

Appendix I. Agency Coordination



Agency Coordination Meetings



Minutes
Northern Lights Express
Wisconsin Agency Coordination Meeting
February 25, 2016 – 1:00 PM to 3:00 PM (Central Time)

Participants: Andrea Martin – Federal Railroad Administration (FRA) (by telephone)
Frank Loetterle – Minnesota Department of Transportation (MnDOT)
Garneth Peterson – MnDOT
Amy Adrihan – Wisconsin Department of Transportation (WisDOT)
Anna Davey - WisDOT
Steve LaValley – Wisconsin Department of Natural Resources (WDNR)
Arun Rao – WisDOT (by telephone)
Jonquil Johnson – WisDOT (by telephone)
Ben Orne – U.S. Army Corps of Engineers (by telephone)
Caron Kloser – HNTB
Todd Ullom – Sambatek (subconsultant to HNTB)
Melanie Johnson – Quandel (by telephone)
Kelly Garvey – HDR
Kelly Farrell – HDR (by telephone)

Caron Kloser provided an overview of the agenda and noted the purpose of this meeting is to kick off the Tier 2 Environmental Assessment (EA) phase of the project. Andrea Martin from FRA welcomed everyone and provided opening remarks.

Project Overview

Description

Frank Loetterle provided an overview of the Northern Lights Express (NLX) project, an intercity passenger rail service between Minneapolis and Duluth. The project will operate on 152 miles of existing BNSF track. Intermediate stations are proposed in Coon Rapids, Cambridge, and Hinckley, MN; and Superior, WI.

Frank also discussed the work that has already been completed. In March 2013, there was a completed Service Development Plan and a Tier 1 Service Level Environmental Assessment (EA). In August 2013, a FONSI was issued and Minnesota issued a Negative Declaration finding. At the end of 2013, the Preliminary Engineering (PE) phase began.

Current Work – PE/NEPA Phase

Frank noted that the team is working on financial planning, operational planning and preliminary engineering. These items allow work to begin on the Tier 2 Project Level Environmental Assessment (EA).

Proposed Operations

Frank discussed the proposed operations of the NLX project, which proposes four round trips at speeds up to 90 mph. With these speeds, the travel time between the Twin Cities and the Twin Ports is



approximately 2.5 hours. The trip speed and frequencies were reduced from the original 110 mph/8 round trip service in order to better match capital costs to anticipated revenue.

Infrastructure Improvements

Frank noted that the project is proposing track and signal improvements and is discussing them with BNSF Railway, which owns and operates the project corridor. The NLX project also proposes to improve grade crossings and add a maintenance and layover facility.

Equipment

Frank noted that for planning purposes, MnDOT is assuming train equipment will be next generation high-speed diesel electric locomotives and bi-level coaches. Upcoming discussions with BNSF will determine the actual equipment that will be utilized.

Stations/Facilities

Frank discussed the plans for stations and facilities. Stations will include a platform, a climate controlled station building, platform shelters, lighting. Stations will be ADA compliant.

A maintenance facility will be located in either Sandstone or Duluth. The Sandstone layover/maintenance facility site, near downtown Sandstone, has sufficient space adjacent to the mainline track. If the facility is in Duluth, it would be located southeast of the Depot and southeast of I-35 next to the port.

Impact Analysis Approach

Tier 1 – Service Level EA Outcomes

Caron discussed the outcomes of the Tier 1 Service Level EA, which evaluated impacts to the corridor as a whole, selected a preferred corridor, looked at project footprint impacts of 110 mph service, and completed a historic resources survey. Caron provided a handout which outlines the Tier 1 EA Impacts Analysis and what will be reviewed in Tier 2. Caron also described how a land cover analysis was used to identify a summary of impacts. It was also noted that the wetland acreage was estimated using GIS information.

Tier 2 – Project Level EA Analyses

Caron described the overall approach for the Tier 2 Project Level EA. There will be a different footprint under analysis in this phase due to a lower maximum speed of 90 mph. The team also has more information on stations and facilities which will help with further analysis. The handout provided to meeting attendees is a good guide for what can be expected from the Tier 2 EA document.

Amy Adrihan asked if NLX will be buildable after completion of the Tier 2 EA. Caron responded that after the Tier 2 EA, the project would move into the final design and permitting phase. Some issue analysis would be completed but MnDOT will do further detailed evaluation (such as wetland delineation) during future design and permitting phases.

Todd Ullom (Sambatek) provided an overview of the approach to evaluating wetlands impacts. Amy noted that there are more wetlands in Wisconsin than what is shown on GIS maps. Steve LaValley agreed and commented there is likely more than one acre of wetlands impact; however, wetlands are

hard to identify from mapping due to tree cover. Todd responded that the team will be using updated National Wetlands Inventory (NWI) maps, Wisconsin Wetlands Inventory (WWI) information, soil survey information and supplemental field verification throughout the corridor to obtain a good understanding of the wetland signatures in the GIS database. Wetland delineations will not be completed until there is more definite information about the start of construction.

Garneth Peterson pointed out that the team looked at the entire corridor in Tier 1 because the location of improvements had not yet been identified. Tier 1 identified the category of improvements but Tier 2 will provide a better indication of where those improvements will be located.

Steve asked if the decrease in train speed from 110 mph to 90 mph shrinks the track footprint. Garneth responded that if improvements are no longer needed, such as sidings, the track footprint may shrink. The footprint will be based on the level of improvements that are needed.

Caron reviewed other key impact areas to be evaluated and noted that she reviewed the agency comments from the Tier 1 document. Now that the team has station footprints, they will revisit storm water and wildlife impacts. The team discussed the need for fencing, and part of preliminary engineering work includes identifying where those sites are, if needed. The project team will complete grade crossing analyses, including potential crossing closures, to determine what changes and improvements are needed to accommodate passenger rail service.

Caron noted that Tier 2 will also look at threatened/endangered species and snowmobile trail crossings. MnDOT asked WisDOT if there is a standard location to collect snowmobile trail information. Amy responded that she could talk to the maintenance staff, while Steve will follow-up with other WDNR staff. Andrea suggested specifically requesting information on snowmobile trails at public meetings or through a public notice. Jonquil added that WisDOT has a snowmobile administrator and that contact information is available on the DOT website. They would likely have a database with snowmobile trails and other information.

Caron noted that the project team is also working on a limited Phase 1 ESA during Tier 2 which will look at the 40 sites identified in Tier 1, as well as station and facilities sites in more detail. The study team will also update the noise and vibration analysis completed in Tier 1 to include the maximum speed change to 90 mph.

Garneth noted that the Section 106 consultation will be completed as part of Tier 2. A programmatic agreement was developed with the MnSHPO and WisSHPO for cultural resources review for this project. An architectural survey was completed after the Tier 1 EA, and the team will complete an archaeological survey in Tier 2.

Steve asked if there would be any work done on the Grassy Point bridge. Garneth responded that the work currently proposed is more focused on maintenance than major construction. The team will coordinate with US Coast Guard and US Army Corps of Engineers on any bridge work.

Schedule

Caron discussed the schedule and next steps for the project. In Spring 2016, preliminary engineering will be underway followed by the completion of the EA in Summer 2016. The Tier 2 Project Level EA is scheduled for release to the public in Winter 2017, and will include a public meeting on the EA. The final



FRA Decision (FONSI) and Minnesota Finding of Fact is scheduled for release in Winter/Spring 2017. Garneth noted that the project will need to meet requirements of both NEPA and MEPA. It was discussed that there is no separate WEPA findings document required. Jonquil noted that WEPA is tied to whether the project has Wisconsin state funding, the differences are small between NEPA and WEPA and are primarily in Section 106. There is no Wisconsin funding, and WEPA will not apply to this project, but WisDOT will sign the document as a participating agency in the EA.

Station Aerial Shots/Plan Views

Caron described the station location graphics.

Jonquil asked if the team could go over the surrounding land uses for each station. It was discussed that the Superior station is within walking distance of the downtown Superior area to the east and is surrounded by mostly commercial property. Access to the station will be from the east. The main railroad yard and heavy industry properties are to the west. The nearest residential area is west of the railroad yard.

The Hinckley station is in the vicinity of the high school, and within walking distance of the downtown and residential areas. It was noted that the tracks run through the middle of town, which is both a concern and an advantage. The biggest issue from residents is that trains would stop and block intersections, which currently occurs with freight traffic. The NLX train would not block intersections while it is stopped at the station.

The station in Cambridge is in the heart of downtown with residential areas nearby.

The suburban station in Coon Rapids is very accessible from the highway system and across the street from an existing Metro Transit park-and-ride. It is designed to complement future development by the City of Coon Rapids in the area.

The Duluth station is located adjacent to, but separate from the Union Depot. Parking would be accommodated primarily by designated parking in existing facilities located north and south of the Depot.

Andrea asked about the consultation with the Duluth Depot from the historic perspective. Garneth responded that the Depot is listed on the National Register of Historic Places but no boundaries were identified for the historic property. A study was conducted and concluded that the NRHP nomination included the Depot building and did not include the adjacent facilities. The NLX Duluth station is proposed for a site adjacent to the Depot. The team needs MnSHPO concurrence on the updated Depot NRHP definition, before presenting the 10% conceptual design for the NLX station to the MnSHPO.

Amy asked whether the maintenance and layover facility locations had been decided. Frank confirmed that both sites would go through the environmental evaluation process. A final decision on the preferred layover and maintenance sites will be determined after the EA is complete.

Amy asked who was in charge of right-of-way acquisition. Frank responded that if private property needs to be acquired, MnDOT would lead that process. However, Frank noted that very little property acquisition is required, as most of the proposed work will occur within the BNSF right-of-way. The stations are the only locations where some property may need to be acquired, but the plan is to stay on BNSF's property as much as possible. Most of the proposed station sites are on publicly owned property.



MnDOT anticipates acquiring a small amount of land from a church in Hinckley and has consulted with them regarding potential acquisitions. In Superior, MnDOT would need an easement for an access road to the station site. MnDOT will work with City of Superior staff to ensure that the access area is maintained for an easement.

Caron concluded the meeting by stating that the team is holding four open houses to update the public on the project. There was an open house in Fridley on February 24 for the Minneapolis and Coon Rapids stations. The open house will be held in Duluth on February 25 for the Twin Port stations. Open houses in Cambridge and Hinckley will be held on February 29 and March 3, respectively. It was also noted that the Minnesota Agency Coordination meeting will be held March 3. Garneth added that the open house meetings will use a lot of the same information presented today. All of the meeting materials will be posted to the project website.



Minutes
Northern Lights Express Project
Minnesota Agency Coordination Meeting
March 3, 2016 – 9:00 AM to 11:00 AM (Central Time)

Participants: Andrea Martin – Federal Railroad Administration (FRA) (by telephone)
Francis Loetterle – Minnesota Department of Transportation (MnDOT)
Garneth Peterson – MnDOT
Bob Manzoline- St. Louis/Lake County Regional Railroad Authority - (by telephone)
Becky Balk – Minnesota Department of Agriculture
Jen Blonn – United States Environmental Protection Agency (US EPA) – (by telephone)
Scott Striffler – United States Coast Guard (US CG) Bridge Office – (by telephone)
Catherine Nadals– Surface Transportation Board (STB) – (by telephone)
Mike Higgins – STB – (by telephone)
Katherine Bourdon – STB – (by telephone)
Russ Owen – Metropolitan Council – (by telephone)
Kelly Garvey – HDR
Kelly Farrell – HDR–(by telephone)
Todd Ullom – Sambatek (subconsultant to HNTB)
Jessica Abernathy – Sambatak
Charlie Quandel – Quandel Consultants (Quandel)
Melanie Johnson – Quandel (by telephone)
Caron Kloser – HNTB

Andrea Martin of FRA provided opening remarks about the project and noted that the purpose of today's meeting is to kick off the Tier 2 Environmental Assessment (EA) phase of the project.

Project Overview

Description

Caron Kloser provided an overview of the Northern Lights Express project, noting that the Northern Lights Express is an intercity passenger rail service between Minneapolis and Duluth. The project will operate on 152 miles of existing BNSF track, with intermediate stations in Coon Rapids, Cambridge, and Hinckley, MN; and Superior, WI.

Caron also discussed the work that has already been completed. In March 2013, there was a completed Service Development Plan and a Tier 1 Service Level Environmental Assessment (EA). In August 2013, a FONSI was issued and Minnesota issued a Negative Declaration. At the end of 2013, the Preliminary Engineering (PE) phase began.

Current Work

Caron noted that the team is currently working on financial planning, operational planning, and preliminary engineering. These items allow work to begin on the Tier 2 Project Level EA.



Proposed Operations

Caron discussed the proposed operations of the NLX project, which proposes four round trips at speeds up to 90 mph. With these speeds, the travel time between the Twin Cities and the Twin Ports is approximately 2.5 hours.

Infrastructure Improvements

Caron noted that the project is proposing to upgrade the tracks and signals, and is discussing these improvements with BNSF. The project would also improve grade crossings; construct a maintenance and layover facility and purchase new train equipment. Garneth Peterson added that the infrastructure improvements are what will be analyzed in the Tier 2 Project Level EA now that the information is available. This may help clarify what was completed in Tier 1 versus what will be done in Tier 2.

Equipment

Frank Loetterle noted that for planning purposes, the project is assuming the equipment will be next generation high speed diesel-electric locomotives and bi-level coaches. Upcoming discussions with BNSF will determine the actual equipment that will be utilized.

Stations/Facilities

Caron discussed the plans for station and facility designs. As part of the study, the team looked at the station sites selected for analysis. All stations will have a platform, a climate controlled station building, platform shelters and lighting. The stations will be ADA compliant. As noted earlier, proposed stations will be at Target Field in Minneapolis, Coon Rapids, Cambridge, Hinckley, and Duluth, MN, along with a station in Superior, WI.

A maintenance facility will be located in either Sandstone or Duluth. The facility will be large enough to accommodate a train inside to allow for maintenance in a climate controlled space. It would also have a train wash, lighting, signage, security, office and shop space as well as yard and lead track. Both sites are also candidates for layover facilities.

Impact Analysis Approach

Tier 1 – Service Level EA Outcomes

Caron discussed the outcomes of the Tier 1 Service Level EA which evaluated impacts of the corridor as a whole, selected a preferred corridor, looked at project footprint impacts of 110 mph service, and completed a historic resources survey. Caron provided a handout that outlines the work that was completed as part of Tier 1.

Tier 2 – Project Level EA Analyses

Caron described the overall approach for the Tier 2 Project Level EA. The Tier 2 analyses will update the Tier 1 impacts based on the updated project construction footprint, station and facility site footprints. It will also identify mitigation strategies/commitments and will include other impacts identified during Tier 2 analysis.

There will be a base map that is developed and as more information is available there will be additional analysis of the project construction footprint. Caron noted that the environmental analysis will be GIS



based. The Tier 2 Project Level EA will provide additional detail and a better picture of where impacts may occur.

Todd Ullom (Sambatek) described the GIS analysis of wetlands and floodplains for the Tier 1 EA. Todd noted that in 2010, the Tier 1 completed a wetland assessment that estimated 97 acres of wetland impact. There will be a similar process completed for Tier 2. The National Wetland Inventory (NWI) and Wisconsin Wetland Inventory (WWI) maps have been updated since the Tier 1 process and will provide a better identification of the wetlands throughout the corridor. The team anticipates that wetland impacts will decrease due to less infrastructure improvements required for 90 mph service.

Caron described other resource analyses to be conducted in Tier 2. Stormwater impacts will be updated based on refined PE and will identify best management practices for stormwater control. The team will consult with DNR regarding fencing, if needed for the project. The Tier 2 EA will confirm the prior finding of "may affect but not likely to adversely affect" threatened or endangered species. There will also be consultation regarding the need for plant and mussel surveys. Transportation impacts will also be assessed and will include a traffic analysis at station sites, grade crossing treatments, grade crossing closures, and snowmobile trail crossings.

There will be a limited Phase 1 Environmental Site Assessment (ESA) that will evaluate the station and facility sites, as well as the 40 sites identified in Tier 1. The project team will also update the noise and vibrations analysis based on the revised operating plan and will determine mitigation commitments. Section 106 consultation will be completed on historic sites surveyed during the Tier 1 EA, and archaeological survey will also be completed during the Tier 2 EA. Garneth noted that the meeting handout will be re-sent to meeting attendees who had not received it previously.

Schedule

Caron discussed the schedule and next steps for the project. In Spring 2016, preliminary engineering will be completed, followed by the completion of the EA in Summer 2016. The Tier 2 Project Level EA is scheduled for release to the public in Winter 2017, and will include a public meeting on the EA. The final FRA Decision (FONSI) and Minnesota Finding of Fact are scheduled for release in Winter/Spring 2017.

Station Aerial Shots/Plan Views

Caron described the station location graphics.

Jen Blonn (EPA) noted that the EPA is working in Duluth as a partner with the city to create more sustainable livable places (the program is called Making A Visible Difference in Communities). Those staff members would likely be very interested in the areas being looked at for this project. Garneth asked Jen to contact her to set up a time to discuss further.

Jen asked about water impacts. If the project moves forward with the Tier 2 EA, there could be benefits to ongoing dialogue with EPA. Jen asked if the team could provide them with preliminary reports. EPA has found in the past that early coordination helps to resolve issues in a more efficient manner. Caron responded that the team would definitely be interested in further coordination and would like to set up a conference call to discuss issues in more detail.

Mike Higgins (STB) asked for more information on the project background. He noted his predecessor was more involved and he would like to get up to date on what has occurred to date. Mike noted he was



also interested in getting copies of the EA and the historic structures survey report. Caron noted that the Tier 1 EA is on the project website. Frank noted there should also be a follow-up call with FRA to understand STB requirements for the project. Garneth will contact Mike for further information.

Andrea noted that the State of Minnesota did an alternatives analysis that FRA can provide. She also added that it was discussed at the Wisconsin Agency Meeting that infrastructure improvements will be concentrated within the right-of-way so there will be few wetland impacts. Frank added that almost all improvements are within BNSF's right-of-way with the exception of the stations where some work may need to occur on private property. Some of the changes between Tier 1 and Tier 2 include a reduction in the amount of infrastructure and impacts.

Scott Striffler asked for additional information about the Grassy Point bridge and what improvements may be completed. Charlie noted that there may be changes to the joints and miter rail at the joints but that would be the extent of work. Frank added that this is a swing bridge and the changes revolve around how the rails join; the rails need to line up when the bridge closes. Scott responded that if the bridge doesn't undergo any major construction, the USCG would likely not have any further involvement in the project. Garneth noted that the team will continue to keep USCG informed moving forward but the intention is that there wouldn't be any impact to the bridge.

Jen asked if the team could send out the PowerPoint slides from today's meeting. Caron responded that she would but they would not include the aerial shots because the file is too large. The station plans are posted on the project website under the open house meeting materials.

Jen asked if the team knows if the facilities are located in the St. Louis River Corridor. Frank responded he did not believe they were but he would have to check with the city.

Garneth provided an overview of the history of the Duluth station which is adjacent to the historic Depot. MnDOT has been evaluating the boundary of the NRHP property, which was not defined in the NRHP nomination. MnDOT has ongoing consultation with the MnSHPO and has recommended that the boundary be defined around the building itself. The NLX station is proposed to be adjacent to the historic Depot and the design will need to be compatible. Frank added that the building is owned by St. Louis County, which is a principal advocate of this project. Jen added that Fresno, CA has a very similar situation with having a station located adjacent to historic property that likely deals with the same issues.



Meeting Minutes

Project: NLX High Speed Rail

Subject: Minnesota Agency Coordination

Date: Wednesday, June 08, 2016

Location: MnDOT Office

Attendees: Garneth Peterson-MnDOT
Sarma Straumanis-MnDOT
Ben Orne-USACE
ToddUllom-Sambetek
Jessica Abernathy-Sambetek
Lydia Nelson-HDR
Kelly Farrell-HDR (on phone)
Kelly Garvey-HDR

Project Introduction

Sambetek started the meeting off with a description of the project which included the following:

- The project consists of a corridor which starts at Target Field Station and ends at the Duluth Depot.
- The corridor is 152 miles in length and will share the use of the existing BNSF track.
- The 2010 Tier 1 EA was developed with a train speed of 110 mph the speed has now been reduced to 90 MPH. The reduction in speed will decrease the overall impacts from the Tier 1 EA due to fewer curve straightening's.
- Tier 2 will include analyzing potential impacts of 6 stations. The stations were not a part of the Tier 1 analysis.
- The Tier 2 analysis will include a wetland assessment which will consist of identifying 50 sites that are representative of the corridor. There will be a raster analysis followed by a field review at the 50 sites. The assessment will not include wetland delineations. Delineations would be done when project is funded for construction
- Preliminary engineering has identified the following known areas of disturbance:
 - New rail
 - Adjusted curves
 - Layover facility
 - Maintenance facility
 - Stations
 - Some at-grade modifications
 - 169 at-grade crossings

General Project Discussion

- USACE (Ben) indicated that the discussion of wet ditches and natural wetlands would be covered during permitting and all resources should be described to best of ability. USACE see's the approach to analyzing

the wetlands for the Tier 2 analysis as a mapping and field verification of the mapping. They would not need to give approval of the approach for determining the wetland impacts in the Tier 2 EA.

- USACE (Ben) indicated that it's difficult to differentiate between wet ditches and wetlands without delineation. MnDOT (Sarma) added that for highway projects, wet ditches within medians can be delineated via an "office or desktop review" due to the safety issues with nearby traffic. Medians are not present within the NLX project and therefore, this issue does not apply to the NLX project.
- The wetland assessment will focus on areas where there will be impacts due to construction. MnDOT (Garneth) conveyed that in the Tier 2 document we need to adequately describe that the entire corridor was included in the analysis, however, the impacts are going to be occurring in the areas of construction. This could be accomplished by providing good graphics to explain that EA covers entire corridor but focuses on locations of potential impacts.
- USACE (Ben) suggested the need to look at larger area to make sure you can assess alternatives. It was explained to USACE that for the most part track alternatives were determined in Tier 1.
- USACE inquired whether changes are still being made to the design.
- MnDOT (Garneth) shared that MnDOT is trying to handle all environmental review, but won't be owner of the track and still needs to be accountable to BNSF.

Corridor Review

Sambatek led the group in a discussion moving through the corridor from Target Field Station to the Duluth Depot. We were unable to get the preliminary engineering onto google earth due to equipment technical difficulties.

- Coon Rapids Station is owned by Anoka County Regional Rail Authority. Foley Blvd is planned to go over the railroad in future project improvements. In addition, there is proposed construction on 3rd and Main.
- Wetland and 4(f) Impacts are expected in the Rice Creek Crossing area.
- The Northstar and NLX alignments separate at Coon Creek Junction. NLX veers to the north while Northstar veers to the west.
- The Cambridge Station is located in a developed area. No impacts are anticipated.
- Hinckley station may have small wetland/natural resources area on the proposed site.
- Bridge to north over Grindstone River will be replaced – bridge deck. Bridge construction practices over water will need to be looked at individually at each bridge site to determine whether there will be any work being done in the water. The bridge work can be done from the track at a majority of the locations.
- Sandstone layover site; there is likely a phase I issue in this general location with what appears to be a small junk yard on west side of the corridor.
- Pine county – has "hump" crossings – hard to cross with vehicles and likely need to be changed
- MnDOT indicated that wetland typing should match what was done with Tier 1.
- MnDOT (Sarma) indicated that wetlands should be tracked by each County and Watersheds
- USACE (Ben) suggested that they have the opportunity to review the Purpose & Need and alternatives analysis in Tier 2. If this review takes place now it will help when the permitting portion of the project comes up.
- USACE will be invited to be a cooperating agency they would generally do the concurrence process if they agree to be a cooperating agency.

Meeting Minutes

Project: Northern Lights Express

Subject: Agency Coordination Update

Date: Wednesday, November 16, 2016

Location: Webinar

Attendees:	Andréa Martin - FRA	Eric Wojchik – Metropolitan Council
	Garneth Peterson - MnDOT	Russ Owen – Metropolitan Council
	Frank Loetterle - MnDOT	Caron Kloser - HNTB
	Deb Moynihan - MnDOT	Jeanne Witzig - Kimley Horn
	Jen Blonn - EPA	Charlie Quandel – Quandel Consultants
	Phil Forst - FHWA	Melanie Johnson – Quandel Consultants
	Peter Leete - MnDNR	Kelly Farrell - HDR
	Steve LaValley - WisDNR	Scott Reed - HDR
	Amy Cronk - WisDNR	Kelly Garvey - HDR
	Brent Pickard - WisDNR	Stephanie Bornetun - HDR

Introductions

Garneth welcomed everyone to the call, briefly summarized the agenda, and conducted a roll call of participants. Andréa thanked everyone for participating and stated we would provide minutes and the slideshow to those who are not on the call. This meeting is an update on the progress on the environmental document.

Project Description and Infrastructure Improvements to be Evaluated in EA

Caron went through the PowerPoint presentation (attached). The following are additional items discussed:

- STB, FHWA and EPA are cooperating agencies on the project. More information on the project is available here: <http://www.dot.state.mn.us/nlx/documents/2016-mndot-envt-coordination.pdf>.
- Caron presented the project overview with information about the overall project, proposed operations, and characteristics of the six stations and the layover/maintenance facilities.

- The level of infrastructure improvements is being coordinated with BNSF and will be ongoing as work on the EA proceeds. The level of infrastructure evaluated in the environmental document is conservative, to ensure that all potential infrastructure would be considered. For example, a third main track from Coon Creek to Northtown is included in the area for environmental review in the EA but may or may not be in the final infrastructure plan.
- No grade crossings will be closed as part of the NLX project.

There were no questions from call participants on this portion of the presentation.

Impact Analysis Approach

- No reviews have been conducted on BNSF right of way for this environmental document. Any needed work on BNSF right of way will be completed during final design.
- Final design and construction for the project are not funded so the EA will identify any further work that may need to be re-evaluated or completed when those plans are developed and funded..
- The service alternative for the project has changed from 8 daily round trips at 110 mph, which was evaluated in the Tier 1 EA, to 4 daily round trips at 90 mph in this Tier 2 EA. This change has reduced the level of infrastructure needed for evaluation in the Tier 2 EA.
- The types of analysis that will be used in the EA were presented for several resource areas, including wetlands, floodplains, and threatened and endangered species. Other resource areas were also addressed with brief summaries.
- An illustrative map, showing how the various environmental resources will be shown in the EA, was presented. These maps will be prepared for the entire corridor and will likely be made available on a CD to accompany the EA.
- Cultural resources evaluation and Section 106 coordination may not follow the same timeline as the rest of the EA, due to the Programmatic Agreement that has been developed/excuted and guides this work.
- The Project will need to re-examine NEPA when the project goes into final design to ensure that all environmental areas are adequately covered and based on the directions and conclusions from this EA.

Jen Blonn (EPA) questioned whether the 92 acres of wetland impacts are all direct impacts? Will you be identifying indirect impacts and temporary vs. permanent impacts?

