

the Commission certified that the proposed rule amendments, if promulgated, would not have a significant economic impact on a substantial number of small business entities, as defined in section 601(3) of the RFA because the rule amendments do not apply to small business entities. Rather, these rules apply to individuals who are interested in radio technique solely with a personal aim and without pecuniary interest.

**II. Ordering Clauses**

4. Parts 0 and 97 of the Commission's rules *is amended* as specified in rule changes effective June 1, 2004.

5. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, shall send a copy of this *Order*, including the Initial Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

**List of Subjects**

47 CFR Part 0

Radio.

47 CFR Part 97

Radio, Volunteers.

Federal Communications Commission.

**Marlene H. Dortch,**

*Secretary.*

**Rule Changes**

■ For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 0 and 97 as follows:

**PART 0—COMMISSION ORGANIZATION**

■ 1. The authority citation for part 0 continues to read as follows:

**Authority:** Sec. 5, 48 Stat. 1068, as amended; 47 U.S.C. 155, 225, unless otherwise noted.

■ 2. Section 0.131 is amended by revising paragraph (n) to read as follows:

**§ 0.131 Functions of the Bureau.**

\* \* \* \* \*

(n) Administers the Commission's amateur radio programs (part 97 of this chapter) and the issuing of maritime mobile service identities (MMSIs).

\* \* \* \* \*

**PART 97—AMATEUR RADIO SERVICE**

■ 3. The authority citation for part 97 continues to read as follows:

**Authority:** 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply 48 Stat. 1064–1068, 1081–1105, as amended; 47 U.S.C. 151–155, 301–609, unless otherwise noted.

■ 4. Section 97.3 is amended by revising paragraph (a)(1) and by removing and reserving paragraph (a)(17) to read as follows:

**§ 97.3 Definitions.**

(a) \* \* \*

(1) *Amateur operator.* A person named in an amateur operator/primary license station grant on the ULS consolidated licensee database to be the control operator of an amateur station.

\* \* \* \* \*

■ 5. Section 97.109 is amended by revising paragraph (d) and removing paragraph (e) to read as follows:

**§ 97.109 Station control.**

\* \* \* \* \*

(d) When a station is being automatically controlled, the control operator need not be at the control point. Only stations specifically designated elsewhere in this part may be automatically controlled. Automatic control must cease upon notification by a District Director that the station is transmitting improperly or causing harmful interference to other stations. Automatic control must not be resumed without prior approval of the District Director.

\* \* \* \* \*

**§ 97.203(h) [Redesignated]**

■ 6. Section 97.203(h) is redesignated as Section 97.205(h).

■ 7. Section 97.307 is amended by revising paragraph (d) to read as follows:

**§ 97.307 Emission standards.**

\* \* \* \* \*

(d) For transmitters installed after January 1, 2003, the mean power of any spurious emission from a station transmitter or external RF power amplifier transmitting on a frequency below 30 MHz must be at least 43 dB below the mean power of the fundamental emission. For transmitters installed on or before January 1, 2003, the mean power of any spurious emission from a station transmitter or external RF power amplifier transmitting on a frequency below 30 MHz must not exceed 50 mW and must be at least 40 dB below the mean power of the fundamental emission. For a transmitter of mean power less than 5 W installed on or before January 1, 2003, the attenuation must be at least 30 dB. A transmitter built before April 15, 1977, or first marketed before January 1, 1978, is exempt from this requirement.

\* \* \* \* \*

■ 8. Section 97.505 is amended by revising paragraph (a)(9) to read as follows:

**§ 97.505 Element credit.**

(a) \* \* \*

(9) An expired FCC-issued Technician Class operator license document granted before February 14, 1991: Element 1.

\* \* \* \* \*

■ 9. Section 97.507 is amended by revising paragraph (a)(2) to read as follows:

**§ 97.507 Preparing an examination.**

(a) \* \* \*

(2) Elements 1 and 2: Advanced or General Class operators.

\* \* \* \* \*

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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Parts 222 and 223**

[Docket No. 040127028–4130–02; I.D 012104B]

RIN 0648–AR69

**Sea Turtle Conservation: Additional Exception to Sea Turtle Take Prohibitions**

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

**ACTION:** Final rule.

**SUMMARY:** NMFS is prohibiting the use of all pound net leaders, set with the inland end of the leader greater than 10 horizontal feet (3 m) from the mean low water line, from May 6 to July 15 each year in the Virginia waters of the mainstem Chesapeake Bay, south of 37° 19.0' N. lat. and west of 76° 13.0' W. long., and all waters south of 37° 13.0' N. lat. to the Chesapeake Bay Bridge Tunnel at the mouth of the Chesapeake Bay, and the James and York Rivers downstream of the first bridge in each tributary. Outside this area, the prohibition of leaders with greater than or equal to 12 inches (30.5 cm) stretched mesh and leaders with stringers, as established by the June 17, 2002 interim final rule, will apply from May 6 to July 15 each year. This final action also includes a framework mechanism by which NMFS may take additional action as necessary. This action, taken under the Endangered Species Act of 1973 (ESA), is necessary to conserve sea turtles listed as threatened or endangered. NMFS also provides an exception to the prohibition on incidental take of threatened sea turtles

for pound net fishermen in compliance with these regulations.

**DATES:** Effective May 5, 2004.

**FOR FURTHER INFORMATION CONTACT:** Carrie Upite (ph. 978-281-9328 x6525, fax 978-281-9394, email [carrie.upite@noaa.gov](mailto:carrie.upite@noaa.gov)), or Barbara Schroeder (ph. 301-713-1401, fax 301-713-0376, email [barbara.schroeder@noaa.gov](mailto:barbara.schroeder@noaa.gov)).

**SUPPLEMENTARY INFORMATION:**

### Background

Incidental take, defined to include the harassing, harming, wounding, trapping and capturing, of threatened sea turtles is not lawful (50 CFR 223.205). On June 17, 2002, based upon the best available information on sea turtle and pound net interactions at the time, NMFS issued an interim final rule that authorized incidental take of threatened sea turtles for pound net fishermen who complied with NMFS' rule. In the rule, NMFS prohibited the use of all pound net leaders measuring 12 inches (30.5 cm) and greater stretched mesh and all pound net leaders with stringers in the Virginia waters of the mainstem Chesapeake Bay and portions of the Virginia tributaries from May 8 to June 30 each year (67 FR 41196). Included in this interim final rule were a year-round requirement for fishermen to report all interactions with sea turtles in their pound net gear to NMFS within 24 hours of returning from a trip, and a year-round requirement for pound net fishing operations to be observed by a NMFS-approved observer if requested by the Northeast Regional Administrator. The interim final rule also established a framework mechanism by which NMFS may make changes to the restrictions and/or their effective dates on an expedited basis in order to respond to new information and protect sea turtles. Prior to issuance of this rule, takes of threatened sea turtles in pound nets were not authorized, and a fisherman who incidentally took a threatened sea turtle risked criminal penalties and fines.

To better understand the interactions between pound net gear and sea turtles, NMFS conducted pound net monitoring during the spring of 2002 and 2003. This monitoring documented 23 sea turtles either entangled in or impinged on pound net leaders, 18 of which were in leaders with less than 12 inches (30.5 cm) stretched mesh. Nine animals were found entangled in leaders, of which 7 were dead, and 14 animals were found impinged on leaders, of which one was dead. In this situation, impingement refers to a sea turtle being held against the leader by the current, apparently

unable to release itself under its own ability. For these purposes, an animal was still considered impinged if it had its head and flipper poking through the mesh. An animal was considered entangled if a body part was tightly wrapped one or more times in the mesh.

The 2002 and 2003 monitoring results represent new information not previously considered in prior assessments of the Virginia pound net fishery, and entanglements in and impingements on these leaders appear to be more of a problem than previously believed. As such, NMFS believes that additional restrictions are warranted to reduce sea turtle entanglement in and impingement on pound net gear.

The documented incidental take of sea turtles in leaders, the ability for sea turtles to continue to become entangled in and impinged on pound net leaders in the future, and the annual high mortality of sea turtles in Virginia during the spring, as evidenced by the high number of dead sea turtles stranding on beaches, are of particular concern because approximately 50 percent of the Chesapeake Bay loggerhead foraging population is composed of the northern subpopulation, a subpopulation that may be declining. In addition, most of the stranded turtles in Virginia are juveniles, a life stage found to be critical to the long term survival of the species. This action is necessary to provide for the conservation of threatened and endangered sea turtles by reducing incidental take in the Virginia pound net fishery during the spring. Details concerning sea turtle and pound net interactions, the potential impact of pound net leaders on sea turtles, and justification for the need for additional pound net leader regulations were provided in the preamble to the proposed rule (69 FR 5810, February 6, 2004).

### Approved Measures

To conserve sea turtles, NMFS prohibits the use of all offshore pound net leaders from May 6 to July 15 each year in the Virginia waters of the mainstem Chesapeake Bay, south of 37° 19.0' N. lat. and west of 76° 13.0' W. long., and all waters south of 37° 13.0' N. lat. to the Chesapeake Bay Bridge Tunnel (extending from approximately 37° 05' N. lat., 75° 59' W. long. to 36° 55' N. lat., 76° 08' W. long.) at the mouth of the Chesapeake Bay, and the portion of the James River downstream of the Hampton Roads Bridge Tunnel (I-64; approximately 36° 59.55' N. lat., 76° 18.64' W. long.) and the York River downstream of the Coleman Memorial Bridge (Route 17; approximately 37°

14.55' N. lat, 76° 30.40' W. long.). Offshore pound nets are defined as those nets set with the inland end of their leader greater than 10 horizontal feet (3 m) from the mean low water line. Additionally, outside this area, NMFS retains the leader mesh size restriction included in the previous interim final rule on the pound net fishery (67 FR 41196, June 17, 2002), which prohibited the use of all leaders with stretched mesh greater than or equal to 12 inches (30.5 cm) and leaders with stringers, from May 6 to July 15 each year in the Virginia waters of the Chesapeake Bay outside the aforementioned closed area, extending from the Maryland-Virginia State line (approximately 37° 55' N. lat., 75° 55' W. long.), the Great Wicomico River downstream of the Jessie Dupont Memorial Highway Bridge (Route 200; approximately 37° 50.84' N. lat, 76° 22.09' W. long.), the Rappahannock River downstream of the Robert Opie Norris Jr. Bridge (Route 3; approximately 37° 37.44' N. lat, 76° 25.40' W. long.), and the Piankatank River downstream of the Route 3 Bridge (approximately 37° 30.62' N. lat, 76° 25.19' W. long.), to the COLREGS line at the mouth of the Chesapeake Bay. South of 37° 19.0' N. lat. and west of 76° 13.0' W. long., and all waters south of 37° 13.0' N. lat. to the Chesapeake Bay Bridge Tunnel, the leader restriction applies to those nets set with the inland end of the leader 10 horizontal feet (3 m) or less from the mean low water line. In addition to avoiding applicable penalties for failure to comply with ESA regulations, Virginia pound net fishermen who comply with these restrictions may incidentally take listed sea turtles without being subject to penalties and fines for that take.

This final rule also retains the framework mechanism currently in place (that was included and analyzed in the status quo alternative), by which NMFS may make changes to the restrictions and/or their effective dates on an expedited basis in order to respond to new information and protect sea turtles. Under this framework mechanism, if NMFS believes based on, for example, water temperature and the timing of sea turtles' migration, that sea turtles may still be vulnerable to entanglement in pound net leaders after July 15, NMFS may extend the effective dates of this regulation. Should an extension be necessary, NMFS would issue a final rule in the **Federal Register** explicitly stating the duration of the extension. The extension would not last beyond July 30. Additionally, under this framework mechanism, if monitoring of pound net leaders reveals that one sea

turtle is entangled alive in a pound net leader or that one sea turtle is entangled dead and NMFS determines that the entanglement contributed to its death, then NMFS may determine that additional restrictions are necessary to conserve sea turtles and prevent entanglements. Such additional restrictions may include reducing the allowable mesh size for pound net leaders or prohibiting all pound net leaders regardless of mesh size in Virginia waters. Should NMFS determine that an additional restriction is warranted, NMFS would expeditiously issue a final rule that would explicitly state any new gear restriction as well as the applicable time period for the restriction, which may be extended through July 30. The area where additional gear restrictions might apply includes the same area as the initial restriction, namely the Virginia waters of the mainstem Chesapeake Bay from the Maryland-Virginia State line (approximately 38° N. lat.) to the COLREGS line at the mouth of the Chesapeake Bay, and portions of the James River, the York River, Piankatank River, the Rappahannock River, and the Great Wicomico River.

