

**Illinois Department of Natural Resources
CONSERVATION PLAN**

(Application for an Incidental Take Authorization)
Per 520 ILCS 10/5.5 and 17 Ill. Adm. Code 1080

150-day minimum required for public review, biological and legal analysis, and permitting

SUBMITTED TO: Ms. Jenny Skufca
Incidental Take Authorization Coordinator
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702
DNR.ITAcordinator@illinois.gov

PROJECT APPLICANT: Mason County Highway Department
Attn: Michael R. Pedigo, County Engineer
1164 E. Laurel Ave.
Havana, IL 62644

PROJECT NAME: TR 234 (3300E) over Main Ditch Bridge Replacement

COUNTY: Mason

AREA OF IMPACT: 3,500 S.F. (0.08 Acres)

The incidental taking of endangered and threatened species shall be authorized by the Illinois Department of Natural Resources (IDNR) only if an applicant submits a conservation plan to the IDNR Incidental Take Coordinator that meets the following criteria:

1. A description of the impact likely to result from the proposed taking of the species that would be covered by the authorization, including but not limited to -

A) Identification of the **area to be affected** by the proposed action, include a legal description and a detailed description including street address, map(s), and GIS shapefile. Include an indication of ownership or control of affected property. Attach photos of the project area.

The area to be affected is TR 234 (commonly known as CR 3300E) over the Main Ditch in unincorporated Manito Township. The site is more specifically located 5 miles southeast of Manito, Illinois (T22N, R6W 3rd PM, Sections 23 and 24). See attached location map, aerial photo, project site photographs, and preliminary plan sheet for additional information. The existing bridge and roadway are under jurisdiction of Manito Township.

The Main Ditch consists of a sandy stream with a dredged channel in a primarily agricultural rural area.

The construction activities for the bridge replacement will take place within the existing Manito Township right-of-way only. No temporary construction easements from adjacent landowners will be taken for this proposed improvement.

B) **Biological data** on the affected species including life history needs and habitat characteristics. Attach all pre-construction biological survey reports.

The Environmental Survey Request (ESR) process for the proposed bridge replacement involved coordination with IDNR for the presence of threatened and endangered species. As a result, the attached IDNR consultation letter dated June 29, 2017 identified the presence of the following protected resource occurring in the vicinity of the project area and proposed action:

State-threatened Ironcolor Shiner (*Notropis chalybaeus*)

The most recent biological survey was performed on September 28, 2012. A total of 25 individual Ironcolor Shiner were collected during this survey. A table of Ironcolor Shiner data at the site is shown in the attached Biological Survey Data Table.

The Ironcolor Shiner is a small fish (2.5 inches in length), with yellowish iron colored back and a well-defined black lateral stripe from the tail to snout. Their usual habitat consists of deep pool areas of creeks and small rivers with submerged aquatic vegetation and a sandy bottom. The sandy bottom is important for spawning, which occurs from mid-April through July in their northern range. Food source is primarily small aquatic insects.

C) **Description of project activities** that will result in taking of an endangered or threatened species, including practices and equipment to be used, a timeline of proposed activities, and any permitting reviews, such as a USFWS biological opinion or USACE wetland review. Please consider all potential impacts such as noise, vibration, light, predator/prey alterations, habitat alterations, increased traffic, etc.

The existing bridge will be completely removed and replaced with a new single span bridge on pile bent integral abutments supporting steel wide-flange beams and a reinforced concrete deck. The new structure will span across the stream from top of bank to top of bank.

To remove the existing structure, the contractor would normally allow portions of the structure to fall into the stream, where they can be retrieved in sections. The existing structure is a three span bridge with a superstructure consisting of steel I-beams and a reinforced concrete deck. The substructure consists of two concrete pile bent abutments and two concrete pile bent piers. There are five (5) existing concrete piles driven into the streambed at each pier. The contractor will take measures to complete the removal with minimal damage or debris entering the stream.

No equipment will be placed in the stream, and no dams or temporary crossings will be allowed to impede the natural flow at any time during construction.

Stone riprap will be placed on the abutment slopes to protect the proposed integral abutments from scour. Stone riprap (RR4, 9" median size) will be placed in front of the bridge abutments down to the streambed at the channel (Elevation ± 490.0). The bed material for the placement area will be graded so that the finished surface of the riprap will conform to the existing channel slopes and transition to match the existing channel at the right-of-way line. A small amount of channel excavation will be necessary and shall be removed from the site and disposed of in an upland location away from the

stream. The stone riprap will be placed by mechanical means to its full course thickness in one operation. Temporary stockpiling of riprap or excavated material in the channel will not be allowed.

D) Explanation of the anticipated **adverse effects on listed species**;

- How will the proposed actions impact each of the species' life cycle stages?

In a letter dated June 29, 2017, IDNR made a determination that the removal of the existing piers and the placement of riprap in the drainage ditch is likely to have an adverse impact on the state listed threatened Ironcolor Shiner (*Notropis chalybaeus*).

- Describe potential impacts to individuals and the population. Include information on the species life history strategy (life span, age at first reproduction, fecundity, recruitment, survival) to indicate the most sensitive life history stages.

Any established individuals that remain in the project limits will be subject to disturbance of the water due to the removal of the existing structure and the grading and placement of riprap at or below the waterline.

In-stream work can potentially impact the Ironcolor Shiner during their reproductive cycle. Spawning season typically occurs from mid-April through early July, with the eggs left unprotected along the sandy streambed. Sedimentation may occur within the normally clear flowing water in the stream from erosion or construction activities. This suspended sediment may cause stress to the species and inhibit their reproductive cycle.

Already established individuals, juveniles, or eggs may be crushed or smothered by construction activities.

- Identify where there is uncertainty, place reasonable bounds around the uncertainty, and describe how the bounds were determined. For example, indicate if it is uncertain how many individuals will be taken, make a reasonable estimate with high and low bounds, and describe how those estimates were made.

The number of individual Ironcolor Shiner fish to be taken is uncertain. A high estimated take would be an entire colony of fish, since they are a schooling fish and would tend to congregate in a localized area. The take may be as high as 25 individuals found during a fish survey at the site, or as low as 0 individuals if the fish move out of the site prior to the commencement of construction. Since the proposed structure work will avoid cofferdams, tremie concrete, structure excavation, and channel relocation, the total number of takes should be minimal and concentrated in a small area. Construction activities below the water surface will be for a relatively short duration of the entire project timeline.

