

## **Authorization for Incidental Take and Implementing Agreement**

Pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5) the Illinois Department of Transportation's (IDOT) authorization for the incidental take of the State endangered Weed shiner (*Notropis texanus*) and the State endangered Blacknose shiner (*Notropis heterolepis*) in Whiteside County, Illinois (as described/shown in the final conservation plan received by the Department on 17 February 2009) is hereby granted, subject to the terms and conditions described in the attached Authorization and Implementing Agreement. The Illinois Department of Natural Resources has determined that this authorized take is incidental to the replacement of the bridge that carries County Highway 3 (Star Road) over Coon Creek near Prophetstown, Illinois in Whiteside County.

### Procedural History

IDOT prepared a conservation plan as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and IDOT's request for authorization for incidental take of the weed shiner and blacknose shiner were received by the Illinois Department of Natural Resources (Department) on 17 February 2009 (final version). Public notice of IDOT's request for authorization of incidental take of the weed shiner and blacknose shiner was published in the Northwest Daily Herald (Official State newspaper) and the Prophetstown Local on March 17, 2009, as well as on March 31, 2009. Public comments on IDOT's conservation plan were accepted by the Department until April 30, 2009. No comments were received by the public during the period of March 17, 2009 through April 30, 2009.

### Compliance with the Endangered Species Protection Act

The Illinois Endangered Species Protection Act includes six (6) criteria which must be met for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each criteria are listed below.

1. The taking will not be the purpose of, but will only be incidental to, the carrying out of an otherwise lawful activity:

The proposed improvement involves the removal and replacement of a structurally deficient bridge carrying CH 3 (Star Road) over Coon Creek in Whiteside County. The original structure was constructed in 1933, is a two lane, single span reinforced concrete girder bridge with closed concrete abutments. The bridge has an overall length of 58'-0" and an out to out deck width of 33'-4" with approach roadway width of 40'-0". The sufficiency rating is 27.5, which under federal guidelines indicates a total replacement is required. The bridge is posted to carry a 15 ton load limit. The bridge has been widened once, in 1971, and the superstructure is in poor condition with advanced deterioration. The bridge and roadway are under the jurisdiction of Whiteside County. Federal funding will be used for the project.

2. The parties to the conservation plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking.

The estimated total number of working days required for the completion of the bridge replacement project is 75 days. The amount of in stream work is for the most part, minimal. Equipment will and shall not be allowed in the stream for the removal of the existing superstructure. Protection at the proposed piers during the construction will and shall not extend into the stream. No in stream work will be required for the placement of riprap. The existing east abutment is located outside of the normal stream flow and will not require in stream work for removal. The existing west abutment is located at the west edge of the normal stream flow and will require a minimal amount of in stream work to remove the vertical concrete wall to one foot below the existing ground line. Approximately one (1) day of in stream work adjacent to the west edge of the stream at the west abutment will be necessary to remove the existing abutment walls.

Field investigations at the project site collected eight (8) samples of the state endangered Weed Shiner, *Notropis texanus* at the site. The Blacknose Shiner *Notropis heterolepis* was believed to be in the vicinity as the habitat for the shiners are similar. Other endangered species were not found. Information on the Weed Shiner, *Notropis texanus* shows they occur throughout the Midwest in slow moving, sand bottom streams and backwater areas. Spawning occurs in the late spring (blacknose shiner) and late July-early August (weed shiner), with the fish surviving approximately 2-3 years.

Erosion while working and the removal of the existing structure present the most danger for fish. While removing the structure, falling debris could, but not highly likely, kill some of those fish remaining in the area. The activity of construction and noise generated are more likely to drive the fish away to another location. They would be expected to return once things quiet down, since the channel itself would be relatively unchanged. Construction of the new bridge would have little likelihood of debris falling in the stream and the construction of the substructure elements are well away from the normal flow of the stream. It should be expected that during the spawning season the fish may be driven to other reaches of the stream to continue their biological activity.

The existing roadway profile grade will not be raised. Embankment material will be placed on either side of the approach roadway within the project limits, but only minimal grading within the ditch lines will be necessary. Temporary erosion control seeding and perimeter erosion barrier will be utilized to address erosion and subsequent sedimentation within the stream.

3. The parties to the conservation plan will ensure that adequate funding for the conservation plan will be provided:

This project is authorized by the Illinois Department of Transportation and Whiteside County, which receive funding from the Illinois General Assembly and the Federal Government in carrying out its programs. In addition, the Illinois Department of Transportation and Whiteside County exclusively abide by the National Environmental Policy Act and all associated state and federal environmental laws in carrying out its mission of performing the most environmentally sensitive methods of transportation planning and engineering. The preliminary estimated cost for this improvement is \$740,000. No new right of way will be needed to construct the bridge.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of the survival or recovery of the endangered species or threatened species in the wild in Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois:

The Whiteside County Highway Department/Whiteside County, as directed by the Illinois Department of Transportation, exclusively abides by the National Environmental Policy Act and all associated state and federal environmental laws in carrying out its mission of performing the most environmentally sensitive methods of transportation planning and engineering.

