



Illinois Department of Natural Resources

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JB Pritzker, Governor
Colleen Callahan, Director

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 Lunda Construction Company (hereinafter referred to as LCC) for the incidental take of the Federally and State-endangered Higgins Eye (*Lampsilis higginsii*) and State-threatened Butterfly (*Ellipsaria lineolata*) mussels. The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that the taking of Higgins Eye and Butterfly is incidental to activities associated with a **high-water contingency plan** for the installation of three 24-inch diameter mooring piles and up to twelve 36-inch diameter barge spudding locations in the Mississippi River at Ben Butterworth Park to facilitate the barge-supported delivery to and installation of Arch Deck Modules for the Interstate 74 (I-74) Bridge Replacement Project across the Mississippi River in Moline, Rock Island County, Illinois. The current project area is located in Pool 15 near River Mile 486 and lies within the Mississippi River – Moline Illinois Natural Areas Inventory Site (INAI #1295) and lies upstream of Sylvan Slough, an area known for high mussel diversity and abundance.

Background

The Department executed an authorization for incidental take with the Illinois Department of Transportation and the Iowa Department of Transportation (hereinafter referred to as DOT) on July 15, 2016, for the incidental take of Federally-listed and State-listed Higgins Eye, Spectaclecase (*Cumberlandia monodonta*), and Sheepnose (*Plethobasus cyphus*); and State-listed Butterfly, Ebonyshell (*Fusconaia ebena*), and Black Sandshell (*Ligumia recta*) mussels during activities associated with the I-74 Bridge Replacement Project across the Mississippi River between Moline, Rock Island County, Illinois and Bettendorf, Scott County, Iowa. That original authorization (ITA#56) remains in effect until July 15, 2031. Due to procedural differences between the federal and state processes for listed species take authorization, the USFWS issued their Biological Opinion to different parties, namely the US Federal Highway Administration and the US Army Corps of Engineers, in July 2016, for the potential taking of mussels at the Project.

During a mussel relocation, two additional State-listed species were found in the I-74 Bridge Replacement Project area: Purple Wartyback (*Cyclonaias tuberculata*) and Spike (*Elliptio dilatata*). After conducting species and impact analyses, an amendment to the original authorization was executed on July 20, 2017, to add these two species. The amendment expires with the original authorization. No federal permit amendment was necessary, due to the lack of additional federal species found present.

Mussel surveys and relocations within the I-74 Bridge Replacement Project, as well as the mussel relocation recipient sites, were performed between 2015 and 2018. The current project area at Ben Butterworth Park was found to harbor a high-quality mussel bed indicating a suitable mussel relocation recipient site. Mussels were relocated from the I-74 Bridge action area to the vicinity of the current project, and the area is referred to in I-74 documents as the “Upstream” site for relocation.

This take authorization contemplates LCC’s **high-water contingency plan**. LCC has constructed land-based temporary roll-off piers, which hang over the Mississippi River to facilitate the loading of the Arch Deck Modules onto barges. If water conditions become too dangerous for loading barges in this manner, LCC will install mooring piles and spud the barges in place. The Arch Deck Modules will then be delivered approximately 2.5 miles downstream and attached to the new I-74 Bridge.

On May 14, 2020, the US Fish and Wildlife Service amended their Biological Opinion to the US Federal Highway Administration and US Army Corps of Engineers on the I-74 Bridge replacement project to include the currently proposed Arch Deck Module delivery and installation. The Service’s determination was that the currently proposed action will not jeopardize the continued existence of the Higgins Eye.

The State’s initial I-74 Bridge take authorization and amendment were to the DOT. The current applicant is LCC. Therefore, this authorization is not considered an amendment to, but rather interrelated to and interdependent upon, ITA#56. Due to the applicants being separate and distinct, the State was statutorily required to consider the potential impacts herein separately from, but as part and parcel of, the I-74 Bridge Replacement Project.

Procedural History

A Conservation Plan prepared by LCC was submitted to the Department on January 31, 2020. The Department requested additional information on February 6, 2020, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on February 27, 2020. The Conservation Plan was approved by the Department on March 5, 2020. The public notice period and public comments will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria which 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 be only incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this **contingency plan** is to install three mooring piles and up to twelve barge spuds in the Mississippi River to facilitate

barge transport of the Arch Deck Modules downstream to the new I-74 bridge in Rock Island County, **if high water levels do not allow for safe barge loading.**

To install the mooring piles, if necessary, Lunda will use its existing temporary dock facility near the I-74 Bridge Replacement Project and load the drill rig and mooring pile materials onto a barge. One of Lunda's tugboats will then transport the barge upstream to the current action area. Once the barge is in position, two spuds will be lowered into the riverbed to hold barge position. The drilling subcontractor will install the mooring piles approximately ten (10) feet into the bedrock using a drill rig and fill it with pea gravel. Spoils from the drilling operations shall be placed in steel catch boxes located on the barge then loaded into a dump truck for proper disposal.

