Note: This is the general script that was followed for two webinars, one on Wednesday, September 8th and Monday, September 14th, 2020. If you have any questions, please direct them to Freshwater.Turtles@MyFWC.com.

Welcome: Thank you for joining us today. My name is Bradley O’Hanlon, and I am the Reptile and Amphibian Conservation Coordinator for the Florida Fish and Wildlife Conservation Commission.

This presentation will be focused on stakeholder engagement to receive feedback on proposed revisions to diamondback terrapin protections in Florida. We will review the species biology, threats, conservation actions, ongoing research, and current protections. Based on the threats to the species we will present proposed changes to protections for the species.

After the presentation we will have time to receive public comment and answer any questions. We have several FWC staff on the call today to help out as needed. We are joined by Brooke Talley, the current Alligator Management Program Coordinator and former Reptile and Amphibian Conservation Coordinator, Eric Suarez and Traci Castellon, two excellent diamondback terrapin biologists, Kelly O’Connor, our stakeholder engagement coordinator, Brie Ochoa, our imperiled species policy administrator, and Krista
Shipley and Hannah Hart are here representing Marine Fisheries Management.
**Range**

- Florida has 5 subspecies
  - 3 are endemic
    - Carolina (M. t. centrata)
    - Florida (M. t. tequesta)
    - Mangrove (M. t. rhizophorarum)
    - Ornate (M. t. macrospilota)
    - Mississippi (M. t. pileata)

**Range**: To get everyone on the same page and up to speed we will begin by taking a quick look at the basic biology of diamondback terrapins. Diamondback terrapins can be found around the Florida coast, from Jacksonville through the Keys to Pensacola. Range wide the northern extent of the species is around Cape Cod, Massachusetts, and the southern extent is southern Texas. Diamondback terrapins use coastal or brackish habitat types, including saltmarshes, mangroves, barrier islands, and tidal creeks and rivers.

Up to five diamondback terrapin subspecies are believed to occur in Florida, and three of those are endemic to the state, meaning they can’t be found anywhere else except for Florida. FWC is currently researching the genetic breaks between subspecies. The three endemic subspecies are the Florida diamondback terrapin, which occurs along much of the states east coast, the mangrove diamondback terrapin which occurs around south Florida and the Keys, and the ornate diamondback terrapin which occurs along most of the states Gulf Coast. The Carolina diamondback terrapin can be found along the states northeast coast, and the Mississippi diamondback terrapin can be found in the western panhandle.
Background: Diamondback terrapins are carnivorous turtles that primarily prey on invertebrates but will also eat fish. In Florida, the species usually nests from April to July, but the nesting season may be longer based on location. The typical clutch size is 5 to 10 eggs, the sex of the hatchlings is determined by incubation temperature and because of that the sex ratio varies latitudinally. Incubation times range from about 60 – 75 days. Diamondback terrapins are active most of the year in north Florida and may be active year-round in south Florida. These turtles have high site fidelity, one researcher found a terrapin near its initial point of capture 11 years after it was originally marked.
Threats: Diamondback terrapins face a myriad of threats in many complex and intertwined forms, and we will take a moment to highlight just a few of these threats. Like many turtles in Florida, they are vulnerable to habitat loss and degradation. Land use changes and shoreline hardening along Florida’s coasts will further limit the amount of available suitable habitat. Roadways also pose a threat to terrapins as females are vulnerable while crossing roads in search of nesting areas, and hatchlings are vulnerable as they return to the water. Hatchlings are also vulnerable to predation from native predators like raccoons, and non-native predators such as red imported fire ants. The loss of mature females can have substantial negative impacts to local populations. Broadly, impacts like climate change and changes to salinity will have impacts on this species into the future.

By-catch is another threat to terrapins, and the FWC is examining the use of by-catch reduction devices through a separate rulemaking process. The illegal collection of terrapins for domestic and international markets is an emerging and significant concern. In recent years, there have been large seizures in Florida, South Carolina, and Maryland. In 2019, FWC seized over 600 wild caught turtles that were illegally collected and destined for Asian markets. Species in that bust included box turtles, mud turtles, chicken turtles, and terrapins.