#### MEASURES TO MINIMIZE AND MITIGATE IMPACTS

To minimize construction impacts the new structure will be designed as an open, three (3) spanned bridge with pile bent piers. The piers will be located outside the normal pool elevation of the stream, thus reducing the disturbance to the channel during low flows. Stone riprap will be provided on the west side between the abutment and Pier 1 to protect this area from erosion. On the east side of the stream, riprap will be placed from the abutment down to the lower berm, but above the normal water elevation. The riprap placement will extend five (5) foot beyond the width of the bridge. Standard practice(s) for placement of the steel girders on the piers and the subsequent forming of the concrete deck will likely produce little spillage into the stream. However, special provisions will be written into the contract cautioning against dropping into the stream.

Removal of the existing structure presents more difficulties in preventing material from falling into the stream. To remove the existing structure, a contractor would typically allow large portions of the existing deck girders and beams to fall into the stream. The existing structure is a single span bridge with a superstructure consisting of reinforced concrete girders and two (2) prestressed concrete deck beams on each side. The substructure consists of closed reinforced concrete abutments on pile supported footings.

To limit the degree to which material is dropped, the contractor will and shall utilize the following procedure(s):

1. Remove all existing wearing surface from the structure
2. Perform a full-depth saw cut through the existing cast-in-place concrete deck for the entire length of the structure between and parallel to the deck girders.
3. Remove each deck girder and associated deck concrete individually, while maintaining bracing to stabilize remaining deck girders
4. Remove each precast, prestressed concrete deck beam individually
5. Remove the vertical walls of both abutments to an elevation one (1)-foot below the proposed ground line, while ensuring that large portions of the walls to not fall "forward" into the stream.

To further minimize project impacts, a temporary runaround was eliminated from consideration. The road will be closed and traffic will be diverted to other nearby roads. Special provisions shall be included in the contract requiring the contractor to follow the mitigating procedures. It shall be the Resident Engineer's responsibility, acting as the County's agent, to monitor all activities of the Contractor, including compliance with the special provisions regarding mitigation and the use of best management practices.

Erosion and sediment control Best Management Practices (BMP's) shall be utilized to prevent additional silt from entering the stream. National Pollutant Discharge Elimination System (NPDES) documentation will be included regardless of whether or not this project requires NPDES documentation. This will include a storm water pollution prevention plan, contractor certification statement, weekly inspections of BMP's and the reporting of incidents of non-compliance. The Illinois Department of Transportation's Bureau of Design and Environment (BDE) Special Provisions entitled "National Pollutant Discharge Elimination System /Erosion and Sediment Control Deficiency Deduction" and "Temporary Erosion Control" will be included in the special provisions for this project. The BDE form 2342 entitled Storm Water Pollution Prevention Plan will be included in the project Proposal Booklet to establish control and practices to be used, such as preservation of mature vegetation, protection of trees, temporary erosion control seeding, and perimeter erosion control barrier.

Both fish species of concern can be expected to be disturbed by any construction activities in or near the channel. For that reason the design of the structure has been modified so that the foundation elements will be outside the normal water elevation. The removal of the existing structure should be of short duration and with mitigating measures, the disturbance to the species will most likely be minimized. The streambed itself will more than likely see little or no physical change with the habitat upstream and downstream remaining the same. It would be expected, too, that the subject species will more than likely retreat during the construction (approximately 3 months) and return once the work is completed.

Construction activity shall be limited to the existing right of way, 50 foot either side of the centerline of roadway. This area is shown on the official design plans, and the contractor shall be required to work within these limits. The resident engineer and the contractor shall be directed by the contract of the need to exercise caution when working over or near the channel. Workers shall be instructed not to intentionally kill or harm any aquatic life and to report sightings to the resident engineer. Construction personnel shall minimize destruction to all aquatic vegetation within the project corridor for the duration of this project as this vegetation provides habitat for the species of concern. Following construction, all disturbed areas will be re-seeded with a native, local ecotype seed mix.

5. Any measures required under Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.40(b)], will be performed:

Additional measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and official Illinois Department of Transportation (IDOT) signature(s) on this authorization indicates their commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application:

IDOT prepared a conservation plan as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and IDOT's request for authorization for incidental take of the weed shiner and blacknose shiner were received by the Illinois Department of Natural Resources (Department) on 17 February 2009 (final version). Public notice of IDOT's request for authorization of incidental take of the weed shiner and blacknose shiner was published in the Northwest Daily Herald (Official State newspaper) and the Prophetstown Local on March 17, 2009, as well as on March 31, 2009. Public comments on IDOT's conservation plan were accepted by the Department until April 30, 2009. No comments were received by the public during the period of March 17, 2009 through April 30, 2009.

