



June 2, 2016

Martin Konrad
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Re: Wild turtle harvest recommendations

Dear Mr. Konrad:

The Iowa Chapter of the Sierra Club offers the following comments about the recommended season for harvesting wild turtles in Iowa.

General Comments

The Iowa Chapter has approximately 5,000 members spread across the state. Our members are involved with protecting the state's wildlife and natural areas. We enjoy recreating in the outdoors. We are not opposed to hunting and trapping. We believe that the state's hunting and trapping laws need to provide for sustainable populations of those species that are harvested.

For many years, our members have been alarmed at the loss of turtles in Iowa's rivers, streams, and lakes. We became so concerned that our organization joined several other organizations in a petition for rulemaking in 2009 that would have repealed Iowa's commercial turtle harvest. That petition was unsuccessful. Since then, the populations of those species of turtles that are harvested both commercially and non-commercially continue to be in a downward spiral in water body after waterbody across the entire state.

The North American Model of Wildlife Conservation enumerates the principles for conserving wildlife in the United States.¹ At a high level, wildlife is owned by the public and hunting or harvesting should be done sustainably. These principles include:

1. Wildlife resources are a public trust. Wildlife belongs to the people and is managed on behalf of the people by government agencies for all current and future generations.
2. Markets for game are eliminated.
3. Allocation of wildlife is by law. Seasons and quotas are determined through a democratic process.

¹ Organ, J.F., V. Geist, S.P. Mahoney, S. Williams, P.R. Krausman, G.R. Batcheller, T.A. Decker, R. Carmichael, P. Nanjappa, R. Regan, R.A. Medellin, R. Cantu, R.E. McCabe, S. Craven, G.M. Vecellio, and D.J. Decker, "The North American Model of Wildlife Conservation", The Wildlife Society Technical Review 12-04. The Wildlife Society, Bethesda, Maryland, 2012.

4. Wildlife can be killed only for a legitimate purpose. Laws are enacted to restrict mistreating wildlife and to ensure that the animals that are caught are not wasted, but will allow the harvest of certain animals, will allow protection of property, and will allow self-defense.
5. Wildlife is considered an international resource. Wildlife are free to cross international borders and those countries should cooperate in protecting the wildlife and ensuring sustainable harvests.
6. Science is the proper tool to discharge wildlife policy. Scientific studies will be used as a basis for wildlife policy, such as seasons, quotas, and which animals can be harvested.
7. Democracy of hunting is standard. Every citizen is allowed to hunt and fish and have access to wildlife.

The Iowa Chapter believes that wild turtles should be covered under these principles. Based on these principles, the wild turtles are held by the Iowa Department of Natural Resources for the benefit and enjoyment of all citizens of Iowa and for future generations, including those who want to observe and photograph the turtles in the wild and sport trappers. In fact, this concept is enshrined in Iowa Code § 481A.2 and it includes turtles.

The commercial harvest of wild turtles has reached staggering volumes. Continued unrestricted and unlimited commercial and sport harvest of turtles will lead to the wild turtles being extirpated from Iowa's waters.

Native turtles belong in Iowa's waters. It is unacceptable to trap the native turtles to extinction. It is equally unacceptable to expect that the Iowa Department of Natural Resources should be involved in restocking turtles across the state.

Furthermore, restoring a threatened or endangered species of turtle to the environment is very difficult. In fact, Jeff Lovich, Research Ecologist with the U. S. Geological Survey, reports that "no species of freshwater turtle or tortoise listed under ESA² has ever been recovered or de-listed".³

Turtles are several years old before they begin reproducing, the eggs and nestlings face high mortality rates, and the adults live long lives. According to herpetologist Jeffrey LeClere, "Over 90 percent of turtle nests are destroyed by predation. The surviving juveniles are eaten by a wide host of predators on their way to a wetland. Once in the wetland, large game fish, bullfrogs, snakes, and other predators consume even more of the hatchlings. The very small percentage of turtles that make it to adult size have few natural predators and live long lives to compensate for that small survival number. When large numbers of adult turtles are road-killed or harvested, they cannot withstand the high mortality rates of both age classes".⁴ According to Jeff Lovich, "High adult survivorship is necessary to ensure the persistence of turtles with delayed maturity, high and variable nest mortality, and long life spans". The turtle life-cycle makes turtles especially vulnerable to overharvest.

Without a doubt, turtles face significant challenges, including nest predation, environmental pollution, mortality on roads, flooding which inundates nesting sites and droughts which dry the

² Endangered Species Act

³ Jeff Lovich, "Life History and Demography of the United States", U. S. Geological Survey, Flagstaff, Arizona

⁴ Jeffrey B. LeClere, A Field Guide to the Amphibians and Reptiles of Iowa, ECO Herpetological Publishing and Distribution, 2013, page 13

wetland habitat required for the turtles, and habitat destruction and loss of wetlands. But one thing that can be controlled and monitored is the commercial and sport trapping of turtles.

