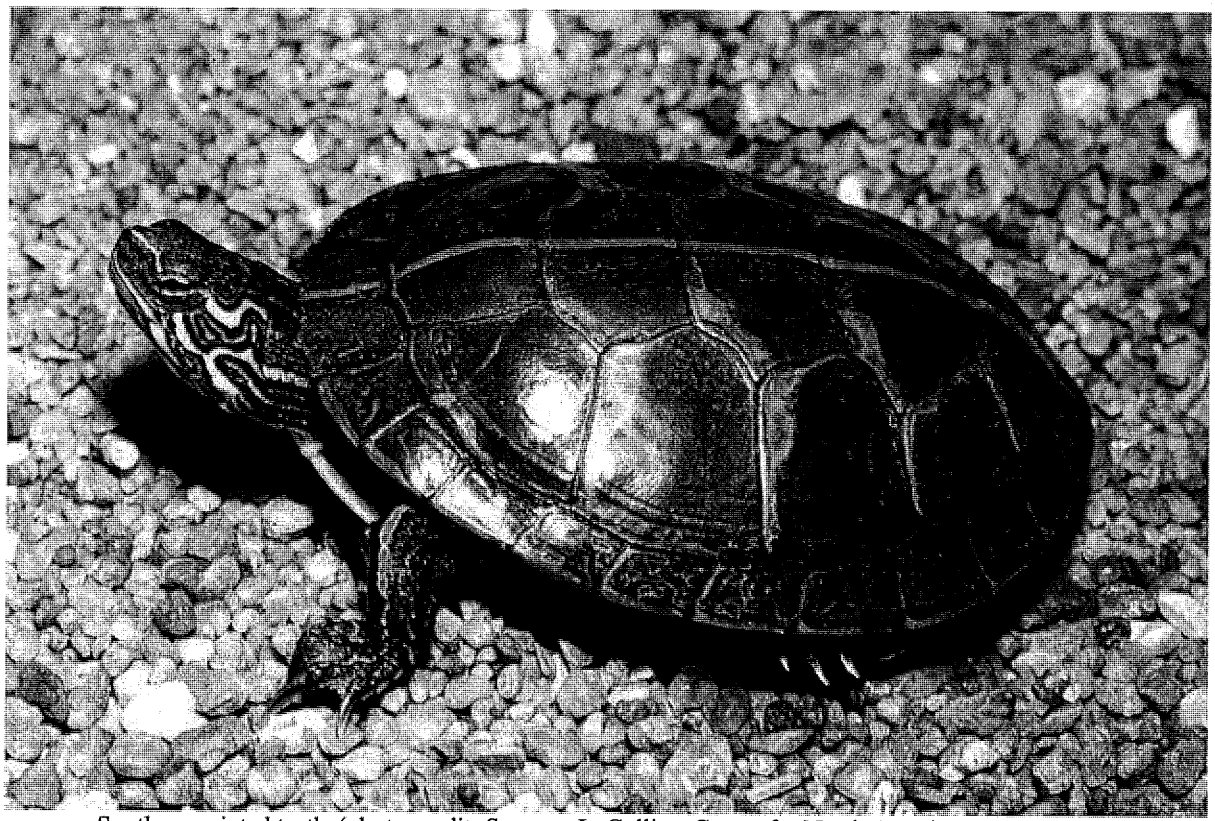
BEFORE THE ARKANSAS GAME AND FISH COMMISSION

PETITION TO END UNLIMITED COMMERCIAL HARVEST OF 14 FRESHWATER TURTLE SPECIES OR SUBSPECIES



Southern painted turtle (photo credit: Suzanne L. Collins, Center for North American Herpetology)

CENTER FOR BIOLOGICAL DIVERSITY

ARKANSAS SIERRA CLUB

ARKANSAS WATERTRAILS PARTNERSHIP

AUDUBON SOCIETY OF CENTRAL ARKANSAS

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Pursuant to Section 25-15-204(d) of the Arkansas Code, the Center for Biological Diversity, Arkansas Sierra Club, Arkansas Watertrails Partnership, Audubon Society of Central Arkansas, Environmental Resources Center, John Kelly, and Kory Roberts hereby petition the Arkansas Game and Fish Commission to end the unlimited commercial collection of 14 species or subspecies of native freshwater turtles in the state. Commercial collection of wild turtles contributes to turtle declines in the state and across the country, intensifying the impacts of water pollution, habitat loss, road mortality, and incidental take from fishery devices, which already contribute to population declines in the state and across the country.

The Center for Biological Diversity (Center) authored this petition. The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center is supported by more than one million members and online activists throughout the United States, including approximately 7,320 members and supporters in Arkansas. The Center and its members are deeply concerned about the conservation of imperiled wildlife—including turtles—and their essential habitats.

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I. INTRODUCTION

Turtles are the oldest living group of reptiles on earth, with fossil evidence suggesting they were alive over 200 million years ago. Although turtles thrived on this planet for millions of years, they are now among the most threatened of any major group of vertebrates. Forty percent of all turtles are threatened according to the International Union for Conservation of Nature (Rhodin & van Dijk 2010).

Wild collection is the primary driver of turtle declines across the world (Bohm et al. 2013). Overexploitation has caused population declines in almost all turtle species that are not extinct, critically endangered, or rare (Klemens and Thorbjarnarson 1995), and it contributes to population declines also caused by water pollution, habitat loss, road mortality, and other threats (Moll and Moll 2004; Schlaepfer et al. 2005).

Turtle population declines are concerning because turtles play important roles in their native ecosystems, connecting terrestrial and aquatic habitats. Turtles are beneficial scavengers that feed on water plants, dead animals, snails, aquatic insects, and crayfish. Population declines due to overexploitation can causes changes in energy flow, nutrient cycling, and food web structure, affecting entire ecosystems (Mali et al. 2014).

The commercial harvest of freshwater turtles poses a significant threat to the future of Arkansas's populations of wild freshwater turtles. Overutilization of imperiled turtle species is problematic because the reproductive success of long-lived reptile species is dependent on high adult survivorship, and population declines occur when adults are harvested (Brooks et al. 1991, Heppell 1998, Pough et al. 1998, Congdon et al. 1993, 1994).

In recognition of the harmful population declines caused by wild collection and due to intensive commercial harvest regimes in the southern United States, state wildlife agencies in Alabama, Florida, North Carolina, and Mississippi have banned unlimited commercial harvest of all native freshwater turtles. In 2007, Texas banned commercial collection of native turtles on public lands and waters. In 2012, Georgia placed numerical limits on the commercial harvest of native, wild turtles.

Nevertheless, the Arkansas Game and Fish Commission continues to allow unlimited commercial harvest of 14 native freshwater turtle species or subspecies in significant portions of state waters, so long as the collector is an Arkansas resident and holds a commercial fisherman permit and sport fishing license, aquatic turtle harvesting permit, and aquatic turtle dealer permit.[1] Only the alligator snapping turtle, western chicken turtle, ornate box turtle, and three-toed box turtle are protected from commercial harvest. Consequently, Arkansas's freshwater turtles are vulnerable to wild collection in large numbers for the food and pet trade. This harvest poses an alarming risk to the future of Arkansas's wild freshwater turtle populations.

The Arkansas Legislature has decreed that all the fish and wildlife in the state, save for fish in private ponds, are the property of the state, and "[t]he hunting, killing, and catching of the game

[1] Resident youths must hold a "junior aquatic turtle harvest permit." A bearer of an "aquatic turtle harvest helper permit" may assist in the harvest of a licensed aquatic turtle harvester or dealer.

and fish are declared to be privileges." Ark. Code. Ann. § 15-43-104 (2017). The Commission is empowered by the Arkansas Constitution to oversee all fish and wildlife, and manage it through rules and regulations for the benefit of the public. Ark. Const. Amendment 35 ("The control, management, restoration, conservation and regulation of birds, fish, game and wildlife resources of the State . . . shall be vested in . . . the Arkansas State Game and Fish Commission); 002-00-004 Code Ark. R. § 2(5). Although Arkansas's Constitution recognizes the citizens' right to harvest wildlife, that right is subject to "regulations that promote sound wildlife conservation and management." Ark. Const. Amendment 88, § 1(a)(2). In light of scientific evidence of the devastating impacts of unlimited commercial harvest on freshwater turtles and ecosystems, administrative power and duty lies with the Arkansas Fish and Game Commission to prohibit the unsound commercial harvest of freshwater turtles in the state.

