

SUMMARY: This document denies Mr. Alan F. Van Horen's petition to amend Federal Motor Vehicle Safety Standard (FMVSS) No. 108, Lamps, reflective devices, and associated equipment, to permit an exterior lamp that would be a visual indicator that the vehicle is in its cruise control mode. The petition provided no information to support the petitioner's contention that an exterior lamp showing when a vehicle's cruise control was engaged would enhance safety, nor does NHTSA's experience and judgment suggest any safety benefits from such a lamp.

FOR FURTHER INFORMATION CONTACT: Mr. Chris Flanigan, Office of Safety Performance Standards, NHTSA, 400 Seventh Street, SW, Washington, DC 20590. Mr. Flanigan's telephone number is: (202) 366-4918. His facsimile number is (202) 366-4329.

SUPPLEMENTARY INFORMATION: By letter dated September 16, 1996, Mr. Van Horen petitioned the agency to amend FMVSS No. 108 to permit an exterior lamp that would serve as a visual indicator that a vehicle operator has engaged the vehicle's cruise control. Mr. Van Horen stated that the indicator would consist of a small green light located in the driver-side tail light housing and driver-side front parking light housing. The indicator would be illuminated when the vehicle's cruise control mode is activated. A silhouette type insignia could be used for color blind motorists. Mr. Van Horen argued that the indicator would contribute to highway safety by reducing "rubbernecking, accidents, and general traffic gridlock."

To establish a new vehicle safety specification, the agency decides, on the basis of data and analyses, that there is a significant safety problem and that the safety problem would likely be reduced by adopting that specification. The petitioner asserted that an external cruise control indicator would reduce "rubbernecking, accidents, and general traffic gridlock." However, the petitioner did not provide any information showing that that lack of a cruise control indicator contributes to crashes, nor is NHTSA aware of any such information from other sources.

Regarding "rubbernecking," the act of observing nearby activity while driving, the petitioner provided no information about how this indicator would reduce crashes occurring as a result of this act. Absent such information, NHTSA's judgment is that "rubbernecking" would not be reduced if vehicle operators were aware that adjacent vehicle operators had engaged their cruise control.

Regarding crashes, the petitioner did not submit any information showing how or how many crashes would be prevented if vehicle operators had this information about cruise control on adjacent vehicles. The agency's judgment is that crashes would not be reduced.

Finally, regarding the reduction of traffic gridlock, the petitioner did not submit any information as to how this indicator would reduce gridlock. The agency fails to see any relationship, let alone one relating to safety, between gridlock and vehicle operators' knowledge of whether adjacent vehicle operators have engaged their cruise control.

The petitioner has submitted no information to support the petition and the agency's judgment is that this indicator would offer no discernable safety benefit. At this time, NHTSA does not believe that changing its agency priorities or allocation of resources to further investigate these types of lamps would be beneficial to safety.

The agency also notes that the specific solution chosen, a green lamp in the same housing as a red tail lamp or an amber or white front parking lamp (or as pictured in the sample illustration provided by the petitioner, optically combined using a multi-color lens and the same optical compartment), would not be permissible under Federal rules. There is a specific provision against any lamp, reflective device, or other motor vehicle equipment that impairs the effectiveness of required motor vehicle lighting equipment. The agency believes that the proximity of the proposed green lamp to the required lamps would impair the effectiveness of required lamps by altering the perceived color of emitted light of the required lamp when the auxiliary green lamp is activated.

In accordance with 49 CFR part 552, this completes the agency's review of the petition. The agency has concluded that there is no reasonable possibility that the amendment requested by the petitioner would be issued at the conclusion of a rulemaking proceeding. Accordingly, it denies Mr. Van Horen's petition.

Authority: 49 U.S.C. 30103, 30162; delegation of authority at 49 CFR 1.50 and 501.8.

Issued on: January 22, 1997.

L. Robert Shelton,

Associate Administrator for Safety Performance Standards.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AD05

Endangered and Threatened Wildlife and Plants; Proposed Rule to List the Northern Population of the Bog Turtle as Threatened and the Southern Population as Threatened Due to Similarity of Appearance

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes to list the northern population of the bog turtle (*Clemmys muhlenbergii*) as threatened from New York and Massachusetts south to Maryland; and the southern population of bog turtle, which occurs in the Appalachian Mountains from southern Virginia to northern Georgia, as threatened due to similarity of appearance to the northern population, with a special rule, pursuant to the Endangered Species Act of 1973 Act), as amended. The bog turtle is threatened by a variety of factors which include: habitat degradation and fragmentation from agriculture and urban development; habitat succession due to invasive exotic and native plants; and illegal trade and collecting.

DATES: Comments from all interested parties must be received by April 29, 1997. Public hearing requests must be received by March 17, 1997.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Pennsylvania Field Office, U.S. Fish and Wildlife Service, 315 South Allen Street, Suite 322, State College, Pennsylvania 16801. The complete file for this rule is available for inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Carole Copeyon, Endangered Species Biologist, at the above address (telephone 814/234-4090; facsimile 814/234-0748).

SUPPLEMENTARY INFORMATION:

Background

The bog turtle was first described and named as Muhlenberg's tortoise (*Testudo muhlenbergii*) by Johann David Schoepff in 1801, based on specimens received in 1778 from Reverend Heinrich Muhlenberg of Lancaster County, Pennsylvania. In 1835, L.J. Fitzinger transferred the species to the genus *Clemmys*, where it remains today

(Barton and Price 1955). In 1917, Dunn considered the southern morph to be distinct and classified the southern population as *Clemmys nuchalis* (Amato *et al.* 1993). This taxon was subsequently synonymized with *Clemmys muhlenbergii* and researchers still question the taxonomic validity of the northern and southern morphs (Amato *et al.* 1993, Klemms *in press*). Initial data from recent preliminary genetic studies, based on examination of variability at the 16S ribosomal gene, suggest that there may not be any significant genetic differences between the northern and southern populations. However, due to the conservative nature of this gene in other turtle species, any definitive conclusions concerning genetic differences between the northern and southern populations is premature (Amato *et al.* 1993).

The bog turtle is sparsely distributed over a discontinuous geographic range extending from New England south to northern Georgia. A 250-mile gap within the range separates the species into distinct northern and southern populations (Klemens *in press*, Tryon 1990, Tryon and Herman 1990). The northern population extends from southern New York and western Massachusetts southward through western Connecticut, New Jersey and eastern Pennsylvania, to northern Delaware and Maryland. Disjunct populations previously occurred in western Pennsylvania and in the Lake George and Finger Lakes regions of New York. The western Pennsylvania and Lake George populations have been extirpated and only a remnant population exists at two remaining sites in the Finger Lakes region. The southern population occurs in the Appalachian Mountains from southwestern Virginia southward through western North Carolina, eastern Tennessee, northwestern South Carolina and northern Georgia.

Based on the disjunct distribution of this species, and the recognition by herpetologists of the existence of distinct allopatric northern and southern populations, the northern population of the bog turtle for the purposes of listing will be treated as a species (a distinct vertebrate population). The Act defines a species to include any subspecies of fish or wildlife or plants, or any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.

