CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA
Amendments to Appendices I and II of CITES

Eleventh Meeting of the Conference of the Parties
Nairobi (Kenya), April 10-20, 2000

A. PROPOSAL

Inclusion of *Clemmys guttata* in Appendix II.

B. PROPONENT

United States of America

C. SUPPORTING STATEMENT

1. Taxonomy

1.1	Class:	Reptilia
1.2	Order:	Testudines
1.3	Family:	Emydidae
1.4	Species:	*Clemmys guttata* (Schneider, 1792)
1.5	Scientific synonyms:	none known
1.6	Common names:	
	English:	Spotted turtle
	Spanish:	none known
	French:	Tortue ponctuée

1.7 Code Numbers:

2. Biological Parameters

2.1 Distribution: In Canada, *Clemmys guttata* currently occurs in moderate numbers in eastern and southwestern Ontario (Litzgus 1996). The species is known from only two records in Quebec, however there are no records for the species in the province after 1992 (Bider and Matte 1994, cited in Litzgus 1996).

In the United States, the spotted turtle occurs from southern Maine southward through the eastern seaboard States to north-central Florida; it also occurs in the Upper Midwest (the lower peninsula of Michigan, northeastern Illinois, northern and central Indiana, central Ohio, and southwestern Pennsylvania) (Barnwell *et. al*. 1997, Ernst *et. al*. 1994, Graham 1995, Lovich 1988, Natural Heritage Central Databases (NHCD) 1999, Perillo 1997). Relatively isolated populations occur in Illinois, central Indiana, and in the western Carolinas.

2.2 Habitat availability: Spotted turtles live in mostly unpolluted, small, shallow bodies of water such as small marshes, marshy pastures, bogs, fens, woodland streams, swamps, small ponds, and vernal pools (Ernst *et. al*. 1994, NHCD 1999). They also occur in brackish tidal streams

(Ernst *et. al*. 1994). Habitat requirements include soft substrate and some aquatic vegetation (Ernst *et. al*. 1994). In a northeastern Indiana radio-tracking study, spotted turtles used cattails (*Typha*), sedge (*Carex*), and shrub areas preferentially (Barlow and Kingsbury 1999). Woods are often nearby or overhead, as in the case of floodplains and low areas (Mitchell 1994). In a northern Virginia radio-tracking study, sedge meadows and adjacent open, lowland forest habitats had the highest use (Wilson 1999a). Spotted turtles often bask along the water's edge, on brush piles in water, and on logs or vegetation clumps. When inactive, they hide in mud bottoms and detritus, or in muskrat burrows (Ernst *et. al*. 1994). In some parts of the range and during certain times of the year, the spotted turtle spends considerable time on land (Ernst *et. al*. 1994, NHCD 1999).

Cold season hibernation occurs in the muddy bottoms of waterways in communal hibernacula (Ernst *et. al*. 1994). They may hibernate in congregations of up to 23 individuals (Ernst *et. al.* 1994). Hibernacula usually have water depths of 55 to 95 centimeters with a slow but steady flow or drift of water through densely vegetated wetlands with a deep, soft, mucky substrate (Ernst *et al.* 1994). In the summer they aestivate in muskrat burrows, upland paludal forests, and upland fields (Ernst *et al.* 1994, Perillo 1997).

This species migrates up to hundreds of meters between water and terrestrial nesting area. Females may migrate outside of the usual home range to nest (Ernst 1970, Wilson 1994, 1997, NHCD 1999). Migration between wetlands occurs possibly to increase their mating opportunities (Perillo 1997). Frequently seen basking in the cooler spring months, spotted turtles are more difficult to find during summer months, when dense vegetation obscures their movements.

There are no estimates of the amount of suitable spotted turtle habitat still remaining in Canada or the United States

2.3 Population status: Spotted turtle courtship occurs from March to May. Copulation occurs either on land or in the water, usually in April. In June, females dig shallow, flask-shaped nests in sunny areas and deposit up to 8 (typically 3-5) eggs. Hatchlings emerge in late August and September or overwinter in the nest until the following spring. Females typically lay one clutch per year; multiple clutches (two or three) are rare in wild populations (Highfield 1996). Sexual maturity is attained in 7-10 years, or as carapace length reaches 8 cm (Ernst and Zug 1994).

