



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

* 7/27/09 - Review

* DUE: 12/07/09

July 20, 2009

Mr. Joseph A. Kath
Terrestrial Endangered Species Project Manager
Office of Resource Conservation
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702-1271

RE: Incidental Take Authorization Submittal
TR 427 (1270 E) over Fayette Creek
T 17N, R 12W, S10
BDE Seq. No.: 15251
Vermilion County

Dear Mr. Kath:

Please find enclosed one copy of the conservation plan for the State Threatened little spectaclecase (*Villosa lienosa*) and the slippershell mussel (*Alasmidonta viridis*). Also enclosed is the draft Public Notice, pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5).

The proposed project will remove the existing single span bridge on concrete closed abutments and replace it with a single span precast prestressed concrete deck beam bridge on concrete spill-thru abutments. These activities include, but are not limited to, requiring equipment in the stream to remove a temporary support system that was installed sometime in the past. Also, the abutments for the new bridge will be further removed from the stream than the current abutments. This will require shaping of the ground from the new abutments to the stream.

If you have any questions, please contact Janel Veile at 217-558-4752 or Janel.Veile@illinois.gov.

Very truly yours,

Charles J. Ingersoll, P.E.
Engineer of Design and Environment

A handwritten signature in black ink that reads "Barbara Stevens". The signature is written in a cursive style with a large initial 'B' and a long, sweeping tail.

By:
Barbara Stevens
Environment Section Chief

CC: Darrell W. Lewis
David Speicher
Attachments

Conservation Plan for the state threatened Little Spectaclecase and Slippershell mussels at the TR 427 bridge over Fayette Creek in Carroll Township, Vermilion County, Illinois.

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

A. Legal Description of the project area:

Southeast quarter of Section 10, Township 17 North, Range 12 West of the Second Principal Meridian. The project area will be within the existing right-of-way.

The approximate coordinates of the bridge are: latitude 39° 56' 27.16", longitude 87° 41' 52.63".

B. Biological Data on the affected species:

Little Spectaclecase (*Villosa lienosa*)

The state threatened little spectaclecase inhabits small to medium streams in sand or gravel. (INHS 2009)

Slippershell (*Alasmidonta viridis*)

The state threatened slippershell inhabits creeks and the headwaters of large rivers in sand, mud or fine gravel (INHS 2009). The slippershell is thought to be a long-term breeder holding the larvae internally for about a year. Host species include the johnny darter (*Etheostoma nigrum*) and the mottled sculpin (*Cottus bairdi*) (Clark 1981). The life span is unknown. The slippershell is a filter feeder. (MNFI 2009)

C. Description of activities that will result in a take.

The proposed project would remove the existing single span bridge on concrete closed abutments and replace it with a single span precast prestressed concrete deck beam bridge on concrete spill-thru abutments.

This work will require equipment in the stream to remove a temporary support system that was installed sometime in the past. The abutments for the new bridge will be further

removed from the stream than the current abutments. This will require shaping of the ground from the new abutments to the stream.

Any of the above described activities could result in the taking of the listed species.

D. Explanation of the anticipated adverse effects of the listed species.

Mussels will likely be buried or crushed by the work activities.

2. Measures the applicant will take to minimize and mitigate the impact.

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

The total footprint of the work zone is approximately 0.40 acres.

Approximately 0-2 listed species of mussels may be taken during work hours. The amount of habitat affected is equal to the area required to complete the in-stream portion of the work (approximately 0.03 acres).

Before construction begins, Illinois Natural History Survey (INHS) representatives should relocate any listed mussels located in the immediate vicinity of the structure (existing right-of-way) to a suitable habitat elsewhere in Fayette Creek.

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

It is reasonable to assume that suitable habitat for all species of mussels is located both up and downstream of the bridge. Thus it appears that habitat for the affected species is locally abundant.

After work is complete, the streambed and habitats will be 'managed' or controlled by natural processes, namely flooding.

C. Description of all measures to be implemented to minimize or mitigate the effects of the proposed action on the endangered or threatened species.

The listed mussels will be moved from their locations within the existing right-of-way to a suitable habitat within Fayette Creek.

The Vermilion County Highway Department will ensure that the contractor performing the work will implement best management practices in order to minimize impacts during work

hours. Best management practices are described in detail in the Illinois Department of Transportation Bureau of Design and Environment Manual Chapter 59 and IDOT's Standard Specifications for Road and Bridge Construction Section 280 and can be accessed through the IDOT website.

A Stormwater Pollution Prevention Plan will be included with the plans regardless of whether or not this project requires NPDES documentation. IDOT's BDE Special Provision for 'National Pollutant Discharge Elimination System/Erosion Control Deficiency Deduction' will be included in the contract documents. Any areas disturbed by the scour countermeasures, will be re-seeded, with erosion control blanket placed in appropriate areas. If needed, any temporary access pads will be constructed in accordance with Check Sheet 8 of the IDOT Supplemental Specifications and Recurring Special Provisions, adopted January 1, 2009 and any provisions provided in the plans and contract documents. After completion of the in-stream work, any temporary access pads will be removed and the area restored to its original configuration.