Response: The 92 acres are direct impacts for the purposes of the EA evaluation. It may be premature to identify indirect, temporary, and permanent impacts because the construction limits represent a maximum area of construction. Upon funding for final design and construction FRA will re-examine this NEPA document and calculate final impact numbers that are anticipated to be much less.

Jen stated it may be helpful to have a breakdown of temporary vs permanent impacts now to provide an idea of impacts.. She also suggested that it would be helpful to include a discussion on the planned approach to permitting so the future direction is clear.

Schedule

Updates will be posted on the project website as the project advances:

<http://www.dot.state.mn.us/nlx/documents.html>

FRA will coordinate with the cooperating agencies for review of the EA. The schedule anticipates the EA will be released for public comment in May 2017, with a public meeting to be scheduled in June 2017 and a FONSI prepared by late summer.

General Questions

Phil Forst (FHWA) questioned whether the Project team expected to have a better idea of what the roadway impacts will be versus the rail impacts? It's not clear yet what if any FHWA undertakings will be coming out of this. Are we looking at two different levels of detail of information for roadways vs railroad due to lack of access?

Response: Most of the roadway-related work is at grade crossings. We have enough information to identify the grade crossing improvement footprint as shown on the example map (shown in yellow). The Project looked at every crossing in the corridor and included any potential areas of impact from the crossings perpendicular to the track. If we suspected that there may be a chance that the reconstruction of the roadway approaches would cause the road to be widened or extend beyond the existing pavement surface and ROW, they have been identified as critical crossings (43). We have prepared detailed drawings and additional analysis to further understand what will be needed at the crossings. The Project is not anticipating any work beyond the crossings and their approaches.

Jen Blonn – Thank you for the information. The maps will be very helpful.

NORTHERN LIGHTS EXPRESS AGENCY COORDINATION UPDATE

November 16, 2016

Agenda

Introductions

Project description

Infrastructure improvements to be evaluated in EA

Impact analysis approach

Schedule

- EA release
- Agency review and comment

Introductions

Presenters

- Garneth Peterson – MnDOT
- Andrea Martin – FRA
- Caron Kloser - HNTB

Agencies

- Cooperating Agencies: STB, FHWA, EPA

Previous coordination

- February 25, 2016 (Wisconsin agencies)
- March 3, 2016 (Federal and Minnesota agencies)
 - Detailed project description available online

<http://www.dot.state.mn.us/nlx/documents/2016-mndot-envt-coordination.pdf>

Agency Coordination Update
November 16, 2016

PROJECT DESCRIPTION



Project overview

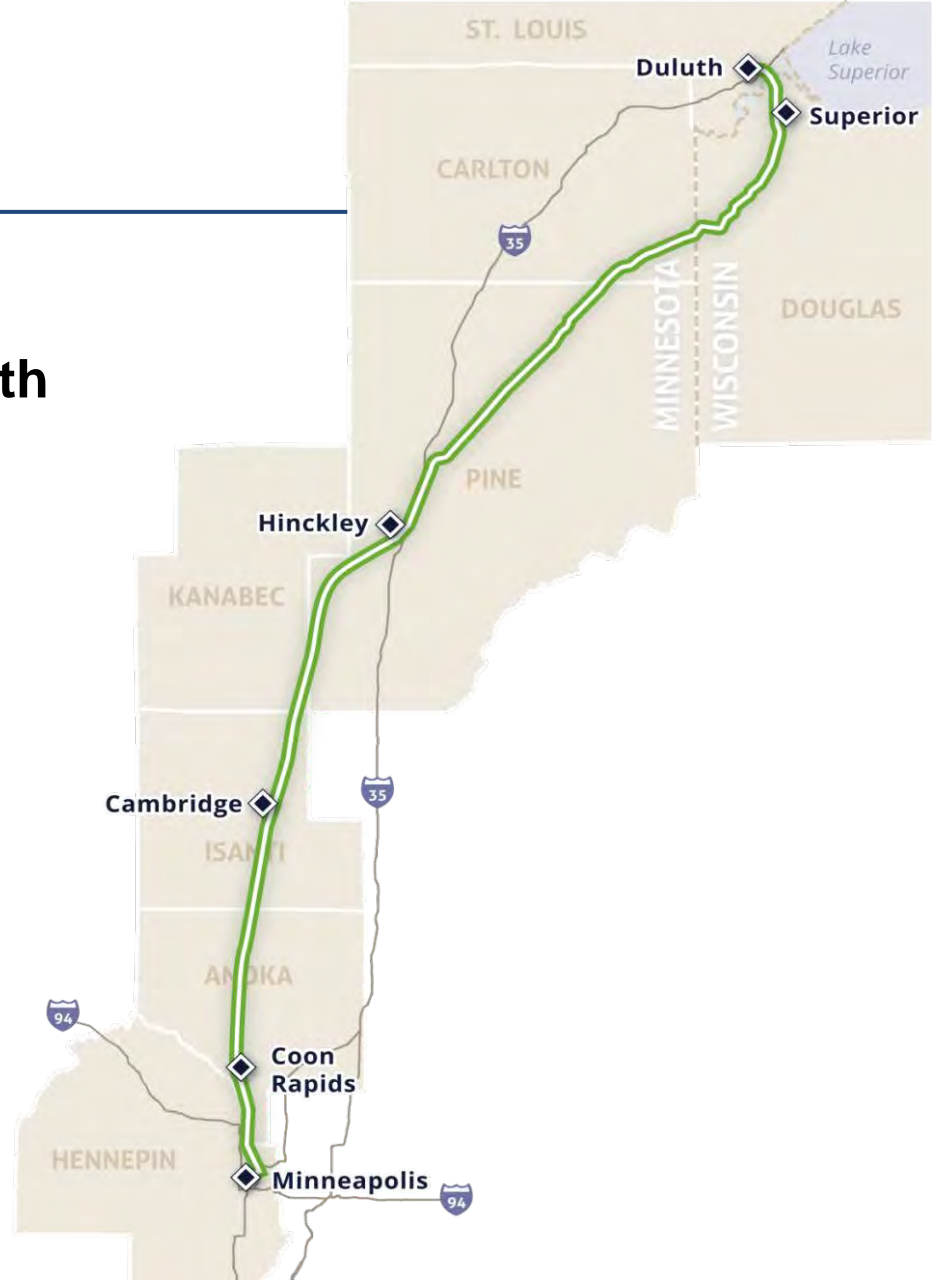
Intercity passenger rail service between Minneapolis and Duluth

Intermediate Stations

- Coon Rapids
- Cambridge
- Hinckley
- Superior, WI

152-mile corridor on existing BNSF track

An alternative travel option that is safe, reliable and frequent



Proposed NLX operations

- 4 round trips
- Speeds up to 90 miles per hour
- About 2½ hours travel time between the Twin Cities and the Twin Ports

	TRAIN					TRAIN				
READ DOWN	7003	7007	7009	7013	Station	7002	7006	7010	7014	READ UP
	4:57	7:17	12:34	5:14	Duluth	11:18	2:18	7:58	11:43	
	5:13	7:33	12:50	5:30	Superior	11:02	2:02	7:42	11:27	
	6:14	8:34	1:51	6:31	Hinckley	9:56	12:56	6:36	10:26	
	6:44	9:09	2:26	7:06	Cambridge	9:26	12:26	6:06	9:56	
	7:11	9:36	2:53	7:33	Coon Rapids	8:59	11:59	5:39	9:29	
	7:30	9:55	3:12	7:52	Target Field Station	8:40	11:40	5:20	9:10	
	2h 33m	2h 38m	2h 38m	2h 38m	Trip Time	2h 38m	2h 38m	2h 38m	2h 33m	

PM times in **bold**

Stations

Platform

Climate controlled station building

Platform shelters

Access facilities

- Parking
- Pedestrian connections
- Transit stops and shelters
- Drop-off/Pick-up locations
- Taxi stands

Lighting

ADA compliant



Layover/Maintenance facility

Located at Sandstone and/or Duluth

Two-train consists – each 650 feet long

Minimum support building

- 700 feet by 90 feet – 63,000 square feet

Train wash

Office and shop space

Yard and lead track

Lighting, signage and security systems



Agency Coordination Update
November 16, 2016

INFRASTRUCTURE IMPROVEMENTS TO BE EVALUATED IN EA



Ongoing BNSF coordination

Ongoing capacity analysis

- Support higher speed passenger rail service
 - Adding main track
 - Siding extensions
 - Turn outs for faster speeds
 - New and upgraded signals
- Ongoing infrastructure refinement
- Improvements assumed for EA



Assumed infrastructure improvements

Track

- Third main – Coon Creek/Norhttown
- Extend existing sidings
- New NLX track through Superior
- Upgrade bridges for 90 mph NLX service
- Culvert extensions, as needed



Infrastructure improvements

Signal improvements

- Centralized Traffic Control (CTC)
 - Power switches remotely
- Positive Train Control (PTC)
 - Ensure safe operation

Grade crossings

- Safety improvements at all grade crossings
 - Both public and private
- Flashing lights, gates and median treatments, fencing
- No closures



Agency Coordination Update
November 16, 2016

IMPACT ANALYSIS APPROACH FOR TIER 2 EA

Factors Influencing Impact Analyses

Ongoing Freight Rail Coordination

- EA evaluation reflects most conservative infrastructure improvement
- Improvements evaluated in the EA will be refined in discussion with BNSF

Limited Access to Rail Right of Way

- No reviews conducted on BNSF right of way; work to be completed during final design

Infrastructure improvements: Tier 1 vs. Tier 2

NLX Segment	Location		BNSF Railway Milepost ^a		Segment Mileage ^a	Tier 1 EA Concept-Level Improvements	Tier 2 EA Preliminary Engineering Improvements
	Start	End	Start	End			
1 Wayzata Subdivision ^b	Target Field Station	Minneapolis Junction, Minneapolis	11.6	9.7	2.1	<ul style="list-style-type: none"> Construct new connecting track through the wye^c at Minneapolis Junction for approximately 3,000 feet. 	<ul style="list-style-type: none"> Construct platform extension at Target Field Station and add station track Improve control points^d Construct 0.69 miles new second main track between CP Harrison Street and CP Van Buren. Reconfigure industry tracks both sides at Van Buren Street
2 Midway Subdivision ^b	Minneapolis Junction, Minneapolis	University Avenue, Minneapolis	9.7	11.4	1.4		
3 Staples Subdivision	University Avenue, Minneapolis	Coon Creek Junction, Coon Rapids	11.4	21.1	9.7	<ul style="list-style-type: none"> Construct 6.2 mile new track between I-694 and Coon Rapids Boulevard /Coon Creek Junction in Fridley (referred to as the third main). Track improvements through Coon Creek Junction. New railroad bridges over Mississippi Street and Rice Creek. Modification of Hwy 610 overpass. 	<ul style="list-style-type: none"> Construct 6.2 miles new third main track between I-694 and Coon Rapids Boulevard/Coon Creek Junction in Fridley Construct track shifts south of MN 610 bridge to accommodate all three tracks under the existing bridge Construct new railroad bridges for third main over Mississippi Street and Rice Creek. No change to MN 610 overpass since NLX Coon Rapids Station location would not require modifications

Impacts Analysis: Linking Tier 1 EA to Tier 2 EA

Study Area Definition by Resource

Study Area Definition	Basis for Study Area
Footprint from preliminary engineering plus a 0.25 mile buffer at stations and layover and maintenance facilities. The study area for private at-grade closures will include analyzing alternative access needs.	Physical conditions will vary at infrastructure construction locations. At stations and layover and maintenance facilities, a 0.25-mile buffer includes adjacent transportation infrastructure. Private at-grade closures will include analyzing alternative access needs that may be outside the 0.25-mile buffer.

Summary of Tier 1 Impacts/Additional Work Required

Identified Impacts in Tier 1 Service Level EA	Required Activities Documented in Tier 1 Service Level EA
Transit: Connections to other modes expand travel options. No adverse impacts on transit.	Further evaluation required for project-level definition.
Traffic Circulation and Parking: Temporary impacts on at-grade crossings and more circuitous travel during construction.	Staging of construction to ensure availability of convenient alternative crossings.
Traffic Circulation and Parking: No permanent closure of public at-grade crossings identified in service level NEPA. Closure of up to 14 private at-grade crossings.	Further evaluation required for project-level definition. Alternative access or property acquisition where private crossings closed.



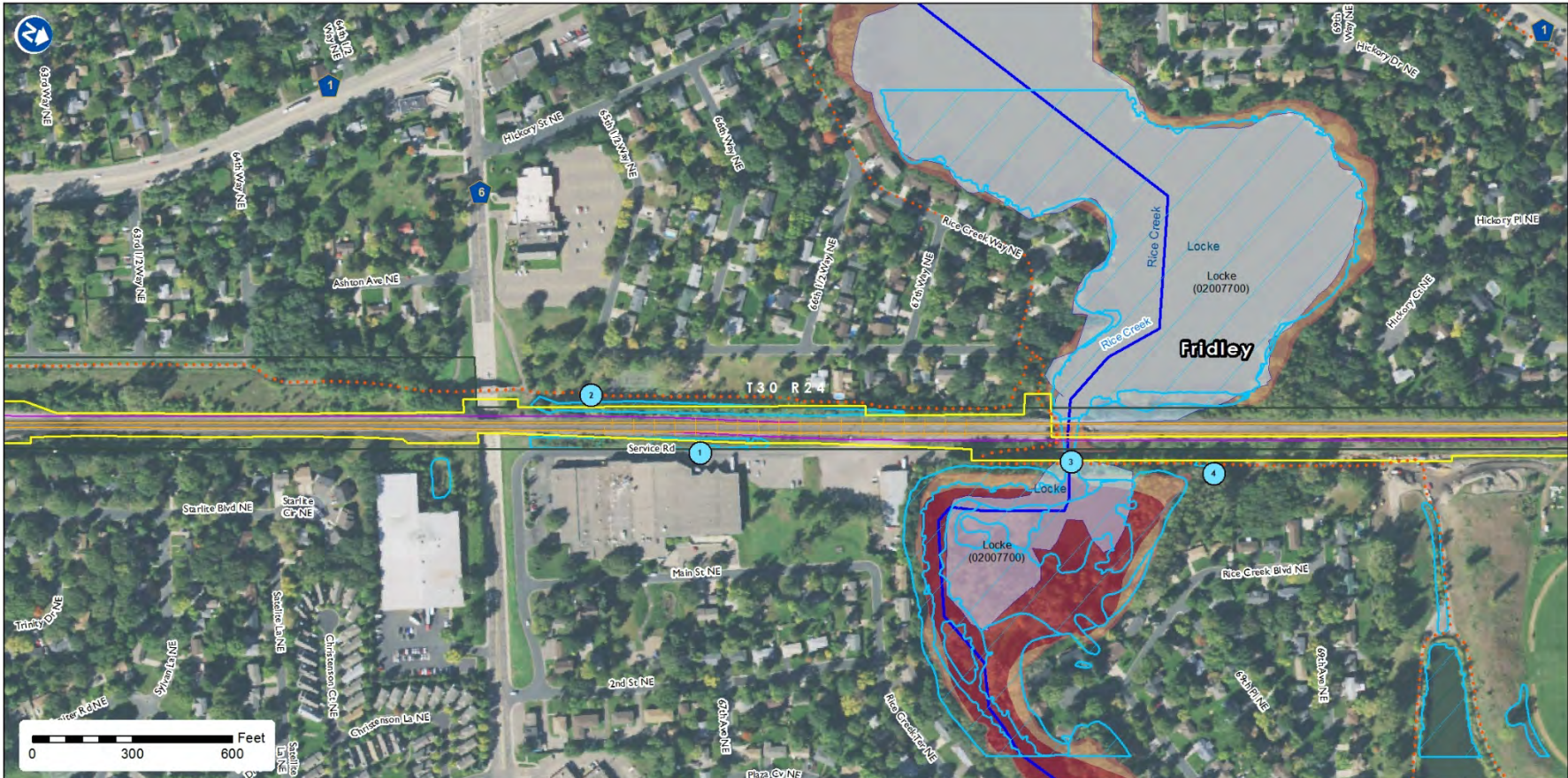
Tier 2 EA: Basic resource analysis outline

3.X Resource

- Introduction: Study Area and Summary of Tier 1 Impacts
- 3.X.1 Regulatory Context and Methodology
- 3.X.2 Affected Environment
- 3.X.3 Impacts
 - No Build
 - Build
- 3.X.4 Mitigation



Path: \\ms-pa-filing\BPO\NT\2019\02_Work\In_Progress\Map_Documents_EA\Appendix_Database\Map_11x17_L_3000\Doc.mxd - User: JAWALTER



- | | | | |
|---|--|---|--|
| <ul style="list-style-type: none"> Northern Lights Express New Track Construction Limits Platform Station Planned Future Railroad ROW At Grade Crossings State County City Boundary | <ul style="list-style-type: none"> Delineated Wetlands Impacted Wetland MN Public Water Watercourse MN Public Ditch/Altered Natural Watercourse MN Public Waters Designated Trout Stream Stream Floodway 100 Year Floodplain 500 Year Floodplain | <ul style="list-style-type: none"> Local Trails State Trails State Land Trails Water Trails Snow Trails Karst Feature Inventory Points Spring Stream Sink Sinkhole DNR Native Railroad Prairies | <ul style="list-style-type: none"> Local Parks County Forest MN DNR Lands AMA State Park State Forest WMA Wild and Scenic River Water Access Other |
|---|--|---|--|



Tier 2 Detailed Natural Environment Route
Study of the Dulluth to Twin Cities High-Speed Rail Corridor
Tier 2 Service Level EIS

DATE:	11/11/2016
STATE:	Minnesota
COUNTY:	Anoka
Aerials: 2015 NAIP Original 11x17 L	
PAGE:	12 of 211



Analyses: Preliminary findings

Wetlands

Wetland Type	Estimated Impacts (ac)							Wisconsin Douglas	Total
	Minnesota								
	Hennepin	Anoka	Isanti	Kanabec	Pine	Carlton	St. Louis		
Type 1/2	0	4.90	2.64	0.35	17.04	0.09	0.40	2.56	27.98
Type 3/4	0	3.23	5.13	0.03	6.14	0.03	0	3.75	18.31
Type 5	0	0	0.14	0	0	0	0	0	0.14
Type 6/7/8	0	0.42	3.72	0.09	10.61	0.91	0	29.39	45.14
Riverine	0	0.13	0	0	0.13	0	0	0.04	0.30
Total	0	8.68	11.63	0.47	33.92	1.03	0.40	35.74	91.87



Analyses: Preliminary findings

Floodplains

Estimated Longitudinal Impacts to Zone A Floodplains

County	Estimated Length of Floodplain Area Affected (feet)	Associated Construction Activities
Hennepin	45	Track removal and construction on west bank of Mississippi River near downtown Minneapolis
Anoka	100	New bridge over Rice Creek
Anoka	200	Coon Creek bridge rehabilitation
Isanti	110	Track undercutting north of CSAH 5 in Isanti
Isanti	160	Track undercutting south of TH-149, adjacent to corridor crossing over an unnamed stream.
Isanti	1,820	Rebuild of roadway approaches at T-75 (343rd Ave. NE) and track undercutting

Bridge Improvements/Culvert Extensions at Surface Water Crossings

County	Improvement	Flood Zone
Anoka	New bridge over Rice Creek	AE
Anoka	15-foot culvert extension in unnamed tributary to Mississippi River, south of 78th Ave. NE	X
Anoka	15-foot culvert extension in unnamed drainageway, east of Liberty St. NE	X

Analyses: Preliminary findings

Threatened and endangered species

County	Species	Listing Status	Critical Habitat	Determination
Minnesota				
Hennepin	Higgins eye (pearlymussel) (<i>Lampsilis higginsii</i>)	Endangered	Yes, Mississippi River and tributaries	DETERMINATIONS TO COME FROM AGENCY MEETING
	Snuffbox mussel (<i>Epioblasma triquetra</i>)	Endangered	Yes, Mississippi River and its adjacent small to large tributaries	
	Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Yes, see note a	
Anoka	Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Yes, see note a	
Isanti	Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Yes, see note a	
Kanabec	Gray wolf (<i>Canis lupus</i>)	Threatened	Yes, northern forest	
	Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Yes, see note a	
Pine	Spectaclecase (mussel) (<i>Cumberlandia monodonta</i>)	Endangered	Yes, St. Croix River	
	Gray wolf (<i>Canis lupus</i>)	Threatened	Yes, northern forest	
	Canada lynx (<i>Lynx canadensis</i>)	Threatened	Yes, northern forest	May Affect, not Likely to Adversely Affect



Analyses

Transportation impacts

- Traffic analysis at station sites
 - Traffic counts at Cambridge, Hinckley and Superior
- Freight rail coordination
- Transit impacts and multimodal connections

Limited Phase 1 ESA

- Sites identified in Tier 1
- Site investigation from public rights of way
- Identify potential further site investigations prior to construction

Review noise and vibration

- Update based on revised operating plan
- Determine mitigation, if needed
 - Horn blowing
 - Vibration
 - Construction options



Analyses

Complete Section 106 consultation

- Architecture-History survey completed in Tier 1
- Archeological survey underway – outside of BNSF property
- Consultation to be completed under Programmatic Agreement between FRA, STB, MnDOT, WisDOT, MnSHPO, WisSHPO

Section 4(f)/6(f)

- No impacts to park and recreational facilities anticipated

Future NEPA updates

Additional NEPA re-examination upon funding of Final Design and Construction

NEPA re-examination may include:

- Evaluate finalized infrastructure improvements
- Coordination/consultation as required (e.g. permitting)
- Refine resource impact analyses based on permitting requirements
- Finalize mitigation measures for construction based on funding
- **This EA will document next steps of future funded projects**



Agency Coordination Update
November 16, 2016

SCHEDULE

Schedule and next steps

Complete environmental analyses	Fall 2016
Cooperating Agency Review of Administrative Draft EA	March 2017 (anticipated)
EA released for public comment	May 2017
Public meeting on EA	June 2017
Final FRA decision (FONSI) and MN Finding of Fact	July/August 2017

For more information on Tier 1 EA

<http://www.dot.state.mn.us/nlx/documents.html>

Agency Tier 2 EA Recommendations

From: [Joyal, Lisa \(DNR\)](#)
To: [Leete, Peter \(DOT\)](#); [Horton, Becky \(DNR\)](#); [Wieland, Ronald \(DNR\)](#)
Cc: [Walter, Jennifer](#); [Peterson, Garneth \(DOT\)](#); [Smith, Christopher E. \(DOT\)](#); [Garvey, Kelly](#); [Fowler, Patricia L \(DNR\)](#); [Lindgren, Heidi \(DNR\)](#); [Wills, Craig \(DNR\)](#); [Sorensen, Jenifer \(DNR\)](#); [Crozier, Gaea \(DNR\)](#); [Hoaglund, Erica \(DNR\)](#)
Subject: RE: For your review prior to sending - Draft DNR Comments on Northern Lights Express (NLX) Tier 2 Environmental Assessment
Date: Tuesday, October 11, 2016 12:14:35 PM
Attachments: [Northern Lights Rail DNR Letter \(NE Region tier 1 review\).pdf](#)
[NLX ER descriptions WisconsinDNR REVISED 6-7-16.doc](#)
[NLX AreaDisturbance 20160922.zip](#)
[Fish Passage & Work Exclusion dates \(from Chapter 2\).pdf](#)
[Ebflyer&factsheet2008_9.pdf](#)
[Entanglement \(from Chapter 1\) w-edits for 2014spec.pdf](#)
[AIS \(from Chapter 1\).pdf](#)
[NLX DNRbasemap \(Oct 2016\).pdf](#)

Based on my 2008 (ERDB 20080263) comments (i.e., I haven't looked at this since then), if there will be any disturbance to riverbeds, mussels will be an issue and surveys may be needed.

Thanks!
Lisa

From: Leete, Peter (DOT)
Sent: Monday, October 10, 2016 3:29 PM
To: Horton, Becky (DNR) <Becky.Horton@state.mn.us>; Joyal, Lisa (DNR) <Lisa.Joyal@state.mn.us>; Wieland, Ronald (DNR) <Ronald.Wieland@state.mn.us>
Cc: Walter, Jennifer <Jennifer.Walter@hdrinc.com>; Peterson, Garneth (DOT) <garneth.peterson@state.mn.us>; Smith, Christopher E (DOT) <Christopher.E.Smith@state.mn.us>; Garvey, Kelly (Kelly.Garvey@hdrinc.com) <Kelly.Garvey@hdrinc.com>; Fowler, Patricia L (DNR) <Patricia.Fowler@state.mn.us>; Lindgren, Heidi (DNR) <Heidi.Lindgren@state.mn.us>; Wills, Craig (DNR) <craig.wills@state.mn.us>; Sorensen, Jenifer (DNR) <jenifer.sorensen@state.mn.us>; Crozier, Gaea (DNR) <Gaea.E.Crozier@state.mn.us>; Hoaglund, Erica (DNR) <erica.hoaglund@state.mn.us>
Subject: For your review prior to sending - Draft DNR Comments on Northern Lights Express (NLX) Tier 2 Environmental Assessment

Hi Becky/Lisa/Ron,

I have been requested to provide information from the NHIS and overall review for the Northern Lights Express (NLX). This is the proposed passenger rail service between Minneapolis and Duluth. You may have seen this before, as it's a proposal that has been around for years. Though it is now moving into the Tier 2 phase of environmental review. I have attached a zipfile of a shapefile provide by the NLX consultants or your use if you want to overlay this to your arcmap. From my review this is what I will be commenting on:

Over 200 hits on NHIS (within a mile), but it's the turtles and native prairie remnants I see as having a potential for adverse impact,
16 segments of Railroad prairie remnant locations (9 in Areas of disturbance)
16 crossings of Public Waters that are within the NLX Area of Disturbance.

I have not gone into details of what work is proposed within the Area of Disturbance, nor gone to detail on every item (there are 153 miles of project area) so I have drafted the following generic type comments. Unless I here otherwise, I will send this to NLX project managers next week. If you have any comments or additions, please let me know by Oct 17.

Contact me if you have questions.
Peter Leete
Transportation Hydrologist (DNR-MnDOT Liaison)
DNR Ecological & Water Resources
Ph: 651-366-3634

Hi,
This email is the DNR response for your project records. I have not sent this out for full DNR review. The following comments

are based on information requests for updating Environmental Review documentation, including Natural Heritage Information System (NHIS) review regarding the proposed Northern Lights Express (NLX) passenger rail line between Minneapolis and Duluth. The project has refined the areas of potential disturbance along the existing BNSF rail line. I have not separately reviewed each type of work within the provided Areas of Disturbance, though have the following generic comments to incorporate into project planning and development:

1. For MnDOT planning purposes, attached to this email is a map of the project area 'NLX DNRbasemap (Oct2016).pdf'. It shows 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 sixteen (16) crossings of DNR Public Waters with the Areas of Disturbance. These are identified in dark blue on the attached DNRbasemap.pdf. Please note the Public Waters in the project area. The provided information does not state whether there will be work at these locations or not. Should plans include work that would change the course, current, or cross-section of these watercourses, including culvert modification, at any of the Public Waters in the project area, please contact me as further review may be required. Be aware that culvert replacement will need to meet design criteria for fish passage. We also typically limit work in the water (Work Exclusion dates) to allow for undisturbed fish migration and spawning. These dates vary along the NLX route, though a map showing these dates is in the attachments. While we may revise these dates for a particular project, there may still be limitations on the types of work during this time.
3. Please remind contractors that a separate water use permit is required for withdrawal of more than 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 over 200 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 near segments throughout the project area. 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.
 - b. The Wood Turtle (*Glyptemys insculpta*), a state-listed Threatened species, has been reported in the near the segments in the Nemadji River Watershed (Carlton County) and may be encountered on site. If they 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 allowed to move out of harm's way, otherwise they should be left undisturbed.