The spotted turtle is a typical K-selected species. Wilson et al. (1999) consider the spotted turtle and other *Clemmys* species to be "especially vulnerable to increased mortality because of slow growth, delayed maturity, and high mortality of eggs and juveniles." Small clutch size further exacerbates this susceptibility (James Harding, herpetologist at Michigan State University Museum, pers. comm. with Office of Scientific Authority (OSA), U.S. Fish and Wildlife Service (USFWS), November 1999).

Population densities reported in the literature range from 0.05 to almost 80 turtles per hectare (ha) (Litzgus 1996). The lowest reported spotted turtle densities occur in Canada (Litzgus 1996). Chippindale (1984) estimated a density of 0.05 spotted turtles per ha in his study site in Ontario, while Litzgus (1996) reported 0.62 turtles per ha at another Ontario location. Northern populations may be limited by a shorter growing season and the harsher environmental conditions associated with northern climates (Litzgus 1996). Reported population densities in New York were 10.6 turtles per ha and 9.35 turtles per ha (Graham 1995, cited in Litzgus 1996). In Massachusetts, Graham (1995) reported a density of 6.66

turtles per ha, while in Lancaster, Pennsylvania, Ernst (1976) reported a density of 79.1 turtles per ha. Graham (1995) calculated a population density of 5.8 turtles per ha for a Maryland population studied by Ward et al. (1976). Wilson (1994) reported a population density of 2.2 turtles per ha for his study population in northeastern Illinois.

Reported spotted turtle population densities are low in comparison to reported population densities for other North American freshwater turtle species (Litzgus 1996). For example, reported densities for the painted turtle (*Chrysemys picta*) have ranged from 25 to 838 turtles per ha in marshes and ponds (Ernst *et al.* 1994). Reported densities for the slider turtle (*Trachemys scripta*) have ranged from 88 to 353 turtles per ha (Ernst *et al.* 1994).

The TNC/Heritage Distribution Ranking System classifies the status of the spotted turtle as follows: Connecticut (S4), Delaware (S3), District of Columbia (S3), Florida (S3), Georgia (S3), Illinois (S1), Indiana (S2), Maine (S3), Maryland (S5), Massachusetts (S3), Michigan (S3), New Hampshire (S3), New Jersey (S5), New York (S4), North Carolina (S4), Ohio (S3), Pennsylvania (S4), Rhode Island (S5), South Carolina (S5), Vermont (S1), Virginia (S3), and West Virginia (S1).[1]

In Connecticut, spotted turtles are considered uncommon in the Quinnipiac River watershed (http://www.qrwa.org/Program_File/Adopt_The_River/Dwindling_Turtle_Populations.html). The status of the species in Georgia is unknown (John Jensen, Georgia DNR, Nongame-Endangered Wildlife Program, pers. comm. with OSA, USFWS, November 1999). There are relatively few spotted turtles remaining in northeastern Illinois (Mauger 1988, Johnson 1983, Wilson 1994). Estimates are that approximately 200 individuals survived in Illinois as of Winter 1997/98 (Dreslik *et al.* 1998). Spotted turtles are very locally distributed in Maine. The Maine Department of Inland Fisheries and Wildlife (MDIFW) surveyed 2,500 wetlands between 1990 and 1995, and documented spotted turtle occurrence in approximately 100 locations (http://wlm13.umenfa.maine.edu/randy/www/tande/group/SpTurt.html). In New York, the species is known to occur in fewer than 200 locations, based on the results of a 10-year project to develop a statewide reptile and amphibian atlas (Al Breisch, Amphibian and Reptile Specialist, New York State Department of Environmental Conservation (NYDEC), pers. comm. with OSA, USFWS, November 1999). The status of the species in Virginia is unknown, largely because there is a lack of information on the extent of populations in threatened wetlands (Mitchell 1994). A more thorough inventory of spotted turtle populations in Virginia is needed (Mitchell 1994, Wilson et al. 1999).

2.4 Population trends: Spotted turtle population trends are difficult to quantify because few population surveys were conducted under pristine conditions (i.e., prior to extensive habitat alteration and collection of the species for the pet trade). The species appears to be locally common in some areas, but declining in many areas due to habitat loss and fragmentation, highway mortality, and excessive collection for the pet trade (NHCD 1999).

[1] Ranks are defined as follows: **S1 - Critically Imperiled** -- Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer occurrences or very few remaining individuals or acres. **S2 - Imperiled** -- Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 occurrences or few remaining individuals or acres. **S3 - Vulnerable** -- Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences. **S4 - Apparently Secure** -- Uncommon but not rare, and usually widespread in the state. Usually more than 100 occurrences. **S5 - Secure** -- Demonstrably widespread, abundant, and secure in the state, and essentially ineradicable under present conditions.