The Arkansas Administrative Procedure Act authorizes any person[2] to petition an agency for the issuance, amendment or repeal of a rule. Ark. Code. Ann. § 25-15-204(d) (2017). The agency then has 30 days from the date of submission to initiate rulemaking proceedings or deny the petition with a written explanation providing the reasons for the denial. *Id.* Under this authority and for the reasons explained below, Petitioners request that the Arkansas Game and Fish Commission grant this petition and initiate rulemaking proceedings to end unlimited commercial collection of the state's wild, freshwater turtles within 30 days.

II. BACKGROUND

A. The Commercial Turtle Trade in the U.S.

The United States has the greatest richness of turtles in the world, with 89 species and subspecies of turtle (Rhodin & van Dijk 2010; Bohm et al. 2013), and it has developed into a significant exporter of wild-collected adult turtles. Most turtles harvested in the United States are exported to supply food and medicinal markets in Asia, where turtle consumption rates have soared and native turtle populations have rapidly depleted (Klemens and Thorbjarnarson 1995; Gibbons et al. 2001; Reed and Gibbons 2003). China is the principal consumer of turtles in the food trade and has long commercially harvested native turtles for food and traditional Chinese medicine, driving most populations to depleted levels and even extinction in the wild (Behler 1997; Chen et al. 2009). Most turtle species in Vietnam and southern China are endangered, and there are reports that turtles can no longer be found in the wild in Vietnam (Kiester and Juvik 1997). Consumers of Asian cuisine prize America's softshell turtles in particular because they appear similar to endemic Asian softshell turtle species that have been depleted by the food trade (Christensen 2008). Consequently, the United States has supplied millions of turtles (including wild-caught adults and "farmed" hatchlings) to Asian markets (Mali et al. 2014).

Large-scale turtle harvest is organized as a pyramid scheme, including trappers, middlemen, and dealers (Mali et al. 2014). Turtle dealers usually have an interstate network of several hundred employees capable of exporting thousands of turtles a year (Mali et al. 2014). Large adults are the most valuable on the meat market and are a primary target of commercial turtle trappers

[2] The Act defines "person" as "an individual, partnership, corporation, association, or public or private organization of any character." Ark. Code. Ann. § 25-15-202(8).

(Close and Seigel 1997; Ceballos and Fitzgerald 2004). Yet the adult life stage is the most sensitive to harvest (Heppell 1998; Congdon et al. 1993; Congdon et al. 1994; Zimmer-Shaffer et al. 2014).

The available data on turtle exports from the United States indicate that export-driven exploitation has targeted the common snapping turtle (*Chelydra serpentina*), Florida softshell (*Apalone ferox*), and spiny softshell (*A. spinifera*), in particular. Some of the smaller hard-shelled turtle species are also targeted, including diamondback terrapins and map turtles. While export levels of freshwater turtles from the United States appear variable, the long-term trend shows an increase in trade for most species (Weissgold 2010). Many wild caught turtles have been exported out of the southeastern U.S. port of New Orleans; the number of wild caught turtles exported from that port increased from 80,050 in 2008 to 6,386,030 in 2009 and has remained high (Mali et al. 2014). According to federal export records, from 2011 to 2016 more than 16 million freshwater turtles designated wild-caught[3] were exported through the U.S. port in New Orleans.

These numbers do not likely give a full picture of wild freshwater turtle exports. Federal export data likely underestimate the number of wild-caught turtles in the U.S. for at least two reasons (Colteaux and Johnson 2017 at 17). First, an unknown biomass of turtle meat is processed and canned domestically before export and thus not subject to recording by the U.S. Fish and Wildlife Service (Colteaux and Johnson 2017 at 17). Second, although exported turtles are classified as either wild-caught or farmed, the distinction between the two may be tenuous (Colteaux and Johnson 2017 at 14). For instance, there is no known documentation of how much farms supplement their stock with wild-caught individuals, nor how many wild-caught individuals may be exported as "farmed" individuals (Colteaux and Johnson 2017 at 14, Sigouin et al. 2016 at 2).

Further, it is difficult to estimate the number of turtles trafficked through the illegal trade of protected species. Turtle smuggling is an ongoing problem in the U.S. In May 2017, federal wildlife inspectors discovered 70 spotted turtles and 100 eastern box turtles hidden in men's socks headed from Los Angeles to China.[4] Experts recognize this is not an isolated circumstance but an example of a troubling trend of large-scale illegal, and legal, trade.[5] Because not all smugglers are caught, it is impossible to know how many turtles are being taken from the wild for clandestine markets.

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[3] Due to idiosyncrasies in federal export monitoring regulations, turtles designated as "wild caught" include farmed or ranched individuals of certain species. It is unknown whether breeding stock for these opeartions are wild-caught.

[4] Louis Sahagun, *Big spenders in China are targeting U.S. species of turtles and tortoises as collector's items and cuisine*, LA Times (June 4, 2017), *available at* http://www.latimes.com/local/california/la-me-turtle-black-market-china-20170604-story.html.

[5] *See, e.g.,* Alan Feuer, *Queens Man Admits Smuggling Endangered Turtles in Packages Marked 'Snacks'*, The New York Times (Feb. 13, 2017), *available at* https://www.nytimes.com/2017/02/13/nyregion/endangered-turtles-smuggling-queens.html?_r=0; Associated Press, *Man who tried smuggling 51 turtles in pants gets 5 years in prison* (Apr. 12, 2016), *available at* http://nypost.com/2016/04/12/man-who-tried-smuggling-51-turtles-in-his-pants-gets-5-years-in-prison/; Robert Snell, *Feds lift veil on international turtle smuggling ring*, The Detroit News (Sept. 26, 2014), *available at* http://www.detroitnews.com/story/news/local/metro-detroit/2014/09/26/turtle-detroit-windsor-border-smuggling-china/16282617/.

B. Commercial Collection of Wild Turtles in Arkansas

There are 18 species or subspecies of turtle native to Arkansas (Powell, Conant & Collins 2016). Arkansas law allows trappers to capture 14 of these native, freshwater turtles from the wild in unlimited numbers. 002-00-001 Code Ark. R. §§ 34.01–34.11. These turtles are[6]:

- eastern musk turtle (*Sternotherus odoratus*);
- midland smooth softshell (*Apalone mutica*);
- pallid spiny softshell (*Apalone spinifera pallida*);
- eastern spiny softshell (*Apalone spinifera spinifera*);
- common snapping turtle (*Chelydra serpentina*);
- southern painted turtle (*Chrysemys dorsalis*);
- northern map turtle (*Graptemys geographica*);
- Ouachita map turtle (*Graptemys ouachitensis*);
- Mississippi map turtle (*Graptemys pseudogeographica kohnii*);
- northern false map turtle (*Graptemys pseudogeographica pseudogeographica*);
- Mississippi mud turtle (*Kiosternon subrubrum hippocrepis*);
- river cooter (*Pseudemys concinna*);
- razor-backed musk turtle (*Sternotherus carinatus*); and
- red-eared slider (*Trachemys scripta elegans*).

It is unlawful to commercially take from the wild or possess wild alligator snapping turtles (*Malaclemys termminckii*), chicken turtles (*Deirochelys reticularia*), or ornate box turtles (*Terrapene ornata*). 002-00-001 Code Ark. R. §§ 34.09, 34.10, 9.14(A)(1)(C), (A)(3). However, box turtles may be kept as pets, and up to six ornate box turtles may be removed from the wild as pets. *Id.* §§ 9.10, 9.14.

Only residents are permitted to harvest wild turtles in Arkansas.[7] *Id.* § 34.01. To legally harvest turtles, trappers must have a commercial fisherman permit and sport fishing license, an aquatic turtle harvest permit or a junior aquatic turtle harvest permit, and an aquatic turtle dealer permit. *Id.* A person holding an "aquatic turtle harvest helper permit" may assist a licensed aquatic turtle harvester or dealer. *Id.* § 34.01(B). The costs for these permits are as follows:

License	Cost
Commercial Fisherman's Permit and Sport Fishing License	$25
Aquatic Turtle Harvest Permit	$100
Aquatic Turtle Harvest Helper Permit	$50
Junior Aquatic Turtle Harvest Permit	$25
Aquatic Turtle Dealer Permit	$250
Non-resident Aquatic Turtle Dealer Permit (no harvest)	$500
Box traps/Turtle trap	$2
Hoop nets/Turtle nets	$4

Source: Arkansas Fish and Game Commission (2017).