2) Measures the applicant will take to minimize and mitigate that impact and the funding that will be available to undertake those measures, including, but not limited to -

A) Plans to **minimize the area affected** by the proposed action, the estimated **number of individuals** of each endangered or threatened species that will be taken, and the **amount of habitat** affected (please provide an estimate of area by habitat type for each species).

According to the Illinois Endangered Species Act (520 ILCS 10/2), the term “take” means, in reference to animals, to harm, hunt, shoot, pursue, lure, wound, kill, destroy, harass, gig, spear, ensnare, trap, capture, collect, or to attempt to engage in such conduct.

The work area has been minimized to reduce impact to the streambed and water quality as much as practical. The amount of habitat impacted is equal to the area required to remove piers and grade the bed for the stone riprap installation. The total area of habitat impacted will be approximately 3,500 square feet (approximately 0.08 acres). The length of stream channel impact within the work area is 50 linear feet.

Compensatory mitigation was chosen by the local public agency as mitigation in-lieu of on-site habitat restoration, acquisition, or protection. A donation to the Illinois Wildlife Preservation Fund is proposed in-lieu of on-site mitigation. The IDNR has determined a compensatory mitigation of \$5,200 for potential taking of Ironcolor Shiner during this project. This value was determined by IDNR based on the species status, species population trend, project footprint size, and degree of impact proposed. The compensatory mitigation was scaled to roughly 20% of a fish propagation project value.

B) **Plans for management of the area** affected by the proposed action that will enable continued use of the area by endangered or threatened species by maintaining/re-establishing suitable habitat (for example, native species planting, invasive species control, use of other best management practices, restored hydrology, etc.).

The Resident Engineer (RE), acting as the county’s representative, will be responsible for the management of the project, including the measures outlined in this conservation plan and in the construction plans and documents.

Similar habitat of equal quality exists both upstream and downstream of the impacted project area. During construction, the Ironcolor Shiner shall be allowed to move upstream and downstream of the site. Noise generated by construction activities should drive the fish to seek calmer waters both upstream and downstream during the project timeline. Additional tributaries in the area contain habitat for Ironcolor Shiner.

After work is completed near the bridge, the streambed and habitats will no longer be affected by the construction work. The habitat will return to being controlled naturally, namely by flooding. If the stream disturbance in the area is minimized, the Ironcolor Shiner are expected to move back into the area over time.

C) Description of **all measures to be implemented to avoid, minimize, and mitigate** the effects of the proposed action on endangered or threatened species.

- Avoidance measures include working outside the species' habitat.
- Minimization measures include timing work when species is less sensitive, reducing the project footprint, or relocating species out of the impact area.
- Mitigation is additional beneficial actions that will be taken for the species such as needed research, conservation easements, propagation, habitat work, or recovery planning.
- It is the applicant's responsibility to propose mitigation measures. IDNR expects applicants to provide species conservation benefits 5.5 times larger than their adverse impact.

Soil conservation measures will be implemented during construction. Practices will include perimeter erosion barrier, ditch checks, erosion control seeding, and erosion control blankets used to minimize the amount of eroded soil entering the channel.

The road will be closed and traffic diverted to other nearby roads during construction. Construction activity shall be accomplished from each bank during construction. A temporary dam or causeway will not be allowed for the project.

D) Plans for **monitoring** the effects of the proposed actions on endangered or threatened species, such as monitoring the species' survival rates, reproductive rates, and habitat before and after construction, include a plan for follow-up **reporting to IDNR**. Monitoring surveys should be targeted at reducing the uncertainty identified in Section 1.d.

The Resident Engineer (RE), acting as the county's representative, will be responsible for the installation of all erosion control measures to ensure that they are constructed and installed in accordance with the plans. The RE will ensure proper maintenance of these installations, with inspections regularly, particularly after periods of heavy rainfall.

A fish survey will be conducted at the project site two (2) years following completion of the proposed project (completion shall be defined as: the first day the new bridge is open for use by the general public). The Illinois Natural History Survey will complete the surveys on behalf of the county. All fish shall be identified to species and enumerated and the length of each fish shall be measured to the nearest millimeter. A report on the species, numbers, and sizes of fish found shall be provided to the Illinois Department of Transportation and the Illinois Department of Natural Resources within 90 days of the completion of each survey. This report shall also include a qualitative evaluation of the habitat and the manner, if any, in which the habitat has changed since the previous survey.

E) **Adaptive management practices** that will be used to deal with changed or unforeseen circumstances that may affect the endangered or threatened species.

- Adaptive management is a way to make decisions in the face of uncertainty by monitoring the uncertain element over time and adjusting to the new information. Adaptive management requires identifying objectives and uncertainties, thinking through a range of potential

outcomes, developing triggers that will lead to different actions being taken, and monitoring to detect those triggers.

- Consider environmental variables such as flooding, drought, and species dynamics as well as other catastrophes. Management practices should include contingencies and specific triggers. Note: Not foreseeing any changes does not qualify as an adaptive management plan.

During the construction activities that were described previously in the streambed impact area, the installation and effectiveness of soil conservation practices will be implemented and monitored daily by the RE. If through daily monitoring of the site, eroded soil is observed leaving the jobsite or limits of construction, additional soil conservation measures shall be taken to reduce soil erosion.

F) **Verification that adequate funding exists** to support and implement all minimization and mitigation activities described in the conservation plan. This may be in the form of bonds, certificates of insurance, escrow accounts, or other financial instruments adequate to carry out all aspects of the conservation plan.

The project is funded through the Township Bridge Program allotment of state funding, with a combination of 80% state funding and 20% local funding. The project construction, including the implementation of all measures of the Conservation Plan, will be funded for this improvement out of the County's allotment.

3) A description of alternative actions the applicant considered that would reduce take, and the reasons that each of those alternatives was not selected. A **"no-action" alternative** shall be included in this description of alternatives. Please describe the economic, social, and ecological tradeoffs of each action.

- Consideration of **alternative actions** is an important tool in conservation planning as it allows for thinking of other options and evaluating the potential outcomes in terms of all relevant objectives. However, to be useful it requires creativity in developing alternatives and systematic analysis in evaluating the alternatives.
- In evaluating alternatives, describe the economic, social, and ecological tradeoffs of each.

Alternative A – "No-Action":

The only alternative which does not result in the taking of the state listed species is to leave the existing bridge in place, or the "no-action" alternative. The bridge would continue to deteriorate, requiring the local agency to spend funds to maintain the deficient structure. Further deterioration could potentially lead to debris falling into the stream, which could also impact the species. The no-action alternative is not considered feasible for this project.

