



US Army Corps
of Engineers
St Paul District

APPLICANT: Randy Prachar,
Minnesota Department
of Natural Resources

Public Notice

ISSUED: September 8, 2015

EXPIRES: October 8, 2015

REFER TO: 2013-01365-CLJ

SECTION:404 - Clean Water Act

1. APPLICATION FOR PERMIT TO discharge dredged and fill material into 17.65 acres of wetlands adjacent to the Roseau River for the purpose of flood damage reduction and wildlife habitat enhancement within the Roseau River Wildlife Management Area (RRWMA).

2. SPECIFIC INFORMATION.

APPLICANT'S ADDRESS:

Roseau River WMA
27952 400th Street
Roseau, Minnesota 56751

AGENT: Nate Dalager, HDR, Inc.

AGENT'S ADDRESS: 324 2nd Street East
Thief River Falls, Minnesota 56701

PROJECT LOCATION: The project site is located in Sections 9, 16, & 17, T. 163N., R. 43W., and Sections 2, 3, 4, 5, 6, 11, 12, & 13, T. 163N., R. 44W., Roseau County, Minnesota. The approximate UTM coordinates are X 696687 Y 5426634.

DESCRIPTION OF PROJECT:

The RRWMA covers an area of over 75,147 acres, including approximately 10,600 acres of pools managed for wildlife. The RRWMA was created in the early 1950s as a multipurpose flood damage reduction and wildlife habitat project. The current flood damage reduction benefits are provided by the capacity to retain up to about 29,000 acre-feet of flood waters in spring. The current wildlife habitat benefits include providing resident and migratory wildlife habitat (game and non-game species) and access to public hunting. The RRWMA includes three large pools (numbered 1, 2, and 3 from east to west) aligned north of the Roseau River for a total of 10,600 acres. These pools were created by constructing 27 miles of embankments. The primary water control is provided by the southern embankment aligned generally east to west.

Water is supplied to the pools by the Pine Creek Diversion ditch, which was completed in 1953 and originates in Canada. The ditch conveys a percentage of the surface water flow from the Pine Creek watershed to Pool 1. Once water from this diversion enters Pool 1, it flows by gravity to the west into Pool 2, and then into Pool 3 through outlet structures located within the embankment. Water flows out of the pools to the Roseau River through two outlets; one outlet between Pool 2 and the river and the other outlet between Pool 3 and the river.

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Water flows through Pools 2 and 3 by gravity; however, the flow is enhanced by an internal conveyance channel located within the pool and adjacent to the main embankment. This channel was excavated for the construction of the embankment (i.e., a borrow area). The channel ranges from 6 to 12 feet deep with some shallower areas, particularly along the western portion of Pool 3. The drainage area at the outlet of Pool 3 is 198.3 square miles.

The RRWMA pools have historically provided diverse wetland habitats for important waterfowl and wetland dependent birds. Much of the habitat in the pools is now in a degraded/ poor condition. The primary cause of this degradation is excessive and frequent water level fluctuations during the growing season. The limited capacity of the outlet channels and associated water control structures has significantly compromised the ability of wildlife managers to achieve the preferred water level management regime. The limited capacity of water management structures has resulted in frequent water level fluctuations during spring and summer which exceed the preferred range of water levels. These fluctuations negatively affect nesting success and the types and quality of habitats (plant communities) present in the pools. For example, in 14 of the last 20 nesting seasons (May 1 – July 15), the water level on Pool 3 has fluctuated in excess of 6 inches resulting in reduced nesting success of ducks and other overwater nesting birds in this area. In addition, during that time period, water levels have exceeded the preferred water level for up to 8 weeks, which compromises re-nesting efforts.