[6] This list of turtles is based on the 2016 publication of Powell, Conant, and Collins' Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America, Fourth Edition (Powell et al. 2016).

[7] Although non-residents may not harvest aquatic turtles, *Id.* § 34.01, Arkansas has a reciprocal agreement with Tennessee to recognize Tennessee fishing licenses on the Mississippi River. 002-00-003 Code Ark. R.

Turtle trapping is restricted geographically to roughly the southeastern half of the state, but includes the entire extents of the Mississippi and Arkansas Rivers along and within state boundaries. 002-00-001 Code Ark. R. § 34.04. Private landowners in counties closed to turtle harvesting are able to obtain from the Commission a Private Land Nuisance Aquatic Turtle Permit to harvest common snapping turtles, red-eared sliders, and spiny softshells from manmade lakes and ponds for commercial purposes. *Id.* § 34.04 (Exception 4).

Trappers may take turtles by hoop nets and box traps (basking traps) meeting certain guidelines, and traps must be set so part of the enclosure remains above the water's surface at all times. *Id.* § 34.05. Trappers must check hoop nets every 24 hours, and box traps every 72 hours. *Id.*

Commercial trappers are required to report their aquatic turtle harvest numbers. *Id.* § 34.07. According to Arkansas harvest report records for wild-caught aquatic turtles, 42,814 turtles were harvested in 2014, 41,368 turtles were harvested in 2015, and 42,199 turtles were harvested in 2016, totaling 126,381 turtles over the last three years. The three most heavily harvested species were red-eared slider (88,292), river cooter (10,623), and softshell turtle (9,600), though stinkpots, map turtles and common snapping turtles were also captured in large numbers (5,876, 5,253, and 3,995, respectively).

Arkansas Freshwater Turtle Harvest (2014-2016)				
Species	**2014**	**2015**	**2016**	**Total Harvest (2014-16)**
Common snapping turtle	1,988	961	1,046	3,995
Map turtle (unspecified species)	875	2,069	2,309	5,253
Mud turtle	415	390	894	1,699
Painted turtle	378	325	258	961
Razorback musk turtle	30	6	46	82
Red-eared Slider	31,241	27,242	29,809	88,292
River cooter	1,518	5,994	3,111	10,623
Softshell turtle (unspecified species)	3,547	3,205	2,848	9,600
Stinkpot (common musk)	2,822	1,176	1,878	5,876
All species combined	**42,814**	**41,368**	**42,199**	**126,381**

Source: Harvest report records obtained from Arkansas Game and Fish Commission

Two-thirds of all turtles harvested between 2014 and 2016 (84,408 turtles) were taken from only five counties: Mississippi (31,700), Greene (15,768), Desha (12,793), Craighead (12,711), and Poinsett (11,436). This narrowly focused harvest pressure could lead to acute localized population declines. Of all wild turtles caught between 2014 and 2016, nearly half (46%) were categorized as "large" and nearly a third (31%) were categorized as "medium," indicating a harvest bias toward larger, reproducing-age turtles.[8] The limited data also suggest a firm increase in harvest pressure on map turtles over the past three years. These numbers offer only a rough approximation of harvest impact on Arkansas turtles, as they reflect only voluntary, self-reported harvest in the state and omit unreported catches including turtles illegally harvested. Yet it is clear that turtle harvesting is an established industry in Arkansas.[9]

[8] These size designations were provided by turtle dealers and do not correlate to a definitive size scales per species.
[9] *See also* Kelly (2013) at 13.

In Arkansas, there are few data available on population size or structure for freshwater turtles (Kelly 2013 at 105); however, studies of some species have indicated declines related to commercial harvest. Howey and Dinkelacker (2013) observed extreme long-term impacts of overcollection on the historically harvested alligator snapping turtle, whose harvest was banned in Arkansas in 1993. The scientists found that alligator snapping turtles in the East Fork Cadron Creek in Arkansas had low population densities, few adult turtles, and a female biased adult sex ratio (Howey and Dinkelacker at 60). They explained that low population density would not be an expected observation in a population that still did not exhibit signs of historic commercial harvest, particularly because prior to commercial harvest, alligator snappers may have occurred at greater densities (Howey and Dinkelacker at 61). Thus, they concluded that low population density was an enduring artifact of increased adult mortality caused by historic commercial harvest (Howey and Dinkelacker at 61). They also hypothesized that the female-biased sex ration could be due to historical harvest that caused higher male mortality because males are larger than females, and thus more valuable to trappers Howey and Dinkelacker at 61). The scientists concluded that their data suggest the effects of commercial harvesting is still highly evident in population demographics for the species, and they may still be affected by incidental bycatch (Howey and Dinkelacker at 61–62).

Similarly, Trauth et al. (2016) found that an alligator snapping turtle population on Salado Creek in Arkansas benefitted from removal of harvesting pressure, leading to an increase in abundance and higher body condition for male and female turtles (Trauth et al. 243). However, they found the sex ratio in the population in Salado Creek was skewed toward male turtles (Trauth et al. 2016 at 242). Interestingly, the scientists also noted that they trapped a "relatively small number" of common snapping turtles in comparison with the protected alligator snapping turtle (Trauth et al. 2016 at 243).

Also, Konvalina et al. (2016) conducted population sampling of turtles in an urban lake in Craighead County, a county that is open to turtle harvest. This research may prove helpful in the future to determine impacts on species richness and abundance in a harvested water body.

Most relevant, a 2013 Master's Thesis by John J. Kelly studied harvesting pressure on aquatic turtles in Arkansas using field research and the state's harvest records, marking the first assessment of freshwater turtles in response to commercial harvesting in the state (Kelly 2013). Kelly studied several river locations in northeastern Arkansas, including the St. Francis, Black, and Cache river systems (Kelly 2013 at 27). Using sites where harvesting was permitted ("low" harvest pressure sites) and sites with no federal or state protections for turtles ("high" harvest pressure sites), Kelly measured and compared carapace length of red-eared sliders, spiny softshell turtles, and common musk turtles (Kelly 2013 at 32–33). The results for red-eared slider body size in response to harvest pressure showed strong evidence that harvest is impacting body size in male and female turtles (Kelly 2013 at 45). Females from "low" harvest pressure sites were significantly larger than females from "high" harvest pressure sites by almost two centimeters (Kelly 2013 at 46). Similarly, female turtles from "medium" harvest sites were significantly smaller than those from "low" harvest pressure sites (Kelly 2013 at 46). Additionally, Kelly found that male red-eared sliders were significantly larger than female sliders, which is significant because female red-eared sliders normally grow larger than males (Kelly 2013 at 47). With regard to common musk turtles and spiny softshells, Kelly noted they

were captured at much lower densities and could present the possibility of an insufficient representation of the range of body sizes for analysis (Kelly 2013 at 48).

Kelly also examined 17,126 records of turtles collected in Arkansas between 2004 and 2012. Based on these records, he found that a total of 10 species had been harvested between 2004 and 2012 (Kelly 2013 at 103). The most heavily harvested species were red-eared sliders (811,867), river cooters (89,802), spiny softshell turtles (65,699), common musk turtles (50,237), snapping turtles (41,713), and unspecified species of map turtles (32,608) (Kelly 2013 at 103). As in more recent years, Greene, Mississippi, and Craighead counties were among the most heavily harvested counties (Kelly 2013 at 104). Adult turtles accounted for 38.7% of all turtles harvested, which could cause population depletions over time, even for traditionally abundant species like red-eared sliders (Kelly 2013 at 105).

Kelly noted that the total number of turtles harvested in Arkansas (1,107,000 turtles) would not be nearly as impactful on populations if it were spread evenly across the state; however, only 45 of 75 counties in Arkansas are open to commercial harvest (Kelly 2013 at 105). Although harvest numbers indicate the number of turtles collected is decreasing over time, there are no data to indicate why; a decline in harvest could be due to any number of factors including the economy, increasing gas prices, increasing turtle farming, or decreasing turtle abundance (Kelly 2913 at 136).