The six Arch Deck Modules will be transported using three barges. The barges will be guided into position by two tugboats, loaded with the Arch Deck Modules, and then transported to the I-74 Bridge Replacement Project (westbound), where the arches will be lifted into place from the barges. This process is anticipated to be repeated for the I-74 Bridge (eastbound) in later spring/early summer 2021. Following completion, the mooring piles will be deconstructed and removed via barge.

All proposed activities may result in direct burial or crushing of, and/or sedimentation or turbidity impacts to, and/or noise and vibration to Higgins Eye and Butterfly, and/or their glochidia.

Total estimated area of impact within species habitat for the immediately proposed actions is **0.008 acre**. The Department concurs that the take of Higgins Eye and Butterfly that could result from the **high-water contingency plan** is not the purpose of LCC'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 avoidance, minimization and mitigation were included in LCC's conservation plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by LCC, based on the life history needs of Higgins Eye and Butterfly. **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.

LCC states it has been in business since 1938 and can supply the necessary bonds and certificates of insurance. LCC understands that if any additional activities are planned that may affect Higgins Eye, Butterfly, or other endangered or threatened species, coordination with the Department will be required.

The Department accepts this provision as assurance that adequate funding will be available to carry out the terms of the conservation plan.

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 is a part, or the habitat essential to the species' existence in Illinois.

Higgins Eye (*Lampsilis higginsii*) is a Federally endangered and Illinois state-endangered mussel species.

Habitat: Higgins Eye is a medium-sized mussel known to inhabit large rivers. Its preferred habitat consists of plant-free, stable areas of mixed sand and gravel. It is unlikely to be found in areas of shifting sands or silt.

Reproduction: Higgins Eye are long-term brooders. Females will retain developing glochidia in their gills over winter and release them in June to July. Glochidia will parasitize Sauger, Largemouth Bass, Smallmouth Bass, Walleye, Yellow Perch, Black Crappie, and Green Sunfish.

Population: The species is rare or extirpated from much of its historical range. Decline is due to poor habitat conditions resulting from human river management, non-point and point-source water and sediment pollution, the infestation of invasive zebra mussels, and early overharvest by the button and pearl industries. Higgins Eye was the first freshwater mussel species to gain federal protection in the United States.

Range in Illinois: Higgins Eye has only been found in the Mississippi River. The species has been observed in five (5) of 102 Illinois counties, including Carroll, Henderson, Jo Daviess, Rock Island, and Whiteside Counties. There are currently 12 extant Element Occurrence Records for Higgins Eye in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has eight (8) previously issued or pending Incidental Take Authorizations for Higgins Eye. Types of projects include bridge installations, dredging, pier removal, and dolphin installation. LCC's project is the seventh authorization for the taking of Higgins Eye in Rock Island County.

Butterfly (*Ellipsaria lineolata*) is an Illinois state-threatened mussel species.

Habitat: The species is found in large rivers in areas with moderate to swift currents. They favor substrates of coarse sand and gravel.

Reproduction: Butterfly mussels are long-term brooders. Females retain developing glochidia in their gills from August until the following July. Glochidia are released and temporarily parasitize a host fish, which may include Freshwater Drum, Green Sunfish, and Sauger.

Population: Butterfly population decline is due to poor habitat conditions associated with river/water management, pollution, impacts from the invasive zebra mussel, and early overharvest caused by the button and pearl industries.

Range in Illinois: In Illinois, Butterfly mussels have been found in the Mississippi and Ohio Rivers, in 12 of 102 counties. There are currently 29 extant Element Occurrence Records for Butterfly in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has 16 previously issued or pending Incidental Take Authorizations for Butterfly mussels. Types of projects included dredging, construction of offshore structures, bridge removal and replacement, riprap installation, and boat dock installation. This is seventh authorization for the taking of butterfly in Rock Island County.

Based on the amount of habitat impacted by this project, the number of known occurrences of Higgins Eye and Butterfly in Illinois, an assessment of the potential effect of this project on individual mussels in the project footprint, the conservation methods included in this authorization for 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 the 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.

Additional measures are listed below under "Authorization". This authorization is, by definition, subject to those terms and conditions and the signature of a representative from LCC 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 LCC's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on March 11, 2020, and in the *Rock Island Argus* on March 11, 18, and 26, 2020. A copy of the conservation plan was deposited at the Moline Public Library, where it was available for public review. The deadline for public comment was April 25, 2020. No comments were received from the public.

