

Appendix B

Agency Correspondence

Exhibit B1. MnDOT CRU Letter (May 13, 2016)



Minnesota Department of Transportation

Office of Environmental Stewardship

Mail Stop 620
395 John Ireland Boulevard
St. Paul, MN 55155-1800

Office Tel: (651) 366-4291
Fax: (651) 366-3603

May 13, 2016

Re: S.P. 8680-172 (Reconstruct I-94; Albertville, St. Michael, Otsego; Wright County)

Dear Ms. Dumont,

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the applicable Programmatic Agreements between the FHWA and the Minnesota State Historic Preservation Office (SHPO). The Section 106 review fulfills MnDOT's responsibilities under the Minnesota Historic Sites Act (MS 138.665-.666), the Field Archaeology Act of Minnesota (MS 138.40); and the Private Cemeteries Act (MS 307.08, Subd. 9 and 10).

The proposed project will reconstruct I-94 from the east end of the MnROAD Research Facility to TH 241 in St. Michael. The purpose of the project is to improve mobility and safety between Albertville and St. Michael. The project will replace the pavement from the east end of MnROAD to TH 241. A third lane will be added in both directions of I-94 between CSAH 37 in Albertville and TH 241 in St. Michael. The TH 241 interchange will be reconfigured to improve operations; the interchange work could include widening or replacing the TH 241 bridge. The CSAH 19 bridges are due for major rehab or replacement. If funding is available, an eastbound collector-distributor road would be built between CSAH 19 and CSAH 37. This project continues westward expansion of the I-94 corridor, extending from the expansion project from Rogers to St. Michael that was completed in 2015.

Based on our existing programmatic agreements with various tribal groups, there are no tribes that want to be consulted on projects in this area of the state and/or projects with the proposed scope of work.

The area of potential effects (APE) for direct effects of the project consists of the proposed construction area. There are no known archaeological sites in the APE. Much of the APE has been disturbed by previous roadway construction. The APE has low potential for containing unidentified significant archaeological resources. The APE for indirect effects of the project consist of properties adjacent to the proposed project. There are no eligible or potentially-eligible buildings or structures in the APE.

The finding of this office is that there will be **no historic properties affected** by the project as currently proposed. If the project scope changes, please provide our office with the revised information and we will conduct an additional review.

Sincerely,

Renée Hutter Barnes, Historian
Cultural Resources Unit

cc: MnDOT CRU Project File

Exhibit B2. MnDOT OES Letter to USFWS (November 7, 2016)



Minnesota Department of Transportation

395 John Ireland Boulevard
 Saint Paul, MN 55155

November 7, 2016

Phil Delphey
 Fish and Wildlife Biologist
 U.S. Fish and Wildlife Service
 Twin Cities ES Field Office
 4101 American Blvd East
 Bloomington, MN 55425-1665

Notification of Determination – May affect, but will not cause prohibited incidental take – northern long-eared bat (*Myotis septentrionalis*)

S.P. 8680-172, I-94
 Wright County, Minnesota

Project Description

The proposed project will reconstruct I-94 from the east end of the MnROAD Research Facility to TH 241 in St. Michael. The purpose of the project is to improve mobility and safety between Albertville and St. Michael. The project will replace the pavement from the east end of MnROAD to TH 241. A third lane will be added in both directions of I-94 between CSAH 37 in Albertville and TH 241 in St. Michael. The TH 241 interchange will be reconfigured to improve operations; the interchange work could include widening or replacing the TH 241 bridge. The CSAH 19 bridges are due for major rehab or replacement. If funding is available, an eastbound collector-distributor road would be built between CSAH 19 and CSAH 37.

Map(s) attached below

Species List for the Project County

According to the official County Distribution of Minnesota Federally-Listed Threatened, Endangered, Proposed, and Candidate Species list (revised in October 2016), maintained by the Service, the project county is within the distribution range of the following:

Revised October 2016

County	Species	Status	Habitat
Wright	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.

State Project 8680-172
 ESA (Section 7) Notice of Determination
 November 7, 2016

Exhibit B2. MnDOT OES Letter to USFWS (November 7, 2016)

Information to Determine NLEB 4(d) Rule Compliance:		YES	NO
1.	Does the project occur wholly outside of the WNS Zone?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	Have you contacted the appropriate agency to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.	Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.	Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.	Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the Biological Opinion.

Streamlined NLEB Consultation Table - General Project Information		YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ¹ ? (if yes, report acreage below)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of forest conversion (including winter)			0
If known, estimated acres ² of forest conversion from April 1 to October 31			0
If known, estimated acres of forest conversion from June 1 to July 31 ³			0
Does the project include timber harvest? (if yes, report acreage below)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest			
If known, estimated acres of timber harvest from April 1 to October 31			
If known, estimated acres of timber harvest from June 1 to July 31			
Does the project include prescribed fire? (if yes, report acreage below)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire			
If known, estimated acres of prescribed fire from April 1 to October 31			
If known, estimated acres of prescribed fire from June 1 to July 31			
Does the project install new wind turbines? (if yes, report capacity in MW below)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)			

¹ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the Biological Opinion).
² If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
³ If the activity includes tree clearing in June and July, also include that acreage in April to October.