Alternative B – "Rehabilitation":

One alternative would be rehabilitation of the existing structure. A rehabilitation alternative will not address the narrow bridge width and hydraulic requirements, which requires widening or reconstruction of the substructures, including construction work on or in the streambed. This alternative is not considered feasible for this project.

Alternative C – “New Alignment”:

Another alternative would be to leave the existing bridge in place, and to construct a new bridge on a new nearby alignment. Placement of stone riprap in the stream nearby will have the same adverse impact to the stream as leaving in the current location on existing alignment. There will still be potential to harm the species. At this location, the “new alignment” alternative is not practical or economical, and has the same negative impact to the stream.

Alternative D – “Total Replacement”:

The final option would be the total replacement option. This option is the most economical alternative and will provide a minimal impact to property and the state listed species. A new structure will have lower future maintenance costs. The new structure eliminates the need for bridge piers in the channel, thus minimizing harm to the species. Once the new structure is constructed and the stream returns to normal flow conditions, the Ironcolor Shiner will return.

4) Data and information to indicate that the proposed taking will not reduce the likelihood of the survival of the endangered 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 Ironcolor Shiner is fairly common in Mason County tributaries to the Illinois River. The species is listed as “state threatened”. It occurs in a select set of streams and tributaries, not broadly found in the entire state. The project location is not known to be associated with any essential habitat for the Ironcolor Shiner in Illinois.

The permanent loss of habitat for this project is estimated to be the impacted stream riprap limits of 3,500 S.F. (0.08 Acres).

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5) An implementing agreement, which shall include, but not be limited to (on a separate piece of paper containing signatures):

A) Names and signatures of all participants in the execution of the conservation plan;

Michael R. Pedigo, County Engineer
Mason County Highway Department

B) The obligations and responsibilities of each of the identified participants with schedules and deadlines for completion of activities included in the conservation plan and a schedule for preparation of progress reports to be provided to the IDNR;

The Mason County Highway Department is responsible for securing authorization for incidental take of state-listed species, obtaining and securing all necessary state and local permits, and inspection of the work and contractor's compliance with the design contract documents. A progress report will be submitted to the IDNR within 90 days of completion of the project (completion shall be defined as: the first day the new bridge is open for use by the general public).

Project construction is anticipated to begin in the late spring or early summer of 2018, with a completion by the end of calendar year 2018.

C) Certification that each participant in the execution of the conservation plan has the legal authority to carry out their respective obligations and responsibilities under the conservation plan;

The Illinois Department of Natural Resources shall be responsible for the review of this Conservation Plan and for subsequent issuance of the Incidental Take Authorization.

This project is authorized by the Illinois Department of Transportation, who oversees the use of state-distributed funding among local agencies.

D) Assurance of compliance with all other federal, State and local regulations pertinent to the proposed action and to execution of the conservation plan;

The Mason County Highway Department, as directed by the Illinois Department of Transportation, exclusively abides by the National Environmental Policy Act and all associated state environmental laws in carrying out its mission of performing the most environmentally sensitive methods of transportation planning and engineering.

E) **Copies of any final federal authorizations for a taking already issued to the applicant, if any.**

Not applicable. The Ironcolor Shiner is not federally threatened or endangered.

Enclosures:

Location Map
Location Map - Aerial Photo
Site Photographs
Preliminary Plan Sheet
Species Fact Sheet
Biological Survey Data – Summary Table
Biological Survey Data – Locations
IDNR Consultation Letter
US Army Corps of Engineers Letter

PLEASE SUBMIT TO:

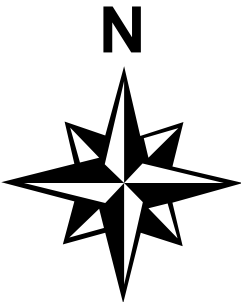
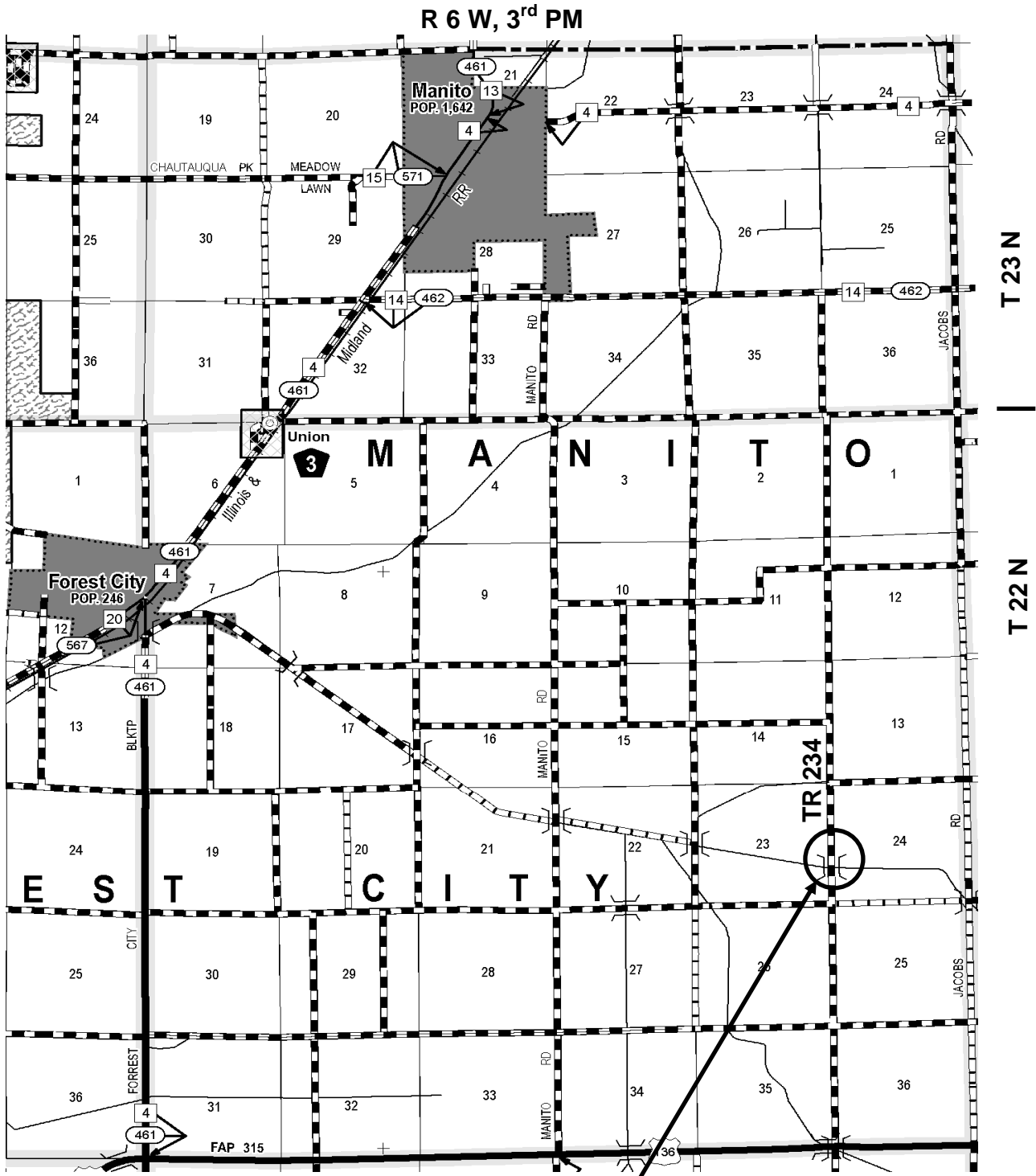
Incidental Take Authorization Coordinator, Illinois Department of Natural Resources, Division of
Natural Heritage, One Natural Resources Way, Springfield, IL, 62702

