



# 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 Godley Public Water District (hereinafter referred to as GPWD) for the incidental take of the Federally- and State-endangered Sheepsnose (*Plethobasus cyphus*), State-endangered Spike (*Elliptio dilatata*), Pallid Shiner (*Hybopsis amnis*), Weed Shiner (*Notropis texanus*), and Western Sand Darter (*Ammocrypta pellucidum*), and State-threatened Mudpuppy (*Necturus maculosus*), Monkeyface (*Quadrula metanerva*), Purple Wartyback (*Cyclonaias tuberculata*), and River Redhorse (*Moxostoma carinatum*). The Illinois Department of Natural Resources (hereinafter referred to as Department) has determined that the taking is incidental to activities associated with the installation of a water intake in the Kankakee River near Custer Park, IL and pipelines to convey water to a treatment station in Will County. This project lies within the Kankakee River Segment Illinois Natural Areas Inventory site (INAI#0980). Just 0.80 miles downstream of this project is a diffuser for Exelon's Braidwood Generating Station that is covered by a previous Incidental Take Authorization (ITA file #46 executed January 13, 2010, and expired January 13, 2015).

### **Procedural History**

The Department received a Conservation Plan prepared by Hey and Associates, Inc. on August 28, 2019, as a request for authorization for the incidental take of Sheepsnose, Spike, Pallid Shiner, Weed Shiner, Western Sand Darter, Mudpuppy, Purple Wartyback, and River Redhorse. Additional information was requested by the Department on October 10, 2019, and February 24, 2020, 2020, to make the Conservation Plan complete as prescribed by Ill. Adm. Code 1080.10. Additional information was received by the Department on December 20, 2019, and February 28, 2020. The final conservation plan was approved by the Department on May 18, 2020. 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 install a water intake in the Kankakee River, approximately 4.5 miles upstream from the dam at Wilmington. The proposed intake would be approximately 262 feet from the left

descending riverbank. The intake would connect to a water pipeline that will follow Illinois Route 113 north from the intake to Garfield Street, west along Scott Street, and finally south along Washington Street. A proposed water treatment plant will be located on a parcel of land adjacent to the Custer-Reed Elementary School at the terminus of the water pipeline to treat the raw water for human consumption. This parcel is already disturbed and maintained as mowed turf grass and does not contain any natural habitats. The intake, pump station, raw water pipe route, and treatment plant site total approximately 5 acres. The transmission pipelines and treatment plant may not be constructed during the same timeframe that the water intake is proposed for construction. Additionally, there is no indication that construction of the pipelines or treatment plant will pose risk of take to listed species; **therefore, this agreement only addresses the risk to the aquatic species during the installation and operation of the intake infrastructure in the Kankakee River.**

The infrastructure in the Kankakee River will be designed to withdraw up to 30 million gallons of water per day, subject to permit conditions in permit NE2019007 granted by the Department's Office of Water Resources on February 28, 2019. The proposed intake infrastructure includes: an underground 122-foot diameter precast concrete (PCC) wet well, 4 vertical turbine pumps installed in the wet well with surface-mounted motors, 2 underground 10-foot diameter PCC valve vaults, a retaining wall to support an access drive and maintenance loading area, underground raw water discharge pump, a high-level intake with screening system, and a low-level intake pipe with full barrel screen intakes.

This infrastructure in the Kankakee River will be constructed within a 0.264-acre coffer dammed work area. There will also be an impact to 0.05 acres of wetland on the riverbank. Most of the facilities will be constructed at or below the existing riverbed elevation. The only infrastructure that will be above the existing ground elevation will be three 42-inch diameter half-barrel screen intakes. The top of these intakes will be 27 inches above the riverbed. The intakes will be placed parallel to the channel flow, have a cross-section of 8 square feet each and up to 12 feet in length.

The detailed construction sequence and methods will be determined once the final engineering design is completed and a contractor is selected. Final engineering design plans will be provided to the Department, United States Fish and Wildlife Service (USFWS), and United States Army Corps of Engineers (USACE) when they are completed. Specific means and methods, such as equipment type, are not determined until qualified bids are received, and a contractor is selected. If shop drawings are produced by the selected contractor for this project, they will be submitted to the Department for review prior to implementation of the project.