In Canada, the spotted turtle was considered common in southwestern Ontario in the late 1800s and early 1900s (Garnier 1881 and Nash 1905, both cited in Litzgus 1996). By the 1970s, concern for the spotted turtle in Ontario was mounting, because declines were evident throughout the whole province, and in specific localities (Oldham 1982, 1991, both cited in Litzgus 1996). There are no recent records of spotted turtles from the Lake Ontario area (Litzgus 1996). The species appears to remain abundant in only a few localized pockets in Ontario (Litzgus 1996). There are no records for the species after 1992 in Quebec (Bider and Matte 1994, cited in Litzgus 1996).

The species is apparently declining throughout much of its range within the United States, however better information is needed on the current population trend in the United States (NHCD 1999). In Connecticut, spotted turtles are considered to be declining in the Quinnipiac River watershed. Populations in northeastern Illinois have declined such that, at present, there are relatively few spotted turtles (Dreslik *et al.* 1998, Mauger 1988, Johnson 1983, Wilson 1994). Historically, the spotted turtle was considered the most abundant turtle in Massachusetts, but populations have declined substantially in the past century (Milam and Melvin 1997). Lovich (1989) documented the decline of spotted turtles in Cedar Bog, Champaign County, Ohio. He concluded that "the spotted turtle population at Cedar Bog has declined dramatically during this century to what may be a critical level" (Lovich 1989).

2.5 Geographic trends: Local extirpations have apparently caused the geographic range to contract or fragment. The spotted turtle's historic range in Illinois likely included much of the Chicago metropolitan area (Cook Co.); no individuals have been discovered in Cook County since the early 1950s (Dreslik *et al.* 1998). In Maine, the species has disappeared from historic range in southern Cumberland Co. (http://wlm13.umenfa.maine.edu/randy/www/tande/group/SpTurt.html). In New York, the spotted turtle was considered to be perhaps the most common turtle in the New York City area at the turn of the century, but today occurs in only a few isolated populations in protected areas (A. Breisch, NYDEC, pers. comm. with OSA, USFWS 1999). And, although the spotted turtle previously occurred in Quebec, at least marginally, there are no records for the species in Quebec after 1992 (Bider and Matte 1994, cited in Litzgus 1996).

2.6 Role of the species in its ecosystem: Spotted turtles are both predator and prey in the aquatic, semi-aquatic, and terrestrial habitats they utilize (Ernst *et al.* 1994). Spotted turtles and their eggs are preyed on by skunks (*Mephitis*) and, especially, raccoons (*Procyon*). Animal foods, eaten live or as carrion, include aquatic insect larvae, small crustaceans, snails, frog tadpoles, salamanders, and small fish (Ernst *et al.* 1994).

Because they are found primarily in unpolluted bodies of water, spotted turtles may be an indicator of habitat quality (Thomas P. Wilson, graduate student in Department of Biology, George Mason University, pers. comm. with OSA, USFWS, November 1999). They appear to be less common or disappear entirely from water bodies with high sediment loads or other pollutants.

2.7 Threats: The primary threats to spotted turtles are habitat degradation, destruction and fragmentation (caused by, among others, introduction of invasive plant species, grazing of domestic livestock, cultivation, draining and filling of wetlands, reservoir construction, natural habitat succession, human disturbance, and pollution), over-collection, predation, and road mortality (Behler 1996, Ernst *et al*. 1994, Graham 1995, Wilson 1999b, NHCD 1999).

Habitat destruction has been suggested as a reason for spotted turtle population declines in

Indiana and Ohio since the 1970s (Minton 1972, Smith *et al.* 1973) and 1980s (Minton *et al.* 1982, Lovich and Jaworski 1988). In Illinois, pollution and urban development have destroyed most of the spotted turtle's cattail marsh and sedge meadow habitats, and remaining habitats are continually threatened by these two factors (Dreslik *et al.* 1998). Increasing human populations and associated development in the last two decades have reduced the quantity and quality of the spotted turtle habitat in southern Maine and southeastern New Hampshire, as well as in many other parts of its range (NHCD 1999). At one site in Lancaster Co., Pennsylvania, the *Clemmys* population declined about 67 % in 20 years (1965-1985) because of wetland drainage (C. Ernst, Distinguished Professor of Biology, George Mason University, *in litt*. to OSA, USFWS, November 1999). Smaller wetlands favored by this species are often not protected by wetland conservation laws.