Authorization

It is the determination of the Department that the measures to be implemented by LCC, if the contingency plan is necessary, will adequately minimize and mitigate the anticipated taking of Higgins Eye and Butterfly associated with new mooring pile installations to facilitate barge transport and installation of the Arch Deck Modules to the I-74 Bridge Replacement Project in Rock Island County, Illinois. Further, the Department has concluded that the taking authorized herein will not reduce the likelihood of survival or recovery of Higgins Eye and Butterfly in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species existence in Illinois. Additional listed aquatic species may inhabit the Mississippi River, this agreement does not authorize take of any species except Higgins Eye and Butterfly.

All terms and conditions included in the aforementioned Conservation Plan submitted by LCC to the Department are incorporated into this agreement by reference and are made a part thereof.

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 LCC in the conservation plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **five (5) 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 LCC has failed to comply with any of these terms and conditions or has been responsible for the taking of Higgins Eye and Butterfly beyond that which is incidental to the installation and removal of mooring piles at the LCC project facilitating Arch Deck Module delivery to and installation at the I-74 Bridge in Rock Island County, Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between LCC and the Department. The Illinois Endangered Species Protection Board shall be notified of 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. Notification to all on-site personnel shall be provided on the sensitive biological resources in the area, the identification of Higgins Eye and Butterfly, regulations protecting the species, where the species might be found, avoidance areas, travel restrictions for equipment, how to report sightings or incidents that may involve take, the importance of avoiding take of the species, and response protocol if the species are found. **LCC 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 potential habitat and species management practices.
6. Biological consultants employed by LCC 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. The salvage of non-listed aquatic life is hereby authorized by the Department with signature of this agreement per the Illinois Fish and Aquatic Life Code (515 ILCS 5/1-150).
8. LCC shall notify the Department's Endangered Species Program by email correspondence of construction commencement and completion. A **project status report** shall be submitted to the Department within **90 days** following completion (removal of mooring piles) of the project summarizing the implementation of minimization and mitigation 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.
9. Notification of any Higgins Eye or Butterfly present during the performance of the project shall be reported electronically to the Department within 48 hours of discovery accompanied by location information (photograph, map, and GPS coordinates). 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.
10. If the **high-water contingency plan** is implemented, LCC shall conduct, or cause to be conducted, the following pre-construction, construction, and/or post-construction efforts:
 - a. All in-stream work shall be conducted from barges spudded into place.
 - b. New barges shall be inspected for the presence of Zebra mussels prior to placing them into the Mississippi River and shall have been completely out of

water for 10 days to ensure desiccation to reduce infestation by Zebra mussels.

- c. No cofferdams or temporary causeways shall be installed.
- d. Mooring piles shall be installed with a drill rig, rather than vibratory hammer, to minimize sediment dispersion and vibrational impacts to nearby mussel bed. The use of a temporary outer casing will minimize turbidity caused by the drilling.
- e. Steel ramp pier on land shall be removed during the gap in installation of the westbound Arch modules and eastbound Arch modules to minimize the amount of time the mussel bed is shaded. No barges shall be parked in the project area between westbound and eastbound installation.
- f. Deconstruction shall occur in late fall from a work barge that will be spudded into the action area and utilize a hydrovac truck to remove the pea gravel from inside the mooring pile. The mooring piles will then be removed from the river bottom and placed on the barge for proper disposal.
- g. All spoil from construction shall be placed in dump trucks and taken offsite. No fill material shall be left in the river.

11. The Department agrees that statutorily required mussel species' monitoring performed under the original take authorization for the I-74 Bridge Replacement Project (ITA#56) adequately satisfies the monitoring requirement for this portion of the bridge project.

12. The Department agrees that statutorily required mitigation bringing conservation benefit to these mussel species performed under the original take authorization for the I-74 Bridge Replacement Project (ITA#56) adequately satisfies the mitigation requirement for this portion of the bridge project.

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 Resource Way
Springfield, IL 62702-1271

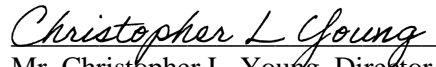
(217)557-8243
DNR.ITAcoordinator@illinois.gov

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 LCC official identified below is authorized to execute this agreement. Execution by LCC 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 LCC 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:

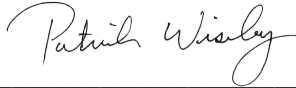


Mr. Christopher L. Young, Director
Office of Resource Conservation

Aug 12, 2020

Date

For Lunda Construction Company:



Mr. Patrick Wiseley P.E.
QC/Senior Project Manager

8/12/2020

Date