It is the intent and design that all equipment would enter the work area from dry land on the riverbank and operate within the cofferdam once the area has been dewatered. It is anticipated that due to groundwater input, pumps may be needed to run intermittently or continuously to maintain a safe, dewatered work area. All practices will be in accordance with the latest edition of the Illinois Urban Manual. A causeway within the coffer dam is not anticipated, but if site

conditions prove otherwise, plans for any causeway placement will be submitted to the Department and be consistent with the Causeway standard in the Illinois Urban Manual.

Take of Sheepnose, Spike, Pallid Shiner, Weed Shiner, Western Sand Darter, Mudpuppy, Monkeyface, Purple Wartyback, and River Redhorse could occur as a result of temporary suspension of fine sediments, potential direct impacts from equipment during construction to any individuals missed during the relocation, desiccation of individual mussels missed during relocation, and potential downstream impacts from sedimentation/siltation. There is also potential impact to these listed mussel species from the water intakes once operational via larval or host fish entrainment and/or impingement on the intake structure. Impacts may also occur to fish, mussel, and amphibians, including eggs of fish and amphibians, that may be in/on the river bottom at the time of construction. The area of direct impact from construction has been kept to the smallest area possible to minimize this impact; however, siltation could occur up to 300 feet downstream. Once the infrastructure construction is completed and the coffer dam removed, mussels are expected to recolonize the work area from adjacent mussel populations.

Total estimated area of impact within suitable species habitat is **0.314 acres**, **0.264 acres in the Kankakee River and an additional 0.05 acres of wetland on the riverbank**. The Department concurs that the take of Sheepnose, Pallid Shiner, Weed Shiner, Western Sand Darter, Mudpuppy, Monkeyface, Purple Wartyback, River Redhorse, and Spike that could result from the proposed project is not the purpose of GPWD'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 measures were included in GPWD's conservation plan.

To meet the "maximum extent practicable" standard, additional minimization and/or mitigation measures may be required beyond those proposed by GPWD, based on the life history needs of the Sheepnose, Spike, Pallid Shiner, Weed Shiner, Western Sand Darter, Mudpuppy, Monkeyface, Purple Wartyback, and River Redhorse. **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.

GPWD serves as a hub for organizing water providers in its region, and successfully organized an informal group named the Kankakee River Valley Tri-County Water Collaborative in 2009 which gained support of the Will and Grundy County leadership, and the State of Illinois. The Kankakee River Valley Tri-County Water Collaborative gave rise to the Kankakee River Valley Water Planning Area Alliance, a collection of local units of government that have

executed an intergovernmental agreement designed to recognize, plan for, and mitigate the effects of urbanization and growth on water supplies and water demand in the Alliance's region.

This project is being funded by financial resources already in place and held by GPWD to implement the priorities of the Alliance.

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 are a part, or the habitat essential to the species' existence in Illinois:

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**Sheepnose** (*Plethobasus cyphus*) is a Federally and Illinois State-endangered mussel species.

**Habitat:** The species is known to inhabit medium to large rivers in shallow areas of moderate to swift current. It inhabits gravel or gravel mixed with sand, but has also been found in areas of mud, cobble, and boulders.

**Reproduction:** Sheepnose are short-term brooders, with reproduction occurring between May and July. Glochidia are released in conglomerates that mimic food organisms of fish, so that they are eaten and glochidia can gain access to host fish. Sauger are confirmed natural host fish for Sheepnose and have been found to be successful in laboratory studies, but there are other species that could potentially be host fish: fathead minnow, creek chub, central stoneroller, and brook stickleback.

**Population:** Sheepnose are declining due to the destruction of habitat through stream channelization, maintenance, and dam construction. Low dissolved oxygen levels and point and non-point source pollution are an ongoing threat to Sheepnose.

**Range in Illinois:** The species has been found in the Mississippi, Rock, Ohio, Wabash, Kaskaskia, and Kankakee Rivers. They have been observed in 5 of 102 Illinois counties, Massac, Pulaski, Rock Island, Shelby, and Will. There are currently 8 extant Element Occurrence Records for Sheepnose in the Illinois Natural Heritage Database.

**Incidental Take Authorizations:** The Department has nine (9) pending or issued Incidental Take Authorizations for Sheepnose. Types of projects include an oil pipeline removal, a bridge installation, installation of a high-speed railway, pipeline maintenance, and barge fleeting facilities. Four (4) of the authorizations for Sheepnose are for projects in the Kankakee River.