The year-round reporting and monitoring requirements for this fishery established by the 2002 interim final rule also remain in effect.

From 12:01 a.m. local time on May 6 through 11:59 p.m. local time on July 15 each year, fishermen are required to stop fishing with and remove from the water pound net leaders altogether or pound net leaders measuring 12 inches (30.5 cm) or greater stretched mesh and pound net leaders with stringers, depending upon the location of their pound net site as indicated above.

#### Comments and Responses

On February 6, 2004, NMFS published a proposed rule that would prohibit the use of all pound net leaders south of 37° 19.0' N. lat. and west of 76° 13.0' W. long., and all waters south of 37° 13.0' N. lat. to the Chesapeake Bay Bridge Tunnel at the mouth of the Chesapeake Bay, and the James and York Rivers downstream of the first bridge in each tributary, and all leaders with stretched mesh greater than or equal to 8 inches (20.3 cm) and leaders with stringers outside the aforementioned area, extending to the Maryland-Virginia State line and the Rappahannock River downstream of the first bridge, and from the Chesapeake Bay Bridge Tunnel to the COLREGS line at the mouth of the Chesapeake Bay, from May 6 to July 15 each year. Comments on this proposed action were requested through March 8, 2004.

Nineteen comment letters from eighteen different individuals or organizations were received during the public comment period for the proposed rule. Four comment letters provided support for the action, while 14 letters expressed their opposition to the proposed regulations. One comment letter was neither in favor nor against the proposed action. Additionally, a petition signed by 1,077 individuals was received requesting that the proposal be withdrawn and terminated. A public hearing was also held in Virginia Beach, VA on February 19, 2004, and 11 individuals provided spoken comments. Three of the 11 individuals also provided written comments. All of the spoken comments were in opposition to the proposed action. NMFS considered these comments on the proposed rule as part of its decision making process. A complete summary of the comments and NMFS' responses, grouped according to general subject matter in no particular order, is provided here.

#### General Comments

*Comment 1:* One commenter recommended that the pound net leader prohibitions and restrictions extend throughout the year and that marine sanctuaries be established in Virginia waters.

*Response:* NMFS considered regulating pound net leaders in Virginia's Chesapeake Bay during the period of May through November, which would encompass the full time period when sea turtle presence and pound net fishing in the Chesapeake Bay overlap. However, few direct observations of sea turtle impingement on and entanglement in pound net leaders exist after early summer. A pound net characterization study by the Virginia Institute of Marine Science (VIMS) documented the entanglement of one dead juvenile loggerhead sea turtle in a pound net leader (approximately 11 inches (27.9 cm)) in October of 2000 (Mansfield *et al.*, 2001), and one dead loggerhead was found entangled in a pound net leader in August 2001 (Mansfield *et al.*, 2002). It is not conclusively known if those animals were dead prior to entanglement or if the interaction with the pound net leader resulted in their death. Additionally, the level of sea turtle strandings is substantially diminished during the summer and fall months which indicates a lower mortality rate. With few direct observations of entanglement in and impingement on pound net leaders and without high levels of strandings, similar to those documented in the spring, there is not a sufficient basis at this time to

conclude that pound net leaders are responsible for high levels of sea turtle mortality from August through November. Accordingly, NMFS has determined that it will not impose gear restrictions on the Virginia pound net fishery during the full time period of the fishery from May through November.

National marine sanctuaries are designated and managed by NOAA's National Marine Sanctuary Program. The sanctuary designation process takes several years and is not an option that could be implemented currently. NMFS has forwarded the comment to the National Marine Sanctuary Program for its consideration.

*Comment 2:* One commenter recommended that pound nets be prohibited in high recreational areas due to potential hazards to human personal safety.

*Response:* Under the ESA, NMFS' authority to implement restrictions on activities is restricted to those activities that affect a species that NMFS manages (e.g., federally endangered and threatened sea turtles). Available information does not indicate that the level of sea turtle interactions with pound nets in high recreational areas necessitates restrictions to protect sea turtles.

*Comment 3:* One commenter recommended that formal ESA section 7 consultation be initiated on the Virginia pound net fishery to adequately assess the impacts of this fishery on listed species.

*Response:* A formal consultation, pursuant to section 7 of the ESA, was previously conducted on the operation of the Virginia pound net fishery, as modified by the implementation of the sea turtle conservation measures enacted in 2002. This Biological Opinion, issued on May 14, 2002, concluded the Virginia pound net fishery as conducted under NMFS' implementation of sea turtle conservation regulations (including the issuance of an interim final rule that restricted the use of pound net leaders in the Virginia Chesapeake Bay from May 8 to June 30, and required year round monitoring and reporting) may adversely affect but is not likely to jeopardize the continued existence of the loggerhead, leatherback, Kemp's ridley, green, or hawksbill sea turtle, or shortnose sturgeon. Consultation on this action has been reinitiated due to the previously unanticipated take of sea turtles in less than 12 inches (30.5 cm) stretched mesh during 2003. Additionally, a formal section 7 consultation has also been completed on the proposed issuance of this new regulation, including review of the

operation of the pound net fishery with new sea turtle conservation measures for the Virginia pound net fishery. Due to similarities in the proposed actions and the effects on listed species, the reinitiated 2002 consultation and the new consultation on this final rule have been combined. The Biological Opinion was issued on April 16, 2004, and concluded that the proposed action may adversely affect, but is not likely to jeopardize, the continued existence of the loggerhead, leatherback, Kemp's ridley, green, or hawksbill sea turtle, or shortnose sturgeon. The Incidental Take Statement exempted the anticipated annual take of no more than 505 loggerhead, 101 Kemp's ridley, and 1 green sea turtle in all pounds set in the action area. These takes are anticipated to be live, uninjured animals. Additionally, no more than 1 loggerhead, 1 Kemp's ridley, 1 green, or 1 leatherback sea turtle are anticipated to be either entangled or impinged in leaders throughout the action area from July 16 to May 5 each year. NMFS further anticipates that, outside the leader prohibited area, 1 loggerhead, 1 Kemp's ridley, 1 green, or 1 leatherback sea turtle will be entangled in leaders with less than 12 inches (30.5 cm) stretched mesh from May 6 to July 15 each year. For the purposes of the analysis in the Biological Opinion, entanglements and impingements are considered to result in sea turtle mortality. No incidental take of hawksbill sea turtles or shortnose sturgeon is anticipated.

*Comment 4:* Two commenters stated that the authority and experience to regulate state fisheries rests with the Virginia Marine Resources Commission (VMRC) and not NMFS, and, therefore, characterized this action as inappropriate. One additional commenter believed that NMFS regulatory and decision making processes are being dictated by environmental groups.

*Response:* NMFS agrees that the authority to regulate state fisheries rests with the respective state agency, in this case, the VMRC. However, VMRC cannot authorize incidental take of threatened sea turtles; only NMFS has the authority to do so. NMFS has the authority and obligation to protect and conserve all sea turtles that occur in U.S. waters that are listed as endangered or threatened under the ESA, regardless of whether they occur in Federal or state waters. This action is taken under the authority of the ESA to conserve sea turtles listed as threatened or endangered.

NMFS bases its decision on the best available data and knowledge of the

situation; the decision is not dictated by the opinion of any outside entity, be it an environmental group, industry participant, or other stakeholder.

*Comment 5:* One commenter noted that recent sea turtle mortalities in Virginia hopper dredging operations have been higher than observed takes in the Virginia pound net fishery, and dredging has been allowed to continue. Two additional commenters felt that there was inequity with how NMFS addresses and regulates potential impacts to sea turtles.

*Response:* Under section 7 of the ESA, Federal agencies must consult with either NMFS or the U.S. Fish and Wildlife Service (USFWS) to ensure their proposed agency actions do not jeopardize the continued existence of listed species. The Norfolk and Baltimore Districts of the Army Corps of Engineers (ACOE) have previously consulted with NMFS on dredging operations in the Virginia Chesapeake Bay. The impacts of hopper dredging on listed species were previously considered via formal section 7 consultations (NMFS NER 2002, NMFS NER 2003), and Incidental Take Statements were prepared to account for the anticipated take in these operations. From July 2000 to October 2003, 54 sea turtles have been taken by Virginia dredge operations. Some of the incidents involved decomposed turtle flippers and/or carapace parts, but most of these takes were fresh dead turtles. Most of these previous sea turtle takes were exempted in the Incidental Take Statements of the Biological Opinions. Efforts are ongoing to work with the ACOE to further minimize this take and enhance existing monitoring programs. NMFS continues to work with the ACOE to reduce sea turtle takes in dredging operations, as well as to research and attempt to minimize sea turtle mortality from other sources (e.g., fisheries, vessels, debris/water quality).

NMFS attempts to consider all of the impacts to sea turtles cumulatively and to reduce threats from all known sources. NMFS and USFWS are in fact working to minimize the impacts to sea turtles from other activities as well (e.g., nesting habitat degradation, marine debris, dredging, power plant impingement). Nevertheless, fishing activities have been recognized as one of the most significant threats to sea turtle survival (Magnuson et al., 1990, Turtle Expert Working Group 2000). To respond to these threats, NMFS is comprehensively evaluating the impacts of fishing gear types on sea turtles throughout the U.S. Atlantic Ocean and Gulf of Mexico, as part of the Strategy for Sea Turtle Conservation and

Recovery in Relation to Atlantic Ocean and Gulf of Mexico Fisheries (Strategy) (NMFS 2001). Based on the information developed for the Strategy, NMFS may impose restrictions on or modifications to other activities that put sea turtles at risk.

*Comment 6:* Eight commenters felt that leaders with greater than or equal to 12 inches (30.5 cm) stretched mesh and leaders with stringers result in the most sea turtle mortalities, and specifically recommended the status quo option. One of the commenters noted that decreasing the allowable mesh size to less than 8 inches (20.3 cm) stretched mesh would not help sea turtles and solve the stranding problem, but, because the problem is with the sea turtles, it would only hurt the fishermen.

*Response:* Based on historical observations of pound net leaders (Bellmund et al., 1987) and for the reasons discussed in the preamble to the 2002 rule, NMFS recognizes that the frequency of sea turtle takes in leaders with stretched mesh 12 inches (30.5 cm) and greater and leaders with stringers may be higher than in smaller mesh leaders. However, during 2002 and 2003, NMFS documented sea turtle interactions with mesh leaders ranging from 14 inches (35.6 cm) stretched mesh down to 8 inches (20.3 cm) stretched mesh. All but one of these takes were in the leader prohibited area, as defined in this final rule. Therefore, NMFS has determined to prohibit all leaders in this area to prevent takes in the area with previous high sea turtle/pound net interactions.

The justification for the further leader mesh size restriction included in the proposed rule was based upon the occurrence of sea turtle takes in 8 inch (20.3 cm) and greater stretched mesh leaders. However, based upon additional analysis of impingement to entanglement ratios by NMFS, it appears that restricting mesh size to less than 8 inches (20.3 cm) stretched mesh would not necessarily provide additional conservation benefit to sea turtles, over that provided by restricting mesh size to less than 12 inches. In addition to mesh size, the frequency of sea turtle takes appears to be a function of where the pound nets are set, with pound nets set in certain areas having a higher potential for takes for a variety of possible reasons, such as depth of water, current velocity, and proximity to certain environmental characteristics or optimal foraging grounds. For instance, it is possible that takes may continue to occur on 7.5-inch (19.1-cm) stretched mesh leaders if set in certain geographical areas. Additional analyses,

and perhaps data collection, will be completed that may provide insights into the relationship between mesh size and sea turtle interactions. At this time, the mesh size threshold that would prevent sea turtle entanglements has not been determined for mesh size below 12 inches (30.5 cm). As such, NMFS is retaining the mesh size restriction included in the 2002 interim final rule, which is the restriction of leaders with greater than or equal to 12 inches (30.5 cm) stretched mesh and leaders with stringers, in areas outside the leader prohibited area. It should also be noted that during the public comment period, it was recognized that an 8-inch (20.3-cm) stretched mesh leader may in fact be slightly smaller than 8 inches (20.3 cm), after it is coated and hung in the water. For example, NMFS observers measured nets to the nearest 0.125 inches (0.318 cm), so a sea turtle entanglement recorded in an 8-inch (20.3-cm) stretched mesh leader may have in fact been in a leader with 7.95-inches (20.2-cm) stretched mesh. Whenever NMFS mentions that sea turtles have been taken in 8 inch (20.3 cm) stretched mesh leaders, it refers to nets that may have been slightly smaller or larger (within 0.125 inches (0.318 cm)) than 8 inches (20.3 cm).