- c. Due to the potential of Blandings and/or Wood turtles to become trapped between the rails as they move across the landscape, we request that measures be incorporated into the project to allow for their escape. We are aware of some low cost options for this to occur:
 - i. Place mounds of typical railroad tie ballast rock above the ties between the rails (though below the elevation of the wheel flange) to allow them to climb out over the rail,
 - ii. Provide a gap between the railroad ties to allow them to crawl out under the rail.
 - iii. In addition, any 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

Options i & ii would require multiple applications at regular intervals. We realize that this would be a new practice for railroad construction and maintenance, though we would like to work with the railroad to make this happen.

- d. There are sixteen (16) segments of remnant native prairie known to exist in railroad right of way in the project area, Nine (9) of these are within proposed Areas of Disturbance. It is unknown what is proposed in these areas. Therefore the significance of impact to these areas is not be known. Project development should include a vegetation assessment and a vegetation management plan developed if there may be impacts to these resources. The concern along these segments is that soil disturbance, incidental herbicide exposure, hydrologic alterations, competition from non-native, sod-forming grasses, or shading by encroaching shrubs can all lead to degradation of the site. These areas should be labeled as an Area of Environmental Sensitivity (AES) and:
 - i. Design the project to avoid impacts to identified Area of Environmental Sensitivity.
 - ii. Design and construction should incorporate protection and/or enhancement of adjacent AES features.
 - iii. Label identified Areas of Environmental Sensitivity on all plans.
 - iv. Drainage into Areas of Environmental Sensitivity may also have limitations on impacts.
 - v. Revegetation of disturbed soils adjacent to these areas should include native mixes in areas that are not proposed for mowed turf grass. Please utilize the native recommendations developed by BWSR (http://www.bwsr.state.mn.us/native_vegetation/) or MnDOT in the 'Vegetation Establishment Recommendations' – dated November 13, 2015 (<http://www.dot.state.mn.us/environment/erosion/seedmixes.html>).
- e. 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 show an area of bat concentration in Banning State Park, it is not known if this area contains occurrences of northern long-eared bat roosts or hibernacula.

Links: USFWS Key to the Northern Long-Eared Bat 4(d) Rule for Non-Federal Activities
<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 Natural Heritage Information System (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.

5. Should there be in-water work at the St Louis River bridge, be aware that the river has been designated with Aquatic Invasive Species (AIS) due to the presence of Round Goby, VHS, New Zealand Mudsail, Spiny waterflea, White perch, Zebra mussel, and/or Ruffe. Should inwater work need to occur, precautions shall be taken to prevent their spread. Attached are best practices for preventing the spread of Aquatic Invasive Species.

The Minnesota Department of Transportation invites you to take our two-minute survey to help us improve our services. [MnDOT External Customer Survey](#)

Thank you for telling us about your experience



April 16, 2013

Julie Carr
State Program Admin Coordinator, MNDOT
395 John Ireland Blvd. MS 480
St. Paul, MN 55155

RE: Northern Lights High Speed Passenger Rail Project EA/EAW

Dear Ms. Carr:

The Minnesota DNR Northeast Region has reviewed the Northern Lights High Speed Passenger Rail Project EA/EAW and has the following comments for your consideration.

Please consider including wildlife friendly erosion mesh where needed in construction areas and to incorporate railroad track escape mounds for turtles, especially in counties with Blanding's and/or Wood turtles. Essentially this requires a mound of gravel/crushed rock between tracks at prescribed intervals so turtles don't get trapped and can climb out. The problem is not usually a result of getting run over by trains, but from getting stuck and perishing from overheating. The Minnesota DNR can assist you in locations for these mounds.

Michael Musnick is a citizen scientist who studies wood turtles in the Great Swamp, a stretch of wetland about 60 miles north of New York City. He found turtles dying in the railroad tracks and proposed a solution of tiny turtle bridges to New York's Metropolitan Transportation Authority. The Transportation Authority tried a pilot project with the modifications. As of the time of the video in 2009, Musnick had not found any more dead turtles along that stretch.

If you wish to view additional information, please see NPR Science Friday.
<http://www.sciencefriday.com/videos/watch/10242>
<http://www.npr.org/templates/transcript/transcript.php?storyId=113208985>

Thanks for the opportunity to comment, please feel free to contact me or Rian Reed (218) 999-7826 with any questions you may have.

Sincerely,

A handwritten signature in blue ink, appearing to read "Craig L. Engwall".

Craig L. Engwall
Northeast Regional Director
1201 East Hwy 2
Grand Rapids, MN 55744
(218) 999-7913
craig.engwall@state.mn.us

cc: Melissa Doperalski, MNDNR

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**

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.

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.

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!

REFERENCES

- ¹Association for Biodiversity Information. "Heritage Status: Global, National, and Subnational Conservation Status Ranks." NatureServe. Version 1.3 (9 April 2001). <http://www.natureserve.org/ranking.htm> (15 April 2001).
- Coffin, B., and L. Pfannmuller. 1988. Minnesota's Endangered Flora and Fauna. University of Minnesota Press, Minneapolis, 473 pp.

REFERENCES (cont.)

- Moriarty, J. J., and M. Linck. 1994. Suggested guidelines for projects occurring in Blanding's turtle habitat. Unpublished report to the Minnesota DNR. 8 pp.
- Oldfield, B., and J. J. Moriarty. 1994. Amphibians and Reptiles Native to Minnesota. University of Minnesota Press, Minneapolis, 237 pp.
- Sajwaj, T. D., and J. W. Lang. 2000. Thermal ecology of Blanding's turtle in central Minnesota. *Chelonian Conservation and Biology* 3(4):626-636.

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.

← add bullet: Select BMP that does not contain plastic. EG disk anchoring

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

Barton, C. and K. Kinkead. 2005. Do erosion control and snakes mesh? Soil and Water Conservation Society 60:33A-35A.
Kapfer, J.M., and R.A. Paloski. 2011. On the threat to snakes of mesh deployed for erosion control and wildlife exclusion. Herpetological Conservation and Biology 6:1-9.



Best Practices for Preventing the Spread of Aquatic Invasive Species

All equipment¹ being transported on roads or placed in Waters of the State shall be free of prohibited and regulated invasive species and unlisted non-native species (any other species not native to Minnesota)

1. **Project plans or documents should identify Designated Infested Waters²** located in or near the project area.
2. **Prior to transportation along roads into or out of any worksite, or between water bodies within a project area, all equipment** must be free of any aquatic plants, water, and prohibited invasive species.
 - A. **Drain** all water from equipment where water may be trapped, such as tanks, pumps, hoses, silt curtains, and water-retaining components of boats/barges (see Figures 5 & 6) **AND**
 - B. **Remove** all visible aquatic remnants (plants, seeds and animals). Removal of mud & soil is not required at all sites, though is encouraged as a Best Practice. Removal of mud and soil may be required on sites designated as infested (see #4).
3. **Prior to placing equipment into any waters**, all equipment must be free of aquatic plants and non-native animals.
4. **Additional measures are required on Designated Infested Waters to remove and kill prohibited species such as zebra mussels, quagga mussels, New Zealand mudsnails, faucet snails, or spiny waterfleas.**

Note: The DNR is available to train site inspectors and/or assist in these inspections. Contact the appropriate Regional Invasive Species Specialist:

www.mndnr.gov/invasives/ais/contacts.html

- A. For day use equipment (in contact with the water for 24 hours or less); Perform #2 above or.
- B. For in-water exposure greater than 24 hours: Perform #2 above, and inspect all equipment for the prohibited invasive species present (see Figure 1).

Then choose one of the following three: **on-site treatment**, **off-site treatment**, or **customized alternative**.

On-Site Treatment

Remove by handscraping or powerwashing (minimum 3000 psi) all accessible areas (Figures 1 and 2) **AND**

Kill Prohibited Aquatic Invasive Species in non-accessible areas using one or more of the following four techniques:

- **Hot Water (minimum 140°F) for ten seconds** (Figure 2) for zebra mussels, quagga mussels, New Zealand mudsnails, faucet snails **OR**
- **Air Dry** (Figures 3 & 4)
 - Spiny waterfleas – air dry for a minimum of 2 days
 - New Zealand mudsnails – air dry for a minimum of 7 days
 - zebra or quagga mussels, faucet snails – air dry for a minimum of 21 days **OR**
- **Freezing Temperatures**
 - zebra mussels - expose to continuous temperature below 32°F for 2 days **OR**
- **Crush**
 - Crush rock, concrete, or other debris by running it through a crushing plant to kill prohibited species

Off-Site Treatment

Under certain conditions, the DNR will allow transportation of equipment off-site after partial removal of prohibited species (for example, after “removal” has been done and equipment will be taken to a facility to complete final treatment [i.e., “kill”]) This is a ‘one-way pass’ to allow transport to a storage area or disposal facility. This option can only be utilized if the receiving site is at least 300 feet from riparian areas, wetlands, ditches, stormwater inlets or treatment facilities, seasonally-flooded areas, or other waters of the state. To be allowed to use the off-site treatment option you must do the following:

- Read, complete, and comply with the appropriate authorization form for transportation of Prohibited Invasive Species at www.mndnr.gov/invasives/ais_transport.html (Note that a completed form is required to be in every vehicle that is transporting equipment containing infested species) **AND**
- Complete on-site treatment described in 4B above prior to re-use in or adjacent to water.



Figure 1. Invasive species may not be readily visible on equipment. Some species are less than 1/4 inch in size.

Photo credit: Brent Wilber, Lunda Construction



Figure 2. Removal of aquatic remnants is required before transporting.

Photo credit: Peter Leete, DNR

Best Practices for Preventing the Spread of Aquatic Invasive Species

Contact a DNR Invasive Species Specialist for authorization of a customized alternative

There may be situations due to time of year, length of exposure, type of equipment, or site conditions that a DNR Invasive Species Specialist could approve alternative methods or requirements for treatment. Contact the appropriate Regional Invasive Species Specialist:
www.mndnr.gov/invasives/contacts.html

5. Temporary appropriations of water from Designated Infested Waters to utilize elsewhere (such as for dust control, landscaping, bridge washing, etc.) is not allowed except by permit, thus should be avoided.

If use of Designated Infested Waters is unavoidable, permit information is located at www.mndnr.gov/waters/watermgmt_section/appropriations/permits.html



Figure 3. Drying will also kill aquatic organisms. Lay out materials to dry in the proper time. Drying times vary by species. Inspect after drying period is over.
Photo credit: Dwayne Stenlund, MnDOT



Figure 4. Drying techniques must not trap water. This equipment will not dry adequately.
Photo credit: Peter Leete, DNR



Figure 5. Pumping from designated infested waters for use elsewhere on the project is prohibited without a permit.
Photo credit: Peter Leete, DNR



Figure 6. Drain all water from equipment where water may be trapped. Remove drain plugs and drain hoses prior to transport.
Photo Credit: Peter Leete, DNR

Document Information

www.mndnr.gov/waters/watermgmt_section/pwpermits/gp_2004_0001_manual.html

Best Practices for Meeting DNR GP 2004-0001 (published 5/11, updated 12/12) – Chapter 1/Page 8

More on the DNR Invasives Species Program can be found at: www.mndnr.gov/AIS

¹ 'Equipment' is defined as any implement utilized in construction. This includes boats, barges, heavy machinery, light machinery, or other material that may be moved on-site or off-site, including but not limited to rock (riprap) or timber for temporary workpads, backhoes, pumps, hoses, worksite isolation materials (eg, sheet pile or jersey barriers), boats, barges, temporary staging materials, erosion prevention products, sediment control products (eg, silt curtain), water trucks that take water from open bodies of water (eg, dust control), or dewatering components.

² List of Designated Infested Waters: http://files.dnr.state.mn.us/eco/invasives/infested_waters.pdf

DNR Contact Information



DNR Ecological and Water Resources lists area office staff at www.mndnr.gov/waters

DNR Ecological and Water Resources
500 Lafayette Road, Box 32, St. Paul, MN
55155-4032, (651)259-5700 or 5100

DNR Ecological and Water Resources website provides information at www.mndnr.gov or by calling (651) 259-5700 or 5100.

© 2013 State of Minnesota, Department of Natural Resources

DNR Information Center

Twin Cities: (651) 296-6157
Minnesota toll free: 1-888-646-6367
Telecommunication device for the deaf (TDD): (651) 296-5484
TDD toll free: 1-800-657-3929

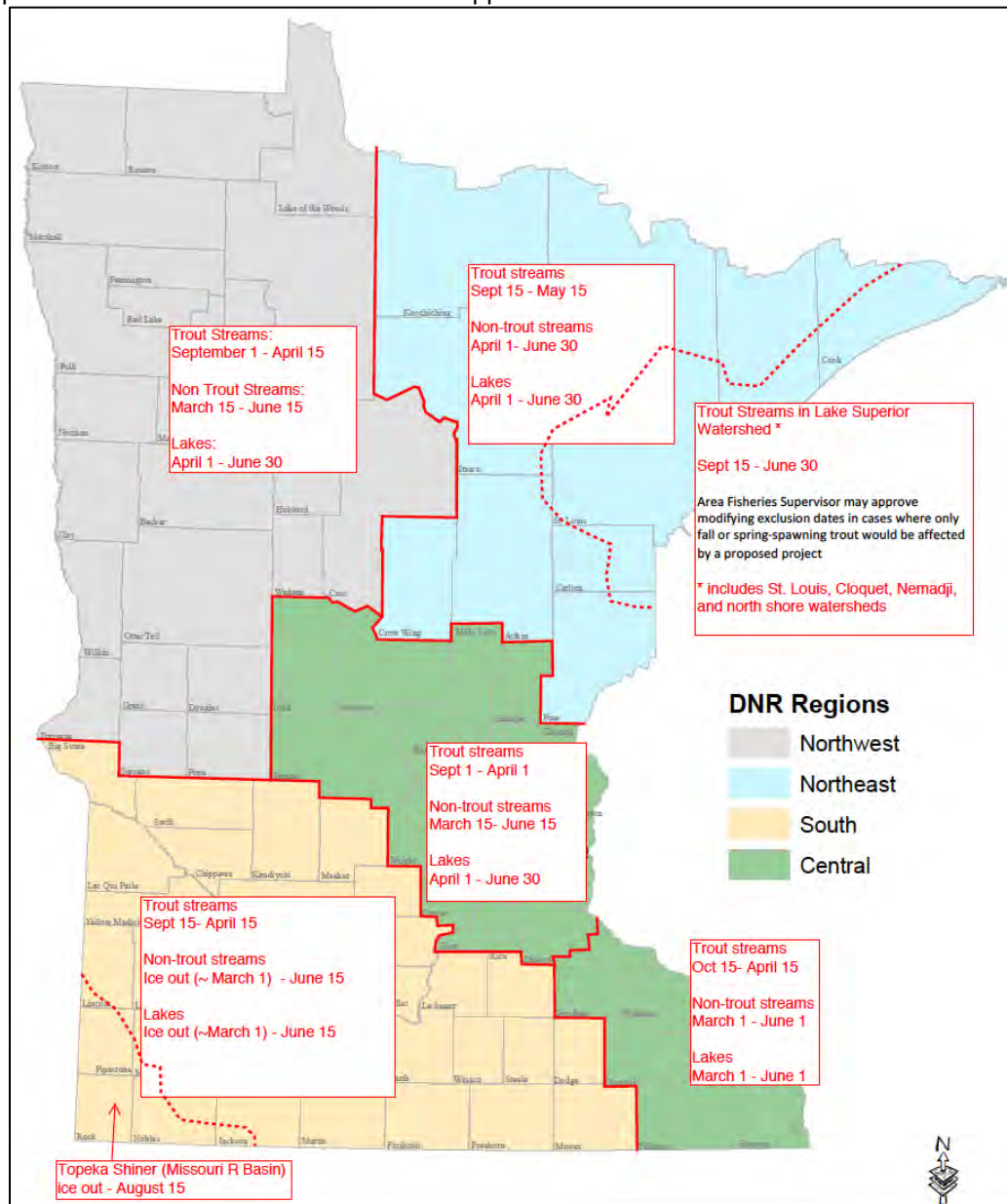
This information is available in an alternative format on request

Equal opportunity to participate in and benefit from programs of the Minnesota Department of Natural Resources is available regardless of race, color, national origin, sex, sexual orientation, marital status, status with regard to public assistance, age, or disability. Discrimination inquiries should be sent to Minnesota DNR, 500 Lafayette Road, St. Paul, MN 55155-4049; or the Equal Opportunity Office, Department of the Interior, Washington, DC 20240.

WORK EXCLUSION DATES TO ALLOW FOR FISH SPAWNING AND MIGRATION

To allow for fish migration or spawning, no in-water work is allowed in Public Waters during these dates*.

The Work Exclusion Dates below shall be incorporated into project scheduling and staging to protect fish spawning and migration. Work may be conducted elsewhere on a project during these dates; however no work shall occur within Public Waters during the specified exclusion dates without written approval from the DNR.



* Where the permittee demonstrates that a project will minimize impacts to fish habitat or if work during this time is essential, work during this period may occur only upon written approval of the DNR Area Fisheries Manager.

Contact information for Area Fisheries Managers:

http://files.dnr.state.mn.us/fisheries/management/dnr_fisheries_managers.pdf

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. 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 construction activity has ceased (and be completed within 24 hours).

Fish Passage

Culverts have a variety of factors associated with the ability for fish to pass through them, including perched outlets, high in-pipe velocity and/or turbulence, inadequate water depth, and excessive pipe length without fish resting space. Any of these can cause difficulties for fish movement and thus adversely affect their habitat, natural range, and ability to spawn. On Minnesota's Public Waters, culverts shall provide for fish movement unless the structure is intended to impede rough fish movement or the stream has negligible fisheries value. The current GP2004-0001 has the following requirement for fish passage:

Bridges, culverts and other crossings shall provide for fish movement unless the structure is intended to impede rough fish movement or the stream has negligible fisheries value as determined by the Transportation Hydrologist or Area Hydrologist in consultation with the Area Fisheries Manager. The accepted practices for achieving these conditions include:

- A. Where possible a single culvert or bridge shall span the natural bankfull width adequate to allow for debris and sediment transport rates to closely resemble those of upstream and downstream conditions. A single culvert shall be recessed in order to pass bedload and sediment load. Additional culvert inverts should be set at a higher elevation. All culverts should match the alignment and slope of the natural stream channel, and extend through the toe of the road side slope. "Where possible" means that other conditions may exist and could take precedence, such as unsuitable substrate, natural slope and background velocities, bedrock, flood control, 100yr flood elevations, wetland/lake level control elevations, local ditch elevations, and other adjacent features.
- B. Rock Rapids or other structures may be used to retrofit crossings to mimic natural conditions.

Traditionally, culvert design was based on hydrologic and hydraulic models that predict peak runoff from a watershed, with the culvert sized accordingly to pass a specified design storm. Fish passage was not always addressed with these designs. Several alternative design methods have been developed that focus on matching the natural characteristics, and consider sediment transport and fish passage requirements. These recent improvements to hydraulic design practices may also reduce the frequency of scour at pipe outlets in many areas. Other potential benefits include lower maintenance costs, longer life span, and better sediment and erosion control. Alternative designs or simulation techniques inherently take fish passage into account by addressing issues of low flow, hydraulic variability and sediment transport. A variety of design techniques are being implemented in Minnesota where fish passage is a concern.

Culvert Design Approaches

Open bottom span: Open bottom structures are not considered as restricting flow or impinging upon the channel cross sectional area. These structures are generally not considered an impediment to fish movement in Minnesota.

Conventional Hydraulic Design: Culverts sized to pass a specified design storm event (e.g., 10 years peak flow) with no consideration given to fish passage needs.

Hydraulic Design for Fish Passage: Techniques that create water depths and velocities to meet the swimming abilities of target fish populations. This approach considers the flow requirements (eg: maximum velocity, sustained velocity, flow depth, etc) needed by specific species. The goal is to keep the velocity below a set of thresholds corresponding to a fish's maximum swim speed, sustained swim speed, and related measures. This is the method for meeting the frequent DNR requirement of: "Velocities of the 2-year 24-hour event shall not exceed 2 feet per second".

FHWA has the publication 'HEC-26' that utilizes the hydraulic design approach to select culvert size and bedload material. HEC-26 presents a mathematical design procedure, methods, and best practices for designing roadway culverts to facilitate aquatic organism passage (AOP).

<http://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf>.

Hydraulic Simulation: Hydraulic design approaches that simulate natural hydraulics of streams by adding rock or roughness elements to simulate natural hydraulic variation within or adjacent to the culvert. Typically these include placement of rock on the floor of the culvert or placement of rock rapids below the outlet to create pools and riffles, etc.

Stream Simulation (Geomorphic Design): Design approaches that recreate or allow natural channel morphology and sediment transport. In Minnesota, two differing methods are being utilized.

1. **'MESBOAC'** was developed in the northern forested region of Minnesota and is based on principles of fluvial geomorphology rather than individual fish swimming ability. **MESBOAC** aims to match the culvert width with natural stream dimensions, while maintaining sediment balance (sediment in = sediment out). In addition to burying the culvert bottom below the streambed to provide for a natural substrate in the culvert, it also provides a low-flow channel that is important for late season migrations which occur from August to November. MESBOAC assumes that since the natural flow characteristics are maintained, fish passage will occur. See Appendix A for more information on MESBOAC methods.

MESBOAC stands for:

- M**atch culvert width to bankfull stream width.
- E**xtend culvert length through the side slope toe of the road.
- S**et culvert slope the same as stream slope
- B**ury the culvert
- O**ffset multiple culverts.
- A**lign the culvert with the stream channel.
- C**onsider headcuts and cutoffs.

2. **The Aquatic Organism Passage (AOP) program** is a broader ecosystem-based design approach developed by the USDA Forest Service for designing and constructing a channel through the road-stream crossing structure based on physical and ecological continuity along the stream corridor. The premise of stream simulation (AOP) is that the culvert be large enough for a channel to be constructed within the crossing that simulates the dimensions and characteristics of the adjacent natural channel. Therefore, fish and other aquatic organisms should experience no greater difficulty moving through the structure than if there were no road crossing. Identifying a 'reference reach' is a key concept and component of stream simulation as it provides the natural template for designing a channel through the crossing and determining the size and embedment depth of the replacement structure. The manual '**Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings**' is located here: http://www.stream.fs.fed.us/fishxing/aop_pdfs.html. A copy of the published report on a summary of this program is in Appendix A (Stream Simulation for Aquatic Organism Passage at Road-Stream Crossings, by Cenderelli, Clarken, Gubernick and Weinhold).

Note: The link to the FishXing program that is embedded in the AOP website is a culvert assessment tool for aquatic organism passage. The program models various organisms capabilities against culvert hydraulics across a range of expected stream discharges. AOP methodology does not require a check on velocities since it uses reference conditions in the stream to emulate a crossing that has the proper context with its surrounding profiles.

MESBOAC and AOP are similar in the use of bankfull width determination, though differ in determination of slope and invert elevations for a culvert.

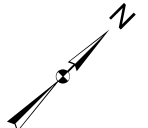
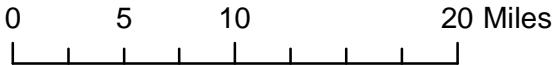
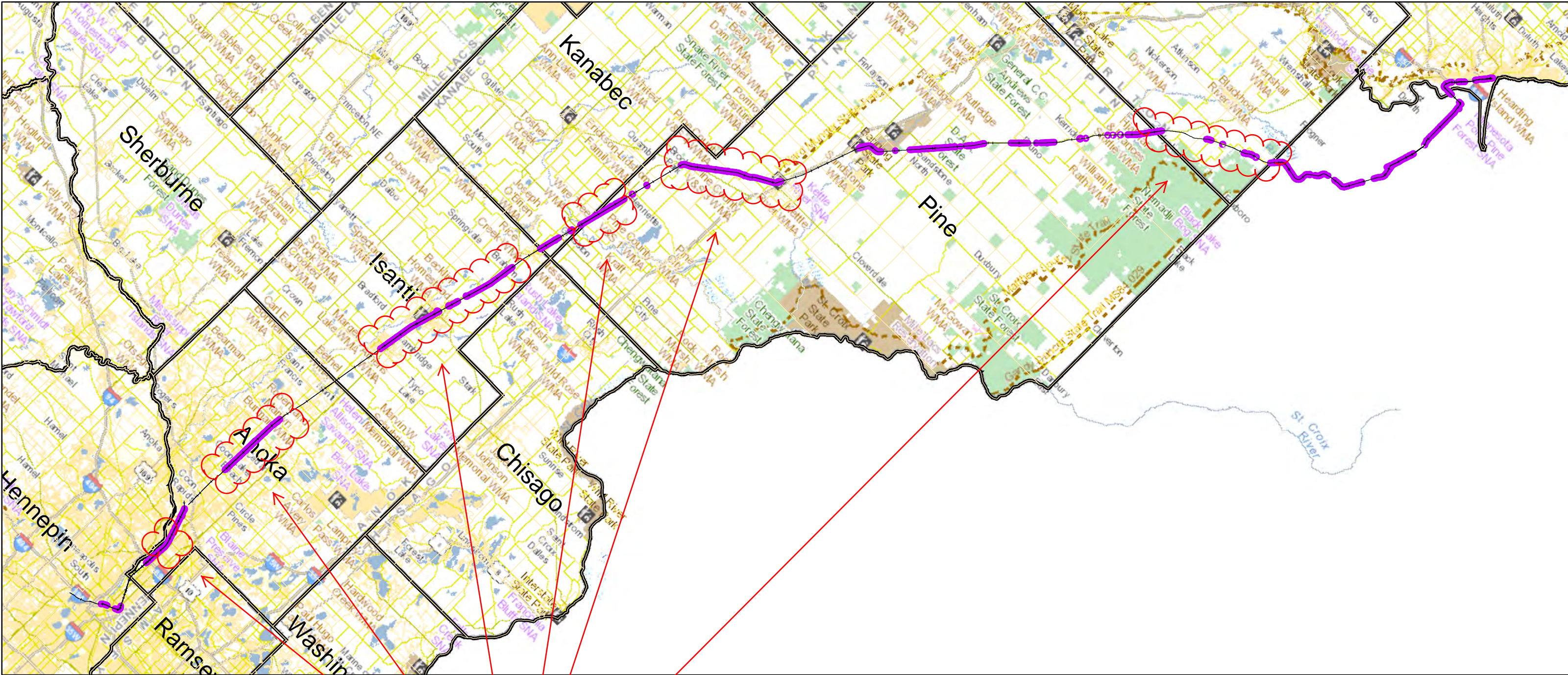
MESBOAC utilizes a line connecting the thalweg riffle elevations from upstream and downstream of the crossing to set culvert slope and elevation.

