Eastern Indigo Snake Protection/Education Plan

Northwest Florida Water Management District
81 Water Management Drive
Havana, FL 32333-4712

25 March 2013

The Northwest Florida Water Management District (NWFWMD) is committed to minimizing potential harm to the eastern indigo snake (*Drymarchon corais couperi*), a threatened species protected by state and federal law. Accordingly, this "Eastern Indigo Snake Protection/Education Plan" is to be implemented whenever habitat for the eastern indigo snake has been identified as possibly occurring within a NWFWMD project area. In such cases, all onsite workers (contractors, construction personnel and others) must be familiar with and abide by this plan. The goal of this plan is compliance with the "Standard Protection Measures for the Eastern Indigo Snake" (Revised 2/12/2004) developed by the US Fish and Wildlife Service (USFWS). Harassing or harming an eastern indigo snake is a violation of state and federal law and may result in severe civil and criminal penalties.

Onsite Signage

Information signs will be posted by NWFWMD or other personnel at the project site and will contain the following information:

- A description of the eastern indigo snake, its habits and protection under Federal Law.
- Instructions not to kill, injure, harm, handle or otherwise harass this species if it is observed.
- Instructions to immediately cease project activities if an eastern indigo snake is observed and to allow it sufficient time to move away from the site on its own accord before activities are resumed.
- Instructions to immediately contact the NWFWMD at 850-539-5999 (or alternative phone number if provided), the USFWS Panama City Office at 850-769-0552, and the Florida Fish and Wildlife Conservation Commission at 352-334-4209 or 850-921-1143 if live or dead specimens of the eastern indigo snake are observed. If a dead specimen is observed, it should be collected, soaked in water, frozen, and turned over to NWFWMD, USFWS, or FWC personnel.

Education of Contractor and/or Other Personnel

Prior to initiation of project activities, all onsite workers will be instructed in the identification of the eastern indigo snake, its habitats, protections under state and federal law, and what steps to follow if live or dead specimens are observed. This will be accomplished by onsite review of posted signage (see above) and other printed materials (see examples attached). Onsite education of workers may be conducted by NWFWMD or other personnel. It will be emphasized that if a live or dead eastern indigo snake is seen, all work must be immediately halted and a supervisor informed.

Monitoring Report

For NWFWMD projects for which this protection/education plan is implemented, a monitoring report will be submitted from the NWFWMD to the USFWS Panama City Field Office within 60 days of project completion. This report will be submitted whether or not eastern indigo snakes are observed. The report will contain the following information:

a. any sightings of eastern indigo snakes and
b. other obligations required by the Florida Fish and Wildlife Conservation Commission (FWC), as stipulated by permit.

Directions to the Contractor

If live eastern indigo snakes are found in the work area, stop all work immediately. Work may resume after the snake or snakes are allowed to leave the area of their own volition. If it appears that the construction activities will cause harm to the snake, construction must be stopped until the proper action can be determined. Do not attempt to capture or handle the snake—only individuals authorized under permit by the USFWS or FWC are permitted to handle the snakes. You must report live sightings of eastern indigo snakes to the NWFWMD, USFWS, and FWC. If a dead eastern indigo snake is found on the project site, freeze the dead snake as soon as possible (soak the snake in water prior to freezing) and immediately notify the NWFWMD, USFWS, and FWC. Every effort should be undertaken to avoid harming any snake observed during work on this construction site.

Contacts to Report Eastern Indigo Snake Sightings:

- NWFMWD—850-539-5999
- USFWS—850-769-0552
- FWC—352-334-4209 or 850-921-1143

Authorization

If not currently authorized through an Incidental Take Statement in association with a Biological Opinion, only individuals who have either been authorized by a section 10(a)(1)(A) permit issued by the USFWS or FWC are permitted to come in contact with an eastern indigo snake.

Attachments

US Fish and Wildlife Service. *Standard Protection Measures for the Eastern Indigo Snake*. Revised February 12, 2004.