*Comment 7:* One commenter continued to be concerned with the potential take in leaders with less than 8 inches (20.3 cm) stretched mesh, particularly as a result of impingement.

*Response:* NMFS has only documented sea turtles in leaders with 8 inches (20.3 cm) and greater stretched mesh and in leaders with stringers. Given that gillnets with less than 8 inches (20.3 cm) stretched mesh have been found to entangle sea turtles (Gearhart, 2002), NMFS recognizes the possibility that entanglements in leader stretched mesh smaller than 8 inches (20.3 cm) could occur. There are differences between gillnet gear and pound net leaders (e.g., monofilament vs. multifilament material; drift, set, and runaround vs. fixed stationary gear; gilling vs. herding fishing method), which likely factor into the potential for sea turtle interactions and should be considered when conducting any mesh size comparison. NMFS does not expect sea turtle impingements on pound net leaders to occur outside the leader prohibited area, because of the lack of observed impingements on pound net leaders outside of this area. Sea turtles may continue to be entangled in leaders with less than 12 inches (30.5 cm) stretched mesh outside the leader prohibited area. Further, given that only one turtle was found entangled outside the leader prohibited area in two years

of monitoring, NMFS has chosen to keep the restriction to leaders with greater than or equal to 12 inches (30.5 cm) stretched mesh. However, NMFS will continue monitoring pound nets for sea turtle interactions and the framework mechanism included in this final rule will enable the enactment of additional management measures if determined necessary.

#### *Comments on Validity of Scientific Information*

*Comment 8:* Sixteen commenters felt that the limited observer data do not support the conclusion that the pound net fishery is a major source of mortality, especially as the spring strandings have been much higher than the observed interactions in pound net gear. Three commenters believed sea turtles will not biologically benefit with the proposed measures given the limited take data. One commenter additionally felt that this regulation, and its supporting justification, establishes a bad precedent for managing Virginia fisheries.

*Response:* In 2002 and 2003, 23 sea turtles were found either entangled in or impinged on pound net leaders, while in May, June and the first half of July of 2002 and 2003, approximately 563 sea turtles were found stranded on Virginia beaches. NMFS acknowledges that other factors likely contribute to spring sea turtle mortality in Virginia, and NMFS does not assume that all sea turtle strandings are the result of pound net interactions. Sea turtle mortality sources are difficult to detect from evaluating the stranded animal. Few sea turtles strand with evidence of fishery interactions, but the lack of gear on a carcass is not necessarily indicative of a lack of fishery interaction. NMFS has observed other fisheries and investigated other potential causes, such as dredge operations, for the annual spring sea turtle mortality event and determined that natural or non-fishing related anthropogenic causes are not consistent with the nature and timing of most of the strandings (67 FR 15160, March 29, 2002, 69 FR 5810, February 6, 2004). For instance, during the approximate time period of the proposed measures (May 16 to July 31, 2003), a preliminary count of 26 of 375 turtles were found on Virginia beaches with carapace/plastron damage or propeller-like wounds. It is unknown how many of these injuries were pre or post-mortem. Unlike for pound net leaders, the level of sea turtle interactions with other potential mortality sources (e.g., other fisheries) has not yet been conclusively determined as few takes have been

documented. As noted above, NMFS has data showing that pound net leaders result in sea turtle entanglement and impingement. NMFS believes that it is likely that pound nets contribute to, but do not cause all of, the high sea turtle strandings documented each spring on Virginia beaches. Under the ESA, NMFS is responsible for protecting sea turtles from various mortality sources.

There are several caveats, ones more likely to result in underestimates, associated with the pound net monitoring studies that should be noted when evaluating the number of animals found in the gear. The sea turtles observed in leaders were found at depths ranging from the surface to approximately 6 feet (1.8 m) under the surface. The ability to observe a turtle below the surface depends on a number of variables, including water clarity, sea state, and weather conditions. Generally, turtles entangled a few feet below the surface cannot be observed due to the poor water clarity in the Chesapeake Bay. In several instances in 2002 and 2003, due to tide state and water clarity, even the top line of the leader was unable to be viewed. Additionally, NMFS' sampling effort was confined to two boats in 2002 and one vessel during 2003, and each net could not be sampled during every tidal cycle, every hour, or even every day. Some impingements, and some entanglements, were undoubtedly missed as a small fraction of the fishing effort was observed. Due to funding and staff constraints, NMFS observers did not monitor pound nets after early June in 2002 and 2003, and did not monitor during the high spring stranding period in 2003. As such, some sea turtle entanglements and/or impingements could have been missed later in the season. Given these caveats, even if pound nets caused every sea turtle mortality in the Virginia Chesapeake Bay, it is not expected that the number of observed sea turtle interactions would equal the number of strandings. It should also be noted that a revised analysis by NMFS found that nets were observed a total of 838 times in 2002 and 2003, not 1463 times as noted in the draft EA. This modification is a factor of discounting the non-active nets and the nets that were not able to be completely observed due to shallow water depth and lack of boat access.

NMFS considers the monitoring information collected in 2002 and 2003 to be noteworthy, given that entanglements were not previously anticipated on leaders with less than 12 inches (30.5 cm) stretched mesh and impingements on leaders were observed, a phenomenon not previously

believed to occur with such frequency. NMFS believes that this data represent new information on the interactions between sea turtles and pound net leaders and should be used to further reduce takes in this fishery.

Sea turtles will benefit from this action, as pound net leaders entangle and impinge these animals and this action will reduce these interactions. The exact population benefit cannot be determined, but as sea turtle populations found in the Virginia Chesapeake Bay have not yet recovered, diligence must be used to reduce mortality sources. Loggerheads and Kemp's ridleys have been found interacting with pound net gear and are the most common species found in the Chesapeake Bay. Most loggerheads in U.S. waters come from one of five genetically distinct nesting subpopulations. The largest loggerhead subpopulation occurs from 29° N. lat. on the east coast of Florida to Sarasota on the west coast and shows recent increases in numbers of nesting females based upon an analysis of annual surveys of all nesting beaches. However, a more recent analysis limited to nesting data from the Index Nesting Beach Survey program from 1989 to 2002, a period encompassing index surveys that are more consistent and more accurate than surveys in previous years, has shown no detectable trend (B. Witherington, Florida Fish and Wildlife Conservation Commission, pers. comm., 2002). The northern subpopulation that nests from northeast Florida through North Carolina is much smaller, and nesting numbers are stable or declining. Genetic studies indicate that approximately one-half of the juvenile loggerheads inhabiting Chesapeake Bay during the spring and summer are from the smaller, northern subpopulation (TEWG, 2000; Bass *et al.*, 1998; Norrgard, 1995).

Kemp's ridleys are considered to be one of the world's most endangered sea turtle species. The population has been drastically reduced from historical nesting numbers, but the Turtle Expert Working Group (1998, 2000) indicated that the Kemp's ridley population appears to be in the early stage of a recovery trajectory. Nesting data, estimated number of adults, and percentage of first time nesters have all increased from lows experienced in the 1970's and 1980's. From 1985 to 1999, the number of nests observed at Rancho Nuevo and nearby beaches has increased at a mean rate of 11.3 percent per year, allowing cautious optimism that the population is on its way to recovery. Given the vulnerability of these populations to chronic impacts

from human-related activities, the high level of spring sea turtle mortality in Virginia must be reduced to help ensure that these populations of loggerheads and Kemp's ridleys recover.

Additionally, most of the turtles found in Virginia waters, as well as found stranded during the spring, are of the juvenile life stage (Mansfield *et al.*, 2001, Musick *et al.*, 2000, Musick and Limpus, 1997). Studies have concluded that sea turtles must have high annual survival as juveniles and adults to ensure that sufficient numbers of animals survive to reproductive maturity to maintain stable populations (Crouse *et al.*, 1987; Crowder *et al.*, 1994; Crouse, 1999). Given their long maturation period, relatively small decreases in annual survival rates of both juvenile and adult loggerhead sea turtles may destabilize the population, thereby potentially reducing the likelihood of survival and recovery of the population. As such, the historical high level of mortality in Virginia plus the increase in mortality documented during the last several years may negatively affect recovery. Any action that helps reduce sea turtle mortality will biologically benefit these species.

Regardless of whether NMFS issued this final regulation, if NMFS identifies additional sea turtle mortality sources, NMFS would consider additional management actions pursuant to its obligations under the ESA. Therefore, this final rule, or the justification for it, does not set any precedent.

*Comment 9:* Two commenters expressed their concern with closing a portion of the fishery without a complete understanding of the problem and recommended more research, particularly with respect to impingements.

*Response:* NMFS is committed to undertaking additional research to not only continue studying the interactions between pound nets and sea turtles, but also to continue monitoring and investigating sea turtle mortality in Virginia during the spring. If any scientific research results or future study plans are available that would provide more information, NMFS would welcome receiving or discussing those studies. However, given the results of the pound net monitoring studies in 2002 and 2003, it is necessary to act on the results at this time to minimize additional sea turtle entanglements and impingements in the future. The data show that sea turtles are entangled in and impinged on leader mesh sizes smaller than what are currently restricted and most of these interactions have occurred in a specific geographical area (i.e., in the leader prohibited area).

Note that at this time NMFS chose to retain the leader mesh size restriction as included in the previous action on this fishery (in areas outside the leader prohibited area) in order to complete additional analyses, and perhaps data collection, on the conservation benefit of different mesh size thresholds. NMFS is committed to continuing to explore the issue as well as working with the industry to develop a gear modification solution that would minimize sea turtle takes and retain an acceptable level of target catch.

*Comment 10:* Two commenters disagreed that most impingements lead to mortality, given the normal diving behavior of sea turtles, the variable strength of the tidal currents, and the lack of observation time for the impinged animals.

*Response:* NMFS observers documented 14 sea turtles, 13 of these alive, impinged on pound net leaders by the current, during monitoring surveys in 2002 and 2003. When an animal was found impinged on the leader, it was immediately released from the net by the observer. Impinged sea turtles were not observed on the net for any length of time, due to the need to release an air-breathing endangered or threatened species from fishing gear as soon as the animal is found, and the uncertainty surrounding how long the animal had already been impinged and how potentially compromised it was. If an animal was impinged on a leader by the current with its flippers inactive, based on other observations of impinged sea turtles, NMFS believes that without any human intervention the turtle could either swim away alive when slack tide occurred, become entangled in the leader mesh when trying to free itself, or drift away dead if it drowned prior to slack tide. In 2002 and 2003, six of the live impingements occurred near the surface, but seven turtles were found underwater, unable to reach the surface to breathe, with an average of 3 hours until slack tide. It is likely that if a turtle could not breathe from the position where it was impinged on the net, it would have a low likelihood of survival if it remained on the net for longer than approximately one hour.

