



# Illinois Department of Natural Resources

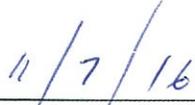
One Natural Resources Way Springfield, Illinois 62702-1271  
www.dnr.illinois.gov

Bruce Rauner, Governor  
Wayne A. Rosenthal, Director

The Illinois Department of Natural Resources Office of Resource Conservation and the Illinois Department of Natural Resources Office of Water Resources hereby agree to extend the Incidental Take Authorization executed on April 21, 2015, for the take of bluebreast darter (*Etheostoma camurum*), eastern sand darter (*Ammocrypta pellucidum*), bigeye chub (*Hybopsis amblops*), river redhorse (*Moxostoma carinatum*), wavy-rayed lampmussel (*Lampsilis fasciola*), and black sandshell (*Ligumia recta*) at the Danville Dam Removal Project pursuant to Condition 2 of the agreement authorized under the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). The deadline shall be extended to December 31, 2021, and all survey and reporting requirement deadlines shall hereby be extended accordingly. All other terms of the Incidental Take Authorization remain in effect and unaltered. It has been determined that (1) the circumstances said to necessitate the change were not reasonably foreseeable at the time the agreement was signed, or (2) the change is germane to the original agreement as signed, or (3) the change is in the best interest of State government and authorized by law.

*For the Illinois Department of Natural Resources  
Office of Resource Conservation*

  
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Mr. Christopher L. Young, Director

  
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Date

*For the Illinois Department of Natural Resources  
Office of Water Resources*

  
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Mr. Rick Gosch, Manager  
Division of Capital Planning

  
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Date





# Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271  
www.dnr.illinois.gov

Pat Quinn, Governor  
Marc Miller, 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 the Illinois Department of Natural Resources, Office of Water Resources (hereinafter referred to as OWR) for the incidental take of the bluebreast darter (*Etheostoma camurum*), eastern sand darter (*Ammocrypta pellucidum*), bigeye chub (*Hybopsis amblops*), river redhorse (*Moxostoma carinatum*), wavy-rayed lampmussel (*Lampsilis fasciola*), and black sandshell (*Ligumia recta*). The Illinois Department of Natural Resources (hereinafter referred to as the Department) has determined that the taking is incidental to activities associated with the partial removal of the Danville Dam and removal of two abandoned bridge piers from the Vermilion River at Danville, Vermilion County, Illinois. The dam is located on the Vermilion River approximately 22 miles upstream from the confluence of the Vermilion River with the Wabash River (-87.631691, 40.122256 Decimal Degrees) and within the Vermilion River – Wabash Drainage Illinois Natural Areas Inventory Site.

*Note: There are two Vermilion Rivers in Illinois. One is part of the Illinois River drainage; the other is part of the Wabash River drainage. All references to the Vermilion River in this document are to the Wabash River tributary.*

### **Procedural History**

On April 24, 2014, OWR submitted a conservation plan, including a proposed public notice, to the Department as their application for authorization of incidental take of the species listed above. Details of the public notice period can be found below in Item #6 of the Compliance section of this document.

### **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 the partial removal of the Danville Dam and removal of two abandoned bridge piers on the Vermilion River at Danville, Vermilion County, Illinois. Dam and pier removal is proposed as a means to improve public safety by eliminating the hydraulic roller at the dam. The project will also improve the ecological integrity of the dam site, enhance

river system connectivity, and increase recreational opportunity on the river. Take of the bluebreast darter, eastern sand darter, bigeye chub, river redhorse, wavy-rayed lampmussel, and black sandshell may result from the immediate demolition and removal of the dam and piers or from siltation downstream if a heavy precipitation event should occur soon after dam and pier removal. The taking that could occur is not the purpose of OWR'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:

The conservation plan prepared by OWR describes measures that will be implemented to minimize and mitigate the potential taking of the bluebreast darter, eastern sand darter, bigeye chub, river redhorse, wavy-rayed lampmussel, and black sandshell.

