



Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (Act) (520 ILCS 10/5.5) and the regulations adopted to implement the Act (17 Ill. Adm. Code 1080), authorization is hereby granted to Mason County Highway Department (hereinafter referred to as Mason County) for the incidental take of the State-threatened Ironcolor Shiner (*Notropis chalybaeus*) and Starhead Topminnow (*Fundulus dispar*). The Illinois Department of Natural Resources (hereinafter referred to as the Department) has determined that the taking is incidental to activities associated with the reconstruction of the Mason County Highway 11 Bridge (hereinafter referred to as the Bridge) over Red Oak Ditch in Mason County, IL. The project is located approximately 7.5 miles north-northwest of Mason City, and 0.7 miles south of US Highway 136 in Mason County, Illinois.

Procedural History

The Department received a conservation plan prepared by Hutchison Engineering, Inc., for Mason County on December 8, 2022, as a request for authorization for the incidental take of Ironcolor Shiner and Starhead Topminnow. Additional information was requested by the Department on January 4, February 3, 2023, to make the conservation plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on January 6, February 16, March 17, 2023. The final conservation plan was approved by the Department on March 17, 2023. The public notice period will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria that must be satisfied for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each 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 stated and apparent purpose of this proposed action is to remove and replace the existing bridge deck, install stone riprap along the abutments, and reconstruct

the roadway approaches for the Bridge over Red Oak Ditch in Mason County, Illinois.

The existing Bridge over Red Oak Ditch will be completely removed and replaced with a longer and wider structure. The initial construction activities will include removal of the existing bridge deck and supporting abutments. The existing bridge deck is composed of a reinforced concrete bridge deck on top of steel beams. The steel beams are supported by reinforced concrete abutment caps that are founded on timber piling driven into the ground. The existing bridge is 45 feet in length from back of abutment to back of abutment and 28 feet 8 inches in total width.

Removal of the reinforced concrete bridge deck may include a combination of saw cutting and jackhammering to break the deck into pieces small enough that may be lifted and loaded onto trucks by an excavator. The steel beams may be lifted and removed by a crane and loaded onto trucks. The concrete abutment caps may be removed intact and hauled away, or they may be jackhammered into pieces small enough to be loaded onto trucks by an excavator. The tops of the timber piling may be excavated and cut off below the existing ground line for removal.

Construction of the new bridge will begin with the bridge abutments. The proposed bridge will be 61 feet in length from back of abutment to back of abutment and 30 feet in total width. New steel piling will be driven into the ground, and a new reinforced concrete abutment cap will be formed and poured around the piling ends. No impact on the channel of Red Oak Ditch is anticipated from the construction of the abutments, as they will be located outside the ditch banks and behind the existing abutment locations; however, once the abutments are complete, and prior to placing the bridge deck, the channel banks will be lined with stone riprap directly under the proposed bridge. The stone rip rap will not be placed through the bottom of the creek channel. The width of this riprap placement will be 40 feet along the length of the creek channel. The stone riprap will be used to prevent erosion and scour under the new bridge along the channel banks.

Take of Ironcolor Shiner and Starhead Topminnow could occur as a result of the demolition of the existing bridge and placing of riprap within the stream bed. Individuals may be crushed, buried, or subject to desiccation if they remain in excavated woody debris by construction activities. Indirect take could temporarily occur as a result of increased noise, vibration, and turbidity from suspension of fine sediments in the water column that would adversely affect all life stages. Impacts to riparian areas from vegetation clearing and woody debris removal, construction, or staging may temporarily adversely affect water quality.

The take of Ironcolor Shiner and Starhead Topminnow that could result from this project is not the purpose of Mason County's activities but is incidental to the carrying out of an otherwise lawful activity.

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

Proposed minimization and mitigation measures were included in Mason County's conservation plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by Mason County, based on the life history needs of Ironcolor Shiner and Starhead Topminnow.

All required minimization and mitigation measures are presented under the Authorization section below.

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

Mason County will enter into a federal aid agreement with the State of Illinois, Department of Transportation, for the construction and observation of this project. Approval of the agreement and expenditure of the federal funding is contingent upon the county, and contractor, following the approved Conservation Plan.

It is the Department's opinion that Mason County's stated commitment to funding their proposed minimization and mitigation measures is sufficient to satisfy this criterion.

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

Ironcolor Shiner (*Notropis chalybaeus*) is an Illinois state-threatened fish species.

Habitat: Ironcolor Shiner is a small fish found in pools and slow runs in creeks and small rivers. They prefer sandy substrates and clear water with vegetation present.

Reproduction: Spawning occurs between June and August. Eggs sink to the bottom of pools with sandy substrate and hatch in two days. Ironcolor Shiner become sexually mature after one year.

Population: Ironcolor Shiner population decline has occurred because of increased stream siltation, turbidity, and pollution.

