

**CONSERVATION PLAN
FOR INCIDENTAL TAKING OF
ENDANGERED SPECIES**

Township Road 97 over Haney Creek

Section 07-01161-00-BR
Structure #035-3013
Job No. C-99-508-08 (Seq. #15657)

HARDIN COUNTY

Prepared By:
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October 17, 2011
Revised December 12, 2011

Conservation Plan for the State endangered Indiana Crayfish (*Orconectes indianensis*) at Township Road 97 over Haney Creek, in Hardin County, Illinois.

1. Description of the impact likely to result from the proposed taking.

A. Legal Description of the Project Area.

Located in the Northeast Quarter of the Southwest Quarter of Section 33, Township 11 South, Range 10 East of the Third Principal Meridian. The project is located within the road right-of-way of Township Road 97 in the far eastern portion of Hardin County.

The coordinates of the bridge are Latitude 37° 30' 54" N, Longitude 88° 06' 38" W.

B. Biological Data on the Affected Species.

Indiana Crayfish (*Orconectes Indianensis*)

The Indiana Crayfish has a limited range in the lower Wabash River Valley and Ohio River Valley, where it occurs in southeastern Illinois and southwestern Indiana. It is found in shallow regions with gravel or cobble substrates in small to large creeks and small rivers. It lives in rocky riffles and pools of first, second and third order streams, frequently found under rocks, in woody debris and in shallow burrows within these streams. (1)

C. Description of Incidental Taking.

The proposed improvements consist of removing a single span, structurally deficient (25.0 sufficiency rating) wooden deck bridge and replacement with a single span precast concrete deck beam bridge on H-pile supported abutments. Construction will require the removal of the existing wooden pile abutments and placement of the new abutments. Proposed work within the channel includes removal of existing structure as described above, driving piles for new abutments, placement of riprap for scour protection, and incidental grading along the stream banks within the existing right-of-way. The bridge, roadway and right-of-way are under the jurisdiction of Hardin County. Federal funding will be used for the project.

D. Anticipated Adverse Effects on the Listed Species.

Primary threats to the Indiana crayfish fall into two categories: habitat alteration and introduction of non-native species. Habitat alteration can consist of siltation, stream channelization, debris, debris removal or substrate removal. (1)

For the purposes of this project, potential adverse affects consist mainly of excavation and placing of riprap within the stream bed. Excavation could create minor, short term siltation in the area immediately downstream of the structure, while some crayfish could be covered or crushed during the excavation and placement of the riprap.

2. Measures to Minimize and Mitigate Impacts.

A. Plans to minimize the affected area, the amount of individuals of the endangered species that will be taken and the habitat affected.

The area of the work zone has been limited to the existing right-of-way. Total impacted area within the stream is slightly more than 3000 square feet. The distance from back to back of the abutments is 51.5', and the existing right of way is 60' wide. Riprap will be placed from abutment to abutment for the full width of the right-of-way for erosion and scour prevention.

B. Plans for management of the area affected by the proposed action that will allow continued use of the area by the species.

Similar habitat is located both upstream and downstream of the structure site. Based on the above description of the habitat, the areas upstream and downstream of the site are more suitable than at the bridge itself. (1) The streambed and habitats will be controlled by natural processes after construction activities are completed. Crayfish should move back into the area immediately adjacent to the bridge over time. Introduction of riprap within the channel and streambed at the bridge site may actually enhance the habitat characteristics within the immediate vicinity of the structure, and the erosion and scour prevention afforded will protect habitat downstream of the site.

C. Description of measures to be implemented to minimize or mitigate the effects of the proposed action to the endangered species, plans for monitoring the effects of the measures implemented, and adaptive management practices that will be used to deal with changed or unforeseen circumstances that affect the effectiveness of the measures instituted.

In order to minimize harm to young crayfish recently released by adult female crayfish, there will be no in-stream work March, April or May of any year.

Four weeks prior to the start of in-stream work, the Hardin County Engineer (Danny Lowry) will notify the Bureau of Design and Environment (BDE) (Barb Traeger) of the date of the County's intent to begin in-stream work. In that notification, the Engineer will provide an estimate of the total number of days of in-stream work for project completion. Within one week of receipt of notification, the BDE will task the Illinois Natural History Survey (INHS) to move by hand the rocks within the stream to a location just outside and upstream of the limits of construction. The moving of rocks will be completed before the start of in-stream work tied to the bridge replacement. Rock moving may be accomplished in May so that bridge construction may be initiated in June. Moving the rocks should encourage crayfish to move to habitats outside of the construction zone.

The Hardin County Engineer will notify the BDE when the project reaches 100% completion.

The preceding language under heading 2.C. will be included in the notes of the contract plans. The Hardin County Engineer will notify the BDE when contract plans are at 50% and 100% completion.