While a public comment noted that sea turtles in Virginia have been found to remain submerged for durations of 40 minutes under normal conditions, it is unlikely that struggling, physiologically stressed sea turtles in fishing gear could do the same, as forcibly submerged turtles rapidly consume their oxygen stores (Lutcavage and Lutz, 1997). In forcibly submerged loggerhead turtles, blood oxygen was depleted to negligible levels in less than 30 minutes (Lutz and

Bentley, 1985 in Lutcavage and Lutz, 1997). The rapidity and extent of internal changes are likely functions of the intensity of underwater struggling and the length of submergence. For instance, oxygen stores were depleted within 15 minutes in tethered green sea turtles diving to escape (Wood *et al.*, 1984 in Lutcavage and Lutz, 1997). Given that some forcibly submerged sea turtles on pound net leaders have been observed struggling, it is unlikely that the submergence duration of impinged animals would be the same as for non-impinged sea turtles. Besides the one specimen of an unknown species of sea turtle found in June 2003, the turtles observed impinged in 2002 and 2003 were not observed moving vertically on the net, given that in most cases, at least one of their flippers were rendered inactive as they were held against the net. The unidentified sea turtle found in June 2003, that either slipped deeper down the net or escaped before the observer could evaluate it further, had both of its front flippers active. Four impinged sea turtles had their head and/or flipper through the leader mesh, but because the part was not wrapped multiple times in the net, it was not considered entangled. Often the impinged turtles were documented as held against the nets by very slight, almost slack, currents. It is unknown how long those animals were impinged on the net before being observed. It could be that those animals were held against the net for more than approximately an hour and when observed impinged with the slight current, they were already in a compromised state. If a sea turtle remains alive after an impingement and swims freely, it could become impinged on or entangled in another nearby pound net leader. This animal would likely already be in a compromised state, which would further augment the impacts of forced submergence.

*Comment 11:* Five commenters noted the difference between nearshore and offshore nets along the Eastern shore of Virginia, with respect to the different current strength, water depth and observed turtle takes. Two of these commenters felt that the potential for impingements could not be extrapolated to the entire fishery or to nets in shallower waters with weaker currents.

*Response:* NMFS observed sea turtles impinged on nets with what appeared to be varying current strengths. NMFS agrees that additional research is necessary on the current strength needed to impinge a sea turtle, and recognizes that there appear to be differences between nearshore and offshore nets with respect to

impingement potential and sea turtle interactions. It was NMFS' previous assumption that all net locations in the leader prohibited area experienced similar conditions, namely relatively high currents regardless of water depth, given that impingements have been documented in those nets set in the Western Bay and along the Eastern shore and NMFS' observations documented swift moving currents in all of those net locations. Information from the public comments suggested that the differences between nearshore and offshore nets are noteworthy, and the difference in impingement potential must be considered. Based on these comments, NMFS re-analyzed the 2002 and 2003 monitoring records and the data do support that there is a statistically significant difference between observed sea turtle takes in nearshore and offshore nets. In 2002 and 2003, offshore nets accounted for all of the observed impingements (n=14) and 8 of the 9 observed entanglements. One dead loggerhead was documented in a nearshore 8 inch (20.3 cm) stretched mesh leader in June 2003. During 2002 and 2003, there were 345 surveys of nearshore nets and 480 surveys of offshore nets. Thirteen surveys did not have a nearshore or offshore designation. Based upon the observations of nearshore nets, it does appear that they pose a significantly lower risk to sea turtles and as such, NMFS has modified the leader prohibited area in this final rule to exclude nearshore nets. Nearshore nets are defined to include those nets with the inland end of their leader 10 horizontal feet (3 m) or less from the mean low water line, and offshore nets include all other nets set in various water depths. The revised leader prohibited area includes all areas where sea turtles were documented impinged on pound net leaders.

Generally, areas close to shore are often shallower and have less current than those areas further from shore, but exceptions may occur because environmental conditions can vary locally. Distance from shore is likely a proxy for other factors (e.g., water depth, current speed) influencing sea turtle interaction rates. For this action, distance from the mean low water line was used as a common characteristic of those nets considered to be nearshore. NMFS will be collecting more data on current strengths in the Virginia Chesapeake Bay, and until additional information may indicate otherwise, NMFS considers distance from shore to be suitable to separate nearshore and offshore nets.

*Comment 12:* Three commenters disagreed with NMFS' statement that there are unreported sub-surface sea turtle mortalities in pound net leaders, because the previous side scan sonar surveys did not detect any sea turtle takes.

*Response:* In 2001, 7 days of side scan sonar surveys were completed from May 24 through August 3 (with no surveys completed from June 24 to July 22 due to weather), for a total of 825 images for the 55 active pound net leaders surveyed (Mansfield *et al.*, 2002a). In 2002, 9 days of surveys were conducted from May 22 to June 27, for a total of 1,848 images for the 61 active pound net leaders surveyed (Mansfield *et al.*, 2002b). In 2001 and 2002, surveys were conducted almost equally in the Western Bay and along the Eastern shore. No sub-surface acoustical signatures were noted during these surveys. The use of side scan sonar as a means to detect sub-surface sea turtle entanglements may have potential, but additional research on sub-surface interactions is needed. Mansfield *et al.* (2002a, 2002b) state that a number of factors may influence the use of side scan sonar, including weather, sea conditions, water turbidity, the size and decomposition state of the animal, and the orientation of the turtle in the net. NMFS recognizes that survey scheduling is limited by weather and sea conditions, but considers that side scan survey results may continue to be affected by water turbidity, the size and decomposition state of the animal, and the orientation of the turtle in the net. These issues must be addressed in future surveys before conclusively determining that sea turtles are not found in pound net leaders sub-surface. NMFS conducted forward searching sonar testing in April 2003 to further explore the issue, but due to technical difficulties (e.g., narrow band width, time needed to familiarize staff with equipment and image interpretation, scheduling), testing had to be curtailed while visual monitoring was conducted. Additional sonar testing is anticipated to be conducted in the spring of 2004.

However, because sea turtles can be present throughout the water column, it is possible that subsurface entanglements and impingements occur. Data indicate that while the spring water column temperatures are stratified and sea turtles may prefer warmer surface waters, sea turtles may also be found at depth. Sea turtles generally inhabit water temperatures greater than 11° C (Epperly *et al.*, 1995), and loggerheads and Kemp's ridleys in Virginia waters forage on benthic species. As sea turtles use the

Chesapeake Bay as developmental foraging grounds (Byles, 1988, Lutcavage and Musick, 1985, Musick and Limpus, 1997), they will be periodically near the bottom if they are foraging and may come in contact with pound net leaders at depth. Musick et al. (1984) found that crustaceans aggregate on large epibiotic loads that grow on the pound net stakes and horseshoe crabs (a preferred prey for loggerheads) become concentrated at the bottom of the net. Additionally, Mansfield and Musick (2003) found that seven sea turtles (six loggerheads and one Kemp's ridley) tracked in the Virginia Chesapeake Bay from May 22 to July 17, 2002, dove to maximum depths ranging from approximately 13.1 ft (4 m) to 41 ft (12.5 m). Further, Byles (1988) and Mansfield and Musick (2003, 2004) found that sea turtles in the lower Chesapeake Bay commonly make dives of over 40 minutes during the day. While the percentage of time spent at each depth range needs to be clarified, it is improbable that turtles, during a 40 minute period, are never found at depths deeper than the depth at which sea turtles were observed entangled and impinged (e.g., approximately 6 feet (1.8 m)). This information suggests that sea turtles will be found through the water column, even though they may prefer warmer surface waters. While side scan sonar survey results have not documented the sub-surface entanglement of sea turtles in two years of surveys, NMFS believes these results should be treated cautiously, recognizing the potential limitations of this technique and known sea turtle behavior patterns.

*Comment 13:* One commenter disagreed with NMFS' statement that the mesh size characteristics are generally consistent from the top to bottom of the leader.

*Response:* It is possible that different nets in different areas of the Chesapeake Bay are set with different mesh sizes from top to bottom. The statement in the proposed rule was that pound net leader characteristics are generally consistent from top to bottom. NMFS conducted pound net leader observations during 2002 and 2003 for a total of 126 individual active nets observed, and documented different mesh sizes in the top and bottom of the leader in only one or two nets, but notes that nets were not routinely monitored from top to bottom. In 2002 and 2003 combined, there were approximately 26 nets that did change mesh sizes from the shallower end to the deeper end of the leader (moving horizontally along the leader), but that is not what was referred to in NMFS' original statement. Additionally, NMFS

discussed this issue with four pound net fishermen and this subset of fishermen indicated that they used one mesh size in their leaders.

*Comment 14:* One commenter disagreed with NMFS' statement that pound net leaders in the Virginia Chesapeake Bay are one mile (1,609 m) long.

*Response:* The Economic and Social Environment section (Section 4.3) of the draft EA stated that "...fish swimming along the shore are turned towards the pound by the leader (sometimes a mile long), guided into the heart, and then into the pound..." The purpose of this paragraph was to provide background information on the configuration of pound net gear, and it is NMFS' understanding that in certain areas pound net leaders can be one mile (1,609 m) long (Dumont and Sundstron, 1961). Based upon field observations in Virginia however, NMFS agrees with the comment that pound net leaders in Virginia do not reach one mile (1,609 m) long. In fact, Section 28.2-307 of the Code of Virginia restricts the total length of a single fixed fishing device to 1,200 feet (365.8 m) or less. The reference to the leader length of one mile (1,609 m) was deleted in the final EA.

*Comment 15:* One commenter noted that pound net operations are critical sources of food for birds, protected under the Migratory Bird Treaty Act, in the Virginia Chesapeake Bay, and NMFS failed to consider this biological benefit in its analysis. Further, this commenter felt that pound net operations are beneficial for sea turtles, as important sources of food from the discards of the pound nets.

*Response:* NMFS recognizes that a variety of birds feed on the catch and discards from the pound net fishery. That potential benefit to avian species was analyzed in the final EA. However, birds have also been documented entangled, dead and alive, in the leaders and have been documented entangled and entrapped in the pounds and hearts, both dead and alive. Monitoring efforts in 2002 and 2003 documented several dead birds entangled in leaders, hearts, or pounds with varying mesh sizes, including 12 pelicans, 10 cormorants, 6 gulls, 2 gannets, 2 common loons, 1 royal tern, and 130 birds of unidentified species. Since individual nets were surveyed multiple times, and since it is difficult to identify decomposing birds, some birds may have been counted multiple times. Regardless, the avian mortality documented during 2002 and 2003 does not represent total mortality to these species, as surveys documented only a portion of total fishing effort. Birds foraging in Chesapeake Bay may

exploit pound nets for prey but they are not dependent on this source of forage. NMFS believes that the risk of mortality, disruption of normal feeding behaviors, and other unknown ecological effects to avian species resulting from pound nets outweighs any perceived benefit of concentrating prey resources.

Sea turtles have been found alive and uninjured in the pounds of pound net gear, and are assumed to be foraging on the entrapped species. Tagging data collected by VIMS suggest that some sea turtles exhibit strong site fidelity to certain pound nets (Mansfield and Musick, in press). Turtles may also feed on the discards of pound net gear outside the pound, but the harm or benefit of this foraging resource are unknown. Turtles' proximity to the gear may in fact increase the potential for interactions with the leaders. NMFS believes the negative impact from interactions with the leaders outweighs any potential benefit from the concentration of prey items or availability of discards. It is also unknown what impact pound nets have on the behavior and development of sea turtles in the Chesapeake Bay.

#### *Comments Related to Stranding Levels*

*Comment 16:* Thirteen commenters stated that the proposed pound net restrictions will not solve the high spring sea turtle stranding problem in Virginia waters, and NMFS should continue to explore other sources of sea turtle mortality (e.g., vessel impacts, habitat degradation, water quality, lack of prey items, other fisheries). One of the commenters recommended that the menhaden fishery be regulated so there would be more food and better water quality for marine species, sea turtles included. Observer coverage on other spring fisheries in Virginia, as well as continued observer coverage on the pound net fishery, was recommended by four of the commenters.

*Response:* As discussed in Comment 8, NMFS does not believe that pound nets are the sole source of spring turtle mortalities in Virginia. NMFS does believe that pound nets play a role in the annual spring stranding event. Prohibiting a gear type known to entangle and impinge sea turtles in an area with documented takes will protect sea turtles from potential mortality associated with these pound net leaders, and reduce the strandings that occur from this gear type.