The bog turtle is the smallest member of the genus *Clemmys*, with the carapace (upper shell) of adults measuring 7.5–11.4 cm (3.0–4.5 in.) in length (Bury 1979). The domed carapace

is weakly keeled and ranges in color from light brown to ebony. The scutes of the shell often have lighter-colored centers resembling a starburst pattern (Herman and George 1986). The plastron (lower shell) is brownish-black with contrasting yellow or cream areas, often along the midline. This species is readily distinguished from other turtles by the large, conspicuous bright orange, yellow or red blotch found on each side of the head. The species is sexually dimorphic. Males have concave plastrons and long, thick tails and the vent is located beyond the posterior carapace margin. Females have proportionately higher carapaces, flat plastrons, relatively short tails, and the vent is located beneath the carapace edge (Bury 1979, Klemens *In press*).

Bog turtles are semi-aquatic and are only active during part of the year (Barton and Price 1955). In the northern part of their range, they are active from April to mid-October (Arndt 1977, Nemuras 1976). The difficulty of locating turtles in July and August may be a result of inactivity during that period (Lovich *et al.* 1992). Bog turtles hibernate from October to April, often just below the upper surface of frozen mud or ice (Chase *et al.* 1989). Their varied diet consists of beetles, lepidopteran larvae, caddisfly larvae, snails, nematodes, millipedes, fleshy pondweed seeds, sedge seeds, and carrion (Barton and Price 1955, Nemura 1967). Where population estimates are available, bog turtles have been found at densities ranging from 7 to 213 turtles per hectare (Chase *et al.* 1989). Chase *et al.* (1989) found an average of 44 turtles per site at his 9 Maryland study sites.

Female bog turtles reach sexual maturity between 5 and 8 years of age (Barton and Price 1955, Ernst 1977). Mating occurs in May and June, and in June or July, females deposit from two to six white eggs in sphagnum moss or sedge tussocks (Arndt 1977, Herman 1990, Herman and George 1986, Klemens *in press*). The eggs hatch after an incubation period of 42 to 56 days (Arndt 1977, Herman 1990) and the young emerge in August or early September (Arndt 1977, Barton and Price 1955). Infertile eggs are common (Arndt 1977, Herman 1990, Tryon 1990) and not all females produce clutches annually (Tryon 1990). Also, there is no evidence to suggest that multiple clutches are deposited in a single season.

Bog turtles inhabit shallow, spring-fed fens, sphagnum bogs, swamps, marshy meadows and pastures which have soft, muddy bottoms; slow-flowing water; and open canopies (Arndt 1977, Barton and Price 1955, Herman and George

1986, Klemens *in press*). In Maryland, Chase *et al.* (1989) reported that bog turtles were found in circular basins with spring-fed pockets of shallow water, a substrate of soft mud and rock, dominant vegetation of low grasses and sedges, and interspersed wet and dry pockets. In these types of habitats, bog turtles often utilize the runways or muskrats and meadow voles (Barton and Price 1955, Nemuras 1967, Taylor *et al.* 1984). Bog turtles range in elevation from near sea level in the north to 1500 m (4500 feet) in the south (Herman and George 1986).

Bog turtles are usually found in small, discrete populations in wetland habitats that are a mosaic of micro-habitats which include dry pockets, saturated areas, and areas that are periodically flooded (Collins 1990). They depend upon this diverse hydrological mosaic, utilizing shallow water in spring, and returning to deeper water in winter (Chase *et al.* 1989). Unless disrupted by fire, beaver activity, grazing, or periodic wet years; open-canopy wetlands are slowly invaded by woody vegetation. They undergo a transition and become closed-canopy, wooded swamplands that are unsuitable for habitation by bog turtles (Klemens *in press*, Tryon 1990). Historically, bog turtles probably moved from one open-canopy wetland patch to another, as succession closed wetland canopies in some areas, and natural processes (beaver activity or fire) opened canopies in other areas (Klemens 1989).

Several plant species commonly associated with bog turtles habitats are: alders (*Alnus* sp.), willows (*Salix* sp.), sedges (*Carex* sp.), sphagnum moss (*Sphagnum* sp.), jewelweed (*Impatiens capensis*), rice cut-grass (*Leersia oryzoides*), tearthumb (*Polygonum sagittatum*), arrow arum (*Peltandra virginica*), red maple (*Acer rubrum*), skunk cabbage (*Symplocarpus foetidus*) and bulrushes (*Juncus* sp. and *Scirpus* sp.) (Arndt 1977, Barton and Price 1955, Herman and George 1986, Taylor *et al.* 1984). Pedestal vegetation, such as tussock sedge (*C. stricta*) and sphagnum moss, are utilized for nesting and basking (Gelvin-Innvaer and Stetzar 1992, Klemens *in press*).

Presently, many wetlands occupied by bog turtles in agricultural areas are subject to livestock grazing. Light to moderate grazing may function to impede succession by preventing or minimizing the encroachment of invasive native and exotic plant species and it appears that moderate grazing helps to maintain an intermediate stage of succession (Smith 1994, Tryon 1990).

Due to the rarity in nature, its small size, and unique habitats, it is difficult

to obtain reliable bog turtle population demographics. This lack of data has led to a misconception as to the number of healthy populations found throughout the species' range. For example, some of the sites documented to support healthy populations consist primarily of old individuals. These populations are slowly disappearing due to negligible recruitment of juveniles over a sustained period of time (Klemens 1989).

A model, based on habitat characteristics, was developed to assess the capacity of sites to maintain viable populations of bog turtles. Known as the "Standardized Bog Turtle Site-quality Analysis" (Klemens, Wildlife Conservation Society, *in litt.* 1993), it groups bog turtle occurrences into sites based on the likelihood of turtles moving between documented occurrence locations and interbreeding. A site is ranked according to four factors: habitat size and degree of fragmentation; the presence of invasive plants and later successional species; immediate threats such as ditching, draining, filling or excavating the wetland; and the type and extent of land use practice in the area. Where adequate data are available, sites are also ranked according to population size and evidence of recruitment.

By using this site-quality analysis in 1993 and 1994, the suitability of almost every known northern population site was assessed and ranked by individuals (the primary bog turtle researcher(s) in each state) most familiar with each site. The ranking process resulted in each site receiving a numerical score, and based on these scores each site was then ranked as good, fair or poor. These rankings represent the suitability of the available habitat needed to maintain a viable bog turtle population. The classification system was based on researchers' best professional judgments regarding site suitability. The classifications based upon these scores are conservative for several reasons. Threats from illegal collecting were not considered in the rankings. Rankings were often based on interpretation of old maps (more than 10 years old). Recent land use changes such as development were not considered, and at some sites the presence of turtles was not confirmed for over 10 years.

Occurrence refers to a documented specific bog turtle location (a single wetland or a road-crossing sighting), one or more of which are included in a site. Due to widespread wetland habitat fragmentation throughout the turtle's range, most sites are often comprised of only one small extant occurrence, often isolated from other such occurrences.