In addition to utilizing riffle elevations, the AOP program methodology incorporates pool depths, stable control points, and other vertical control points in the stream (bedrock, pool-tailcrests, and large woody debris) to determine a streambeds potential upper and lower vertical adjustment profile (VAP) to which the culvert invert and slope are determined.

Summaries of both methods are located in Appendix A

Floodplain Connectivity: In addition to the above, there is growing attention in the concept of 'floodplain culverts'. These culverts are set in the floodplain, away from the main channel and are dry, except in flood conditions. It is gaining interest for use within floodplains, and in areas with woody debris or ice issues. An initial study by the DNR is located here: <http://files.dnr.state.mn.us/eco/streamhab/geomorphology/reducing-rior.pdf>

Please contact the DNR Area Hydrologist for design information at the earliest stages of project development. Determining the appropriate design method is influenced by project objectives. Consideration for fish passage, other aquatic organisms, rare species, invasive species, habitat protection/restoration, wildlife passage, traffic (road safety), funding limits, adjacent property and right-of-way limits, floodplain ordinances and other regulatory requirements (e.g., wetland protection) are to be considered.

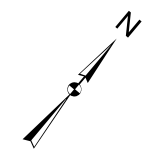
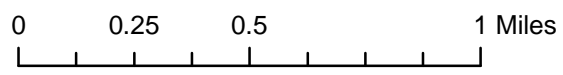
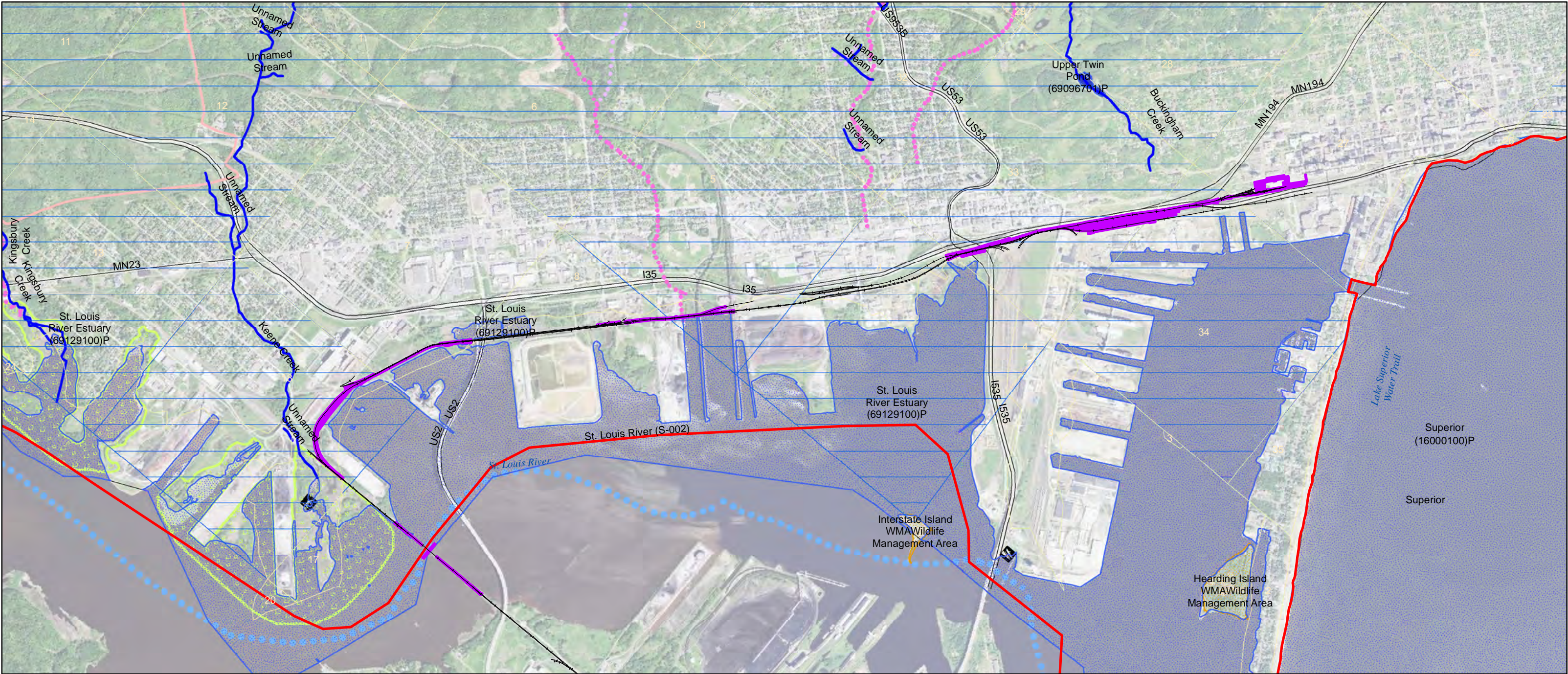


Overall Map (1 of 13)

Areas for Rare Turtle awareness in planning and design (Blandings and/or Wood Turtle)

Northern Lights Express (NLX) Potential Areas of Disturbance

- Railroad centerline
- NLX_AreaDisturbance_20160922



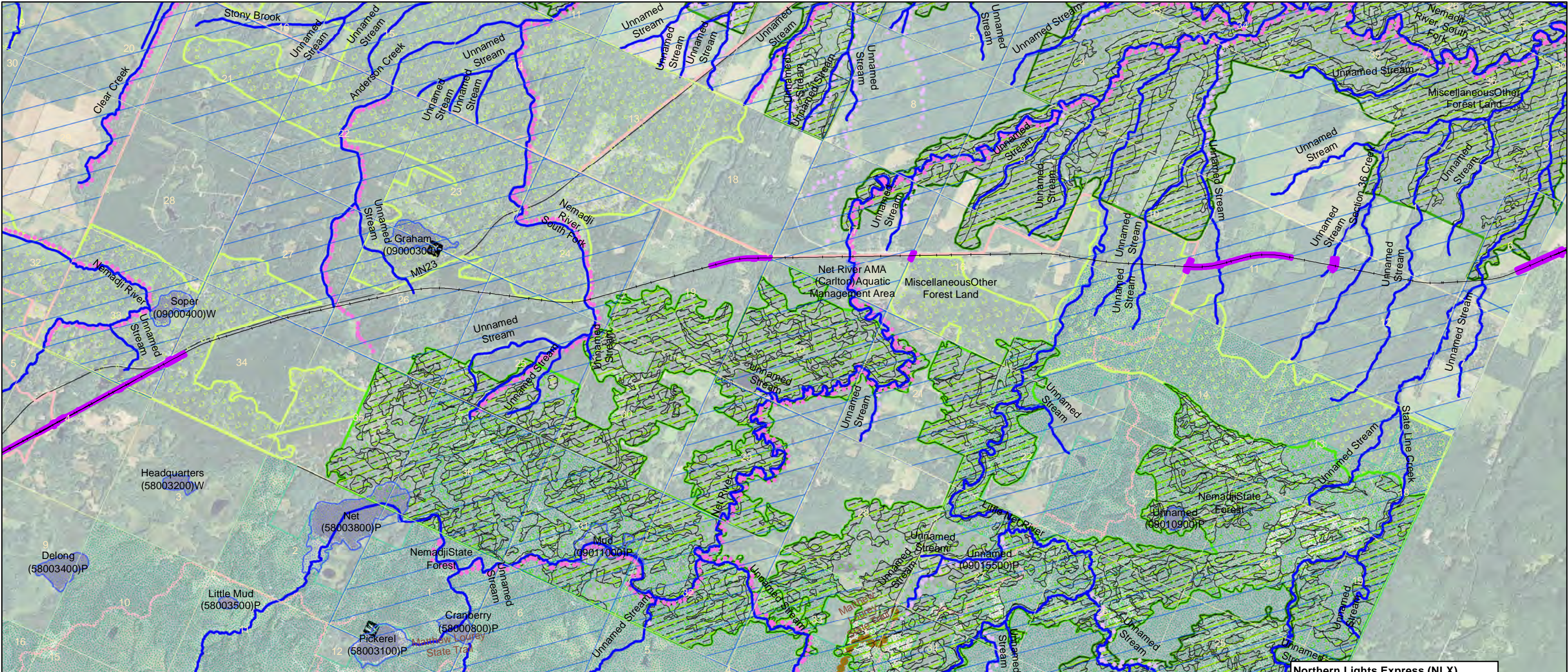
Map 2 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Designated Infested (Aquatic Invasive Species - AIS)
- PLS sections with designated trout streams
- Public Water Watercourse
- Public Waters Basins
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- State-designated trout lakes
- Site of Biodiversity Significance - Moderate
- Wildlife Management Area - WMA
- Minnesota Water Trails
- Public Access - Carry-In
- Public Access - Trailer Launch
- Local Snowmobile Trails



Northern Lights Express (NLX) Potential Areas of Disturbance

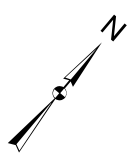
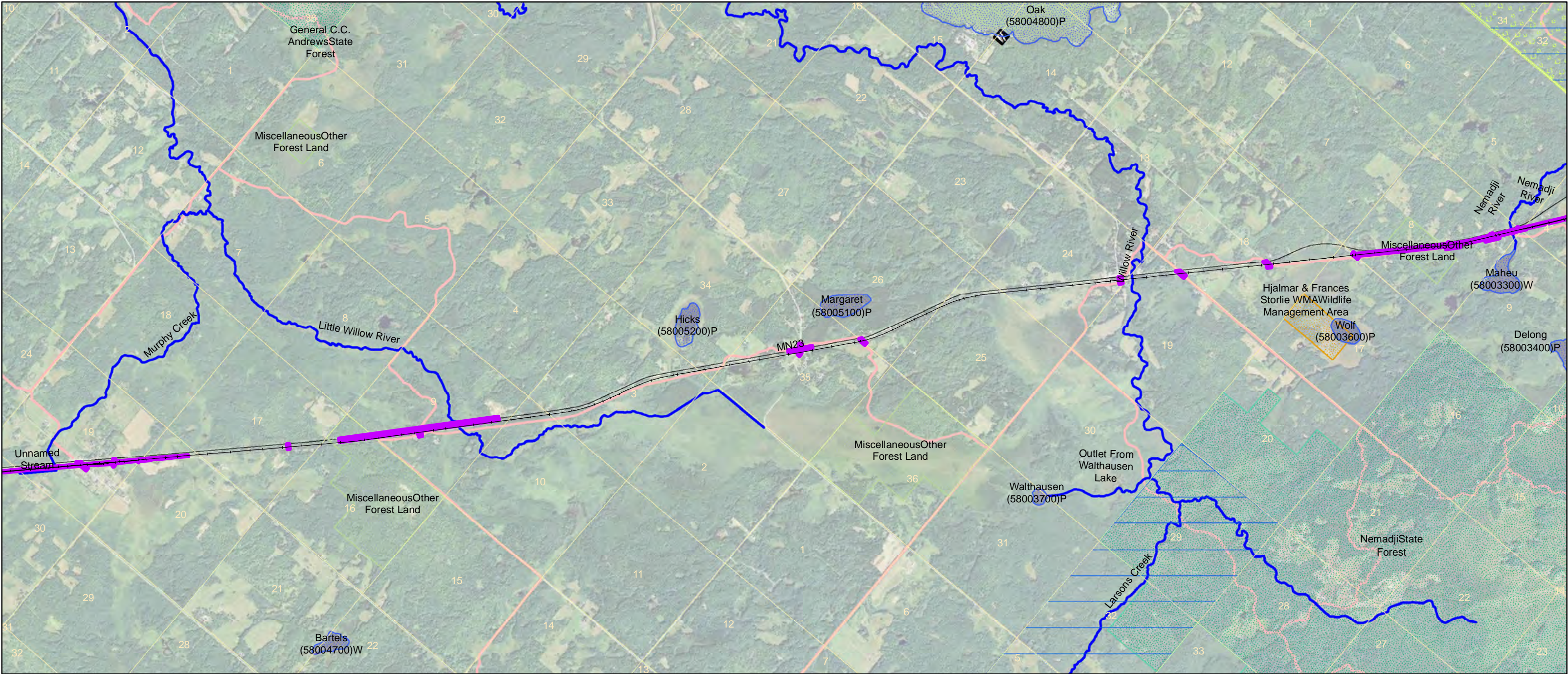
- Railroad centerline
- NLX_AreaDisturbance_20160922
- PLS sections with designated trout streams
- Public Water Watercourse
- Public Waters Basins
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Outstanding
- Site of Biodiversity Significance - High
- Site of Biodiversity Significance - Moderate
- Aquatic Management Area - AMA
- State Forest Land
- Other Forest Land
- Minnesota State Trails
- Public Access - Carry-In
- Public Access - Trailer Launch
- Local Snowmobile Trails



Map 3 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016



Map 4 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

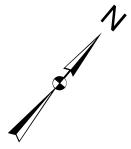
**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- NLX_AreaDisturbance_20160922
- PLS sections with designated trout streams
- Public Water Watercourse
- Public Waters Basins
- Designated Trout Stream
- Site of Biodiversity Significance - Moderate
- State Forest Land
- Other Forest Land
- Wildlife Management Area - WMA
- Public Access - Trailer Launch
- Local Snowmobile Trails



**Northern Lights Express (NLX)
Potential Areas of Disturbance**

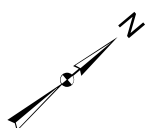
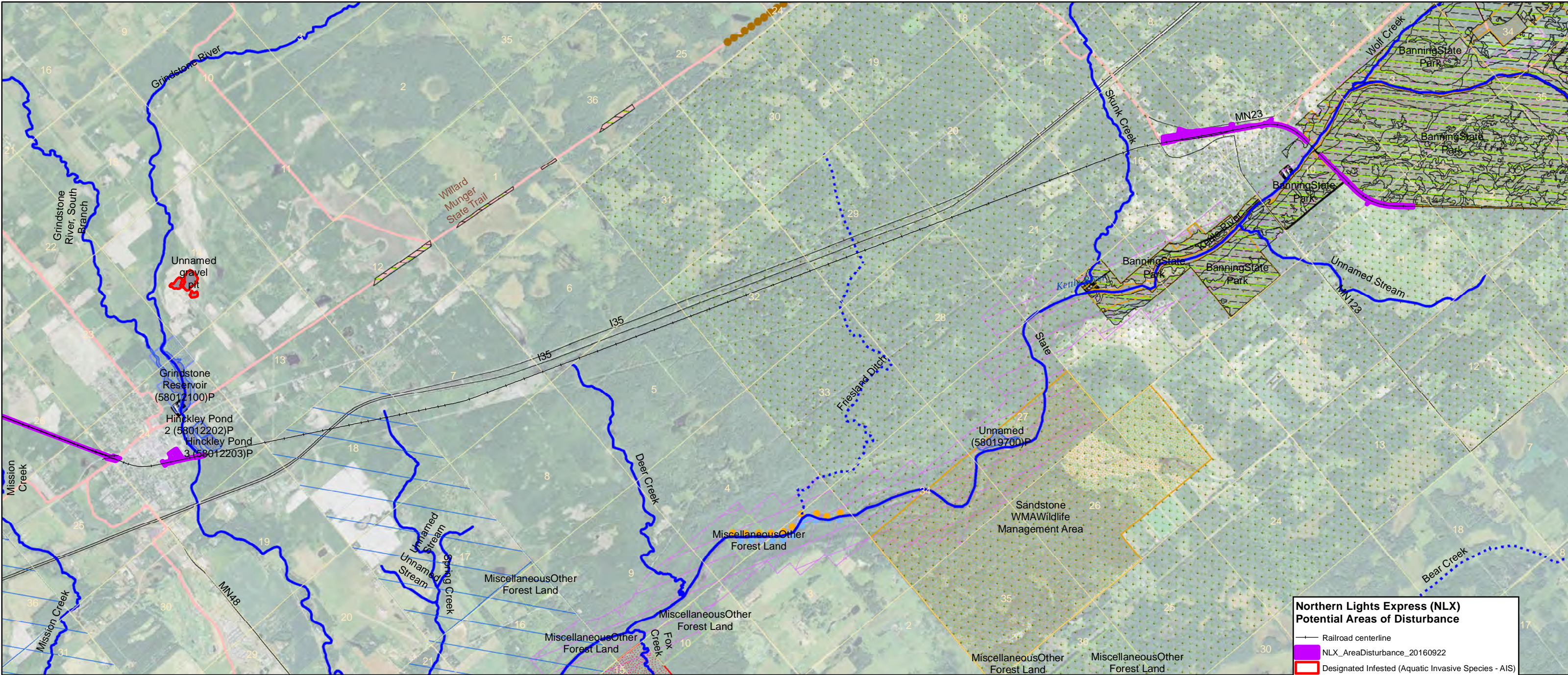
- Railroad centerline
- NLX_AreaDisturbance_20160922
- ▭ PLS sections with designated trout streams
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- ▭ Public Waters Basins
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- ▭ NLE_bat_roost_trees_and_hibernacula
- ▭ DNR Native Plant Communities (single symbol)
- ▭ Aquatic Management Area - AMA
- ▭ State Forest Land
- ▭ Other Forest Land
- ▭ State Parks
- State Wild & Scenic River
- ▭ Wild and Scenic River Districts
- Minnesota Water Trails
- ▭ Public Access - Trailer Launch
- Local Snowmobile Trails



Map 5 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016



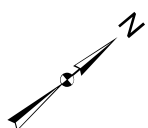
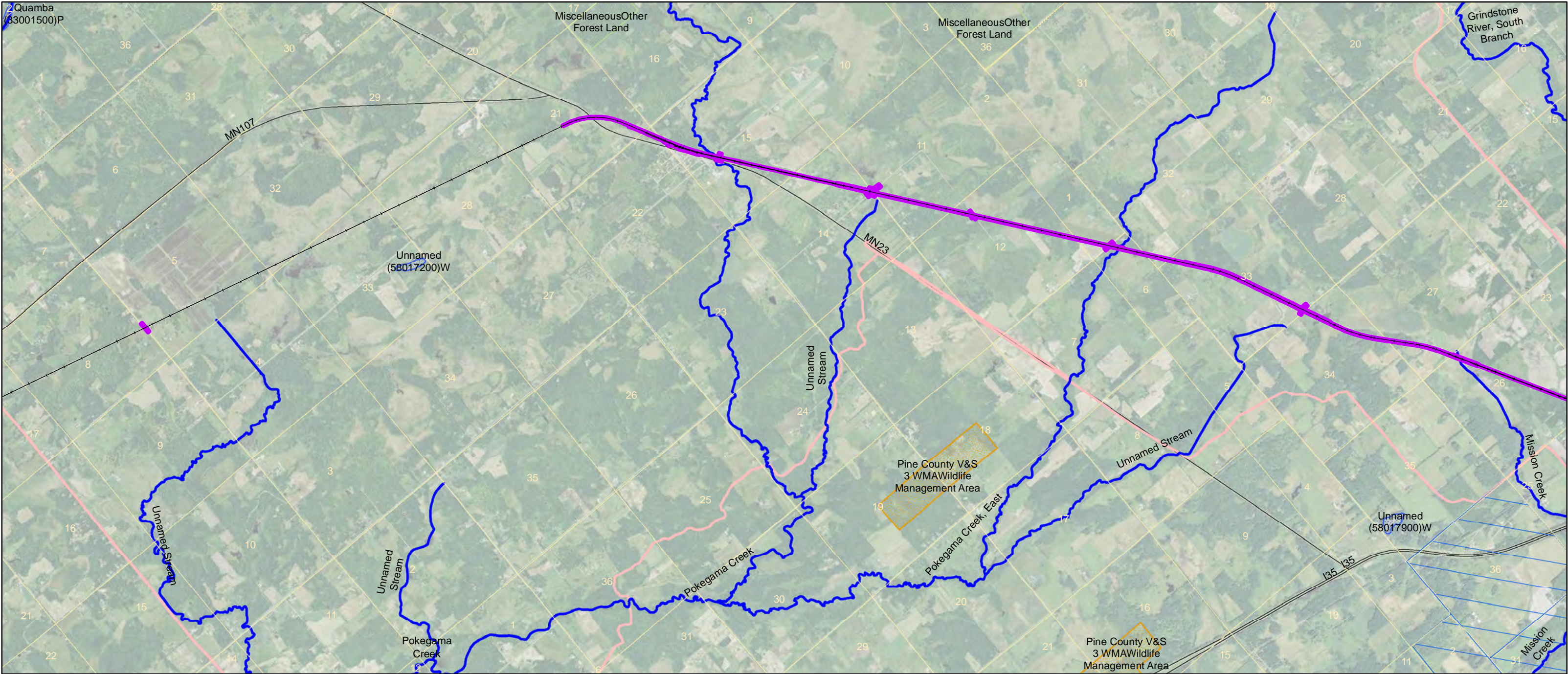
Map 6 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

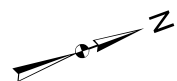
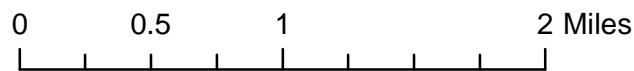
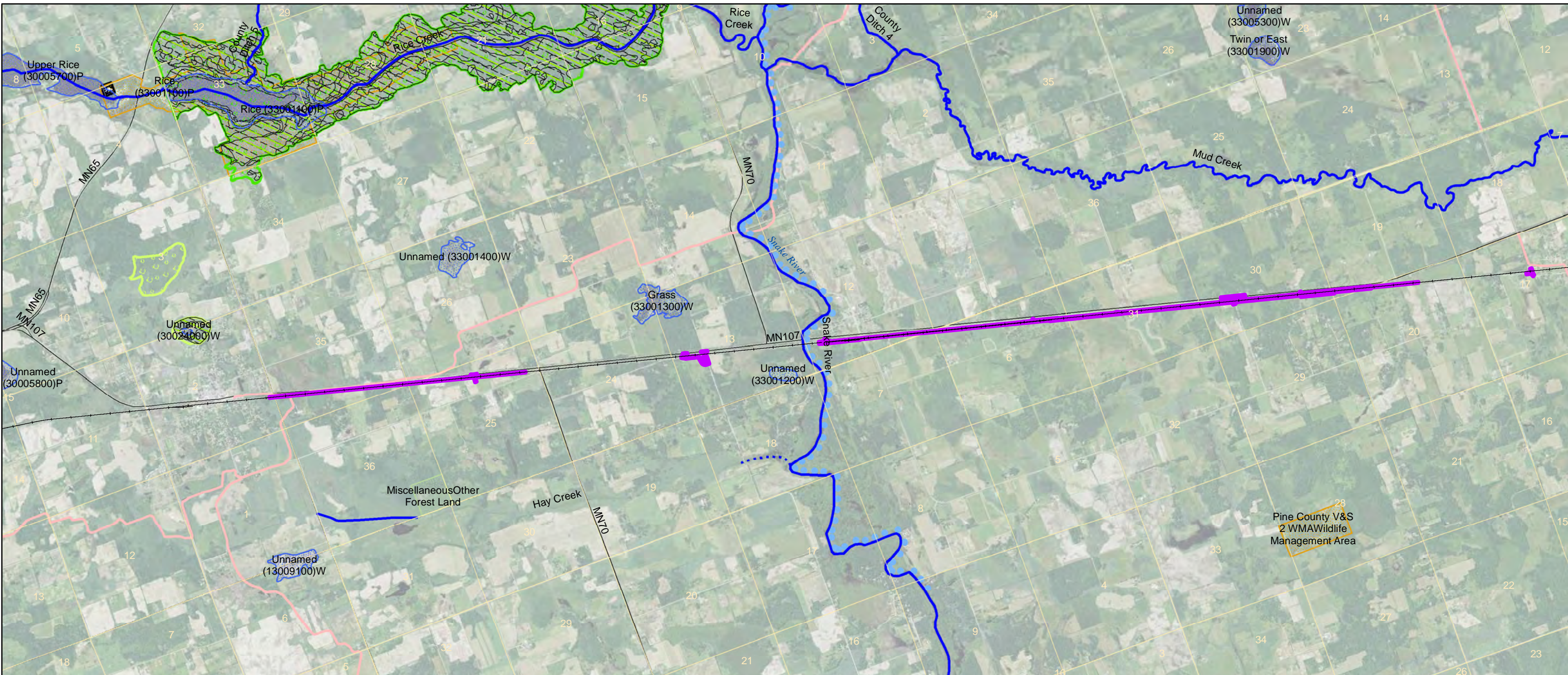
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- PLS sections with designated trout streams
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Waters Basins
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- NLE_bat_roost_trees_and_hibernacula
- DNR Native Plant Communities (single symbol)
- Aquatic Management Area - AMA
- Scientific and Natural Area - SNA
- Other Forest Land
- State Parks
- Wildlife Management Area - WMA
- State Wild & Scenic River
- Wild and Scenic River Districts
- Minnesota Water Trails
- Minnesota State Trails
- Public Access - Carry-In
- Public Access - Trailer Launch
- Local Snowmobile Trails



Map 7 of 13

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

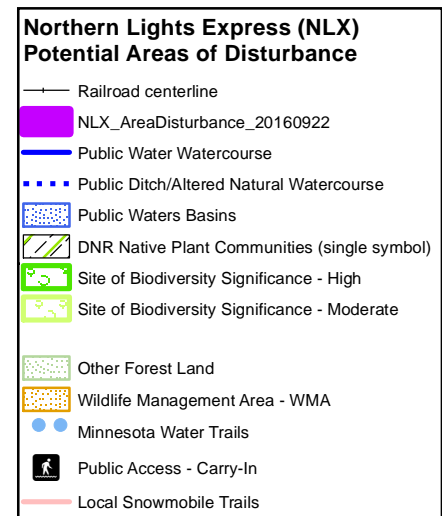
- Railroad centerline
- NLX_AreaDisturbance_20160922
- ▭ PLS sections with designated trout streams
- Public Water Watercourse
- ▭ Public Waters Basins
- Designated Trout Stream
- Other Forest Land
- ▭ Wildlife Management Area - WMA
- Local Snowmobile Trails