Since 2001, several fisheries have been observed in Virginia with few documented sea turtle takes. However, NMFS recognizes that variations in fishery-turtle interactions may occur between years, and is committed to



continued monitoring of fisheries in and around Virginia. The NMFS 2004 monitoring program is anticipated to include observer coverage of the gillnet fisheries in offshore and nearshore Virginia and Chesapeake Bay waters; alternative platform observer coverage of the large mesh gillnet black drum fishery; observer coverage of the trawl and scallop dredge fisheries in offshore Virginia waters; investigations into sea turtle interactions with the whelk and crab pot fisheries; and pound net monitoring. NMFS is also working to place observers on board the menhaden purse seine fishery in the Chesapeake Bay. NMFS will also be providing funding for professional necropsies and associated lab costs on fresh dead sea turtles in Virginia to get a better picture of the health of a subset of stranded sea turtles, and working with Virginia organizations to institute an educational campaign aimed at reducing sea turtle interactions with recreational fishermen and boaters. NMFS will continue to closely monitor sea turtle stranding levels and to evaluate interactions with other mortality sources not previously considered that may contribute to sea turtle strandings.

NMFS recognizes that water quality and habitat degradation from many sources can influence sea turtle distribution, prey availability, foraging ability, reproduction, and survival. Sea turtles are not very easily directly affected by changes in water quality or increased suspended sediments, but if these alterations make habitat less suitable for turtles and hinder their capability to forage, eventually they might tend to leave or avoid these less desirable areas (Ruben and Morreale, 1999). The Chesapeake Bay watershed is highly developed and may contribute to impaired water quality via stormwater runoff or point sources. However, due to the volume of water in the mainstem Chesapeake Bay, the impacts of pollutants may be slightly reduced compared to certain tributaries. In a characterization of the chemical contaminant effects on living resources in the Chesapeake Bay's tidal rivers, the mainstem Bay was not characterized due to the historically low levels of chemical contamination, but the James River was characterized as an area with potential adverse chemical contaminant effects to living resources (Chesapeake Bay Program Office 1999). NMFS, USFWS, and the Environmental Protection Agency (EPA) are currently engaged in ESA section 7 consultations on EPA's water quality standards and aquatic life criteria. Through those consultations, the effects of EPA's water

quality standards will be evaluated with respect to potential impacts to listed species.

NMFS recognizes that the blue crab population in the Chesapeake Bay has declined from previous levels (Seney, 2003). A diet analysis of stranded loggerhead and Kemp's ridley sea turtles in Virginia found that the diet of loggerheads appears to have shifted to a fish dominated diet in the mid-1990s and in 2001 to 2002, from horseshoe crab dominance during the early to mid-1980s and blue crab dominance in the late 1980s and early 1990s (Seney, 2003). Menhaden, croaker, seatrout, striped bass and bluefish were the fish species most frequently found in the recent loggerhead samples, with all of these fish species being commercially important in Virginia's gillnet and pound net fisheries (Mansfield *et al.*, 2001, 2002a in Seney, 2003). Seney (2003) stated the fish species composition and the fact that few turtles had consumed both fish and scavenging mud snails suggests that the turtles examined were feeding on primarily live and fresh dead fish from nets. It remains uncertain whether these results are biased because sampling was conducted on only stranded animals and it could be that more fish was found in the stomachs of stranded loggerheads because some were interacting with fishing gear, which contributed to their demise. Based upon these results however, it does appear that loggerheads are shifting their diet and the decline of the horseshoe and blue crab populations may be increasing loggerheads' interaction rate with fishing gear. The future ramifications of this are unclear and it warrants further research. A small subset of Kemp's ridleys was sampled and data suggest that blue crabs and spider crabs were key components of the Virginia Kemp's ridley diet from 1987 to 2002. However, based on the body condition of the majority of stranded turtles, sea turtles in the Chesapeake Bay do not appear to be compromised by a lack of food. The decline of the horseshoe and blue crab populations may result in a diet shift to different species (e.g., different species of crab) or potential move to a different foraging area.

Again, it should be stressed that NMFS believes that high spring strandings may be a result of an accumulation of factors, most notably fishery interactions, but pound net leaders are known to take sea turtles and NMFS believes that interactions with pound net leaders likely contribute to the overall strandings.

*Comment 17:* Twelve commenters noted that the number of active pound

nets (large mesh and stringer leaders in particular) have decreased since the 1980s while the number of strandings have increased in recent years.

*Response:* NMFS agrees that there are currently fewer pound net leaders, in particular those utilizing large mesh and stringer leaders, in the Virginia Chesapeake Bay in comparison to the 1980s. It is unclear whether the reduction in pound nets has been consistent throughout the Virginia Chesapeake Bay, or whether the number of pound nets in one area has decreased significantly and the number in another area has remained relatively the same or potentially increased. The number of pound net licenses issued in Virginia has remained the same since 1994, due to a limited entry program, and one license is assigned to each pound net. So while the number of pound nets has apparently decreased since the 1980s, the number of licenses issued (n=161) has been approximately the same since 1994. This suggests that the number of pound nets in the Virginia Chesapeake Bay has been approximately the same since 1994, but NMFS recognizes that the number of active nets in any given season may vary among years. Also, NMFS notes that pound net landings from 1990 to 1999 have increased at an annual rate of 8.33 percent, while the annual revenues from pound net landings have increased by 17.31 percent (Kirkley *et al.*, 2001).

Regardless, NMFS disagrees with the conclusion that some turtle strandings cannot be attributed to pound net leaders because strandings have increased while the number of leaders have decreased. NMFS recognizes that the increase in documented sea turtle mortalities could be a function of the increase and improvement in the level of stranding effort, coverage, and reporting that has occurred, especially along the Eastern shore, and perhaps a function of the apparent increase in abundance of the southern population of loggerheads, which make up approximately 50 percent of the loggerheads found in the Virginia Chesapeake Bay. Pound net leaders (regardless of how many are in the Chesapeake Bay) still entangle and impinge sea turtles and the ESA requires NMFS to use the best available scientific information to protect the species. There have been documented sea turtle entanglements in leaders that were determined to have caused mortality by drowning. Impingements represent a take under the ESA that may lead to mortality.

*Comment 18:* Four commenters acknowledged that elevated strandings abate by the end of June or early July

and the pound net fishery operates throughout the turtle residency period in the Chesapeake Bay. They noted that if pound nets were the problem, one would expect strandings to remain at elevated levels throughout the season. One of the commenters noted that there have been no documented takes after June 15, 2003, to the present.

*Response:* From 1995 to 2002, the average monthly sea turtle strandings for Virginia (oceanside and Chesapeake Bay combined) were the highest in June (117), followed by May (39), July (28), August (26), October (18), and September (17). Strandings do continue throughout the sea turtle residency period, but not at the elevated levels seen in the spring. As noted in Comment 1, to NMFS' knowledge, there have been 2 observed turtles in pound net leaders after the spring, but there also has been very limited observer coverage during that time. It is possible that entanglements and impingements are occurring in pound net leaders after the spring, and contributing to stranding levels, but there are no notable observations to suggest that, or that the frequency of takes is the same as in the spring. It is also possible that sea turtles are more vulnerable to pound net entanglement and impingement in the spring, as they are moving into the Chesapeake Bay, migrating through a concentration of pound nets set near the mouth of the Chesapeake Bay. NMFS acknowledges that additional information would be beneficial to adequately assess the risk of entanglement/impingements in pound net leaders after the spring, and to determine why sea turtles may not be interacting as frequently with leaders during this time. The only directed study on temporal entanglements dates back to the 1980s, and the sampling area was concentrated in the western Chesapeake Bay. Bellmund *et al.*, (1987) stated that entanglements in pound net leaders began in mid-May, increased in early June, and reached a plateau in late June. In 1984, surveys were conducted through September, and no entanglements were observed after late June. Bellmund *et al.* (1987) further stated that these data suggest pound nets pose mortality threats to sea turtles in the Chesapeake Bay for a relatively short period of the year even though most sea turtles reside in the Chesapeake Bay from May through October. Additionally, from 1981 to 1984, 14 loggerheads and 2 Kemp's ridleys were monitored via radio tracking (Byles, 1988). Three of the animals became entangled in leaders; the other animals tracked in the summer

and fall were able to forage around the nets with little apparent entanglement threat (Byles, 1988, Musick *et al.*, 1994, Mansfield *et al.*, 2002b).

NMFS acknowledges that there are few documented sea turtle interactions with pound net leaders after mid-June. However, there also have not been any directed monitoring efforts during this time; NMFS monitoring in 2003 ended on June 11 due to funding and logistical constraints. Monitoring was not conducted during the peak of the 2003 stranding period and it is possible that many more sea turtles would have been observed entangled in or impinged on leaders during that time. As stated in the responses to Comments 8 and 16, NMFS does not believe pound nets cause all of the strandings in Virginia, and as noted in the proposed rule, a cause and effect relationship between pound net interactions and high spring strandings cannot be statistically derived based on the available data, even though a concentration of strandings has been consistently found in the vicinity of pound nets and a number of dead floating sea turtles were documented around pound nets in recent years. The facts remain that turtles have been observed entangled in and impinged on pound net leaders during the spring.

*Comment 19:* Two commenters noted that the proposed rule failed to identify what action NMFS would take if the final rule is implemented as proposed and high strandings continue in the spring.

*Response:* Monitoring of potential mortality sources will continue to occur this spring, and the information gathered from these monitoring initiatives would inform what action NMFS would take if strandings continue. It is possible that additional mortality sources may be identified and appropriate actions taken. NMFS believes this final rule will result in reduced sea turtle mortality associated with pound net gear in the Chesapeake Bay. The final rule includes the framework mechanism that enables NMFS to make changes to the restrictions and/or their effective dates on an expedited basis in order to respond to new information and protect sea turtles.

*Comment 20:* Two commenters felt that healthy sea turtles can forage around the pound nets without being entangled or impinged, and the animals observed in pound net gear, and found stranded on Virginia's beaches, are sick, diseased (like some of those found in Florida), cold stunned, and tired. One additional commenter felt that strandings are a result of natural

selection, and that NMFS should not interfere with lack of recovery of those animals with weak genes.

*Response:* The ESA's prohibition against take applies to all endangered or threatened animals. A capture in fishing gear is still a take, regardless of the animal's condition and whether it is weak, sick, or in any other way compromised. Unless the take is authorized pursuant to a regulation, a permit, or in the Incidental Take Statement of a Biological Opinion, the person who incidentally takes a listed animal is subject to criminal penalties and fines. The condition of sea turtles is therefore not relevant to NMFS' determination to permit an additional exception to the take prohibitions.

In any event, NMFS has no information to suggest that the animals found entangled or impinged on leaders during the spring of 2002 and 2003 were unhealthy before their capture. The animals observed by NMFS as entangled and impinged have visually appeared healthy (e.g., not emaciated, not externally compromised). Granted, the live turtles and the dead turtles not necropsied may have had other problems besides those that are able to be visually observed. Necropsies were performed on 4 of the 7 dead entangled turtles found in pound net leaders in 2002 and 2003. One additional Kemp's ridley sea turtle is anticipated to be necropsied (found in May 2003); NMFS is waiting for the necropsy results from this animal. The other two dead animals were left in situ to monitor their status. Necropsy results from 2 of the 7 dead entangled turtles showed that the turtles had adequate fat stores, full stomach and/or intestines, and no evidence of disease. A necropsy by the Armed Forces Institute of Pathology on one of the dead Kemp's ridleys recovered from a leader found that "the animal was active and in good nutritional condition at the time of death" and concluded that entrapment in fishing gear was the cause of death. One of the 4 necropsy reports only stated that the turtle was female with nematodes and digested tissue in its digestive tract.