In 1994, there were 165 known extant bog turtle sites within the northern population, 35 were classified as good, 57 as fair and 73 as poor. Since 1994, an additional 38 sightings were reported, 24 of which occurred in the State of New Jersey. The state-by-state summaries given below present information primarily about the status and distribution of extant northern bog turtle populations/sites within each state.

In Connecticut, bog turtles are found in the northwestern corner of the State in Fairfield and Litchfield counties. All five remaining populations are found on private lands; four of these populations are classified as fair and one as poor (Julie Victoria, Connecticut Division of Wildlife, *in litt.* 1994).

In Delaware, bog turtles were historically reported from 11 localities in the piedmont and coastal plain of New Castle County (Arndt 1977). Presently, only four sites are known to support bog turtles; two occur on state lands and two on private property (Lisa Gelvin-Innvaer, Jay Greenwood and Bill Zawaki, Delaware Division of Fish and Wildlife, *in litt.* 1994).

All three known bog turtle populations in Massachusetts occur on private property in southern Berkshire County. Two of these sites receive some degree of protection through landowner conservation agreements. One population is considered good, one fair and one poor.

Maryland's 65 remaining extant bog turtle sites occur in the piedmont region of Baltimore, Carroll, Cecil and Harford counties, with approximately 97 percent of the habitat privately owned and the other 3 percent in state ownership (Scott Smith, Maryland Department of Natural Resources, *in litt.* 1994). Seventeen of these sites are classified as good, 23 as fair and 25 as poor. In 1995-1996, five additional bog turtle sightings were documented from Harford, Baltimore, and Carol counties. However, most of these documented occurrences are components of previously identified and ranked sites (Smith, *in litt.* 1996).

In New Jersey, there are 35 known remaining bog turtle sites in Burlington, Hunterdon, Monmouth, Morris, Ocean, Sussex and Warren counties (James Sciascia, New Jersey Department of Fish, Game and Wildlife, and Robert Zappalorti, Herpetological Associates, Inc., *in litt.* 1994). Ten of these sites are classified as good, 10 as fair and 15 as poor. Approximately 90 percent of the turtle habitat in New Jersey is privately owned, with the state and Federal governments owning 5 percent each (Sciascia and Zappalorti, *in litt.* 1994).

Recent surveys conducted by the New Jersey Endangered and Nongame Species Program located an additional 24 bog turtle sites. From 1993-1995, the habitat suitability of 473 wetlands in Hunterdon, Somerset, Sussex, and Warren counties was assessed. Only 77 (16 percent) sites contained suitable habitat and bog turtles were found at only 8 of these wetlands (Sciascia 1996). In 1996, additional surveys conducted in Sussex County turned up 16 new bog turtle occurrences in calcareous fen habitats. These fens are restricted to a 40 square mile area in central Sussex and northern Warren counties. The 24 occurrences that were located between 1993 and 1996 were not evaluated using the Standardized Bog Turtle Site-quality Analysis. However, many of these new sightings are located near previously reported sites and are possibly parts of these sites (James Sciascia, New Jersey Department of Fish, Game and Wildlife, *in litt.* 1996).

The discovery of bog turtles in calcareous fen habitats is important to their conservation within this area of New Jersey and neighboring Pennsylvania. Fens are primarily shrub and herb communities formed in low-lying areas where groundwater percolates over limestone bedrock. This alkaline seepage water most likely retards the growth of canopy-closing trees such as red maple. This type of shrub/herb community can persist virtually unaltered, which could account for the presence of bog turtles (James Sciascia, New Jersey Department of Fish, Game and Wildlife, *in litt.* 1996).

The bog turtle's range in New York is concentrated primarily in the extreme southeastern corner of the state. Disjunct populations historically occurred in the Lake George area in eastern New York, in the Finger Lakes region in western New York, and in southcentral New York. The Lake George and southcentral populations have been extirpated, and only two extant bog turtle sites in Oswego and Seneca counties remain in the Finger Lakes region (Alvin Breisch and Michael Kallaji, New York Department of Environmental Conservation, and Paul Novak, New York Natural Heritage Program, *in litt.* 1994). Twenty-two potential sites remain in southeastern New York and only 17 are extant. Of the 19 remaining sites in New York (Oswego, Seneca, Columbia, Dutchess, Putnam, and Orange counties), 5 are considered good, 7 fair and 7 poor. Nearly all bog turtle habitat (99 percent) occurs on private lands; the remaining 1 percent is found on state lands (Breisch *et al.*, *in litt.* 1994).

In Pennsylvania, bog turtles are still found in 13 of the 17 counties from which the species was previously reported (Adams, Berks, Bucks, Chester, Cumberland, Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton and York). Of the 34 remaining sites, 2 sites are considered good, 8 fair and 24 poor. Approximately 85 percent of the bog turtle habitat is found on private lands, with the remainder occurring on state and Federal lands (10 percent and 5 percent, respectively) (Barton, *in litt.* 1994). Between 1994 and 1996, 9 new sightings were reported from Berks, Chester, and North Hampton counties. These sites have yet to be evaluated and appear to be small and marginal in quality.

Based on documented losses of bog turtles and their habitat, the northern population has declined by at least 50 percent over the last 20 years. Habitat destruction and illegal collecting for the pet trade are the primary threats to the species. Widespread alteration of bog turtle habitat has resulted in the draining, ditching, dredging, filling and flooding of wetlands for residential, urban and commercial development; road construction; agricultural activities; and, pond and reservoir construction. The proximity of many remaining bog turtle populations to rapidly developing areas also poses a significant threat to the species.

Previous Federal Action

The bog turtle was first recognized as a Category 2 candidate species by the Service in the December 30, 1982 Federal Register Notice of Review (47 FR 58454). It was later retained as a Category 2 species in subsequent notices of review (50 FR 37958 September 18, 1995; 54 FR 554 January 6, 1989; and 56 FR 58804 November 21, 1991). Reclassification of the bog turtle to Category 1 was reflected in the November 15, 1994 Animal Notice of Review (59 FR 58982). On February 28, 1996 (61 FR 7457), the Service published a notice of review that no longer included species formerly referred to as Category 2 candidate species. The notice revised the definition of the term "candidate" as taxa for which the Service has on file sufficient information on biological vulnerability and threats to list them and endangered or threatened species. The northern population of bog turtle was included as a candidate on this February 28 Notice of Review.

In the September 17, 1996, Notice (61 FR 48962) on priority guidance for Fiscal Year 1997, the guidance calls for giving highest priority to handling emergency situations (Tier 1) and

second highest priority (Tier 2) to resolving the listing status of the outstanding proposed listings. At this time, there is only one pending higher priority action in the Northeast Region and it will be handled by March, 1997. Thus, processing of this proposed rule to list the northern population of bog turtle as threatened is designated as a Tier 3 activity under the guidance and has been processed accordingly.