**Requirement 1: Establish seasons for the commercial and noncommercial harvest of turtles.
Recommendation: Harvest Season of July 16 to December 31**

The Iowa Chapter supports the recommendation of having an open season from July 16 to December 31. A harvest season that begins on July 16 and ends December 31 would protect the wild turtles during most of their nesting season. It would give an extra season for the adult turtles to reproduce, before those turtles are caught in traps and removed from Iowa's waters.

First, it makes sense to have consistent dates for both the sport and commercial trapping of turtles, realizing that sport trappers can take snapping turtles throughout the year. Second, it makes sense to have a consistent date for trapping all species of turtles.

Based on discussion at the stakeholders meeting on May 12, 2016, the commercial trappers were advocating for a beginning date for the snapping turtles in mid-June rather than mid-July. They claimed that the snapping turtles complete laying eggs by mid-June. However, the painted and softshell turtles are still laying eggs into July. Based on the data provided by the commercial trappers, the snapping turtles are more prevalent and, consequently, more likely to get caught by the trappers. Even so, large numbers of painted, smooth softshell, and spiny softshell turtles are captured. These three species are less common and are at the most risk of significant decline. If the trapping season is allowed to vary by species, a turtle that is not allowed to be kept by the trapper will be put under stress during the time it is in the trap. By capturing a female turtle before it has laid its eggs, the turtle will be negatively affected. It makes no sense to needlessly put any turtles under stress during their breeding and nesting season. Based on discussion at the stakeholders meeting on May 12, 2016, a single commercial trapper is putting 25, 40, 60, or 100 nets into Iowa's waters on any given day. The traps do not distinguish between the species of turtles that can be lured into the trap. Any trapped turtle will be under stress while it is in the trap. Although the nets are required to have an escape hole which will allow the smaller turtles to leave the trap, the larger turtles are going to remain caught in the trap. The recommendations for Requirement 2 include requiring traps to be set above the water lines, which will improve the survivability of those that are not harvested. Even so, there is still a risk to those turtles that will be returned to the water and not kept by the trappers. The Sierra Club Iowa Chapter is not aware of any studies that look at how many turtles are killed in the traps or how many perish soon after they are released from the traps. By opening the trapping season on July 16, all four species of turtles will have a chance to complete a significant portion of their nesting.

Requirement 2: Establish daily catch limits for commercial and noncommercial harvest of turtles.

Recommendation:

Snapping: daily catch limit of 4 and possession limit of 20

Softshell: an aggregate daily catch limit of 1 and possession limit of 5

Painted: daily catch limit of 1 and possession limit of 5

All traps would be required to be emptied when checked and prohibit grading after possession; all traps would be required to be tagged and set above water lines.

The Iowa Chapter supports the proposed recommendation that all traps would be required to be emptied when checked and would prohibit grading after possession. The Iowa Chapter also

supports the proposed recommendation that all traps would be required to be tagged and set above water lines. These requirements should apply to both the commercial and non-commercial harvest of turtles.

The Chapter does not support any effort to target the males for a greater harvest or for an earlier harvest season. D. E. Pearse and J. C. Avise addressed turtle mating and determined that female turtles will mate with several males.⁵ That increases the genetic diversity within the nest. Furthermore, the females will store the sperm and will use it to lay additional clutches. Based on this study, it is important to keep a large portion of male turtles in the wild.

Current regulations require a 7.5-inch diameter escape hole in turtle traps. This allows small turtles, as well as fish to escape the trap. However this escape hole presents an interesting issue with respect to the softshell turtles. The male spiny softshell turtle rarely reaches 7 inches while female spiny softshell turtles grow up to 18 inches long.⁶ With respect to smooth softshell turtles, the males grow to 5 to 7 inches long while the female is 7 to 14 inches long.⁷ Male painted turtles rarely exceed 5.5 inches.⁸ That means that all of the male softshell turtles and all of the male painted softshell turtles should be able to escape the nets. In the case of the softshell turtles, in general, trappers are harvesting only the females. In overharvest situations, that will lead to serious and rapid declines because there will be few females left in the wild to lay their eggs. However, the current regulations do not require a minimum size of turtle that can be harvested and the current reports do not reflect the sex of the turtles that are harvested in Iowa, so it is difficult to know if the smaller turtles are escaping or if they are remaining in the traps and are ultimately harvested.

The DNR stated during the stakeholder meeting that it would be providing annual reports to the Iowa legislature about the turtle trapping and population. As part of the annual review of the turtle populations in Iowa, the Department of Natural Resources should be prepared to further reduce the season, daily catch limits and quotas if the turtle populations are showing further significant declines and the DNR should not wait until the final report in 2021 to make that adjustment. The DNR currently has the authority to adjust the trapping regulations and does not need further legislation to do so.