Endangered Species Act – Section 7

Section 7 of Endangered Species Act of 1973, as amended (Act), requires each Federal agency to review any action that it funds, authorizes or carries out to determine whether it may affect threatened, endangered, proposed species or listed critical habitat. Federal agencies (or their designated representatives) must consult with the U.S. Fish and Wildlife Service (Service) if any such effects may occur as a result of their actions. Consultation with the Service is not necessary if the proposed action will not directly or indirectly affect listed species or critical habitat. If a federal agency finds that an action will have no effect on listed species or critical habitat, it should maintain a written record of that finding that includes the supporting rationale.

Notice of Determination

Northern Long-eared Bat— May affect, but will not cause prohibited incidental take.

According to the information provided, this project will include bridge work. There are no known locations of NLEB roost trees or hibernacula in the vicinity of this project ([MNDNR 2016](#)). By signing this form, MnDOT on behalf of the FHWA, determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, MnDOT may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic Biological Opinion. MnDOT will update this determination annually for multi-year activities.

State Project 8680-172
 ESA (Section 7) Notice of Determination
 November 7, 2016

Exhibit B2. MnDOT OES Letter to USFWS (November 7, 2016)

MnDOT, on behalf of the FHWA, understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. MnDOT will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. **Involved parties will promptly notify the appropriate USFWS Field Office, and MnDOT Office of Environmental Stewardship, upon finding a dead, injured, or sick NLEB.**

Please contact me if there are questions or concerns.

Christopher E Smith  Digitally signed by Christopher E Smith
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Date: 2016.11.07 09:34:36 -06'00'

Christopher E. Smith, M.Sc., CWB®
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State Project 8680-172
ESA (Section 7) Notice of Determination
November 7, 2016

Exhibit B2. MnDOT OES Letter to USFWS (November 7, 2016)

