



Illinois Department of Natural Resources

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

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 Prairie Crossing Homeowner's Association (hereinafter referred to as PCHOA), for the incidental take of the State-endangered Blacknose Shiner (*Notropis heterolepis*) and Pugnose Shiner (*Notropis anogenus*), and the State-threatened Western Banded Killifish (*Fundulus diaphanus menona*), Blackchin Shiner (*Notropis heterodon*), and Starhead Topminnow (*Fundulus dispar*). The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that this taking is incidental to hydraulic dredging to recover ~~enriched~~ lake sediments and improve ecological conditions, including shoreline restoration and invasive species removal in Lake Leopold, Prairie Crossing, Grayslake, Lake County, Illinois.

Procedural History

A Conservation Plan prepared by GeoSyntec Consultants, Inc., on behalf of PCHOA, was submitted to the Department on March 3, 2020, as a request for authorization for the incidental take of the Blacknose Shiner, Pugnose Shiner, Western Banded Killifish, Blackchin Shiner, and Starhead Topminnow. The Department requested additional information on April 17 and May 26, 2020, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on May 6 and 27, 2020. The final Conservation Plan was accepted as complete by the Department on June 2, 2020. The public notice period and public comments will be detailed under #6 of the Compliance section below.

Lake Leopold, located within the Prairie Crossing conservation community, was created as a fish sanctuary, per the Prairie Crossing Threatened and Endangered Fish Relocation: Implementation and Research Proposal, dated January 31, 2000. According to the proposal, the translocation of native listed fish to this manmade impoundment was initiated by PCHOA in consultation with the Department, Loyola University, U.S. Fish and Wildlife Service, Lake County Health Department, and Integrate Lakes Management. No evidence of an approved management agreement with the Department could be found to support stocking Lake Leopold with listed species, therefore an exemption under the provisions of Ill. Adm. Code 1080.70(b) does not apply.

In the 2020 revision to the Illinois List of Endangered and Threatened Species, the Illinois Endangered Species Protection Board agreed with the data that supported removal of the Iowa Darter from the Illinois List. For that reason, although the species was presented in the Conservation Plan, it will not be contemplated in this agreement.

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 proposed action is to recover lake sediments (silt) by selectively dredging portions of Lake Leopold. The rotational maintenance dredging will occur over ten (10) years. The action will be performed utilizing a hydraulic dredge specification focused on low turbidity. The specification could include, but is not limited to:

- a 6-inch horizontal auger-type dredge that distributes suction across a 6-foot-wide horizontal intake auger with a low turbidity shroud, producing a less concentrated suction zone than a rotating basket-type cutterhead dredge, pumping approximately 1,000 gallons per minute (gpm), OR
- a diver-operated approach using a 4-inch intake, or similar, pumping approximately 400 – 500 gpm, OR
- an 8-inch horizontal auger may also be considered, if the contractor can demonstrate the higher gpm pumping will not result in unwarranted suspension of material.

Based on sediment samples analyzed from the onset of the project, the material to be dredged is extremely light and should be retrievable without the need of heavy cutterhead-style dredges. There is no intention of going below the hard bottom of the lake, nor an intention to dredge within the littoral zone of the lake, as there is no significant buildup of sediment to retrieve in these locations. Since the lake is proposed to be dredged in phases to allow for recovery and assessment within smaller footprints, the fish typically associated with mid to deep lake water levels will have ample space to temporarily relocate to the remainder of the lake. The speed of the dredge is anticipated to be less than one foot per second to allow ample opportunity for the fish to relocate. For the species covered by this agreement, the impact of dredging should minimally interface with their preferred near shore vegetated habitat.

The sediment material will be pumped offsite for dewatering within placed geotubes. Return water will be delivered to the lake via an existing storm drain. The return water effect should be consistent with traditional stormwater flow and cannot exceed the water quality parameters or turbidity of the existing water source.

Proposed silt removal activities and habitat improvement projects may result in noise, vibration, and/or light disturbance; predator/prey alterations; habitat alterations; and/or direct impact to mature, juvenile, fry, and/or eggs of the

Blacknose Shiner, Pugnose Shiner, Western Banded Killifish, Blackchin Shiner, and Starhead Topminnow.