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**Pallid Shiner** (*Hybopsis amnis*) is an Illinois State-endangered freshwater fish species.

**Habitat:** It inhabits medium to large rivers and prefers quiet waters over sand and silt substrates, often at the downstream ends of sand and gravel bars. It appears to avoid heavily silted habitats.

**Reproduction:** Little is known about Pallid Shiner reproduction. Breeding likely occurs later in Illinois from May to September. Pallid Shiners are a short-lived minnow, rarely living longer than two years.

**Population:** Pallid Shiners are sensitive to human impacts, and its populations are thought to be declining due to increased siltation of habitat.

**Range in Illinois:** In Illinois, Pallid Shiners have been found in the Mississippi, Kankakee, and Sangamon Rivers. They have been found in 6 of 102 Illinois counties: Carroll, Grundy, Jo Daviess, Kankakee, La Salle, and Will. There are currently 13 extant Element Occurrence Records for Pallid Shiner in the Illinois Natural Heritage Database.

**Incidental Take Authorizations:** There have been five (5) previously issued or pending Incidental Take Authorizations in Illinois for Pallid Shiners. Previous projects have included pipeline maintenance, railroad bridge construction, and diffuser installation. This is the fifth authorization granted for the take of Pallid Shiner in Will County. All of the projects have taken place in the Kankakee River.

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**Weed Shiner** (*Notropis texanus*) is an Illinois State-endangered fish species.

**Habitat:** Weed Shiner is a small fish that is found in sandy runs within clear pools of creeks and small to medium rivers, as well as in sloughs and lakes. They are often found in areas with abundant aquatic vegetation, although not always, and are typically found in the lower third of the water column.

**Distribution:** Weed Shiners are found in the Central United States. Their range is the Gulf of Mexico coastal region up to the north into Minnesota, Michigan, and Wisconsin, and further north into Manitoba. The West to East distribution is narrow: from Missouri to Indiana, with some populations found in Texas to the west.

**Reproduction:** Spawning occurs from April through September. Females are believed to be able to produce multiple clutches of eggs within one breeding season. Weed Shiners have been known to live over two years, and occasionally up to four.

**Population:** Weed Shiners are sensitive to human impacts, and it is thought to be declining due to increased siltation and pollution of its habitats. It is also thought that Weed Shiners may be subject to competition with introduced Rough Shiners (*Notropis baileyi*) in some parts of its range.

**Range in Illinois:** In Illinois, Weed Shiners have been found in the Mississippi and Kankakee Rivers, as well as several other smaller creeks and tributaries. They have been found in 9 of 102 Illinois counties: Bureau, Carroll, Henry, Iroquois, Jo Daviess, Kankakee, La Salle, Whiteside, and Will. There are currently 17 extant Element Occurrence Records for Weed Shiner in the Illinois Natural Heritage Database.

**Incidental Take Authorizations:** There have been two (2) previously issued or pending Incidental Take Authorizations for Weed Shiner in Illinois. Previous projects have included bridge replacement and pipeline maintenance. This is the second authorization granted for the take of Weed Shiner in Will County.

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**Western Sand Darter** (*Ammocrypta clarum*) is an Illinois State-endangered fish species.

**Habitat:** Western Sand Darter is a small fish found in sandy areas of medium to large streams with moderate current. In the north, Western Sand Darters are often found in the mouths of tributaries to large rivers. They spend much of their time on the stream bottom buried in the sand with only their snout and eyes exposed waiting for food items to float by.

**Distribution:** Western Sand Darter populations are found mostly in the Mississippi and Ohio River Valley states. In the United States, they are found from Minnesota, Wisconsin, states bordering Lake Michigan, south to Texas and Mississippi, east to Tennessee and Virginia.

**Reproduction:** Western Sand Darter spawn typically takes place from May to late August. Little is known about spawning, but it is thought that they move into areas of shallow riffles.

**Population:** Western Sand Darter populations have declined due to habitat loss, increased siltation of sandy habitats, declining water quality, and habitat alteration due to the installation of dams and other manmade structures.