Shockingly, the DNR is reporting that the turtles are being harvested before they reach their historic maximum size, which is implying that the turtles are being harvested while they are still relatively young. “Females are being harvested at roughly 80% of their historic maximum sizes; males, at roughly 55%”⁹ Further the “Sampling found few-to-no small or intermediate-sized turtles in either gender, meaning there is little-to-no-recruitment. The lack of small to intermediate sized turtles is an expected consequence of having too few large adults in a population.”¹⁰

⁵ D. E. Pearse and J. C. Avise, “Turtle Mating Systems: Behavior, Sperm Storage, and Genetic Paternity”, *The Journal of Heredity*, 2001:92(2), page 206

⁶ www.iowadnr.gov/Fishing/Fishing-Licenses-Laws/Additional-Regulations/Frogs-Turtles, select Spiny softshell turtle

⁷ www.iowadnr.gov/Fishing/Fishing-Licenses-Laws/Additional-Regulations/Frogs-Turtles, select Smooth softshell turtle

⁸ www.iowadnr.gov/Fishing/Fishing-Licenses-Laws/Additional-Regulations/Frogs-Turtles, select Western painted turtle

⁹ Martin Konrad, Governor’s Office Preclearance Form, February 12, 2015

¹⁰ Martin Konrad, Governor’s Office Preclearance Form, February 12, 2015

Currently, based on the Iowa Department of Natural Resources report by Scott Gritters, et al., the Iowa Chapter believes that the spiny softshell turtle and the smooth softshell turtle need to be closely monitored.¹¹ It is clear that our neighboring states have determined that the turtle populations are in such jeopardy that they should not be harvested at all. There is no reason to think that Iowa's turtle population is in any less jeopardy. It appears that the smooth softshell turtle is extremely vulnerable to over-harvest and may already have hit a point of over-harvest.

Before reviewing the catch limits, it is useful to compare the sizes of the turtle species and their reproductive cycles, as shown in the following table. This table shows that the various species of trapped turtles vary in size, vary in size between the males and females of a species, and vary between the nesting times.¹²

	Spiny softshell	Smooth softshell	Painted	Snapping
Adult size	Males are 5 to 7 inches, but rarely reach 7 inches. Females grow 7 to 18 inches long.	Males are 4.5 to 7 inches long. Females are 6.5 to 14 inches long.	Adults are 3.5 to 7 inches, with the largest being 9.5 inches. Males rarely exceed 5.5 inches. Females are 5 to 8 inches long.	8 to 14 inches with the largest being 19 inches
Mating season	April through May	April through May and again in the fall	April to June and in the fall, but also breeding will occur in the summer	April to November, especially in spring and fall
Age at sexual maturity	Males - 4 to 5 years. Females - 7 to 10 years.	Males - 4 years. Females - 7 to 9 years.	Males - 2 to 6 years. Females - 4 to 10 years.	Males - 4 to 5 years. Females - 4 to 7 years.
Egg laying	4 to 32 eggs during June and July. The larger the female, the more eggs that are laid. One clutch is laid.	4 to 33 eggs during late May, June or July. The larger the female, the more eggs that are laid.	2 to 20 eggs, with an average of 12 eggs, laid in late May or June. Usually 2 to 3 clutches of eggs are laid a year.	20 to 40 eggs laid mid-May to mid-June

¹¹ Scott Gritters, Karen Osterkamp, Denny Weiss, Chad Dolan, Mike Mason, Karen Kinkead, Mike Steuck, Joint Committee on Turtle Harvest, Iowa Department of Natural Resources, "Iowa's Commercial Turtle Harvest", released in 2013, page 6

¹² Sources for this table are:

Jeffrey B. LeClere, A Field Guide to the Amphibians and Reptiles of Iowa, ECO Herpetological Publishing and Distribution, 2013, page 120-128, 162-170

Scott Gritters, et al, Joint Committee on Turtle Harvest, Iowa Department of Natural Resources, "Iowa's Commercial Turtle Harvest", released in 2013

www.iowadnr.gov/Fishing/Fishing-Licenses-Laws/Additional-Regulations/Frogs-Turtles, select Spiny softshell turtle

www.iowadnr.gov/Fishing/Fishing-Licenses-Laws/Additional-Regulations/Frogs-Turtles, select Smooth softshell turtle

www.iowadnr.gov/Fishing/Fishing-Licenses-Laws/Additional-Regulations/Frogs-Turtles, select Western painted turtle

	Spiny softshell	Smooth softshell	Painted	Snapping
Sex determination of hatchling	Genetic, independent of temperature	Genetic	Nest temperature during incubation, females result at greater than 84 degrees, males at less than 84 degrees	Nest temperature during incubation, females result at greater than 84.2 degrees, males at between 73.4 and 75.2 degrees, temperatures between 77 and 82.4 degrees produces both males and females
Eggs hatch	Late August or to October	September	2 to 2.5 months after laid, usually in late August. If eggs are laid in late summer, the hatchlings may overwinter inside the nest and emerge in the next spring.	50 to 60 days after laid

Comments Related to the Commercial Trapping of Turtles

The Iowa Chapter supports the proposed recommendations for daily catch limits and possession limits for the commercial trapper, as recommended by the DNR staff. Furthermore, it is absolutely mandatory that the DNR set reasonable quotas on the commercial harvest of turtles.

