



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

May 15, 2014

Ms. Mara Roche
Jo Carroll Depot Local Redevelopment Authority
18933 A Street
Savanna, IL 61074

**Re: Industrial Park Baling
Endangered Species Consultation Program
Project Number(s): 1409716
County: Carroll**

Dear Ms. Roche:

This letter concerns the Endangered Species Consultation for the **Industrial Park Baling**. This project was submitted for consultation in accordance with the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The proposed action involves: cutting, windrowing and baling the industrial park area approximately 2 to 3 times during the growing season – June through October.

The project is located within the **Savanna Army Depot INAI**. The State-listed **Plains Hognosed Snake**, *Heterodon nasicus* and **Loggerhead Shrike**, *Lanius ludovicianus* records exist within the footprint of the project area. In addition, State-listed plant species exist within the project area footprint, to include **False Heather**, *Hudsonia tomentosa* and **Kitten Tails**, *Besseyia bullii*.

The Department has completed its review of the project and determined that the action may have an adverse affect on the Plains Hognose Snake, Loggerhead Shrike, and listed plant species. To minimize potential impacts, The Department recommends that the following measures be implemented by the Jo Carroll Depot Local Redevelopment Authority.

Plains (Western) Hognosed Snake, *Heterodon nasicus*

According to a herpetological study done at Lost Mound Unit of the Upper Mississippi River National Wildlife Refuge - Savanna Army Depot, in 2008 and 2009, Plains Hognose Snakes were encountered. The listed species has been adversely affected by habitat conversion to agriculture, development and road-kills.

This subspecies of the Western Hognose is a thick-bodied snake typically found in sand prairies, savannas, and nearby woodlands. An ambush predator, this snake sometimes buries itself in the soil with only its eyes exposed and waits for prey, primarily toads, frogs, and rodents, to move within striking distance, or moves about slowly while searching for prey which has burrowed just beneath the surface. Although not usually classified as a venomous reptile dangerous to humans, it is sometimes described as rear-fanged, having enlarged rear teeth which serve to deflate toads and frogs (which swell themselves as a defense against being swallowed). Its saliva (venom) is toxic, but it cannot deliver large amounts. Even so, bites from this animal, though rare, may require medical attention.

With its close cousin, the Eastern Hognose Snake (*Heterodon platirhinos*), whose range overlaps that of the Plains Hognose and which also occurs in Carroll County, it shares two characteristics. First is an upturned snout, which produces a vaguely pig-like appearance, and which enable this snake to actually burrow through loose soils, an ability most snakes lack. Second, is the habit of rolling over and “playing dead” when harassed; if righted, the snake will roll over again. This behavior only occurs after puffing up the neck and head, loud hissing, and mock strikes (with mouth closed) have failed to discourage an attacker. These two species can be distinguished by the colors of the undersides of their tails – that of the Plains Hognose is black, while that of the Eastern Hognose is a lighter color than the belly.

Plains Hognose snakes may use abandoned rodent burrows for thermoregulation or during its hibernation period (September through March). They are most active in the early morning and late evening, spending much of the rest of the time seeking shade or warmth to regulate their temperature. In Illinois, mating begins soon after spring emergence, with females depositing eggs in the soil beginning in June or July; eggs usually require six to eight weeks to hatch (in August or September), and neonates are fully capable of independent existence. Adults neither guard the nest nor provide care to young.

The proposed agricultural activities pose the threat of kill or injury to basking or traversing snakes. Noise generated by cutting, windrowing, and baling activities could interfere with animal communication and may hinder reproductive success, depending on the length and intensity. Vibrations from these activities may pose another risk factor since reptiles are very sensitive to vibrations transmitted through the ground. Hay cuttings, specifically after being windrowed, may attract this species to be used as cover and for thermoregulation, greatly increasing the chance for death or injury. Further, compaction of sandy soils can make it difficult, or impossible, for this species to retreat to rodent burrows it uses for thermoregulation or during its hibernation period (September through March), and farm equipment compaction could crush eggs and/or impede emergence of newly hatched snakes.