Nest predation and road kills may increase as development fragments the landscape (NHCD 1999). Warm season draw-downs of wetlands for game management can initiate emigrations of turtles that result in significant road kills (NHCD 1999).

Legal and illegal commercial exploitation (for both domestic use and export) and incidental collecting have impacted and continue to impact spotted turtle populations in many parts of the species' range (NHCD 1999). Lovich (1989, cited in Wilson, in prep.) cited the commercial pet trade as a reason for spotted turtle declines in over 50 % of the range. Over-collection has been suggested as a reason for spotted turtle population declines in Indiana and Ohio since the 1970s and 1980s (Smith *et al.* 1973, Minton *et al.* 1982). Several professional herpetologists have reported known or suspected population declines or extirpations as a result of over-collecting for the pet trade (see Section 3.4 Actual or potential trade impacts).

Another possible threat awaits this species in the future – global warming (Dr. Carl Ernst, Distinguished Professor of Biology, George Mason University, *in litt*. to OSA, USFWS, November 1999). *C. guttata* has temperature-dependent sex determination. Should its nesting environment become hotter in the future, the sex ratio is likely to be skewed toward primarily- or all-female clutches (the normal sex ratio is 1:1). Also, the spotted turtle is a cold-adapted species (Ernst 1976, Ernst 1982). Warming will adversely affect its behavior and possibly dry up many of the shallow wetlands where it occurs.

3. Utilization and Trade

3.1 National utilization: Spotted turtles are being collected from the wild for the domestic pet trade in the United States (Ernst 1995), however the number of animals collected each year for domestic pet use has not been quantified. More than 1,100 spotted turtles were legally taken by a commercial collector in North Carolina in 1993-94 (A. Braswell, North Carolina State Museum, pers. comm. with OSA, USFWS, November 1999).

Dr. Carl Ernst, a world-renowned herpetologist, reports that "spotted turtles are showing up in pet stores in this country more and more often..." (C. Ernst, Distinguished Professor of Biology, George Mason University *in litt.* to OSA, USFWS, November 1999). Spotted turtles are being offered for sale on commercial price lists. One company sells spotted turtles for US $200 per pair (West Coast Zoological, Inc. web site: http://www.westcoastzoo.com/turtle%20prices.htm). Another offers individual turtles for sale at US $149.99 (Alligator Alley web site: http://www.alligatoralley.com/retail.htm).

There is some captive breeding of spotted turtles for the domestic pet trade in the United States, however annual production has not been quantified. One commercial captive-

breeding operation offers first and second generation spotted turtles for export or bonafide

educational or scientific purposes for US $100 (Riparian Farms web site: http://personal.riverusers.com/~richardfife/index.html).

3.2 Legal international trade: Table 1 summarizes declared spotted turtle imports to and exports from the United States for 1995 through 1999 (data from U.S. Fish and Wildlife Service, Division of Law Enforcement). Declared imports totaled 196 individuals for the five years, while declared exports totaled 1,203 individuals. Declared exports averaged 291 individuals per year for the four years with complete data. The accuracy of these international trade data is unknown (i.e., the extent of under-reporting of imports and exports is unknown).

Table 1. Declared U.S.A. imports and exports of *Clemmys guttata*, 1995 – 1999. (1999 data are incomplete)

Year	Number of Specimens Imported	Number of Specimens Exported
1995	185	247
1996	-	168
1997	4	559
1998	3	188
1999	4	41
TOTAL	**196**	**1,203**

3.3 Illegal trade: Litzgus and Brooks (1999) state that there is anecdotal evidence of some poaching of both spotted turtles and wood turtles in southwestern Ontario, Canada. J. Litzgus actually encountered a person she believed to be a turtle poacher in her study site in Ontario (Wilson 1999b). A herpetologist with the Wildlife Conservation Society was working in his spotted turtle study site in New York State when he encountered a person who had collected a number of spotted turtles from the site (A. Breisch, NYDEC, pers. comm. with OSA, USFWS, November 1999). Because the study site was a New York State Wildlife Management Area, the collection was illegal, and the herpetologist made the person return the turtles to the wild. In June 1998, state and federal agents raided a house in Bedford Co., Pennsylvania and confiscated more than 60 illegally-held turtles, including 28 spotted turtles (Blankenship 1999). The defendant had been observed selling illegally-obtained turtles on several occasions prior to his arrest (Andrew Shiels, Pennsylvania Fish and Boat Commission, pers. comm. with OSA, USFWS, November 1999). It was the largest case involving illegal possession and sale of reptiles and amphibians in Pennsylvania history.