In 1975, the bog turtle was added to Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in order to monitor trade in the species. In 1991, the New York Zoological Society submitting a proposal to the Service requesting the transfer of the bog turtle from Appendix II to Appendix I of CITES (Anon. 1991). In response to a Notice (56 FR 33895; July 24, 1991) calling for changes to the CITES Appendices, a total of 13 comments were received concerning the bog turtle proposal. All commentors recommended transferring the bog turtle from Appendix II to Appendix I because: the increase number of bog turtles being advertised for sale, the increased being paid for individuals and pairs, and illegal trade was not being reported under CITES. In the March 4, 1992 Federal Register Notice (57 FR 7722), the Service announced that the Party members to CITES agreed to transfer the bog turtle from Appendix II to Appendix I; and on June 11, 1992, the species was officially added to Appendix I.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in Section 4(a)(1). These factors and their application to the bog turtle (*Clemmys muhlebergii*) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Habitat loss is a major factor for the past and present decline of bog turtles throughout much of their range. Wetland habitats have been drained and filled for development, agriculture, road construction, and impoundments. These activities have also severely fragmented the remaining habitat and have created physical barriers to movement; thus isolating existing bog turtle populations

from other such sites. Development and agriculture continue to cause indirect hydrological alterations of adjacent wetland habitats by changing the surface water flow into or out of occupied wetlands habitats. Stormwater retention basins in upland areas, if not maintained, lose their ability to store adequate stormwater for release into adjacent bog turtle habitat (Larry Torok, New Jersey Department of Environmental Protection and Energy, pers. comm. 1994). Development in the vicinity of wetlands also pose a threat when the water table is lowered due to the sinking of wells or if roads act as barriers to the normal flow of surface water (Klemens 1988, 1989). Urban and commercial development contribute to increased traffic (leading to increased bog turtle road kills), surface water pollution, and the accelerated succession of existing vegetation.

Untimely mowing or burning and the use of herbicides and pesticides on adjacent agricultural fields also degrade bog turtle habitat (Klemens 1988). Many wetlands occupied by bog turtles are located in agricultural areas that are subject to frequent livestock grazing. Light to moderate grazing functions to impede plant succession by minimizing the encroachment of invasive native and exotic plant species. However, heavy grazing destroys bog turtle habitat by cropping and trampling vegetation that is necessary for turtle nesting, basking, foraging and cover.

Three of Connecticut's eight known bog turtle sites have already been extirpated. A Fairfield County population was obliterated by industrial development, and two Litchfield County populations were destroyed by pond construction. In addition, residential development and natural plant succession are responsible for the partial loss of two extant populations in Litchfield and Fairfield counties (Victoria, *in litt.* 1994).

Only a small fraction of Delaware's freshwater wetlands are potential bog turtle habitat, and between 40 and 60 percent of the state's freshwater wetlands have already been lost (Tiner 1985). The four remaining bog turtle populations are threatened by invasive exotic plant species, collecting, and development (Gelvin-Innvaer and Stetzar 1992).

Of the 178 bog turtle occurrences (Taylor *et al.* 1984) representing 90 sites in Maryland, 25 have been lost in the last 15 years (Smith, *in litt.* 1994). Plant succession and exotic plant invasions have caused the extirpation of turtles at several sites, but most sites were lost due to wetland destruction and alteration, and stream channelization. In

addition, heavy grazing has been implicated in the loss of at least six sites (Smith, *in litt.* 1994).

Of the remaining 65 sites, 17 are considered good, 23 fair and 25 poor. Habitat at 31 of these sites has been partially destroyed or degraded. Causes of habitat loss include pond construction (6 sites), filling of wetlands (1 site), heavy grazing (4 sites), and the ditching, draining, tiling and stream channelization (13 sites) (Smith, *in litt.* 1994). In addition, flooding of turtle habitat from beaver activity poses a threat to many of the remaining populations.

In Massachusetts, there are four recorded sites for the state; three extant and one historic. The historical population was lost when the fen was inundated after dam construction. Of the three remaining extant populations, one site is threatened by the encroachment of giant reed and another site is threatened both by residential development and invasion of giant reed and alder (Klemens 1988). Although there are conservation agreements in place to protect the above two sites, they do not address the threats to habitat quality. In 1986, the fen at the poor site was ditched and the water was diverted for cattle use. The water supply has subsequently been restored to the fen and the habitat partially restored. However, much of the suitable bog turtle habitat in the state continues to be threatened by annual burning, severe overgrazing and chemical pollution from agricultural runoff (Klemens 1986, 1988).

Bog turtles have been extirpated from 10 of the 17 New Jersey counties in which they occurred (Bergen, Camden, Cape May, Gloucester, Mercer, Middlesex, Passaic, Salem, Somerset and Union counties). Surveys conducted in 1988 and 1989 revealed that 44 of the 68 known historic sites no longer appear to support bog turtles (Anon. 1991). By 1994, at least 53 sites had been lost; 33 to urban and commercial development and wetland alteration, and the remainder to plant community succession and the invasion of exotic plants (Sciascia and Zappalorti 1989, Sciascia and Zappalorti, *in litt.* 1994). One bog turtle site was recently destroyed when stormwater runoff from a development cut a channel through the wetland; thus draining the wetland and changing its vegetative composition (Torok, pers. comm. 1994). Many of the remaining populations are close to urban and suburban areas (the Philadelphia, Camden, and Trenton areas, and the New York City area) and are imminently threatened by development and collecting. Of the 35

remaining bog turtle sites in New Jersey (Sciascia and Zappalorti, *in litt.* 1994), 10 are considered good, 10 fair and 15 poor.

Bog turtles were reported from 17 counties in New York, but have been eliminated from 11 counties (Albany, Genessee, Onondaga, Otsego, Rockland, Sullivan, Tompkins, Ulster, Warren, Wayne and Westchester) (Breisch *et al.*, *in litt.* 1994). Of New York's 24 remaining sites, only 19 populations are extant; five are considered good, 7 fair and 7 poor. This represents a significant reduction in range and reflects the loss of at least 33 of 57 bog turtle sites.

The bog turtle's range in New York is now limited to the Lower Hudson River and Housatonic River drainages in the southeastern corner of the state, and to two sites in western New York. In western New York, five of the seven historic bog turtle sites have been lost. Two sites were eliminated due to plant community succession; one was destroyed by a sand and gravel operation; and two were eliminated due to plant succession and hydrological alteration associated with agricultural practices and construction of the Erie Canal (Breisch *et al.*, *in litt.* 1994; Collins 1990). Loss of the disjunct population in the Lake George watershed is attributed to plant succession, while the loss of Susquehanna River drainage population was caused by the construction of an interstate highway (Breisch *et al.*, *in litt.* 1994).

At least twenty-six known bog turtle sites have been lost in southeastern New York due primarily to road construction, impoundments, plant succession and development. In addition, the historic bog turtle sites on Staten Island were eliminated by development (Nemuras 1967). In western New York, the viability of the only two remaining sites is questionable. In 1989, no turtles were located during surveys conducted at the Oswego County site. The Seneca County site is threatened by over-collecting, plant succession and construction of an interstate highway through a wetland within 200 feet of existing bog turtle habitat (Breisch *et al.*, *in litt.* 1994).