Diamondback terrapins fall under CITES Appendix II, which means that unless trade is
closely controlled the species may become threatened with extinction. International trade of this species must be accompanied by appropriate permits and species must be acquired legally. The International Union for Conservation of Nature’s Red List of Species categorizes diamondback terrapins as vulnerable to extinction because of population declines caused by habitat loss, commercial and pet trade exploitation, road mortality, sea level rise, and many other threats.
Bycatch Reduction Devices

- Terrapin habitat can overlap with species like blue crabs
  - Blue crabs are recreationally and commercially harvested, commonly with traps
  - Potential for terrapins to get caught in traps
  - Bycatch reduction devices (BRDs) could reduce incidental terrapin mortality

Potential draft rule proposal

- Require BRDs in recreational and commercial blue crab traps in nearshore and inshore waters
  - Out to 1 nautical mile on the Atlantic
  - Out to 3 nautical miles on the Gulf

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**Bycatch reduction devices:** As part of a multi-pronged approach to diamondback terrapin conservation efforts, staff will bring bycatch reduction device recommendations to the commission concurrent with proposed changes to the species protections in December. These changes are being developed by the Division of Marine Fisheries Management and would require bycatch reduction devices in nearshore and inshore waters. A draft recommendation is presented on this slide. Public workshops for the use of bycatch reduction devices are being planned, so keep an eye out for official announcements. More information will be available on the Marine Fisheries Website, and we will share that link in the chat box and again at the end of the presentation. As a reminder, bycatch reduction devices aren’t the focus of today’s talk, but we do have staff on the presentation who will be able to provide guidance if needed.
Current Protections

- Limits on take and possession
  - Take from the wild: 1/person/day
  - Possession limit of 2

- Permits required to exceed these limits

- Most states prohibit removing terrapins from the wild

Current Protections: Diamondback terrapins currently have some protection in Florida. Take and possession of diamondback terrapins is regulated in Rule 68A-25.002, Florida Administrative Code. Currently, without a permit a citizen may take one terrapin per day, and transport one at a time. There is a personal possession limit of two terrapins per person, which by default prohibits captive breeding of the species. In Florida, all turtle eggs are protected from take, and wild caught turtles are not allowed to be sold. Broadly looking at our turtle rules, take from the wild is already prohibited for several non-listed species, like cooters and common snapping turtles. Outside of Florida, most states prohibit the removal of diamondback terrapins from the wild.
Ongoing Conservation Actions

- Established Critical Wildlife Areas – will benefit Diamondback terrapins
- Determining the status, distribution and genetic validity of all Florida subspecies
- Determine population and sub-population estimates
- Identify habitat needs and population centers
- Active participation with existing stakeholder groups (e.g. Florida Diamondback Terrapin Working Group)

Research & Management: Several ongoing management and research actions are underway throughout the state. FWC has established Critical Wildlife Areas, primarily for imperiled birds, but many of these areas also benefit terrapins and other wildlife. A genetic assessment of terrapins throughout the state is underway to better understand the delineations between subspecies, and to determine if any subspecies may warrant elevation to full species status. In collaboration with partners, mark-recapture studies are ongoing to estimate population numbers for several important areas, and we are evaluating how to best manage and protect important population centers.

These conservation actions are designed to benefit the terrapin along with other coastal species and will inform future management decisions.
**Research & Management:** This graphic shows where FWC and partner organizations are conducting research throughout the state. So far, over 1000 tissue samples have been collected for genetic analyses to validate subspecies delineations. Additionally, mark and recapture studies are ongoing throughout the state which will help inform population assessments. We are glad to have partnerships with many cooperating entities to help complete important research throughout the state.
Ongoing FWC Actions

- Reevaluating existing protections
  - Considering strengthened protections to prohibit take and possession
  - Seeking public input on these proposed changes

FWC Outreach: Part of FWCs ongoing conservation actions is to periodically review existing protections to ensure that vulnerable species do not warrant state threatened status. At the end of this webinar, we will be sharing proposed rule changes to meet these needs. As a part of this process, we are currently inviting stakeholder feedback. Before developing these proposed rule revisions, we reached out to a small group of stakeholders for guidance. These stakeholders had a diverse background, and represented many areas involved in wildlife conservation, including education and outreach, scientific research, and the commercial pet trade. The feedback received from these stakeholders helped guide the creation of our proposals.
**Targeted Stakeholder Outreach**

- Asked participants to answer 7 questions
- Multiple choice
- Participant generated lists
- General importance
- Ranked importance
- Other feedback

**Initial Outreach:** While reaching out to stakeholders, we asked them to complete a brief survey to help guide our policy needs. This effort asked them about terrapin population trends, allowed stakeholders to state what they thought were the primary threats to terrapins, what they thought were the most important actions for FWC to take to increase conservation success for the terrapin, and to rate and rank potential actions. Nearly all the stakeholders surveyed felt that diamondback terrapin populations were decreasing, and that increased conservation would benefit the species. As you will see over the next few slides, stakeholders identified crab traps as a concern and bycatch reduction devices as a supported action, which again is something that is being addressed by our Division of Marine Fisheries Management. I will quickly summarize some of the key responses to this survey over the next few slides.
In your opinion, what are the primary threats in Florida for Diamondback terrapins? List up to 5.