Kelly also collected anecdotal statements from locals about turtles in Arkansas, including statements such as "you used to be able to see turtles on every log in the river now you hardly see any" or "a friend of mine used to catch turtles and sell them, but it is hard to catch enough to break even recently" (Kelly 2013 at 58–59). Though anecdotal references cannot replace sound science, in the absence of baseline data, they provide local perspective on the impacts of harvesting.

Despite apparent declines and studies showing harvest is harmful to turtle populations, the Arkansas Game and Fish Commission has taken no action to strengthen its turtle protection rules. In 2009, the Commission opted to take no action on a petition to end turtle harvest filed by the Center for Biological Diversity, Arkansas River Coalition, Audubon Society of Central Arkansas, Center for Food Safety, Center for North American Herpetology, and the Center for Reptile and Amphibian Conservation and Management. 1133 ARGR 79 (Oct. 2009). At the time the Commission cited the need for "sufficient research on the impact of commercial harvest in Arkansas" to be completed. *Id.* It appears no further action has been taken on the petition since. The turtle regulation has received minor amendments to alter the list of waterways open to turtle trapping and limit the type of tackle commercial turtle harvesters may use, 184 ARGR 101 (Sept. 2015); 157 ARGR 51 (June 2013); 148 ARGR 36 (Sept. 2012).

The following subsections will provide natural history, threats, and statuses for several heavily harvested, wild, freshwater turtles: common snapping turtles, softshell turtles, and red-eared sliders, and map turtles.

C. Natural History, Threats, and Status of Common Snapping Turtles

The common snapping turtle, one of the Arkansas turtle species subject to unlimited commercial collection, is a large, mostly aquatic turtle that weighs as much as 50 pounds (Ernst and Lovich 2009 at 113–114). The common snapping turtle occurs in the United States, Canada, throughout Mexico, and as far south as Ecuador (NatureServe 2015). Common snapping turtles can be found statewide in Arkansas.

Snapping turtles occupy all types of freshwater habitats (streams, lakes, reservoirs, ponds, marshes, swamps), especially those with soft mud bottoms and abundant aquatic vegetation or submerged brush and logs (Ernst and Lovich 2009 at 115). The species exhibits good tolerance of altered habitats (NatureServe 2015). Common snapping turtles have a diverse diet and feed on insects, crayfish, fish, snails, earthworms, amphibians, snakes, small mammals, and birds. Up to a third of their diet, however, is made up of aquatic vegetation.

The species is characterized by delayed female maturation, relatively low fecundity, low recruitment, and long generation times. Snapping turtles commonly experience low reproductive success due to extensive predation on their eggs, but females produce large clutches and may live and reproduce for several decades, so they usually produce offspring that join the breeding population (NatureServe 2015).

Although common snapping turtles are not significantly threatened overall, urbanization and excessive harvest has local impacts (NatureServe 2015; van Dijk 2016a). Females are especially susceptible during nesting season when crossing roads exposes them to injury and death from automobile strikes and makes them easy prey for humans who take them for food (Ernst and Lovich 2009 at 113). Other threats include water pollution, drainage of water bodies, water impoundment and channelization, and development leading to increased raccoon populations (Ernst and Lovich 2009 at 137). For example, in Algonquin Park in Ontario, Canada, the probability of a snapping turtle embryo surviving to sexual maturity is less than 0.1% (COSEWIC 2008).

The common snapping turtle is widely exploited for local subsistence collection, as well as commercial trade for local, national, and international consumption (van Dijk 2016a). The flesh of the snapping turtle is eaten throughout its range, and a soup can be made from it (Ernst and Lovich 2009 at 137). Collection for human consumption has decimated some populations (Harding and Holman 1990; Tucker and Lamer 2004). In Michigan, for example, snapping turtles were intensively trapped for 2–3 years in the 1980s, which greatly reduced populations. Collection was then prohibited, and by 2009, populations were approaching pre-impact levels, suggesting a 25-30 year recovery period after depletion (van Dijk 2016a).

In the United States snapping turtles are sold at Asian seafood markets and Asian restaurants. Juvenile snapping turtles ship from online dealers for about $70 each (http://www.reptilestogo.com/For_Sale_Common_Snapping_Turtle_Baby.htm;http://myturtlestore.com/juvenile-snapping-turtles-for-sale/).

Collection of snapping turtles from the wild and captive production in turtle farms for export to East Asia increased consistently and substantially in recent years, from about 10,000 animals

declared as exported from the United States in 1999 to more than 1 million annually in more recent years (van Dijk 2016a; Weissgold 2010; USFWS 2016). Common snapping turtles are second only to red-eared sliders in terms of number of live individuals exported each year (Adkins Giese 2011). From 2006-2010, nearly 200,000 live common snapping turtles designated by the U.S. Fish and Wildlife Service as "wild caught" were exported from the United Sates. In 2010 alone, more than 32,000 wild-caught live snapping turtles were exported, including a single shipment to China of 20,000 turtles.

According to a recent study, for the 16 years between 1998 and 2013, an estimated 348,529 snapping turtles were reported as commercially harvested among 11 states that provided harvest data (Colteaux and Johnson 2017). The total annual harvest across reporting states was positively correlated with the number of wild caught live individuals exported (Colteaux and Johnson 2017).

Although snapping turtle populations have been known to be vigorous throughout much of the species' range, long-term persistent take makes the species vulnerable to decline (USFWS 2016). For example, harvesters have reported declining numbers of turtles in harvested areas for snapping turtles on the upper Mississippi River (Paisley et al. 2009). Population recovery potential is low, due to a lack of an effective density-dependent response in reproduction and recruitment (Brooks et al. 1991; Galbraith et al. 1997). Some populations cannot withstand even minimal exploitation without undergoing a decline in numbers (Brooks et al. 1991; Brooks et al. 1988). Life-history models indicate that only slight increases (0.1) in annual adult mortality rate (such as from road mortality or harvesting) will cause a population to be halved in under 20 years (COSEWIC 2008).

While local declines have been documented, the species has not reached a 30 percent decline over 50 years (van Dijk 2016a). As such, common snapping turtles are included on the IUCN Red List as a species of "least concern" (van Dijk 2016a).

As of November 21, 2016, the U.S. Fish and Wildlife Service will regulates and monitors the international trade of common snapping turtles and three softshell turtles under a new agency rule. The rule, which responds in part to a 2011 request from the Center for Biological Diversity documenting the harms of the turtle trade, adds the turtles to Appendix III of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This designation is designed to curb overexploitation of these freshwater turtles for Asian food and medicinal markets

Wild capture of common snapping turtles is prohibited in some states (including Michigan and New York) or strictly regulated (including Alabama, Maryland, Texas). But some states still allow unlimited commercial take (Kentucky, Missouri, Ohio, and Tennessee) (Nanjappa and Conrad 2011; van Dijk 2016a).

D. Natural History, Threats, and Status of Softshell Turtles

Three species of softshell turtles exist in the United States: Florida softshell, spiny softshell and smooth softshell. The spiny and smooth softshells are found in Arkansas.

The smooth softshell turtle has a smooth upper shell that lacks small bumps or scutes and is most often observed in the open waters of medium-sized to large rivers and streams with moderate to fast currents and visibility varying from clear to cloudy (Ernst and Lovich 2009 at 614). Unlike the smooth softshell, the spiny softshell turtle has small bumps or spines on the front of the upper shell and small ridges on each side of the snout. As with the smooth softshell, the spiny softshell is primarily a riverine species; however, the spiny softshell also inhabits ecotonal areas, small creeks, marsh rivelets, roadside and irrigation ditches, farm and natural ponds, bayous, oxbows, large lakes, and impoundments.

The smooth and spiny softshells are characterized by delayed female maturation, a small clutch size (but multiple clutches), high neonate parental involvement, and low neonate survivorship. Males bask in shallow water and nests are often in close proximity to each other, facilitating collection. They feed on fish, crayfish, salamanders, tadpoles, frogs, snails, and aquatic insects.

Softshells can be locally common with high reproductive potential by turtle standards (van Dijk 2016b,c). The smooth softshell is reportedly extirpated from Pennsylvania and possibly extirpated from West Virginia. They are rare in the Ozarks of Missouri (Washington University undated).

The presumed primary threats to both smooth and spiny softshell turtles are overexploitation and habitat loss or habitat degradation, some predation and bycatch, and periodic natural flooding. The release of pesticides and both industrial and household chemicals into the waterways of spiny softshells is harmful, and softshells have now been found to contain many heavy metal and PCB contaminants (Ernst and Lovich 2009 at 634).