Most of the turtles stranded in Virginia have been moderately to severely decomposed (e.g., 85 percent in 2003). The ability to conduct necropsies is limited by the condition of the stranded animals, and severely decomposed turtles are not usually necropsied. The majority of the stranded turtles that were examined by necropsy in the spring of previous years had relatively good fat stores and full stomachs/digestive tracts, suggesting that they were in good health prior to their death. NMFS has no evidence to

suggest that sea turtles found in the Chesapeake Bay during the spring are weakened from their seasonal migration. There is also no evidence of widespread disease in these stranded animals. As referred to in a public comment, a Florida epizootic occurred from October 2000 through March 2001, although a few cases a year have been seen since then. The epizootic appears to have been limited to south Florida. The hallmark symptom was a varying degree of paralysis which affected voluntarily movements and certain reflexes. Forty-nine alive stranded loggerheads were confirmed to have been caused by the epizootic. However, a living animal was necessary to make the diagnosis. Many of the dead loggerheads found during that period may have also died from the same disease, but it was not possible to determine their cause of death. The animals that have stranded in Virginia have not exhibited the same symptoms as those found in the Florida stranding event that was associated with an epizootic, nor has the epizootic continued in any significant way beyond early 2001. In the early 1990s, four live stranded animals in Virginia exhibited signs of a central nervous system disturbance, later determined to be a bacterial encephalitis (George *et al.*, 1995). These animals were dull and listless when undisturbed, but when handled, they moved their flippers spastically and showed a hyperflexion of the neck. At this time, NMFS has no data indicating that the sea turtles found in Virginia pound nets have a central nervous system problem. As mentioned, NMFS is providing funding to conduct necropsies and lab analyses on fresh dead sea turtles this spring, which will hopefully provide additional information on the health of some of these stranded animals.

It is unlikely that the spring stranded animals in Virginia were cold stunned. The average water temperature on May 6 at the NOAA National Ocean Service Kiptopeke, Virginia station was 16.1 C from 1999 to 2002, 16.6 C on May 7, and 17.2 C on May 8. Average water temperatures in 2003 were 14.3 C, 15.1 C, and 17.1 C on May 6, 7, and 8, respectively, not notably different from the most recent 4-year average. Water temperatures generally increase gradually over the spring and summer, and in 2003, most of the sea turtle strandings occurred during the last two weeks of June, when water temperatures were warmer. For example, on June 22, the average water temperature at the Kiptopeke station was 21° C. Mansfield *et al.*, (2001) and Mansfield and Musick (2003) state that analyses by VIMS have

estimated that sea turtles migrate into the Chesapeake Bay when water temperatures warm to approximately 16 to 18° C. However, sea turtles do frequent waters as cool as 11° C (Epperly *et al.*, 1995). Cold stunning typically occurs during the time of the year when water temperatures are decreasing, not increasing, and is well documented in other areas. Sea turtles, the majority of them Kemp's ridleys, wash ashore cold stunned each fall/winter along the beaches of Cape Cod Bay, Massachusetts, beginning with the first sustained storm front after the Cape Cod Bay water temperatures have dropped to or below 10° C. From the available data on cold stunning and sea turtle preferences for water temperature, it is unlikely that the sea turtles found stranded and in pound net gear in Virginia during May and June are cold stunned.

Determining the cause of death in stranded sea turtles is difficult, given the level of decomposition of most stranded turtles and the lack of evidence, due in part to sea turtles' anatomy (e.g., hard carapace, scaly skin). However, the circumstances surrounding the spring strandings in Virginia are consistent with fishery interactions as a likely cause of mortality and, therefore, strandings. These circumstances include relatively healthy turtles prior to the time of their death, a large number of strandings in a short time period, no external wounds on the majority of the turtles, no common characteristic among stranded turtles that would suggest disease as the main cause of death, and turtles with finfish in their stomachs (which suggests interactions with fishing gear (Bellmund *et al.*, 1987) or bycatch discarded from vessels (Shoop and Ruckdeschel, 1982)).

As to whether these turtle mortalities may be the result of natural selection, anthropogenic impacts have impeded sea turtle recovery, significantly contributing to their endangered and threatened status. Anthropogenic mortality sources are considered to far outweigh natural mortality sources. There is no evidence to support the notion that turtles interacting with pound nets (or other fisheries gear) are genetically weakened and predisposed to incidental capture. As direct and indirect impacts to sea turtles continue through, for example, habitat destruction, marine debris and pollution, and incidental take in fisheries, dredging, and power plant operations, it remains necessary to attempt to recover and rehabilitate those sea turtles that may be able to be saved. Sea turtle populations have not yet

recovered, and as such, NMFS has a statutory obligation to manage and protect these species. Reduction of mortality from anthropogenic sources is necessary to achieve recovery of these species.

#### *Comments Related to Economic and Social Impact Assessment:*

*Comment 21:* Eleven comments were received recommending that NMFS work with the industry on this issue and develop and test pound net leader modifications.

*Response:* On September 3, 2003, VMRC convened a meeting with NMFS, representatives from the pound net industry, VIMS, the Virginia Marine Science Museum, and the Virginia Department of Game and Inland Fisheries, to discuss the 2002 and 2003 pound net leader monitoring results, high spring sea turtle strandings, and potential measures to reduce sea turtle interactions with pound net gear. At this meeting, NMFS expressed its desire to work with the industry to develop gear modification solutions and requested ideas on potential leader configurations.

NMFS has an effort underway, in conjunction with industry participants, to develop and test an alternative leader design along the Eastern shore during the spring of 2004. This alternative leader design is the non-preferred alternative 5 considered in the EA, but was not able to be fully analyzed with respect to benefits to sea turtles because of the lack of data. After monitoring and analyzing the results of this study, it will be determined if the modification is effective at reducing sea turtle capture, while retaining an acceptable level of target catch, or if additional research is necessary.

Additionally, NMFS has partnered with the National Fish and Wildlife Foundation to establish a fishing gear mini-grant program for sea turtles that is aimed at working with industry (and other interested public stakeholders) to promote research, development, and testing for alternative leader designs in the Virginia pound net fishery. Proposals were due on April 15 and funding decisions are expected to be made by July 15, 2004.

While research is ongoing and NMFS is committed to pursuing a gear modification solution for this fishery, it remains necessary to implement additional restrictions on the Virginia pound net fishery at this time due to the documented takes in leaders in compliance with the 2002 interim final rule and continuing levels of sea turtle mortality in Virginia waters.

*Comment 22:* Thirteen commenters expressed their concern with the high

economic impacts to fishermen from this proposed action, and one of these commenters believed that the economic impacts were underestimated and that economic burden from the proposed action would prohibit fishermen from fishing pound nets year round. Four of the 13 commenters recommended compensation to the fishermen that do not fish this season.

*Response:* NMFS used the best available information to estimate the economic costs to the pound net fishery. The overall economic impact may be considered underestimated since indirect economic impacts were not assessed. For example, processing plants or fish houses may be affected indirectly by the management measures imposed on this fishery.

NMFS only estimated the direct economic impacts, which are the impacts on the harvester. In the economic analysis of direct impacts, averages are reported, and an average may not reflect an individual's actual position. That is, what an individual actually earned in revenues may be less or more than the reported average. Also note the reported coefficient of variation (CV) for the anticipated revenue loss of \$40,474 under the proposed rule was 1.08 percent (See Table 5.1.2.6 in the EA). The CV is equal to the standard deviation divided by the mean (i.e., 1.08 percent = [ $\$43,712/\$40,474$ ]). That is, given a standard deviation of \$43,712, some harvesters may have earned as much as \$127,024 (=mean+2\*standard deviation=\$40,474+2\*( $\$43,712$ )) in the same area and during the same time period. It is the average revenue per harvester NMFS reports along with the statistical variation (reported in a CV).

Industry losses were overestimated. The total number of harvesters in the lower portion of the Virginia Chesapeake Bay was biased up by two to three harvesters. That is, these two or three harvesters can modify their leader mesh size versus remove their leaders. This results in industry losses being overestimated.

In summary, total economic impacts may be underestimated since indirect economic impacts were not included. Direct impacts on the individual were not over or underestimated, as averages were reported. Direct industry impacts were overestimated. This response refers to the economic impacts associated with the proposed rule, as the proposed rule is what was commented upon. However, with this final rule, the economic impacts to the pound net fishery are reduced as compared to the proposed rule. The economic impacts of this final rule are smaller than those evaluated for the

proposed rule. Fewer nets are affected due to the smaller closure area and leader mesh size outside the leader prohibited area is not further restricted. With this final rule, annual revenues per harvester would be reduced by 14.7 percent to 29.4 percent, depending on how many nets the harvesters set. Industry revenues would be reduced by 7.3 percent (= \$0.19M/\$2.6M). Without authorization from Congress, NMFS cannot provide compensation to industry. For details on how the reductions in revenues were calculated, refer to Sections 5.1.2 and 5.8.2 in the EA. Virginia's 2002 landings data indicated 31 harvesters (Table 5.1.2.3 in EA) landed fish from May 6 to July 15, and there were 53 harvesters that fished year round. Excluding the May 6 to July 15 time period in 2002, 16 harvesters fished in the lower bay and earned revenues of \$48,126 (CV=1.22). This implies there were six harvesters in the lower bay that did not fish from May 6 to July 15 in 2002. Therefore, some harvesters fishing pound nets do survive from an economic perspective by harvesting outside the proposed rule time period. However, NMFS does not have any information as to whether these six harvesters have alternative supplementary sources of income.

*Comment 23:* Six commenters expressed concern with the delay in publishing the proposed regulations, especially as the industry begins planning for the next fishing season early in the calendar year.

*Response:* NMFS has been working to alleviate the impacts of the Virginia pound net fishery on sea turtles as expeditiously as possible, in order to give the fishermen advance notification and ensure measures are in place before the historical period of high strandings. NMFS recognizes that the industry begins planning for the next fishing season in approximately December or January and is sensitive to fishermen's time constraints required to outfit their gear with mesh in compliance with required measures. NMFS issued the proposed rule as soon as possible after taking the necessary time to acquire and analyze the available data, explore the management alternatives, and prepare and review the necessary documents. Similarly, NMFS issued this final rule as soon as possible after thoroughly reviewing and considering public comments and determining if modifications to the proposed rule were necessary.

*Comment 24:* One commenter felt that the timeframe of the restrictions was too long and that fishing would be inappropriately curtailed when water

temperatures were too cold for sea turtles.

*Response:* NMFS believes that, given the available information, the time period for the pound net restrictions is appropriate. From 1994 to 2003, the average date of the first reported stranding in Virginia was May 13. However, sea turtle mortality would have occurred before the animals stranded on Virginia beaches. In order for the proposed pound net restrictions to reduce sea turtle interactions with pound net leaders, the proposed measures should go into effect at least 1 week prior to the stranding commencement date, or on May 6 each year. Implementing protective measures by May 6 would ensure they are in place at the time when sea turtles are expected to be in the Chesapeake Bay and are becoming vulnerable to mortality sources.

Based on historical Sea Turtle Stranding and Salvage Network (STSSN) stranding data, typically the peak of Virginia strandings has been from mid-May to mid-June. However, the stranding data show that the peak can occur earlier and later. For instance, in 2003, the stranding peak occurred during the last two weeks of June and strandings remained consistent through the second week of July (e.g., 48 sea turtles stranded from July 1–15, 2003). The 2003 stranding peak was 10–15 days later than in 2001 and 2002 (Swingle and Barco, 2003). Given that sea turtle presence in the Chesapeake Bay is dependent upon water temperature, which makes the stranding peak somewhat variable, it is important to ensure sea turtles are protected during the period of apparent vulnerability (as indicated by elevated strandings). While there is some concern that entanglements could continue until the end of July or throughout the sea turtle residency period in the Chesapeake Bay, based upon the available data on sea turtle entanglements, impingements, and stranding patterns, the greatest potential for sea turtles to interact with pound net leaders occurs during May and June, and extends into the first half of July. In some years the peak period of high strandings may be shorter than the time period addressed by this final rule, but historically, high sea turtle strandings have been documented throughout the proposed time period of the leader restrictions. Implementation of the gear restrictions from May 6 to July 15 will account for stranding peak variability among years and is expected to minimize the occurrence of sea turtle takes in the pound net fishery in the

spring and, thus, reduce the strandings that occur from this gear type.

