CONSERVATION PLAN FOR THE INCIDENTAL TAKINGS OF GREATER REDHORSE AND RIVER REDHORSE RELATIVE TO THE REPLACEMENT OF THE WILSON STREET BRIDGE

Introduction

The existing Wilson Street Bridge is a filled spandrel, 3-span arch bridge which was built in 1911. It is the only Fox River crossing in the City of Batavia. The current two-way average daily traffic on the bridge is 24,600.

The bridge arches are in poor condition showing signs of progressive deterioration. The current bridge railing is also in poor condition most notable on the south side of the bridge. The current rail is most likely ineffective in keeping vehicle or people from falling in the river. Portions of the rail support base are deteriorating and falling into the waterway below. Consequently, based on structural condition, the structure requires total replacement. Because of the important transportation link this bridge offers, it was decided through a public process to re-build the bridge in stages so as to allow continued traffic use of the bridge during construction. The City's police department is located at City Hall along the Fox River and uses the bridge to access public safety calls on the east side of town. Likewise, the bridge is used to bus children back and forth to school daily on the opposite sides of the City. Plans were prepared and funding secured for bridge reconstruction to occur in calendar year 2007. When plans were made for the bridge removal and subsequent reconstruction, there were no threatened and endangered species issues in the area. See *Exhibit A* for our original biological resources paperwork.

In fall of 2005, the Kane County Forest Preserve approved a contract for removal of the South Batavia Dam, downstream of the bridge. The dam removal was completed in January of 2006. The Greater Redhorse (Moxostoma valenciennesi), a state listed endangered species, and the River Redhorse (Moxostoma carinatum), a state listed threatened species, have been found downstream of the dam site on the Fox River. Since the dam has been removed it is possible that the Greater Redhorse and the River Redhorse will move upstream to spawn.

Besides impacting the City of Batavia public safety access and traffic, the bridge reconstruction will require the Fox River under the bridge to be closed to public navigation during construction. A popular canoeing stretch of the river, public access canoe put-ins and take-outs are located at the parks upstream and downstream of the bridge. The bridge reconstruction will most likely result in the cancellation of the Fox River Mid-America Canoe Race.

To minimize the impact on the City's traffic and the Fox River recreational navigation, it is proposed to reconstruct the bridge in one calendar year. Unfortunately, it is unlikely that the contractor will be able to construct the bridge in one calendar year if in-water

work is prohibited for the spawning season from April 1st thru June 15th year. Three separate cofferdams are expected to be needed, at different times, to allow for the safe demolition and re-construction of the bridge. All attempts will be made to conduct in-water work outside of the spawning period. However, within the spawning period the contractor may need to complete construction of the first cofferdam, remove the first cofferdam and construct a second cofferdam. In all, the contractor may need to conduct in-water work in three distinct periods during the spawning season. In order to conduct the work in one year, it is proposed that the first cofferdam (blocking the west portion of the river) be installed prior to the spawning period (with the possibility that it may be finished in the very early part of the spawning season), then removed and replaced with a second cofferdam (blocking the east portion of the river) during the spawning period. This plan describes what is proposed to be undertaken to minimize the potential impact on the Greater Redhorse and River Redhorse, during the cofferdam removal and rebuilding process.

Description of Likely Impacts

In accordance with the Department administered Part 1080 rules, Incidental Taking of Endangered or Threatened Species, we are supplying the following information.

Legal Description of Activity Location

Wilson Street Bridge is located on the Fox River in Sec. 22 of Township 8E, Range 39 N of the 3rd PM in Kane County in downtown Batavia. A map can be found enclosed as Exhibit 1. The bridge is owned by the City of Batavia.

Biological Data

The Greater Redhorse and River Redhorse have been found on the Fox River south of the South Batavia Dam. It is possible that with the removal of the dam, they will use the Fox River up to the North Batavia Dam, the next obstruction, for spawning habitat.

The two species spawn in the spring from approximately April 1 to June 15th. Information published by the Michigan Natural Features Inventory, a service of the Michigan State University Extension, suggests the River Redhorse has been observed spawning in southern Michigan in April when the water temperature is 22-24 degrees C. In northern Michigan, spawning occurs in early June when water temperatures are 20 to 23 degrees C (Michigan Natural Features Inventory, 2006). River Redhorse prefer to spawn in shallow gravel areas (Michigan Natural Features Inventory, 2006). Wisconsin Department of Natural Resources information suggests the Greater Redhorse spawns in Wisconsin in May and June in rapid waters on gravel, sand or rubble (Wisconsin DNR, 2003).

The potential for a taking to occur is during construction of an in-water cofferdam during the spawning season. There is a concern that constructing the cofferdam during the

spawning season in the river could kill adult fish. It is assumed that adult fish are more likely to be injured by in-water construction activities during spawning periods when they are otherwise distracted. As adult fish are the key to reproduction, protecting adult fish during in-water construction during the spawning period is a critical part of this conservation plan.

