

Conservation Plan for the black sandshell (*Ligumia recta*) mussel in the vicinity of the Rock River and Peoria Avenue Bridge in Dixon, Illinois

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

A. Legal description of the project area

NE/4, Section 5, T.21N-R.9E. and SE/4, Section 32, T.22N.-R.9E. 4th P.M.

B. Biological data on the affected species

The black sandshell is widely distributed but uncommon in much of the Midwest. This mussel inhabits medium to large rivers in riffles or raceways in gravel or firm sand (Cummings 1992). Within the project area, the substrate of the Rock River is predominately rip-rap along both banks, with patches of gravel, cobble, and sand in mid-channel; the depth of water varies from about 3 to 10 ft; and the width of the river is approximately 590 ft. Both banks are composed of concrete retaining walls or rip-rap; grass and scattered trees were present along portions of the north bank. Surrounding land use is urban.

C. Description of the activities that will result in take

Mussels will be taken because of the in-stream work necessary for demolition and construction of the new Peoria Avenue Bridge. The bridge deck will be broken and dropped into the Rock River. The broken concrete from the deck will be cleaned from the stream bed. Eight piers will be removed down to the footings and replaced with four new ones. Two rock causeways will be placed in the Rock River on the downstream side of the Peoria Avenue Bridge. One will originate from the north and the other from the south. The footprint of the causeways is approximately 40 ft in width by 167 ft in length. Total area of temporary fill is approximately 0.3 acres. Duration of fill is approximately 11 months.

D. Anticipated adverse effects on the listed species

Mussels will likely be taken or killed through the placement of rock causeways, demolition of the old Peoria Avenue Bridge and construction of the new Peoria Avenue Bridge.

Besides the black sandshell, other listed species of mussels may be taken in the process of placing the rock causeways, demolishing the old Peoria Avenue Bridge, and constructing the new Peoria Avenue Bridge. The incidental take authorization issued by the Illinois Department of Natural Resources (IDNR) shall include the take of black sandshell mussels and the potential take of any other listed species of mussels inhabiting the Rock River within the project area.

2. Measures to minimize and mitigate impacts

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

All work will occur within the shadow of the bridge plus 50 feet out from the edges of the shadow. Total area of in-stream work is approximately 2.6 acres. The number of black

sandshell mussels that will be taken is unknown. Since the existing bridge deck will be dropped into the Rock River that amount of habitat (the shadow) plus the area of the causeways is equal to the amount of habitat affected. Amount of habitat directly affected is approximately 1.4 acres. The rock causeways will be in place approximately eleven months.

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

Following demolition of the existing bridge and construction of the new one, all broken concrete and fill material will be removed thus restoring the original or pre-construction grade of the Rock River in the project area.

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 IDOT has minimized as much as practicable the area of impact to black sandshell mussel habitat. Total area and duration of the impact is approximately 1.4 acres and 11 months. Following the completion of all construction activities, the original or pre-construction grade of the Rock River will be restored.

D. Plans for monitoring the effects of the measures implemented

The IDOT proposes to monitor or cause to be monitored, the original 2.6-acre project area including the 1.4-acre impact area for black sandshell mussels following completion of the new Peoria Avenue Bridge in Dixon, IL. The project area will be monitored years two, five, ten and fifteen following completion of construction. All freshwater mussels within the project area will be identified 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, numbers, and sizes of mussels found shall be provided to the 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.

The incidental taking authorization issued for construction of the Peoria Avenue Bridge shall cover the taking or handling of all listed species of mussels, including black sandshell mussels, necessary for implementation of post-construction monitoring.

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

Each monitoring including field work and report preparation will cost the IDOT approximately \$2,500. For the entire monitoring program the cost will run approximately \$10,000.

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

In-stream work will be minimized to approximately eleven months duration and the area of impact to 1.4 acres. Following all construction activities, there will be no further direct impact to black sandshell mussel habitat. In fact, the number of Bridge piers will be reduced from eight to four and there will be a net increase in habitat.

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

The Illinois Department of Transportation will continue to fund its statewide contract with the Illinois Natural History Survey to provide biological surveys.

3. Alternative actions that would not result in the take

Complete avoidance of in-stream work for construction of the Peoria Avenue Bridge in Dixon, Illinois is not practicable.

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

The black sandshell is widely distributed but uncommon in much of the Midwest (Cummings 1992).

5. Implementing Agreement

A. Participants in the execution of this conservation plan

City of Dixon
Dixon, Illinois

Glen Kruse
Biodiversity Program Manager
Illinois Department of Natural Resources

Michael Hine
Design and Environment Bureau Chief
Illinois Department of Transportation

Geoff Levin
Director of the Center for Biodiversity
Illinois Natural History Survey

B. Obligations and responsibilities of each of the identified participants

City of Dixon. Construction work on the Peoria Avenue Bridge is scheduled to be completed in December 2005. This work includes restoration of the pre-construction grade of the bottom of the Rock River. The city shall ensure the amount of impact or in-stream work is kept to within the 2.6-acre construction limit and that the construction

schedule is met. Any deviations shall be reported by the city to the IDOT District Two Bureau of Local Roads and Streets. District Two shall forward this information to the IDOT central Bureaus of Local Roads and Streets and Design and Environment.

Illinois Department of Natural Resources. The IDNR shall adhere to timeframes and procedures for incidental taking authorizations as outlined in 17 Ill. Adm. Code 1080. The IDNR shall review black sandshell monitoring reports and shall respond to the IDOT Bureau of Design and Environment within 90 days of receipt.

Illinois Natural History Survey. The INHS under its contract with the IDOT shall carry out monitoring for black sandshell mussels. These reports will be delivered to the IDOT Bureau of Design and Environment for review and coordination with the IDNR.

Illinois Department of Transportation. The IDOT Bureau of Local Roads and Streets shall ensure that all requirements of the incidental take authorization are met.

The first monitoring report shall be delivered to the IDNR no later than two years six months following completion of all construction activities. Monitoring reports for years 5, 10 and 15 shall be delivered to the IDNR no later than 90 days following completion of on-site monitoring.

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 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 plan

The City of Dixon and the IDOT assure that all federal, state, and local regulations pertinent to the proposed action and to execution of the conservation plan shall be acquired and kept on file.

E. Federal authorizations for taking

The black sandshell mussel is a state threatened species only and is not federally listed; consequently, no consultation is required by the U.S. Fish and Wildlife Service.