United States Department of the Interior

FISH AND WILDLIFE SERVICE
East Lansing Field Office (ES)
2651 Coolidge Road, Suite 101
East Lansing, Michigan 48823-6316

IN REPLY REFER TO:

February 26, 2016

Mary P. Logan
U.S. Environmental Protection Agency
77 W. Jackson, SR-6J
Chicago, Illinois 60604-3590

Re: Draft Tittabawassee River Segment 4 and 5 (OU1) Response Proposal for the Tittabawassee River/Saginaw River & Bay Site, Dow Submittal Number 2015.047

Dear Ms. Logan:

Attached please find the Natural Resource Trustees' comments on the Draft Tittabawassee River Segment 4 and 5 (OU1) Response Proposal. We appreciate EPA's efforts to work closely with the Trustees and your consideration of our comments on this Draft Response Proposal.

Please feel free to contact me at 517-351-8324 if you have questions. We look forward to continuing to provide technical assistance regarding resource management goals for this site.

Sincerely,

Lisa L. Williams
Trustee Coordinator

attachment
cc: Charlie Chandler, BIA
Sally Kniffen, SCIT
Polly Synk, MAG
Judie Alfano, MDEQ
Allan Taylor, MDEQ
Jessica Mistak, MDNR

Natural Resource Trustee Comments on Segment 4 and 5 Response Proposal

This document summarizes the Tittabawassee River Natural Resource Trustees comments on the Draft Tittabawassee River Segment 4 and 5 (OU1) Response Proposal ("Proposal"), prepared by the Tittabawassee and Saginaw River Team and submitted by The Dow Chemical Company on December 18, 2015.

Specific Comments

1. *Section 2.3, p. 6. "Several dams were constructed around this time to provide hydroelectric power and a clean water supply. The dams also controlled river flows and limited peak flood events."*

   Comment: We have made comments on this paragraph on each Proposal and are doing so again because this paragraph does not provide a good understanding of the influence of dams in the river downstream of Midland. Although four hydropower dams were constructed on the Tittabawasee River, all are upstream from the City of Midland. Fluctuations in flow from the Sanford Dam affect water levels and erosion in these segments. The Dow Dam at Midland is a barrier to fish passage.

2. Section 3.5.1, p. 27+: *Segment 1 and 2 Benthic Community Conditions*

   Comment: We have made comments on this paragraph on each Proposal and are doing so again because Dow continues to repeat their conclusion that "the benthic community in Segments 1 and 2 is diverse, abundant, and comparable to ….reference conditions." The 2010 Benthic Community Study was performed without the involvement of the Trustees. We are uncertain of how representative the sampling locations were and are not aware of any agency oversight that validated the site selection, observations, scoring, and calculation of metrics. As Dow notes in this proposal section, no sample locations were included in Segments 4 and 5, so sampling will need to be performed if we are to have baseline information on benthic communities, including freshwater mussels, prior to implementation of work on Sediment Management Areas in Segments 4 and 5.

3. Section 3.5.3, p. 29+. *Threatened and Endangered Species*

   Comment: The northern long-eared bat (NLEB) was listed as threatened under the federal Endangered Species Act (ESA) on April 1, 2015, and is included in the text and Table 3-4a, so the citation to sources used in the text should be updated to a date after

that in 2015. Despite the footnote to Table 3-4a that federal and state status of listed species was accessed in September of 2015, the information is not entirely accurate for that date. For example, the snuffbox mussel (*Epioblasma triquetra*) was listed as endangered under the federal ESA in March of 2012, yet no federal status is given on the table.

Given the number of state and federally listed species of freshwater mussels that are potentially present in Segments 4 and 5, Dow should be required to conduct freshwater mussel surveys using qualified specialists prior to conducting work at SMAs. Although we are particularly concerned about the federal and state endangered snuffbox and the state endangered hickorynut (*Obovaria olivaria*), we are also concerned with freshwater mussels in general because they are long-lived species with low rates of recruitment and recovery from disturbance. In 2008, the USFWS conducted mussel surveys around the Shiawassee National Wildlife Refuge that included three sites on the Tittabawassee River: just upstream of Freeland Road, just upstream of South Center Road, and in the cross channel by Green Point Island. At the two upstream sites, the biologists found 15 and 10 species of mussels, respectively, with the live species including mapleleaf (*Quadrula pustulosa*), pink heelsplitter (*Potamilus alatus*), deertoe (*Truncilla truncata*), white heelsplitter (*Lasmigona complanata*), mucket (*Actinonaias ligamentina*), and black sandshell (*Ligumia recta*) (Jim Boase, USFWS, unpublished data). Should freshwater mussels be found in a proposed SMA, the Trustees could work with Dow and U.S. EPA on protocols to translocate mussels to the nearest suitable mussel bed. ***We also request at this time that mussel surveys be conducted in the Segment 3 SMAs prior to construction.***