Of the remaining 24 bog turtle sites in New York, most are of poor habitat quality. The presence of bog turtles at 5 sites is highly questionable since turtles have not been reported from these sites for 15 to 25 years. Most of the existing sites suffer from habitat degradation due to residential and commercial development, road construction and vegetational succession. At least 99 percent of bog turtle habitat in New York occurs on private lands and all but two of the remaining populations are

found in areas of high human population density.

In Pennsylvania, 28 of the 62 known bog turtle sites have been extirpated, especially in Mercer, Crawford, Delaware and Philadelphia counties. The reasons for the loss of a disjunct population represented by 3 historic locations in the northwestern counties, are unknown. However, much of the historic bog turtle habitat at Pymatuning Swamp was destroyed by construction of a dam.

Most bog turtle habitat is concentrated in the southeastern corner of the state, within portions of the Delaware and Susquehanna river drainages. Development and urbanization, road construction, and agriculture are largely responsible for the loss of bog turtle habitat in southeastern Pennsylvania and also several large cities are located in this area (Philadelphia, Harrisburg, Reading, Lancaster, and York). In the early 1960s, Robotham (*in Nemuras* 1967) documented the destruction of two bog turtle sites in Chester County (in the West Chester-Downingtown area). One site was destroyed after a road was constructed through the center of the marsh and the marsh was drained for development. The other site was destroyed by a road bypass, commercial development, and excavation of a lake.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The bog turtle is a target for pet collectors due to its rarity in the wild, distinctive coloration, and small size. Take (primarily illegal) both for the national and international commercial pet trade industry has occurred for many years. Collecting is a significant factor for the species decline and is an ongoing threat to its continued existence in the wild (Anon. 1991; Earley 1993; David Flemming, U.S. Fish and Wildlife Service, *in litt.* 1991; Herman 1990; Klemens *in press*; Stearns *et al.* 1990; Tryon 1990; Tryon and Herman 1990). During the last 5 to 10 years, an increasing number of bog turtles have been advertised for sale, and prices have increased substantially. This increase in price most likely reflects the increase in demand for the turtles; therefore, increasing the threats to the wild populations (Tryon and Herman 1990).

Atlanta Zoo personnel reported that from 1989 to early 1991, over 100 bog turtles were exported to Japan. These figures differ significantly from CITES data and represent a significant amount of unreported illegal trade (Anon. 1991). The World Wildlife Fund recently listed bog turtles as among the world's top 10

“most wanted” endangered species (Earley 1993).

Due to the threats facing bog turtle populations, the Society for the Study of Amphibians and Reptiles adopted a resolution calling for the prohibition of collection from wild populations (Stearns *et al.* 1990). Due to the small size of existing populations and the low reproductive and recruitment potential of this species, the removal of even a few breeding adults can do irrevocable damage to a population (Tryon 1990). Over-collecting has caused the reduction or extirpation of several bog turtle populations in Delaware (Anon. 1991), Maryland (Anon. 1991; Smith, *in litt.* 1994), Massachusetts (Anon. 1991), New Jersey (Farrell and Zappalorti 1989; Zappalorti, pers. comm. 1994), New York (Breisch, *in litt.* 1993; Breisch *et al.*, *in litt.* 1994; Collins 1990), and Pennsylvania (Ralph Pisapia, U.S. Fish and Wildlife Service, *in litt.* 1992). Many sites in these states have suitable habitat; but have a much-reduced bog turtle population, probably due to overcollecting.

Throughout its entire range, states regulate take through classification of the species as endangered (in Connecticut, Delaware, Massachusetts, New Jersey, New York, Pennsylvania and Virginia) or threatened (in Georgia, Maryland, North Carolina, South Carolina and Tennessee), yet trade in specimens continues.

Illegal trade is difficult to detect due to the questionable origin of turtles being offered for sale. Bog turtles are often “laundered” through states which either do not have native populations (e.g., West Virginia, Florida, California), or through states which have inadequate protection of their own bog turtle populations (Charles Bepler, U.S. Fish and Wildlife Service, *in litt.* 1993; Breisch, *in litt.* 1993; Michael Klemens, *in litt.* 1990). Hatchling and juvenile turtles marketed as “captive-born” are usually offspring from gravid adult females illegally brought into captivity and held until they deposit eggs. The eggs are then hatched in captivity, and the captive-born (but not captive-bred) offspring are then marketed or retained (Bepler, *in litt.* 1993).

A few specific instances of illegal bog turtle collecting and trade are reported below:

(1) An undercover office purchased eight bog turtles from a person who had collected them near Lancaster, Pennsylvania. Also, two additional bog turtles were recovered from persons who had gotten them from friends allegedly in the New York area (Bepler, *in litt.* 1993);

(2) An individual from New Jersey was arrested for bringing bog turtles from New Jersey to Florida and selling them as captive born. It is suspected that he collected about six turtles per year over a period of several years (Bepler, *in litt.* 1993);

(3) A reliable source in New York reported that over 2000 wild-caught bog turtles were shipped to Japan in a 2-year period (Murdock, *in litt.* 1990);

(4) Researchers found several turtle traps and a much diminished bog turtle population at an important bog turtle site in Pennsylvania (Pisapia, *in litt.* 1992); and,

(5) In 1993, a New Jersey resident purchased 47 bog turtles in Florida and since 1984 had also bought 20 additional bog turtles. This individual supposedly has an active breeding program for bog turtles (Terry Tarr, U.S. Fish and Wildlife Service, *in litt.* 1993).

The general consensus among bog turtle researchers, nongame biologists and law enforcement officials is that illegal collecting is occurring at a much greater rate than previously reported (Anon. 1991; Breisch, *in litt.* 1993; Flemming, *in litt.* 1991). Bog turtles are already extremely low in numbers throughout their range, and any additional take could eliminate marginal populations and hamper survival and recovery efforts.

Protecting existing sites for bog turtles can pose a threat when these specific sites are revealed and publicized. In addition to threats from the pet trade industry, bog turtles have been collected for exhibition at nature centers (Anon. 1991). Tryon and Herman (1990) report that on more than one occasion, landowners, fearing involvement from state or federal authorities, have drained (ditched) bog turtle habitat after researchers visited the site.

C. Disease or Predation

Bog turtles (particularly the eggs and young) are preyed upon by raccoons, opossums, skunks, foxes, snapping turtles, water snakes and large birds (Herman and George 1986). Predation by raccoons appears to increase in areas with high human density, since raccoons favor fragmented areas consisting of farmland, forests and residential development (Klemens 1989). In some cases, predation contributes to population declines by impairing reproductive recruitment so that the population age structure is skewed toward older individuals (Zappalorti and Rocco 1993).

D. The Inadequacy of Existing Regulatory Mechanisms

Bog turtles receive some degree of protection through state listings as endangered or threatened species and take from the wild within all range states requires a valid permit.

In Connecticut, the bog turtle is listed as endangered and the take of an endangered species is prohibited. Regulations require that any person owning or possessing a bog turtle, must register with the Wildlife Bureau of the Department of Environmental Protection. There are no special provisions for the protection of species of special concern under Connecticut's wetland laws and regulations and only about 10 percent of the permits issued by townships are checked for species of special concern (Doug Cooper, Connecticut Department of Environmental Protection, pers. comm. 1994).