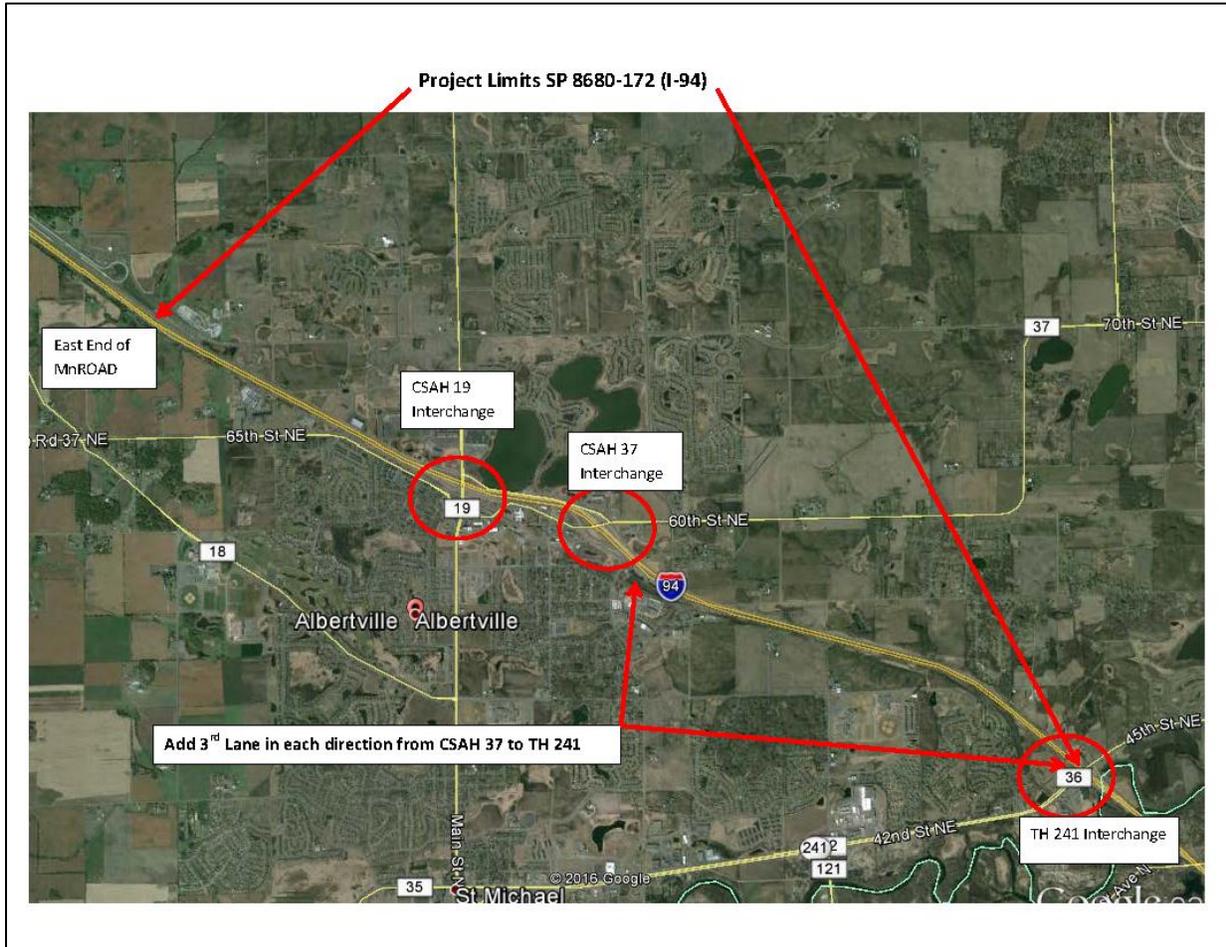


Exhibit B3. MnDOT OES Letter to USFWS (July 5, 2017)



July 5, 2017

Andrew Horton
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Minnesota/Wisconsin ES Field Office
4101 American Blvd East
Bloomington, MN 55425-1665

Notification of Determination – May affect, but will not cause prohibited incidental take – northern long-eared bat (*Myotis septentrionalis*)

S.P. 8680-172, I-94
Wright County, Minnesota

Project Description

The proposed project will reconstruct I-94 from the east end of the MnROAD Research Facility to TH 241 in St. Michael. The purpose of the project is to improve mobility and safety between Albertville and St. Michael. The project will replace the pavement from the east end of MnROAD to TH 241. A third lane will be added in both directions of I-94 between CSAH 37 in Albertville and TH 241 in St. Michael. The TH 241 interchange will be reconfigured to improve operations; the interchange work could include widening or replacing the TH 241 bridge. The CSAH 19 bridges are due for major rehab or replacement. If funding is available, an eastbound collector-distributor road would be built between CSAH 19 and CSAH 37. Right-of-way will be acquired.

Map(s) attached below

Species List for the Project County

According to the official County Distribution of Minnesota Federally-Listed Threatened, Endangered, Proposed, and Candidate Species list (revised in March 2017), maintained by the Service, the project county is within the distribution range of the following:

Revised March 2017

County	Species	Status	Habitat
Wright	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.

State Project 8680-172
ESA (Section 7) Notice of Determination
July 5, 2017

Exhibit B3. MnDOT OES Letter to USFWS (July 5, 2017)

Information to Determine NLEB 4(d) Rule Compliance:		YES	NO
1.	Does the project occur wholly outside of the WNS Zone?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	Have you contacted the appropriate agency to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.	Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.	Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.	Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question #1 or yes to question #2 and no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the Biological Opinion.

Streamlined NLEB Consultation Table - General Project Information		YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ¹ ? (if yes, report acreage below)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of forest conversion (including winter)		3.5	
If known, estimated acres ² of forest conversion from April 1 to October 31		0	
If known, estimated acres of forest conversion from June 1 to July 31 ³		0	
Does the project include timber harvest? (if yes, report acreage below)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest			
If known, estimated acres of timber harvest from April 1 to October 31			
If known, estimated acres of timber harvest from June 1 to July 31			
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Does the project install new wind turbines? (if yes, report capacity in MW below)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)			

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Notice of Determination

Northern Long-eared Bat— May affect, but will not cause prohibited incidental take.

According to the information provided, this project will include tree removal and bridge work. There are no known locations of NLEB roost trees or hibernacula in the vicinity of this project (MNDNR 2017). By signing this form, MnDOT on behalf of the FHWA, determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, MnDOT may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2)

State Project 8680-172
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with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic Biological Opinion. MnDOT will update this determination annually for multi-year activities.

MnDOT, on behalf of the FHWA, understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. MnDOT will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. **Involved parties will promptly notify the appropriate USFWS Field Office, and MnDOT Office of Environmental Stewardship, upon finding a dead, injured, or sick NLEB.**

Please contact me if there are questions or concerns.