Water levels in the pools have also fluctuated beyond the preferred range later in the growing season. The change in water levels results in difficulties managing vegetation that is sensitive to fluctuations at key times in the plant's life cycle (e.g., wild rice at the floating leaf stage). Production of ducks, as well as other water dependent bird species, has also declined on the RRWMA in recent years as a direct result of excessive water level bounce on the pools. Significant bounce events have occurred approximately 2 out of every 3 years during the past 20 years that have resulted in a large reduction in duck production from the RRWMA.

The Roseau River Wildlife Management Area (RRWMA) Pool Enhancement project is a cooperative effort between the Roseau River Watershed District (RRWD) and DNR Section of Wildlife. The proposal builds on existing infrastructure and would improve the capacity to manage water levels in Pools 2 and 3 of the RRWMA to achieve wildlife habitat goals and flood damage reduction goals. The ability to discharge more water from Pools 2 and 3 before the peak flow on the Roseau River would maximize the existing storage potential of Pools 2 and 3 and optimize timing of storage in the RRWMA for peak flow reduction, resulting in a reduction in flood damages downstream of the RRWMA.

In order to achieve the wildlife benefit and flood damage reduction goals, the applicant proposes to replace the existing structure located between Pool 2 and Pool 3, excavate within the western portion of the existing Pool 3 internal conveyance channel to direct water to the outlet, and install a new outlet structure and channel from Pool 3 to the Roseau River.

The new structure between Pool 2 and Pool 3 would include a sluice gate and stop log bay with a capacity to discharge up to 800 cfs. The increased conveyance capacity would allow managers to move water out of Pool 2 ahead of peak flows on the Roseau River during spring melt and to better manage water levels during precipitation events. The existing, non-functional, structure would be completely removed.

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The existing internal channel within Pool 3 is a channel (borrow area) along the main embankment that was excavated to provide materials to build the embankment. Some of the excavated materials were used to build the embankment and some were cast adjacent to the channel within the pool forming an irregular berm. Several areas within this internal channel are narrow enough to inhibit flow. The project would include selective widening of the existing, narrow areas of the internal conveyance channel along the western portion of the channel, and would include excavating a collection area near the new outlet structure.

The existing outlet structure for Pool 3 is located near the upstream portion of the pool, on the south embankment, near the intersection of Pool 2 and Pool 3. When initially constructed, this outlet alignment was selected given its proximity to the Roseau River. The outlet structure is a combination of weir and stop logs, and was constructed in 1987. The structure has a maximum capacity to convey 150 cfs. This existing outlet structure will be maintained and a new Pool 3 outlet structure is proposed to be added near the northwest corner of Pool 3. This new structure will be designed with a capacity to convey up to 1,000 cfs into a new outlet channel.

A new outlet channel would be constructed to convey water from the new Pool 3 outlet directly to the Roseau River at a point downstream of the Big Swamp area. The new Pool 3 outlet channel would be excavated, constructed, and stabilized before any water is allowed to discharge through the new Pool 3 outlet structure.

QUANTITY, TYPE, AND AREA OF FILL: Approximately 17.65 acres of wetland would be impacted due to activities associated with the reconstruction of construction of the conveyance channel within Pool 3 and the construction of the outlet channel. All 17.65 acres of total impact to wetlands, would be permanent (fill and excavation) as no temporary impacts in wetlands are proposed.

Fill impacts associated with raising 400th street along the outlet channel include 2.32 acres of wetland.

Approximately 1.52 acres of fill would be placed in wetlands as a result of the excavation of the internal conveyance channel. This fill would be placed on the existing spoil area (embankment) to reduce impacts to wetland areas not previously impacted.

VEGETATION IN AFFECTED AREA: The corridor along the proposed outlet channel is dominated by fresh wet meadow, sedge meadow, and shrub carr wetland plant communities, as well as upland forested plant communities.

The corridor of along the proposed internal conveyance channel is dominated by shallow marsh plant communities.

