Illinois Department of Transportation Conservation Plan for the state-threatened Marsh Rice Rat (*Oryzomys palustris*) for the FAP 312 (IL 3) highway project in Alexander and Union County

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

A. Legal Description of the project area

This improvement project begins 1.2 miles north of the Cape Tee intersection (McClure Quadrangle 7.5', Township 14 South/Range 3 West/Section 9, 3rd Principal Meridian), continues north along Illinois Route 3, and ends 334 feet north of the intersection of IL 3 and IL 146 at Ware IL. (Ware Quadrangle 7.5', Township 12 South/Range 3 West/Section. 25, 3rd Principal Meridian, see Figure 1.)

The proposed improvement and resulting impacts will occur within IDOT right-of-way limits.

B. Biological Data

The marsh rice rat (*Oryzomys palustris*) occurs from Texas, Oklahoma, and southeastern Kansas eastward to the Atlantic coast, and north to Pennsylvania and southern New Jersey. Their range within Illinois includes the area south of the Shawnee Hills Section and extends northward along the Mississippi River on the west and through the Shawnee Hills Section by way of the Big Muddy River valley into the poorly drained upland of the Mt. Vernon Hill Country. According to recent records from the Illinois Natural History Survey, the rice rat has been found in 12 Southern Illinois counties. In addition, there are ten records for Alexander and Union County alone.

This species is known to occupy a variety of wetland types including swamps, drainage ditches, farm ponds, and wet meadows.

C. Habitat and Description of activities that will result in take

Wetlands provide habitat for rice rats. The Illinois Natural History Survey (INHS) found this species at A, B, C, and D only (see Figure 2 and 3), no rice rats were found at the other traplines. It is anticipated that most rice rats will leave or can move away from the construction zone once work begins. However, there may be an incidental taking from construction activity on those rice rats unable to move out of harms way such as nesting young.

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

It is anticipated that the project will adversely impact rice rats due to habitat loss and potential for harming individual species.

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

Impacts were minimized since this project is an improvement and affects wetlands only adjacent to the project. Impacts would have been much greater if this project was an add-lanes or on new alignment.

It is unknown if any individuals will be taken by construction activity since they may move away from construction activity, except nesting young. While there are a total of 25 jurisdictional wetlands in the project area and a total of 3.5 acres of wetlands converted for highway right-of-way, only four wetlands were successfully trapped for rice rats. The amount of impact to these four wetlands totals 0.69 acres of habitat affected.

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

IDOT is converting only a small percentage of each wetland impacted by this project. The rest of the wetland will be available for use by the rice rat as well as all other wetland plants and animals. As mentioned above, 3.5 acres of habitat will be permanently converted to highway right-of-way. The remaining habitat will be held in private ownership. The new roadside ditches will provide habitat and replace those ditches previously used by rice rats.

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

IDOT minimized the take of rice rat habitat by reducing the ditch backslopes from a 4:1 ratio to a 3:1 and adjusted the ditch grades. Restoring wetland habitat in a wetland compensation site will mitigate take of rice rats and their habitat. Approximately 15 acres of wetlands will be restored to compensate the loss of 3.5 acres.

D. Plans for monitoring the effects of the measure implemented.

Once construction is complete, INHS will re-survey the project area to determine any affect on rice rats by the highway project. Also, the compensatory wetland site will be monitored for its overall performance and the presence of rice rats for five years. These reports will be coordinated with IDNR, Division of Natural Resource Review and Coordination.

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

The project cost for constructing the wetland mitigation sites is estimated at $525, 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.

IDOT will ensure that the wetland compensation site /rice rat habitat meets performance goals approved by the IDNR and the US Army Corp of Engineers and IDOT will remedy any failure(s) so that all performance goals are met.

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

Funding was granted under The Transportation Equity Act for the 21st Century by the Federal government and implemented through the Illinois First program and will be carried out as part of the highway project.

3. Alternative actions that would not result in the take

There are three alternatives for this project and the reasoning why these alternatives are not being considered as a viable option.

A. Alternative 1: No build

Currently, IL Route 3 is a major highway for residents to use in the western portion of Southern Illinois. This road currently lacks safety features like shoulders. Due to increasing daily traffic, this is a major concern. In addition, IL Route 3 is the main route to Cape Girardeau, a major economic region for Southern Illinois. Not widening and reconstructing this highway will not meet the needs of Southern Illinois residents.

B. Alternative 2: No shoulder construction

A highway lacking shoulders is hazardous since disabled vehicles are not able to safely pull off the road and this increases the potential for rear-end collisions.

C. Alternative 3: No ditchwork

Not doing the ditchwork would leave extremely steep foreslopes and could easily cause vehicle rollovers, a potentially fatal situation. Also, this would add to the cost of the project since guardrail would have to be added for the entire length of the improvement.

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

This species has been trapped in twelve counties in Southern Illinois (Alexander, Franklin, Hamilton, Jackson, Johnson, Massac, Pope, Pulaski, Saline, Union, White, and Williamson). This species has been recently found in the project areas of numerous IDOT highway projects. Two examples are the proposed IL 13/127 improvement Jackson and Perry Counties and the widening and reconstruction of the Herrin-Johnston City Blacktop.

Locally, there are ten IDNR records in Alexander and Union Counties, four of the ten are in the vicinity of the IL Route 3 project area. Furthermore, a nest was found at the Union County Conservation area in 1993 and eight rice rats were trapped in the conservation area in 1998. Rice rats also were trapped along Clear Creek drainage ditch, just southeast of McClure IL and more were trapped just northeast of McClure also in 1998. Therefore, this species is not isolated in one geographic are but is distributed in other locations.

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.

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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.

District 9 of the IDOT will be responsible for the funding, construction and maintenance of the compensatory wetland/rice rat habitat site. The INHS will provide technical information and will perform follow-up surveys for the rice rat and determine the quality of the compensation site. The Illinois State Geological Survey (ISGS) will perform hydrologic studies of the wetland compensation site and send these annual reports to IDOT. The monitoring reports will be coordinated with the IDNR and US Army Corp of Engineers.

The activities in the conservation plan will be implemented concurrently with the contract for the highway work.

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.

IDOT is authorized by the Illinois Highway Code to carry out its duties of providing safe and efficient highways for Illinois citizens.

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 rice rat is listed as threatened in Illinois and is covered by the Illinois Endangered Species Act of 1971 only. Therefore, compliance under the federal Endangered Species Act of 1973 is not required. Wetland impacts will be compensated per the rules of the Interagency Wetland Policy Act of 1989. No known local regulations are pertinent to this conservation plan.

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

Not applicable since the rice rat is not federally threatened or endangered.

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

Not applicable since the rice rat is an animal, as defined by the Illinois Endangered Species Act of 1971.