**Range in Illinois:** In Illinois, Western Sand Darters have been found in the Kankakee, Kaskaskia, Mississippi, and Sugar Rivers. There are currently 8 extant Element Occurrence Records for Western Sand Darter in the Illinois Natural Heritage Database in 8 of 102 Illinois counties: Calhoun, Carroll, Fayette, Henderson, Jo Daviess, Mercer, Rock Island, and Will.

**Incidental Take Authorizations:** There have been three (3) previously issued or pending incidental take authorizations for the Western Sand Darter in the State of Illinois. Previous projects included the installation of a multiport diffuser, the construction of an electrical transmission line, and pipeline maintenance. This is the third authorization for Western Sand Darter to be issued in Will County.

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**Mudpuppy** (*Necturus maculosus*) is an Illinois State-threatened freshwater amphibian species.

**Habitat:** Mudpuppies are aquatic salamanders that can be found in lakes, rivers, and ponds.

**Reproduction:** Mudpuppy mating typically takes place in Autumn. Males deposit spermatophores in the substrate of the waterbody. Females then pick them up and store them in their spermatheca until fertilization. In the Spring, females deposit 20-200 fertilized eggs under rocks or logs in the water. The eggs hatch in about 60 days. Offspring go through partial metamorphosis and retain gills as adults.

**Distribution:** Mudpuppies can be found Eastern North America, in the Atlantic and Gulf of Mexico drainages. The Southern limit of their range is Mississippi, Alabama, and Georgia. Their range extends north into Canadian provinces of Manitoba, Ontario, and Quebec.

**Population:** Mudpuppy populations have declined due to industrial, chemical contamination and sedimentation of waterways.

**Range in Illinois:** In Illinois, Mudpuppies have been found in the Mississippi and Kankakee Rivers, Lake Michigan, as well as several other smaller creeks and tributaries. They have been found in 16 of 102 Illinois counties, and there are currently 20 extant Element Occurrence Records for Mudpuppies in the Illinois Natural Heritage Database.

**Incidental Take Authorizations:** There have been two (2) previously issued or pending Incidental Take Authorizations for Mudpuppy in Illinois. Previous projects have included lake management activities and a bridge replacement project. This is the first authorization granted for the take of Mudpuppy in Will County.

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**Monkeyface (*Quadrula metanerva*)** is an Illinois state-threatened mussel species.

**Habitat:** Monkeyface are predominately found in medium to large rivers that have gravel or mixed sand and gravel substrates.

**Distribution:** This species is widespread in the United States. Populations can be found from Kansas, Nebraska, and Oklahoma east to West Virginia and Georgia, and range from Minnesota south to the Gulf of Mexico in Louisiana, Mississippi, and Alabama.

**Reproduction:** Monkeyface is a short-term brooder, with females retaining glochidia in their gills from late March to July. Glochidia host fish include Spotfin Shiner, Bluntnose Minnow, Eastern Blacknose Dace, and Creek Chub.

**Population:** Monkeyface populations are on the decline due to siltation, habitat loss, desiccation during droughts, pollution, impoundment and channelization, species introductions including Zebra Mussels, and increased water temperatures.

**Range in Illinois:** Monkeyface mussels are found in 10 drainages, but healthy populations are only found in the Mississippi River and Kankakee River. Monkeyface have been reported in 15 of 102 Illinois counties. There are currently 30 extant Element Occurrence Records for Monkeyface mussel.

**Incidental Take Authorizations:** This is the sixth Incidental Take Authorization issued or pending for Monkeyface following its addition to the Illinois Threatened and Endangered Species List in May 2020. The other projects included adding riprap under a bridge around the piers, construct a barge mooring facility, and pipeline maintenance.

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**Purple Wartyback (*Cyclonaias tuberculata*)** is an Illinois State-threatened mussel species.

**Habitat:** The species is predominantly found in small to medium-sized streams and the main headwaters of large rivers. The species prefers gravel or mud substrates.

**Reproduction:** Purple Wartyback is a short-term brooder, with females retaining glochidia in their gills from May to late August. Glochidia are released and temporarily parasitize a host fish. Purple Wartyback glochidial host fish include black bullhead, yellow bullhead, channel catfish, and flathead catfish.

**Population:** Purple Wartyback populations are jeopardized by habitat degradation and pollution. They are also being impacted by infestations of the non-native zebra mussel.