Northwest Florida Water Management District. *Eastern Indigo Snake Protection Plan* (Brochure).

Northwest Florida Water Management District. *Eastern Indigo Snake Education Plan and Protection Measures for FDOT District 3 Contractors* (PowerPoint Presentation and Handout).

Photos of Eastern Indigo Snake and Similar-looking Southern Black Racer (provided by Florida Department of Transportation, District-3).

NWFWMD Indigo Snake Poster. *Have You Seen This Snake?*

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE

1. An eastern indigo snake protection/education plan shall be developed by the applicant or requestor for all construction personnel to follow. The plan shall be provided to the Service for review and approval at least 30 days prior to any clearing activities. The educational materials for the plan may consist of a combination of posters, videos, pamphlets, and lectures (*e.g.*, an observer trained to identify eastern indigo snakes could use the protection/education plan to instruct construction personnel before any clearing activities occur). Informational signs should be posted throughout the construction site and along any proposed access road to contain the following information:

    a. a description of the eastern indigo snake, its habits, and protection under Federal Law;
    b. instructions not to injure, harm, harass or kill this species;
    c. directions to cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site on its own before resuming clearing; and,
    d. telephone numbers of pertinent agencies to be contacted if a dead eastern indigo snake is encountered. The dead specimen should be thoroughly soaked in water and then frozen.

2. If not currently authorized through an Incidental Take Statement in association with a Biological Opinion, only individuals who have been either authorized by a section 10(a)(1)(A) permit issued by the Service, or by the State of Florida through the Florida Fish Wildlife Conservation Commission (FWC) for such activities, are permitted to come in contact with an eastern indigo snake.

3. An eastern indigo snake monitoring report must be submitted to the appropriate Florida Field Office within 60 days of the conclusion of clearing phases. The report should be submitted whether or not eastern indigo snakes are observed. The report should contain the following information:

    a. any sightings of eastern indigo snakes and
    b. other obligations required by the Florida Fish and Wildlife Conservation Commission, as stipulated in the permit.

Revised February 12, 2004

Protection Status and Penalties

The eastern indigo snake is listed as threatened by the US Fish and Wildlife Service. Due to its federally listed status, Section 9 of the Endangered Species Act of 1973 (16 U.S.C. 1531), as amended, makes it unlawful for any person to "take" any threatened species, with "take" being defined as "…harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such contact." The eastern indigo snake is also listed as threatened by the Florida Fish and Wildlife Conservation Commission. Due to its listed status, Rule 39-27.011 of the State of Florida Wildlife Code (Chapter 39, Florida Administrative Code), states that "No person shall kill, attempt to kill, or wound any endangered or threatened species," and 39-27.002(1) states, "No person shall pursue, molest, harm, harass, capture, or possess any endangered or threatened species of parts thereof or their nest or eggs…" For persons convicted of violating the provisions of the above federal regulations and state regulations, the penalties can be civil with fines up to $25,000 or criminal, with fines up to $50,000 and/or imprisonment up to one year.

Northwest Florida Water
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Northwest Florida Water Management District

Eastern Indigo Snake Protection Plan

(Photo via US Army Environmental Command Website)

What you should know about the Eastern Indigo Snake when your project contains suitable habitat.

Adult Eastern Indigo Snake

Description and Ecology

The eastern indigo snake (*Drymarchon corais couperi*) is one of the largest, non-poisonous snakes found in North America. It can reach a length of up to eight feet, is thick bodied, and has a glossy blue-black color with iridescent scales. The gular scales on the underside of the head found in the throat region and labial scales bordering the mouth opening are orange to coral red, though head and throat coloring can vary.

The indigo snake is usually found in high, dry, well-drained sandy soils, in the same habitat preferred by the gopher tortoise. Indigo snakes may also be found in hammocks, swamps, and flatwoods habitats in south Florida. Gopher tortoise burrows are used by many prey animals that are easily captured by the indigo snake in the burrow. Indigo snakes also use the burrows as dens for cover, and laying eggs. Other potential dens are stumps of trees, cavities in the soil, and under piles of debris.