International trade in smooth softshell turtles is small. Less than 500 wild-caught smooth softshell turtles were exported from 2009–2014 (Weissgold 2010; USFWS 2016). These numbers are down from previous years, likely reflecting the rarity of the species.

In contrast, the spiny softshell is widely traded internationally as live specimens for the pet trade and consumption. In fact, spiny softshells have long been exploited for consumption and more recently for export of adults for food and of hatchlings as pets and for Asian farming operations (van Dijk 2016c).

As for spiny softshells declared as "wild caught," 40,000 were exported from 2006-2010 and 35,000 were exported in the last five years. After years of high exportation in 2012 and 2013—with more than 12,000 wild-caught spiny softshells exported each of those years—export numbers have sharply declined, which may reflect scarcity. Turtle trappers exported only 4,105 wild-caught spiny softshells in 2014 and 660 in 2015.

The impact of commercial exploitation on populations appears to be undocumented, but bycatch in commercial fisheries and recreational fishing is suspected to be a factor in the observed decline of some populations (Brown et al. 2012; van Dijk 2016c).

The smooth softshell is subject to a variety of state laws and regulations (van Dijk 2016b) and has endangered status in Illinois (Illinois Endangered Species Protection Board 2015). The spiny

softshell's conservation status is reported as "secure" or "apparently secure" throughout much of its U.S. range. It is considered "vulnerable" in Florida, Alabama, North Carolina, and Montana, and it is considered "imperiled" in South Dakota, New York, and Virginia (NatureServe 2015; North Carolina Wildlife Resources Commission 2014; New York Dept. of Environmental Conservation 2007). It is threatened in Vermont (Vermont Fish and Wildlife Dept. 2015). It is managed as a nongame resource across much of the United States (van Dijk 2016c). Softshell turtles are included on the IUCN Red List as a species of "least concern" (van Dijk 2016b,c).

Along with the common snapping turtle and the Florida softshell turtle, the smooth and spiny softshell turtles were added to CITES Appendix III in May of 2016.

E. Natural History, Threats, and Status of Red-eared Sliders

The red-eared slider is a subspecies of the pond slider (*Trachemys scripta*) (Powell, Conant & Collins 2016). The red-eared slider has yellow stripes on its head, forelimbs, and thighs, with broad, reddish stripes behind its eyes. Its carapace is greenish or olive with light yellowish vertical bars, which often become obscured or mottled with age.

Red-eared sliders can be found in rivers, ditches, sloughs, lakes, and ponds in the Mississippi Valley from north Illinois to the Gulf of Mexico (Powell, Conant & Collins 2016; Behler & King 1979). They mate from March to June and nest in June and July, laying 1–3 clutches of 4-23 oval eggs (Behler & King 1979). Males mature in 2–5 years. Young turtles feed on water insects, crustaceans, mollusks, and tadpoles, then turn to a plant diet as they mature.

Sliders are fond of basking and often seen stacked upon one another on logs, making them vulnerable to people who use them for target practice. Commonly referred to as "dime store" turtles, red-eared sliders are often collected and sold in the pet trade (Behler & King 1979; FFWCC, undated). Consequently, the red-eared slider is the most widely introduced turtle in the world and is included among 100 of the World's Worst Invasive Species (Powell, Conant & Collins 2016; http://www.issg.org/worst100_species.html).

Red-eared sliders are also negatively impacted by commercial collection. Warwick and Steedman (1988) compared the abundance and body size of red-eared sliders in protected populations in Texas and exploited areas of Louisiana. They found lower overall abundance and a sharp reduction in the proportion of larger individuals in the Louisiana populations. Close and Seigel (1997) studied the effect of human harvesting on red-eared sliders in Mississippi, where they are protected, and in southern Louisiana, where they are not. They found that populations of sliders from protected sites were larger than turtles from harvested sites, consistent with harvesting pressure that target large adults for meat or breeding stock. The results suggest that higher levels of harvesting are likely to have negative consequences for red-eared slider populations. Brown et al. (2011) recently reported harvesting impacts for unprotected waters in Texas, with female turtles being smaller in unprotected waters when compared to protected waters. They attributed the difference in female turtle sizes to a harvesting preference for female turtles, which are collectively larger than males and preferable for food markets (Brown et al. 2011). They also suggested females may be collected in larger quantities to be used as breeding stock (Brown et al. 2011).

Though wild red-eared sliders have been captured and exported in massive numbers, export trends may indicate declining populations. In 2012, 4,403,752 red-eared sliders designated as "wild caught" were exported from the United States, and since that time exports have sharply declined, which may indicate scarcity. In 2015, 2,043,969 red-eared sliders were exported from the United States, representing less than half of the 2012 exports by comparison.

Studies of putative turtle meat products in Louisiana and Florida markets also indicate that as larger turtles become depleted and harder to capture, smaller species, including emydid turtles like red-eared sliders, may receive increased harvest pressure (Roman and Bowen 2000).

Though the red-eared slider is listed as Least Concern under the IUCN Red List of Threatened Species, this is largely due to its wide distribution, large range of habitat, and large population (van Dijk et al. 2016). NatureServe lists red-eared sliders as globally secure, though its status was last reviewed 20 years ago in 1996.

Wild collection and export of native red-eared sliders is also harmful because it leads to invasive populations of sliders in ecosystems where they would not normally occur (Pearson et al. 2015; FFWCC, undated). Red-eared slider turtles have been introduced to wetlands throughout the world and have negatively impacted native turtle populations by competing for limited food resources (Pearson et al. 2015). In Florida, exotic populations of red-eared sliders are expanding and rivaling populations of native turtles in some ponds (FFWCC, undated). They have also been introduced into places they do not naturally occur in at least twenty-three other states (USGS 2009). These turtles are introduced primarily through pet releases and escapes (USGS 2009). Though many states have made it unlawful to release nonnative turtles like the red-eared slider into natural ecosystems, these laws are difficult to enforce. Releases and escapes presumably continue to occur.

II. JUSTIFICATION FOR THE REQUESTED RULEMAKING

A. Wild Turtle Populations Cannot Withstand Unlimited Commercial Collection

Natural populations of turtles are characterized by a suite of life-history characteristics that may predispose these populations to rapid declines when subject to wild collection (Congdon et al. 1993, 1994; Galbraith et al. 1997; Heppell 1998, Colteaux and Johnson 2017 at 17). Among these characters are delayed maturity, low fedundity, high annual survivorship of adults, and high natural levels of nest mortality (Reed and Gibbons 2003).

Removing even a few adult turtles from a population can have effects lasting for decades because each adult turtle removed eliminates the reproductive potential over a breeding life that may exceed 50 years (Brooks et al. 1991). For example, a modest harvest pressure (10% per year for 15 years) of common snapping turtles may result in a 50% reduction in population size (Congdon et al. 1994). Stable turtle populations are dependent on sufficient long-lived breeding adults to offset the effects of high egg and nestling mortality and delayed sexual maturity (Congdon et al. 1993; Wilbur and Morin 1988).

Accordingly, scientists have repeatedly documented that freshwater turtles cannot sustain any significant level of harvest from the wild without leading to population declines (Ernst et al. 1989; Congdon et al. 1993, 1994; Galbraith et al. 1997; Heppell 1998; Gibbons et al. 2000; Reed and Gibbons 2003; Burke et al. 2000; Gamble and Simons 2004; Brown et al. 2011; Zimmer-Shaffer et al. 2014). Congdon et al. (1994) concluded that carefully managed sport harvests of some populations may be sustainable, but "commercial harvests will certainly cause substantial population declines." Reed et al. (2002) found that the removal of as few as two female adult alligator snapping turtles could halve a population of 200 turtles within 50 years. Congdon et al. (1994) found that the removal of as few as 10 percent of the adults above 15 years of age could halve a snapping turtle population in 15 years. Garber and Burger (1995) documented the extirpation of a wood turtle (*Glyptemys insculpta*) population due to the occasional removal of adults by recreational users. After populations are depleted by overharvest, they can take decades to recover (Brown et al. 2011).

Life history traits not only constrain turtles in their response to harvest but also mask early detection by observers. In contrast to "traditional" managed wildlife and fisheries species, where the effects of management measures become measurable within years, the time scale of turtle life history results in exploitation effects becoming apparent and continuing to have effects for decades (van Dijk 2010).