In order to minimize the area affected by the project, OWR will restrict demolition and related activity to the smallest possible area adjacent to the dam and piers. The channel banks bordering the project site will be stabilized to protect the area from long-term erosion effects. Any areas into which material will be placed or equipment will enter will be inspected in advance by mussel and fisheries biologists.

To document the effects of dam removal on the fish and mussel communities in the North Fork of the Vermilion River, Eastern Illinois University and the Illinois Natural History Survey have conducted fish and mussel surveys upstream and downstream of the dam in 2012-2014. Annual surveys will continue through 2016 to detect any changes in the diversity and abundance of fishes and mussels.

Throughout the dam removal process, OWR will advise DNR's local fisheries biologist of the status of the project and allow the biologist to be present for evaluation of methods, searches for stranded fishes and mussels and other aspects of the project.

It is the opinion of the Department that these measures, along with any additional terms and conditions listed in the Authorization section of this document will, to the maximum extent practicable, minimize and mitigate the impact caused by the potential taking.

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

Funding for OWR projects is provided by appropriation by the Illinois General Assembly. Policy requires that those funds must be released for construction before a contract is awarded for a given project. Sufficient funds for this project have been identified in the OWR budget. Funding for fish sampling by Eastern

Illinois University will come from an approved State Wildlife Grant from the U.S. Fish and Wildlife Service. OWR estimates that that cost of mitigation measures for this project will be \$38,040.

Based on the existing OWR budget and the previous approval of the State Wildlife Grant, it is the Department's conclusion that adequate funding for the conservation plan will be available as needed.

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:

The bluebreast darter is listed as an endangered species in Illinois. The species has no formal federal conservation status. Bluebreast darters are small fish, seldom exceeding three inches in length. In Illinois, they are known only from the Vermilion River system. The Vermilion River population of bluebreast darters represents the western limit of the species distribution in the U.S. Maintenance of water quality is the most important factor in protection of the species. OWR has estimated the potential take of this species at one to three individuals.

The Illinois Natural Heritage Database includes 14 element occurrence records for the bluebreast darter that are classified as extant. All of these occurrences are in east-central Illinois within the Vermilion River system. The Department has issued two previous incidental take authorizations for the bluebreast darter. One authorization was for take related to the replacement of the Anderson Hill Bridge in Vermilion County. For that project, the Vermilion County Highway Department agreed to minimize the footprint of their work and limit the number of days on which instream work would occur. The second was for OWR's removal of the Ellsworth Park Dam on the North Fork of the Vermilion River. Measures proposed to minimize take of the bluebreast darter were similar to those proposed for the current project.

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The eastern sand darter is listed as a threatened species in Illinois. The species has no formal federal conservation status. Siltation, impoundments and declining water quality are the major factors in the decline of the species throughout its range. Eastern sand darters are small fish, usually two to three inches in length. They are most often found in medium to large streams with sand or sand-gravel bed material. In Illinois, eastern sand darters are found in the Vermilion and Embarras drainages. OWR has estimated the potential take of this species at one to three individuals.

The Illinois Natural Heritage Database includes 27 element occurrence records for the eastern sand darter that are classified as extant. Twenty-one of these records

are from the Embarras River system and the other six are from the Vermilion River system. The Department has issued one previous incidental take authorization for the eastern sand darter. That authorization was for removal of the Ellsworth Park Dam on the North Fork of the Vermilion River.

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The bigeye chub is listed as an endangered species in Illinois. The species has no formal federal conservation status. Bigeye chubs are small fish, usually 2.5 to 3.5 inches in length. They are most commonly found in small to medium streams with sandy, rocky or gravelly bed material. They make use of pools with little current but near riffles. Their name reflects their dependence on sight to locate food and they are very intolerant of turbid water. In Illinois, they are known only from the Vermilion, Wabash and Iroquois river systems. OWR has estimated the potential take of this species at one to 10 individuals. Bigeye chubs (14 fish) were found during sampling at the Danville Dam.