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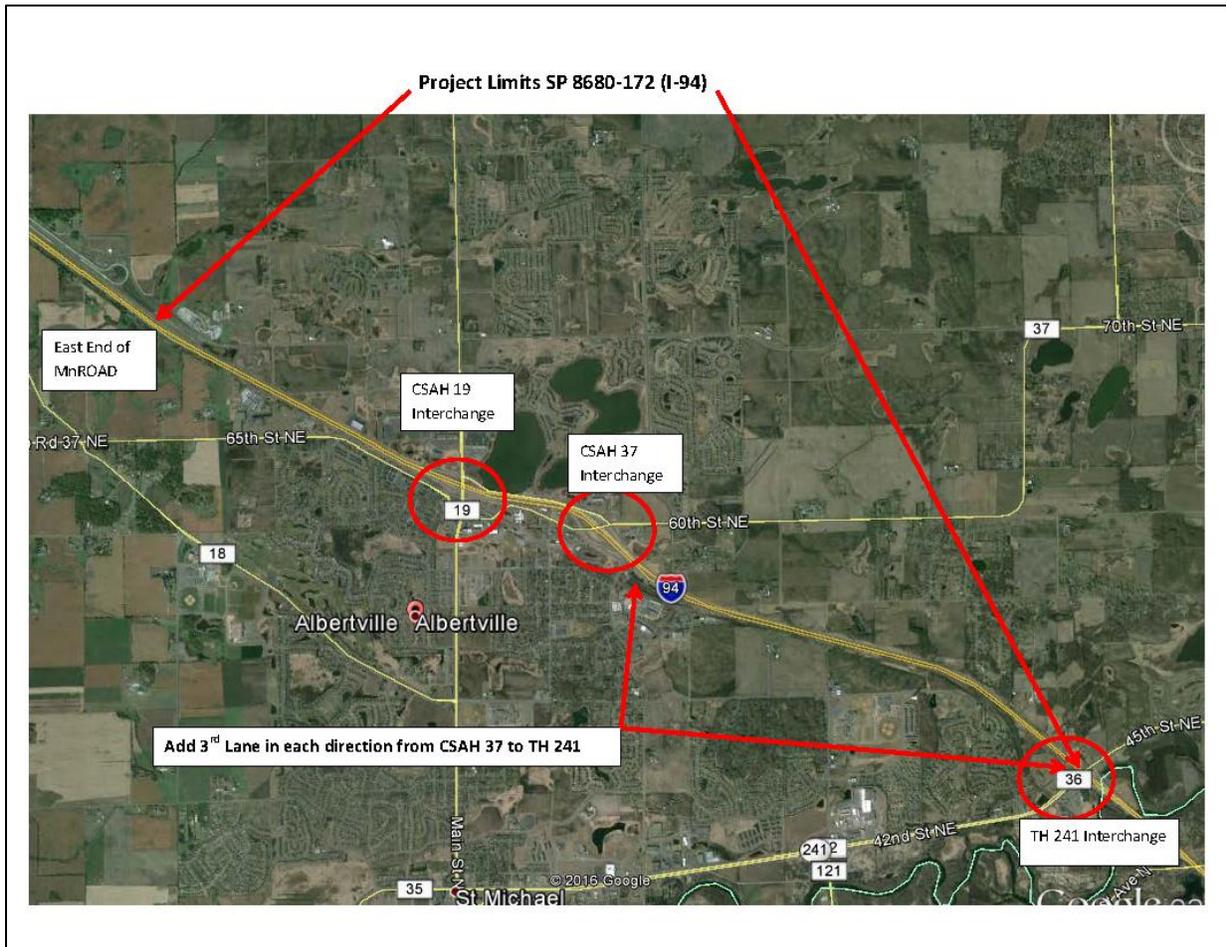


Exhibit B4. DNR Letter and Attachments (July 25, 2016)

From: [Dumont, Claudia \(DOT\)](#)
To: [Brett Danner](#)
Subject: FW: DNR Comments on MnDOT Early Notification Memo, I-94 reconstruction near Albertville, Wright County (SP8680-172)
Date: Tuesday, July 26, 2016 10:19:18 AM
Attachments: [8680-172 ENM.pdf](#)
[Curb design \(from Chapter 1\).pdf](#)
[Entanglement \(from Chapter 1\) w-edits for 2014spec.pdf](#)
[Ebfiver&factsheet2008 9.pdf](#)
[DNRbasemap.pdf](#)

Hi Brett – for the I-94 project..

From: Leete, Peter (DOT)
Sent: Monday, July 25, 2016 7:15 PM
To: Dumont, Claudia (DOT)
Cc: Stangler, Michael (DOT); Smith, Christopher E (DOT); 'Wingert, Sarah E MVP'; Straumanis, Sarma (DOT); Joyal, Lisa (DNR); Horton, Becky (DNR); Stewig, Joe (DNR); Stradal, Roger A (DNR); Bengtson, Fred (DNR); Hoaglund, Erica (DNR)
Subject: DNR Comments on MnDOT Early Notification Memo, I-94 reconstruction near Albertville, Wright County (SP8680-172)

Claudia,

This email is the DNR response for your project records. I have not sent this Early Notification Memo (ENM) out for full DNR review. The following comments are based on information provided in the submitted documents regarding the proposed reconstruction of I-94 between TH241 through Albertville to the MnROAD facility. Please consider the following comments as final designs and special provisions are developed:

1. For MnDOT planning purposes, attached to this email is a map of the project area (DNRbasemap.pdf) showing nearby locations of DNR areas concern (if they exist), such as Public Waters (in blue), waterbodies designated as infested with aquatic invasive species (AIS), snowmobile Trails (in pink), and various green shaded polygons for Sites of Biodiversity Significance. This map may be shared or included in project documentation, as all information is from publically available data layers. The Natural Heritage Information System (NHIS) database has been reviewed, though in order to prevent the inadvertent release of a rare features location, those details are not shown on the map. Comments on potential impacts to rare features listed in the NHIS comments are below. If you have questions regarding proposed work near any of the data shown, please give me a call.
2. There are two DNR Public Waters in the project area (School Lake, Hunters Lake and an Unnamed wetland at RP199.5). These are identified in dark blue on the attached DNRbasemap.pdf. Please note the Public Waters in the project area. The Early Notification Memo does not state whether there will be work at these locations or not. Be aware that the Ordinary High Water elevation is 947.3 ft (NGVD 29) for both Hunters and School Lakes. Should plans proposed work at or below this elevation, please contact me as further review may be required. More information is on the DNR lakefinder website:
<http://www.dnr.state.mn.us/lakefind/showlevel.html?downum=86002500>
<http://www.dnr.state.mn.us/lakefind/showlevel.html?downum=86002600>