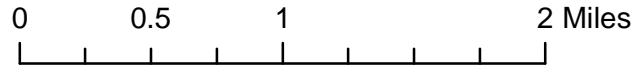
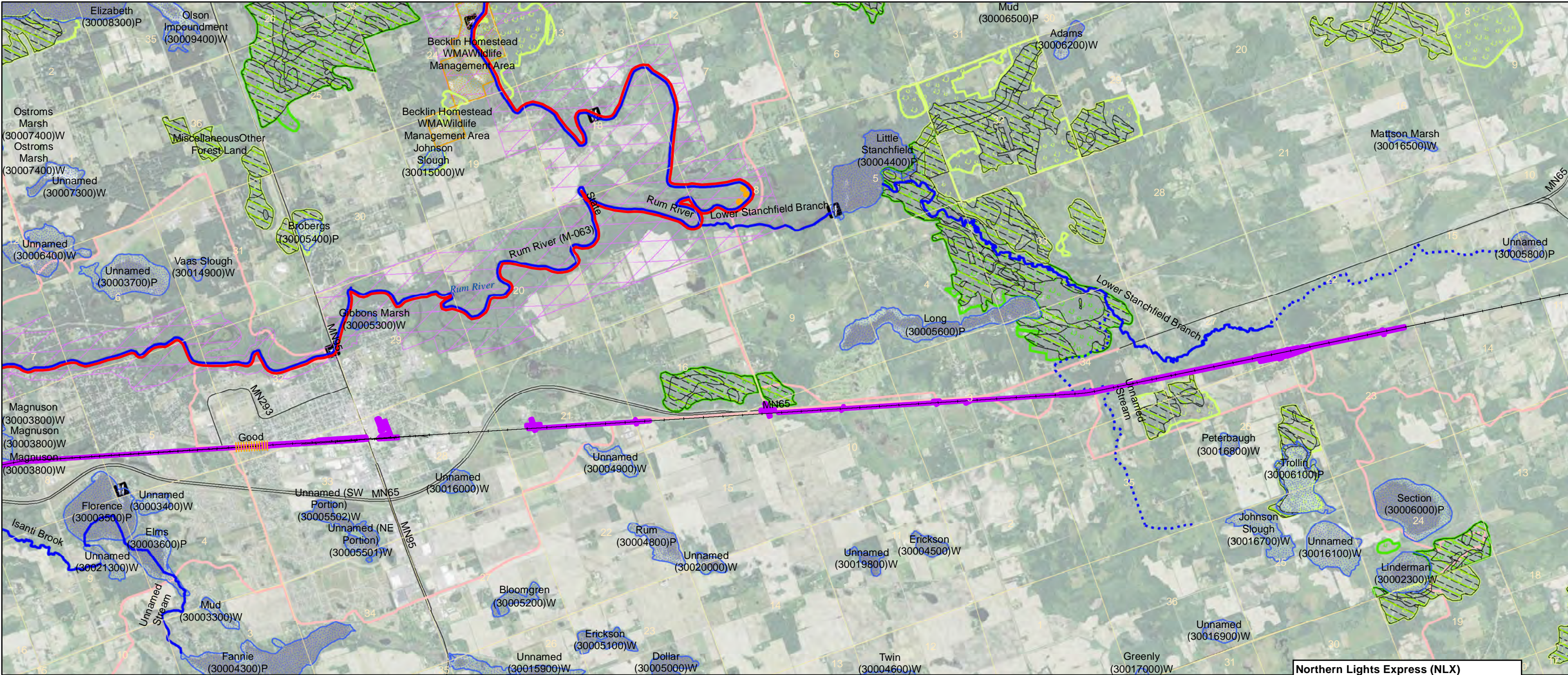


Map 8 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

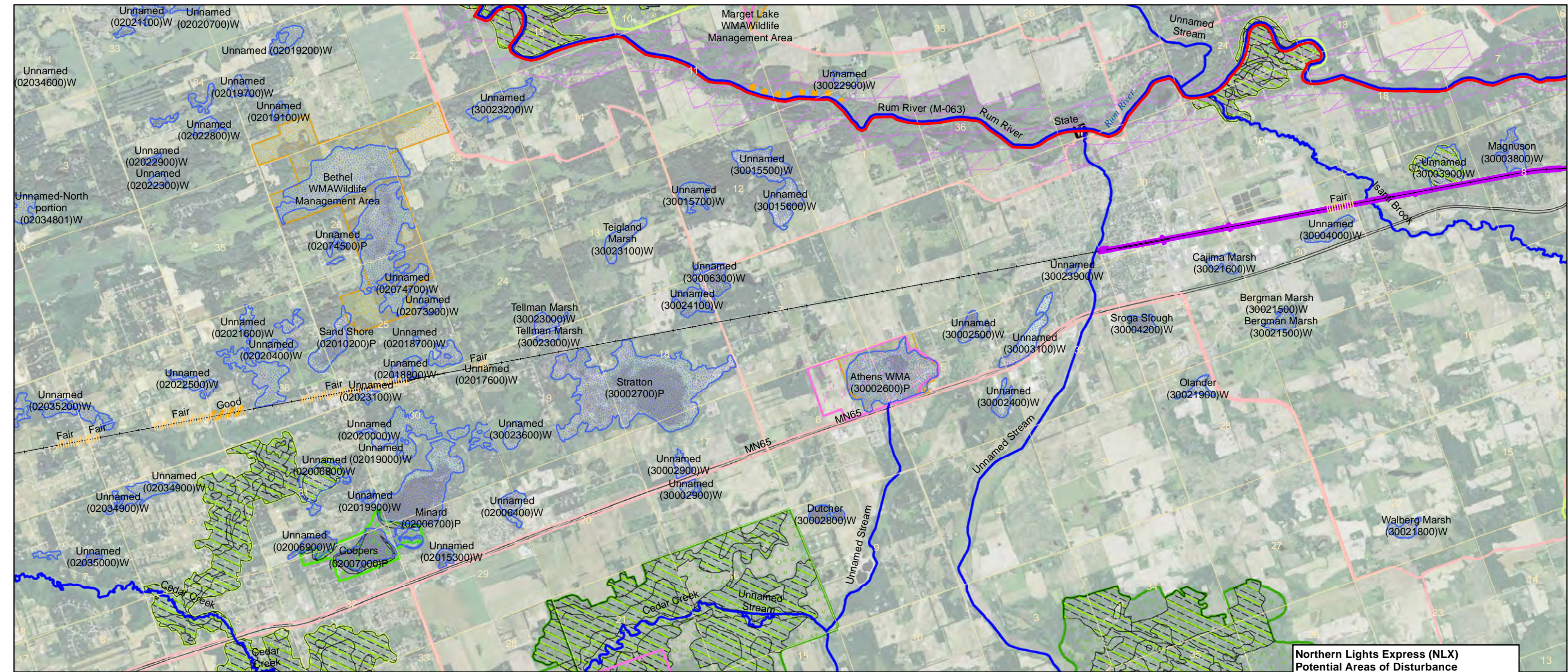




Map 9 of 13

Northern Lights Express (NLX) Potential Areas of Disturbance

- Railroad Right-of-Way Native Prairie Remnant - Good
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Waters Basins
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - High
- Site of Biodiversity Significance - Moderate
- Other Forest Land
- Wildlife Management Area - WMA
- State Wild & Scenic River
- Wild and Scenic River Districts
- Minnesota Water Trails
- Public Access - Carry-In
- Public Access - Trailer Launch
- Local Snowmobile Trails



**Northern Lights Express (NLX)
Potential Areas of Disturbance**

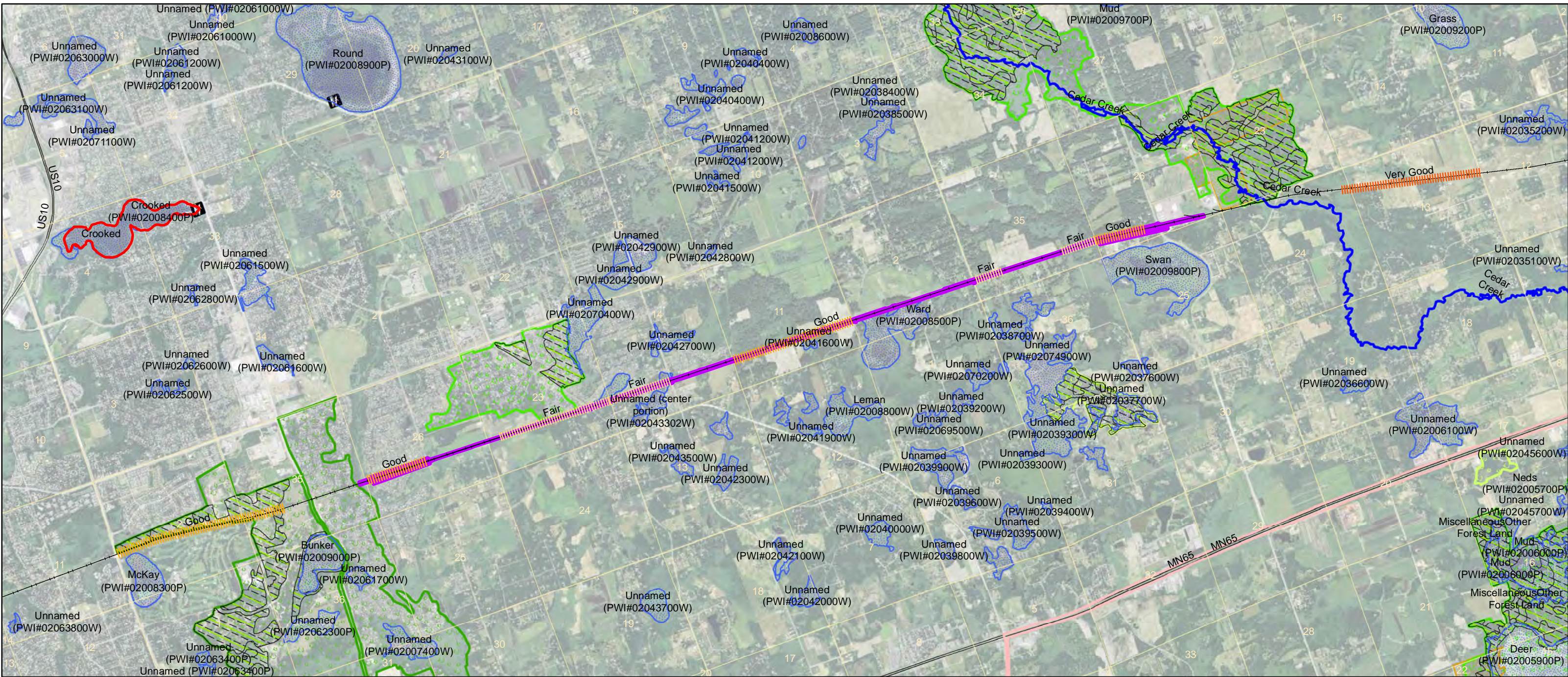
- Railroad Right-of-Way Native Prairie Remnant - Good
- Railroad Right-of-Way Native Prairie Remnant - Fair
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Public Water Watercourse
- Public Waters Basins
- Blandings Turtle Priority Area
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Outstanding
- Site of Biodiversity Significance - High
- Site of Biodiversity Significance - Moderate
- Other Forest Land
- Wildlife Management Area - WMA
- State Wild & Scenic River
- Wild and Scenic River Districts
- Minnesota Water Trails
- Public Access - Trailer Launch
- Local Snowmobile Trails



Map 10 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016



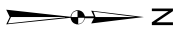
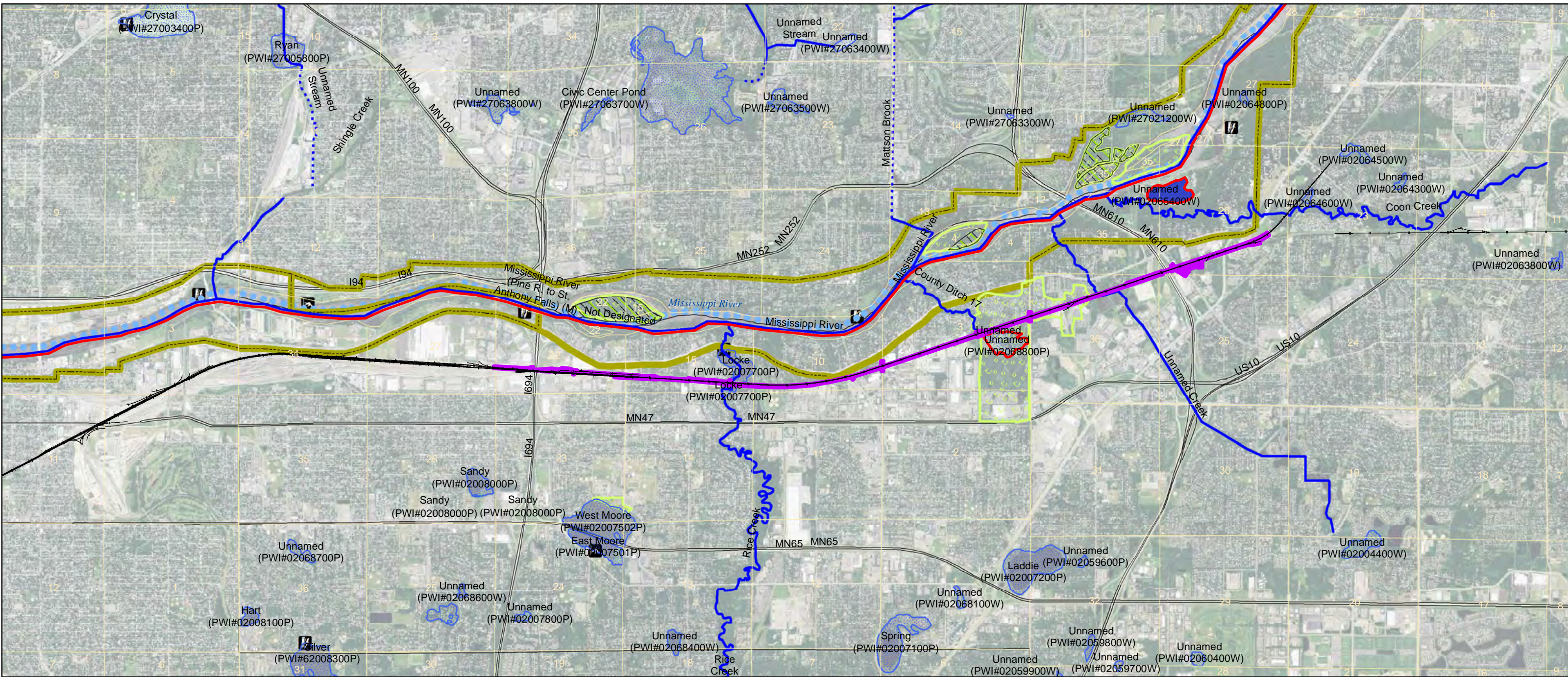
Map 11 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

Northern Lights Express (NLX) Potential Areas of Disturbance

- Railroad Right-of-Way Native Prairie Remnant - Very Good
- Railroad Right-of-Way Native Prairie Remnant - Good
- Railroad Right-of-Way Native Prairie Remnant - Fair
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Public Water Watercourse
- Public Waters Basins
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Outstanding
- Site of Biodiversity Significance - High
- Site of Biodiversity Significance - Moderate
- Other Forest Land
- Wildlife Management Area - WMA
- Public Access - Trailer Launch
- Local Snowmobile Trails



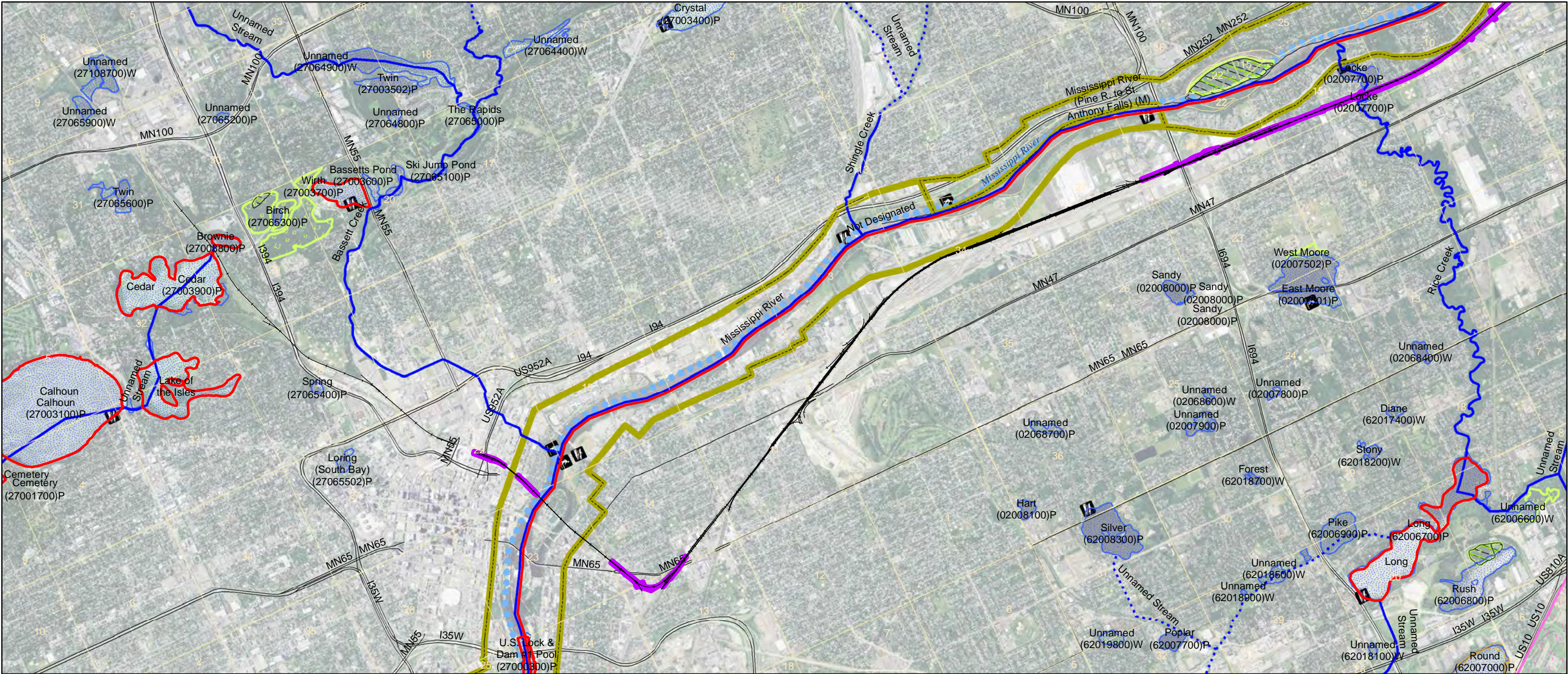
Map 12 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Designated Infested (Aquatic Invasive Species - AIS)
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Waters Basins
- State-designated trout lakes
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Moderate
- Mississippi River Critical Area Boundary
- Minnesota Water Trails
- Public Access - Carry-In
- Public Access - Trailer Launch



**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- NLX_AreaDisturbance_20160922
- Track Modification
- Designated Infested (Aquatic Invasive Species - AIS)
- Designated Infested (Aquatic Invasive Species - AIS)
- National Wildlife Refuges
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Waters Basins
- Blandings Turtle Priority Area
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Moderate
- Mississippi River Critical Area Boundary
- Minnesota Water Trails
- Public Access - Carry-In
- Public Access - Trailer Launch



Map 13 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

**Endangered, Threatened, and Special Concern Species found in/near proposed
NLX corridor in Douglas County, Wisconsin
Revised June 2016**

The following species are known to occur in or near the proposed NLX Corridor. Specific list history information is given below.

Group	Scientific Name	Common Name	State Status *
Bird	<i>Oporornis agilis</i>	Connecticut Warbler	SC
	<i>Sturnella neglecta</i>	Western meadowlark	SC
	<i>Ammodramus leconteii</i>	LeConte's sparrow	SC
	<i>Falco peregrinus</i>	Peregrine Falcon	END
Fish	<i>Anguilla rostrata</i>	American Eel	SC
Mammal	<i>Canis lupus</i>	Gray Wolf	SC
Plant	<i>Ranunculus gmelinii</i>	Small Yellow Water Crowfoot	END
	<i>Ranunculus cymbalaria</i>	Seaside Crowfoot	THR
	<i>Caltha natans</i>	Floating Marsh Marigold	END
	<i>Petasites sagittatus</i>	Arrow-leaved Sweet-coltsfoot	THR
	<i>Eleocharis nitida</i>	Slender Spike-rush	END
	<i>Sparganium glomeratum</i>	Northern Bur-reed	THR
	<i>Juncus vaseyi</i>	Vasey Rush	SC
	<i>Calamagrostis stricta</i>	Slim-stem Small-reedgrass	SC
	<i>Carex crawei</i>	Crawe Sedge	SC
	<i>Carex nigra</i>	Smooth Black Sedge	SC
	<i>Platanthera orbiculata</i>	Large Roundleaf Orchid	SC
	<i>Salix planifolia</i>	Tea-leaved Willow	THR
	<i>Sparganium glomeratum</i>	Clustered Bur-Reed	THR
Reptile	<i>Glyptemys insculpta</i>	Wood Turtle	THR

* SC = Special Concern (those species about which some problem of abundance or distribution is suspected but not yet proved.); THR = Threatened; END = Endangered

1. **Connecticut Warbler** (*Oporornis agilis*) – A bird of special concern in Wisconsin. It prefers mature, multi-layered pine stands, particularly jack pine, and occasionally in tamarack-pine stands with dense hardwood understory. The breeding season extends from mid-June through mid-July.

2. **Western Meadowlark** (*Sturnella neglecta*) – A Special Concern species in Wisconsin, is a medium-sized bird that is a chunkier equivalent to a robin. It is distinguishable by its bright yellow throat and breast marked by a black "V". The rest of the body is intricately patterned with a multitude of brown, black spots and stripes. The species is typically found in open landscapes like pastures and hay fields, grasslands, prairies and meadows where there is a mix of short to medium-high grasses. During the avoidance period from April 20 - August 15, nests are constructed by the females from weaving grass and shrub stems in a 7-8 inch wide depression in the soil. The Western Meadowlark has suffered from significant population decline over the past three decades, likely due to loss of habitat caused by fragmentation, land use conversion and succession from grasslands to brush or forests.
3. **LeConte's Sparrow** (*Ammodramus leconteii*) –Le Conte's Sparrow, a Special Concern species in Wisconsin, is a small, chunky sparrow with an orange-yellow face and chest. Its head is marked by a white crown stripe between two black streaks. Black streaks also mark the sides and flanks. Its nape is pinkish-brown. An uncommon migrant to Wisconsin, the species is found nesting throughout the central and northern portions of the state. Le Conte's Sparrow is found in habitats with tall, dense, moist vegetation such as sedge meadows, wet hayfields and prairies. Other breeding habitats include marshy meadows and open bogs. Most individuals have been documented in the northern one-third of the state. The avoidance period is from May 5 to early September. Two to six pale greenish covered eggs with fine brown specks are laid in open cup nests, composed of fine grasses, on or above the ground. Promoting practices that maintain tall grassland habitats will benefit this species in the state.
4. **Peregrine Falcon** (*Falco peregrinus*) - Peregrine Falcon, a bird listed as Endangered in Wisconsin, prefers relatively inaccessible rock ledges on the sides of steep bluffs and ledges on high-rise buildings in urban areas. The recommended avoidance period is from **March 1 through July 31**.
5. **American Eel** (*Anguilla rostrata*) – A fish of special concern in Wisconsin. It prefers large streams, rivers and lakes with muddy bottoms and still waters.
6. **Gray Wolf** (*Canis lupus*) – Also referred to as the timber wolf, and is listed as special concern in Wisconsin. Wolves are social animals that live in packs, and pack sizes in Wisconsin average up to six individuals with a few packs as large as ten animals. A wolf pack's territory may cover 20-120 square miles.
7. **American Marten** (*Martes Americana*) – A state endangered mammal that lives in mature, dense conifer forests, mixed conifer-hardwood, and hardwood dominated forests. American martens prefer forests with a mixture of conifers and deciduous trees including hemlock, white pine, yellow birch, maple, fir and spruce. Marten young are born in tree dens in late March and April and are weaned when about six weeks old.
8. **Small Yellow water Crowfoot** (*Ranunculus gmelinii*) – A plant species that is endangered in Wisconsin. It is found in cold brooks and springs, shallow water and muddy shores of ditches, streams, and lakes. Blooming occurs late June through late August; fruiting occurs early July through early September. The optimal identification period for this species is late June through early September.

9. **Seaside Crowfoot** (*Ranunculus cymbalaria*) – A state threatened plant which is found in sandy or muddy shores and marshes, ditches and harbors along Lake Michigan, and salted roadsides near the City of Superior. Blooming occurs early June through late August; fruiting occurs late July through late August. The optimal identification period for this species is early June through late August.
10. **Floating Marsh Marigold** (*Caltha natans*) – A state endangered plant found in shallow water in creeks, pools, ditches, and sheltered lake margins. It typically roots in mud, silt, or clay, and spreads by rooting at the nodes. Blooming occurs throughout July; fruiting occurs throughout August. The optimal identification period for this species is early July through late August.
11. **Arrow-leaved Sweet-coltsfoot** (*Petasites sagittatus*) – A state threatened plant that is found in cold marshes and swamp openings, often forming large clones. This species hybridizes with *Petasites palmatus*. Blooming occurs throughout May; fruiting occurs throughout June. The optimal identification period for this species is late may through late August.
12. **Slender Spike-rush** (*Eleocharis nitida*) – A state endangered plant that is found on wet exposed clay in ditches and openings in alder thickets and marshes, only near Superior. Blooming occurs throughout June; fruiting occurs late June through early September. The optimal identification period for this species is late June through late August.
13. **Northern Bur-reed** (*Sparganium glomeratum*) – A state threatened plant found in cold ditches and pools in sedge meadows, willow-alder thickets, and, occasionally, tamarack stands on the Lake Superior clay plain. Blooming occurs late June through late July; fruiting occurs late July through early September. The optimal identification period for this species is early July through early September.
14. **Vasey Rush** (*Juncus vaseyi*) – A plant of special concern in Wisconsin that is found in moist old fields, ditches, and moist prairies. It has been most commonly found on the Lake Superior clay plain. Blooming occurs early July through late August; fruiting occurs early August through early September. The optimal identification period for this species is early July through late August.
15. **Slim-stem Small-reedgrass** (*Calamagrostis stricta*) – A plant of special concern in Wisconsin. It is usually found on dry to moist dunes, barren, and dolomite or sandstone ledges, mostly near the Great Lakes, as well as calcareous wetlands. Blooming occurs throughout June; fruiting occurs early July through late August. The optimal identification period for this species is early July through late August.
16. **Crawe Sedge** (*Carex crawei*) – A plant of special concern in Wisconsin. It is found in calcareous wetlands and dolomitic pavement, often near Lake Michigan. It is also found in fens and moist calcareous prairies. Blooming occurs late in April through late May; fruiting occurs late May throughout late June. The optimal identification period for this species is throughout May.
17. **Smooth Black Sedge** (*Carex nigra*) – A plant of special concern in Wisconsin. It is found mainly on the edge of dry meadows and wet/sedge meadows and shrub-carr habitats. Fruiting occurs July through August. The optimal identification period for this species is early July through late August.