The Illinois Natural Heritage Database includes 23 element occurrence records for the bigeye chub that are classified as extant. The Department has issued two previous authorizations for incidental take of bigeye chubs. Those authorizations were for the same projects as described in the discussion of bluebreast darters above.

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The river redhorse is listed as a threatened species in Illinois because of its limited range and threats to its habitat such as siltation and pollution. The species has no formal federal conservation status. Historically, it was found in the Wabash, Rock and Illinois River drainages. OWR has estimated the potential take of this species at one to five individuals.

The Illinois Natural Heritage Database includes 32 occurrences of the river redhorse that are classified as extant. The species is most often found in deep, gravelly riffles of small and medium-sized rivers. The Department has issued five previous authorizations for incidental take of the river redhorse. These were for bridge replacement projects in Kane and Vermilion Counties, installation of hydropower facilities in an existing Illinois River dam in LaSalle County, a cooling water discharge in Will County, and removal of the Ellsworth Dam in Vermilion County. A sixth authorization for incidental take of river redhorse has been requested for installation of hydropower in an existing dam in Grundy County.

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The wavy-rayed lampmussel is classified as an endangered species in Illinois. The species has no formal federal conservation status. In the early 20<sup>th</sup> century, this species was reported from the eastern part of Illinois from Cook County to the Ohio River. By the 1960s, it was known only from the Vermilion River system. Pollution and siltation are believed to be the principle causes of this marked

decline. Wavy-rayed lampmussels are most often found in clear, small to medium-sized streams with sand or gravel substrates. OWR has estimated the potential take of this species at one to two individuals.

The Illinois Natural Heritage Database includes 21 element occurrence records for the wavy-rayed lampmussel that are classified as extant. All of those occurrences are in the Vermilion River or its tributaries. The Department has issued five previous authorizations for incidental take of wavy-rayed lampmussels. All of those authorizations were for projects in Vermilion County; three for bridge replacement/repair work, one for the installation of shoreline erosion control, and one for the removal of the Ellsworth Dam.

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The black sandshell is listed as a threatened species in Illinois. It has no formal federal conservation status. Black sandshells were once known from nearly all river systems in Illinois. In more recent years, it has been found in only about one-fourth as many drainages as in the past. Favored habitat is riffles and raceways with sand or gravel substrate. The decline of this species is believed to be related to siltation and pollution as well as the mining of sand and gravel from rivers. OWR has estimated the potential take of this species at one to five individuals. Four live black sandshells were found just downstream of the area to be affected by this project during pre-project sampling.

The Illinois Natural Heritage Database includes 99 element occurrence records for the black sandshell that are classified as extant. Many of the occurrences are in the Mississippi River, with additional records from the Vermilion, Rock, Kishwaukee, Kankakee and other rivers. The Department has issued 16 previous authorizations for incidental take of black sandshells. Six of those were for bridge repair/replacement projects. Other project types included dredging of boat/barge channels, pipeline installation or removal, dam removal, and placement of rock and/or rip rap for navigation improvements. Project locations were in Boone (1), Calhoun (1), Jo Daviess (1), Lee (1), McHenry (1), Mercer (1), Rock Island (3), Vermilion (1), Whiteside (2), Will (2), and Winnebago (2) counties. The project in Calhoun County was cancelled after the authorization for incidental take was issued.

Partial removal of the Danville Dam, removal of two abandoned bridge piers, and placement of rip-rap bank protection along both banks of the Vermilion River will potentially affect approximately 4.3 acres of riverine habitat. Removal of the dam will make approximately 28 acres of upstream riverine habitats available to the species discussed in this document and any other species that are present in this reach of the Vermilion River. This upstream area is currently unavailable to most species because the Danville Dam acts as a barrier to upstream movement.