SOURCE OF FILL MATERIAL: The applicant has indicated that fill material would be clean material either excavated on site or purchased from commercial sources

SURROUNDING LAND USE: Lands within the project area are predominantly public lands consisting of forest, wetland, riparian, open water and grassland habitats. Scattered parcels of lands owned by The Nature Conservancy occur nearby in Kittson County. A minor component of private land exists in the project area consisting of agricultural lands which are primarily used for grazing or

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hay production. A few private seasonal cabins are located immediately north of the unorganized township road that is adjacent to the new proposed outlet channel.

The portion of RRWMA affected by the project (i.e., Pool 2, Pool 3, and the corridor of the proposed outlet channel) is used primarily for natural resources management and outdoor recreation.

DESCRIPTION OF STRUCTURE: Two new water control structures would be installed as part of the proposal. The water control structure between Pool 2 and Pool 3 would include a sluice gate and stop-log bay with a capacity to discharge up to 800 cfs. The outlet structure, proposed in the northwest corner of Pool 3 would include four 5-foot wide by 6-foot high openings, three of which would be controlled by sluice gates with the fourth consisting of a stop-log bay.

The outlet channel would include an approximately 10-foot deep ditch, a 10-foot wide ditch bottom, and 4:1(H:V) sideslopes. The outlet ditch would have the capacity to carry up to 1,200 cfs to the Roseau River. Energy dissipation would be installed at the confluence of the outlet channel and the Roseau River. This structure would include a rip-rap fortified, two-stage drop structure allowing for 13.5 feet of fall over 55 linear feet.

DESCRIPTION OF DREDGING OR EXCAVATION: Excavation for the construction of the outlet channel would result in a total of 7.0 acres of impact to wetlands, of which 3.63 acres of the total impact would be in the existing roadside ditch.

Excavation for the enhancement of the internal conveyance channel would impact a total of 6.81 acres of wetland, of which 5.48 acres of the total impact would be in the existing internal channel.

THE FOLLOWING POTENTIALLY TOXIC MATERIALS COULD BE USED AT THE PROJECT SITE: The applicant has indicated that only clean fill material would be used for the project. No use of toxic materials has been identified by the applicant, and any hazardous materials used would be similar to those used in other projects involving large machinery.

THE FOLLOWING PRECAUTIONS TO PROTECT WATER QUALITY HAVE BEEN DESCRIBED BY THE APPLICANT: Best Management Practices, including silt fence, turbidity curtain, and winter construction would be utilized to reduce erosion and protect water quality. The applicant would be required to prepare a Storm Water Pollution Prevention Plan, as this proposal would disturb greater than one acre of soil.

MITIGATION: The applicant is proposing two sites for project specific mitigation. Both sites include vegetative and hydrologic enhancement, and buffer establishment.

Carlson Pothole - The Carlson Pothole is located in the SE ¼ of Section 18, T163N., R42W in Roseau County, MN. The mitigation site is part of a complex of wetland communities located to the south of the wildlife pools, and is part of a large expanse of wetland and upland communities within the boundaries of the RRWMA. In 1987 a channel was excavated to create a fire break extending from the Roseau County Ditch 17 cut off ditch to the shallow marsh habitat within the site. Organic topsoil was removed until mineral subsoil was encountered, and excavated material was side cast along the constructed fire break. In the 28 years following excavation, there has been a shift in the function of the wetland and the composition of vegetation. Drainage lines have formed across the site over the

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years resulting from surface drainage to the fire break, which have altered hydrologic function, allowed sediment transport of organic soils from within the site to downstream waterways and promoted transition in plant communities with a dominance of hybrid cattail. Prior to excavation of the channel, plant communities within the pothole footprint were composed of Shallow Marsh (Type 3), Sedge Meadow (Type 2), Fresh Wet Meadow (Type 2), and Shrub Carr (Type 6) wetland communities. DNR staff have performed maintenance on the Carlson pothole in the past to control invasive plants species, primarily hybrid cattail. Areas of cattail maintenance have reverted to native plant communities dominated by native grasses and sedge species. Reduction in cattail provides an opportunity for native plant species to persist which is preferred and more beneficial to wildlife. A reduction also allows for an increase in mudflat habitat which can result in the production of certain invertebrates, providing a food source for wildlife such as waterfowl.