D. Plans for monitoring the effects of the measures implemented to minimize or mitigate the effects of the proposed action on the endangered or threatened species.

Specified erosion and sediment control practices in the Stormwater Pollution Prevention Plan will be implemented. Inspections to ensure proper working order and maintenance of practices will be made daily by the engineering staff with the Vermilion County Highway Department. Additional inspections will be made immediately prior to and following forecast events of heavy rain for the area.

The Illinois Department of Transportation (IDOT) will conduct, or cause to be conducted, a thorough survey of the construction area (within existing right-of-way) for freshwater mussels following the completion of bridge construction. 'Completion' shall be defined as the date the bridge is officially open for public use. Freshwater mussels located within the construction right-of-way shall be identified as to species, numbered and measured. Handling of mussels 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, number and sizes of mussels found shall be provided to IDOT within 60 days of the survey for freshwater mussels in the construction right-of-way area and the manner in which that habitat has changed since the last survey.

E. Adaptive management practices that will be used to deal with changed or unforeseen circumstances that affect the effectiveness of measures instituted to minimize or mitigate the effects of the proposed action on endangered or threatened species.

Soil conserving practices will be implemented to minimize the amount of eroded soil entering Fayette Creek. The installation and effectiveness of the soil conserving practices will be monitored each day by engineering staff with the Vermilion County Highway Department. If through daily monitoring, eroded soil is observed leaving the jobsite or limits

of construction, additional soil conserving practices, including those not included in the Stormwater Pollution Prevention Plan, shall be installed or measures taken to minimize soil erosion. The need to implement additional practices would be most apparent following extreme or record rainfall.

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

The estimate for the cost of the bridge replacement is \$250,000.00. This estimate includes funding for design and implementation of erosion and sediment control measures. Additional soil conserving practices and measures necessary to deal with changed and unforeseen circumstances would be funded through change order and force account practices. By law, the erosion and sediment control plan must be in place for the life of the project.

3. Alternative actions that would not result in the take.

The PPC deck beam bridge is the most cost effective and consistent with the type of bridges built by Vermilion County. The only alternative that would not result in a take would be to do nothing and close the bridge.

4. Data and information to assure that the proposed take will not reduce the likelihood of the survival of the species.

The listed species of mussels are not currently on the federal endangered or threatened list.

“The slippershell (*Alasmidonta viridis*) was historically widespread in the northern half of Illinois but has since been reduced to widely scattered populations throughout its range. The slippershell was found alive at three sites (3-5) in the upper part of the Little Vermilion River in 1997. The only live records for this species in the adjacent Vermilion River basin to the north were collected from Bean Creek (Middle Fork Drainage) in 1989.” (INHS 1998)

“Formerly, the little specteclecase (*Villosa lienosa*) was widely distributed in tributaries to the Wabash River in Illinois. It is still extant in the upper North Fork Vermilion, the middle Embarras and the Little Vermilion rivers. The largest remaining population of this mussel in Illinois occurs in the upper Little Vermilion River. This species ranked 4th in overall abundance in the present survey and was common at sites 2-4.” (INHS 1998)

5. **An implementing agreement, which shall include, but not be limited to:**

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

Douglas R. Staske

County Engineer

Vermilion County Highway Department

Oakwood, IL

Glen Kruse

Natural Heritage Chief

Illinois Department of Natural Resources

Springfield, IL

- 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 for preparation of progress report to be provided to the Department.**

The Illinois Department of Natural Resources shall be responsible for the review of this Conservation Plan and for subsequent issuance of the Incidental Take Authorization.

The Vermilion County Highway Department is responsible for securing authorization for incidental take of state-listed species; securing all permits including NPDES, Section 404 and Office of Water Resources; inspection of the work and contractor compliance with the contract documents.

The Illinois Department of Transportation will conduct or cause to be conducted, a survey for threatened and endangered species and the relocation of any found mussels away from the project location. IDOT shall also be responsible for post-construction surveys.

- 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.**

This project is authorized by the Illinois Department of Transportation, who 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 Vermilion County Highway Department, 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.

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

Not applicable.

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

Not applicable.

6. References

'Freshwater Mussels, Crayfishes, and fishes of the Little Vermilion River Drainage, Illinois'. Cummings, Kevin S.; Page, Lawrence M.; Mayer, Christine A. and Sabaj, Mark H.; Illinois Natural History Survey Technical Report 1998 (12).

'Freshwater Mussels of the Midwest', Illinois Natural History Survey website: www.inhs.uiuc.edu/cbd/musselmanual/p____.html. Obtained April 27, 2009.

'Mussels of the Midwest', Michigan National Features Inventory website: www.Web4.msue.edu/mnfi/abstracts/zoology/__.pdf. Obtained April 27, 2009.

Tiemann, Jeremy S. and Christopher A. Taylor, Illinois Natural History Survey, 2008. Fish and mussel surveys, Anderson Hill bridge, IDOT TR 210/FAS 507, Section 08-04134-00-DR, Station 37+00 to Station 42+00, existing bridge structure No. 092-3326, seq. no. 14624, Vermilion County.

7. Attachments

None