For these reasons, turtle experts have repeatedly warned that states must end turtle harvesting to ensure healthy, viable populations. Most recently, Colteaux and Johnson (2017) concluded after studying the impacts of harvest on snapping turtles that "[c]losure of commercial harvest of snapping turtles is the most effective way to support population persistence." (Colteaux and Johnson 2017 at 18). Although size limit regulations may reduce the number of turtles caught, studies have not examined the potentially negative demographic consequences of size-limit regulations on population viability (Colteaux and Johnson 2017 at 18). Size limits can result in the targeting of one size or age class that is critical to the viability of a population, such as older reproductive adults (Colteaux and Johnson 2017 at 14). The scientists surmise that minimum size limits could skew population structures toward smaller, younger, and less fecund individuals by selectively removing larger breeding individuals (Colteaux and Johnson 2017 at 18). Accordingly, a full closure of harvest seasons is the best way to ensure population viability.

Arkansas's authorization of commercial freshwater turtle collection poses a risk to other species too. Arkansas regulations allow permitted individuals to use nets and traps to collect most freshwater turtles. These nets and traps incidentally and indiscriminately capture many species, which subsequently drown when they cannot escape. Hoopnets range in length, but most are long collapsible cylinder-shaped wire mesh or webbed netting funnel traps. The narrowing throat is open on one end to allow turtles and other aquatic animals to enter and not turn around to escape. The trap is baited with fish, stretched and weighted to the stream floor to capture hungry wildlife. These devices are capable of capturing all aquatic animals in the trap location including fish, aquatic mammals (such as beaver, muskrat, otter, and mink), snakes, and state and federal threatened and endangered species. Scientists have documented this type of incidental mortality from commercial fishing nets in the Mississippi River (Fratto et. al. 2007; Barko et al. 2004; Braun and Phelps 2016). Hoopnets and other turtle collecting devices have also been known to

capture aquatic migratory birds that are protected under the Migratory Bird Treaty Act, 16 U.S.C. § 703.

Though Arkansas regulations require that turtle traps be set so that "a portion of the enclosure remains above water surface at all times," 002-00-001 Code Ark. R. § 34.05, it is practically infeasible to monitor and ensure compliance. Further, even when partially submerged to allow captured animals to breathe, the likelihood of these traps drowning incidentally captured wildlife is significant due to unpredictable stream hydrology (rising waters from rain events), instability of trap design, and weight and movement of captured animals (Larocque et al. 2012).

In addition, turtle collectors often misidentify protected species that appear similar to non-protected turtles. For example, trappers often cannot distinguish alligator snapping turtles from common snapping turtles and coin both species simply as "loggerheads." Collectors who can distinguish these species and who realize the high value of alligator snapping turtles for the international pet trade may purposely harvest them and portray them for sale as common snapping turtles. Compounding the problem, game wardens are not often fully trained to distinguish most aquatic turtle species and face difficulty enforcing the law when encountering collectors in the field.

In Arkansas, the alligator snapping turtle, western chicken turtle, and box turtles are protected from harvest, 002-00-001 Code Ark. R. §§ 34.09, 34.10, 9.14(A)(1)(C), (A)(3); however, they could be killed or captured by commercial turtle collectors, either inadvertently or intentionally. Restrictions on commercialization of turtles in Arkansas would help lead to less incidental take of nontarget species and make it harder for poachers to pass off rare, protected species as more common ones.

Unfortunately, the threat of illegal turtle trapping is ongoing in Arkansas and surrounding states, as evidenced by recent and repeat apprehensions of poachers. In Arkansas, two residents have been prosecuted on multiple occasions for illegally harvesting turtles from ditches in southern Missouri and then selling them to a turtle farmer in northern Arkansas (Burleson, undated). In nearby Missouri, the U.S. Fish and Wildlife Service has documented illegal trade in box turtles, alligator snapping turtles, common snapping turtles, and several protected species (Burleson, undated). Likewise, the Service and Department of Justice have documented numerous turtle trading violations in Louisiana, which have led to convictions under the Lacey Act.[10] These stories only cover poachers who have been caught, and it is likely other clandestine illegal operations remain active.

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[10] *See, e.g.,* Press Release, United States Department of Justice [USDOJ], Two Men Charged with Conspiring to Illegally Export Turtles (Jan. 28, 2016), *available at* https://www.justice.gov/usao-edla/pr/two-men-charged-conspiring-illegally-export-turtles; Press Release, USDOJ, Illinois Man Sentenced for Violating the Lacey Act (Aug. 5, 2015), *available at* https://www.justice.gov/usao-edla/pr/illinois-man-sentenced-violating-lacey-act; Press Release, USDOJ, Pennsylvania Man Sentenced to Prison for Conspiracy to Smuggle Turtles out of United States (Mar. 24, 2016), *available at* https://www.justice.gov/usao-edla/pr/pennsylvania-man-sentenced-prison-conspiracy-smuggle-turtles-out-united-states; Jim Mustian, *North Shore Man Helps Feds Untangle Turtle-smuggling Ring*, New Orleans Advocate (Sep. 10, 2014), *available at* http://www.theadvocate.com/new_orleans/news/article_c077dcb5-4856-5408-9d53-014bf09205ce.html.

B. Turtle Meat Poses a Human Health Risk

A string of published scientific evidence demonstrates that consumption of turtle meat, shell, organs, and body parts can be harmful to humans. Meyers-Schöne and Walton (1994) examined dozens of scientific studies of pesticide and metal concentrations in freshwater turtles from the 1960s through the 1980s. Over a dozen studies found significant concentrations of numerous pesticides in freshwater turtles in states throughout the south, including aldrin, chlordane, DDT, dieldrin, endrin, mirex, nonachlor, and toxaphene (Meyers-Schöne and Walton 1994). Studies found bioconcentration of mercury and other metals such as aluminum, barium, cadmium, chromium, cobalt, copper, iron, lead, molybdenum, nickel, strontium, and zinc in turtles in Florida, Georgia and other southern states (Meyers-Schöne and Walton 1994).

Turtles, as apex trophic animals, will bioaccumulate toxins from contaminated prey (Kennish and Ruppel 1998). Because of their longevity, their exposure time to environments with aquatic contaminants is longer, which causes turtles to retain greater amounts of bioaccumulation compared to shorter lived lower trophic animals like finfish (Kennish and Ruppel 1998; Rowe 2008). Turtles that burrow and submerge themselves in contaminated sediment, such as snapping turtles and softshell turtles, are likely to have greater levels of aquatic contaminants because their pathway of exposure is greater.

The Arkansas Department of Health, Arkansas Game and Fish Commission, and Arkansas Department of Environmental Quality have released a fish consumption notice for mercury in fish for several water bodies in southern Arkansas where turtles may be trapped. (ADH et al., undated). In light of scientific evidence that turtles bioaccumulate high levels of aquatic contaminants, eating wild-caught turtles in Arkansas poses a human health risk. This provides yet another reason the Arkansas Game and Fish Commission should prohibit commercial collection and sale of all wild-caught turtles in Arkansas.

C. Most States Have Ended This Harmful Practice

Numerous state wildlife agencies have ended commercial harvest of native freshwater turtles in the last decade. For example, North Carolina, Alabama, and Mississippi have long banned this harmful practice.

Starting in 2007, the Center for Biological Diversity (Center) identified 12 states that still allowed commercial collection of turtles (Arkansas, Florida, Georgia, Iowa, Kentucky, Louisiana, Missouri, Ohio, Oklahoma, South Carolina, Tennessee, and Texas). The Center submitted administrative rulemaking petitions to these states requesting each to prohibit commercial harvest of freshwater turtles. The petitions and background information on the commercial harvest of freshwater turtles can be found on the Center's website at: http://www.biologicaldiversity.org/campaigns/southern_and_midwestern_freshwater_turtles/index.html.