Restoration of hydrologic function of the Carlson pothole coupled with comprehensive chemical application would promote wetland communities that were present prior to excavation of the fire break. The goal of restoring the Carlson pothole is to improve water quantity/quality in the subwatershed, improve habitat, and promote soil health while reducing soil loss.

Noracres South - The Noracres South site is located in the NW ¼ of Section 33, T164N., R44W. in Roseau County MN. Noracres South is part of a large hayfield adjacent to a large complex of wetlands and forest lands and provides an opportunity to establish a natural block of upland grassland and emergent wetland communities. Prior to settlement the site was likely a grassland/scrubland complex of both upland and wetland plant communities. Currently, the upland communities are dominated by Smooth Brome, Timothy and Kentucky Bluegrass while the wetlands are dominated by various sedges, rushes and willows. Reed Canary Grass is sporadic throughout much of the site, with one large monoculture located in the southeast corner of the site. The existing wetlands located in the western edge of property are partially drained due to the existing road ditch, which outlets into Pool 3. Lateral effects due to the ditch were observed in the field, via plant community transition and loss of hydric soil indicators in subsoils adjacent to the ditch.

Restoration of the hydrology through strategic plugging of the road ditch to would enhance hydrology of wetlands affected by artificial drainage. Vegetation management of the wetlands through spot spraying, mowing and prescribed burning would ensure the sustainability of the emergent native plant communities while controlling the encroachment of Reed Canary Grass and Shrub communities. Establishment of Tall Grass upland plant community would provide the wetlands with a natural buffer, and improve habitat for wildlife.

Lateral Effect Reduction through Installation of Clay Liner - The proposed RRWMA Pool 3 outlet channel transects multiple wetlands as it extends from the Pool 3 dyke to the Roseau River. The applicant has identified the potential for a Lateral Effect due to excavation of the channel that would result in loss or change in function to wetlands adjacent to the channel. The subsurface soils within the project consist of sandy and silty clay loams with bedded layers of sand and gravel which provide a conduit for subsurface water flow.

The applicant reviewed Army Corp of Engineers Boring Data and conducted a field inspection to verify depth of clay, and engineered a design to install a clay liner. The applicant determined that heavy clay sourced from within the construction limits could be utilized to act as an impermeable layer to prevent water intrusion from wetlands to the south. Depth of heavy clay ranged from 3-8 feet from

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the surface, the proposed ditch bottom would be below the top of the clay layer throughout the entire alignment.

The applicant is proposing to use the heavy clay excavated from the project site to install a clay liner along the ditch slope to reduce any lateral effect from the excavation of the outlet ditch.

3. REPLIES/COMMENTS.

Interested parties are invited to submit to this office written facts, arguments, or objections within 30 days of the date of this notice. These statements should bear upon the suitability of the location and the adequacy of the project and should, if appropriate, suggest any changes believed to be desirable. Comments received may be forwarded to the applicant.

Replies may be addressed to Regulatory Branch, St. Paul District, Corps of Engineers, 180 Fifth Street East, Suite 700, Saint Paul, MN 55101-1678.

Or, IF YOU HAVE QUESTIONS ABOUT THE PROJECT, call Craig Jarnot at the Bemidji field office of the Corps, telephone number (651) 290 - 5337.

To receive Public Notices by e-mail, go to: http://mvp-extstp/list_server/ and add your information in the New Registration Box.