As advocates for using the seven principles of the North American Model of Conservation for the protection of turtles, the Chapter would support a significant curtailment of the commercial harvest of turtles. All of the neighboring states have either closed their commercial harvest of turtles (South Dakota, Nebraska, and Illinois) or severely restricted it (Missouri, Minnesota, Wisconsin). Additional states in the upper middle portion of the United States have closed their commercial harvest of turtles - North Dakota, Michigan, Indiana, Kentucky, Montana, Wyoming, and Colorado.¹³

At the stakeholders meeting, the commercial trappers requested that their possession limit be increased, since they would like to hold the turtles for a longer period of time before they transport them to the buyers. The Iowa Chapter would support increasing the possession limit so that the trappers could possess a weeks-worth of captured turtles, but would not support a companion increase in the daily catch limit.

¹³ Scott Gritters, et al, Joint Committee on Turtle Harvest, Iowa Department of Natural Resources, "Iowa's Commercial Turtle Harvest", released in 2013 and Chad R. Dolan, "Challenges Facing Iowa's Turtle Populations", Iowa Department of Natural Resources

The limits are based on documented harvest trends, as found in the Gritters report¹⁴ and the Dolan PowerPoint¹⁵. It is expected that the current levels of commercial trapping would continue if the DNR does not set a season and harvest limits. The goal is to establish a sustainable harvest of wild turtles as well as allowing the turtles to continue to live in the wild in their historical habitat. A summary of the findings in the Gritters report follows:

- In 1987, 37 commercial trappers harvested 29,000 pounds of turtles. Additionally Konrad reports that by 2012, 179 commercial trappers harvested over 240,313 pounds of turtles.¹⁶
- The commercial harvest of snapping turtles has increased substantially. At the same time the average number of pounds per harvester is decreasing. In 25 years, the number of pounds per trapper decreased from 1823 to 910.
- Softshell turtle harvest increased rapidly from 1987 until 2001, followed by downward harvests for 8 years. The average pounds of softshell turtles commercially harvested are declining precipitously.
- The total pounds of painted turtles commercially harvested is increasing while the average pounds of painted turtle is declining.
- Demand for turtles is increasing while fewer states allow commercial trapping of turtles.

The Iowa Chapter agrees with the Gritters report that the “turtle harvest trends are alarming”.¹⁷ The decrease in the number of pounds of snapping turtle harvested per commercial trapper points out overharvest, since the snapping turtle is the most commonly harvested turtle and has been commonly found in waters throughout the state. Softshell turtle harvest and painted turtle harvest in number of pounds and pound per trapper clearly show signs of overharvest.

One can only conclude that unchecked harvest can lead to extirpation.

- Large turtles are targeted year after year
- Which leads to harvesting smaller adult turtles
- Which encourages more trapping in order to maintain the trapper’s income or to reach the sportsman’s quota
- That leads to fewer adults, and fewer eggs being laid
- Because turtles have low nesting success and low hatchling success that leads to fewer surviving juvenile turtles.
- All of this creates a spiral toward extirpating the turtles.

It is not surprising that our members are reporting that all the major rivers are facing significant declines in the turtle populations, including the Skunk, Wapsipinicon, Maquoketa, Cedar, Des Moines, Boone, Iowa, and Raccoon.

The chapter supports catch limits being placed on all four species of turtles, including the snapping turtle. Even the common snapping turtle is showing signs of over-harvest. According to LeClere, “Iowa Department of Natural Resources Fisheries personnel working on the Mississippi River are noticing less common snapping turtles than in previous years, and also note that large turtles are

¹⁴ Scott Gritters, et al, Joint Committee on Turtle Harvest, Iowa Department of Natural Resources, “Iowa’s Commercial Turtle Harvest”, released in 2013

¹⁵ Chad R. Dolan, “Challenges Facing Iowa’s Turtle Populations”, Iowa Department of Natural Resources

¹⁶ Martin Konrad, Governor’s Office Preclearance Form, February 12, 2015

¹⁷ Scott Gritters, et al, Joint Committee on Turtle Harvest, Iowa Department of Natural Resources, “Iowa’s Commercial Turtle Harvest”, released in 2013

rarely caught anymore.”¹⁸ DNR records show that the snapping turtle represents 84% of all turtles commercially trapped between 2008 and 2012.¹⁹

One of the characteristics of turtles is that they gather together during the winter, as discussed by DNR biologist Chad Dolan at the May 12 stakeholder meeting. Winter trapping is done during their hibernating state when their body functions have slowed, which makes them unable to escape the hooks used to capture them. It is troubling that a commercial trapper is allowed to harvest each and every turtle that has colonized in one area during the winter. That action alone could extirpate the entire population along an entire stretch of a river, at a vulnerable time of year in the life of a turtle. The Iowa Chapter believes that this issue needs to be addressed.

Based on discussion at the stakeholders meeting on May 12, 2016, a quota of turtles that could be trapped over a season was considered. The Iowa Chapter supports placing a quota, similar to one that was used for the bobcat and river otter in Iowa. That implies regular on-line reporting, more frequent than once a month. The season should be closed once that quota is met. The Chapter would support a requirement that the commercial harvest be reported on-line within 24 hours.