While monitoring surface water temperature and implementing restrictions based on reaching a pre-designated water temperature may account for seasonal variability, enacting regulations based upon real time water temperature is impractical due to the amount of time required for the agency to implement and for fishermen to comply with the regulations, and the potential variability of water temperature within different locations in the Chesapeake Bay and within the water column. NMFS has considered historical surface water temperatures (not real time monitoring) in establishing previous area closures. Real time monitoring of water temperature as a trigger for regulations is not practical for this situation, nor is it appropriate given the predictable time period of annual spring strandings in Virginia. Further, NMFS believes that a consistent effective date better enables industry to plan its fishing activities, as fishermen would know in advance specifically when the restrictions would apply.

#### Changes From the Proposed Rule

Based upon public comments received, NMFS has determined that several modifications to the measures included in the proposed rule are warranted. Specifically, the area in the southern portion of the Chesapeake Bay where all pound net leaders are prohibited has been reduced, and the nearshore boundary to which the prohibition applies has been moved from the beach to offshore, excluding those nets set with the inland end of the leader 10 horizontal feet (3 m) or less from the mean low water line. This modification was deemed appropriate given public comments noting that there is a difference between the nearshore and offshore nets, and that this difference may impact sea turtle interaction rates, in particular the occurrence of impingements. As noted in the response to Comment 11, NMFS had originally considered the environmental conditions in the locations where the offshore and nearshore nets are set to be similar, based upon reports from NMFS observers and general understanding of the currents in the Chesapeake Bay (e.g., strong along the Eastern shore near the mouth of the Chesapeake Bay). Given the public comments indicating that the currents and take conditions are different between offshore and nearshore nets, NMFS considered those potential differences when reanalyzing the take information. The data support

this modification, in that in 2002 and 2003, offshore nets accounted for all of the observed impingements ( $n=14$ ) and eight of the nine observed entanglements. One dead sea turtle was observed entangled in a nearshore 8-inch (20.3-cm) stretched mesh leader along the Eastern shore. The difference in takes between the offshore and nearshore nets is statistically significant with a chi-square value of 3.841 and  $p<0.01$ . In the lower Chesapeake Bay (encompassing the proposed leader prohibited area), approximately 60 percent (13 of 22) of the active pound nets surveyed in 2003 were nearshore nets. In 2002 and 2003, there were 345 surveys of nearshore nets and 480 surveys of offshore nets throughout the Virginia Chesapeake Bay, and 13 surveys did not specify the location. NMFS recognizes that the best available information suggests that the boundary of the leader prohibited area should be modified to account for this distinction between the effects of offshore and nearshore nets on listed sea turtles.

Additionally, NMFS has determined that this final rule should not change the restricted leader mesh size outside the leader prohibited area from 12 inches (30.5 cm) to 8 inches (20.3 cm) stretched mesh. Based upon additional analysis on impingement to entanglement ratios by NMFS, it appears that restricting mesh size to less than 8 inches (20.3 cm) stretched mesh would not necessarily provide the anticipated conservation benefit to sea turtles. In addition to mesh size, the frequency of sea turtle takes may be a function of where the pound nets are set, with pound nets set in certain areas having a higher potential of takes for a variety of reasons, such as depth of water, current velocity, and proximity to certain environmental characteristics or optimal foraging grounds. Additional analyses, and perhaps data collection, is planned to be completed that may provide insights into the relationship between mesh size and sea turtle interactions. At this time, the mesh size threshold that would prevent sea turtle entanglements cannot be determined for mesh sizes below 12 inches (30.5 cm). Hence, at this time NMFS is not making an additional modification to leader mesh size and is retaining the mesh size restriction included in the 2002 interim final rule, specifically the restriction of leaders with greater than or equal to 12 inches (30.5 cm) stretched mesh (as well as leaders with stringers), outside the leader prohibited area. While some takes may still occur in less than 12 inches (30.5 cm) stretched mesh, retaining this mesh size restriction

should still provide a conservation benefit to sea turtles (Bellmund *et al.*, 1987).

This final rule also includes the contains the framework mechanism that was a component of the 2002 interim final rule, and of the status quo alternative included and analyzed in the EA. This mechanism enables NMFS to make changes to the restrictions based upon new information, and extend the effective date of the restrictions until July 30 on an expedited basis. This final rule does not reduce the allowable leader stretched mesh size to less than 8 inches (20.3 cm) as proposed, for reasons identified previously. NMFS intends to continue to monitor fisheries active in the Virginia Chesapeake Bay and ocean waters, including pound net leaders with a stretched mesh size measuring less than 12 inches (30.5 cm) outside the leader prohibited area. Retaining this framework mechanism is necessary to respond to any new information on the interactions between sea turtles and pound nets and ensure that sea turtles can be protected from additional take should monitoring document the entanglement of a live or dead sea turtle outside the leader prohibited area. The framework mechanism was excluded from the proposed rule due to difficulties experienced with enacting regulations on a real time basis. NMFS recognizes that delays have been experienced with the framework mechanism, as observed in 2003. To alleviate some of the temporal delays associated with the issuance of a framework measure, NMFS will prepare portions of the required documents ahead of time, in the event that a mid-season framework action is necessary.

In the proposed rule, NMFS stated that the purpose of the action was to prevent sea turtle entanglement in and impingement on pound net gear. NMFS continues to believe that sea turtles will be protected by this final rule, and that sea turtle entanglements in and impingements on pound net leaders will be reduced. However, this discussion of the final rule has noted that the goal of the action is to minimize or reduce sea turtle interactions with pound net gear, because sea turtle entanglements, and possibly impingements, may still occur in leaders outside the leader prohibited area. As noted previously, all documented sea turtle interactions, except one entanglement in an 8-inch (20.3-cm) stretched mesh leader, have occurred inside the leader prohibited area. It is believed that the measures in the final rule will be protective of sea turtles and reduce takes in this fishery, given that leaders are prohibited in the

area with most of the documented sea turtle takes. Given this information, with the recognition that NMFS is continuing to collect information on sea turtle and pound net interactions, the purpose of this action is to reduce future sea turtle entanglements in and impingements on pound net gear.

This final rule corrects an item related to year-round reporting that was inadvertently deleted in the proposed rule. The preamble to the proposed rule noted that all Virginia pound net fishermen would still be required to report all sea turtle interactions (e.g., dead or alive; entangled, impinged, or floated into their net) in any part of their pound net gear (e.g., pound, heart, or leader) to NMFS within 24 hours of returning from the trip in which the take was documented. However, the proposed regulatory text relating to the reporting of captured dead or injured sea turtles was inadvertently deleted and must be reinserted.

NMFS has also included in this final rule geographical boundaries for the leader mesh size restrictions in the Great Wicomico River and the Piankatank River, based upon a public comment requesting that the geographical areas in those Western Chesapeake Bay tributaries be better defined. This modification is for clarification purposes only and does not change the biological, economic, or social analysis included in the EA.

The final rule clarifies that this action adds a new exception to prohibitions on the take of threatened sea turtles, something that was not explicitly noted in the title of the proposed rule. The prohibitions against taking in 50 CFR 223.205(a) do not apply to the incidental take of any member of a threatened species of sea turtle during fishing or scientific research activities, to the extent that those involved are in compliance with all applicable requirements of 50 CFR 223.206(d). By adding the prohibitions and restrictions on leaders in the Virginia Chesapeake Bay to 50 CFR 223.206(d), this final rule adds a new exception and modifies the previous pound net related exception to the prohibitions on take of threatened sea turtles. NMFS has changed the title of this final rule to more accurately reflect what this rule entails, including the exception to the prohibitions on take.

#### Classification

This final rule has been determined to be not significant for purposes of Executive Order 12866.

The AA finds good cause under 5 U.S.C. 553(d)(3) to waive the 30-day delay in effective date of this final rule.

Such a delay would be contrary to the public interest because sea turtles are anticipated to occur in Virginia waters in May, during the 30-day delay period. Sea turtles are found to occur in water temperatures of 11° C and warmer. Analysis conducted by the NMFS Southeast Fisheries Science Center found that in week 17 (April 23 to April 29), week 18 (April 30 to May 6), and week 19 (May 7 to May 13), approximately 80 percent, 85 percent, and 90 percent, respectively, of the area encompassing the mouth of the Chesapeake Bay (from the COLREGS line to the 20-m (65.6-ft) depth contour) contained sea surface temperatures of 11° C and warmer (NOAA Fisheries, unpub. data, 2003). Data from 1993 to 2002 were included in the analysis. This indicates that water temperatures around the mouth of the Chesapeake Bay are well within sea turtles' preferred temperature range in late April and early May. There is no information to suggest that the water temperatures this year would be notably different than in previous years. As such, sea turtles are likely to be present in the Virginia Chesapeake Bay during the 30-day delay period, and at this time, these turtles would likely be subject to entanglement and impingement in pound net leaders and potential subsequent mortality.

NMFS has prepared a final regulatory flexibility analysis that describes the economic impact this final rule would have on small entities. A summary of the analysis follows:

The fishery affected by this final rule is the Virginia pound net fishery in the Chesapeake Bay. The final rule prohibits all offshore pound net leaders in a portion of the southern Chesapeake Bay, and retains the prohibition of leaders with stretched mesh greater than or equal to 12 inches (30.5 cm) and leaders with stringers in the remainder of the Virginia Chesapeake Bay, from May 6 to July 15 each year. Non-preferred alternative 1 would prohibit all pound net leaders in a portion of the southern Chesapeake Bay, and prohibit leaders with stretched mesh greater than or equal to 8 inches (20.3 cm) and leaders with stringers in the remainder of the Virginia Chesapeake Bay, from May 6 to June 30. Non-preferred alternative 2 would prohibit pound net leaders with 8 inches (20.3 cm) and greater stretched mesh, as well as leaders with stringers, in the Virginia Chesapeake Bay from May 6 to July 15. Non-preferred alternative 3 is similar to the non-preferred alternative 1, except that the pound and heart, in addition to the leader, must also be removed in a portion of the southern Chesapeake Bay,

and the time frame of the restrictions would be from May 6 to July 15 each year. Non-preferred alternative 4 would prohibit all pound net leaders from May 6 to July 15 in the Virginia Chesapeake Bay. In addition to the 8 inches (20.3 cm) and greater mesh size restrictions in a portion of the Virginia Chesapeake Bay, non-preferred alternative 5 would modify the pound net leader configuration in a portion of the southern Chesapeake Bay so that the mesh height would be restricted to one-third the depth of the water, the mesh would be required to be less than 8 inches (20.3 cm) and held with ropes 3/8 inches (0.95 cm) or greater in diameter strung vertically a minimum of every 2 feet (61 cm) and attached to a top line. Non-preferred alternative 6 includes the measures in the proposed rule, namely a prohibition of all pound net leaders in a portion of the southern Chesapeake Bay, and a prohibition of leaders with stretched mesh greater than or equal to 8 inches (20.3 cm) and leaders with stringers in the remainder of the Virginia Chesapeake Bay, from May 6 to July 15.

According to the 2002 VMRC data, there are 31 harvesters actively fishing pound nets from May 6 to July 15, with 10 harvesters located in the lower portion of the Virginia Chesapeake Bay and 21 harvesters located in the upper portion of the Virginia Chesapeake Bay. These 31 harvesters fish approximately 40 pound nets in the upper portion of the Virginia Chesapeake Bay (=21 harvesters x 1.9 pound nets/harvester) and 30 pound nets in the lower portion of the Virginia Chesapeake Bay (=10 harvesters x 3.0 pound nets/harvester). Based on 2000 to 2002 data, annual landings per harvester were 280,996 pounds (127,457 kg) in the upper portion of the Virginia Chesapeake Bay and 257,491 pounds (116,795 kg) in the lower portion of the Virginia Chesapeake Bay. Annual average revenues per harvester were \$64,483 (CV=0.73) and \$105,298 (CV=0.91) in the upper and lower region, respectively. From May 6 to July 15, landings per harvester were 96,946 pounds (43,973 kg) in the upper region and 95,380 pounds (43,263 kg) in the lower region. Estimated revenues per harvester were \$18,102 (CV=0.88) and \$40,474 (CV=1.08) in the upper and lower region, respectively.