4. FEDERALLY-LISTED THREATENED OR ENDANGERED WILDLIFE OR PLANTS OR THEIR CRITICAL HABITAT.

None were identified by the applicant or are known to exist in the permit area. However, Roseau County is within the known or historic range of the following Federally-listed threatened (T) and endangered (E) species:

<u>Species</u>	<u>Habitat</u>
Canada Lynx (<i>Lynx canadensis</i>) (T)	Northern Forest
Gray Wolf (<i>Canis lupis</i>) (T)	Northern Forest
Northern Long-eared bat (<i>Myotis septentrionalis</i>) (T)	Hibernates in caves, swarms in surrounding forests, roosts/forages in upland forests
Poweshiek skipperling (<i>Oarisma poweshiek</i>) (E)	Native prairie

This application is being coordinated with the U.S. Fish and Wildlife Service. Any comments it may have concerning Federally-listed threatened or endangered wildlife or plants or their critical habitat would be considered in our final assessment of the described work.

5. JURISDICTION.

This application is being reviewed in accordance with current practices for documenting Corps jurisdiction under Section(s) 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act.

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We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are subject to Corps of Engineers jurisdiction under Section(s) 9 & 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act. If an approved jurisdictional determination is completed as part of the review process for this application, a copy will be posted on the St. Paul District web page at the following link:

<http://www.mvp.usace.army.mil/Missions/Regulatory.aspx>.

THE APPLICANT HAS STATED THAT THE FOLLOWING STATE, COUNTY, AND/OR LOCAL PERMITS HAVE BEEN APPLIED FOR/ISSUED: MN DNR Public Waters Works Permit, MN Wetland Conservation Act decision, MN DNR Dam Safety Permit, Construction Stormwater NPDES/SDS permit.

6. STATE SECTION 401 WATER QUALITY CERTIFICATION.

Valid Section 404 permits cannot be issued for any activity unless state water quality certification for the activity is granted or waived pursuant to Section 401 of the Clean Water Act. The state Section 401 authority in Minnesota is the Minnesota Pollution Control Agency (MPCA). The St. Paul District has provided this public notice and a copy of the applicant's Section 404 permit application form to the MPCA. If MPCA needs any additional information in order for the Section 401 application to be considered complete by MPCA, the MPCA has indicated that it would request such information from the applicant. It is the permit applicant's responsibility to ensure that the MPCA has received a valid, complete application for state Section 401 certification and to obtain a final Section 401 action from the MPCA.

The MPCA has indicated that this public notice serves as its public notice of the application for Section 401 water quality certification under Minnesota Rules Part 7001. The MPCA has also indicated that the Section 401 process shall begin to commence upon the issuance date of this public notice unless the MPCA notifies both the St. Paul District and the permit applicant to the contrary, in writing, before the expiration date of this public notice.

Any comments relative to MPCA's Section 401 Certification for the activity proposed in this public notice may be sent to:

Minnesota Pollution Control Agency, Resource Management and Assistance Division,
Attention: 401 Certification, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

7. HISTORICAL/ARCHAEOLOGICAL.

This public notice is being sent to the National Park Service and the State Archaeologist for their comments. The Corps would review information on known cultural resources and/or historic properties within and adjacent to the project area. The Corps would also consider the potential effects of the project on any properties that have yet to be identified. The results of this review and the Corps' determination of effect would be coordinated with the State Historic Preservation Officer independent of this public notice. Any adverse effects on historic properties would be resolved prior to the Corps authorization, or approval, of the work in connection with this project.

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8. PUBLIC HEARING REQUESTS.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, in detail, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided or if there is otherwise no valid interest to be served.

9. PUBLIC INTEREST REVIEW.

The decision whether to issue a permit would be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision would reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal would be considered, including the cumulative effects. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. Environmental and other documents would be available for review in the St. Paul District Office.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received would be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Benjamin R. Cox
Chief, Northwest Section

Enclosures

NOTICE TO EDITORS: This public notice is provided as background information and is not a request or contract for publication.