Please be aware that the MPCA NPDES general permit for authorization to discharge stormwater associated with construction activities (permit MN R10001) recognizes the DNR “work in water restrictions” during specified fish migration and spawning time frames for areas adjacent to water. During the restriction period, all exposed soil areas that are within 200 feet of the water’s edge and drain to these waters, must have erosion prevention stabilization activities initiated immediately after soil disturbing activity has ceased (and be completed within 24 hours). For restriction dates in this area are March 15 through June 15.

3. Please remind contractors that a separate water use permit is required for withdrawal of more than

Exhibit B4. DNR Letter and Attachments (July 25, 2016)

10,000 gallons of water per day or 1 million gallons per year from surface water or ground water. GP1997-0005 (temporary water appropriations) covers a variety of activities associated with road construction and should be applied of if applicable. An individual appropriations permit may be required for projects lasting longer than one year or exceeding 50 million gallons. Information is located at: http://www.dnr.state.mn.us/waters/watermgmt_section/appropriations/permits.html

4. The Minnesota Natural Heritage Information System (NHIS) has been queried to determine if any rare plant or animal species, native plant communities, or other significant natural features are known to occur within an approximate one-mile radius of the project area. There were few rare features identified in this query. In order to prevent the inadvertent release of the location of specific listed or rare species contained in the NHIS, I have not identified the species or their location on the attached 'DNRbasemap.pdf'. If these details are needed for documentation, please contact me. Please note that the following rare features were identified in the query and *may* be impacted by the proposed project. Suggested avoidance and/or protection measures are also identified:

- a. Blanding's turtles (*Emydoidea blandingii*), a state-listed threatened species, have been reported from the vicinity of the proposed project and may be encountered on site. If Blanding's turtles are found on the site, please remember that state law and rules prohibit the destruction of threatened or endangered species, except under certain prescribed conditions. If turtles are in imminent danger they should be moved by hand out of harms way, otherwise they should be left undisturbed. For your information, I have attached a Blanding's turtle fact sheet that describes the habitat use and life history of this species. The fact sheet also provides two lists of recommendations for avoiding and minimizing impacts to this rare turtle. **Please refer to the first list of recommendations for your project.** If greater protection for turtles is desired, the second list of additional recommendations can also be implemented. The attached flyer should be given to all contractors working in the area.

The use of erosion control blanket should be limited to 'bio-netting' or 'naturalnetting' types (category 3N or 4N), and specifically not allow plastic mesh netting. Attached is a page that outlines the issue of entanglement. This is from Chapter one in the manual ' Best Practices for Meeting GP 2004-0001', at http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_manual.html

Additionally, any new curb should be Type D or Type S, as these are mountable curbs that also allow animals to exit the roadway should they attempt to cross the road.

- b. The northern long-eared bat (*Myotis septentrionalis*), federally listed as threatened and state-listed as special concern, can be found throughout Minnesota. During the winter this species hibernates in caves and mines, and during the active season (approximately April-October) it roosts underneath bark, in cavities, or in crevices of both live and dead trees. Pup rearing is during June and July. Activities that may impact this species include, but are not limited to, any disturbance to hibernacula and destruction/degradation of habitat (including tree removal).

The U.S. Fish and Wildlife Service (USFWS) has published a final 4(d) rule that identifies prohibited take. To determine whether you need to contact the USFWS, please refer to the USFWS Key to the Northern Long-Eared Bat 4(d) Rule (see links below). Please note that the NHIS does not contain any known occurrences of northern long-eared bat roosts or hibernacula within an approximate one-mile radius of the proposed project.

Links: USFWS Key to the Northern Long-Eared Bat 4(d) Rule for Non-Federal Activities

Exhibit B4. DNR Letter and Attachments (July 25, 2016)

<http://www.fws.gov/midwest/endangered/mammals/nleb/KeyFinal4dNLEB.html>

USFWS Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions

<http://www.fws.gov/midwest/endangered/mammals/nleb/KeyFinal4dNLEBFedProjects.html>

USFWS Northern Long-eared Bat Website

<http://www.fws.gov/midwest/endangered/mammals/nleb/index.html>

USFWS Northern Long-eared Bat Fact Sheet

<http://www.fws.gov/midwest/endangered/mammals/nleb/nlebFactSheet.html>

The NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. If information becomes available indicating additional listed species or other rare features, further review may be necessary.

This ENM has not been circulated to DNR field staff for comment. I will let you know if any additional comments on design requirements are returned to me due to this email.

DNR folks, if I've missed anything, or have any suggestions for MnDOT to consider, please respond ASAP to Claudia, and myself.