The Department has concluded that the taking proposed herein will not reduce the likelihood of survival or recovery of the bluebreast darter, eastern sand darter, bigeye

chub, river redhorse, wavy-rayed lampmussel or black sandshell 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. This conclusion is based on the following considerations:

For each of these species, the area that will be affected by dam removal represents only a small portion of the available habitat. The bluebreast darter has the most restricted distribution of the species of concern for this project, but is found at numerous locations within the Vermilion River system. All other species occur at scattered locations in the Vermilion River system as well as in other river drainages in Illinois. The temporary disturbance of 4.3 acres of what is presently sub-optimal habitat with a resulting increase of 28 acres in potential habitat is likely to have a positive long-term effect on these species. Post-project surveys at other dam removal sites in Illinois have shown an increase in the abundance and diversity of fishes and mussels. Surveys following this project will determine if this project has paid benefits to the listed species. The increase in available aquatic habitat that will result from dam removal is seen by the Department as adequate compensation for the area of habitat that will be disturbed by this project.

Based on the results of fish and mussel surveys on the Vermilion River in recent years, the take estimated by OWR (no more than ten individuals of any species) appears to be adequate. Considering the measures to be taken by OWR to minimize adverse effects, e.g. pre-project relocation of mussels and "rescue" of stranded fish and mussels during dam removal, it is anticipated that the actual take, if any, will be in the lower range of OWR's estimates. Any take that may occur is not likely to be significant to the population of these species in the Vermilion River or in the State of 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 an official OWR signature on this agreement indicates OWR's 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 the availability of OWR's conservation plan for review and comment was published in the (Taylorville) Breeze-Courier on May 14, 21, and 28, 2014, and in the (Danville) Commercial-News on May 14, 21, and 28, 2014. The conservation plan was also posted on OWR's website and a copy of the conservation plan was deposited at the Danville Public Library where it was available for public review. The deadline for public comment was June 27, 2014. No comments were received from the public.

## Authorization

It is the determination of the Department that the measures to be implemented by the Office of Water Resources will adequately minimize and mitigate the anticipated taking of bluebreast darter, eastern sand darter, bigeye chub, river redhorse, wavy-rayed lampmussel and/or black sandshell incidental to the partial removal of the Danville Dam on the Vermilion River in Vermilion County, Illinois, the removal of two abandoned bridge piers just upstream of the Danville Dam and placement of rip-rap bank protection upstream and downstream of the Danville Dam. Further, the Department has concluded that the take authorized herein will not reduce the likelihood of survival or recovery of the bluebreast darter, eastern sand darter, bigeye chub, river redhorse, wavy-rayed lampmussel or black sandshell 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.

All terms and conditions included in the aforementioned conservation plan submitted by OWR 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 the applicant in #2 above:

1. This authorization is effective upon the signature of the Department and shall remain in effect through December 31, 2016, unless terminated by written agreement by both parties.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that OWR has failed to comply with any of these terms and conditions or has been responsible for the taking of bluebreast darters, eastern sand darters, bigeye chubs, river redhorse, wavy-rayed lampmussels, or black sandshells beyond that which is incidental to partial removal of the Danville Dam on the Vermilion River in Vermilion County, Illinois, the removal of two abandoned bridge piers just upstream of the Danville Dam and placement of rip-rap bank protection upstream and downstream of the Danville Dam.

2. The effective period of this authorization may be altered by mutual written agreement between OWR and the Department. In this event, the Department shall notify the Illinois Endangered Species Protection Board of any such alteration.

Any substantive changes, including but not limited to a change in the project footprint or a change in the Illinois endangered and threatened 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. Incidental take authorizations are non-transferable.

4. The Department reserves the right of entry to inspect potential habitat and species management practices.
5. OWR shall ensure that project activities are limited to the smallest possible area and limit in-channel work to dry ground as much as possible. This shall not preclude the placement of stone for bank stabilization or for temporary access to the project site.
6. Throughout project execution, OWR will ensure that those portions of the channel that will be directly affected by project-related activities will be inspected by mussel and fisheries biologists prior to any placement of material or equipment in the channel. In the event that any State-listed fish or mussel species are found, those animals shall be relocated to downstream areas of suitable habitat in at least 12 inches of water. In the event that any State-listed fish or mussel species is found, the Department shall be notified within 48 hours of any relocation.