Total estimated area of dredging and habitat improvement within species habitat is **15.03 acres**. During Phase 1, dredging of the northern portion of the lake may encompass up to 6.05 acres. During Phase 2, dredging of the southern portion of the lake may encompass up to 8.98 acres. The Department concurs that the take of Blacknose Shiner, Pugnose Shiner, Western Banded Killifish, Blackchin Shiner, and Starhead Topminnow that could result from the proposed project is not the purpose of PCHOA'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 PCHOA's Conservation Plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by PCHOA, based on the life history needs of the Blacknose Shiner, Pugnose Shiner, Western Banded Killifish, Blackchin 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.

The PCHOA states that a portion of their annual budget funded by residential dues collection shall be dedicated toward implementation of the Conservation Plan, mitigation, and lake management work to continuously improve and maintain the lake's ecosystem to enhance the overall quality of life for both residents and aquatic flora and fauna. Dues support yearly maintenance activities along with special projects including shoreline protection, invasive species removal, aquatic vegetation restoration, and dredging. Additionally, PCHOA has budgeted for needs such as rotational fish surveys. The contingency and minimization measures proposed within this plan are work items that PCHOA planned for in the dredging project costs. Monitoring components will be added to the originally scheduled fish surveys.

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.

Blacknose Shiner (*Noptropis heterolepis*) is an Illinois state-endangered fish species.

Habitat: Blacknose Shiner is a small fish found in cool weedy creeks, small rivers, and lakes with a sandy substrate. The preference is for slow-moving waters, such as bays and marsh areas.

Distribution: The species occurs from Canada to Nova Scotia, south to Kansas, and east to New York. Blacknose shiners are declining across most of the southern part of their range, which includes Illinois.

Reproduction: Blacknose Shiner spawns April to July in Illinois. Eggs are scattering over vegetation and hatch after only a few days.

Population: Blacknose Shiner is sensitive to human impacts, and is declining due to increased turbidity, siltation of stream bottoms, and disappearance of aquatic vegetation.

Range in Illinois: Blacknose Shiner has been found in the Illinois, Kankakee, and Kishwaukee Rivers, as well as several other smaller creeks and tributaries. They have been found in nine (9) of 102 Illinois counties, including Carroll, DuPage, Grundy, Kankakee, LaSalle, Lake, McHenry, Stark, and Will. There are currently 21 extant Element Occurrence Records for Blacknose Shiner in the Illinois Natural Heritage Database.

Incidental Take Authorizations: There are four (4) previously issued or pending Incidental Take Authorizations for Blacknose Shiner in Illinois. Previous projects have included a bridge replacement, aquatic vegetation management, and pipeline maintenance. The nearest executed Incidental Take Authorization is at Loon Lakes approximately 8.83 miles northwest of the PCHOA project. This is the second authorization granted for the take of Blacknose Shiner in Lake County.

Pugnose Shiner (*Notropis anogenus*) is an Illinois state-endangered fish species.

Habitat: Pugnose Shiner is a small fish found in shallow waters during summer, and in weedy, clear lakes and slow-moving streams.

Distribution: Pugnose Shiner is restricted in range to the Great Lakes drainage basin. It is known from New York, Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, North Dakota, and Canada. It is one of the rarest minnows in North America.

Reproduction: Spawning occurs from May to July in Illinois. Eggs are distributed in shallow water areas that have dense vegetation.

Population: Pugnose Shiner are declining because of increased turbidity in lakes and streams, and a reduction in aquatic vegetation.

Range in Illinois: Pugnose Shiner has been found in three (3) of Illinois' 102 counties, including DuPage, Lake, and McHenry. There are currently 4 extant Element Occurrence Records for Pugnose Shiner in the Illinois Natural Heritage Database.

Incidental Take Authorizations: There are two (2) previously issued or pending Incidental Take Authorizations for Pugnose Shiner in Illinois. The previous project was for aquatic vegetation management. The nearest executed Incidental Take Authorization is at Loon Lakes approximately 8.83 miles northwest of the PCHOA project. This is the second authorization granted for the take of Pugnose Shiner in Lake County.