3.4 Actual or potential trade impacts: Legal and illegal commercial exploitation and incidental collecting has and continues to impact spotted turtle populations in many parts of the species' range (NHCD 1999). Lovich (1989, cited in Wilson, in prep.) cited the commercial pet trade as a reason for spotted turtle declines in over 50 % of the range. Litzgus and Brooks (1999) state that *Clemmys* are particularly vulnerable to collection in southwestern Ontario. Over-

collection has been suggested as a reason for spotted turtle population declines in Indiana and Ohio since the 1970s and 1980s (Smith *et al.* 1973, Minton *et al.* 1982). Dr. Carl Ernst, Distinguished Professor of Biology at George Mason University and world-renowned herpetologist, knows of three formerly large, healthy populations that have been extirpated by pet trade collectors in the past 20 years (C. Ernst, *in litt*. to OSA, USFWS, November 1999). One in Lancaster Co., Pennsylvania, had 300-400 individuals in 1980, but none are found at the site today. The other two populations, both about the same size as the Pennsylvania population, were in northern Virginia. One has had no spotted turtles since 1989, and the other has had only two spotted turtles since 1985. James Harding, a herpetologist with the Michigan State University Museum, has strong circumstantial evidence that collectors wiped out his study population of 20-25 spotted turtles in south-central Michigan in the early 1970s (J. Harding, pers. comm. with OSA, USFWS, November 1999). Alvin Braswell of the North Carolina State Museum reports that spotted turtles were difficult to locate in Hyde and Tyrrell Cos., North Carolina, after a collector removed more than 1,100 from the wild in 1993-94 (A. Braswell, pers. comm. with OSA, USFWS, November 1999).

3.5 Captive-breeding or artificial propagation for commercial purposes (outside country of origin): Spotted turtles are apparently being bred in captivity as an aquarium/pet species by the Fuxiang Aquarium Co., Shanghai, China (http://www.fuxiangaquarium.com/turtle.htm).

4. Conservation and Management

4.1 Legal status:

4.1.1 National: Although the spotted turtle is protected as endangered or threatened, or is considered a species of special concern in many of the States and Provinces were it occurs, protection is not consistent across its range (Graham 1995, Levell 1997).

In Canada, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) recently listed the spotted turtle as "vulnerable" (Litzgus and Brooks 1999). Protection for the spotted turtle in Canada has been enhanced with the recent implementation of a new Fish and Wildlife Conservation Act, a new set of regulations, and several new policies and procedures (John Brisbane, Ministry of Natural Resources, Ontario, Canada, *in litt.* to Charles Dauphine, Canadian CITES Scientific Authority, Canadian Wildlife Service, November 1999).

In the United States, the spotted turtle is protected in many of the States where it occurs (Appendix 1). In Illinois, the species is protected from being collected from the wild. The species is protected as "threatened" under the Maine Endangered Species Act. It is also listed as threatened in Vermont and Indiana, and protected under the respective state endangered species laws. In Michigan, state regulations prohibit taking spotted turtles from the wild or possession of one without a scientific collector's permit issued by the Department of Natural Resources. This turtle is a species of "special concern" in West Virginia, New York, and Massachusetts. In Massachusetts, the spotted turtle is protected by the Massachusetts Endangered Species Act and by the state's Wetlands Protection Act. In Georgia, this species is protected on state lands and it is also protected from habitat destruction or harassment on private lands.

Throughout its range, various Federal, State, and municipal regulations that protect wetlands may provide some indirect protect for the species as well.

4.1.2 International: None known.

4.2 Species management:

4.2.1 Population monitoring: Considerable effort has gone into surveying for spotted turtles in Vermont since 1984 (M. Ferguson, Vermont Natural Heritage Program, pers. comm. with OSA, USFWS 1999). The Vermont Natural Heritage Program, in conjunction with The Nature Conservancy of Vermont, is monitoring this species on one site (M. Ferguson, pers. comm. with OSA, USFWS 1999).