After Dow drafted the Proposal, the USFWS finalized the 4(d) rule under the ESA for the NLEB on January 14, 2016, effective February 16, 2016[1] and published a streamlined process for federal actions – "Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions that May Affect Northern Long-Eared Bats"[2]. The U.S. EPA may want to consider using this streamlined process for NLEB given that Segments 4 and 5 are within the White Nose Syndrome zone and the proposed work involves tree-cutting, yet all proposed work is more than 1/4 mile from any known maternity roost trees or 150' from known hibernacula.

For the Indiana bat, the Proposal cites USFWS 2007 as indicating that there are no known Indian bat hibernacula or maternity colonies present within Saginaw, Midland or

[1] http://www.fws.gov/midwest/endangered/mammals/nleb/

[2] http://www.fws.gov/midwest/endangered/mammals/nleb/KeyFinal4dNLEBFedProjects.html

surrounding counties. Information from eight years ago cannot be relied upon as evidence of absence for the present. A current survey based on USFWS guidance[3] should be conducted in order to be able to make a statement that there is evidence of absence. Dow and U.S. EPA may want to consider the bat survey work that was completed in 2013 at the Shiawassee National Wildlife Refuge (Auteri and Kurta, 2013[4]) as part of the analysis.

Without additional surveys for mussels, in particular, it is not clear to the USFWS or MDNR that Dow's final statement in this section can be supported: "Regardless, implementing potential remedial actions would meet any requirements of the Endangered Species Act or state regulations, as appropriate." In order to make a statement like this, the Proposal needs to include plans to conduct surveys and descriptions of what measures will be taken should those surveys find listed species (e.g. notification so that U.S. EPA can consult, avoiding or transplanting listed plants, translocating mussels, avoiding maternity colony trees).

4. Section 3.6.3, p. 31. *Identification of Historic or Culturally Significant Resources*

Comment: This section lists resources for identifying known or potential cultural or historic resources, but does not affirmatively state that Dow has consulted or will consult these resources other than searching the National Register of Historic Places. In talking with both State and Tribal Historic Preservation Officers, the Trustees understand that it is inappropriate to merely rely on a discovery plan. These experts should be consulted during the planning stage so that they can determine if surveys are needed. The discovery plan is specifically intended for unanticipated discoveries of remains or artifacts, so experts with local knowledge should be consulted about what can reasonably be anticipated prior to beginning construction. ***This concern may also need to be addressed for Segment 3 work planned in 2016 which will disturb soils.***

5. Section 3.8.2.3, p. 35. "*In addition, the elevated TEQ in lower Reach KK is stable and not expected to be susceptible to erosion. Differential bathymetry in this area shows little to no change in surface sediment elevation (Appendix B1). Thus, the TEQ is expected to remain buried."*

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[3] http://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html

[4] G. Auteri and A. Kurta. An Exploratory Netting and Acoustic Survey for Bats at the Shiawassee National Wildlife Refuge,Saginaw County, Michigan. 2013.

Comment: We remain concerned that deposits of PCOIs located in what Dow characterizes as stable areas may pose a risk to long-term protectiveness of human health and the environment should these areas become unstable in the future as the watershed is subjected to extreme weather events associated with climate change and the river channel shifts either laterally or vertically. If PCOIs are left in-place, there is the potential that they will be re-exposed after a large flood or ice scour event. This possibility should be evaluated in the model and by considering other lines of evidence, including historic data and climate projections to the extent possible, especially given the understandable but still relatively short time frame for which bed pin monitoring and differentially bathymetry have been performed. Bed pins should remain in place, when possible, to provide for long-term monitoring of channel stability.