Western Banded Killifish (*Fundulus diaphanus menona*) is an Illinois state-threatened fish species.

Habitat: Western Banded Killifish is a small, freshwater fish found in quiet waters. The species is typically found over sand, gravel, or detritus-covered bottoms with patches of submerged aquatic vegetation. They are a schooling fish that tends to stay in shallows in the summer.

Distribution: The species is widely distributed throughout eastern North America, ranging from South Carolina north to the Atlantic Provinces, west to Minnesota, and throughout suitable habitat of the Great Lakes watershed.

Reproduction: Spawning occurs from May to July in Illinois. Eggs are released in clusters and attach to plants in quiet weedy pools. The eggs hatch in 11-12 days. Western Banded Killifish become sexually mature after one year.

Population: Western Banded Killifish population decline has occurred because of increased stream siltation, turbidity, and pollution.

Range in Illinois: In Illinois, Western Banded Killifish are found in the Fox, Kankakee, Chicago, Illinois, and Des Plaines River basins. Western Banded Killifish are found in 4 of 102 Illinois counties, including Cook, DuPage, Lake, and McHenry. There are currently 12 extant Element Occurrence Records for Western Banded Killifish in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has ten (10) previously issued or pending Incidental Take Authorizations for Western Banded Killifish. Types of projects include aquatic vegetation management, invasives control, and commercial development. The nearest executed Incidental Take Authorization is at Loon Lakes approximately 8.83 miles northwest of the PCHOA project. This is the fifth authorization for the taking of Western Banded Killifish in Lake County.

Blackchin Shiner (*Notropis heterodon*) is an Illinois state-threatened fish species.

Habitat: Blackchin Shiner is a small fish found in clear, vegetated lakes, and in pools and slow runs of creeks and small rivers, usually over sand.

Distribution: Blackchin Shiner range is centered in the Great Lakes region and upper Mississippi River basin, but occurs also in a few Atlantic drainages, upper Ohio River basin, and Hudson Bay basin from Minnesota and Iowa to New York, Vermont, southeastern Ontario, and southern Quebec.

Reproduction: Spawning occurs from July to October in Illinois. The species is sexually mature at one year and spawns annually. However, the species normally does not survive beyond two years.

Population: Blackchin Shiner population decline is attributed to pollution, including turbidity and siltation, and the introduction of sport fishes. Dams present a barrier to dispersal.

Range in Illinois: Blackchin Shiner is found in the Fox and Des Plaines River basins. Blackchin Shiner is found in four (4) of 102 Illinois counties, including Cook, DuPage, Lake, and Will Counties. There are currently 21 extant Element Occurrence Records of Blackchin Shiner in the Illinois Natural Heritage Database.

Incidental Take Authorizations: The Department has three previously issued or pending Incidental Take Authorization for Blackchin Shiner, all in Lake County. The nearest executed Incidental Take Authorization is at Loon Lakes approximately 8.83 miles northwest of the PCHOA project for the removal of invasive aquatic vegetation.

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 May to June in Illinois 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: 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, including Fulton, Iroquois, Kankakee, Lake, Mason, McHenry, Piatt, Pope, Putnam, Union, and Winnebago Counties. There are currently 19 extant Element Occurrence Records in the Illinois Natural Heritage Database.

Incidental Take Authorizations: There are six (6) previously issued or pending Incidental Take Authorizations for Starhead Topminnow in Illinois. Previous projects have included aquatic vegetation management, pipeline maintenance, and a bridge replacement. The nearest executed Incidental Take Authorization is at Loon Lakes approximately 8.83 miles northwest of the PCHOA project. This is

the third authorization to be granted for the take of Starhead Topminnow in Lake County.

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 PCHOA 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 PCHOA’s request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on June 11, 2020, and the *Lake County Journal* on June 11, 18, and 25, and July 3, 2020. A notice of the location where the hard copy of the Conservation Plan could be reviewed was posted at the Grayslake Public Library. The deadline for public comment was August 3, 2020. No comments were received from the public.

