

Iowa's Wild Turtles in Severe Decline: Action Needed to Prevent Collapse

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Turtles at risk in Iowa

Four species of Iowa's wild turtles are currently harvested year-round for commercial sales -- snapping, painted, smooth softshell, and spiny softshell turtles. **All four species have been determined to be at serious risk of dropping to unsustainable population levels.** This means that they could become extirpated in Iowa (locally extinct) if unlimited harvest continues.

Recommendation

At a minimum, Iowa's wild turtles must be protected during their mating and nesting season from January 1 to July 15. This would allow populations to stabilize and possibly reverse their downward trend and achieve long-term sustainability. This action would benefit turtles, the complex ecosystem of which they are a part, children and adults who want to see turtles in the wild, and those who harvest turtles for their personal use. **This policy also would benefit commercial harvesters who want long-term, sustainable populations of wild turtles to sell.** A commercial harvest season would be allowed from July 16 to December 31.

Background

Turtle biology:

- Female turtles require 7 to 10 years to reach reproductive maturity.
- Once mature, female turtles can continue to lay eggs for 50 years. Large, older turtles produce the largest and the most eggs.
- Turtles are semi-aquatic and require both wetland and upland habitats for mating, reproduction and nesting.
- A typical turtle nest has a 70% chance of being destroyed because of weather and flooding, natural predators, and unsafe locations among other reasons.
- A snapping turtle may need to lay 1,400 eggs before one offspring reaches reproductive maturity.

Pressures on Iowa's wild turtles in addition to commercial harvest:

1. Predation

- Mammals such as opossums, raccoons, coyotes, foxes, skunks, weasels, and dogs dig up most turtle nests. Studies show an average of 80% of turtle nests are destroyed by these predators.
- Other predators of turtle eggs and hatchlings include birds and snakes.

2. Habitat loss

- Less than 5% of Iowa's pre-settlement wetland acres remain.
- More than 69% of Iowa's land is in row-crops or urban development.
- Channelized streams, soil erosion, and water pollution reduce turtle feeding, mating, and nesting opportunities.

3. Weather and flooding

- Female turtles lay their eggs (from 12 to 30 eggs depending on species and age) in the spring and early summer in sandy areas generally near water, making their nests and hatchlings vulnerable to severe rain and floods.

Impact of unlimited commercial wild turtle harvest.

Currently, there are no restrictions on harvesting wild snapping turtles, painted turtles, smooth softshell, or spiny softshell turtles in Iowa. **All can be commercially harvested in Iowa at any time of the year.** As surrounding states close or limit commercial turtle harvesting, this puts more pressure on the population of Iowa's wild turtles. **Commercial wild turtle harvest is banned in the adjacent states of Illinois, Nebraska, South Dakota, and Wisconsin, and harvest is limited in Minnesota.** Commercial harvest is also banned in Kansas, Indiana, Michigan, and North Dakota.

Iowa turtle harvest records show that **nearly 33%** of turtles are harvested for commercial purposes **during the nesting season.** Since commercial harvest licenses became required in Iowa in 1987, the number of harvesters has grown from 37 people in 1987 to 179 in 2012. The pounds of turtles harvested have grown from 29,000 pounds in 1987 to 240,313 pounds in 2012.

Research indicates serious decline in turtle numbers today.

Studies show that not enough young turtles are reaching reproductive maturity to replace the number of adult turtles being harvested. New research indicates that harvesting more than 3% of adult snapping turtles is too much to sustain the species. However, more than 30% of adult snapping turtles have been harvested in some areas of Iowa, assuring their complete loss in sections of the state. **By limiting the harvest season and protecting wild turtles during their mating and nesting season, long-term sustainability is possible.**

Data shows that of the turtles currently being harvested, neither males nor females are at or near their maximum size. Males harvested are at only 55% of their historic maximum size; females being harvested are at roughly 80% of their historic size. Because size correlates to age, this reinforces other research data that not enough young turtles are reaching reproductive maturity to replace the number of adult turtles being harvested.

Scientists and stakeholders support this recommendation.

The dates of a harvest season (July 16 – December 31) that protects turtles during their mating and nesting season (January 1 – July 15) were recommended in 2013 by a seven-member team of DNR professional Fisheries Bureau biologists, appointed to serve on the Joint Committee on Turtle Harvest. The team evaluated 26 years of Iowa wild turtle harvest statistics, reviewed numerous field studies, and examined decades of wild turtle life history research. They published their report and recommendations, "Iowa's Commercial Turtle Harvest," in September 2013.

DNR staff worked to include as many stakeholders as possible prior to initiating their rulemaking effort. Four meetings were held across the state, including invitations to all commercial turtle harvesters and buyers as well as other stakeholders. In addition, a public comment period was opened so people could call or email statements. **The results showed that 90% of the 313 comments were in favor of the proposed rule, with only 10% opposed.**

Many people expressed the opinion that wild turtles belong to all citizens of Iowa, and it is unfair that only a few Iowans should benefit financially from this public resource until turtles become extinct in Iowa. Records indicate that commercial harvesters do not depend on this activity for their main job or primary source of income. **(Note: This rule would have no impact on Iowa farmed turtle [aquaculture] trade in Asian markets; it only would affect wild turtles in Iowa.)**

History with other species shows this approach works . . .

In the 1980s, severe overharvesting of **channel catfish** resulted in few fish reaching reproductive maturity and a steep downward trend in commercial catches. To protect breeding females and to reverse the decline, a 15-inch size limit was established in 1985. **Catfish numbers rebounded quickly, and commercial harvest has remained healthy ever since.**

. . . but delayed action harms wildlife and commercial interests.

Washboard mussels, highly sought by commercial harvesters for their shell size and quality, were open to year-round harvest until 1987. Like turtles, mussels take many years (eight) to reach reproductive maturity and are subject to many environmental pressures. While harvest numbers were strong, researchers noted smaller and smaller mussels being harvested and very few reaching adulthood.

In an effort to sustain mussel populations, a harvest season was established in 1987. Numbers continued their steep decline, and protections were strengthened in 1990 and 1992. **These efforts were not enough**, and in 1999 commercial harvest was completely halted for washboard mussels. **In 2007, all mussel harvest was banned.**

It is time to protect Iowa's wild turtles during their mating and nesting season from January 1 – July 15 to assure their survival and for the benefit of all Iowans.

Sources:

1. Iowa's Commercial Turtle Harvest, Joint Committee on Turtle Harvest, Fisheries and Wildlife Bureaus, Iowa DNR, September 2013.
2. Joint letter from Iowa turtle experts from Iowa universities (3) and business (2), February 20, 2014.
3. Lizards and Turtles of Iowa, by Dr. J.L. Christiansen and Dr. R.M. Bailey, 1988.
4. Administrative Rules, Governor's Office Preclearance Form, February 12, 2015.
5. Chapter 86, "Turtles" – Executive Summary, Iowa DNR, March 23, 2015.
6. Decision Making Memorandum, Iowa DNR, February 6, 2015.

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