The bog turtle is listed as endangered in Delaware and except under permit, it is unlawful to import, transport, possess or sell this species. Currently, there is no regulatory mechanism to protect wetland habitat since Delaware's wetland laws only address tidal wetlands.

In 1972, the bog turtle was listed as endangered in Maryland when only 5 of the 23 then known historic locations were extant. However, it was removed from the state endangered species list in 1982, after 173 new occurrences were discovered during surveys conducted between 1976 and 1978 (Smith 1994, Taylor *et al.* 1984). In 1992-1993, the Maryland Department of Natural Resources conducted follow-up surveys of the 178 locations documented to support bog turtle (Taylor *et al.* 1984). Of the 159 locations surveyed, bog turtle were found at 91 locations; this represents a 43 percent reduction of bog turtle occurrences over a 15-year period (Smith 1994). Based on the results of these recent surveys, bog turtles are now classified as threatened in Maryland. They also receive additional protection under the State's Reptile and Amphibian Possession and Permit Regulations, which regulate the possession, breeding, sale and trade of certain native reptiles and amphibians. Under these regulations, it is illegal to take bog turtles from the wild or to breed them in captivity. In addition, the regulations prohibit the possession, sale, offering for sale, trade or barter of any turtle with a carapace length less than 4 inches (which applies to most bog turtles due to their small size).

A portion of bog turtle habitat in Maryland receives some degree of

protection under the Nontidal Wetlands Protection Act. Habitat in agricultural areas receives little or no protection due to the Act's exemption of agricultural activities from permit requirements.

The species is classified as endangered in Massachusetts and it is unlawful to take or possess bog turtles without a permit. Currently no person in the state has a valid permit to possess bog turtles (Tom French, Massachusetts Department of Fisheries and Wildlife, pers. comm. 1994). Its habitat receives some degree of protection under the Massachusetts Wetlands Protection Act, which prohibits permitted projects from having an adverse effect on wetland habitat that support endangered and threatened species, or species of special concern. The Act also allows for a 100-foot buffer zone around such wetlands when activities in the buffer zone could result in the alteration of adjacent wetlands (Melvin and Roble 1990).

In New Jersey, the bog turtle is listed as endangered. It is unlawful to take, possess, transport, export, process, sell, offer for sale, or ship bog turtles without a permit. Bog turtle habitat receives some protection under the Exceptional Resource Value Wetland provision of New Jersey's Freshwater Wetland Protection Act. This Act allows for a 150-foot buffer zone around wetlands, a stringent permit review process, and prohibits activities that would likely jeopardize or destroy bog turtles habitat (Torok, pers. comm., 1994). Most agricultural activities are exempt from these regulations.

In New York, the bog turtle is listed as endangered and the animal and its parts (including eggs) are protected from unauthorized take, import, transport, possession, or sale. Wetlands occupied by an endangered or threatened species are classified as Class 1 Wetlands and they receive some protection from filling and excavation. Certain activities such as draining of wetlands for agriculture, are exempted from permitting requirements, as long as no excavations are required to accomplish the draining.

In Pennsylvania, the bog turtle is listed as endangered. It is illegal to catch, take, kill, possess, import, export, sell, offer for sale, or purchase any individual of this species, alive or dead, or any part thereof, without a special permit. Bog turtle habitat receives some degree of protection under state wetland regulations, which categorize wetlands that serve as habitat for endangered or threatened flora or fauna as "exceptional value wetlands." Issuance of permits to alter such wetlands is contingent upon meeting specific requirements.

The U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act regulates the discharge of all fill into waters of the United States, including navigable waters and wetlands. The Clean Water Act requires that project proponents obtain a permit from the Corps before undertaking any activity that would result in the fill of waters under the Corps' jurisdiction.

The Corps has promulgated nationwide permits in order to provide some measure of regulatory relief. Nationwide permits pre-authorize certain activities which meet special regulatory conditions. A pre-determination is made that certain activities will have minimal cumulative and environmental effects. Massachusetts has revoked nationwide permits and has adopted a State Programmatic General Permit. This general permit further refines the criteria for which projects require individual review.

The Corps promulgated nationwide permit Number 26 (see 33 CFR 330.5(1)(26)) to address fill in isolated or headwater wetlands totalling less than 10 acres in size. Under this permit, proposals that involve the fill of wetlands less than one acre in size are automatically authorized. When fills adversely modify anywhere between 1 to 10 acres of wetland, the Corps circulates a pre-discharge notification to the Service and other interested parties for comment in order to determine whether a permit is required for a proposed fill and its associated impacts.

The review process for the issuance of individual permits is more rigorous than for nationwide permits. Individual permit applicants are required to undergo a mitigation sequencing process that includes avoidance, minimization and compensation for any adverse environmental impacts. Unlike nationwide permits, an analysis of cumulative wetland impacts is required. However, standards have not been set for cumulative effect thresholds beyond those for which permitting activities are already restricted.

For nationwide permits, the Corps has discretionary authority to require an applicant to seek an individual permit if the Corps deems that the resources are important, regardless of the wetland's size. The Corps rarely requires an individual permit when a project qualifies under a nationwide permit, unless a threatened or endangered species or other significant resources are adversely affected by a proposed activity.

The bog turtle could potentially be affected by a project requiring a permit from the Corps under section 404 of the

Clean Water Act. The bog turtle is effected by agricultural practices which are exempt from regulation under section 404 of the statute. In addition to a Federal exemption for maintenance of existing agricultural drainage systems, other exempted activities include plowing, planting and harvesting in existing cropped wetlands as long as the activity is part of an on-going farming operation.

Finally, under section 401 of the Clean Water Act, all Federal permit actions, including section 404 activities, must also meet individual State Water Quality Standards. If a state views an activity as inconsistent with their Federally-approved standards, the state can deny certification.

While all range states have legislation protecting bog turtles from take, lack of uniform protection throughout the United States imperils the species by creating loopholes for illegal take and trade (Klemens, *in litt.* 1990). In addition, destruction and alteration of habitat are major factors for its decline, yet state and Federal provisions for protection of its habitat are non-existent. Wetlands inhabited by bog turtles are generally small, wet-vegetated, spring-fed bogs. These wetlands are often considered of low value and are drained, filled or converted into ponds, despite Federal and state wetland regulations. Due to provisions (agricultural exemptions, Nationwide Permits) in Federal and state wetland regulations, these wetlands are often given minimal regulatory protection.

On July 1, 1975, the bog turtle was added to Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and on June 11, 1992 (57 FR 20443), it was transferred from Appendix II to Appendix I. Both import and export permits are required from the importing and exporting countries before an Appendix I species can be transported, and an Appendix I species can not be exported for primarily commercial purposes. CITES permits are not issued if the export will be detrimental to the survival of the species or if the specimens were not legally acquired.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Plant community succession and the invasion of wetland systems by exotic plant species have also contributed to the decline of the bog turtle. Wetland habitats are in a state of transition; unless set back by fire, beaver activity, light to moderate grazing, or periodic wet years. The habitat continues to succeed into wooded swampland and

becomes unsuitable for bog turtles. Various human activities, such as fire suppression, beaver control, fertilizer runoff, draining and ditching, and filling of wetlands accelerate both natural succession and the invasion of exotic plants (Gelvin-Innvaer and Stetzar 1992, Klemens 1984).