**Range in Illinois:** In Illinois, Purple Wartyback are found in the Kankakee, Vermillion, Ohio, Fox, and Rock River basins. They have been found in 9 of 102 Illinois counties, including Champaign, Grundy, Iroquois, Kankakee, Massac, Pulaski, Rock Island, Vermilion, and Will. There are currently 35 extant Element Occurrence Records for Purple Wartyback mussels in the Illinois Natural Heritage Database.

**Incidental Take Authorizations:** The Department has 17 previously issued or pending Incidental Take Authorizations for Purple Wartyback. Types of projects included bridge repair or installation, pipeline maintenance, high-speed railway construction, and dredging. Four of the previous projects have taken place in Will County in the Kankakee River.

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**River Redhorse** (*Moxostoma carinatum*) is an Illinois State-threatened fish species.

**Habitat:** River Redhorse is a large, bottom-feeding fish found in large clear creeks, rivers, and occasionally lakes. They prefer deep pools with moderate current over bedrock or gravel substrates and are intolerant of high turbidity (murky water), siltation, and pollution.

**Reproduction:** Spawning occurs between June and August. During this time, adult River Redhorses migrate to shallow riffles to spawn at night. Mating takes place when two males press a single female between them, and eggs and sperm are released from the three fish. River Redhorse bury their eggs in fine gravel with their tails, and no further parental care is given.

**Population:** River Redhorse population decline has occurred because of poor water quality and habitat fragmentation. The presence of river redhorse in an aquatic system is considered an indicator of good water quality.

**Range in Illinois:** In Illinois, River Redhorses are found in the Vermillion, Kankakee, Illinois, Des Plaines, Wabash, Fox, and Mississippi Rivers, including several smaller creeks and tributaries. River Redhorses are found in eighteen (18) of 102 Illinois counties. There are currently thirty-six (36) extant Element Occurrence Records of River Redhorse in the Illinois Natural Heritage Database.

**Incidental Take Authorizations:** The Department has fifteen (15) previously issued or pending Incidental Take Authorizations for River Redhorse. Previous projects included bridge replacements, a diffuser installation, hydroelectric dam construction, dam removal, railroad construction, and oil pipeline installation. This is the fifth authorization for the taking of River Redhorse in Will County.

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**Spike** (*Elliptio dilatata*) is an Illinois State-threatened mussel species.

**Habitat:** The species is found in small to large rivers with sand and gravel substrates. They are occasionally found in reservoirs and lakes, usually associated with outlet habitats dominated by swift currents.



**Reproduction:** Spike are short-term brooders. Females brood their young in their gills from May through August before releasing glochidia. Glochidia are released and temporarily parasitize a host fish. Spike glochidial host fish include gizzard shad, flathead catfish, white crappie, black crappie, and yellow perch.

**Population:** Spike populations are declining due to widespread degradation of habitat throughout its range. Dams, channelization and dredging can also impact glochidial host fish. They are also prone to impacts caused by the invasive zebra mussel.

**Range in Illinois:** In Illinois, Spike have been found in the Mississippi, Illinois, Kaskaskia, Kankakee, Fox, Sangamon, Wabash, and Little Wabash River basins in 17 of 102 counties. There are currently 33 extant Element Occurrence Records for Spike in the Illinois Natural Heritage Database.

**Incidental Take Authorizations:** There have been seventeen (17) previously issued or currently pending Incidental Take Authorizations for Spike in Illinois. Previous projects include bridge replacements, pipeline installation, water treatment outfall, and diffuser installation. Four of the previous Authorizations have been in Will County.

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Based on the amount of habitat impacted by this project, the number of known occurrences of Sheepsnose, Spike, Pallid Shiner, Weed Shiner, Western Sand Darter, Mudpuppy, Monkeyface, Purple Wartyback, and River Redhorse 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.

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 GPWD 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 GPWD's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on October 6, 2020. The notice was also published in *The Braidwood Journal* on October 7, October 14, and October 21, 2020. A notice of the location where the hard copy of the Conservation Plan could be reviewed was posted at the Fossil Ridge Public Library. The deadline for public comment was November 20, 2020. No comments

were received from the public. It was found that those dates did not meet the requirements of the Act; therefore, a second public notice is described below.