#### Authorization

It is the determination of the Department that the measures to be implemented by the IDOT will adequately minimize and mitigate for the possible taking of the State endangered Weed shiner (*Notropis texanus*) and the State endangered Blacknose shiner (*Notropis heterolepis*) in Whiteside County, Illinois associated with the replacement of the bridge that carries County Highway 3 (Star Road) over Coon Creek near Prophetstown, Illinois. Further, it is our opinion that the restrictions authorized herein would not diminish the likelihood of the survival of the weed shiner and blacknose shiner in the wild within the State of Illinois, the biotic community of which the species is a part or the habitat essential to the species' existence in Illinois.

Pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5) the Illinois Department of Transportation's (IDOT) authorization for the incidental take of the State endangered Weed shiner (*Notropis texanus*) and the State endangered Blacknose shiner (*Notropis heterolepis*) in Whiteside County, Illinois (as described/shown in the final conservation plan received by the Department on 17 February 2009) is hereby granted, subject to the terms and conditions described in the attached Authorization and Implementing Agreement. The Illinois Department of Natural Resources has determined that this authorized take is incidental to the replacement of the bridge that carries County Highway 3 (Star Road) over Coon Creek near Prophetstown, Illinois in Whiteside County.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.40(b)], this authorization is issued subject to the following additional terms and conditions:

1. This authorization is effective upon signature of the Department and shall remain in effect for a period of four (4) years [beginning the first day the new bridge is officially open for use by the general public], unless terminated pursuant to Section 5.5. of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.80].
2. Regarding in-stream work and spawning fish: In-stream work may begin August 15 and continue to March 15 of the following calendar year in order to reduce disturbance to spawning fish (i.e. State endangered Weed shiner (*Notropis texanus*) and the State endangered Blacknose shiner (*Notropis heterolepis*))

3. IDOT and/or Whiteside County shall coordinate a post-construction monitoring regime for the listed fish species of concern in Year 2, following the completion of all work activities ["completion" shall be defined as: the first day the new bridge is officially open for use by the general public]. All fish shall be identified to species and enumerated and the length of each fish shall be measured to the nearest millimeter. Handling of fish shall be in compliance with any and all conditions and/or protocols included in the State and/or Federal authorizations for this work. A report on the species, numbers, and sizes of fish found shall be provided to the Illinois Department of Transportation and the Illinois Department of Natural Resources (Attn: Joseph Kath) within 90 days of the completion of each survey. Each report shall also include a qualitative evaluation of the habitat fish being provided by the construction right-of-way and the manner in which the habitat has changed since the previous survey.
4. If the results of the Year 2 study described above show that the at least one (1) of the listed fish species of concern is not present within the project corridor, and/or the habitat has changed drastically (positive or negative fashion) since the official completion of the bridge, a subsequent monitoring survey shall be conducted in Year 4 following bridge completion. All fish shall be identified to species and enumerated and the length of each fish shall be measured to the nearest millimeter. Handling of fish shall be in compliance with any and all conditions and/or protocols included in the State and/or Federal authorizations for this work. A report on the species, numbers, and sizes of fish found shall be provided to the Illinois Department of Transportation and the Illinois Department of Natural Resources (Attn: Joseph Kath) within 90 days of the completion of this survey. Each report shall also include a qualitative evaluation of the habitat fish being provided by the construction right-of-way and the manner in which the habitat has changed since the previous survey.
5. The effective period of this authorization may be altered by mutual agreement between the Illinois Department of Transportation (IDOT) and the Department.
6. This authorization may be revoked pursuant to Section 5.5 of the Act if the Department finds that the IDOT has failed to comply with any of these terms and conditions or has been responsible for the take of any State listed species, namely the: weed shiner and blacknose shiner, associated with the of the bridge that carries County Highway 3 (Star Road) over Coon Creek near Prophetstown, Illinois in Whiteside County.
7. The Illinois Department of Transportation (IDOT) official identified below is authorized to execute this agreement. Execution by the IDOT indicates acceptance of all terms and conditions described in this document.

For the IL. Department of Natural Resources

John D. Ryan  
Mike Conlin, Acting Director  
Office of Resource Conservation

8/31/09  
Date Signed

For the Illinois Dept. of Transportation/IDOT

George F. Ryan  
Signature

GEORGE F. RYAN DEPUTY DIRECTOR  
REGION 2 ENGINEER  
Please print name and official title

AUGUST 11, 2009  
Date Signed

APPROVED FOR EXECUTION

Date: 8-27-09

Legal Counsel: Synkausk