Habitat selection can vary seasonally. From December to April, eastern indigo snakes prefer sandhill habitats; from May to July snakes shift from winter dens to summer territories, which can include forested systems and tortoise burrows; from August through November they are located more frequently in shady creek bottoms than during other seasons. They often den in gopher tortoise burrows during the winter, though will utilize these burrows year round for a variety of needs, including protection from temperature extremes, shedding, and egg laying. Indigos typically lay 5 – 12 eggs in May or June, while hatching occurs in August and September, with hatchlings approaching 2 feet in length.

It is an active forager that feeds on virtually any vertebrate small enough to consume. Prey includes fish, frogs, toads, lizards, snakes, small turtles and small mammals. It will even attack and eat venomous snakes.

The only species with an overlapping geographic range that may be mistaken for an eastern indigo snake is the southern black racer (*Coluber constrictor*). The black racer is a much more slender snake, has scales that are a smooth and dull black color, and often have chin and throat colors that are creamy white.

The contractor and all construction personnel must be familiar with and use this plan to be in compliance with USFWS and FWC requirements for the protection of the eastern Indigo snake.

Eastern Indigo Snake Head Coloration

Juvenile Eastern Indigo Snake

What should you do if you see an eastern indigo snake?

If live or dead eastern indigo snakes are found in the work area, **stop all work immediately**. Work may resume after live snakes are allowed to leave the area of their own volition. If it appears that the construction activities will cause harm to the snake, construction must be stopped until the proper action can be determined. **Do not attempt to capture or handle the snake** – only individuals authorized by state or federal wildlife agencies are permitted to come in contact with an eastern indigo snake. Please report all live or dead sightings of eastern indigo snakes to the Northwest Florida Water Management District (NFWMD), the US Fish & Wildlife Service (USFWS), and the Florida Fish & Wildlife Conservation Service (FWC). If a dead eastern indigo snake is found on the project site, and collect and freeze the dead snake as soon as possible. The snake should be soaked in water prior to freezing to ensure proper preservation.

NWFWMD 850-539-5999
USFWS 850-769-0552
FWC 352-334-4209 or 850-921-1143

Eastern Indigo Snake Education Plan and Protection Measures for Northwest Florida Water Management District Contractors

Protection Status

- Federally Threatened under US Endangered Species Act of 1973

- ***Unlawful to "…harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such contact."***

Protection Status

- State Threatened under State of Florida Wildlife Code
- ***"No person shall kill, attempt to kill, or wound any endangered or threatened species, No person shall pursue, molest, harm, harass, capture, or possess any endangered or threatened species or parts thereof or their nest or eggs…."***

Penalties

- ***For persons convicted of violating the provisions of the above federal regulations and state regulations, the penalties can be civil with fines up to $25,000 or criminal, with fines up to $50,000 and/or imprisonment up to one year.***

Indigo Snake Basics

- Scientific Name - (*Drymarchon corais couperi*)
- Non-poisonous
- One of largest snakes in North America
- Up to 8 feet long
- Glossy Black, bluish-black, gun-metal black
- Iridescent Purple in sunlight

Indigo Snake Basics

- The chin and throat may be orange or blood red.