Development and agriculture adjacent to bog turtle habitat can result in soil disturbance and increases in the nutrient and sediment load, thus allowing for the invasion of exotic species, such as multiflora rose, purple loosestrife, giant reed and reed canary grass, as well as native species such as red maple and alder (Klemens 1984, 1989, and *in press*).

Beavers pose a threat to isolated bog turtle populations by flooding the remaining suitable habitat within a watershed. Smith (*in litt.* 1994) reported that flooding caused by beavers now poses a threat to three bog turtle populations in Maryland.

Thick deposits of iron bacteria, suggesting possible contamination from pollutants, have been found at three bog turtle sites in Maryland. Reptile and amphibian populations at these sites are much lower in numbers than one would expect based on the habitat characteristics (Smith, *in litt.* 1994). Wetland habitats are also vulnerable to pollutants (oil and grease) carried by stormwater runoff. Farrell and Zappalorti (1989) reported that one New Jersey wetland occupied by bog turtles was degraded by trash and motor oil that was carried through a storm drain.

The bog turtle is also vulnerable to local extirpation and rangewide reduction due to: (1) the small numbers of individuals within many populations; (2) the isolation of existing populations; (3) the delay in reaching sexual maturity; (4) low juvenile recruitment rates; and (5) relatively low mobility and small home ranges (Arndt 1977, Chase *et al.* 1989). Isolation of populations prevents gene flow which can result in an inbred population with low fecundity. Further, isolation/habitat fragmentation prevents recolonization of existing habitat or colonization/expansion into newly created habitats (Collins 1990).

Vehicles and livestock pose a direct threat to bog turtles by killing and injuring individuals. Roads near sites contribute significantly to mortality as is evidenced by the number of dead turtles found along roadsides. Roads that are adjacent to or within wetlands pose the greatest threat to bog turtles (Arndt 1977). Large numbers of livestock within a wetland can also pose a threat by actually stepping on bog turtles (M.

Klemens, pers. comm., S. Smith, pers. comm.).

In developing this proposed rule, the Service has assessed the best available scientific and commercial information regarding the past, present and future threats faced by the species. Based on this evaluation, the preferred action is to list the northern population of the bog turtle as threatened and the southern population as threatened due to similarity of appearance. In spite of existing state protective regulations, the northern population has declined by approximately 50 percent over the past 20 years, and has experienced a significant decrease in its known range. Presently, less than 200 active sites remain in the north. Most of these consist of small wetlands isolated from one another and often in close proximity to human habitation. Critical habitat will not be proposed at this time for the northern population of bog turtles for the following reasons.

Critical Habitat

Critical habitat is defined in section 3 of the Act as: (1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection and; (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. Conservation means the use of all methods and procedures need to bring the species to the point at which listing under the Act is no longer required.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for the bog turtle at this time. Service regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

The publication of precise maps and descriptions of critical habitat in the

Federal Register would increase the vulnerability of the bog turtle to collection. Listing of the bog turtle as threatened also elevates the awareness to the rarity of the species, thereby increasing the likelihood of take by private and commercial collectors. The listing could lead to increased illegal take and the risk of eggs being accidentally destroyed by collectors searching for adult turtles.

Designation of critical habitat could also increase the vulnerability of bog turtle habitat to intentional destruction by landowners who do not want a protected species on their property. Based on past and continuing threats to the bog turtle and its habitat from illegal collecting and vandalism, the designation of critical habitat at this time would significantly increase these threats. Therefore, the Service has determined that designation of critical habitat at this time is not prudent. Protection of bog turtle habitat will be addressed through the recovery and section 7 consultation process.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery action, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, state, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the states, and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed for listing or is listed as endangered or threatened and with respect to critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(4) requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is subsequently listed, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action could affect

a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions that may require conference and/or consultation as described in the preceding paragraph include Army Corps of Engineers (Corps) involvement in projects such as the construction of roads and bridges, and the permitting of wetland filling and dredging projects subject to section 404 of the Clean Water Act (33 U.S.C. 1344 *et seq.*) and section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401 *et seq.*); National Resources Conservation Service projects; U.S. Environmental Protection Agency authorized discharges under the National Pollutant Discharge Elimination System and U.S. Housing and Urban Development projects. In addition, Federal involvement under section 7 would be expected for management and other land use activities on Federal lands with bog turtle populations.

The Act and implementing regulations set forth a series of general prohibitions and exceptions that apply to all threatened wildlife. The prohibitions, codified at 50 CFR 17.21, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and state conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving threatened wildlife under certain circumstances. Regulations governing permits are codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in the course of otherwise lawful activities. For threatened species, permits also are available for zoological exhibition, educational purposes, or special purposes consistent with the purposes of the Act.

It is the policy of the Service (59 FR 34272; July 1, 1994) to identify to the maximum extent practicable at the time a species is listed those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of the listing on

proposed and ongoing activities within a species' range. The Service believes, based on the best available information, that the following actions will not result in a violation of section 9:

- (1) Transferring individual turtles from roads to immediately adjacent habitat;
- (2) Light to moderate livestock grazing that prevents or minimizes the encroachment of invasive native and exotic plant species;
- (3) Possession of legally acquired bog turtles; and
- (4) Actions that may affect bog turtles and are authorized, funded or carried out by a Federal agency when the action is conducted in accordance with section 7 of the Act.

With respect to both the northern and southern populations of the bog turtle, the following actions would be considered a violation of section 9:

- (1) Take of bog turtles without a permit (this includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting any of these actions). However, with respect solely to the southern population, incidental take (see special rule below) would not be considered a violation of section 9;
- (2) Possess, sell, deliver, carry, transport, or ship illegally taken bog turtles;
- (3) Interstate and foreign commerce (commerce across state and international boundaries) and import/export (as discussed earlier in this section) without prior obtaining a threatening species, similarity of appearance, or CITES permit.

With respect solely to the northern population, activities that the Service believes could result in the take of bog turtles include, but are not limited to:

- (1) Destruction or alteration of the species habitat: by draining, ditching, discharging fill material, impoundment, water diversion, or activities that result in the destruction or severe degradation of wetland vegetation used by the turtles for nesting, basking, foraging or cover, except as outlined in (4) above; and
- (2) Discharging or dumping of toxic chemicals or other pollutants into wetlands occupied by the species.