Recommendation. The Department has completed its review of the project and determined that the action is likely to have an adverse impact on the Plains (Western) Hognosed Snake, *Heterodon nasicus*, which is known to occur in the area. Because of the high probability of an illegal take, the Department recommends the Jo Carroll Depot Local Redevelopment Authority obtain Incidental Take Authorization (ITA) for the Plains (Western) Hognosed Snake, *Heterodon nasicus*, in accordance with 17 Ill Adm. Code Part 1080, from the Department’s Office of Resource Conservation, pursuant to 520 ILCS 10/5.5. ‘Take’ means, in reference to animals and animal products, to harm, hunt, shoot, pursue, lure, wound, kill, destroy, harass, gig, spear, ensnare, trap, capture, collect, or to attempt to engage in such conduct. Communication concerning the ITA application should be directed to Jenny Skufka, Endangered Species Project Manager, Office of Resource Conservation, One Natural Resources Way, Springfield, IL 62702. Phone: 217-557-8243; e-mail: Jenny.Skufca@illinois.gov.

Loggerhead Shrike, *Lanius ludovicianus*.

The Loggerhead Shrike was a candidate (C2) species for listing as either threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) - however, the USFWS discontinued the designation of C2 species as candidates for listing, therefore it is considered by USFWS to be a species of concern.

This species returns to Illinois from its wintering range in the southern United States and often returns to the area where it nested the previous year. Loggerhead shrikes are known for their unique habit of impaling small vertebrates on thorns or other sharp objects. However, it appears that these birds are primarily insectivorous. Pairs will build a nest 3' – 12' above the ground in the crotch of tree branches commencing in March or April. Incubation and nestling periods typically last until June; July if late nesting or second broods occur. Their habitat is typically characterized by open, agricultural areas or grasslands with short vegetation and scattered trees, shrubs, or hedgerows for nesting cover and lookout points. They have also been known to inhabit riparian corridors, open woodlands, and row crop fields. Thus, they could be nesting in trees very close to either project's footprint and could be disturbed by activities, and noise, during the construction period. If the disturbances are too much, the adults could abandon their nest.

Recommendation #1. Trees and shrubs in the vicinity of the project footprint should be surveyed for Loggerhead Shrike nests by a qualified biologist. Typical trees and shrubs that this species uses include: Eastern Red Cedar, Hawthorn, Osage Oranges, Multiflora Rose, Honey locust, Pines, Spruces, Firs, Apple, and Willows. If nests are discovered, the Department should be notified immediately (Duane Ambroz, IDNR District Heritage Biologist, 815/990-8653 and Sheldon Fairfield, IDNR Impact Assessment Section, 217/782-0031).

Recommendation #2. If nests are discovered, work should not take place between mid-March and late July, while this species is nesting.

Recommendation #3. The Department recommends that all on-site personnel be educated and informed about Loggerhead Shrikes before work begins. Photos should be distributed and a site management plan for responding to potential encounters should be discussed.

INAI and Plants

While listed plant species are the property of the landowner, it would be beneficial to conserve the genetic material if the plant is present at the project site. This could include translocation, seed collection, or stockpiling and replacing the surface soils containing the seed bank.

Consultation Termination and Notification

Consultation under 17 Ill. Adm. Code Part 1075 is terminated. In accordance with 17 Ill. Adm. Code 1075.40(h), Jo Carroll Depot Local Redevelopment Authority must notify the Department of its decision regarding these recommendations, whether they will:

- Allow the action to proceed as originally planned;
- Require the action to be modified per Department recommendations (please specify which measures, if not all, will be required); or
- Forgo the action.

Consultation for Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or

Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database and the Illinois Wetlands Inventory at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Cordially,

A handwritten signature in black ink, appearing to read "Sheldon R. Fairfield". The signature is fluid and cursive, with the first name "Sheldon" and last name "Fairfield" clearly distinguishable.

Sheldon R. Fairfield
Impact Assessment Section
Division of Ecosystems & Environment
Phone: (217) 782-0031
Sheldon.Fairfield@illinois.gov

Cc: Jenny Skufca, IDNR Endangered Species Project Manager
Duane Ambroz, IDNR District Heritage Biologist