

# Conservation Plan for the Little Spectaclecase (*Villosa lienosa*) at Brouilletts Creek

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

### A. Legal description of the project area

Specific locality information for this project site has been taken from the Chrisman, Illinois (7.5' series, 1966 edition; NAD 1927) U.S. Geological Survey topographic quadrangle map (all coordinates to north edge of bridge). UTM = Universal Transverse Mercator System.

Illinois, Edgar County, Brouilletts Creek, 2 miles WSW Chrisman, at the U.S. Route 36/FAP 323 bridge (2 miles west of intersection with Illinois Route 1, where the creek flows in a southeasterly direction as it crosses under the bridge). 2<sup>nd</sup> Principal Meridian: Township 16 North, Range 12 West, Southeast Quarter, of the Southeast Quarter of Section 32. Latitude: 39.7922209100735° North, Longitude: -87.7316242381249° West. UTM coordinates: Zone 16,049115 miles East, 4404745 miles North.

### B. Biological data

Although historically widespread in the lower Midwest and south, few extant populations are known in the northern part of its range. Almost no information is available on the life-history of this animal. Age and growth data are unknown. It probably lives about 10 years maximum. The larvae (glochidia) of freshwater mussels are obligate parasites on fishes. The fish host of the Little Spectaclecase is unknown.

### C. Habitat description of activities that will result in take

Brouilletts Creek at the U.S. 36 bridge number 023-0007 is approximately 35-50 feet in width with depth ranging from 4-6 feet. The Little Spectaclecase is typically found in small to medium-sized streams in sand or gravel. The construction associated with the scour mitigation of the bridge over Brouilletts Creek at U.S. 36 will likely result in the take of Little Spectaclecase in the area of the scour mitigation.

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

If not relocated, mussels would likely be buried or otherwise crushed or killed by construction activities. It will be impossible to relocate all mussels in the area so some take is likely to occur.

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

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

Before construction begins, Illinois Natural History Survey (INHS) representatives should relocate any Little Spectaclecase mussels located in the immediate vicinity of the structure (existing right-of-way) to a suitable habitat elsewhere in Brouilletts Creek. Construction activity will be limited to the existing right-of-way.

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

If measures are taken to minimize substrate disturbance in the area around the bridge, mussels should move back into the area over time.

**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 Little Spectaclecase mussels will be moved from their locations within existing right-of-way to a suitable habitat within Brouilletts Creek. This will prevent the mussels from being affected by the proposed construction activity.

**D. Plans for monitoring the effects of the measures implemented**

It is the recommendation of the Illinois Department of Natural Resources (IDNR) that the Illinois Department of Transportation (IDOT) conduct, or cause to be conducted, a thorough survey of the construction area (within existing right-of-way) for freshwater mussels in the second and fifth year following completion of the contract. "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 and enumerated and the length of each mussel shall be measured to the nearest millimeter. 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 completion of each survey. Each report shall also include a qualitative evaluation of the habitat for freshwater mussels being provided by the construction right-of-way area and the manner in which that habitat has changed since the previous survey.

**E. Projected cost of each measure that will minimize or mitigate the effects of proposed action on endangered or threatened species**

The estimated cost of the scour mitigation, at this structure and four others is \$300,000.

**F. 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**

Due to the nature of the project, IDOT does not anticipate any changed or unforeseen circumstances. The scour mitigation will be completed and no additional work will be necessary afterwards.

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

The Illinois Department of Transportation has a contractual obligation with the Illinois Natural History Survey.

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

The only alternative that would not result in the take of listed freshwater mussels is the "do nothing" alternative, which means that the scour at this bridge would not be addressed. This alternative is not acceptable because in its current condition, the scour has weakened the bridge and does not fulfill the purpose and need of the project.

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

In Illinois, the Little Spectaclecase is narrowly restricted in distribution to the Embarras River in Coles and Douglas Counties, Vermilion River drainage (North and Middle Forks), Little Vermilion River drainage, and Brouilletts Creek drainage in Edgar County. The only two sites where *Villosa lienosa* are known to occur in the Brouilletts Creek drainage are at U.S. Route 36. However, it likely occurs elsewhere in the basin, but surveys have not been conducted to substantiate this or define its limits in the basin. It has healthy populations in the North Fork Vermilion River and the Little Vermilion River. Continued survival of the species would therefore not be jeopardized by this project.

**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.**

Glen Kruse  
Endangered Species Program Manager  
Illinois Department of Natural Resources

Joseph E. Crowe  
Regional Engineer  
Illinois Department of Transportation

Charles Ingersoll  
Bureau Chief of Design and Environment  
Illinois Department of Transportation

**B. The obligations and responsibilities of each of the identified participants with schedules and deadlines for completion of activities in the conversation 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 Illinois Natural History Survey will have duties of surveying for threatened or endangered mussels and moving the Little Spectaclecase away from the project location. Post construction, the INHS will examine Brouilletts Creek for colonization by Little Spectaclecase mussels.

The Illinois Department of Transportation is responsible for all biological resource consultation and clearance, securing all permits, including NPDES and Section 404, inspection of the construction activities and contractor compliance with the contract documents. The Illinois Department of Transportation shall conduct, or cause to be conducted, a thorough survey for threatened and endangered species of mussels prior to construction, an effort to move all mussels to locations outside of the construction limits and a post-construction survey for mussels within the construction limits and vicinity.

**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, which receives funding from the Illinois General Assembly and the Federal government in carrying out its programs.

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

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 since the Little Spectaclecase mussel (*Villosa lienosa*) is not federally threatened or endangered.

**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 since the Little Spectaclecase mussel (*Villosa lienosa*) is considered an animal under the Illinois Endangered Species Act. (ILCS 10/2).