OR

DNR.ITAcordinator@illinois.gov

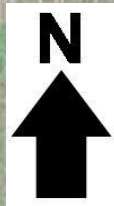
July 2016

Location Map



Proposed Structure
SEC 23 & 24, T 22 N, R 6 W, 3rd P.M.
Mason County
Manito Township
TR 234 (3300E) over Main Ditch
Section 17-08111-00-BR
Existing SN 063-3404
Proposed SN 063-3405

Location Map - Aerial Photo



Site Photographs

Section 17-08111-00-BR
TR 234 (3300E) over Main Ditch
Manito Township, Mason County



Photo 1 – Downstream (West Elevation of Existing Bridge) – Looking southeast



Photo 2 – Upstream (East Elevation of Existing Bridge) – Looking southwest



Photo 3 – Downstream channel - Looking West (DS)



Photo 4 – Downstream channel - Looking West (DS) from bridge



Photo 5 – Upstream channel - Looking East (US)



Photo 6 – Upstream channel - Looking east (upstream) from bridge

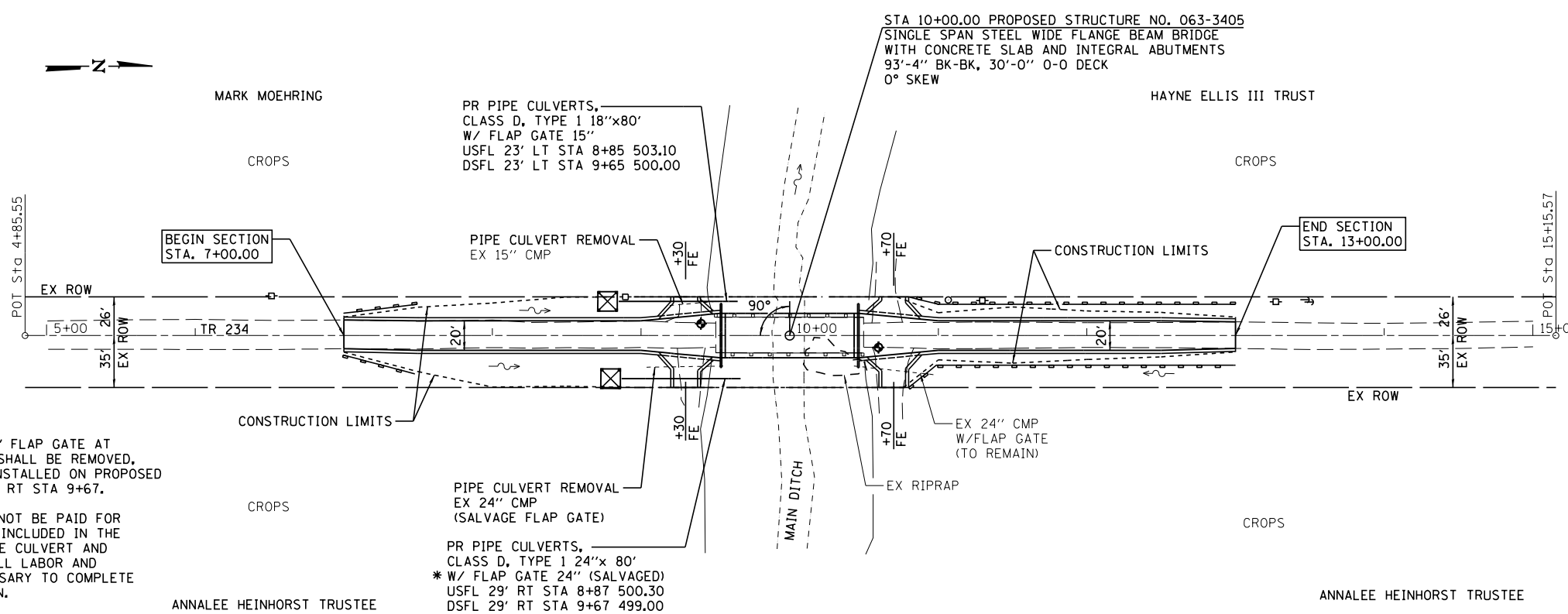
Section 17-08111-00-BR
TR 234 (3300E) over Main Ditch
Manito Township, Mason County



Photo 7 – TR 234 (3300E) - Looking South



Photo 8 – TR 234 (3300E) - Looking North



EXISTING STRUCTURE NO. 063-3404
 STA. 10+00.00
 THREE SPAN STEEL I-BEAM BRIDGE
 WITH CAST-IN-PLACE CONCRETE DECK
 ON CONCRETE PILE BENT SPILL-THRU
 ABUTMENTS AND PILE BENT PIERS
 3 SPANS @ 29'-6", 37'-0", 29'-6"
 99.5' BK. TO BK. ABUTS
 24.0' OUT TO OUT DECK; 22.0' FC. TO FC. RAILS
 NO SALVAGE

REMOVAL OF EXISTING STRUCTURES = 1 EACH

ENTRANCES TO BE BUILT

LT STA 9+30 F.E. -16.4% 20' ROADBED
 RT STA 9+30 F.E. -5.84% 20' ROADBED
 LT STA 10+70 F.E. -11.64% 20' ROADBED
 RT STA 10+70 F.E. -6.94% 20' ROADBED

QUANTITIES INCLUDED IN THOSE LISTED

NOTE: THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTH OF PIPE CULVERTS BEFORE ORDERING THESE ITEMS

LEGEND

- PERIMETER EROSION BARRIER
- INLET AND PIPE PROTECTION
- BORING LOCATION

* THE EXISTING 24" FLAP GATE AT RT STA 9+57.90 SHALL BE REMOVED, SALVAGED, AND INSTALLED ON PROPOSED PIPE CULVERT AT RT STA 9+67.

THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF THE PIPE CULVERT AND SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY TO COMPLETE THE INSTALLATION.

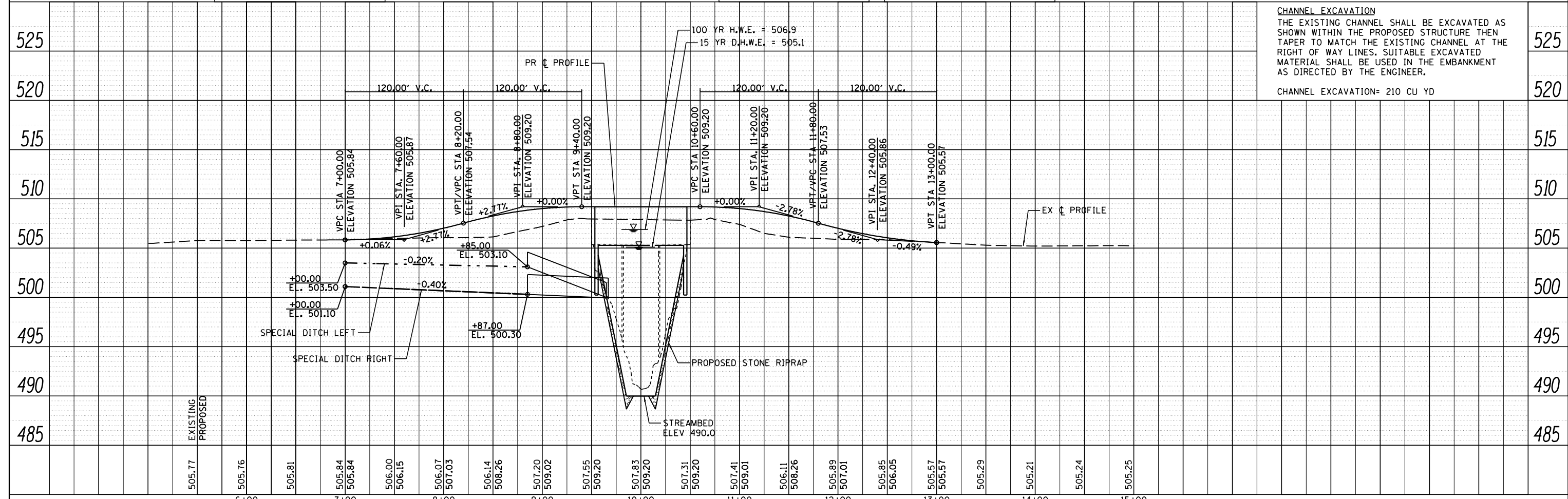
PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	FILED	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES	
	CHECKED	
	STRUCTURE	
	NOTATIONS	
	CHKD	
	NO.	

BM*1 - MAG SPIKE IN POWER POLE
 26' LT STA 6+51
 ELEV 505.41

BM*2 - CUT 'C' ON N.E. CURB
 11' RT STA 10+49
 ELEV 508.33

BM*3 - MAG SPIKE IN POWER POLE
 22' LT STA 13+28
 ELEV 505.06



CHANNEL EXCAVATION
 THE EXISTING CHANNEL SHALL BE EXCAVATED AS SHOWN WITHIN THE PROPOSED STRUCTURE THEN TAPER TO MATCH THE EXISTING CHANNEL AT THE RIGHT OF WAY LINES. SUITABLE EXCAVATED MATERIAL SHALL BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
 CHANNEL EXCAVATION= 210 CU YD

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Notropis chalybaeus (Cope, 1867)

Ironcolor shiner

Upload your [photos](#) and [videos](#)[Pictures](#) | [Google image](#)*Notropis chalybaeus*Picture by [Lyons, J.](#)Add your observation in [Fish Watcher](#)[Native range](#) | [All suitable habitat](#)This map was computer-generated and has not yet been reviewed.
[Notropis chalybaeus](#) [AquaMaps](#) Data sources: GBIF OBIS

Classification / Names

[Common names](#) | [Synonyms](#) | [Catalog of Fishes \(gen., sp.\)](#) | [ITIS](#) | [CoL](#) | [WoRMS](#) | [Cloffa](#)

Actinopterygii (ray-finned fishes) > [Cypriniformes](#) (Carps) > [Cyprinidae](#) (Minnows or carps) > Leuciscinae
 Etymology: *Notropis*: A misnomer given by Rafinesque to shriveled specimens, with the meaning of "back keel"; from Greek, noton = back (Ref. [45335](#)); *chalybaeus*: *Notropis*=ridged or keeled back, and *chalybaeus*=iron colored (referring to the lateral band) (Ref. [79012](#)).

Environment / Climate / Range

Ecology

Freshwater; benthopelagic. Subtropical; 44°N - 27°N

Distribution

[Countries](#) | [FAO areas](#) | [Ecosystems](#) | [Occurrences](#) | [Point map](#) | [Introductions](#) | [Faunafri](#)

North America: USA.

Size / Weight / Age

Maturity: L_m ? range ? - ? cmMax length : 6.5 cm TL male/unsexed; (Ref. [5723](#)); common length : 5.0 cm TL male/unsexed; (Ref. [12193](#))

Biology

Glossary **Search** (e.g. epibenthic)

Occurs in clear, vegetated, sand-bottomed pools and slow runs of creeks and small rivers (Ref. [5723](#)). Feeds mainly on small crustaceans (amphipods, cladocerans, and ostracods), aquatic insects (caddisfly, midge, and mayfly larvae, and corixids), and terrestrial insects (ants), and filamentous algae (Ref. [79012](#)).