Contact me if you have questions

Peter Leete
Transportation Hydrologist (DNR-MnDOT Liaison)
DNR Ecological & Water Resources
Ph: 651-366-3634

Exhibit B4. DNR Letter and Attachments (July 25, 2016)

Curb Design and Small Animals



Traditional curb and gutter inadvertently directs small mammals and reptiles into the storm sewer. Animals trying to leave the road are blocked by the steepness and height of the curb and they will travel parallel to it until they find an exit. The storm sewer is the exit they literally fall into, often with fatal consequences.



A design without the side box inlet does give the animals a better chance of moving past the storm sewer to seek a safe way off the road. Coincidentally, this design is increasingly being utilized due to reduced installation and maintenance costs.



A sloped curb allows small animals to leave the road surface at any point. Yet it still provides for the collection and treatment of stormwater. If this modification to the entire curb system is not possible, a compromise is install sections of the curb on either side of the storm water drain for several feet will allow an area for animals to exit. Priority areas for mountable curbs are those with nearby wetlands.

(Specify Type D or Type S curb in plans)



In typical rural sections, trapping of animals on road surfaces is not an issue. Yet the movement onto the road surface from adjacent areas is a continuing concern. In areas of known concentrations, a wildlife barrier may be something to consider to reduce the likelihood of vehicle-animal collisions.

http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_manual.html
Best Practices for Meeting DNR GP 2004-0001 (version 4, October 2014)

Exhibit B4. DNR Letter and Attachments (July 25, 2016)

Preventing Entanglement by Erosion Control Blanket

Plastic mesh netting is a common component in erosion control blanket. It is utilized to hold loose fibrous materials in place (EG straw) until vegetation is established. Erosion control blanket is being utilized extensively and is effective for reducing soil erosion, benefitting both soil health and water quality. Unfortunately there is a negative aspect of the plastic mesh component: It is increasingly being documented that its interaction with reptiles and amphibians can be fatal (Barton and Kinkead, 2005; Kapfer and Paloski, 2011). Mowing machinery is also susceptible to damage due to the long lasting plastic mesh.

Potential Problems:

- Plastic netting remains a hazard long after other components have decomposed.
- Plastic mesh netting can result in entanglement and death of a variety of small animals. The most vulnerable group of animals are the reptiles and amphibians (snakes, frogs, toads, salamanders, turtles). Ducklings, small mammals, and fish have also been observed entangled in the netting.
- Road maintenance machinery can snag the plastic mesh and pull up long lengths into machinery, thus binding up machinery and causing damage and/or loss of time cleaning it out.

Suggested Alternatives:

- Do not use in known locations of reptiles or amphibians that are listed as Threatened or Endangered species.
- Limit use of blanket containing welded plastic mesh to areas away from where reptiles or amphibians are likely (near wetlands, lakes, watercourses, or rock outcrops) or habitat transition zones (prairie – woodland edges, rocky outcrop – woodland edges, steep rocky slopes, etc.)
- Select products with biodegradable netting (preferably made from natural fibers, though varieties of biodegradable polyesters also exist on the market). Biodegradable products will degrade under a variety of moisture and light conditions.
- DO NOT use products that require UV-light to degrade (also called “photodegradable”) as they do not degrade properly when shaded by vegetation.

Solution: Most categories of erosion control blanket and sediment control logs are available in natural net options.

- Specify ‘Natural Netting’ for rolled erosion control products, per MnDOT Spec 3885. ~~See Table 3885-1.~~
- Specify ‘Natural Netting’ for sediment control logs, per MnDOT Spec 3897



use: NT for category 0 (Table 3885-1)
use: 3N or 4N for Category 3 or 4 (Table 3885-3)

The plastic mesh component of erosion control blanket becomes a net for entrapment.

Literature Referenced

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Best Practices for Meeting DNR GP 2004-0001 (version 4, October 2014)

Chapter 1, Page 25

Exhibit B4. DNR Letter and Attachments (July 25, 2016)

CAUTION



BLANDING'S TURTLES MAY BE ENCOUNTERED IN THIS AREA

The unique and rare Blanding's turtle has been found in this area. Blanding's turtles are state-listed as Threatened and are protected under Minnesota Statute 84.095, Protection of Threatened and Endangered Species. Please be careful of turtles on roads and in construction sites. For additional information on turtles, or to report a Blanding's turtle sighting, contact the DNR Nongame Specialist nearest you: Bemidji (218-308-2641); Grand Rapids (218-327-4518); New Ulm (507-359-6033); Rochester (507-280-5070); or St. Paul (651-259-5764).

DESCRIPTION: The Blanding's turtle is a medium to large turtle (5 to 10 inches) with a black or dark blue, dome-shaped shell with muted yellow spots and bars. The bottom of the shell is hinged across the front third, enabling the turtle to pull the front edge of the lower shell firmly against the top shell to provide additional protection when threatened. The head, legs, and tail are dark brown or blue-gray with small dots of light brown or yellow. A distinctive field mark is the bright yellow chin and neck.