Activities that Could Result in a Taking

The first cofferdam need to be completed and then removed and the second constructed in the Fox River during the spawning period in order to complete the bridge removal and reconstruction within one calendar year (notice to proceed is anticipated to be granted by IDOT in February of 2007). The in-water portions of the work will consist of the contractor building a total of three different cofferdams at separate times from both the east and west river bank to about the center of the river. It is anticipated that two of the cofferdams may impact the spawning period. After the construction of each cofferdam, the area behind the cofferdam will be dewatered allowing the contractor to work in the dry. Following dewatering of the first cofferdam, the contractor will remove and reconstruct the southern half of the existing western pier and abutment and place a falsework system for casting the concrete superstructure of the new bridge The falsework mentioned above will consist of a network of scaffolding and or beams founded on the bedrock at river level. Upon completion of the southern-half of the new bridge piers and the installation of the falsework system the cofferdam will be removed. The contractor will then build a second cofferdam blocking the eastern half of the river to repeat the process for the southeastern quadrant of the bridge, this cofferdam will remain in place until work is completed in the northeastern quadrant of the bridge and then it will be removed. A third cofferdam will be constructed to complete construction of the northwestern quadrant of the bridge. As mentioned previously, the removal and construction of the first and second cofferdams may be in conflict with the spawning period. See *Exhibit B* for drawings depicting the cofferdam sequence.

This instability issue will preclude the contractor from working over a cofferdam area at all times during the demolition process. Most likely the contractor will take the bridge out in large pieces using a crane and in the event some pieces of the bridge fall into the river these will be cleaned out when that particular area of the river is in the dry.

Because of the potential for the bridge to fail catastrophically, unless carefully removed, the options for constructing the cofferdams so as to not impact the river are limited. The proposed cofferdam plan was the best plan developed to allow the construction to continue rapidly so as to avoid work in-water during the spawning period; however, there is the possibility that construction activities will not be able to progress as rapidly as desired and some in-water work would need to take place during the April 1st to June 15th period. In addition, the City will try to get the contractor to start construction as early as possible in 2007.

Anticipated Adverse Effects

It is expected that adult fish would generally avoid a construction area. However, there is concern that during a spawn, that adults intent on spawning will not leave the area and will be killed.

Measures to Minimize and Mitigate Impacts and Funding

a) The estimated footprint of the cofferdam to be built during the spawn is 0.1 acres in the river. It is assumed that if any fish are caught within the cofferdam, they can be hand netted and relocated to outside the cofferdam before or during the following dewatering operation. We expect no adult fish to be killed during the cofferdam operation. The footprint of the cofferdam has been reduced from an initially estimate 0 .25 acres by limiting the river access locations to minimize the footprint of the cofferdam.

b) The rest of the river will be able to be used during the spawn by the species including an adjacent area from which the cofferdam will be removed.

c) The first cofferdam for the site is expected to be built before the spawning period begins; however, there is the possibility that it may be finished during the very early days of the spawning season (See *Exhibit B*).

During the removal of the first cofferdam and before the second cofferdam is constructed (and if the first cofferdam extends into the spawning season), the area in which the cofferdam is to be built will be swept for fish using weighted seine nets extending to the bottom of the river and electroshocking (to find fish hiding under rocks) in order to remove fish from the area of the proposed cofferdam footprint during the construction of the cofferdam. Fish trapped within the cofferdam will be manually removed as the area behind the cofferdam is being dewatered. It is expected that IDNR staff would be present at the start of the cofferdam placement operations to determine that the methods proposed in this plan are being followed. The individual that will conduct the electroshock and seining operations will include individuals recognized for their expertise in fish sampling in Illinois. Should high water occur and the area behind the cofferdam become flooded, any fish caught behind the cofferedam will be removed manually during the dewatering operation, as was done during construction.

d) The City of Batavia will provide resources to assist the IDNR in monitoring of the river before and after the bridge re-construction to determine the presence and number of Greater Redhorse and River Redhorse in the area. If the IDNR is unable to be involved in the process, the City will be willing to have individuals knowledgeable in fish sampling to conduct that analysis.

e) Should it be required, the City would install measures upon the completion of the bridge to assist in fishery spawns, including building in-stream structures in the vicinity of the bridge for spawning and protection of young.

f) As a unit of local government, the City of Batavia has adequate funding to undertake the measures proposed.

Alternatives That Would Not Result in a Take

a) No-Action Alternative: This alternative assumes that there will be no construction activities in the water during the spawning season. This alternative is expected to extend the construction period to two years. During that time, the river would need to be closed to public navigation under the bridge. Public safety concerns because of the location of the police headquarters and the need to transport school children over the river through the construction site on a daily basis will be extended to two years. Because of the impact on the public safety concerns and the need to close the river to public navigation for two years, other alternatives were investigated to minimize the potential for a taking to occur.

Impact of This Take on the Survival of the Species in Illinois

We believe these measures will allow us to relocate any fish in the area of the cofferdam placement, allowing us to move the cofferdams during the spawning season without any mortality to the Greater Redhorse or the River Redhorse adult fish. The relocation may disturb spawning activities in the area, however.