18. **Large Roundleaf Orchid** (*Platanthera orbiculata*) – A plant of special concern in Wisconsin which is found in moist hardwood or mixed conifer-hardwood forests. Blooming occurs late June through late July; fruiting occurs early July through late August. The optimal identification period for this species is late June through early August.
19. **Tea-leaved Willow** (*Salix planifolia*) – A state threatened plant that is found near Lake Superior, including bedrock shorelines in the Apostle Islands. Blooming occurs throughout May; fruiting occurs throughout June. The optimal identification period for this species is early June through early September.
20. **Clustered Bur-Reed** (*Sparganium glomeratum*) - Clustered Bur-reed, a Wisconsin Threatened plant, is found in cold ditches and pools within sedge meadows, willow-alder thickets and, occasionally, tamarack stands on the Lake Superior clay plain. Blooming occurs late June through late July; fruiting occurs late July through early September. The optimal identification period for this species is early July through early September.
21. **Wood Turtle** (*Glyptemys insculpta*) – A state threatened species that prefers clean rivers and streams with moderate to fast flows, adjacent riparian wetlands, and upland deciduous forests. The wood turtle becomes active in spring as soon as the ice is gone and air temperatures reach approximately 50 degrees in March or April. They can remain active into mid-October but have been seen breeding under the ice. Wood turtles can breed at any time of the year but primarily during the spring or fall. Nesting usually begins in late May and continues through June. They usually nest in sand or gravel, and usually very close to the water.

**Endangered Resources found near NLX corridor in Douglas County, Wisconsin
Revised June 2016**

Town/Range	Section	Species	Status
T47N R14W	4	Crawe Sedge	SC
	4	Slim-stem small reedgrass	SC
	17	Wood Turtle	THR
	4, 8, 9, 17	Gray Wolf	SC
T47N R15W	General	Gray Wolf	SC
	24, 25	Western meadowlark	SC
	24, 25, 26	LeConte's sparrow	SC
	32	Floating marsh marigold	END
	35	Connecticut warbler	SC
T48N R14W	10, 22	Vasey Rush	SC
	3	Arrow-leaved sweet coltsfoot	THR
	3	Seaside crowfoot	THR
	3	Tea-leaved willow	THR
	15, 18	Northern bur-reed	THR
	21, 28, 31, 32, 33	Gray wolf	SC
	22	Wood turtle	THR
	33	Crawe Sedge	SC
	33	Slim stem small reedgrass	SC
	T49N R14W	General	Large roundleaf orchid
15, 21, 27		Seaside crowfoot	THR
27, 34		Vasey rush	SC
27		Small yellow water crowfoot	END
27, 34		Northern bur-reed	THR
27		Smooth black sedge	SC
27		Arrow-leaved Sweet Coltsfoot	THR
27		Clustered Bur-Reed	THR
15		Peregrine Falcon	END
16		American eel	SC
34		Slender spike-rush	END

From: [Martin, Andrea \(FRA\)](#)
To: phil_delphey@fws.gov
Cc: [Peterson, Garneth \(DOT\)](#)
Subject: Request for Concurrence – ESA (Section 7): Northern Lights Express
Attachments: [How to UNZIP.html](#)
[SecureZIP Attachments.zip](#)

Good morning Mr. Delphey;

Attached is request for concurrence for a project that may affect, but is not likely to adversely affect Canada lynx and gray wolf. Also included is my determination for NLEB that this project may affect, but will not cause prohibited incidental take. The Northern Lights Express (NLX) Project would operate on 152 miles of existing BNSF Railway track in Minnesota and Wisconsin. The project crosses Anoka, Carlton, Hennepin, Isanti, Kanabec, Pine, and St. Louis counties in Minnesota, and Douglas County in Wisconsin. The Minnesota Department of Transportation (MnDOT) is leading the project in consultation with the Federal Railroad Administration (FRA) and in cooperation with the Wisconsin Department of Transportation (WisDOT).

The NLX Project would operate four passenger round-trips (8 trains) per day at speeds up to 90 miles per hour (mph), and includes stations at Target Field, Coon Rapids, Cambridge, Hinckley, Superior (Wisconsin), and Duluth. Travel time between Minneapolis and Duluth would be about 2.5 hours. The NLX passenger trains would operate primarily on existing track owned by BNSF Railway for freight rail service. Track and signal infrastructure improvements would occur within existing BNSF Railway right of way. Some grade crossing reconstruction improvements may require additional roadway right of way where pavement widths need to be increased to accommodate upgraded warning device installations.

FRA recognizes that specific details about areas of disturbance, tree removal impacts and timing, and bridge work are unavailable at this time making detailed evaluation of project impacts difficult. FRA commits to reinitiate consultation with the Service prior to authorizing final plans, specifications, and estimates (PS&E) for this project to more fully address endangered species impacts.

Thank you, Andrea

[ANDRÉA E. MARTIN](#)
Environmental Protection Specialist
[Federal Railroad Administration](#)
(d) 202.493.6201



U.S. Department
of Transportation

1200 New Jersey Avenue, SE
Washington, DC 20590

**Federal Railroad
Administration**

January 11, 2017

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

Request for Concurrence, May affect, not likely to adversely affect – Canada lynx (*Lynx canadensis*)
Request for Concurrence, May affect, not likely to adversely affect – Gray wolf (*Canis lupus*)

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

No Effect Determination – Canada lynx – Critical Habitat
No Effect Determination – Gray wolf – Critical Habitat
No Effect Determination – Kirtland's Warbler (*Setophaga kirtlandii*)
No Effect Determination – Piping Plover (*Charadrius melodus*) and Critical Habitat
No Effect Determination – Rufa Red Knot (*Calidris canutus rufa*)
No Effect Determination – Higgins eye pearl mussel (*Lampsilis higginsii*)
No Effect Determination – Snuffbox (*Epioblasma triquetra*)
No Effect Determination – Spectaclecase (*Cumberlandia monodonta*)
No Effect Determination – Fassett's locoweed (*Oxytropis campestris chartacea*)

No Jeopardy Determination – Rusty-patched Bumble Bee (*Bombus affinis*)

Northern Lights Express Passenger Rail Project (NLX)

Minneapolis to Duluth, Minnesota
Anoka, Carlton, Hennepin, Isanti, Kanabec, Pine, and St. Louis counties, Minnesota
Douglas County, Wisconsin

Project Description

The Federal Railroad Administration (FRA) and Minnesota Department of Transportation (MnDOT) with cooperation from the Wisconsin Department of Transportation (WisDOT) are initiating the Tier 2 Project Level Environmental Assessment (EA) for the proposed NLX high-speed intercity passenger rail project between Minneapolis and Duluth, Minnesota. MnDOT completed a Tier 1 Service Level EA/Finding of No Significant Impact (FONSI) in 2013. Changes in project scope are listed in Table 1-1.

Table 1-1: Project Modifications between Tier 1 and Tier 2 NEPA

Tier 1 NEPA Project	Tier 2 NEPA Project
8 round trips per day	4 round trips per day
Speeds up to 110 miles per hour	Speeds up to 90 miles per hour
Estimated capital cost	Refined estimated capital cost
General locations for stations and layover and maintenance facilities identified	Stations and layover and maintenance facilities sites defined
Impacts assessed in general corridor	Impacts refined in accordance with design for specific infrastructure improvements

The Northern Lights Express (NLX) Project is a proposed high-speed intercity passenger rail project that would provide service between Minneapolis and Duluth, Minnesota. The NLX corridor and proposed station locations are shown on Figure 1-1. The NLX Project would operate on 152 miles of existing BNSF Railway track in Minnesota and Wisconsin. The project crosses Anoka, Carlton, Hennepin, Isanti, Kanabec, Pine, and St. Louis counties in Minnesota, and Douglas County in Wisconsin. The Minnesota Department of Transportation (MnDOT) is leading the project in consultation with the Federal Railroad Administration (FRA) and in cooperation with the Wisconsin Department of Transportation (WisDOT).

The NLX Project would operate four passenger round-trips (8 trains) per day at speeds up to 90 miles per hour (mph), and includes stations at Target Field, Coon Rapids, Cambridge, Hinckley, Superior (Wisconsin), and Duluth. Travel time between Minneapolis and Duluth would be about 2.5 hours.

The NLX passenger trains would operate primarily on existing track owned by BNSF Railway for freight rail service. Track and signal infrastructure improvements would occur within existing BNSF Railway right of way. Some grade crossing reconstruction improvements may require additional roadway right of way where pavement widths need to be increased to accommodate upgraded warning device installations. The following infrastructure improvements are proposed to accommodate the NLX Project on the BNSF Railway right of way:

- Track and signal improvements to increase train capacity
 - Construct an additional track and sidings at select locations
 - Modification to curves to allow increased operating speed
- Bridge improvements
 - New railroad bridges over Mississippi Street and Rice Creek in Fridley
 - Convert open deck to ballast deck at select locations
 - Rehabilitate bridges at select locations
- Safety improvements at highway/railroad grade crossings
 - Install crossing warning devices
 - Install additional signage as appropriate
 - Reconstruct up to 43 grade crossings to improve approach grades on the intersecting roadway.



- Grade crossing closures for consolidation at up to 6 crossings, which will be determined in coordination with local officials

All of the NLX stations either modify existing, or construct new facilities. At Target Field Station, an existing platform would be extended and new track constructed to accommodate NLX service and existing North Star service. New stations would be constructed in Coon Rapids (near the Foley Boulevard Metro Transit park and ride lot) and downtown locations in Hinckley and Superior. The new stations would include a station building, parking, and platforms with warming shelters. The station in Cambridge would renovate space in the existing City Center Mall in downtown, and construct a new platform with warming shelters. The station at Duluth would be a new facility adjacent to the existing Union Depot building, along with a new track, and platform for the NLX service. All stations would provide for multimodal connections and long term parking. The station sites are configured for taxi, bus and private vehicular drop-off/pick-up, bicycle and pedestrian access. All station facilities would be adjacent to the track and built primarily on either publicly owned parcels or BNSF Railway rights of way. Some private right of way acquisition may be required in Hinckley and Superior.

There are two maintenance/layover facility site alternatives under consideration, at sites adjacent to the tracks in Duluth and Sandstone. The sites are about 10 acres in size and would be located on existing BNSF Railway right of way. The maintenance facility would handle inspection, servicing, maintenance and repair activities required to keep NLX trains in service. A layover facility is used to park trains between trips and perform limited servicing, inspection and minor repair functions.

No funding is currently available for project construction. Should funding become available in the near future, the NLX service could be operating by the year 2020.

Additional map(s) attached below.

Previous ESA Consultation

April 12, 2012 – FRA requested concurrence that based on the findings of the Tier 1 Project Level Environmental Assessment that the project may affect, but is not likely to adversely affect Canada lynx.

September 26, 2012 – U.S. Fish and Wildlife Service concurred that the project, as presented, may affect but is not likely to adversely affect Canada lynx.

Endangered Species Act and Commitment to Reinitiate Consultation

FRA is requesting concurrence based on the findings of the Tier 2 Project Level Environmental Assessment that that the proposed activities may affect, but will not likely adversely affect the following species: Canada lynx and gray wolf.

FRA recognizes that specific details about areas of disturbance, tree removal impacts and timing, and bridge work are unavailable at this time making detailed evaluation of project impacts difficult. At present no major bridge work is anticipated, however, if the scope of bridge projects changes the project shall make an effort to incorporate wildlife passages benches where feasible to minimize impacts to wolves, lynx, and other wildlife. FRA also recognizes that additional species may be listed under the Endangered Species Act prior to the start of construction. As such, FRA commits to reinitiate consultation with the Service prior to authorizing final plans, specifications, and estimates (PS&E) for this project to more fully address endangered species impacts.

Conservation Measures

- Winter tree removal – tree removal November 1 to March 31, inclusive.
- If rolled erosion control products (EG erosion control blanket) are to be utilized, they shall be limited to 'bio-netting', 'natural-netting' (category 3N or 4N) or woven type products, and specifically not allow welded plastic mesh netting. See page 25 of 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 and DNR's Nongame Wildlife Program factsheet at <http://files.dnr.state.mn.us/eco/nongame/wildlife-friendly-erosion-control.pdf>.

- Coordinate with Minnesota and Wisconsin DNRs on measures to minimize impacts to state-listed turtles, including but not limited to:
 - Place mounds of typical railroad tie ballast rock above the ties between the rails (though below the elevation of the wheel flange) to allow them to climb out over the rail,
 - Provide a gap between the railroad ties to allow them to crawl out under the rail.

Species List for the Project County

According to the official County Distribution of Minnesota and Wisconsin 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

Species	Counties	Status	Habitat
Northern long-eared bat <i>Myotis septentrionalis</i>	Minnesota – Anoka, Carlton, Hennepin, Isanti, Kanabec, Pine, and St. Louis Wisconsin – Douglas	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
Canada lynx <i>Lynx canadensis</i>	Minnesota – Carlton, Pine, and St. Louis Wisconsin – Douglas	Threatened	Northern forest
Canada lynx <i>Lynx canadensis</i>	Minnesota – St. Louis	Critical Habitat	Map of lynx critical habitat in Minnesota
Gray wolf <i>Canis lupus</i>	Minnesota – Carlton, Kanabec, Pine, and St. Louis Wisconsin – Douglas	Threatened	Northern forest
Gray wolf <i>Canis lupus</i>	Minnesota – St. Louis	Critical Habitat	Map of wolf critical habitat in Minnesota
Kirtland's warbler <i>Setophaga kirtlandii</i>	Wisconsin – Douglas	Endangered	Potential breeding in young jack pine stands (5 to 25 years old)
Piping Plover <i>Charadrius melodus</i>	Minnesota – St. Louis Wisconsin – Douglas	Endangered and Critical Habitat	Sandy beaches, islands Great Lakes Breeding Population
Rufa Red knot <i>Calidris canutus rufa</i>	Minnesota – St. Louis Wisconsin – Douglas	Threatened	Coastal areas along Lake Superior
Higgins eye pearl mussel <i>Lampsilis higginsii</i>	Minnesota – Hennepin	Endangered	Mississippi River
Rusty patched bumblebee <i>Bombus affinis</i>	Minnesota – Hennepin	Proposed as Endangered	Grasslands with flowering plants from April through October, underground and abandoned rodent cavities or clumps of grasses above ground as nesting sites, and undisturbed soil for hibernating queens to overwinter.
Snuffbox <i>Epioblasma triquetra</i>	Minnesota – Hennepin	Endangered	Mississippi River
Spectaclecase <i>Cumberlandia monodonta</i>	Minnesota – Pine	Endangered	St. Croix River
Fassett's locoweed <i>Oxytropis campestris chartacea</i>	Wisconsin – Douglas	Threatened	Open sandy lakeshores

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 checked="" type="checkbox"/>	<input type="checkbox"/>
Estimated total acres of forest conversion (including winter)	Est. 50 acres	
If known, estimated acres ² of forest conversion from April 1 to October 31	Unknown	
If known, estimated acres of forest conversion from June 1 to July 31 ³	Unknown	
Does the project include timber harvest? (if yes, report acreage below)	<input checked="" 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.

Concurrence Requests

Request for Concurrence, May affect, not likely to adversely affect – Canada lynx (*Lynx canadensis*)

Request for Concurrence, May affect, not likely to adversely affect – Gray wolf (*Canis lupus*)

Canada lynx and gray wolf – *May affect, not likely to adversely affect.*

This project will include an additional eight (8) trains a day along this rail corridor, which may affect lynx and/or wolf population connectivity. At present the corridor accommodates approximately 12 freight trains per day. No critical habitat exists within the project area. **FRA has determined that the proposed action may affect, but is not likely to adversely affect the Canada lynx and gray wolf and is requesting concurrence for this determination.**

No Effect / No Jeopardy Determinations

No Effect Determination – Canada lynx – Critical Habitat

No Effect Determination – Gray wolf – Critical Habitat

No Effect Determination – Kirtland's Warbler (*Setophaga kirtlandii*)

No Effect Determination – Piping Plover (*Charadrius melodus*) and Critical Habitat

No Effect Determination – Rufa Red Knot (*Calidris canutus rufa*)

No Effect Determination – Higgins eye pearl mussel (*Lampsilis higginsii*)

No Effect Determination – Snuffbox (*Epioblasma triquetra*)

No Effect Determination – Spectaclecase (*Cumberlandia monodonta*)

No Effect Determination – Fassett's locoweed (*Oxytropis campestris chartacea*)

No Jeopardy Determination – Rusty-patched Bumble Bee (*Bombus affinis*)

Canada lynx and gray wolf – Critical Habitat – *No effect determination*

Project area does not include designated critical habitat for the lynx or wolf. **Therefore, FRA has made a determination of no effect for this species.**

Kirtland's Warbler – *No effect determination.*

No known occurrences for this species exist within the project area. Suitable habitat is not present. **Therefore, FRA has made a determination of no effect for this species.**

Piping Plover including Critical Habitat, and Rufa Red Knot – *No effect determination.*

All construction activities will be conducted along the existing railroad right-of-way, and is not anticipated to impact suitable habitat. **Therefore, FRA has made a determination of no effect for this species.**

Higgins eye, snuffbox, and spectaclecase – *No effect determination*

No known occurrences for this species exist within the project area. Suitable habitat is not present. **Therefore, FRA has made a determination of no effect for this species.**

Fassett's locoweed – *No effect determination*

No known occurrences for this species exist within the project area. Suitable habitat is not present. **Therefore, FRA has made a determination of no effect for this species.**

Rusty-patched bumble bee – *No Jeopardy determination*

No known occurrences for this species exist within the project area. Project not expected to jeopardize the continued existence of the species. **Therefore, FRA has made a determination of no jeopardy for this species.**

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 and tree removal. Approximately 50 acres of woodlands / forest have been identified within the project area, but exact removal amounts and locations are unknown at this time. There are NLEB roost trees approximately 2 miles from the project in Douglas County, Wisconsin. In addition, a single hibernaculum exists approximately 0.30 mile from an area of disturbance along the rail corridor in Pine County, Minnesota ([MNDNR 2016](#)). The activities required within this area of disturbance have not yet been identified, but will be disclosed when consultation with the Service is reinitiated prior to PS&E approval. By signing this form FRA determines that this project may affect the NLEB, but that any resulting incidental takes 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, FRA 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. FRA will update this determination annually for multi-year activities.

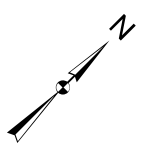
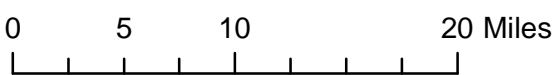
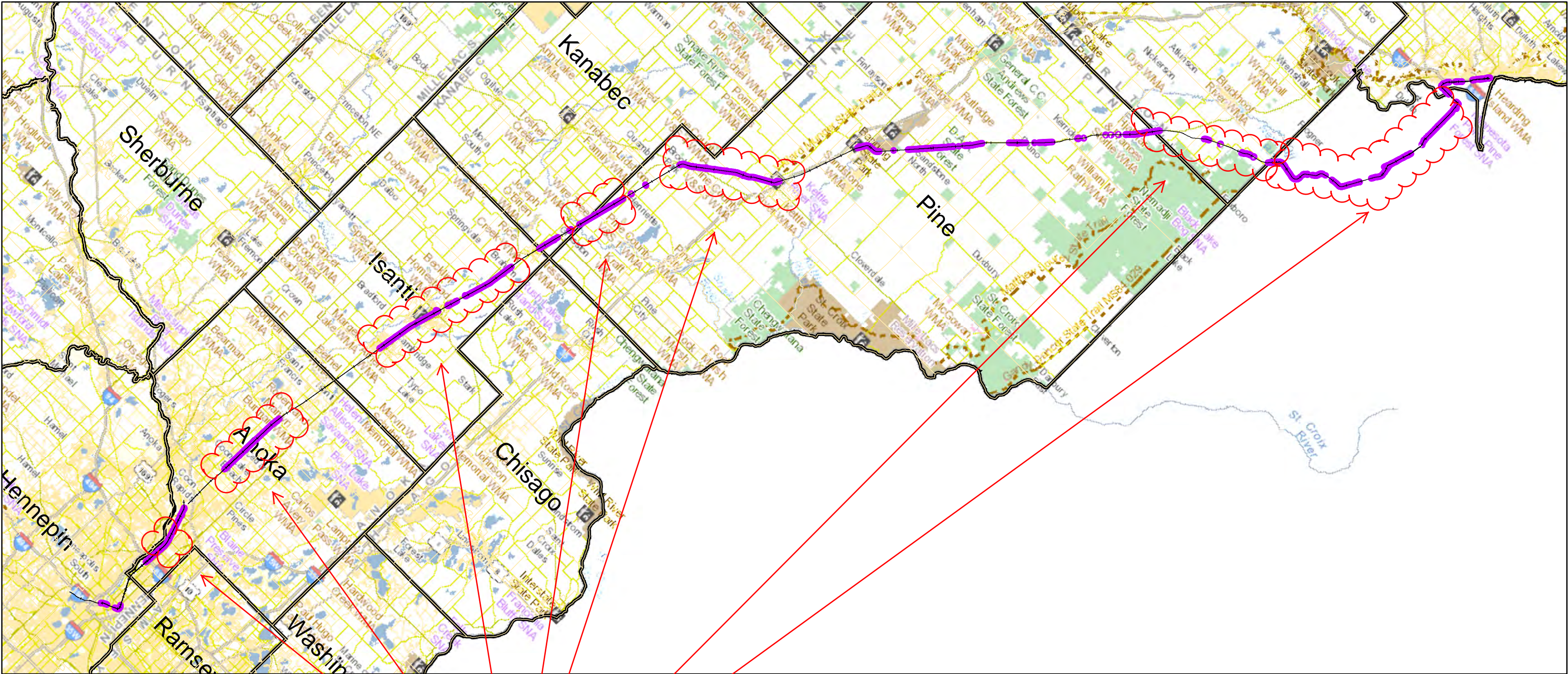
FRA understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. FRA will provide the appropriate USFWS Field Office with the results of any surveys 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 any questions or concerns.

X

Andrea E. Martin
Environmental Protection Specialist

Federal Railroad Administration
Andrea.Martin@dot.gov
202-493-6201

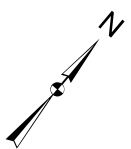
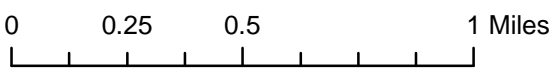
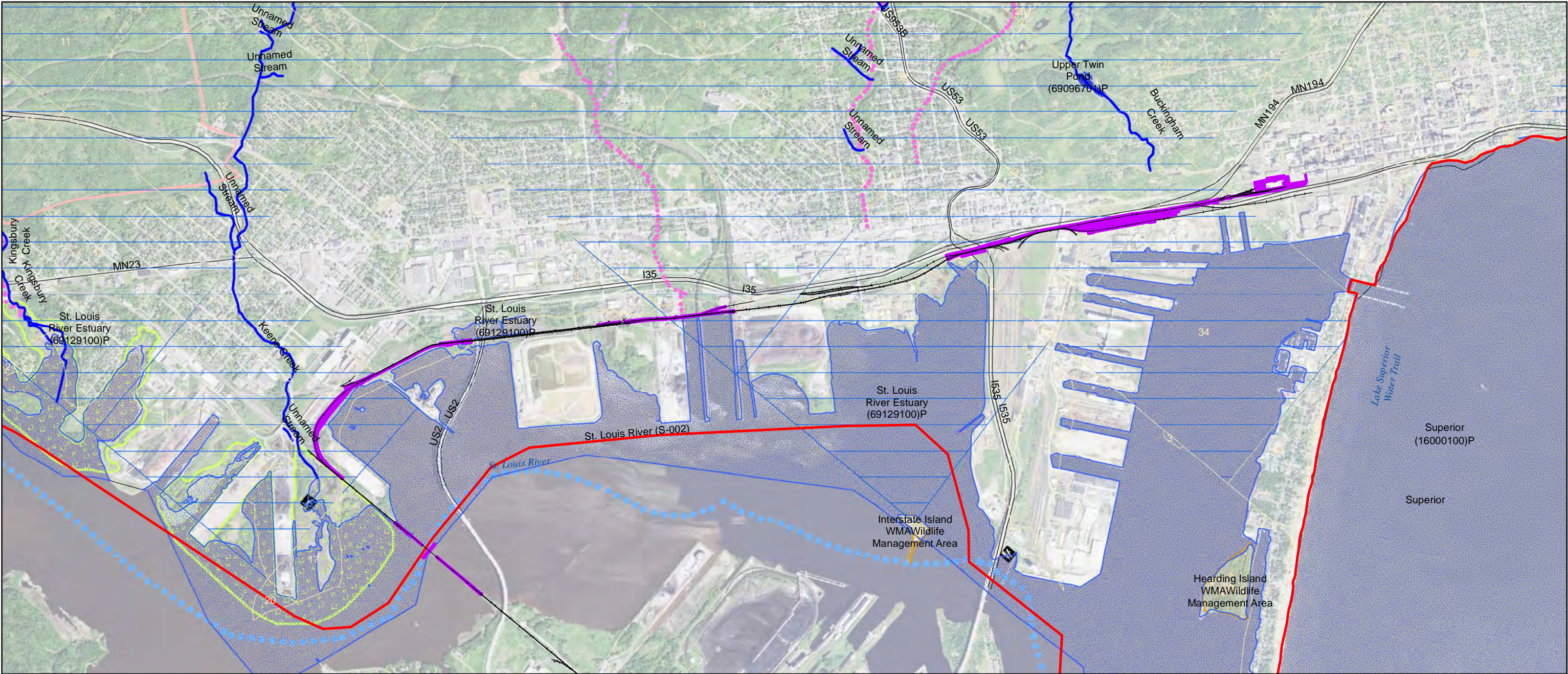


Overall Map (1 of 13)

Areas for Rare Turtle awareness in planning and design (Blandings and/or Wood Turtle)

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- NLX_AreaDisturbance_20160922



Map 2 of 13

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Designated Infested (Aquatic Invasive Species - AIS)
- PLS sections with designated trout streams
- Public Water Watercourse
- Public Waters Basins
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- State-designated trout lakes
- Site of Biodiversity Significance - Moderate
- Wildlife Management Area - WMA
- Minnesota Water Trails
- Public Access - Carry-In
- Public Access - Trailer Launch
- Local Snowmobile Trails


Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

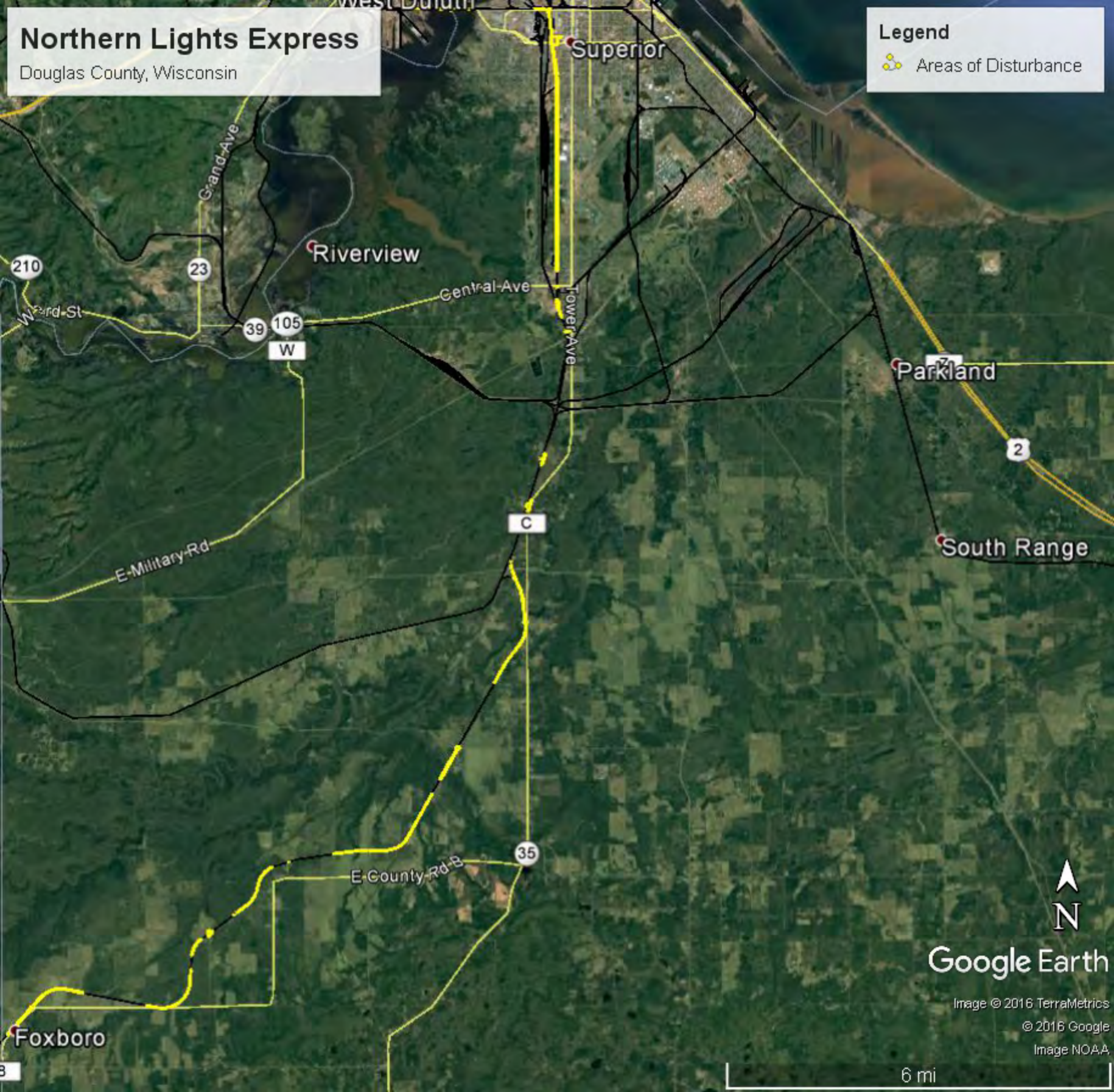
Date: 10/3/2016

Northern Lights Express

Douglas County, Wisconsin

Legend

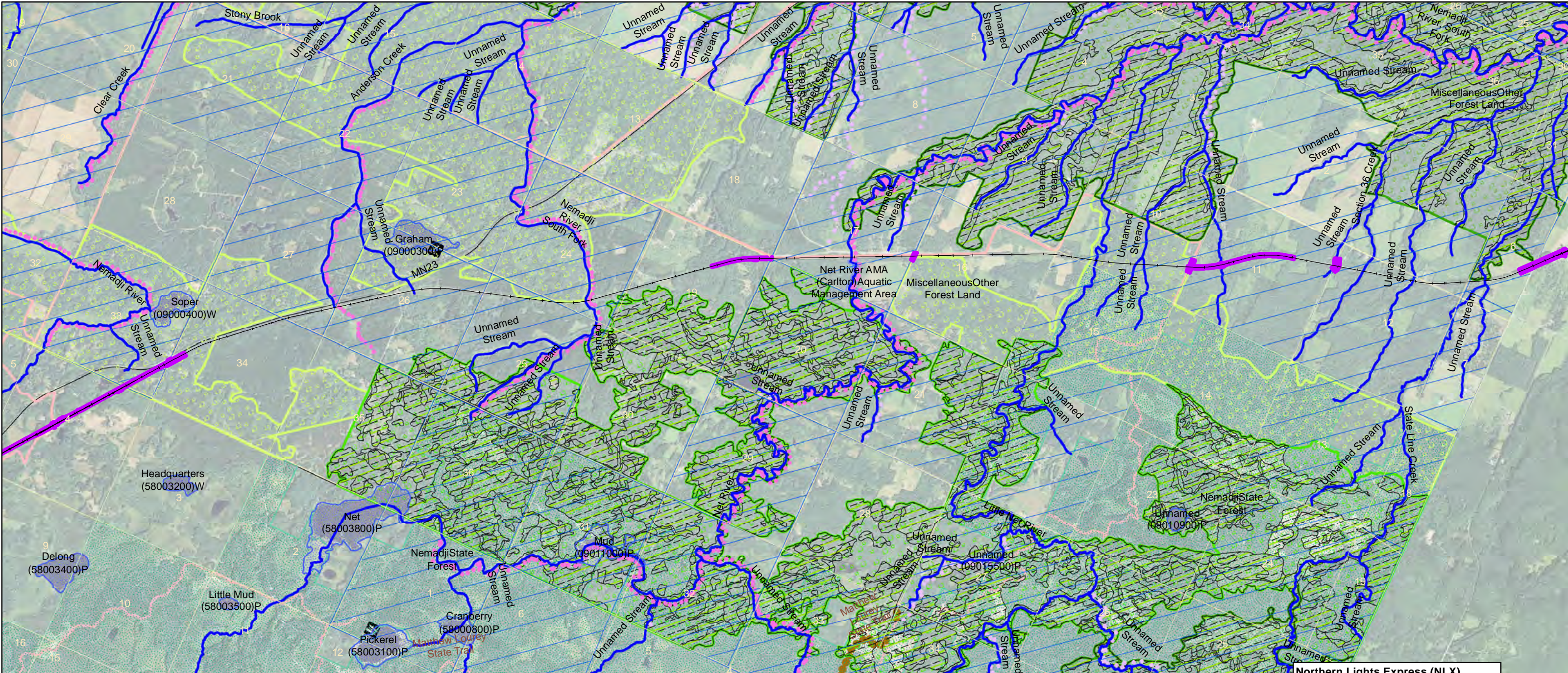
 Areas of Disturbance




N
Google Earth

Image © 2016 TerraMetrics
© 2016 Google
Image NOAA

6 mi



Northern Lights Express (NLX) Potential Areas of Disturbance

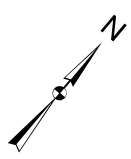
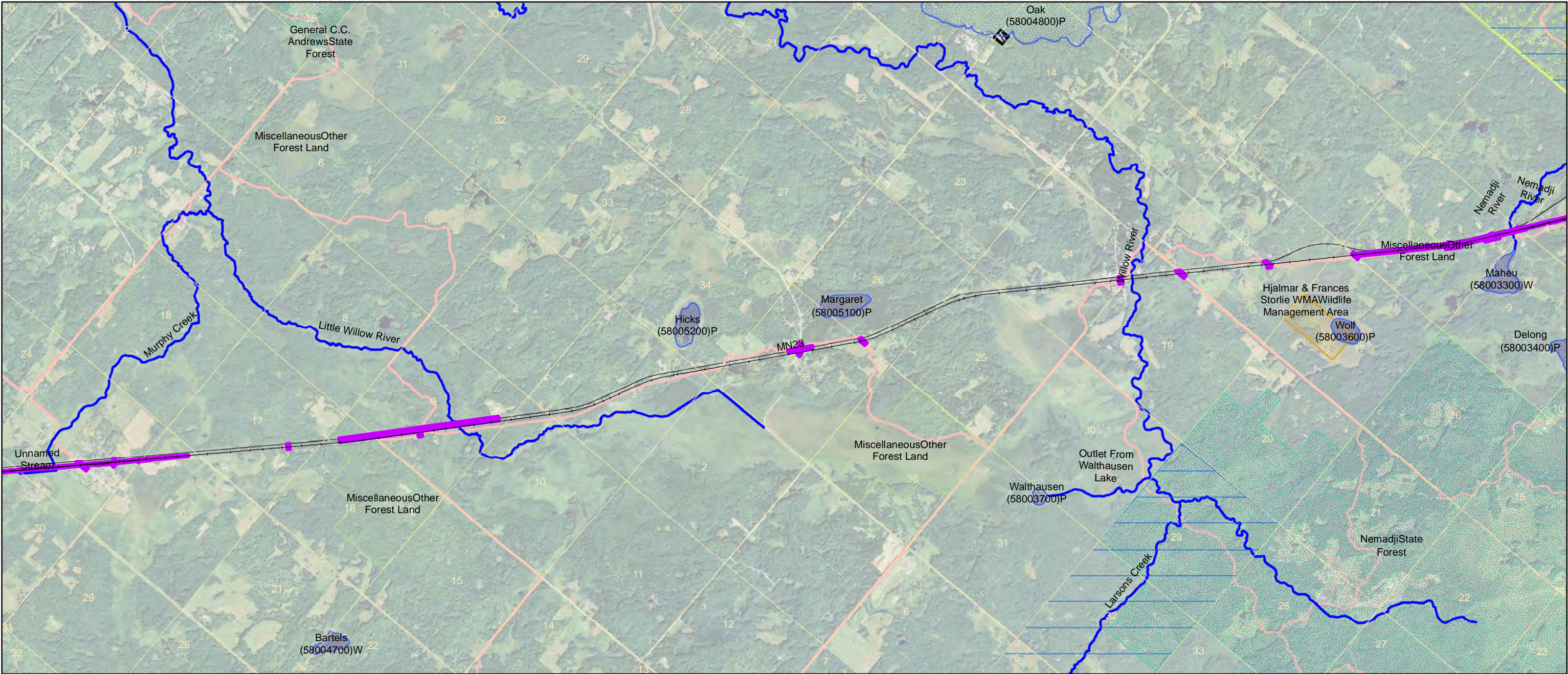
- Railroad centerline
- NLX_AreaDisturbance_20160922
- PLS sections with designated trout streams
- Public Water Watercourse
- Public Waters Basins
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Outstanding
- Site of Biodiversity Significance - High
- Site of Biodiversity Significance - Moderate
- Aquatic Management Area - AMA
- State Forest Land
- Other Forest Land
- Minnesota State Trails
- Public Access - Carry-In
- Public Access - Trailer Launch
- Local Snowmobile Trails



Map 3 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016



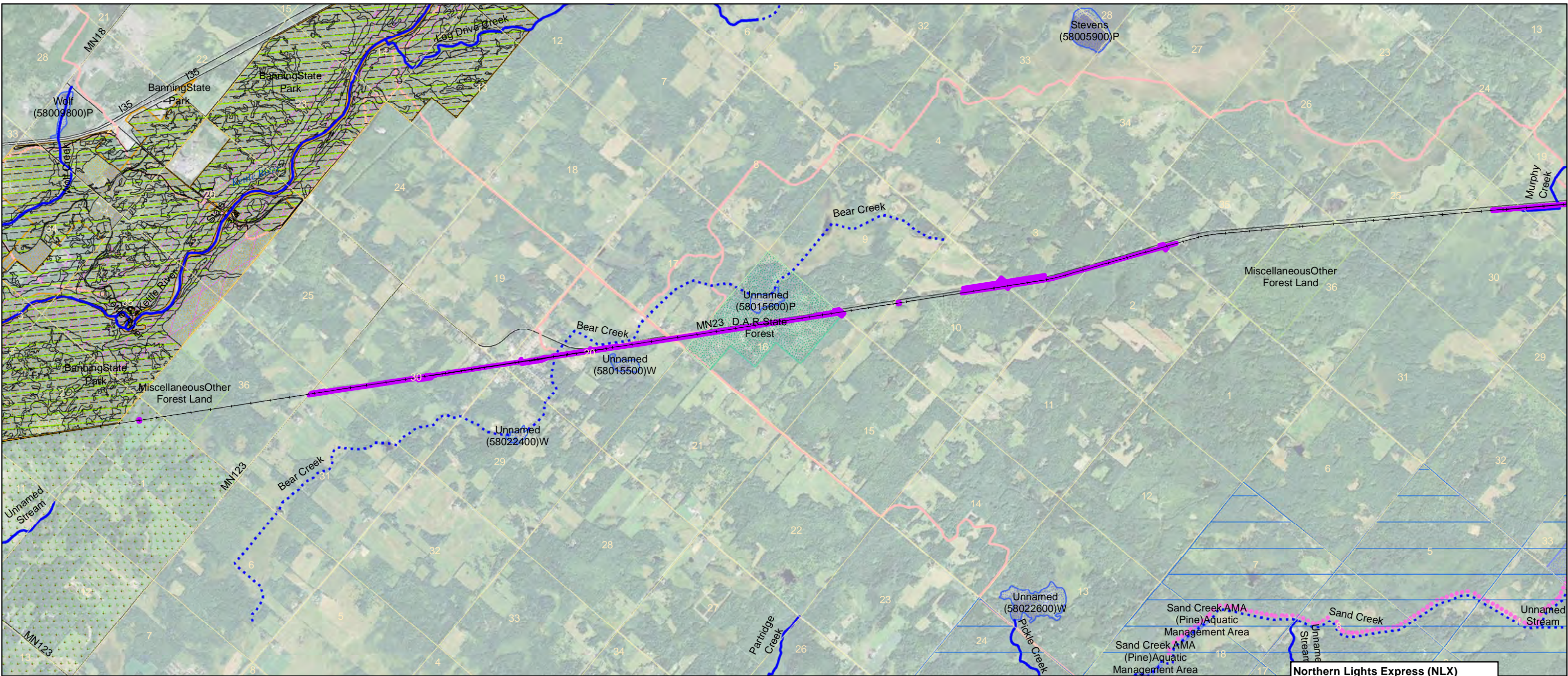
Map 4 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

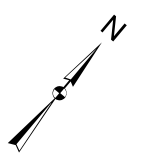
**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- NLX_AreaDisturbance_20160922
- PLS sections with designated trout streams
- Public Water Watercourse
- Public Waters Basins
- Designated Trout Stream
- Site of Biodiversity Significance - Moderate
- State Forest Land
- Other Forest Land
- Wildlife Management Area - WMA
- Public Access - Trailer Launch
- Local Snowmobile Trails



**Northern Lights Express (NLX)
Potential Areas of Disturbance**

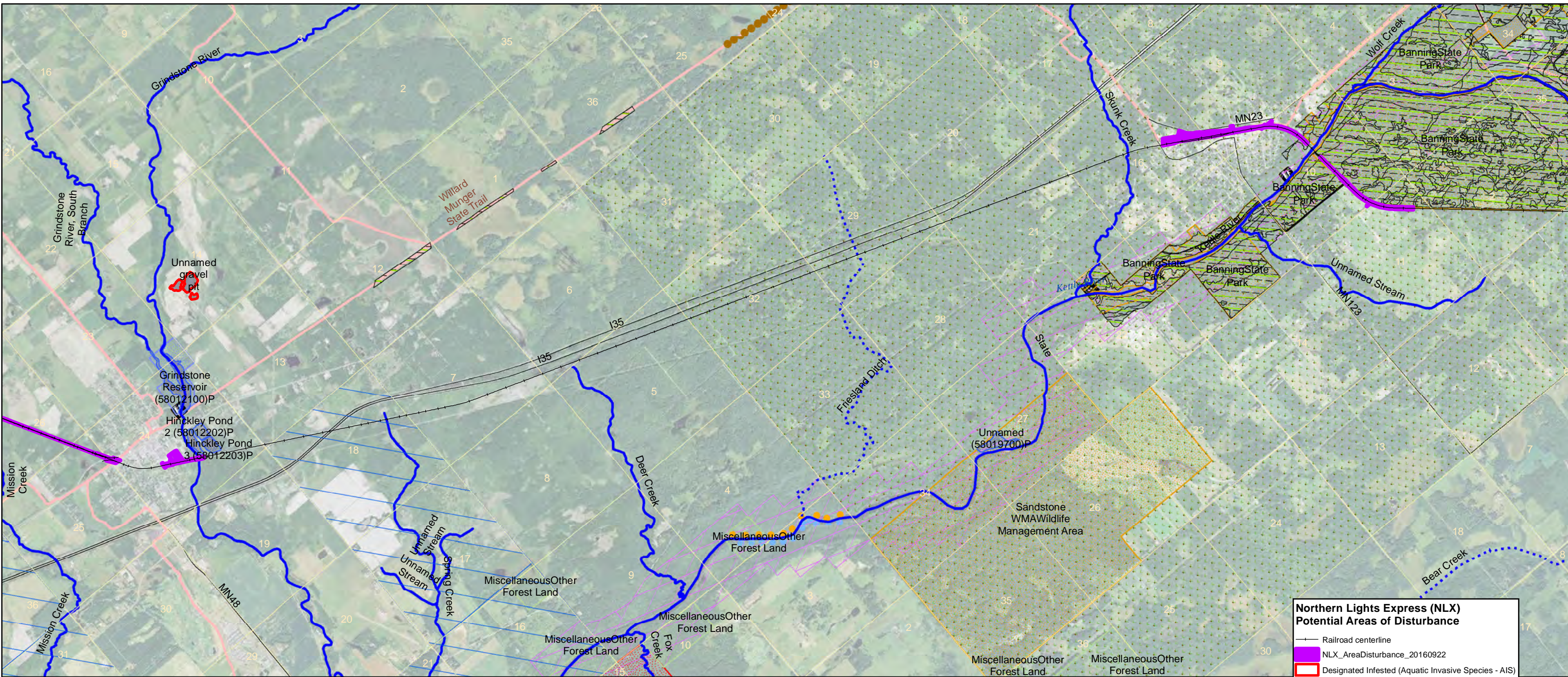
- Railroad centerline
- NLX_AreaDisturbance_20160922
- ▭ PLS sections with designated trout streams
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- ▭ Public Waters Basins
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- ▭ NLE_bat_roost_trees_and_hibernacula
- ▭ DNR Native Plant Communities (single symbol)
- ▭ Aquatic Management Area - AMA
- ▭ State Forest Land
- ▭ Other Forest Land
- ▭ State Parks
- State Wild & Scenic River
- ▭ Wild and Scenic River Districts
- Minnesota Water Trails
- ▭ Public Access - Trailer Launch
- Local Snowmobile Trails



Map 5 of 13

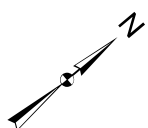
Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016



Northern Lights Express (NLX) Potential Areas of Disturbance

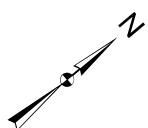
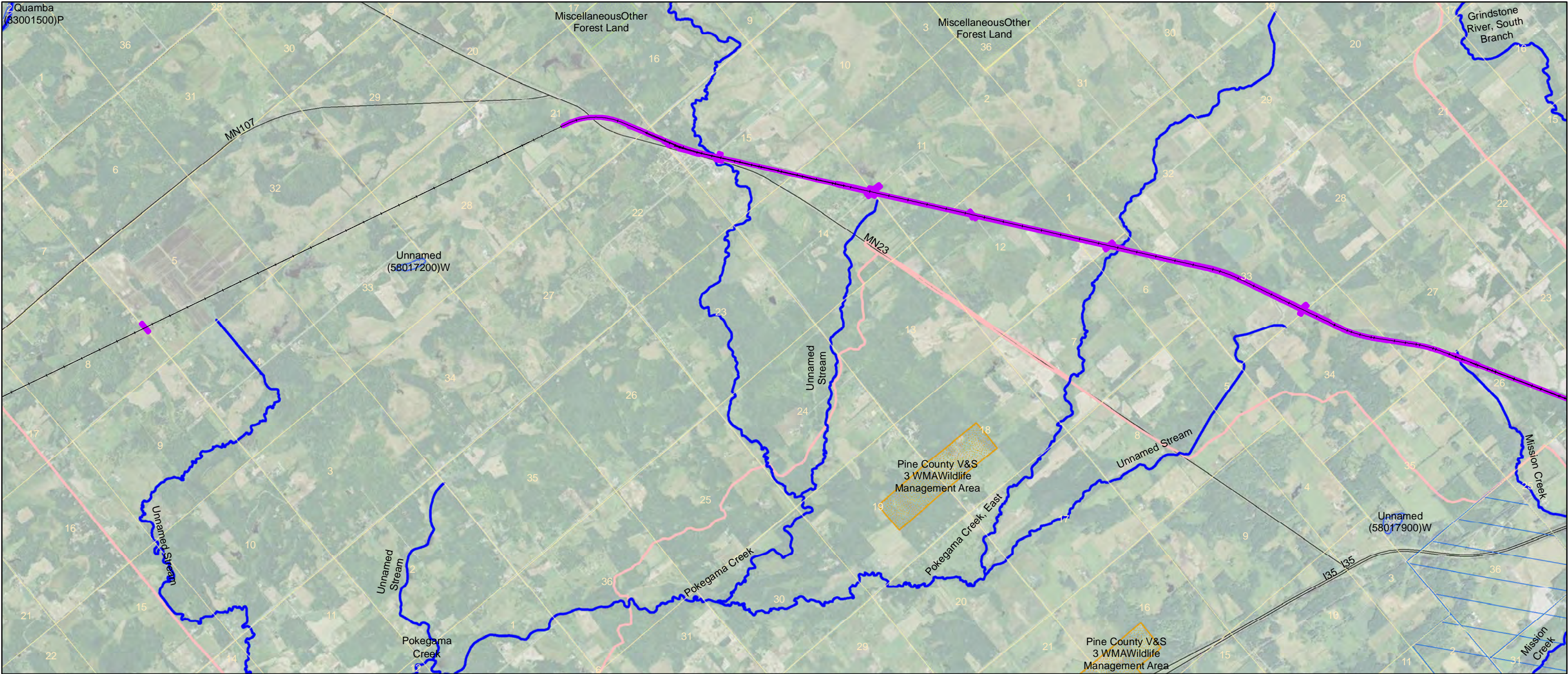
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- PLS sections with designated trout streams
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Waters Basins
- Designated Trout Stream
- Protected Tributary to Designated Trout Stream
- NLE_bat_roost_trees_and_hibernacula
- DNR Native Plant Communities (single symbol)
- Aquatic Management Area - AMA
- Scientific and Natural Area - SNA
- Other Forest Land
- State Parks
- Wildlife Management Area - WMA
- State Wild & Scenic River
- Wild and Scenic River Districts
- Minnesota Water Trails
- Minnesota State Trails
- Public Access - Carry-In
- Public Access - Trailer Launch
- Local Snowmobile Trails



Map 6 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

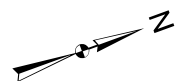
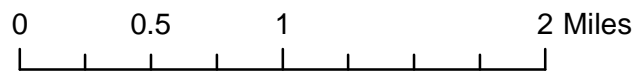
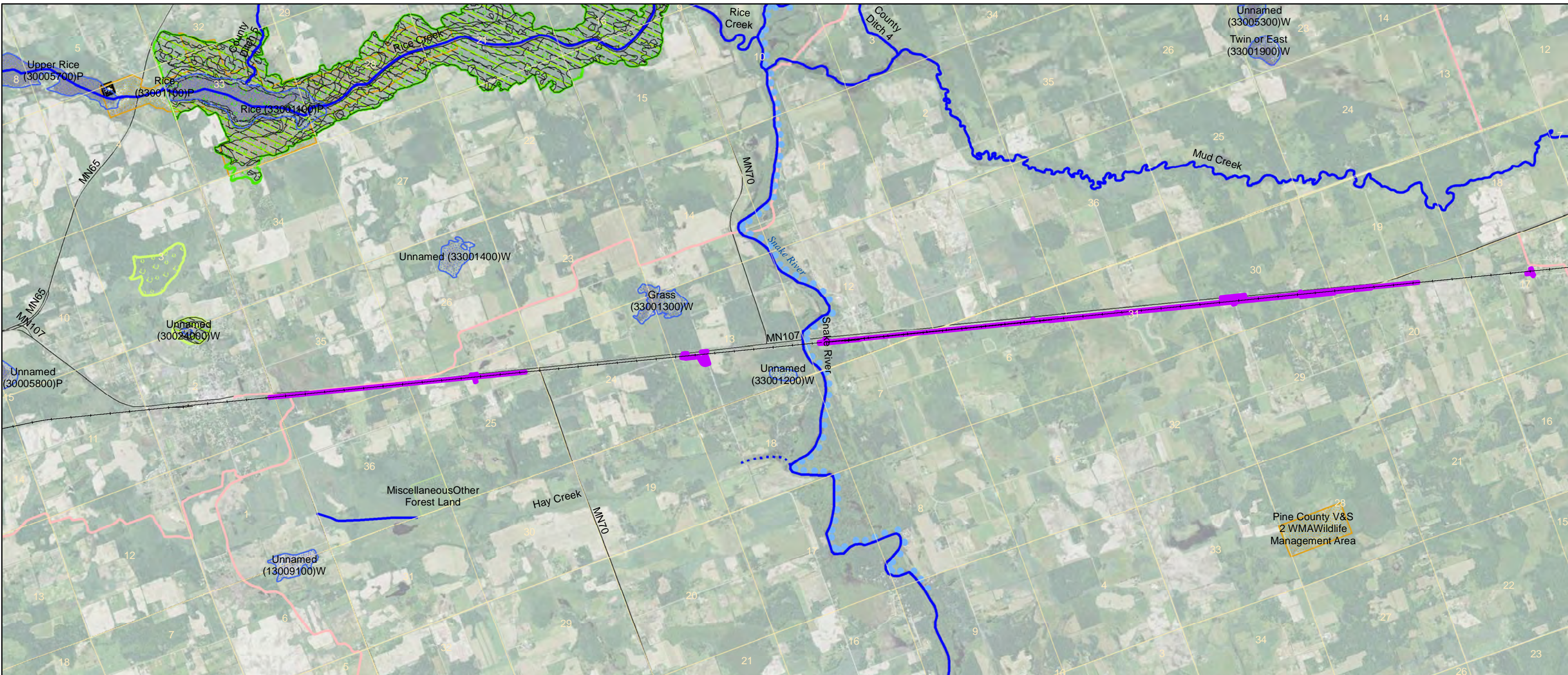
Date: 10/3/2016