Of the 31 harvesters, 33 percent of the harvesters (=10 located in the upper region +10 located in the lower region)/31 total harvesters) fishing from May 6 to July 15 would be affected by this action. Approximately 12 pound nets in total would be affected by this action,

all found in the lower portion of the Virginia Chesapeake Bay.

In the upper bay region, five of the seven alternatives, not counting the "no action" alternative, are the same. This final rule does not impose additional requirements on those leaders found in the upper bay region, so the revenue reductions would be zero. The non-preferred alternatives 1, 2, 3, 5, and 6 would require the leader mesh to be less than 8 inches (20.3 cm). In the upper portion of the Virginia Chesapeake Bay, two potential responses to the leader mesh size restrictions would be either choosing to not fish or switching to a smaller leader mesh size during the restricted period. If harvesters choose not to fish, their revenues decrease by 15.1 percent to 17.1 percent (depending on the time frame of the restrictions), since they incur revenue losses and the cost of removing their gear from the water. If a harvester switches to a smaller mesh leader, his or her revenues would be reduced by 8.4 percent. For purposes of this analysis, we assumed the harvesters will modify their gear since they want to minimize their economic loss. Therefore, in the upper bay region, annual revenues may be reduced by a low of 8.4 percent per harvester under non-preferred alternatives 1, 2, 3, 5, and 6, and 4 harvesters would be affected. Under non-preferred alternative 4, all leaders must be removed from the Virginia Chesapeake Bay. This alternative would impact all 21 harvesters in the upper region, and annual revenues per harvester would be reduced by 33.5 percent.

In the lower portion of the Virginia Chesapeake Bay where all offshore leaders are prohibited under the final rule, management actions vary between alternatives. Under all of the alternatives, all 10 harvesters would be impacted. With this final rule, annual revenues per harvester would be reduced by 14.7 percent to 29.4 percent, depending on how many nets the harvesters set. The economic impact under non-preferred alternative 1 would be more compared to the final action (34.5 percent reduction in annual revenues versus a maximum of 29.4 percent), because more nets would be impacted. The impact under the non-preferred alternative 3 would be greater than this final rule (50.3 percent reduction in annual revenues versus a maximum of 29.4 percent), because additional labor costs would be incurred to remove the heart and pound in addition to the leader and more nets would be affected. The impacts of non-preferred alternative 4 and non-preferred alternative 6 are the same, and

annual revenues per harvester would be reduced by 43.2 percent. Reductions in annual revenues per harvester would be less under non-preferred alternatives 2 and 5 in comparison to the final rule, since these non-preferred alternatives would allow harvesters to modify their gear and continue to fish. In the lower bay area, the non-preferred alternative 2 would reduce annual revenues per harvester by 8.6 percent to 12.1 percent, depending on how many nets they set. Under non-preferred alternative 5, annual revenues per harvester would be reduced by 12.1 percent. The status quo would not have economic consequences, at least in the short term.

Annual industry revenues are \$2.6 million for the pound net fishery. Under the final rule, industry revenues would be reduced by 7.3 percent (= \$0.19M / \$2.6M). Under non-preferred alternatives 1, 2, 3, 5, and 6, industry revenues would be reduced by 14.8 percent, 4.9 percent, 21.2 percent, 5.8 percent, and 18.3 percent, respectively. With the preceding five alternatives, 14 of 31 harvesters would be affected by the management actions. Under non-preferred alternative 4, all harvesters would be affected and forgone industry revenues would be reduced by 34.9 percent. Again, these numbers assume fishermen would switch to a smaller mesh leader and continue to fish in those areas with leader mesh size restrictions, instead of removing their leaders entirely. Non-preferred alternatives 2 and 5, although less costly to the industry, were not chosen as the preferred alternative because they cannot be evaluated for benefit to conservation of sea turtles. At this point in time, we are unable to determine whether leader mesh sizes less than 8 inches (20.3 cm) have a different catch rate than leaders with mesh between 8 and 12 inches (20.3 and 30.5 cm). As such, looking strictly at a mesh size restriction, non-preferred alternative 2 would not necessarily afford adequate protection for sea turtles in the lower Chesapeake Bay area where observed sea turtle interactions have been the highest. Non-preferred alternative 5 was rejected because it consisted of a gear modification that is currently untested as a means to reduce sea turtle interactions.

This action does not contain new reporting or record keeping requirements.

This final rule does not duplicate, overlap or conflict with other Federal rules.

Thirteen comments were received and addressed (see *Comments Related to Economic and Social Impact*

*Assessment*) on the initial regulatory flexibility analysis.

A formal consultation pursuant to section 7 of the ESA was conducted on this action. The Biological Opinion on this action concluded that the operation of the Virginia pound net fishery with NMFS' sea turtle conservation measures may adversely affect but is not likely to jeopardize the continued existence of the loggerhead, leatherback, Kemp's ridley, green, or hawksbill sea turtle, or shortnose sturgeon. An incidental take statement was issued for this action. Copies of this Biological Opinion are available by contacting (978) 281-9328 or FAX (978) 281-9394.

This final rule contains policies with federalism implications that were sufficient to warrant preparation of a federalism assessment under Executive Order 13132. Accordingly, the Acting Assistant Secretary for Legislative and Intergovernmental Affairs provided notice of the proposed action to the Governor of Virginia on March 3, 2004. No comments on the federalism implications of the proposed action were received in response to the March 2004 letter.

Dated: April 29, 2004.

**Rebecca Lent,**

*Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.*

**List of Subjects**

**50 CFR Part 222**

Administrative practice and procedure, Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements.

**50 CFR Part 223**

Administrative practice and procedure, Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements.

■ For the reasons set forth in the preamble, 50 CFR parts 222 and 223 are amended as follows:

**PART 222—GENERAL ENDANGERED AND THREATENED MARINE SPECIES**

■ 1. The authority citation for 50 CFR part 222 continues to read as follows:

**Authority:** 16 U.S.C. 1631 *et seq.*

■ 2. In § 222.102, the definition of "Pound net leader" is revised to read as follows:

**§ 222.102 Definitions.**

\* \* \* \* \*

*Pound net leader* means a long straight net that directs the fish offshore towards the pound, an enclosure that captures the fish. Some pound net

leaders are all mesh, while others have stringers and mesh. Stringers are vertical lines in a pound net leader that are spaced a certain distance apart and are not crossed by horizontal lines to form mesh. An offshore pound net leader refers to a leader with the inland end set greater than 10 horizontal feet (3 m) from the mean low water line. A nearshore pound net leader refers to a leader with the inland end set 10 horizontal feet (3 m) or less from the mean low water line.

\* \* \* \* \*

**PART 223—THREATENED MARINE AND ANADROMOUS SPECIES**

■ 1. The authority citation for part 223 continues to read as follows:

**Authority:** 16 U.S.C. 1531 *et seq.*

■ 2. In § 223.205, paragraph (b)(15) is revised to read as follows:

**§ 223.205 Sea turtles.**

\* \* \* \* \*

(b) \* \* \*

(15) Fail to comply with the restrictions set forth in § 223.206(d)(10) regarding pound net leaders; or

\* \* \* \* \*

■ 3. In § 223.206, paragraph (d)(2)(iv) is removed; (d) introductory text and (d)(2) paragraph heading are revised; and paragraph (d)(10) is added to read as follows:

**§ 223.206 Exemptions to prohibitions relating to sea turtles.**

\* \* \* \* \*

(d) *Exception for incidental taking.*

The prohibitions against taking in § 223.205(a) do not apply to the incidental take of any member of a threatened species of sea turtle (i.e., a take not directed towards such member) during fishing or scientific research activities, to the extent that those involved are in compliance with all applicable requirements of paragraphs (d)(1) through (d)(10) of this section, or in compliance with the terms and conditions of an incidental take permit issued pursuant to paragraph (a)(2) of this section.

\* \* \* \* \*

(2) *Gear requirements for trawlers—\**

\* \* \* \* \*

(10) *Restrictions applicable to pound nets in Virginia*—(i) Area closed to use of pound net leaders. During the time period of May 6 through July 15 each year, any offshore pound net leader, as defined in the definition for pound net leader in § 222.102, in the Virginia waters of the mainstem Chesapeake Bay, south of 37° 19.0' N. lat. and west of 76°

13.0' W. long., and all waters south of 37° 13.0' N. lat. to the Chesapeake Bay Bridge Tunnel (extending from approximately 37° 05' N. lat., 75° 59' W. long. to 36° 55' N. lat., 76° 08' W. long.) at the mouth of the Chesapeake Bay, and the portion of the James River downstream of the Hampton Roads Bridge Tunnel (I-64; approximately 36° 59.55' N. lat., 76° 18.64' W. long.) and the York River downstream of the Coleman Memorial Bridge (Route 17; approximately 37° 14.55' N. lat, 76° 30.40' W. long.) must be removed from the water so that no part of the leader contacts the water. All pound net leaders must be removed from the waters described in this subparagraph prior to May 6 and may not be reset until July 16.

(ii) *Area with pound net leader mesh size restrictions.* During the time period of May 6 to July 15 each year, any pound net leader in the Virginia waters of the Chesapeake Bay outside the area described in (i), extending to the Maryland-Virginia State line (approximately 37° 55' N. lat., 75° 55' W. long.), the Great Wicomico River downstream of the Jessie Dupont Memorial Highway Bridge (Route 200; approximately 37° 50.84' N. lat, 76° 22.09' W. long.), the Rappahannock River downstream of the Robert Opie Norris Jr. Bridge (Route 3; approximately 37° 37.44' N. lat, 76° 25.40' W. long.), and the Piankatank River downstream of the Route 3 Bridge (approximately 37° 30.62' N. lat, 76° 25.19' W. long.) to the COLREGS line at the mouth of the Chesapeake Bay, must have only mesh size less than 12 inches (30.5 cm) stretched mesh and may not employ stringers. South of 37° 19.0 N. lat. and west of 76° 13.0' W. long., and all waters south of 37° 13.0' N. lat. to the Chesapeake Bay Bridge Tunnel (extending from approximately 37° 05' N. lat., 75° 59' W. long. to 36° 55' N. lat., 76° 08' W. long.), the leader restriction applies to nearshore pound nets, as defined in the definition for pound net leader in § 222.102. Any pound net leader with stretched mesh measuring 12 inches (30.5 cm) or greater or any pound net leader with stringers must be removed from the waters described in this paragraph (d) prior to May 6 and may not be reset until July 16.

(iii) *Reporting requirement.* At any time during the year, if a sea turtle is taken live and uninjured in a pound net operation, the operator of the vessel must report the incident to the NMFS Northeast Regional Office, (978) 281-9328 or fax (978) 281-9394, within 24 hours of returning from the trip in which the incidental take was discovered. The report shall include a

description of the sea turtles condition at the time of release and the measures taken as required in paragraph (d)(1) of this section. At any time during the year, if a sea turtle is taken in a pound net operation, and is determined to be injured, or if a turtle is captured dead, the operator of the vessel shall immediately notify NMFS Northeast Regional Office and the appropriate rehabilitation or stranding network, as determined by NMFS Northeast Regional Office.

(iv) *Monitoring.* Owners or operators of pound net fishing operations must allow access to the pound net gear so it may be observed by a NMFS-approved observer if requested by the Northeast Regional Administrator. All NMFS-approved observers will report any violations of this section, or other applicable regulations and laws. Information collected by observers may be used for law enforcement purposes.

(v) *Expedited modification of restrictions and effective dates.* From May 6 to July 15 of each year, if NMFS receives information that one sea turtle is entangled alive or that one sea turtle is entangled dead, and NMFS determines that the entanglement contributed to its death, in pound net leaders that are in compliance with the restrictions described in paragraph (d)(10)(ii) of this section, NMFS may issue a final rule modifying the restrictions on pound net leaders as necessary to protect threatened sea turtles. Such modifications may include, but are not limited to, reducing the maximum allowable mesh size of pound net leaders and prohibiting the use of pound net leaders regardless of mesh size. In addition, if information indicates that a significant level of sea turtle entanglements, impingements or strandings will likely continue beyond July 15, NMFS may issue a final rule extending the effective date of the restrictions, including any additional restrictions imposed under this subparagraph, for an additional 15 days, but not beyond July 30, to protect threatened sea turtles.

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