**BLANDING'S TURTLES DO NOT MAKE GOOD PETS
IT IS ILLEGAL TO KEEP THIS THREATENED SPECIES IN CAPTIVITY**

Exhibit B4. DNR Letter and Attachments (July 25, 2016)

Environmental Review Fact Sheet Series

Endangered, Threatened, and Special Concern Species of Minnesota

Blanding's Turtle

(Emydoidea blandingii)

Minnesota Status: Threatened
Federal Status: none

State Rank¹: S2
Global Rank¹: G4

HABITAT USE

Blanding's turtles need both wetland and upland habitats to complete their life cycle. The types of wetlands used include ponds, marshes, shrub swamps, bogs, and ditches and streams with slow-moving water. In Minnesota, Blanding's turtles are primarily marsh and pond inhabitants. Calm, shallow water bodies (Type 1-3 wetlands) with mud bottoms and abundant aquatic vegetation (e.g., cattails, water lilies) are preferred, and extensive marshes bordering rivers provide excellent habitat. Small temporary wetlands (those that dry up in the late summer or fall) are frequently used in spring and summer -- these fishless pools are amphibian and invertebrate breeding habitat, which provides an important food source for Blanding's turtles. Also, the warmer water of these shallower areas probably aids in the development of eggs within the female turtle. Nesting occurs in open (grassy or brushy) sandy uplands, often some distance from water bodies. Frequently, nesting occurs in traditional nesting grounds on undeveloped land. Blanding's turtles have also been known to nest successfully on residential property (especially in low density housing situations), and to utilize disturbed areas such as farm fields, gardens, under power lines, and road shoulders (especially of dirt roads). Although Blanding's turtles may travel through woodlots during their seasonal movements, shady areas (including forests and lawns with shade trees) are not used for nesting. Wetlands with deeper water are needed in times of drought, and during the winter. Blanding's turtles overwinter in the muddy bottoms of deeper marshes and ponds, or other water bodies where they are protected from freezing.

LIFE HISTORY

Individuals emerge from overwintering and begin basking in late March or early April on warm, sunny days. The increase in body temperature which occurs during basking is necessary for egg development within the female turtle. Nesting in Minnesota typically occurs during June, and females are most active in late afternoon and at dusk. Nesting can occur as much as a mile from wetlands. The nest is dug by the female in an open sandy area and 6-15 eggs are laid. The female turtle returns to the marsh within 24 hours of laying eggs. After a development period of approximately two months, hatchlings leave the nest from mid-August through early-October. Nesting females and hatchlings are often at risk of being killed while crossing roads between wetlands and nesting areas. In addition to movements associated with nesting, all ages and both sexes move between wetlands from April through November. These movements peak in June and July and again in September and October as turtles move to and from overwintering sites. In late autumn (typically November), Blanding's turtles bury themselves in the substrate (the mud at the bottom) of deeper wetlands to overwinter.

IMPACTS / THREATS / CAUSES OF DECLINE

- loss of wetland habitat through drainage or flooding (converting wetlands into ponds or lakes)
- loss of upland habitat through development or conversion to agriculture
- human disturbance, including collection for the pet trade* and road kills during seasonal movements
- increase in predator populations (skunks, raccoons, etc.) which prey on nests and young

*It is illegal to possess this threatened species.

Exhibit B4. DNR Letter and Attachments (July 25, 2016)

Minnesota DNR Division of Ecological Resources Environmental Review Fact Sheet Series. Blanding's Turtle.

2

RECOMMENDATIONS FOR AVOIDING AND MINIMIZING IMPACTS

These recommendations apply to typical construction projects and general land use within Blanding's turtle habitat, and are provided to help local governments, developers, contractors, and homeowners minimize or avoid detrimental impacts to Blanding's turtle populations. List 1 describes minimum measures which we recommend to prevent harm to Blanding's turtles during construction or other work within Blanding's turtle habitat. List 2 contains recommendations which offer even greater protection for Blanding's turtles populations; this list should be used *in addition to the first list* in areas which are known to be of state-wide importance to Blanding's turtles (contact the DNR's Natural Heritage and Nongame Research Program if you wish to determine if your project or home is in one of these areas), or in any other area where greater protection for Blanding's turtles is desired.