Public notice of GPWD's request for authorization of incidental take was published in the *Breeze Courier* on January 27, 2021. The notice was also published in *The Braidwood Journal* on January 27, February 3, February 10, and February 17, 2021. A notice of the location where the hard copy of the Conservation Plan could be reviewed was posted at the Fossil Ridge Public Library. The deadline for public comment was March 17, 2021.

### Authorization

It is the determination of the Department that the measures that will be implemented by GPWD will adequately minimize and mitigate the anticipated taking of Sheepnose, Spike, Pallid Shiner, Weed Shiner, Western Sand Darter, Mudpuppy, Monkeyface, Purple Wartyback, and River Redhorse associated with the construction of water intake infrastructure in Will County, Illinois. 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 GPWD 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 GPWD in the conservation plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **eleven (11) 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 GPWD has failed to comply with any of these terms and conditions or has been responsible for the taking of the Sheepnose, Spike, Pallid Shiner, Weed Shiner, Western Sand Darter, Mudpuppy, Monkeyface, Purple Wartyback, and River Redhorse, beyond that which is incidental to activities associated with the installation of a water intake structure in the Kankakee River in Will County, Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between GPWD 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. Notification to all on-site personnel shall be provided on the sensitive biological resources in the area; the identification of Sheepnose, Spike, Pallid Shiner, Weed Shiner, Western Sand Darter, Mudpuppy, Monkeyface, Purple Wartyback, and River Redhorse; 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; the importance of avoiding take of the species; and response protocol if individuals are found, including the chain of response personnel. **GPWD 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.
6. Biological consultants employed by GPWD 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, Herptile Scientific Permit as authorized under 17 Illinois Administrative Code 885, and an IDNR Endangered Species Permit as authorized under 17 Illinois Administrative Code 1070. Gloves shall always be worn when handling any herptile species and properly disinfected or discarded between individuals.
7. The relocation 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. GPWD shall notify the Department's Endangered Species Program by email correspondence of construction commencement and completion of water intake in the Kankakee River and pipelines to convey water to a treatment station in Will County. A **project status report** shall be submitted to the Department **within 90 days following 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.
9. 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).
10. GPWD shall conduct, or cause to be conducted, the following pre-construction, construction, or post-construction efforts:
  - a. The area of disturbance shall be minimized to the smallest area needed for construction purposes.
  - b. Prior to construction or any in-stream work, a mussel relocation plan (as detailed in #10) will be implemented to relocate all mussels from within the defined 0.264-

- acre work area and a 5m buffer to a suitable habitat location upstream of the work area.
- c. Erosion and sediment control measures shall be implemented. This shall include silt curtains around the work areas within the river channel during all construction activities. These measures will be in place before the coffer dams are installed and will be removed after cofferdam removal.
  - d. Instream construction activity will occur during low flow conditions as much as practicable to minimize impacts from dewatering operations by reducing the time needed to complete the dewatering of the work area.
  - e. A coffer dam shall be used of a non-erodible material or structures such as sheet pile, A-frame structure dam, etc.
  - f. Cofferdams and dewatering will be used as depicted on the plans in accordance with the Illinois Urban Manual and any USACE permits for the project. No bypass or pump is anticipated but may be used if deemed as necessary.
  - g. Once the work area for the intake construction is surrounded by a coffer dam, a fish and amphibian relocation operation will be implemented as outlined in #11.
  - h. Once the coffer dammed area is dewatered and the aquatic biota are relocated, work will occur in the dry within the coffer dam-protected work area. It will not be possible to avoid the breeding seasons for all species considered under this ITA, but the cofferdam will prevent impacts to biota in the river outside of the dewatered area.
  - i. Turbidity monitoring will be used to demonstrate that the cofferdam and silt curtains are functioning as intended to contain re-suspended sediment and minimize downstream transport of sediment. This will entail visual observations and in-situ turbidity measurements to demonstrate that the controls are functioning as intended. The water pumped from within the cofferdams may be filtered or re-suspended sediment allowed to settle out of the water column prior to discharge to the river to prevent turbidity impacts to fishes and other aquatic life in the vicinity of the construction site.
    - i. If fine sediment is encountered as expected, then turbidity monitoring would be likely sufficient.
    - ii. If Secchi disk readings are less than 6 inches within 10 feet below the discharge, then additional filtration such as a frac tank will be implemented.
  - j. To avoid entrainment and impingement of aquatic organisms on the intake structure, intake velocities will not exceed 1.5 feet per second and screen openings will not exceed 0.5 inches.
  - k. Per Department permit, water withdrawal shall occur only when the flow in the Kankakee River is above 600 cubic feet per second (CFS) as determined by the U. S. Geologic Survey (USGS) stream gage station at Wilmington, Illinois to minimize impacts on the aquatic biota of the river.
  - l. Construction of the infrastructure shall be restricted to the south riverbank; all work shall be done from the landward side of this site and not from the river to construct the land-based infrastructure and follow the standards of the Illinois Urban Manual.
  - m. All appropriate soil erosion and sediment control measures shall be followed and maintained while installing the proposed water transmission pipes and water treatment plant.