There has been ongoing research and monitoring of spotted turtles in Maine (M. McCollough, Endangered Species Group, MDIFW, pers. comm. with OSA, USFWS, November 1999). Movements, populations, and habitat use are being monitored on a 4-sq-mile area in York County. Surveys were conducted between 1990 and 1995 in York, Cumberland and Oxford county towns, with more than 2,500 wetlands searched. The ultimate plan is to design a wetland conservation reserve program to protect a minimum viable population; smaller wetlands that contain spotted turtle populations are not currently protected by the state (M. McCollough, pers. comm. with NHCD 1999).

David Carroll has been observing a population of spotted turtles in a roughly 5-ha (12-acre) wetland complex and its associated waterways in southern interior New Hampshire since 1983. As time permits he may make less-detailed investigations in other parts of the state (D. Carroll, pers. comm. with NHCD 1999).

There has been ongoing monitoring of spotted turtle populations in Illinois since 1987. Surveys are conducted every 2-3 years (T. Wilson, pers. comm. with OSA, USFWS, November 1999).

4.2.2 Habitat conservation: Spotted turtle habitats are protected in a number of federal, state, local, and private preserves and natural areas throughout the species' range. It is not possible (or desirable) to include in this proposal a complete, accurate list of all protected areas where spotted turtles are known to occur.

The Nature Conservancy has recommended the following habitat conservation measures for the spotted turtle:

1. Restoration Potential:
Wetland restoration and landscape level planning can increase the connections among suitable habitat patches; this could help improve the security of existing populations. The natural reconstruction or human replacement of beaver dams, lesser impoundments, and channels may be beneficial, as all appear to have historically led to the creation of wetland complexes that this turtle favored (D. Carroll, pers. comm. with NHCD 1999).

2. Preserve Selection & Design Considerations:
Preserves should be designed around wetland complexes and include adequate habitat for nesting and estivation. Priority should be given to habitat well-removed from paved and all but minimum-use dirt roads and buffered from commercial and

incidental collecting. Nesting habitat should be extensive, varied, centrally located

within the overall habitat, and buffered against human access and activity. Habitat integrity must be maintained and secured so that populations have the ability to disperse and interchange genes with other populations.

4.2.3 Management measures: The Nature Conservancy has recommended the following management measures for the spotted turtle:

1. Management Requirements:
Nesting habitat is conducive to protection, restoration, creation, and management (D. Carroll, pers. comm. with NHCD 1999). In nesting areas, setting back plant succession every 5 to 25 years would be beneficial. Preventing the invasion of non-native plants (purple loosestrife and common reed) and eradicating them from spotted turtle habitat is essential (D. Carroll, pers. comm. with NHCD 1999). Restoration of wetlands would be beneficial in some areas. Maintenance of high water quality is important; the degradation of water quality leads to a tendency to emigrate in search of more desirable habitat.

2. Headstarting:
Headstarting of hatchlings is not recommended, except in cases of severe species decline (D. Carroll, pers. comm. with NHCD 1999). However, if practiced, hatchlings should be released at nest sites, rather than transporting them to wetlands (NHCD 1999).

4.3 Control measures:

4.3.1 International trade: None known.

4.3.2 Domestic measures: The species is protected at the state and provincial level throughout much of its range (see Section 4.1.1 Legal status, National).

5. Information on Similar Species

The bog turtle (*Clemmys muhlenbergi*) was listed on Appendix II of CITES when the treaty entered into force in 1975, and was transferred to Appendix I at COP8 (1992). The wood turtle (*C. insculpta*) was listed on Appendix II at COP8 (1992).

6. Other Comments

The Government of Canada was consulted during preparation of this proposal, and supports the inclusion of *Clemmys guttata* in Appendix II. Their comments were incorporated throughout the text. All U.S. States within the range of the spotted turtle were consulted regarding the desirability of an Appendix-II listing for the species. The States also support the inclusion of *Clemmys guttata* in Appendix II.

7. Additional Remarks

The spotted turtle qualifies for listing in Appendix II under the terms of Resolution Conf. 9.24, Annex 2a. The species satisfies all three criteria in Annex 2a. Because the species faces an entire suite of threats, including international trade, it can reasonably be inferred that unless trade in the

species is subject to strict regulation, it will meet at least one of the biological criteria for listing in Appendix I (Criterion A.). Likewise, available information indicates that harvesting of specimens from the wild for domestic and international trade has, or may have, a detrimental impact on the species by exceeding, over an extended period, the level that can be continued in perpetuity (Criterion B.i), and by reducing population levels (and, especially, sub-population levels), to at point at which the species would be threatened by other influences (Criterion B.ii).