A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented in accordance with IDOT's National Pollution Discharge Elimination System Permit No. ILR10. The SWPPP will be coordinated with the BDE for review at 50% and 100% completion.

Post-construction monitoring will be performed by the INHS two and four years following completion of the project. Monitoring reports will be prepared by the INHS and submitted to the BDE for review. Monitoring reports will be coordinated with the IDNR Division of Ecosystems and Environment, Transportation Review Program.

D. Verification that funding to support mitigation activities will be available for the life of the conservation plan.

The project estimated budget will include line items for implementation of BMP's included in the SWPPP, including seeding of all disturbed areas draining to the stream. Maintenance and repair of SWPPP items, and additional measures implemented during construction will be paid for by change order or force account. By law, the erosion and sediment control measures will remain in place for the life of the project.

3. Analysis of Project Alternatives.

There are four alternatives for the project involving this bridge, as follows:

A. Do Nothing.

The only alternative that does not result in a taking of the listed species is leaving the bridge as is. This would result in a structurally deficient bridge being left in place. Normal maintenance measures cannot correct the deficiencies, and the structure will continue to deteriorate and eventually collapse, with probable injury or loss of life. This alternative is neither prudent nor feasible, due to the unacceptable safety hazard it poses and the restrictions an eventual closure would place on local traffic.

B. Leave existing bridge in place and construct a new structure on an offset alignment.

This alternative is not considered feasible. It would eliminate taking of the species at the current bridge site, but would necessitate taking of the species at a location either immediately upstream or downstream of the structure at the site of new construction. This option would require the acquisition of additional right-of-way, and the disturbance of additional areas adjacent to the existing right-of-way.

C. Rehabilitate the existing structure.

The superstructure and the substructure of the existing bridge, and the Channel and Protection were all rated as "Poor Condition - Advanced Deterioration" by Illinois Department of Transportation in 2008. Overall Structural Evaluation at that time was listed as "Intolerable - High Priority for Correction". The existing abutments and other structural components should be considered inadequate for reconstruction of the bridge. This bridge has a posted limit of 10 tons. Therefore this alternative is not considered feasible.

D. Construct a new structure on existing alignment.

This is the preferred alternative. Complete removal and replacement of the bridge will provide the maximum benefit to area residents. No additional right-of-way will be required to construct the new structure on the present alignment. Roadway approach, excavation and embankment work will be minimal. Work within the channel will also be minimal. This is the most practical and cost effective option for this project.

4. Data and information regarding survival of the species after the proposed take is complete.

The Indiana Crayfish occurs in several locations in southeastern Illinois and southwestern Indiana, including other sites in Hardin County. Suitable habitat exists both upstream and downstream of the bridge site. (1) Due to the small area affected by construction of the new bridge, it is expected that the species will continue to exist in this reach of Haney Creek.

5. Implementing Agreement.

A. Names of all participants in the execution of the conservation plan, including public bodies, corporations, organizations, and private individuals.

Danny K. Lowry
County Engineer
Hardin County

Dennis W. Hillebrenner
Local Roads & Streets Engineer
Illinois Department of Transportation, District 9

B. The obligations and responsibilities of each of the identified participants with schedules and deadlines for completion of activities in the conservation plan and a schedule of preparation of progress report to be provided to the department.

The Illinois Department of Natural Resources is responsible for the review of this conservation plan and for the subsequent issuance of the Incidental Take Authorization.

The Illinois Department of Transportation is responsible for all biological clearance coordination and recommendations related to the project.

Hardin County is responsible for securing authorization for the incidental take; securing all permits, Section 404 and Office of Water Resources; inspection of the work and contractor compliance with the contract documents.

C. Assurances that each participant in the execution of the conservation plan has the legal authority to carry out their respective obligations and responsibilities under the conservation plan.

The plan is authorized by the Illinois Department of Transportation, which oversees the use of state-distributed funding among local agencies.

D. Assurances of compliance with all other federal, state and local regulations pertinent to the proposed action and to the execution of the conservation plan.

The Illinois Department of Transportation and Hardin County exclusively abide by the National Environment Policy Act and all associated federal and state environmental laws in carrying out their mission of performing the most environmentally sensitive methods of transportation planning and engineering.

E. Copies of any federal authorizations for taking already issued to the applicant.

Since the Indiana Crayfish (*Orconectes Indianensis*) is not federally threatened or endangered, this does not apply.

F. For projects that will result in the taking of endangered or threatened species of plants, copies of expressed written permission of the landowner.

Not applicable.

6. Attachments

- A. Location Map.
- B. Plan & Profile of Proposed Action.

(1) All information regarding the Indiana Crayfish was taken from "Conservation Assessment for the Indiana Crayfish (*Orconectes indianensis*)" published by USDA Forest Service, Eastern Region, January 3, 2003, and prepared by:

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