Authorization

It is the determination of the Department that the measures to be implemented by PCHOA will adequately minimize and mitigate the anticipated taking of Blacknose Shiner, Pugnose Shiner, Western Banded Killifish, Blackchin Shiner, and Starhead Topminnow associated with the sediment dredging and habitat improvement projects at Lake Leopold in Lake County, Illinois. Further, the Department has concluded that the taking authorized herein will not reduce the likelihood of survival or recovery of the listed fish 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.

All terms and conditions included in the Conservation Plan submitted by PCHOA 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 PCHOA in the Conservation Plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **ten (10) 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 PCHOA has failed to comply with any of

these terms and conditions or has been responsible for the taking Blacknose Shiner, Pugnose Shiner, Western Banded Killifish, Blackchin Shiner, and Starhead Topminnow beyond that which is incidental to the recovery of sediment in Lake Leopold in Lake County, Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between PCHOA 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 performing activities to effectuate the proposed hydraulic dredging project and this Incidental Take Authorization shall be provided on the sensitive biological resources in the area; the identification of the Blacknose Shiner, Pugnose Shiner, Western Banded Killifish, Blackchin Shiner, and Starhead Topminnow; 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, including the chain of response personnel. **PCHOA 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 PCHOA shall hold the necessary permits for work with non-listed and listed species; these include, but may not be limited to, 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. PCHOA shall notify the Department's Endangered Species Program by email correspondence of annual commencement and completion of the rotational maintenance dredging project. A **project status report** shall be submitted to the Department **within 90 days following completion of each phased dredging effort** summarizing the implementation, minimization efforts, mitigation, and restoration measures and evaluating the effectiveness or status 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.

9. PCHOA shall conduct, or cause to be conducted, the following pre-construction, construction, and/or post-construction efforts:
 - a. Avoid near shore vegetated fish habitat during dredging.
 - b. Utilize a hydraulic dredge specification supporting low suction, low vibration, and low turbidity.
 - c. Install a sediment curtain partition to minimize turbidity outside the area to be dredged. This system is only used during dredging and shall be removed at the end of the annual work window.
 - d. All phased dredging work shall occur between September and November to minimize species impacts during sensitive life stages.
 - e. Return water and fish loss will be monitored periodically during each day of dredging.
 - f. All measures of erosion control shall be put into practice to decrease siltation to Lake Leopold.

10. PCHOA shall conduct, or cause to be conducted, the following post-construction monitoring throughout the term of this agreement:
 - a. Survey protocol shall follow pre-dredge survey protocol to provide comparable analyses.
 - b. Fish and vegetation surveys for Lake Leopold shall be provided to the Department for the duration of the agreement.
 - c. A fish survey shall take place after Phase 1 dredging and prior to Phase 2 to evaluate dredging impacts to the fish assemblage. An additional survey shall take place in Year 5, or after the Phase II effort, of the agreement.

A report summarizing the results of fish surveys will be prepared by PCHOA and submitted to the Department. The report shall include, but not be limited to, a description of the survey methodology utilized including duration, date, time, habitat description, estimate of survey area, photographs, and a map of survey locations and the locations of listed species shall be provided to the Department **within 90 days of completion of each survey.**

11. Mitigation to the maximum extent practicable is required by the Act. Mitigation requirements for this authorization are as follows:

The phased rotational dredging project is part of a habitat improvement effort to maintain high water quality and a unique fishery. The overall effort includes invasive species control, shoreline restoration, and species monitoring. Conservation benefit to the listed species will be derived from the performance of the project and serves as mitigation.

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

12. 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.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.

13. The PCHOA official identified below is authorized to execute this agreement. Execution by PCHOA indicates acceptance of all terms and conditions described in this authorization.
14. The execution of this agreement does not waive or excuse the responsibilities of PCHOA 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:

For the Prairie Crossing Homeowners Association:

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

Scot Lara

Mr. Scot Lara
President, PCHOA

Date

8/31/2020

Date

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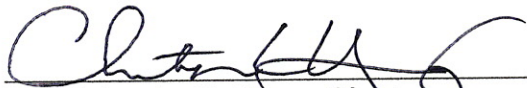
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For the Illinois Department of Natural Resources:

For the Prairie Crossing Homeowners Association:



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

Scot Lara

Mr. Scot Lara
President, PCHOA

9/2/2020

Date

8/31/2020

Date