In response to the Center's advocacy and administrative rulemaking requests, in 2007 the Texas Parks and Wildlife Commission voted to ban commercial collection of native Texas turtles on public lands and waters, with an allowance for commercial capture from private property for a few more common species. 31 Tex. Admin Code § 65.331. In 2010, no wild-caught turtles were exported from Texas (Mali et al. 2014). Oklahoma banned commercial harvest of turtles from

public waters, but a small commercial harvest still exists in private waters. 29 Okl. St. § 6-204; OAC § 800:15-9-3. Florida closed commercial turtle harvest in both public and private waters. Fla. Admin. Code Ann. r. 68A-25.002(6)(c). In South Carolina, it is now unlawful to remove more than 10 turtles from the state at one time and more than 20 turtles in one year, for nine native species. S.C. Code Ann. Regs. 50-15-70. In 2012, Georgia set annual commercial catch limits of 100 turtles per year for the Florida softshell turtle, spiny softshell turtle and river cooter; 300 per year for the common snapping turtle, painted turtle, striped mud turtle, eastern mud turtle, common musk turtle, loggerhead musk turtle; and 1,000 per year for the pond slider. Ga. Comp. R. & Regs. § 391-4-16-.05(1). Also in 2012, Alabama prohibited the unlimited commercial collection of all turtles listed as nongame species, with an allowance for very limited personal collection. Ala. Admin. Code r. 220-2-.142 (2)(A); Ala. Admin. Code r. 220-2-.92.

Most recently, in March 2017 Iowa imposed new harvest seasons and catch limits,[11] 571 IAC 86.1 (2017), and Missouri is considering more protective rules as well.[12] Notably, resource scientist Jeff Briggler from the Missouri Department of Conservation stated "Adult turtles are the most important individuals for population stability" and "[t]hey don't have the means to compensate for [commercial] harvest."[13]

As individual states close or restrict turtle trapping within their borders, harvest pressure increases on the remaining states without restrictions (Mali et al. 2014). Mali et al. 2015 reported that because regulations in surrounding states and the high cost of commercially producing red-eared sliders on farms, commercial harvest in unregulated states like Arkansas is likely to continue and even increase (Mali et al. 2015). This will further exacerbate the threat to native turtles in the years to come.

In addition, inconsistencies across state regulations provide opportunity for turtle trafficking (Sigouin et al. 2016 at 3). Turtle poachers often illegally trap in states with restrictions and claim that the turtles came from an adjacent state where trapping remains legal (Mali et al. 2014), or they can use legally harvested turtles to smuggle illegally harvested ones. At the same time, inconsistent regulations make it more difficult for law enforcement officers to identify harvesting violations and enforce the law. Consequently, allowing turtle harvesting can lead to illegal overexploitation. For example, in 2016 a Louisiana man was able to rely on inconsistent state regulations to smuggle at least 160 protected turtle species using commonly harvested common snapping turtles as cover (http://www.nola.com/crime/index.ssf/2016/01/minden_man_accused_of_smugglin.html).

Several states bordering Arkansas have ended unlimited collection of wild, freshwater turtles. As noted above, Texas has banned the commercial collection of turtles on public lands and waters. 31 Tex. Admin Code § 65.331. Mississippi prohibits the commercial sale of wild-caught reptiles,

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[11] News Release, Iowa Department of Natural Resources, New commercial and recreational turtle harvest seasons and catch limits (Mar. 21, 2017), *available at* http://www.iowadnr.gov/About-DNR/DNR-News-Releases/ArticleID/1236/New-commercial-and-recreational-turtle-harvest-seasons-and-catch-limits.

[12] News Release, Center for Biological Diversity, Missouri Agrees to Consider Ban on Unlimited Commercial Trapping of Wild Turtles (Oct. 24, 2016), *available at* https://www.biologicaldiversity.org/news/press_releases/2016/freshwater-turtles-10-24-2016.html.

[13] Margaret Slayton, *Exports to Asia threatening turtle populations*, News-Press Now (July 1, 2017), http://www.newspressnow.com/sports/outdoors/exports-to-asia-threatening-turtle-population/article_832e2d9a-6acd-53b4-91aa-d76414a1dfae.html.

though personal collection is still allowed with yearly limits of one wild-caught alligator snapping turtle, 4 common snapping turtles, smooth softshell turtles, or spiny softshell turtles (or a mix of these species); and 10 of any other turtle species. 40-005-02 Code Miss. R. § 2.3(C), (D) (2016). Oklahoma banned commercial harvest of turtles from public waters, though commercial harvest still exists in private waters. 29 Okl. St. § 6-204; OAC § 800:15-9-3. Kentucky prohibits sale of all native wildlife, including turtles, but has no limit on personal collection of softshell turtles and common snapping turtles. 301 KAR 2:081. Additionally, Alabama and Florida have fully closed commercial harvest of freshwater turtles, and Georgia has imposed bag limits. Ala. Admin. Code r. 220-2-.142 (2)(A), 220-2-.92; Fla. Admin. Code Ann. r. 68A-25.002(6)(c); Ga. Comp. R. & Regs. § 391-4-16-.05(1).

Arkansas, Louisiana, Mississippi, and Georgia are in the center of the freshwater biodiversity hotspot for the United States, and yet they lack unified policy to protect freshwater turtle diversity (Mali et al. 2014). If Arkansas grants this petition and restricts commercial trapping of turtles, the southeast region would be better equipped to protect its turtle populations by making clear to turtle traders—and prospective poachers—that trade is strictly regulated and enforced in the region.

III. PROPOSED RULE AMENDMENT

Arkansas's commercial fishing and turtle trapping regulations presently allow the harvest of 14 species or subspecies of freshwater turtle in unlimited numbers from authorized waters. 002-00-001 Code Ark. R. §§ 34.01–34.11. We propose that the Arkansas Game and Fish Commission amend Section 34.04 (Commercial Aquatic Turtle Harvest Restrictions) as follows:

34.04 COMMERCIAL AQUATIC TURTLE HARVEST RESTRICTIONS

(A) It is unlawful to take or attempt to take aquatic turtle eggs from the wild.

(B) It is unlawful to take or attempt to take aquatic turtles for commercial purposes by any means. ~~other than hoop nets or box type turtle traps. Commercial aquatic turtle harvest is allowed in waters of the following counties or specified portions thereof, and/or bodies of water as specified:~~

~~(1) Arkansas, Ashley, Bradley, Calhoun, Chicot (Exception 2), Cleveland, Clay, Columbia (Exception 2), Craighead, Crittenden (Exception 2), Cross, Dallas, Desha, Drew (Exception 2), Grant, Greene, Jackson, Jefferson, Lafayette (Exception 2), Lawrence (east of the Black River), Lee, Lincoln, Lonoke, Miller, Mississippi (Exception 2[G]), Monroe, Nevada, Ouachita, Phillips, Poinsett, Prairie, Pulaski (south of I-30 and east of I-440 and Arkansas highway 67), Randolph (east of the Black River) from the southern border to Pocahontas; from Pocahontas to Maynard east of Highway 115; and from Maynard to the state line east~~

~~of Arkansas Highway 166, St. Francis, Saline (east of I-30), Union, White (east of Arkansas highway 67) and Woodruff counties;~~

~~(2) Arkansas River, from its mouth to the Arkansas/Oklahoma state line, including the part of the Arkansas River from the Ozark Dam to the Arkansas/Oklahoma state line, bounded on the north by the Union Pacific Railroad and on the south by Arkansas Highway 22 in compliance with Code 30.25;~~

~~(3) Black River, from its mouth to the Missouri state line;~~

~~(4) Little River, from its mouth to the Corps of Engineers boat ramp on west bank of river below Millwood Lake Dam;~~

~~(5) Ouachita River, from the Louisiana state line to the U.S. Highway 79B bridge at Camden;~~

~~(6) Red River, from the Louisiana state line to the Oklahoma/Texas state line;~~

~~(7) Sulphur River, from its mouth to the Texas state line;~~

~~(8) White River, from its mouth to 100 yards below Dam No. 1 at Batesville, Independence County;~~

~~(9) Arkansas waters between the main levees of the Mississippi River.~~

~~(10) All lakes, bays or other bodies of water, other than tributary streams, connected to waters as specified above, when accessible by boat from the main channel except as limited by Addendum Chapter H1.00.~~

~~(C) When a river or stream forms the boundary between opened and closed counties, that boundary segment shall be open to tackle legal in the open county.~~

~~EXCEPTIONS:~~

~~(1) Bayou Meto Bayou in compliance with Code 38.01.~~

~~(2) The following waters are closed to commercial aquatic turtle harvest:~~

~~(a) Lake Erling, including all tributaries upstream from 100 yards below Lake Erling Dam to Arkansas Highway 313 (Lafayette County);~~