- Habitat loss and degradation
- Predation and mortality
- Crab traps
- Climate change
- Not enough regulation
- Information needs
- Too much regulation

Outreach Question: One of our questions asked our participants to think about the primary threats to diamondback terrapins. After receiving their lists, we grouped similar responses into broader categories, for example, if someone responded with nest predation and road mortality as threats, we lumped them into the predation and mortality category. While all of the responses were valuable on an individual level, for planning purposes this information was best filtered at a higher level. The bar in orange represents the total number of threats listed in a category, and the blue bar represents the number of participants who identified at least one threat in the category. So to try and explain that a little better, if a single participant responded with coastal development, habitat fragmentation, and shoreline hardening as threats, they were all lumped into habitat loss and degradation. The orange bar would receive three tallies, one for each threat, but the blue bar would only receive one tally, representing the participant. A majority of respondents identified habitat loss and degradation, predation and mortality, and crab traps as the main threats to terrapins in Florida.
In your opinion, what are the primary actions FWC could take to increase conservation success? List up to 5.

- Increase habitat conservation and management
- Increase regulations
- BRD requirement / Trap removal
- Decrease regulations
- Increase enforcement of existing regulations
- Increase research
- More rehabilitation and education / outreach

Outreach Question: Like the last question, we asked our participants to generate a list of potential FWC actions to increase terrapin conservation in our state. Again, we grouped similar responses into broader categories, the orange bar represents total actions, and the blue bar represents the number of respondents who identified at least one action in each category. Of the 48 actions listed, most included aspects of increased habitat conservation and management, increased regulations, and a bycatch reduction device requirement and removal of derelict ghost traps.

Again, this survey was not heavily scrutinized, but it was a valuable tool to see where a small subset of our partners and stakeholders landed on many issues. They were not provided with any of the proposed changes to terrapin protections. We are looking forward to receiving feedback on those protections at the end of this presentation, so let’s take a look at them.
Proposed Changes to Protections

- Prohibit take from the wild
  - From 1 turtle/day/person → no removal from the wild

- Prohibit possession
  - From a limit of 2 terrapins/person → no possession without a permit
  - Terrapins currently in possession will be permitted to remain in possession

- Issue permits for education, outreach, and research

- Concurrent effort to address threat of by-catch in crab traps

**Proposed Changes:** Based on early stakeholder feedback and discussions among terrapin experts, we are proposing to strengthen the protections for diamondback terrapins by prohibiting take and possession. After careful consideration, we believe the proposed changes are warranted as part of a larger conservation focus on this species to prevent further decline. The main focus and consideration for these proposed changes is providing an additional layer of protection for wild terrapins.

Should these changes be approved, all diamondback terrapins currently in possession, either personal pets or outreach and educational animals would be allowed to remain in possession, but they would require a no-cost permit. This would also allow for educators and outreach facilities, such as zoos and aquariums, to continue to keep and display terrapins for public benefit. Pet owners will be able to continue to care for their turtles for the life of the animal. Research that requires handling or possession of a terrapin could still be permitted. These proposed changes would allow for a higher standard of enforcement on illegal terrapin capture and trafficking.
Next Steps

- Public comment period open September 2nd – October 2nd
- Two webinars during public comment period
- Commission presentation in December 2020
  - Final approval in Spring 2021

**Next Steps:** We look forward to receiving feedback on the recommendations presented here through October 2nd. This is one of two webinars for the topic, and both webinars will contain the same information. As mentioned, draft rule language will be brought to the December 2020 Commission Meeting and approval will be sought in Spring 2021.

A recommendation on bycatch reduction devices will also be brought to the Commission on the same timeline. In addition to these recommendations, FWC will continue to work with public and private partners to promote terrapin conservation across the state and to address a suite of emerging issues related to freshwater turtles.
Questions and Comments

- Please use the chat function to indicate that you have a question
- Written comments may be emailed to Freshwater.Turtles@MyFWC.com
- www.myfwc.com/wildlifehabitats/wildlife/freshwater-turtles/
- www.myfwc.com/fishing/saltwater/rulemaking/workshops/

**Questions:** We will now open the discussion up to questions and comments. We can flip back to any slide if you have a particular question about one. If you would like to speak up, please indicate that you have a question in the chat or go ahead and type the full question out. Once you are called on, please unmute your microphone and ask your question. Written comments may be submitted directly to FWC at the email address Freshwater.Turtles@MyFWC.com. More information can be found at www.myfwc.com/wildlifehabitats/freshwater-turtles/, and I recommend keeping an eye on your Gov Delivery notifications and the marine rulemaking website for updates on the bycatch reduction device process. Myself and other FWC staff will stay on the webinar after the discussion winds down, so you are welcome to stick around if you have any lingering questions. Otherwise thanks very much for taking the time to be with us today, we really appreciate it and hope it was informative for you.