The maximum harvest, using the proposed daily catch limits, can be computed by:

$$\text{maximum harvest} = 100 * \text{proposed daily catch limit} * 169$$

Where the 100 represents the number of commercial turtle trapper licensees in 2015 and 169 represents the number of days in the proposed season

The formula for determining the quota converts the daily catch limit to a maximum season catch limit. Using that mathematical formula, the maximum number of turtles that can be trapped commercially is:

Painted turtles – 16,900

Softshell turtles – 16,900

Snapping turtles – 67,600

Now, those maximum numbers do not reflect what is happening currently. “During 2012, 179 turtle harvesters reported harvesting 25,767 turtles of all species with a total weight of 240,313 pounds”.²⁰ The year 2012 represents the greatest number of trappers, with the highest recorded harvest and income. The DNR reported that in 2013 the harvest declined by 11% over the 2012 numbers.²¹ By 2014, the harvest had declined to 17,504 turtles, weighing 182,000 pounds.²²

The Iowa Chapter maintains that the 2012 and 2014 harvests were unsustainable. Since the season is going to be open for 169 days, then the total harvest needs to be 46% of the previous annual harvest (169 / 365). Furthermore, the Gritters report shows that historically half of the turtles are harvested during the DNR’s proposed season.²³

The number turtles harvested for each species can be summarized in the table below:

¹⁸ Jeffrey B. LeClere, *A Field Guide to the Amphibians and Reptiles of Iowa*, ECO Herpetological Publishing and Distribution, 2013, page 124

¹⁹ Martin Konrad, Governor’s Office Preclearance Form, February 12, 2015

²⁰ Martin Konrad, Governor’s Office Preclearance Form, February 12, 2015

²¹ Martin Konrad, Governor’s Office Preclearance Form, February 12, 2015

²² Orlan Love, “Shell-shocked wild turtles”, Cedar Rapids Gazette, October 24, 2015

²³ Scott Gritters, et al, Joint Committee on Turtle Harvest, Iowa Department of Natural Resources, “Iowa’s Commercial Turtle Harvest”, released in 2013, Figure 9

	Painted	Softshell	Snapping
The maximum harvest, using the proposed daily catch limits	16,900	16,900	67,600
Using 2012 harvest of 25,767 turtles and with 84% of them being snapping turtles, and the painted and softshell each at 8%	2,061	2,061	21,644
Using 2014 harvest of 17,504 turtles and with 84% of them being snapping turtles, and the painted and softshell each at 8%	1,400	1,400	14,703
Proposed quota, using the 2014 harvest data, adjusting for 46% of the year will be open season for trapping	644	644	8,051

The Iowa Chapter would suggest that the annual commercial harvest quota should be 644 painted turtles, 644 softshell turtles, and 8051 snapping turtles. Once the commercial trappers have harvested the quota for that species, the season would be closed.

One issue that the chapter would like to have addressed is preventing one or two commercial trappers who have a lot of nets from harvesting the entire quota of turtles.

The sport trapper wants an on-going opportunity to collect a small number of turtles for his or her own personal consumption. Those needs should not be over-run by commercial trappers who can gobble up the entire quota by the sheer number of traps and the hours that a commercial trapper can expend in trapping. Consequently we support the quota being set only for commercial trappers, including those trappers using the nonresident commercial fishing licenses.

The wild turtles are not owned by the commercial trappers and the commercial buyers and consequently they should not have priority on the use of those turtles. Likewise the commercial turtle trappers are not entitled to take as many turtles from the waters of Iowa as they desire, with no consideration of the overall effects of an unlimited harvest. The season and catch limits proposed by the Iowa DNR allow some commercial harvest, while giving the turtle species a chance to increase their populations.

Comments Related to the Sport Trapper

The Iowa Chapter supports the proposed recommendations for daily catch limits and possession limits for the sport trapper, as recommended by the DNR staff. Based on discussion at the stakeholders meeting on May 12, 2016, the current possession limit of a maximum of 100 pounds of live turtles or 50 pounds of dressed turtles will remain in effect along with the recommended daily catch limit and possession limit.

It should also be noted that the sport trappers can have a major impact on the population of turtles. If the turtles being caught are smaller in size, a larger number of turtles can be trapped and still meet the possession limit of 100 pounds of live turtles or 50 pounds of dressed turtle. That is why a catch and possession limit is important for the sport trapping of turtles, along with the possession limit that is currently in effect.

The Chapter also would support an on-line reporting mechanism for tracking the number, size, and species of turtles being trapped by the non-commercial trappers.

Requirement 3: Conduct a five-year review of the status of turtle population in the state, and report recommendations regarding potential revisions to commercial and noncommercial wild turtle harvest by June 30, 2021.

Recommendation: Continue monitoring of harvest reporting; continue ongoing southeast turtle studies underway; collect additional regional turtle data; search and review historical turtle data; compile and submit report as required.