Map 7 of 13

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

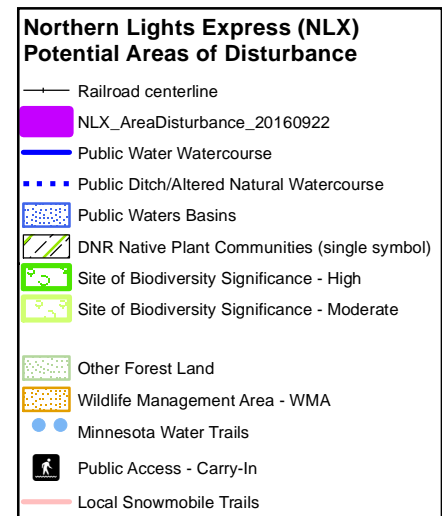
- Railroad centerline
- NLX_AreaDisturbance_20160922
- ▭ PLS sections with designated trout streams
- Public Water Watercourse
- ▨ Public Waters Basins
- Designated Trout Stream
- ▨ Other Forest Land
- ▨ Wildlife Management Area - WMA
- Local Snowmobile Trails

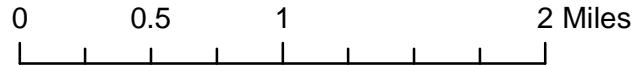
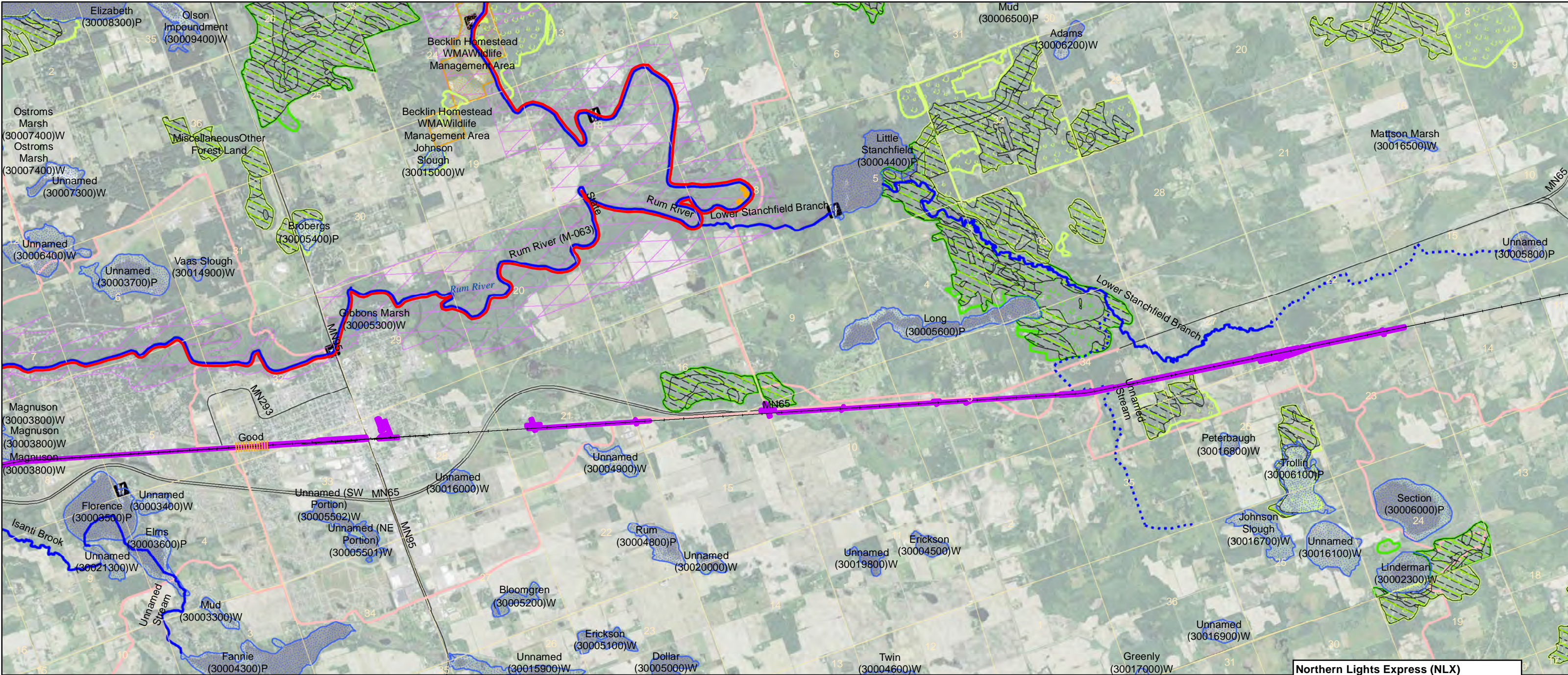


Map 8 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

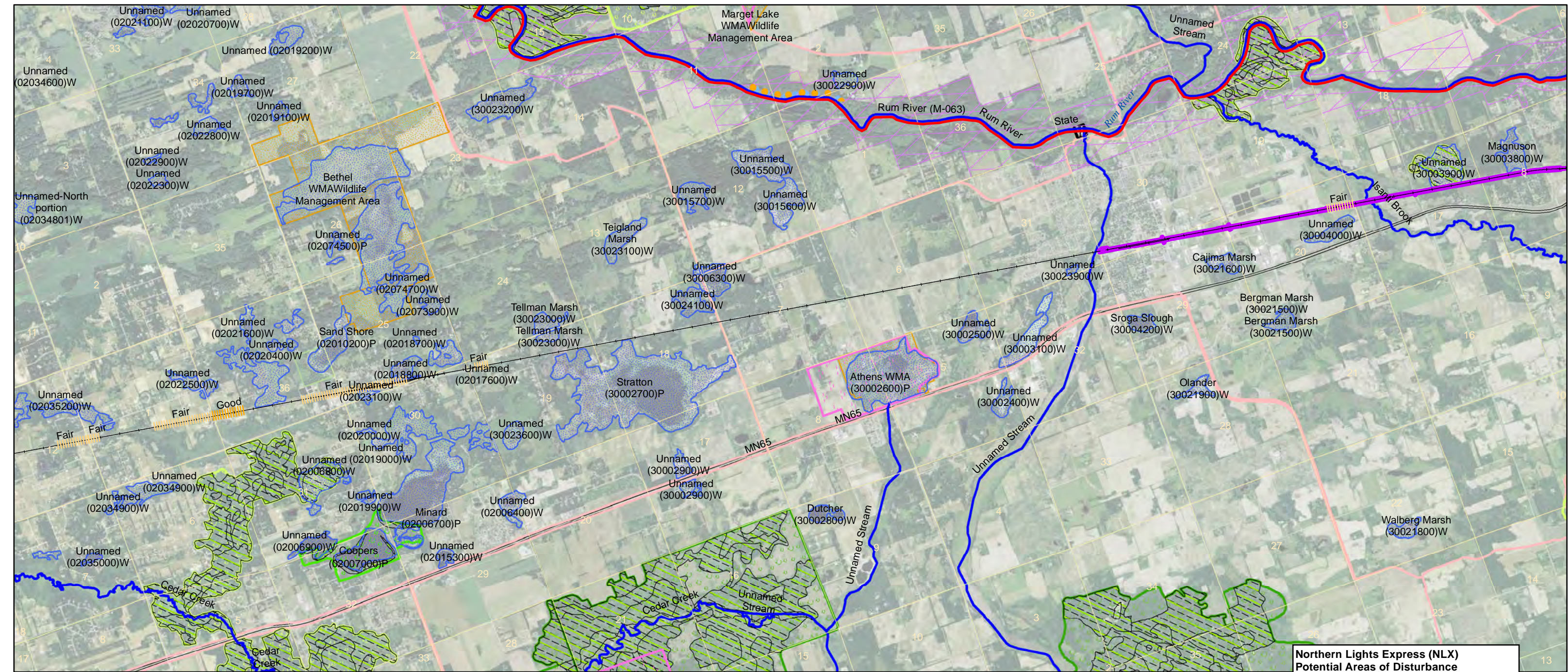




Map 9 of 13

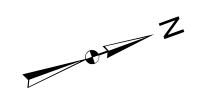
**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad Right-of-Way Native Prairie Remnant - Good
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Waters Basins
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - High
- Site of Biodiversity Significance - Moderate
- Other Forest Land
- Wildlife Management Area - WMA
- State Wild & Scenic River
- Wild and Scenic River Districts
- Minnesota Water Trails
- Public Access - Carry-In
- Public Access - Trailer Launch
- Local Snowmobile Trails



**Northern Lights Express (NLX)
Potential Areas of Disturbance**

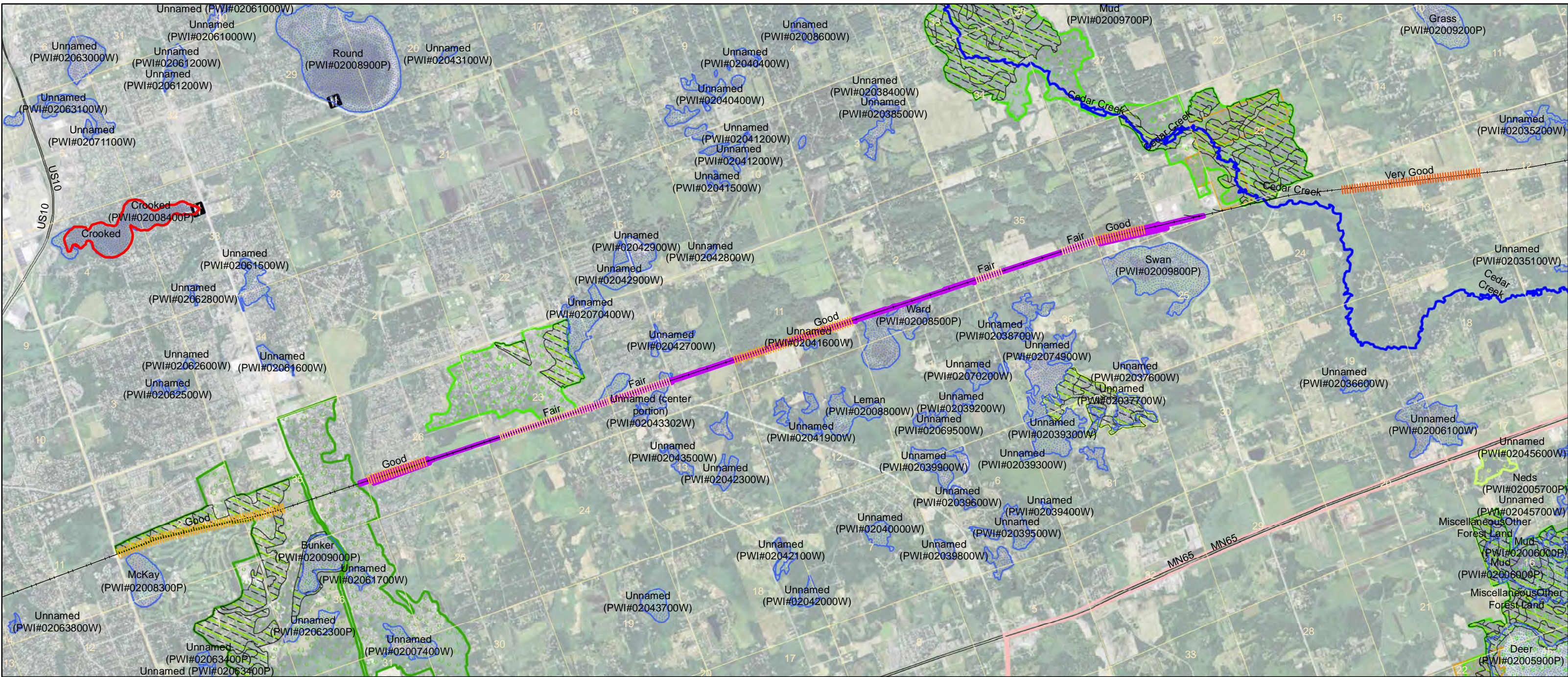
- Railroad Right-of-Way Native Prairie Remnant - Good
- Railroad Right-of-Way Native Prairie Remnant - Fair
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Public Water Watercourse
- Public Waters Basins
- Blandings Turtle Priority Area
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Outstanding
- Site of Biodiversity Significance - High
- Site of Biodiversity Significance - Moderate
- Other Forest Land
- Wildlife Management Area - WMA
- State Wild & Scenic River
- Wild and Scenic River Districts
- Minnesota Water Trails
- Public Access - Trailer Launch
- Local Snowmobile Trails



Map 10 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016



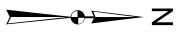
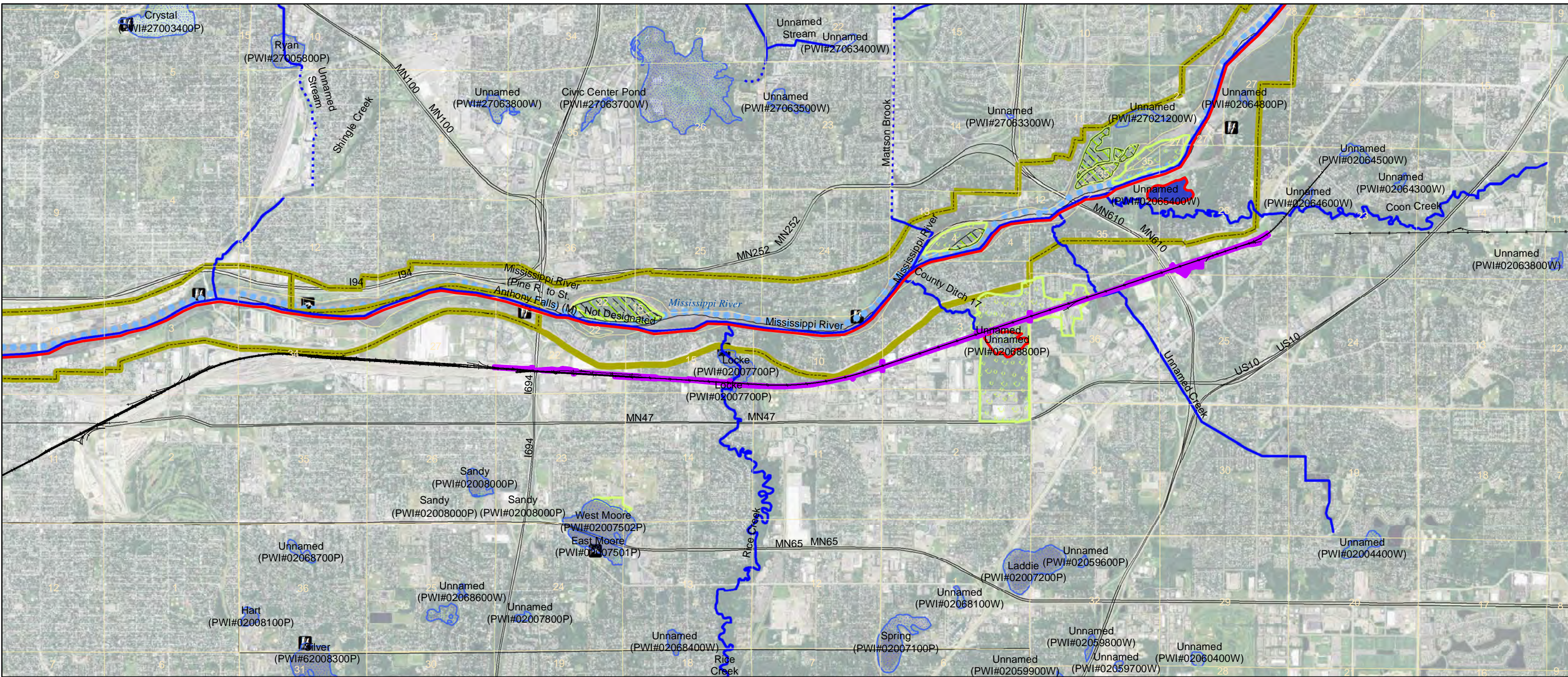
Map 11 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

Northern Lights Express (NLX) Potential Areas of Disturbance

- Railroad Right-of-Way Native Prairie Remnant - Very Good
- Railroad Right-of-Way Native Prairie Remnant - Good
- Railroad Right-of-Way Native Prairie Remnant - Fair
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Public Water Watercourse
- Public Waters Basins
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Outstanding
- Site of Biodiversity Significance - High
- Site of Biodiversity Significance - Moderate
- Other Forest Land
- Wildlife Management Area - WMA
- Public Access - Trailer Launch
- Local Snowmobile Trails



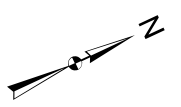
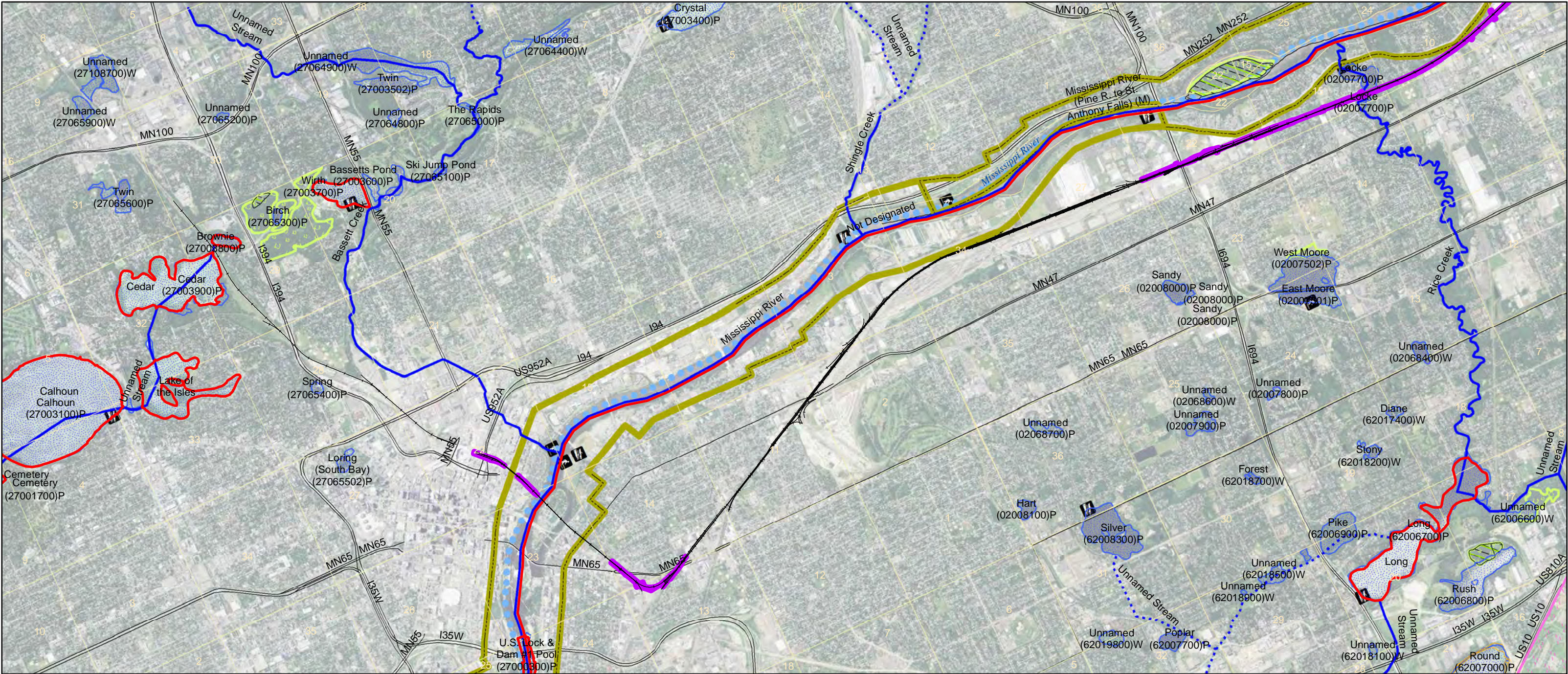
Map 12 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- Railroad centerline
- NLX_AreaDisturbance_20160922
- Designated Infested (Aquatic Invasive Species - AIS)
- Designated Infested (Aquatic Invasive Species - AIS)
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Waters Basins
- State-designated trout lakes
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Moderate
- Mississippi River Critical Area Boundary
- Minnesota Water Trails
- Public Access - Carry-In
- Public Access - Trailer Launch



Map 13 of 13

Peter Leete, Transportation Hydrologist
(MnDNR-MnDOT Liaison)

Date: 10/3/2016

**Northern Lights Express (NLX)
Potential Areas of Disturbance**

- Railroad centerline
- NLX_AreaDisturbance_20160922
- Track Modification
- Designated Infested (Aquatic Invasive Species - AIS)
- Designated Infested (Aquatic Invasive Species - AIS)
- National Wildlife Refuges
- Public Water Watercourse
- Public Ditch/Altered Natural Watercourse
- Public Waters Basins
- Blandings Turtle Priority Area
- DNR Native Plant Communities (single symbol)
- Site of Biodiversity Significance - Moderate
- Mississippi River Critical Area Boundary
- Minnesota Water Trails
- Public Access - Carry-In
- Public Access - Trailer Launch



United States Department of Agriculture

Natural Resources Conservation Service
4915 Matterhorn Drive
Duluth, MN 55811

Telephone: 218-720-5308
Fax2Mail: 1-855-843-6839

Melissa Jean
Environmental Scientist

HDR
701 Xenia Avenue South, Suite 600
Minneapolis, MN 55416-3636

Re: Northern Lights Express

Dear Ms. Jean,

Upon reviewing the updated site information in regards to the Northern Lights Express, I have determined that this project is exempt from the Farmland Protection Policy Act review due a small acreage exemption for corridor projects.

If you have any other questions, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Mike Walczynski". The signature is written in a cursive, flowing style.

Mike Walczynski
Resource Soil Scientist

Natural Resources Conservation Service
4915 Matterhorn Drive, Duluth, Minnesota 55811
Telephone: 218-720-5308 Fax2Mail: 1-855-843-6839

An Equal Opportunity Provider and Employer

Cooperating Agency Letters





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUL 26 2016

REPLY TO THE ATTENTION OF:

E-19J

Michael Johnsen
Federal Railroad Administration
1200 New Jersey Avenue S.E.
Mail Stop 20
Washington, District of Columbia 20590

Re: Invitation to become a Cooperating Agency for the Northern Lights Express Tier 2 Project Environmental Assessment, Minneapolis to Duluth, Minnesota; Hennepin, Anoka, Isanti, Kanabec, Pine, Carlton and St. Louis Counties in Minnesota and Douglas County, Wisconsin

Dear Mr. Johnsen:

Thank you for your June 28, 2016 letter inviting EPA to become a cooperating agency in the environmental review process for the above referenced project. The Federal Railroad Administration (FRA) is the lead agency for this project under the National Environmental Policy Act. FRA is working closely with the Minnesota Department of Transportation (MNDOT) on the Environmental Assessment (EA). FRA and MNDOT are coordinating with the Wisconsin Department of Transportation and the Minneapolis-Duluth/Superior Passenger Rail Alliance.


The proposed project would provide passenger rail service between Minneapolis and Duluth, Minnesota. FRA and MNDOT previously prepared a Tier 1 Service Level EA, which resulted in the current preferred corridor. EPA provided comments on the Tier 1 document in an April 22, 2013 letter. The planned Tier 2 EA would incorporate preliminary engineering and evaluate potential environmental, social, cultural, and transportation impacts from construction and operation.

EPA agrees to be a cooperating agency for this project. As time and resources allow, we will provide project-related input in areas of our expertise, participate in coordination meetings, and provide comments on the EA. EPA does not assume any responsibility for development of the EA, and we retain our independent review authority.

Jen Blonn of my staff will be the lead reviewer for this project. She may be reached at 312-886-6394 or blonn.jennifer@epa.gov. We would appreciate two weeks advance notice for meetings

and any early coordination documents for our review. We appreciate the opportunity to be a cooperating agency and look forward to working with you on this project.

Sincerely,

A handwritten signature in blue ink that reads "Jennifer Blom" with the word "For" written below it.

Kenneth A. Westlake
Chief, NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Cc via email: Andrea Martin, Federal Railroad Administration
 Garneth Peterson, Minnesota Department of Transportation



U.S. Department
of Transportation
**Federal Highway
Administration**

Minnesota Division

August 5, 2016

380 Jackson Street
Cray Plaza, Suite 500
St. Paul, MN 55101-4802
651.291.6100
Fax 651.291.6000
www.fhwa.dot.gov/mndiv

Michael Johnsen
Acting Division Chief
Federal Railroad Administration
United States Department of Transportation
1200 New Jersey Avenue
Washington, DC 20590

Re: Cooperating Agency Request
Northern Lights Express
Minneapolis to Duluth

Dear Mr. Johnsen:

We received your letter requesting the Federal Highway Administration (FHWA) become a Cooperating Agency (40 C.F.R. §1501.6) in the National Environmental Policy Act (NEPA) process for the subject project.

Based upon our review of your letter and our knowledge of the proposed project, we agree to become a Cooperating Agency for the NEPA process. Please send us a draft of any SAFETEA-LU 6002 coordination plan for review and comment. We are assuming any coordination plan will include the latest version of the project schedule.

The FHWA primary point of contact for the project will be Joe Campbell, FHWA area engineer. If you have any questions, please contact me at joe.w.campbell@dot.gov/651-291-6121 or Philip Forst, Environmental Specialist, at phil.forst@dot.gov/651-291-6110.

Sincerely,

Joseph W. Campbell
Area Engineer

cc: Lynn Clarkowski - MnDOT
Phil Forst - FHWA

SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

July 21, 2016

Michael Johnsen
Acting Division Chief
Environmental and Rail Planning Division
Federal Railroad Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: Northern Lights Express (NLX) Tier 2 Level Environmental Assessment
Minneapolis to Duluth, Minnesota in Hennepin, Anoka, Kanabec, Isanti,
Pine, Carlton and St. Louis counties, in Minnesota and Douglas County,
Wisconsin: Acceptance of Invitation to be a Cooperating Agency for
Environmental Review

Dear Mr. Johnsen

Thank you for your June 28, 2016 letter inviting the Surface Transportation Board (Board) to be a cooperating agency for the Tier 2 Environmental Assessment for the proposed Northern Lights Express (NLX) Passenger Rail Service from Minneapolis to Duluth, Minnesota. Because it appears that the Board may have a licensing role in this proceeding, I am pleased to accept your invitation to cooperate with the Federal Railroad Administration and the Minnesota Department of Transportation in conducting the environmental review for the Tier 2 phase of the NLX Project. I understand that the Tier 2 environmental review will be coordinated with the Wisconsin Department of Transportation and the Minneapolis-Duluth/Superior Passenger Rail Alliance.

Catherine Nadals of my staff is the environmental protection specialist assigned to this case. If you have any questions or would like to discuss this matter further, please feel free to contact Catherine at (202) 245-0293 or email at nadalsc@stb.dot.gov.

We look forward to working with you and your team to provide timely review and comment on the environmental analysis for this project.

Sincerely,

Handwritten signature of Victoria Rutson in black ink, appearing as 'Victoria Rutson' with a stylized flourish at the end.

Victoria Rutson
Director

cc: Andrea Martin, FRA
Garneth Peterson, MnDOT Environmental Manager