Life cycle and mating behavior

[Maturity](#) | [Reproduction](#) | [Spawning](#) | [Eggs](#) | [Fecundity](#) | [Larvae](#)

Main reference

[Upload your references](#) | [References](#) | [Coordinator](#) | [Collaborators](#)

Page, L.M. and B.M. Burr, 1991. A field guide to freshwater fishes of North America north of Mexico. Houghton Mifflin Company, Boston. 432 p. (Ref. [5723](#))

IUCN Red List Status (Ref. [115185](#))

[Least Concern \(LC\)](#)**CITES (Ref. [115941](#))**

Not Evaluated

CMS (Ref. 116361)

Not Evaluated

Threat to humans Harmless**Human uses**FAO(Publication : [search](#)) | [FisheriesWiki](#) | [Sea Around Us](#)**More information**

Countries	Common names	Age/Size	References	Collaborators
FAO areas	Synonyms	Growth	Aquaculture	Pictures
Ecosystems	Metabolism	Length-weight	Aquaculture profile	Stamps, Coins
Occurrences	Predators	Length-length	Strains	Sounds
Introductions	Ecotoxicology	Length-frequencies	Genetics	Ciguatera
Stocks	Reproduction	Morphometrics	Allele frequencies	Speed
Ecology	Maturity	Morphology	Heritability	Swim. type
Diet	Spawning	Larvae	Diseases	Gill area
Food items	Fecundity	Larval dynamics	Processing	Otoliths
Food consumption	Eggs	Recruitment	Mass conversion	Brains
Ration	Egg development	Abundance	Vision	

Tools

[E-book](#) | [Field guide](#) | [Identification keys](#) | [Length-frequency wizard](#) | [Life-history tool](#) | [Point map](#) | [Classification Tree](#) | [Catch-MSY](#) |

Special reports

[Check for Aquarium maintenance](#) | [Check for Species Fact Sheets](#) | [Check for Aquaculture Fact Sheets](#)

Download XML

[Summary page](#) | [Point data](#) | [Common names](#) | [Photos](#)

Internet sources

[Aquatic Commons](#) | [BHL](#) | [Cloffa](#) | [Websites from users](#) | [Check FishWatcher](#) | [CISTI](#) | [Catalog of Fishes \(gen., sp.\)](#) | [DiscoverLife](#) | [ECOTOX](#) | [Faunafri](#) | [Fishtrace](#) | [GenBank\(genome, nucleotide\)](#) | [GloBI](#) | [GOBASE](#) | [Google Books](#) | [Google Scholar](#) | [Google](#) | [IGFA World Record](#) | [MitoFish](#) | [Otolith Atlas of Taiwan Fishes](#) | [PubMed](#) | [Reef Life Survey](#) | [Scirus](#) | [SeaLifeBase](#) | [Tree of Life](#) | [Wikipedia\(Go, Search\)](#) | [World Records Freshwater Fishing](#) | [Zoological Record](#)

Estimates of some properties based on models

Phylogenetic diversity index (Ref. [82805](#)): $PD_{50} = 0.5000$ [Uniqueness, from 0.5 = low to 2.0 = high].

Bayesian length-weight: $a=0.00692$ (0.00313 - 0.01531), $b=3.08$ (2.89 - 3.27), in cm Total Length, based on LWR estimates for this (Sub)family-body shape (Ref. [93245](#)).

Trophic Level (Ref. [69278](#)): 2.9 ± 0.3 se; Based on size and trophs of closest relatives

Resilience (Ref. [69278](#)): High, minimum population doubling time less than 15 months (Preliminary K or Fecundity.).

Vulnerability (Ref. [59153](#)): Low vulnerability (13 of 100).

Entered by [Froese, Rainer](#)

Modified by [Reyes, Rodolfo B.](#)



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**Biological Survey Data
Summary Table**

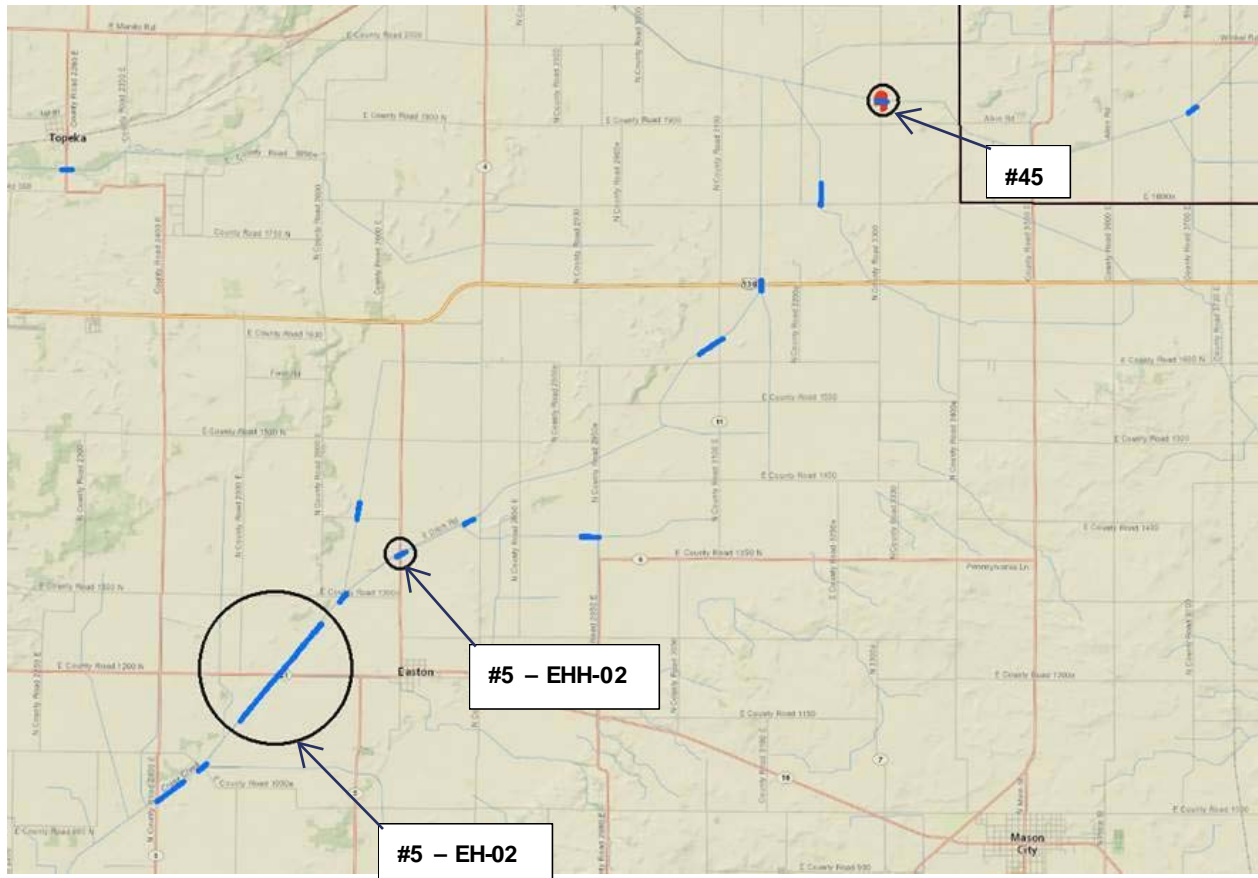
From: Kieninger, Tara
Sent: Tuesday, January 30, 2018 2:52 PM
To: Skufca, Jenny <Jenny.Skufca@Illinois.gov>
Subject: RE: Mason County - 3300E over Main Ditch - Bridge replacement GIS/Map

Hi Jenny,

Per your request, I am attaching GIS data consisting of ironcolor shiner (*Notropis chalybaeus*) locations within Mason County and part of Tazewell County. I have also attached our disclaimer for you to send to the Applicant along with the data. Note that though there are 10 records of ironcolor shiner in the area, only 2 of those records have observations within the last 10 years. I have summarized the data for those locations below and took a quick screenshot below, with the project site noted as a red polygon and the more current ironcolor shiner locations circled in black.