List 1. Recommendations for all areas inhabited by Blanding's turtles.	List 2. Additional recommendations for areas known to be of state-wide importance to Blanding's turtles.
GENERAL	
A flyer with an illustration of a Blanding's turtle should be given to all contractors working in the area. Homeowners should also be informed of the presence of Blanding's turtles in the area.	Turtle crossing signs can be installed adjacent to road-crossing areas used by Blanding's turtles to increase public awareness and reduce road kills.
Turtles which are in imminent danger should be moved, by hand, out of harms way. Turtles which are not in imminent danger should be left undisturbed.	Workers in the area should be aware that Blanding's turtles nest in June, generally after 4pm, and should be advised to minimize disturbance if turtles are seen.
If a Blanding's turtle nests in your yard, do not disturb the nest.	If you would like to provide more protection for a Blanding's turtle nest on your property, see "Protecting Blanding's Turtle Nests" on page 3 of this fact sheet.
Silt fencing should be set up to keep turtles out of construction areas. It is <u>critical</u> that silt fencing be removed after the area has been revegetated.	Construction in potential nesting areas should be limited to the period between September 15 and June 1 (this is the time when activity of adults and hatchlings in upland areas is at a minimum).
WETLANDS	
Small, vegetated temporary wetlands (Types 2 & 3) should not be dredged, deepened, filled, or converted to storm water retention basins (these wetlands provide important habitat during spring and summer).	Shallow portions of wetlands should not be disturbed during prime basking time (mid morning to mid- afternoon in May and June). A wide buffer should be left along the shore to minimize human activity near wetlands (basking Blanding's turtles are more easily disturbed than other turtle species).
Wetlands should be protected from pollution; use of fertilizers and pesticides should be avoided, and run-off from lawns and streets should be controlled. Erosion should be prevented to keep sediment from reaching wetlands and lakes.	Wetlands should be protected from road, lawn, and other chemical run-off by a vegetated buffer strip at least 50' wide. This area should be left unmowed and in a natural condition.
ROADS	
Roads should be kept to minimum standards on widths and lanes (this reduces road kills by slowing traffic and reducing the distance turtles need to cross).	Tunnels should be considered in areas with concentrations of turtle crossings (more than 10 turtles per year per 100 meters of road), and in areas of lower density if the level of road use would make a safe crossing impossible for turtles. Contact your DNR Regional Nongame Specialist for further information on wildlife tunnels.
Roads should be ditched, not curbed or below grade. If curbs must be used, 4 inch high curbs at a 3:1 slope are preferred (Blanding's turtles have great difficulty climbing traditional curbs; curbs and below grade roads trap turtles on the road and can cause road kills).	Roads should be ditched, not curbed or below grade.

Exhibit B4. DNR Letter and Attachments (July 25, 2016)

Minnesota DNR Division of Ecological Resources Environmental Review Fact Sheet Series. Blanding's Turtle.

ROADS cont.	
Culverts between wetland areas, or between wetland areas and nesting areas, should be 36 inches or greater in diameter, and elliptical or flat-bottomed.	Road placement should avoid separating wetlands from adjacent upland nesting sites, or these roads should be fenced to prevent turtles from attempting to cross them (contact your DNR Nongame Specialist for details).
Wetland crossings should be bridged, or include raised roadways with culverts which are 36 in or greater in diameter and flat-bottomed or elliptical (raised roadways discourage turtles from leaving the wetland to bask on roads).	Road placement should avoid bisecting wetlands, or these roads should be fenced to prevent turtles from attempting to cross them (contact your DNR Nongame Specialist for details). This is especially important for roads with more than 2 lanes.
Culverts under roads crossing streams should be oversized (at least twice as wide as the normal width of open water) and flat-bottomed or elliptical.	Roads crossing streams should be bridged.
UTILITIES	
Utility access and maintenance roads should be kept to a minimum (this reduces road-kill potential).	
Because trenches can trap turtles, trenches should be checked for turtles prior to being backfilled and the sites should be returned to original grade.	
LANDSCAPING AND VEGETATION MANAGEMENT	
Terrain should be left with as much natural contour as possible.	As much natural landscape as possible should be preserved (installation of sod or wood chips, paving, and planting of trees within nesting habitat can make that habitat unusable to nesting Blanding's turtles).
Graded areas should be revegetated with native grasses and forbs (some non-natives form dense patches through which it is difficult for turtles to travel).	Open space should include some areas at higher elevations for nesting. These areas should be retained in native vegetation, and should be connected to wetlands by a wide corridor of native vegetation.
Vegetation management in infrequently mowed areas -- such as in ditches, along utility access roads, and under power lines -- should be done mechanically (chemicals should not be used). Work should occur fall through spring (after October 1 st and before June 1 st).	Ditches and utility access roads should not be mowed or managed through use of chemicals. If vegetation management is required, it should be done mechanically, as infrequently as possible, and fall through spring (mowing can kill turtles present during mowing, and makes it easier for predators to locate turtles crossing roads).

Protecting Blanding's Turtle Nests: Most predation on turtle nests occurs within 48 hours after the eggs are laid. After this time, the scent is gone from the nest and it is more difficult for predators to locate the nest. Nests more than a week old probably do not need additional protection, unless they are in a particularly vulnerable spot, such as a yard where pets may disturb the nest. Turtle nests can be protected from predators and other disturbance by covering them with a piece of wire fencing (such as chicken wire), secured to the ground with stakes or rocks. The piece of fencing should measure at least 2 ft. x 2 ft., and should be of medium sized mesh (openings should be about 2 in. x 2 in.). It is *very important* that the fencing be removed **before August 1st** so the young turtles can escape from the nest when they hatch!

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Exhibit B4. DNR Letter and Attachments (July 25, 2016)

Minnesota DNR Division of Ecological Resources Environmental Review Fact Sheet Series. Blanding's Turtle.

4

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