11. GPWD shall conduct, or cause to be conducted, a mussel relocation effort.
- a. All mussels shall be relocated 3000 to 6000 feet upstream from the area of direct impact, to a location adjacent to the Forest Preserve of District of Will County's Evans-Judge Preserve, which was approved by the USFWS and Department.
  - b. Relocation efforts shall use a combination of wading, snorkeling, and/or scuba diving to systematically hand collect mussels from 5 m<sup>2</sup> grids. Multiple passes shall be conducted in each grid until a pass yields, <10% of the total grid abundance.
  - c. All collection and relocation of mussels shall occur during normal or low flow conditions, and when the water temperature exceeds 59 degrees Fahrenheit.
  - d. Live mussels shall be held in submerged mesh bags or containers filled with clean river water. A portable aerator shall be used if oxygen levels are insufficient.
  - e. Listed mussel species shall not be held out of the water more than 5 minutes and kept in the shade at all times.
  - f. Federally- and State-listed species will have Passive Integrated Transponders tag (PIT tags) attached to allow for future monitoring efforts.
  - g. Listed mussels shall be hand-placed securely in the substrate at the relocation site such that their siphons are exposed above the substrate. Whereas, non-listed mussels may be "broadcast" over areas with suitable substrate. However, they must be re-checked within 24 hours to ensure they have buried themselves.
  - h. If an individual of the listed species is accidentally killed, or found moribund or fresh dead with soft tissues, it will be preserved according to standard museum practices, properly identified, indexed (date of collection, complete scientific and common name, latitude and longitude of collection site, and description of collection site) for submission to the Illinois Natural History Survey or the Field Museum. Additionally, the Department and USFWS must be notified within 24 hours of this take.
  - i. Dewatered soils shall be temporarily stockpiled onsite, and if buried mussels are discovered during the excavation, they shall be relocated as described above.

**Five (5) working days after the relocation effort, a draft summary shall be transmitted via email to the Department with the number of listed species encountered.**

**A full report shall be submitted to the Department (and USFWS) within 45 days of the relocation effort including an introduction, GIS mapping, methods section, results section, conclusion and/or summary, and any relevant supplementary information (e.g., names and qualifications of surveyors). The methods section shall detail the protocols used for surveying, holding, handling, and translocating mussels, and establishment and location of the relocation site. The results section shall include the total number of individuals of each listed species collected, condition, size, and approximate age of live individuals; the number of individuals of each non-listed species collected, condition; grid and pass of origin for each collected individual; and GIS maps or figures showing projects features and action area, and the relocation site(s). In addition to maps, the GIS data (shapefiles and/or database with XY coordinates) of species' locations shall be provided to the Department (and USFWS).**

12. GPWD shall conduct, or cause to be conducted a pre-construction fish and mudpuppy relocation effort.
- a. Using electroshocking, dip-netting, and seining to recover fish and amphibians trapped within the work area and relocate them to suitable habitat downstream of the intake location. This shall be coordinated with Department Fisheries staff.
  - b. All fish and amphibians shall be identified to species and numbers estimated before relocation.
  - c. All organisms shall be held in aerated tanks filled with water from the site for the minimum amount of time possible.