Species	EO_NUM	Data
<i>Notropis chalybaeus</i>	5	<u>Crane Creek, EH-02:</u> 2013-08-06: 5 fish collected, 2 vouchered 2008-07-07: 1 collected 2003-07-24: 1 fish collected 2003-07-24: 1 fish collected and vouchered 1996-08-26: 26 fish collected 1991-05-15: 2 fish collected 1989-05-25: 200 individuals collected 1988-09-26: fish observed 1988-09-26: 115 fish collected 1973-06-28: 14 fish collected <u>Crane Creek Central Ditch, EHH-02:</u> 2012-09-28: 97 collected 2005-05-26: 30 fish collected 2004-05-05: Fish observed 1991-05-15: 3 fish collected
	45	2012-09-28: 25 collected 2006-07-19: 3 fish collected 2001-07-11: 1 fish collected

Biological Survey Data EO_NUM Locations



Let me know if you have any questions.

Tara Kieninger

Heritage Database Program Manager
Illinois Dept of Natural Resources - ORC
One Natural Resources Way
Springfield, IL 62711
(217)782-2685 (phone) / (217)785-2438 (fax)
tara.kieninger@illinois.gov



Illinois Department of Natural Resources

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

Bruce Rauner, Governor
Wayne A. Rosenthal, Director

June 29, 2017

Mr. Vince Hamer
Bureau of Design and Environment
Natural Resources Unit
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62674

Re: 3300E over Main Ditch
Sequence Number: 20724
Project Number: 1712645
County: Mason County

Dear Mr. Hamer:

This letter concerns the Endangered Species Consultation for the **3300E over Main Ditch**, located in **Mason** County. This project was submitted for consultation in accordance with the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The proposed action involves: “Total replacement of the existing bridge. Construction will involve a new single span across Main Ditch.”

E&T Review

The following protected resources occur in the vicinity of the project area and proposed action:
Ironcolor Shiner (*Notropis chalybaeus*)

To minimize or avoid potential adverse impacts, the Department recommends the measures described below be included as commitments in the NRR.

The Department has completed its review of the project and determined that the action is likely to have an adverse impact on the state listed threatened Ironcolor Shiner (*Notropis chalybaeus*), which is known to occur at the project location. Because of the high probability of a prohibited (illegal) take, the Department recommends the applicant obtain Incidental Take Authorization (ITA) for the Ironcolor Shiner (*Notropis chalybaeus*), in accordance with 17 Ill Adm. Code Part 1080, from the Department’s Office of Resource Conservation, pursuant to 520 ILCS 10/5.5. ‘Take’ means, in reference to animals and animal products, to harm, hunt, shoot, pursue, lure, wound, kill, destroy, harass, gig, spear, ensnare, trap, capture, collect, or to attempt to engage in such conduct. Communication concerning the ITA application should be directed to Jenny Skufca, Incidental Take Authorization Coordinator, Office of Resource Conservation, One Natural Resources Way, Springfield, IL 62702. Phone: 217-557-8243; e-mail: Jenny.Skufca@illinois.gov.

Consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Sincerely,

A handwritten signature in black ink, appearing to read "Sheldon R. Fairfield". The signature is written in a cursive style with a large, prominent initial "S".

Sheldon R. Fairfield
Impact Assessment Section
Division of Ecosystems & Environment
Phone: (217) 782-0031



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ROCK ISLAND DISTRICT
PO BOX 2004 CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61204-2004

RECEIVED
7.3.17

REPLY TO
ATTENTION OF

June 27, 2017

Operations Division

SUBJECT: CEMVR-OD-P-2017-581

Mason County Highway Dept.
Attn: Mr. Michael R. Pedigo
1164 E. Laurel Ave.
Havana, IL 62644

Dear Mr. Pedigo:

Our office reviewed your application dated April 19, 2017, concerning the proposed bridge replacement project located on TR 234 approximately 5 miles southeast of Manito, IL, over a tributary to Lake Chautauqua, in Section 24, Township 22 North, Range 6 West, Mason County, Illinois.

Your project is covered under Nationwide Permit No. 14, as published in the enclosed Fact Sheet No. 8 (IL), provided you meet the permit conditions for the nationwide permits, which are also included in the Fact Sheet. The Illinois Environmental Protection Agency (IEPA) also issued Section 401 Water Quality Certification with conditions for this nationwide permit. Please note these additional conditions included in the Fact Sheet. The decision regarding this action is based on information found in the administrative record, which documents the District's decision-making process, the basis for the decision, and the final decision.

This verification is valid until March 18, 2022, unless the nationwide permit is modified, reissued, or revoked. It is your responsibility to remain informed of changes to the nationwide permit program. We will issue a public notice announcing any changes if and when they occur. Furthermore, if you commence or are under contract to commence this activity before the date the nationwide permit is modified or revoked, you will have twelve months from that date to complete your activity under the present terms and conditions of this nationwide permit. If your project plans change, you should contact our office for another determination.

Our office has completed a Preliminary Jurisdictional Determination concerning your project area. A copy of our jurisdictional determination is enclosed. A Preliminary Jurisdictional Determination is not appealable, and it is applicable only to the permit program administered by the Corps of Engineers. **Please review, sign, date, and return the form to our office.**

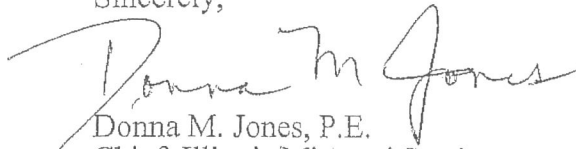
This authorization does not eliminate the requirement that you must still acquire other applicable Federal, state, and local permits. If you have not already coordinated your project with the Illinois Department of Natural Resources – Offices of Water Resources, please contact them at 217/782-3863 to determine if a floodplain development permit is required for your project. You may contact the IEPA Facility Evaluation Unit at 217/782-3362 to determine whether additional authorizations are required from the IEPA. Please send any electronic correspondence to Epa.401.docs@illinois.gov.