Range in Illinois: In Illinois, Ironcolor Shiner are found in the Iroquois, Kankakee, Illinois, and Sangamon River basins. Ironcolor shiner are found in six (6) of 102 Illinois counties: Fulton, Iroquois, Kankakee, Mason, Piatt, and Putnam. There are currently 13 extant Element Occurrence Records of Ironcolor Shiner in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has two (2) previously issued or pending Incidental Take Authorizations for Ironcolor Shiner: dredging and bridge repair. This is the second authorization for the taking of Ironcolor Shiner in Mason County.

Starhead Topminnow (*Fundulus dispar*) is an Illinois state-threatened fish species.

Habitat: Starhead Topminnow is a small fish found in clear, well-vegetated floodplain lakes, swamps, and marshes. They prefer quiet areas in shallow backwater with submerged vegetation.

Reproduction: Spawning occurs between late spring to early summer in dense beds of aquatic vegetation. Eggs hatch in 9-11 days. Female Starhead Topminnow are known to produce multiple clutches of eggs within a single breeding season. They reach sexual maturity after one year.

Population: Starhead Topminnow populations have declined due to the draining of wetlands and other forms of habitat loss and degradation.

Range in Illinois: In Illinois, Starhead Topminnows are found in the Illinois, Kankakee, and Fox Rivers, along with several lakes and smaller creeks and tributaries. They have been found in 11 of 102 Illinois counties, and there are currently seventeen (17) extant Element Occurrence Records in the Illinois Natural Heritage Database.

Incidental Take Authorizations: There have been six (6) previously issued or pending Incidental Take Authorizations for Starhead Topminnow in Illinois. This is the first authorization to be granted for the take of Starhead topminnow in Mason County. Other projects have included lake management, water control structure installation, pipeline maintenance, dredging, and bridge construction.

Based on the amount of habitat impacted by this project, the number of known occurrences of Ironcolor Shiner and Starhead Topminnow in Illinois, an assessment of the potential effect of this project on the listed species in the project footprint, the conservation measures included in this authorization for incidental take and the conservation plan, and the understanding that vulnerability and recovery information on the species remains limited; it is the conclusion of the Department that the taking anticipated as a result of this project will not reduce the likelihood of survival or recovery of the species in the wild within the State of

Illinois, the biotic community of which these species are a part, or the habitat essential to the species' existence in Illinois.

5. Any measures required under Section 5.5(b)(6) of the Act will be performed:

These measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and the signature of a representative of Mason County 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:

Public notice of Mason County's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on March 29, 2023, and in *The Mason County Democrat* on March 29, April 5, 12, and 19, 2023. A copy of the conservation plan was deposited at the Mason City Public Library where it was available for public review. The deadline for public comment was May 19, 2023. No comments were received from the public.

Authorization

It is the determination of the Department that the measures that will be implemented by Mason County will adequately minimize and mitigate the anticipated taking of Ironcolor Shiner and Starhead Topminnow incidental to activities associated with the reconstruction of the Bridge over Red Oak Ditch in Mason County. Further, the Department has concluded that the taking authorized herein will not reduce the likelihood of survival or recovery of the species in the wild within the State of Illinois, the biotic community of which the species are a part, or the habitat essential to the species' existence in Illinois.

All terms and conditions included in the aforementioned conservation plan submitted by Mason County to the Department are incorporated into this agreement by reference and are made a part thereof. In the event there is conflict between the conservation plan and this authorization, this authorization shall control.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5] and the Administrative Rules for the Incidental Taking of Endangered and Threatened Species [Ill. Adm. Code 1080.40(b)], this authorization is issued subject to the following terms and conditions, which may include additions or modifications to the minimization and mitigation measures proposed by Mason County in the conservation plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of seven (7) years from the date of the Department signature, unless terminated by written agreement of both parties.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that Mason County has failed to comply with any of these terms and conditions or has been responsible for the taking of Ironcolor Shiner and Starhead Topminnow beyond that which is incidental to activities associated with the reconstruction of the Bridge over the Red Oak Ditch in Mason County, IL.

2. The effective period of this authorization may be altered by mutual written agreement between Mason County and the Department. The Illinois Endangered Species Protection Board shall be notified of any such alteration.

Any substantive changes, including but not limited to a change in the project footprint or a change in the State-listed species which could potentially be affected, will require that a new conservation plan be submitted to the Department to initiate the review and public notice process as required by the Act.

3. This authorization may only be transferred upon approval and written authorization by the Department.
4. All on-site personnel shall be educated on the sensitive biological resources in the area, the identification of Ironcolor Shiner and Starhead Topminnow, regulations protecting the species, where the species might be found, avoidance areas, travel restrictions for equipment and vehicles, how to report sightings or incidents that may involve take, and the importance of avoiding take of the species. **Mason County shall submit a copy of the education materials to the Department.**
5. The Department reserves the right of entry by its staff or representatives to inspect species, potential habitat, and species management practices. Department staff must be accompanied by an employee of Mason County Highway Department and are required to adhere to IDOT's health and safety requirements.
6. Biological consultants employed by, or conducting work on behalf of, Mason County shall hold the necessary permits for work with non-listed and listed species; these include an Illinois Department of Natural Resources (IDNR) Scientific Collection Permit as authorized under 17 Illinois Administrative Code 520, and an IDNR Endangered Species Permit as authorized under 17 Illinois Administrative Code 1070.
7. **Mason County shall notify the Department's Endangered Species Program by email correspondence of construction commencement and completion of work to reconstruct the Bridge over the Red Oak Ditch in Mason County, IL. A project status report shall be submitted to the Department within 90 days of completion summarizing the implementation of minimization, mitigation, and restoration measures and evaluating the effectiveness of those measures and shall include a project photo log. The report shall also include a map and GPS coordinates of any listed species found within the project footprint, description of any injuries or mortalities, and the disposition of any individuals that were injured or killed.**