**A report including, but not limited to, relocation methodology, a description and map of the area and where individuals were relocated, abundance of each species, and length of each listed species shall be provided to the Department within 90 days of relocation effort completion.**

13. GPWD shall conduct, or cause to be conducted, post-construction surveys for Sheepnose, Purple Wartyback, Monkeyface, and Spike during the species' active period and in the vicinity of the water intake facility and relocation area in **Years 2, 4, 6, 8, and 10** following construction completion.
- a. The search area in the vicinity of the water intake facility shall include a buffer around the area of direct impact, plus 5m upstream, downstream, and lateral buffer.
  - b. A combination of semi-quantitative and qualitative search methods shall be used. A minimum of 260 meters of 1-meter wide transects, oriented perpendicular to stream flow, shall be searched in both the project and relocation areas (with buffers). Transects shall be resampled (i.e. multi-pass) until subsequent passes no longer yield  $\geq 10\%$  of the total individuals collected from a transect.
  - c. Transect searches shall be followed by 2 person-hour qualitative surveys which cease when no new species are detected.
  - d. All individuals of listed species and the first 100 individuals of each non-listed species shall have their length and growth ring count recorded.
  - e. A search effort for PIT tagged individuals of the listed species within the relocation area. No less than 50% of those found shall be excavated, checked for mortality, measured, and replaced within the substrate.

**A report including, but not limited to, survey methodology, a description and map of each area surveyed including transects and qualitative search areas and summary of habitat characteristics (e.g., substrate, depth), abundance of each species, length and growth ring count of each individual, transect and pass or search hour of origin for each individual, and a map of the listed species locations shall be provided to the Department within 90 days of survey completion. Within 45 days of monitoring events in the relocation area, a report shall be submitted that includes the percentage of individuals that were found from all those relocate, and notes about any known mortality.**

14. GPWD shall conduct, or cause to be conducted, post-construction surveys for Pallid Shiner, Weed Shiner, Western Sand Darter, and River Redhorse during the species' active period and in the vicinity of the water intake facility in **Years 2 and 5** following construction completion.

- a. Monitoring shall be centered near the area of direct impact and consist of barge or boat electrofishing (consultant will select methods at the time of survey depending upon river conditions).
- b. Community-based sampling shall consist of two 30-minute electrofishing runs.
- c. Additional sampling using no less than ten (10) seine pulls for Weed Shiner and Western Sand Darter (separately) in species-appropriate habitat shall supplement electrofishing.
- d. Surveys shall occur during base flow conditions between August and October.

**A report including, but not limited to, survey methodology, a description and map of each area surveyed, abundance of each species, and length of each listed species shall be provided to the Department within 90 days of survey completion.**

15. GPWD shall conduct, or cause to be conducted, post-construction surveys for Mudpuppy during the species' active period and in the vicinity of the water intake facility and a buffer of 10 m in all directions in **Years 2 and 5** following construction completion.
  - a. Mudpuppy shall be collected using modified minnow or panfish traps and shall occur when water temperatures are less than 10° Celsius (50° Fahrenheit). Baited traps shall be placed in habitat suitable for Mudpuppy (e.g., boulders, logs, cut banks) at a density of approximately 1 trap per 100 square meters (i.e., 11 traps) and deployed for a minimum of 2 nights per trap (i.e., 22 trap-nights).
  - b. Traps shall be checked daily, and length of all captured Mudpuppy shall be measured. Captured Mudpuppy shall be individually marked using Passive Integrated Transponders (PIT tags) or Visible Implant Elastomer (VIE tags).

**A report including, but not limited to survey methodology, map with trap locations, a summary of habitat characteristics in each 100 square meter trap area, the number of individuals located, length, trap and date of capture, and tag ID of each Mudpuppy captured shall be provided to the Department within 90 days of survey completion.**

16. Mitigation to the maximum extent practicable is required by the Act. GPWD shall submit mitigation to the Ohio State University in the amount of \$30,000. The mitigation will be earmarked to bring conservation benefit to the Purple Wartyback, Black Sandshell, Spike, and Sheepsnose mussels. GPWD specifically desires that this work should specifically address impacts from water withdrawals to listed species such as the Sheepsnose.

Additionally, GPWD shall submit mitigation to the Illinois Wildlife Preservation Fund in the amount of \$33,000. This mitigation shall be earmarked to benefit Mudpuppy, Pallid Shiner, River Redhorse, Weed Shiner, and Western Sand Darter. Final, full mitigation payment is expected within 1 year of the execution of this agreement.

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.

17. 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.

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

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

May 18, 2021  
Date

*For Godley Public Water District:*

For GPWD / Joe Cosgrove, MANAGER  
Mr. Joe Cosgrove  
General Manager

5/17/2021  
Date