You are required to complete and return the enclosed "Completed Work Certification" form upon completion of your project in accordance with General Condition No. 30 of the nationwide permits.

The Rock Island District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the attached postcard and return it or go to our Customer Service Survey found on our web site at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. (Be sure to select "Rock Island District" under the area entitled: Which Corps office did you deal with?)

Should you have any questions, please contact our Regulatory Branch by letter, or telephone Mrs. Jackie M. Groves, 309-794-5351.

Sincerely,


Donna M. Jones, P.E.
Chief, Illinois/Missouri Section
Regulatory Branch

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s), of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

Transferee

Date

Enclosures

Copy Furnished:

Mr. Steve Altman, P.E.
Office of Water Resources
IL Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702-1271
steve.altman@illinois.gov (email) (w/o enclosures)

Mr. Dan Heacock
Illinois Environmental Protection Agency
Watershed Management Section
Permit Sec. 15
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
epa.401.bow@illinois.gov (email) (w/o enclosures)

Cummins Engineering Corp.
Attn: Michael D. Cummins
135 West Lake Shore Dr.
Springfield, IL 62703

COMPLETED WORK CERTIFICATION

Permit Number: CEMVR-OD-P-2017-581

Name of Permittee: Mason County Highway Dept.

County/State: Mason County, Illinois

Date of Issuance: June 27, 2017

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Engineer District,
Rock Island
ATTN: Regulatory Branch
Clock Tower Building
Post Office Box 2004
Rock Island, Illinois 61204-2004

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above reference permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

JMG

STATE OF ILLINOIS
CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION
2017 GENERAL AND SPECIFIC CONDITIONS
NWP 14 – LINEAR TRANSPORTATION PROJECTS

These conditions ensure that the activities carried out under Nationwide Permits (NWPs) do not violate the Water Quality Standards of the State of Illinois resulting in permanent damage to habitat, increased turbidity, reduced bank and channel stability, and/or impacts to the biological and chemical integrity of the waters. These conditions are in addition to, not a replacement for, those conditions included by the federal authorities. Proposed projects authorized by the NWPs listed above that cannot be conducted within the conditions listed below must apply for individual Clean Water Act Section 401 Water Quality Certification.

Applications for certification should be sent to the Illinois Environmental Protection Agency, Division of Water Pollution Control, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois, 62794-9276. An issued certification becomes part of the Clean Water Act Section 404 Permit. Therefore, it expires with the 404 Permit unless explicitly stated otherwise.

GENERAL CONDITIONS FOR ALL NWPs

1. . An individual 401 water quality certification will be required for any activities permitted under these Nationwide Permits for discharges to waters designated by the State of Illinois as Outstanding Resource Waters under 35 Ill. Adm. Code 302.105(b).
2. Projects requiring authorization under Section 404 of the Clean Water Act must implement Best Management Practices (BMPs) to protect water quality, preserve natural hydrology and minimize the overall impacts to aquatic resources during and after construction. Projects that include a discharge of pollutants to waters that have impaired water quality according to the Illinois Environmental Protection Agency's Section 303(d) list or for which there is an approved Total Maximum Daily Load (TMDL) allocation for any parameter, additional planning will be necessary to ensure that no further degradation of water quality will occur. The TMDL program information and the Agency's 303(d) list of impaired waters are available at <http://www.epa.illinois.gov/topics/water-quality/watershedmanagement/tmdls/index>. For waters that include an approved TMDL the applicant shall incorporate into their plans and BMPs any measures that ensure consistency with the assumptions and requirements of the TMDL within any timeframes established in the TMDL. The applicant must carefully document the justifications for all plans and BMPs, and install, implement and maintain BMPs that are consistent with all relevant pollutant load allocations and conditions in the TMDL implementation plan. If a TMDL has not yet been approved to address water quality impairments that are documented in the Agency's 303(d) List, the applicant shall carefully document the plans and measures that will be implemented to ensure that the proposed activity will not cause additional loading of those pollutants which are the cause of water quality impairment. If the project involves an impaired water listed on the Agency's Section 303(d) list for suspended solids, turbidity, or siltation, measures designed for at least a 25-year, 24-hour rainfall event shall be incorporated.
3. Prior to proceeding with any work in accordance with any Nationwide Permit, potential impacts to threatened or endangered species shall be identified through use of the State's Ecological Compliance Assessment Tool (EcoCAT) at <http://dnrecocat.state.il.us/ecopublic/>. If potential impacts to State threatened or endangered species are identified, the Illinois Department of Natural Resources shall be consulted with.

SPECIFIC CONDITIONS FOR NWP 14 – Linear Transportation Projects

1. The affected area of the stream channel shall not exceed 300 linear feet, as measured along the stream corridor.
2. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, as determined by the Illinois EPA.
3. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.
4. The applicant shall not cause:
 - A. violation of applicable provisions of the Illinois Environmental Protection Act;
 - B. water pollution defined and prohibited by the Illinois Environmental Protection Act;
 - C. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation; or
 - D. interference with water use practices near public recreation areas or water supply intakes.
5. All areas affected by construction shall be mulched and seeded as soon after construction as possible. The applicant shall undertake necessary measures and procedures to reduce erosion during construction. Interim measures to prevent erosion during construction shall be taken and may include the installation of sedimentation basins and temporary mulching. All construction within the waterway shall be conducted during zero or low flow conditions. The applicant shall be responsible for obtaining an NPDES Storm Water Permit prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. An NPDES Storm Water Permit may be obtained by submitting a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control, Permit Section.
6. The applicant for Nationwide Permit 14 shall implement erosion control measures consistent with the "Illinois Urban Manual" (IEPA/USDA, NRCS; 2016).
7. Temporary work pads, cofferdams, access roads and other temporary fills shall be constructed of clean coarse aggregate or non-erodible non-earthen fill material that will not cause siltation. Sandbags, prefabricated rigid materials, sheet piling, inflatable bladders and fabric lined basins may be used for temporary facilities.
8. The applicant for Nationwide Permit 14 that uses temporary work pads, cofferdams, access roads and other temporary fills in order to perform work in creeks, streams, or rivers shall maintain flow in these waters by utilizing dam and pumping, fluming, culverts or other such techniques.