~~(b) All Commission-owned lakes (excluding natural lakes when accessible by boat from river or stream channel on WMAs in counties listed above);~~

~~(c) Lake Columbia (Columbia County);~~

~~(d) Horseshoe Lake (Crittenden County);~~

~~(e) Lake Wallace (Drew and Chicot counties);~~

~~(f) Upper and Lower Lake Chicot (Connerly Bayou to Ditch Bayou Dam inclusive) (Chicot County);~~

~~(g) The Mississippi River in Mississippi County, from the Sans Souci Landing downstream to the head of Sunrise Towhead, due east of Butler, AR, and all waters within and bounding the area known as "Driver Bar", which forms the east bank of the river channel within this river segment.~~

~~(3) USDA Forest Service lakes, State Park lakes and lakes owned by municipalities or propertyowner associations.~~

~~(4) Private landowners, in closed counties, can obtain from the Commission, a Private Land Nuisance Aquatic Turtle Permit. This permit allows the harvest of Common Snapping Turtles (Chelydra serpentina), Redear Sliders (Trachemys scripta), and Spiny Softshells (Apalone spinifera) for commercial purposes on private property under the following conditions:~~

~~(a) Only from manmade lakes and ponds.~~

~~(b) Only by a licensed commercial aquatic turtle harvest or dealer permittee.~~

~~(c) Only with legal commercial turtle harvest gear as defined above.~~

~~(d) All harvested turtles shall be reported on aquatic turtle harvest report forms as specified in Code 34.07.~~

We also propose amendments to Section 34.01 as follows:

34.01 AQUATIC TURTLE PERMIT REQUIREMENTS

~~Non-residents are not permitted to harvest aquatic turtles. It is unlawful for a resident to operate tackle, harvest, propagate, purchase or sell wildcaught aquatic turtles for commercial purposes, without the following permits:~~

~~(A) A commercial fisherman permit and sport fishing license, and either an aquatic turtle harvest permit or a junior aquatic turtle harvest permit (for resident youths) are required to harvest and sell wild aquatic turtles.~~

~~(B) The bearer of an aquatic turtle harvest helper permit may assist in the harvest or operate the properly tagged tackle of a licensed aquatic turtle harvester or dealer.~~

~~(C) A commercial fisherman permit and sport fishing license, and an aquatic turtle dealer permit are required to engage in the harvest, propagation, purchase, sale or export of wildcaught aquatic turtles.~~

(~~D~~**A**) An aquatic turtle farmer permit is required to engage in the propagation, sale or export of propagated aquatic turtles. This permit does not allow for the purchase, barter, trade, exchange or sale of wild-caught turtles.

(~~E~~**B**) An alligator snapping turtle breeder/dealer permit is required to possess, buy, sell or offer to sell alligator snapping turtles or their eggs. Alligator snapping turtles longer than 5 inches curved carapace length may not be sold, bartered, traded, or transferred without written approval of the Commission. An affidavit form provided by the Commission specifying the transaction type (transfer or sale), party type (individual or business), and number of turtles, shall be submitted to the Commission. ~~All sales of wild-caught aquatic turtles shall follow all transaction and reporting requirements (Code 34.07) in this chapter.~~

~~EXCEPTIONS:~~

~~(1) Fish farmer permittees may harvest and sell turtles from their facilities with an aquatic turtle harvest permit.~~

~~(2) Fish markets selling only dressed turtles for human consumption in Arkansas are not required to have an aquatic turtle dealer permit~~

~~(3) In compliance with Codes 3.07; 3.08.~~

PENALTY: Class 3

We also propose amendments to Section 34.03 as follows:

34.03 NON-RESIDENT AQUATIC TURTLE DEALER PERMIT REQUIREMENTS

It is unlawful for non-residents to purchase, sell, or offer to purchase or sell aquatic turtles in Arkansas without a non-resident aquatic turtle dealer permit and shall follow all transaction and reporting requirements (Code 34.07).

EXCEPTION:

Non-residents may purchase aquatic turtles from holders of aquatic turtle ~~harvest/~~dealer/farmer permits without a non-resident aquatic turtle dealer permit if turtles are being shipped directly out of Arkansas to the buyer, or if the buyer is picking up and transporting a purchase out of Arkansas.

PENALTY: Class 3

We also propose amending 34.07 as follows:

34.07 AQUATIC TURTLE TRANSACTION AND REPORTING REQUIREMENTS

~~(A) It is unlawful for aquatic turtle harvest, junior aquatic turtle harvest, and aquatic turtle dealer permittees to fail to mail or deliver to the Commission on or before the 10th of each month a legibly completed and itemized aquatic turtle harvest form provided by the Commission for all wild-caught aquatic turtles harvested during the prior month. A copy of this form shall be retained by the permittee for a period of 12 months and made available for inspection by any agent of the Commission.~~

(~~B~~A) ~~Aquatic turtle harvest,~~ aquatic turtle dealer, non-resident turtle dealer, aquatic turtle farmer, and alligator snapping turtle breeder/dealer permittees must comply with the following:

(1) An invoice, bill of sale or true bill of lading must accompany all turtle sales shipped or transported in intrastate or interstate commerce to the final destination and must contain the following information:

(a) Name, address, and telephone number of buyer and seller;

(b) Permit number of seller, and,

(c) Number and species of turtles in shipment.

(2) Permittees may have turtles transported by their authorized representatives if accompanied with a true bill of lading or bill of sale as described above.

(~~C~~**B**) It is unlawful for alligator snapping turtle breeder/dealer permittees to fail to mail or deliver to the Commission by the 10th of each month a legibly completed, itemized transaction record of all alligator snapping turtles purchased, sold, bartered, traded, or transferred during the prior month transactions were made. This transaction record shall include the names, addresses and phone numbers of all persons involved in the sale, purchase, barter, trade or transfer of alligator snapping turtles. Transaction records shall be recorded on a form provided by the Commission.

PENALTY: Class 2; Second offense shall result in the revocation of the permit.

Finally, we propose that the Commission repeal Sections 34.05 (Aquatic Turtle Tackle Restrictions), 34.06 (Aquatic Turtle Tackle Tagging), and 34.08 (Possession of Sport Fish by Aquatic Turtle Harvesters Prohibited), as they will be obsolete should commercial harvest be banned.

Further, to ensure the efficacy of wild turtle harvest restrictions, we recommend the Commission implement measures for turtle farmers to maintain records of origin, date, and price for any turtle added to their stock.

While the most effective means for protecting wild aquatic turtles is to close harvesting completely, the Commission should, at the very least, consider introducing reasonable daily bag limits and size limits in to Section 34.04 to ensure harvest does not target and overharvest adult turtles, which will lead to population collapse if permitted to continue.

It is Arkansas's policy to "control, manage[], restore[], and conserve[e]" wildlife for the benefit of the people of the state, including freshwater turtles. Ark. Const. Amendment 35. The Commission is empowered under the Arkansas Constitution and Arkansas Code to oversee all fish and wildlife, and manage it through rules and regulations *Id.*; 002-00-004 Code Ark. R. § 2(5). Consistent with these legal duties and authorities, the proposed rule amendment is intended to protect Arkansas's aquatic turtle populations by ending unlimited commercial collection.

IV. CONCLUSION

Petitioners have summarized the harms caused by the commercial collection of wild turtles in Arkansas. Specifically, Petitioners have demonstrated that wild turtles cannot withstand unlimited commercial collection without facing population crashes. In addition, the wild collection of wild turtles to be sold for meat poses a human health risk because of contaminants. As a result of the significant harm caused by unlimited commercial collection of turtles, most states have ended the practice, including Texas and Mississippi, which border Arkansas.

Petitioners therefore request that the Arkansas Game and Fish Commission adopt the proposed rule amendment and end unlimited commercial collection of wild turtles.

Consistent with Section 25-15-204(d) of the Arkansas Code, Petitioners request that the Commission initiate rulemaking proceedings or state reasons for any denial of such rulemaking proceedings in writing within thirty days of the submission of this petition.

If the Commission or staff has any questions, please contact Elise Bennett, staff attorney at the Center for Biological Diversity, at (727) 755-6950 or ebennett@biologicaldiversity.org. The Center can provide copies of the literature cited in this petition upon request.

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