6. Section 3.9.5, p. 47. *Results of the Segment 4 and 5 BMA Evaluation*

Comment: The Trustees remain concerned about the long term effectiveness of containing hazardous substances in place along a dynamic river system. Given bank stabilization as an approach, the Trustees appreciate the use of soft engineering and native species as an alternative to the use of hard engineering approaches utilizing concrete or steel to physically stabilize the banks. However, techniques like canopy management and bank smoothing do change the type of habitat present and fix the river channel in place laterally at the BMAs. Erosive forces at the stabilized BMAs, particularly during bank full events, will be transferred to banks downstream or to vertical erosion of the sediments near the BMA.

7. Section 4.3.2.5, p. 51. *The law requires federal agencies, in consultation with USFWS and/or the US National Oceanic and Atmospheric Administration Fisheries Service,…*

Comment: "US National Oceanic and Atmospheric Administration Fisheries Service" should be "National Oceanic and Atmospheric Administration's National Marine Fisheries Service".

8. Section 4.3, p. 48 et seq. *ARARs or TBCs*

Comment: Part 55, Air Pollution Control, of the NREPA, and the Federal Clean Air Act (CAA) still do not appear to be not included. Rules prohibiting the emission of air contaminants in quantities that cause injurious effects on human health, animal life, plant life of significant economic value, and/or property are established in Part 55 of the NREPA. The CAA establishes requirements for constituent emission rates in accordance

with national ambient air quality standards. Relevant Part 55 of the NREPA and CAA requirements are expected to relate primarily to fugitive dust control.

9. Section 5.1.2. p. 59. *Long-term monitoring and maintenance would be performed as needed on Segments 4 and 5 SMAs where capping is implemented. Monitoring would ensure the caps achieve RAOs by successfully isolating underlying sediment from physical disturbance and biological contact, and would ensure long-term cap integrity.*

   Comment: Stabilization at one location in a river usually results in destabilization in another, so long-term monitoring must include areas beyond the footprint of any cap. For example, erosion may occur in areas where flow is diverted by a structure and not just at the end of the structure. Dow's response to this comment in previous draft Proposals stated that "monitoring will occur at both the upstream and downstream end of the bank management areas to determine if any erosion is occurring", but this is not reflected in the language of this Proposal: the first sentence quoted still can be read as including performing monitoring only in the footprint of the implemented cap.

10. Section 5.2.2, p. 62. *Removal*
    Section 6.3.1.4 , p. 71 and p.72. *Both wet and dry removal would eliminate the benthic community in the short term. Removal of sediment also results in slower benthic recolonization rates compared with capping; benthic recolonization of removal areas typically occurs within months or several years."*

    Comment: Bank and in-stream restoration following removal could also include placement of large woody debris to replace structure, differential flows, and woody surface area that provide microhabitats for production of algae, macroinvertebrates, and fish. Placing large woody debris at or near removal areas would help mitigate short-term impacts of the removal.

11. Section 6.3.1.5, p. 73. "*Results are promising insofar as all caps constructed in the past several years within the Tittabawassee River have remained stable since installation. Results to date in the CCS pilot areas (SMAs 1-4, 2-1, and 2-2) show a stable remedy that has created a new sediment layer at the sediment bed surface.*"

    Comment: Dow discovered and repaired a section of the cap at SMA 2-5 that appeared to have been torn up by ice following installation, so this event should be mentioned and accompanied by an improved installation protocol. This event underscores the need for monitoring and maintenance to ensure short- and long-term effectiveness.

12. Section 6.3.2, p. 77. "*In wooded areas or areas of dense vegetation, trees may need to be cut to allow access to the river, and a bank area may require clearing and preparation to allow equipment access to the channel, disrupting the existing ecosystem*."

    Comment: As stated previously, because of the possible presence of two federally listed species of bats, appropriately conducted bat surveys and consultation between U.S. EPA and the U.S. Fish and Wildlife Service (Service) may be necessary to ensure compliance with the ESA. Under ESA, reaching a finding of "not likely to adversely affect" may include seasonal restrictions on tree cutting. While the Service has now developed a streamlined process for federal agency compliance with the recently issued 4(d) rule for the NLEB, this process does not apply to the Indiana bat. We appreciate Dow's continued efforts to perform canopy management in the winter.

13. Section 6.4.1.3, p. 81. BMAs, Short-Term Effectiveness

    Comment: Both Alternative 1 and Alternative 2 include tree cutting. Please see comment #12.