FIGURE 1. PROJECT LOCATION

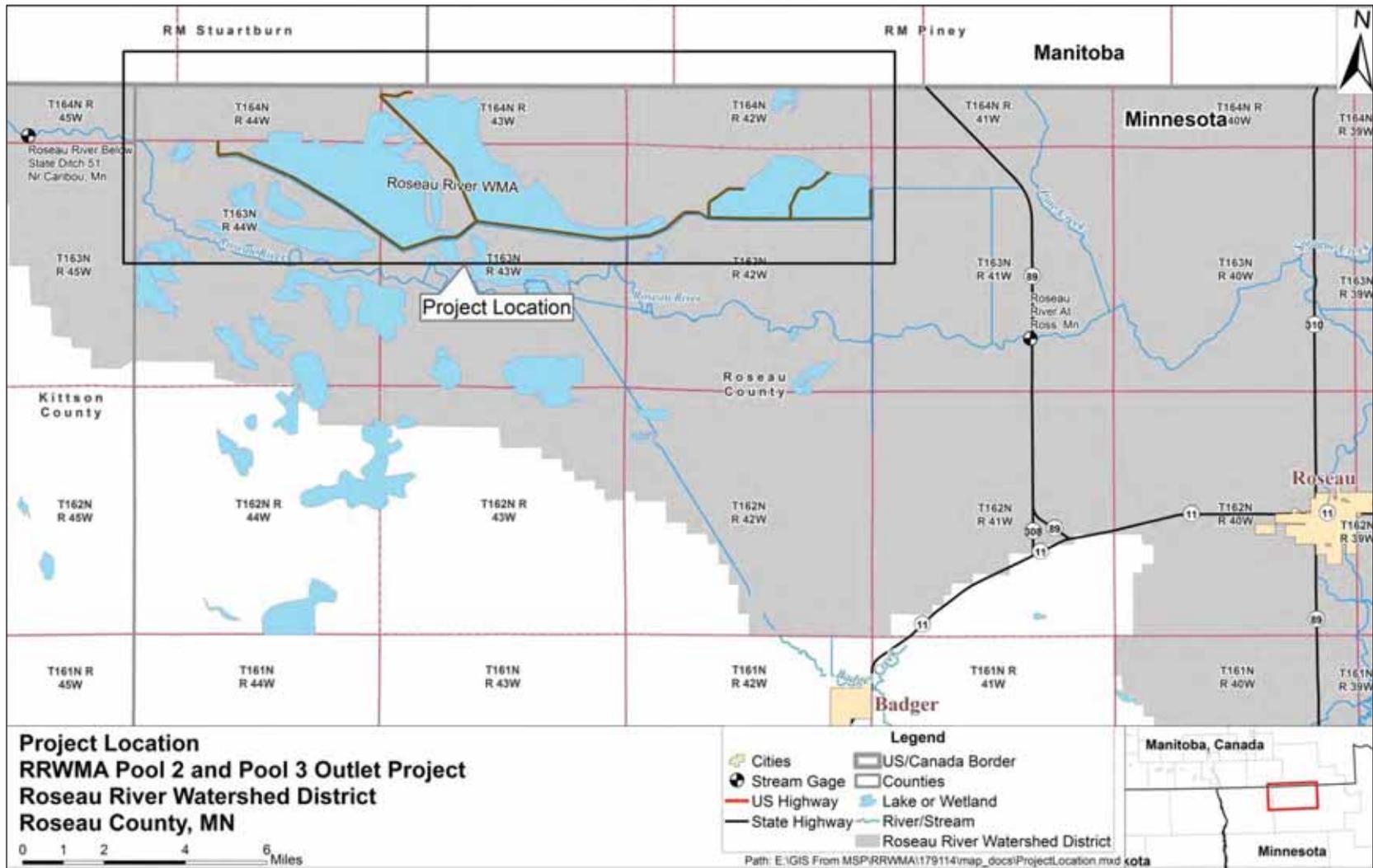