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Appendix 1. State Regulation of Spotted Turtle (*Clemmys guttata*): Collection/Possession

STATE	PROTECTIVE STATUS	REGULATORY CITATION	COMMENTS
Connecticut	Partially protected	CTGS 490 26-70 and CTPA 94-29	Collection, possession and sale for non-commercial purposes allowed. Commercial transactions prohibited.
Florida	Not protected	FAC 39-25.002-13	Collection allowed with no catch limit. Commercial sale requires a license (FAC 39-23.003-02).
Georgia	Protected	GA AC 27-3-130-133	Fully protected under the GA End. Wildlife Act of 1973; listed as Unusual. Scientific collection permit system in place for research and educational purposes.
Illinois	Protected	17 IL AC 1010	Fully protected under the IL End. Spp. Protection Act; listed as Endangered. A system to issues scientific, education ,zoological, propagation and other types of permits is in place.
Indiana	Protected	IC 14-22-34 and 310 IAC 3.1-5-4	Fully protected under the IN Nongame and End. Spp. Act. A permit system is in place for scientific and educational purposes.
Maine	Protected	MRSA 12-7751 to 7758	Fully protected under the ME ESA; listed as Threatened. Permit system in place for scientific, educational, propagation, rehabilitation, or exhibition purposes.
Maryland	Protected	COMAR 08.03.11.03B & .04C	No specimens may be taken from the wild and possession is limited to one specimen. Documentation of origin is required and carapace length must be over 4".
Massachusetts	Protected	M.G.L. 131A:1-6 and 321 CMR 10.60	Fully protected under the MA ESA; listed as Special Concern. A permit system is in place for scientific, and educational purposes.
Michigan	Protected	MI CL 324.36501 (Public Act 451)	Fully protected under the MI Natural Resources and Environmental Protection Act (Public Act 451); listed as Threatened. A permit system is in place for research and other special purposes.
New Hampshire	Protected	NHRSA XVIII 212-A and NMCAR Fis 804.07, 29, 810.01 & 1407.1	Fully protected under the NH Nongame Spp. Mgmt. Act; listed as Controlled. A permit system is in place for scientific collection and possession. A cutoff date of Jan. 1, 1996 is in place to determine legal acquisition.
New Jersey	Protected	NJSA 23:2A-1 to 2A-13 and NJAC 7:25-4.10, 7:25-4.17 & 7:25-4.4	Fully protected under the NJ End. and Nongame Spp. Cons. Act; listed as Protected. A permit system is in place for scientific, zoological, educational, propagation, exhibition, and rehabilitation purposes.
New York	Not protected	NY ECL 11-0311 and 6 NY CRR	May be taken at any time in unlimited quantities and possession is not regulated; method of take may impose some limits. Commercialization of turtle specimens under 4" not allowed.
North Carolina	Protected	15A NCAC 10B.0119	Collection banned except by permit for legitimate research purposes or for those activities determined non-detrimental to the conservation of the species.
Ohio	Not protected	OHAC 1501:31-13-05	Collection, possession and sale allowed with fee-based fishing license. Some seasonal lake-specific and posted “No Fishing” restrictions for all turtles.

Pennsylvania	Not protected	PA FBR 77.1-.8	Collection allowed with ban on egg collection or possession for all reptiles. Fee-based fishing license required.
Rhode Island	Protected	RI GL 20-1-12-13	Fully protected under the RI State ESA; listed as Protected. A permit system is in place for scientific and research purposes. Commercialization is strictly prohibited.
South Carolina	Not protected	SC CL R 123-150.3 and SC CL 50-11-2190	Permit system in place for collection; allowable purposes unclear, but spotted turtles are not specifically protected by law or regulation.
Vermont	Protected	VSA 10-123-5401 to 5408	Fully protected under the VT ESA in March 1998; listed as Endangered. Permit system in place for scientific, educational, and photographic purposes.
Virginia	Partially protected	VAC 15-360-10 & 10A	Collection and possession of all reptiles for personal use only; possession limit of five specimens.
West Virginia	Partially protected	WV CSR 47-23-7.1	Collection and possession for commercial purposes prohibited. Collection and possession for other purposes permitted with a daily bag limit of 100 specimens.