8. Any discoveries of additional State-listed species beyond those identified in this agreement **halts work** and shall be reported to the Department within 48 hours accompanied by location information (photograph, map, and GPS coordinates).
9. Mason County shall conduct, or cause to be conducted, the following pre-construction or construction efforts:
 - a. No equipment shall enter the stream to remove the bridge deck or abutments, except buckets and equipment arms.
 - b. Instream work shall be prohibited from May 1 to July 31 for the nesting/spawning season.
 - c. Sediment and erosion best management practices shall be utilized.
 - d. Disturbance of vegetation shall be minimized to prevent erosion and sedimentation. Existing vegetation will be preserved where attainable and disturbed portions of the site will be stabilized.
 - e. Erosion and sediment control measures shall be monitored weekly and after heavy rain events to ensure effectiveness.
 - f. Debris and excavated material shall be removed from the streambed as soon as practicable.
 - g. Stone and other materials shall not be stockpiled in the stream channel.
 - h. Riprap shall not be placed across the entire streambed. Instead, its use shall be limited to use at abutments and a cleat or two shall be used to prevent excessive amounts from falling into the channel.
 - i. All disturbed areas shall be seeded upon completion of construction activities. This includes slopes that will require a seed mix specifically formulated for these locations.
10. Mason County shall conduct, or cause to be conducted, post-construction surveys for Ironcolor Shiner and Starhead Topminnow in Years 2 and 5 following construction completion.
 - a. Surveys shall be conducted between July 15 and October 31.
 - b. Backpack electrofishing shall be used to collect fishes. The sample extent shall be 60 meters centered on the bridge.
 - c. All fish shall be identified and enumerated. All collected Starhead Topminnow and Ironcolor Shiner shall be categorized as juvenile or adult.

A report including, but not limited to survey methodology, map with survey extent, a summary of habitat characteristics in the survey extent, number of individuals collected for each fish species recorded, and proportion of Starhead Topminnow and Ironcolor Shiner categorized as juveniles shall be provided to the Department within 90 days of survey completion.

11. Mason County shall conduct, or cause to be conducted, post-construction surveys for aquatic vegetation regrowth after completion of construction. This monitoring shall be

conducted to document fish habitat restoration and recovery following construction.

A report, including photos from similar locations as the preconstruction location condition photos in the Conservation Plan, shall be submitted to the Department within 90 days of survey completion.

12. Mitigation to the maximum extent practicable is required by the Act. Mason County shall submit mitigation to the Illinois Department of Natural Resources - Illinois Wildlife Preservation Fund in the amount of \$5,580.00. The mitigation will be earmarked to bring conservation benefit to Ironcolor Shiner and Starhead Topminnow. Mitigation payments are nonrefundable, including events of revocation or termination

Mitigation values are based on the Department's best current understanding of the species life history needs and impact analysis relevant to the project site's proposed conceptual design elements available at the time of review.

13. All reports, notifications, and other project documentation shall be submitted to:

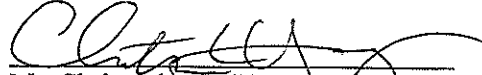
Illinois Department of Natural Resources
Office of Resource Conservation
Endangered Species Program – Incidental Take Authorization Coordinator
One Natural Resources Way
Springfield, IL 62702-1271

(217)557-8243
DNR.ITAcordinator@illinois.gov

The Department's Endangered Species Program shall provide all reports required under this agreement to the Illinois Endangered Species Protection Board and to the Department's Natural Heritage Database.

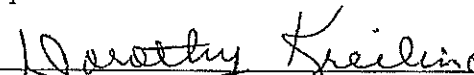
14. The Mason County official identified below is authorized to execute this agreement. Execution by Mason County indicates acceptance of all terms and conditions described in this authorization.
15. The execution of this agreement does not waive or excuse the responsibilities of Mason County to comply with other Federal, State, or local regulations, including but not limited to obtaining any required permits for the execution of this project.

For the Illinois Department of Natural Resources:


Mr. Christopher L. Young, Director
Office of Resource Conservation

Aug 13, 2023
Date

For the Mason County Highway Department:


--- Mr. Kenneth Walker, Chairman --- Dorothy Kreiling,
Mason County Board Vice-Chairman

8-8-23
Date