Supporting documentation, including maps, shall be submitted to:

Illinois Department of Natural Resources  
Endangered Species Program – Incidental Take Authorization Coordinator  
One Natural Resources 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 Illinois Natural Heritage Database.

7. The detonation of underwater explosive charges during bridge pier and dam removal is prohibited. If above-water explosive charges are to be used in bridge pier demolition; demolition of the piers shall precede demolition of the dam, since protected species are less likely to be present in the pool while the dam remains in place. To minimize fish mortality in this Illinois Natural Areas Inventory Site, appropriate means shall be used to attempt to displace fish from the area prior to the detonation of any explosive charge. Appropriate means may consist of the generation of pulsed broadband noise prior to the detonation and of sufficient duration to allow fish to clear the area without causing injury or mortality. Following the detonation, a report shall be prepared detailing any animal mortality (fish, invertebrates, mammals, birds, reptiles, or amphibians) to the species level which becomes apparent within one hour of the detonation; the report shall identify the weight and type of explosives detonated and the time of day. A Department or Illinois Natural History Survey biologist shall be present during detonation and shall provide identification of impacted species. The report shall be submitted to the Department's Endangered Species Program within 60 days of detonation.

8. OWR estimates a temporary disturbance of 4.3 acres of sub-optimal habitat with a resulting increase of 28 acres of newly available potential habitat upstream after this project is complete. The Department's mitigation ratio of 5.5:1 for creation, restoration, or acquisition of State-listed species habitat is exceeded [4.3 acres x 5.5 = 23.65 acres]. Therefore, no further mitigation is requested. The dam removal project is expected to provide conservation benefit for all of the State-listed species that may be incidentally taken.
9. Before project activities begin, OWR will ensure that biologists from the Illinois Natural History Survey will relocate all mussels from the project area to suitable habitat outside of the project area. As dam removal proceeds, portions of the pool upstream of the dam will be dewatered. As water levels recede in the upstream pool, the contractor or biologists will inspect the dewatered area and relocate any mussels or fishes that have been stranded to downstream areas with suitable habitat and at least 12 inches of water. A final search for stranded mussels and fishes will be conducted when dewatering of the upstream pool is complete. A summary report describing the species and numbers of mussels and fishes relocated, including a map of the relocation area for all State-listed species, shall be provided to the Department within 60 days of the completion of each survey/relocation.
10. To document the effects of dam removal on the fish and mussel communities in the Vermilion River, OWR will ensure that staff of Eastern Illinois University and the Illinois Natural History Survey or other qualified contractors approved by the Department conduct a survey in 2016 to detect any changes in the diversity and abundance of fishes and mussels.

Following completion of the final survey in 2016, a report shall be prepared to summarize and compare the results of all pre-project and post-project surveys. That report shall be provided to the Department within 120 days of the final survey in 2016.

11. Throughout project execution, from commencement to completion, OWR will advise DNR's District Fisheries Biologist or Streams Biologist of the status of the project and allow the biologist to be present for evaluation of methods, searches for stranded fishes and mussels, and other aspects of the project.
12. The OWR official identified below is authorized to execute this agreement. Execution by OWR indicates acceptance of all terms and conditions described in this authorization.
13. The execution of the agreement does not waive or excuse the responsibilities of OWR to comply with other State, Federal 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*



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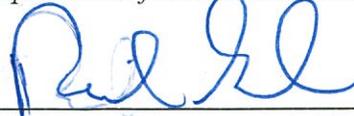
Dr. James Herkert, Director  
Office of Resource Conservation

4-21-15

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Date

*For the Office of Water Resources,  
Department of Natural Resources*



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Rick Gosch, Manager  
Division of Water Resource Planning

Apr. 15, 2015

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Date