Based on discussion at the stakeholders meeting on May 12, 2016, the DNR will be providing annual updates to the Iowa legislature concerning the turtle harvest. The Iowa Chapter supports that plan.

Additionally it is obvious that the DNR needs to collect scientific and biological information about the four species of turtles and post it on the DNR website as well as include it in the reports to the Iowa legislature, along with the material that is already present at on the website.²⁴ That way, all parties involved in the turtle issue would have a basic level of factual material about each species.

It would also be helpful to have a description of the turtle trapping laws in all 50 states, particularly the four species harvested in Iowa, including catch limits, quotas, and season dates for both the commercial and non-commercial harvest of turtles. Also included in the 50-state review should be the cost for a commercial and sport trapping license.

The DNR has a good start on providing information - the Gritters report and the Dolan PowerPoint. This information is built on the data reported to the DNR by the professionals involved in the commercial harvest and commercial buying of turtles. The Iowa Chapter supports continuing the collection of this information from the commercial trappers and buyers.

Information in the Gritters report should be updated to reflect three more years of turtle harvest statistics, information gathered since 2012, and to reflect turtle harvests each year.

The Iowa Chapter recommends that the DNR update the Dolan PowerPoint to include the painted turtle annual commercial harvest and average harvest per licensee; a comparison of the softshell and painted turtle harvest by county similar to the maps provided for the snapping turtle. Additionally the Chapter recommends that the PowerPoint include the number of snapping, painted, and softshell turtles that were harvested and the average number that were harvested per licensee for each year since 1987, since this information is tracked on the monthly turtle buyer report.

The Iowa Chapter supports an initiative that would monitor the turtle population in all of Iowa's water bodies. Herpetologist Jeffrey B. LeClere states "There have been no studies to quantify the effects of turtle harvest in Iowa, and some wetlands may be more susceptible to over harvesting than others. A monitoring initiative should be utilized to track numbers of turtles harvested annually by each licensee in Iowa so that trends can begin to be analyzed."²⁵ The Chapter supports his proposal. LeClere included range maps by county in his book.

²⁴ www.iowadnr.gov/Fishing/Fishing-Licenses-Laws/Additional-Regulations/Frogs-Turtles

²⁵ Jeffrey B. LeClere, *A Field Guide to the Amphibians and Reptiles of Iowa*, ECO Herpetological Publishing and Distribution, 2013, page 12

The Southeast Iowa Amphibian and Reptile Conservation Area is a hotspot of diversity of amphibian and reptiles.²⁶ It behooves the DNR to begin the work to make this area a no-trapping area for turtles. It is a rather large area, is consequently not fragmented, and is very conducive to all four species of trapped turtles. As the most diverse areas for reptiles and amphibians in the state, this area should be a sanctuary.

Comments regarding additional questions

In the May 5, 2016, letter from Martin Konrad to the Stakeholders, Mr. Konrad asked for comments about several statements that were made by the trappers at the Wild Turtle Working Group meeting in September, 2015. The Iowa Chapter of the Sierra Club will be responding to those statements in this section. It is interesting to note that although the stakeholders, in particular the commercial trappers, were requested to bring answers to these statements to the May 12 stakeholder meeting, no data, studies, or surveys were provided during the stakeholder meeting.

1. The DNR does not have sufficient data to prove the needed (sic) for more restrictive turtle harvest regulation. The Iowa Chapter believes that there is enough information to place catch limits, a quota, and a season on the harvest of turtles. The DNR has been collecting harvest information by species since 1987, as provided in the Gritters report. Furthermore, the trappers did not provide any current Iowa data or studies during the stakeholders meeting.
2. More data is needed and this data could probably be gathered in one year. As stated in item 1, the Iowa Chapter believes that there is enough information to place catch limits, a quota, and a season on the harvest of turtles. With respect for establishing a turtle season and harvest limits, the can has been kicked down the road for too many years; it is now time to set a season and trapping limits. As early as 2009, a petition to close the commercial trapping season was presented to the Natural Resources Commission because we knew then that the turtles were being overharvested. Furthermore, the trappers did not provide any current Iowa data or studies during the stakeholders meeting.
3. The size of the turtles that I have harvested in recent years has increased from 10 inches to 13 inches. The Chapter has no information to confirm or deny this statement. However, Chad Dolan's PowerPoint presentation given to Iowa's Wild Turtle working Group on September 17, 2015, is instructive. When looking at the snapping turtles, most of the males were between 11 and 12 inches while most of the females were between 10 and 11 inches. The majority of the females were between 9 and 11 inches while the majority of the males were between 8 and 14 inches. Mr. Dolan's presentation also pointed out that none of the male turtles had reached the record maximum size of 19 inches and only one female had reached the maximum size of 14 inches. Furthermore, the trappers did not provide any current Iowa data or studies during the stakeholders meeting.
4. More male turtles are caught during the egg-laying season as opposed to females. The Chapter does not have data to support or deny this statement. However the Chapter does not support targeting the males for an increased harvest or early harvest. The Pearse study on turtle mating systems, as mentioned above, points out that females will mate with more than one male and that they will hold the sperm to be used in more than one clutch of eggs. Reducing the number of males in the wild will weaken the overall genetic diversity of species and the overall genetic diversity found within each clutch of eggs. Greater genetic