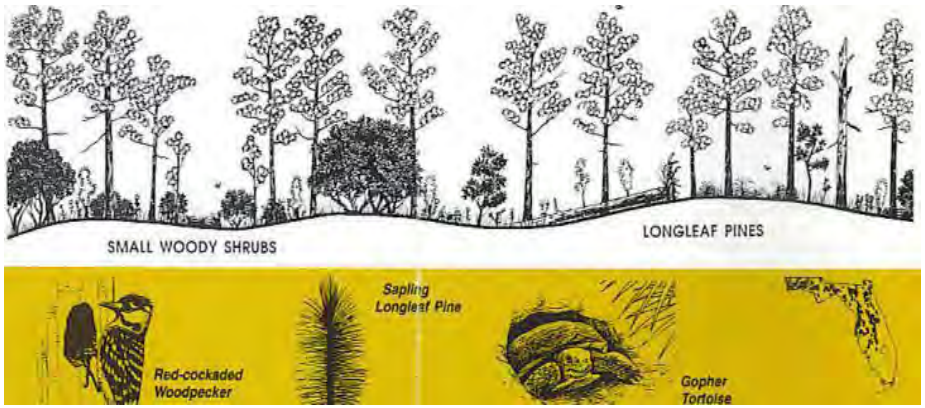
- Only species similar in appearance is black racer
  - More slender body
  - White or creamy throat and underside of head

Indigo Snake Basics

- Juveniles are black bodied, some with light colored bands.

Habitat and Ecology

- Typically found in dry well drained sandy soils
- Same habitat preference as gopher tortoises
- Can vary seasonally
  - Winter dens in tortoise burrows or other refuges
  - Summer in hammocks, swamps, or other habitat



Habitat and Ecology

- Feeds on any vertebrate it can overcome
- Fish, Frogs, lizards, turtles, small mammals
- Will eat poisonous snakes

What to do if you see an indigo snake

- If a live snake is seen:
  - STOP ALL WORK
  - Allow the snake to leave on its own
  - Immediately report the sighting to NWFWMD, USFWS, and FWC
  - All live sightings must be reported

- If a dead snake is found
  - STOP ALL WORK
  - Determine if any other snakes are in the area
  - Freeze the specimen by soaking it in water then placing it in a freezer
  - Report the sighting to NWFWMD, USFWS, and FWC

DO NOT attempt to capture or handle a live snake!

Contact Information

- Northwest Florida Water Management District (NWFWMD)
  850-539-5999

- US Fish & Wildlife Service (USFWS)
  850-769-0552

- Florida Fish & Wildlife Conservation Commission (FWC)
  352-334-4209 or 850-921-1143

Eastern Indigo Snake

Photo 3 – Adult Eastern Indigo Snake cheek coloration

Photo 4 – Juvenile Eastern Indigo Snake

Southern Black Racer (Similar-looking Species)

Photo 5 – Southern Black Racer

Photo 6 – Southern Black Racer with facial coloring

Have You Seen This Snake?

Eastern Indigo Snake (*Drymarchon corais couperi*)

Description: **Nonpoisonous, up to 8 FT long, shinny bluish-black with red or cream coloring on chin or side of head.**

Habitat: **Typically high, dry, well-drained sandy soils favored by gopher tortoise. Also hammocks, swamps, and flatwoods. Potential dens include gopher tortoise burrows, tree stumps, cavities in soil, and under piles of debris.**

Protection: **State and federal "Threatened" species. Persons convicted of harassing or harming this snake face penalties of up to $50,000 and/or one year imprisonment.**

IF YOU OBSERVE THIS SPECIES:

- **DO NOT KILL, HARM, HANDLE, OR HARASS.**
- **STOP WORK IMMEDIATELY AND INFORM A SUPERVISOR. ALLOW SUFFICIENT TIME FOR THE SNAKE TO MOVE AWAY FROM PROJECT SITE.**
- **IMMEDIATELY CONTACT THE NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT AT 850-539-5999, US FISH & WILDLIFE SERVICE AT 850-769-0552, AND FLORIDA FISH & WILDLIFE CONSERVATION COMMISSION AT 352-334-4209 or 850-921-1143.**
- **IF A DEAD SPECIMEN IS FOUND, STOP WORK IMMEDIATELY, COLLECT AND TURN OVER TO NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT, US FISH & WILDLIFE SERVICE, OR FLORIDA FISH & WILDLIFE CONSERVATION COMMISSION PERSONNEL. FREEZE IN WATER IF POSSIBLE.**

(Northwest Florida Water Management District, 81 Water Management Drive, Havana, FL 32333)