The existing bridge is a filled spandrel arch bridge it will be necessary to sequence the demolition in such a way so as not to cause instabilities in the structure during demolition. Particularly, the thrust forces from each arch span must be balanced at each existing pier during demolition; if they become unbalanced the bridge could collapse into the river. This same problem was encountered when a similar bridge in St. Charles was demolished and an entire quadrant of the bridge collapsed nearly injuring two construction workers. To prevent this from occurring on this project, it will most likely be necessary for the contractor to remove each half of the bridge during it respective construction stage in a south to north or north to south fashion, thereby keeping the thrust forces balanced at each pier.

Obligations and Responsibilities of Participants and Schedule of Progress Report

The City of Batavia will assume responsibility for the implementation of this plan. The responsible person and contact information for the City is Noel Basquin, P.E., City Engineer, 100 N. Island Avenue, Batavia, IL 60510. Progress reports will be provided to the IDNR designee on a monthly basis, starting March 15th and ending June 15th, indicating the status of in-water construction. The City will provide the IDNR with seven days advanced warning of any in-water action during the spawning period of April 1st through June 15th.

References

Michigan Natural Features Inventory, *Moxostoma carinatum* river redhorse,

http://web4.msue.msu.edu/mnfi/abstracts/aquatics/Moxostoma_carinatum.pdf, referenced May 9, 2006.

Wisconsin DNR, Greater Redhorse (*Moxostoma valenciennesi*), http://dnr.wi.gov/org/land/er/factsheets/fish/Grtred.htm, last modified Monday January 13, 2003.

From: BOB SCHANZLE
To: Kabbes, Karen; KATH, JOE; RUNG, ROBERT
Date: 6/22/2006 8:50:43 AM
Subject: Re: City of Batavia Wilson Street/Donovan Bridge Replacement

Hello, Karen

I have previously asked both the Corps of Engineers and the Office of Water Resources to make the April 1 - June 15 exclusionary period a condition of their respective permits. Assuming either permit carries the condition, I don't believe it will be superseded by the ITA, if one is granted. However, the ITA would presumably lend strong support should you wish to approach either agency to ask that the condition be removed (if, in fact, it's included in either permit in the first place). To my knowledge, the ITA and the OWR permit are this agency's only direct links to the project; no other authorizations are needed from us.

Sincerely,

Robert W. Schanzle
Permit Program Manager
IDNR, Office of Realty and Environmental Planning

e-mail: bob.schanzle@illinois.gov
phone: 217-785-4863

>>> "Karen C. Kabbes" <KCKabbes@kabbesengineering.com> 06/21/06 4:21 PM >>>
Thank you all for your help on the Wilson Street Bridge replacement. The City is pursuing an Incidental Taking Authorization (ITA) to allow work in-water, if necessary, between April 1 and June 15, per the Conservation Plan we submitted. We look forward to working with you to incorporate any revisions needed to the Plan to allow issuance of authorization. April 1 until June 15 is a general prohibition against work in-water for all fish species.

One question the City was looking for confirmation on is that if the ITA is granted, no additional authorizations are needed to allow work in-water during the April 1 - June 15 period. Is that correct? The mitigation measures proposed in our Conservation Plan would be used for all fish species.

Thanks for your help,

Karen

Karen C. Kabbes, P.E., D.WRE

President

Kabbes Engineering, Inc.

1250 S. Grove Avenue, Suite 105

Barrington, IL 60010

Phone: 847.842.9663

Fax: 847.842.9960

Email: kckabbes@kabbesengineering.com

Website: kabbesengineering.com

DRAFT

Notice of Proposed Incidental Taking Authorization Request by the City of Batavia in Conjunction with the Replacement of the Wilson Street/Donovan Bridge over the Fox River in Batavia, Illinois

The City of Batavia, 100 North Island Avenue, Batavia, IL 60510, is proposing to remove and replace the Wilson Street/Donovan Bridge across the Fox River in downtown Batavia. To state listed threatened and endangered species, Greater Redhorse (Maxostoma valenciennesi) and the River Redhorse (Maxostoma carinatum), may now access the area due to the removal last winter of the South Batavia Dam. In-water work, consisting of the construction and removal of temporary cofferdams during the April 1st – June 15th spawning period, may result in an accidental taking of some individual members of the threatened and endangered species. To minimize and mitigate the impact, the City is proposing to complete as much of the in-water work as possible before April 1st. However, the work schedule may require cofferdam removal and reconstruction between April 1st and June 15th. Should cofferdam work need to take place during that period, the City will hand net and remove any fish found within the cofferdam before or during the dewatering operation Before any new cofferdams are built, the construction area will be swept for fish using weighted seine nets extending to the bottom of the river and electroshocking in order to remove fish from the area.

The construction plan describing the proposed action is available for review at the Batavia Public Library, 10 South Batavia Avenue, Batavia, IL 60510 and at the City of Batavia Engineering Office, 100 North Island Avenue, Batavia, IL 60510. Comments on the conservation plan may be directed to Mr. Joe Kath at the IDNR Office of Resource Conservation, One Natural Resource Way, Springfield, IL 62701; Email: Joe.Kath@Illinois.gov. Comments can be submitted by mail or by email and must be received by _____.
30 days after the last date of publication of notice.