²⁶ "Iowa Wildlife Action Plan – From Vision to On-the-Ground Action", Iowa Department of Natural Resources, www.iowadnr.gov/Conservation/Wildlife-Stewardship/Iowa-Wildlife-Action-Plan

- diversity is important for the long-term sustainability of the turtles. Furthermore, the sizes of male softshell turtles and also the male painted turtles are smaller than the required escape hatch that must be present in traps. Therefore this statement would not apply to the softshell turtles and the painted turtles. Furthermore, the trappers did not provide any current Iowa data or studies during the stakeholders meeting.
5. Turtle reproductive rates are more than sufficient to negate losses due to habitat degradation, road mortality, climate change, competition for food and space, environmental pollution, disease, and commercial/sport harvest. Looking at the Gritters report and the Dolan PowerPoint, it is clear that the turtles are being overharvested. The average pounds harvested per licensee is decreasing. The sizes of the snapping turtles are showing few juveniles and few of the largest turtles. The figures are all pointing to declines in sizes and age, which points to overharvest. Mr. Dolan's figures show that there are few juvenile snapping turtles. This is troublesome, since one would expect their numbers to be at least as high as the larger adult turtles. The juveniles will be the ones who will be reproducing within a few years, replacing the older turtles that are trapped or die. All of this collected information squares with the anecdotal information our members are talking about – that turtles are disappearing from Iowa's waters. Furthermore, the trappers did not provide any current Iowa data or studies during the stakeholders meeting.
 6. The same technological advances have not been made in improving the efficiency of turtle collection gear as opposed to fish collection gear (e.g., nets, sonar). The technology of turtle trapping has reached the point that commercial trappings are removing over 220,000 pounds of turtles from Iowa's waters every year, a level that is unsustainable. Commercial turtle trapping is obviously hard work. However, a comparison of the fishing gear to the trapping gear should make no difference in the turtle season, the catch limits, or quotas.
 7. Finally, if you are contending that more data is needed to substantiate the DNR's concern for wild turtle populations, please provide specific information such as what type of data is needed; what sampling methods and procedures are needed; what time frame is needed to gather this information; at what geospatial scale should data be gathered; and what are the specific goals and objectives for gathering this information? The Iowa Chapter believes that the DNR has enough information to establish a season and catch limits. Furthermore, the trappers did not provide any information during the stakeholders meeting.

Given the amount of misinformation tossed out by the commercial trappers during the stakeholders meeting on May 12, it is necessary for the DNR to independently conduct research to gather facts and figures about the turtles in Iowa and to verify whether the statements that have been made are true or false.

Analysis of Economic Impact

The Chapter is aware that any Notice of Intended Action requires a review of the economic impact of any new rule.

The annual licenses cost \$102 for a resident commercial turtle trapper and \$402 for a non-resident commercial trapper. The State of Iowa collects \$19,200 from the sale of commercial turtle trapping licenses each year.²⁷

²⁷ Martin Konrad, Governor's Office Preclearance Form, February 12, 2015

Obviously the economic analysis done by the Iowa Department of Natural Resources (DNR) would include the effect a closed season would have on the turtle harvesters, their helpers, and the commercial operations that purchase those turtles. The 2015 preclearance form stated, “During 2012, 179 turtle harvesters reported harvesting 25,767 turtles of all species with a total weight of 240,313 pounds, worth a gross estimated \$386,603. This gross income represents an average of \$2,160 per licensed trapper.”²⁸ The year 2012 was used since it represents the greatest number of trappers, with the highest recorded harvest and income. The DNR reported that in 2013 the harvest declined by 11% over the 2012 numbers.²⁹ By 2014, the harvest had declined to 17,504 turtles, weighing 182,000 pounds, worth \$272,860.³⁰ At the stakeholders meeting DNR staff reported to the stakeholders that only 100 commercial turtle trapping licenses were sold in 2015.

Clearly if the harvest continues at its current unsustainable pace and if the turtle populations make precipitous declines, the value of the commercial harvest will decline toward zero.

Most of the commercially harvested turtles are shipped to China and to other Asian countries. Many of the native turtles in China and southern Asia have been harvested to extinction. Iowans do not want their native turtles harvested to extinction in order to supply demand from foreign countries, regardless of how much economic benefit is accrued from the harvest. Certainly international trade should not trump the desire of Iowans who want to trap a few native turtles for their own non-commercial use.

The economic impact of the turtle harvest must be seen beyond the commercial harvesters. Many of our members enjoy wildlife viewing, outdoor photography, paddling and other outdoor recreation. And we expect to be able to view turtles. Outdoor recreation supports significant amounts of economic activity in Iowa – from the purchase of outdoor equipment, money spent on hotels and meals, and supporting outfitters.