Questions regarding whether specific activities may constitute a violation of section 9 should be directed to the Field Supervisor of the appropriate Service Field Office as follows: in Pennsylvania, the Pennsylvania Field Office, 315 S. Allen Street, Suite 322, State College, PA 16801 (814/234-4090); in Maryland and Delaware, the Chesapeake Bay Field Office, 177 Admiral Cochrane Drive, Annapolis, MD 21401 (410/224-2732); in New York, the New York Field

Office, 3817 Luker Road, Cortland, NY 13045 (607/758-9334); in Massachusetts and Connecticut, the New England Field Office, 22 Bridge Street, Concord, NH 03301-4986 (603/225-1411); and, in New Jersey, the New Jersey Field Office, 927 North Main Street, Building D1, Pleasantville, NJ 08232 (609/747-0620). Requests for copies of the regulations regarding listed wildlife and inquiries about prohibitions and permits may be addressed to U.S. Fish and Wildlife Service, 300 Westgate Center Drive, Hadley, Massachusetts 01035 (telephone 413/253-8200; facsimile 413/253-8482).

Similarity of Appearance

Section 4(e) of the Act authorizes the treatment of a species (subspecies or population segment) as endangered or threatened even though it is not otherwise listed as endangered or threatened if: (a) The species so closely resembles in appearance an endangered or threatened species that enforcement personnel would have substantial difficulty in differentiating between the listed and unlisted species; (b) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and (c) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of the Act.

There are only slight morphological differences in this species throughout its range (Amato *et al.* 1993; Nemuras 1967), making it extremely difficult to differentiate where bog turtles are taken from. Presently, the origin and legality of a specimen (specific wetland, locality or state) cannot be determined. This poses a problem for Federal and state law enforcement agents trying to stem illegal trade in the threatened northern population. The listing of the southern population as threatened due to similarity of appearance eliminates the ability of commercial collectors to commingle northern bog turtles with southern ones or to misrepresent them as southern bog turtles for commercial purposes. For these reasons, the Service proposes to list the southern population (occurring in the states of Georgia, North Carolina, South Carolina, Tennessee and Virginia) as threatened due to similarity of appearance to the northern population.

The special rule exempts incidental take of the southern population of bog turtles. Incidental take is take that results from, but is not the purpose of, carrying out an otherwise lawful activity. For example, legal application of pesticides and fertilizers, livestock grazing and other farming activities, mowing, burning, water diversion, and any other legally undertaken actions

that result in the accidental take of a bog turtle will not be considered a violation of section 9 of the Endangered Species Act in the Southern states of Georgia, North Carolina, South Carolina, Tennessee, and Virginia. The Service does not consider the southern population of bog turtles to be biologically threatened or endangered and believes that listing the southern population under the similarity of appearance provision of the Act, coupled with the special rule, minimizes enforcement problems and helps to conserve the northern population. It is the intent of the special rule to treat bog turtles from the southern population in the same way as the threatened northern population with regard to permit requirements for pre-Act wildlife (50 CFR 17.4) or captive bred wildlife (50 CFR 17.21(g)).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade (legal and illegal), or other relevant data concerning any threat (or lack thereof) to this species;
- (2) The location of any additional populations or occurrences of this species;
- (3) Additional information concerning the range, distribution, and population size of this species;

(4) Current or planned activities in the subject area and their possible impacts on this species; and

(5) The number, origin, location and legal disposition of bog turtles in captivity and/or trade.

Final promulgation of the regulations on this species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal in the Federal Register. Such requests must be made in writing and addressed to Field Supervisor (see ADDRESSES section).

Required Determinations

The Service has examined this proposed regulation under the Paperwork Reduction Act of 1995 and found it to contain no information collection requirements. This rulemaking is not subject to review by the Office of Management and Budget under Executive Order 12866.

National Environmental Policy Act

The Fish and Wildlife Service has determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to Section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination

was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited herein is available upon request from the U.S. Fish and Wildlife Service, Pennsylvania Field Office (see ADDRESSES section).

Author

The primary author of this document is Carole K. Copeyon (see ADDRESSES section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Proposed Regulation Promulgation

Accordingly, the Service hereby proposes to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat 3500, unless otherwise noted.

2. Section 17.11(h) is amended by adding the following, in alphabetical order under "Reptiles," to the List of Endangered and Threatened Wildlife, to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
* * * * *							
REPTILES							
* * * * *							
Turtle, bog (=Muhlenberg).	<i>Clemmys muhlenbergii</i> .	U.S.A. (CT, DE, GA, MD, MA, NC, NJ, NY, PA, SC, TN, VA).	Entire, except GA, NC, SC, TN, VA.	T	.....	NA	NA
Do .....	.....do .....	.....do	U.S.A. (GA, NC, SC, TN, VA).	T(S/A)	.....	NA	17.42(f)
* * * * *							

3. Amend § 17.42 by adding paragraph (f) to read as follows:

§ 17.42 Special rules—reptiles.

* * * * *

(f) Bog turtle (*Clemmys muhlenbergii*), southern population—(1) Definitions. For the purpose of this paragraph (f): bog turtle of the southern population shall mean any member of the species

Clemmys muhlenbergii, within Georgia, North Carolina, South Carolina, Tennessee and Virginia, regardless of whether in the wild or captivity, and

shall also apply to the progeny of any such turtle.

(2) Except as provided in paragraph (f)(3) of this section, the provisions of § 17.31 (a) and (b) of this part shall apply to bog turtles of the southern population (see also 50 CFR part 23).

(3) Take. Incidental take, that is, take that results from, but is not the purpose of, carrying out an otherwise lawful activity, shall not apply to bog turtles of the southern population.

Dated: January 17, 1997.

George T. Frampton, Jr.,
Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 97-2101 Filed 1-28-97; 8:45 am]

BILLING CODE 4310-55-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 678

[I.D. 092396B]

Atlantic Shark Fisheries; Extension of Comment Period

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and

Atmospheric Administration (NOAA), Commerce.

ACTION: Extension of comment period.

SUMMARY: NMFS extends the comment period for a proposed rule to adjust quotas and bag limits in the Atlantic Shark Fishery that was published in the Federal Register on December 20, 1996. The proposed rule would establish quotas and bag limits and implement prohibitions and requirements to reduce effective fishing mortality, facilitate enforcement, and improve management.

DATES: Written comments on the proposed rule must be received on or before February 7, 1997.

ADDRESSES: Written comments should be sent to William T. Hogarth, Chief, Highly Migratory Species Management Division (F/SF1), Office of Sustainable Fisheries, National Marine Fisheries Service, 1315 East-West Highway, Room 14853, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: C. Michael Bailey or John Kelly, 301-713-2347; fax 301-713-1917.

SUPPLEMENTARY INFORMATION: Although NMFS previously extended the comment period from January 21, 1997, to January 24, 1997 (62 FR 1872, January 14, 1997), NMFS has received requests

from the affected public that more time is necessary to submit their comments on the Atlantic shark fishery proposed rule (61 FR 67295, December 20, 1996). The proposed rule, as published, would reduce commercial quotas and recreational bag limits; establish a quota for small coastal sharks; prohibit the directed commercial fishing for, and landing or sale of, five species of sharks; establish a recreational tag-and-release only fishery for white sharks; prohibit filleting of sharks at sea; and restate the requirement for species-specific identification by all owners or operators, dealers, and tournament operators of all sharks landed.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: 23 January 1997.

George H. Darcy,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.
[FR Doc. 97-2107 Filed 1-24-97; 10:00 am]

BILLING CODE 3510-22-F