Allowing turtles to be extirpated from Iowa’s waters also has a cost and brings with it costs to reintroduce turtles into their native habitat. In fact, the Iowa Chapter finds it unacceptable to harvest wild populations of turtles to the point of extirpation. Turtles do not travel far from their homes and are unlikely to self-reintroduce themselves into water bodies where they have been extirpated. The cost of establishing a reintroduction program would include buildings and tanks to house the turtles, vehicles to use in moving turtles to waterbodies across the state, equipment to capture breeding stock, staff salaries and benefits, food to feed the turtles, and other expenses. It is not clear how successful a restocking program would be, as noted by the Lovich research cited above.

Driving toward a long-term sustainable harvest of turtles benefits all of us – commercial harvesters, non-commercial harvesters, and outdoor enthusiasts.

The Iowa Chapter expects that the DNR will analyze the costs of extirpation and restoration of turtle species at the same time the costs to the existing commercial harvesters is analyzed. Furthermore, the Chapter expects that the DNR will also analyze the benefit those people who are engaged in wildlife viewing and related activities brings into the state.

²⁸ Martin Konrad, Governor’s Office Preclearance Form, February 12, 2015

²⁹ Martin Konrad, Governor’s Office Preclearance Form, February 12, 2015

³⁰ Orlan Love, “Shell-shocked wild turtles”, Cedar Rapids Gazette, October 24, 2015

CITES listing should not delay rule-making

Recently three of the commercially harvested species of turtles have been listed as CITES Appendix III species – the smooth softshell, the spiny softshell, and the snapping turtle.³¹ The commercial trappers will face new requirements, related to the CITES regulations, in order to better protect the turtles and to protect against poaching. The Iowa Chapter encourages the DNR to monitor the information collected under the CITES regulations.

The CITES regulations should not cause the DNR to delay implementing the season, daily catch limits, possession limits, and quotas for harvesting turtles proposed during the stakeholder meeting in May.

Furthermore, the CITES rules should not serve as an excuse to allow more turtles to be harvested or to allow a longer season.

These three species were put on the CITES list because of concern about the overall health of the populations of these turtles. In fact, United States Fish and Wildlife Service indicated that part of the Appendix III listing is to allow data collection that would lead to an Appendix II listing for a species that will become endangered if trade is not strictly controlled. Alternatively if the data shows that the population is healthy, the species can be removed from the CITES appendix III designation.

Conclusion

The 2009 petition for closing the commercial season should have served as a wake-up call to the commercial trappers and buyers that the level of harvest was becoming unsustainable. It should have served as a wake-up call for the commercial trappers and buyers to begin working on a means to voluntarily ensure that their harvest activities were sustainable. And yet, based on the stakeholders meeting on May 12, 2016, the commercial trappers and buyers are still denying that the population of turtles is crashing in waterbodies across the state. That denial shows that the DNR needs to step in and set the season, catch limits, and quotas for trapping turtles. It is long past the time for regulatory efforts to reduce the harvest of turtles in this state.

Iowans have a long history of overhunting furbearers. Many of those furbearers were hunted to extirpation. Some were later restocked, such as river otters. Others have returned on their own, such as the bobcats. Some have never returned, such as the elk. Given the historical examples, we can and should intervene now, before snapping turtles, painted turtles, smooth softshell turtles, and spiny softshell turtles become extinct in Iowa.

It is ironic that another branch of the DNR listed the snapping turtle, smooth softshell turtle, and spiny softshell turtle as species of greatest conservation need in its 2015 Draft Wildlife Action Plan at the same time that this branch of the DNR is allowing trapping of the same species. A reptile of greatest conservation need is one that has low or declining populations and is in need of

³¹ Fish and Wildlife Service, “Inclusion of Four Native U.S. Freshwater Turtle Species in Appendix III of the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES)”, Federal Register, Volume 81, No. 100, May 24, 2016, page 32664

conservation action. The previous plan listed only the smooth softshell turtle as a species of greatest conservation need.³²

A harvest is considered sustainable if the population of turtles is able to maintain its population, or even grow its population, allowing the turtles to continue to live in Iowa's waters for generations to come. The turtle harvest is not sustainable if it results in declining populations. Likewise the harvest is not sustainable if there is a risk that the turtles will be extirpated from the waters in Iowa. Trappers are fond of saying that turtles are a renewable resource. However turtles that are unable to sustain their populations are not being treated as a renewable resource. When turtles are trapped to such levels that they have been extirpated from waters where they are traditionally found, they can no longer be considered a renewable resource. A sustainable harvest benefits all of us – commercial harvesters, sport trappers, and outdoor enthusiasts.

The Iowa Chapter appreciates being given the opportunity to comment on the proposed rules for the turtle season and daily catch limits. Thank you for considering these suggestions.

Sincerely,

Pam Mackey Taylor
Conservation Chair

³² The Iowa Wildlife Action Plan, September, 2005, Updated August, 2012, Iowa Department of Natural Resources, Page 44