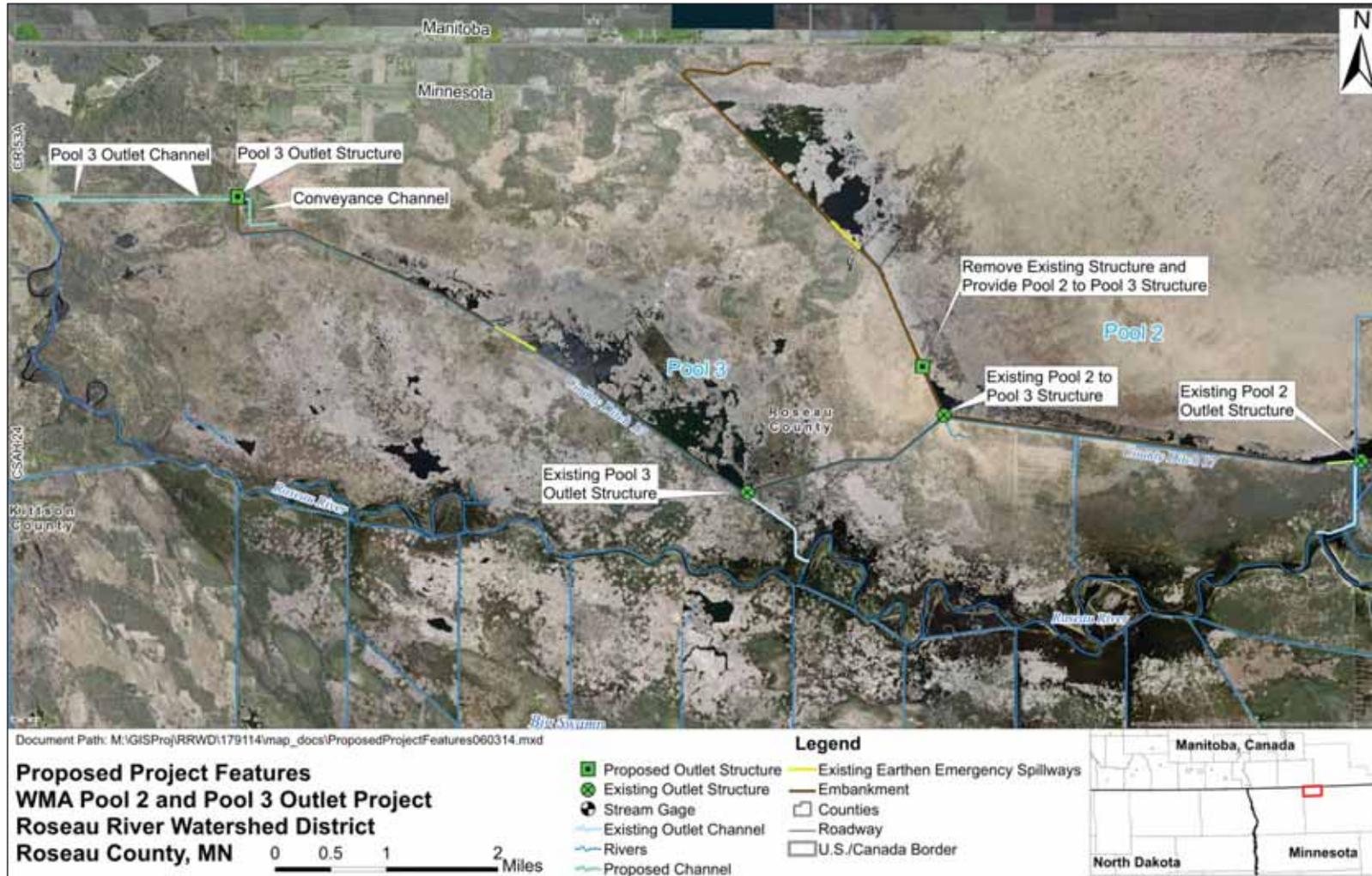
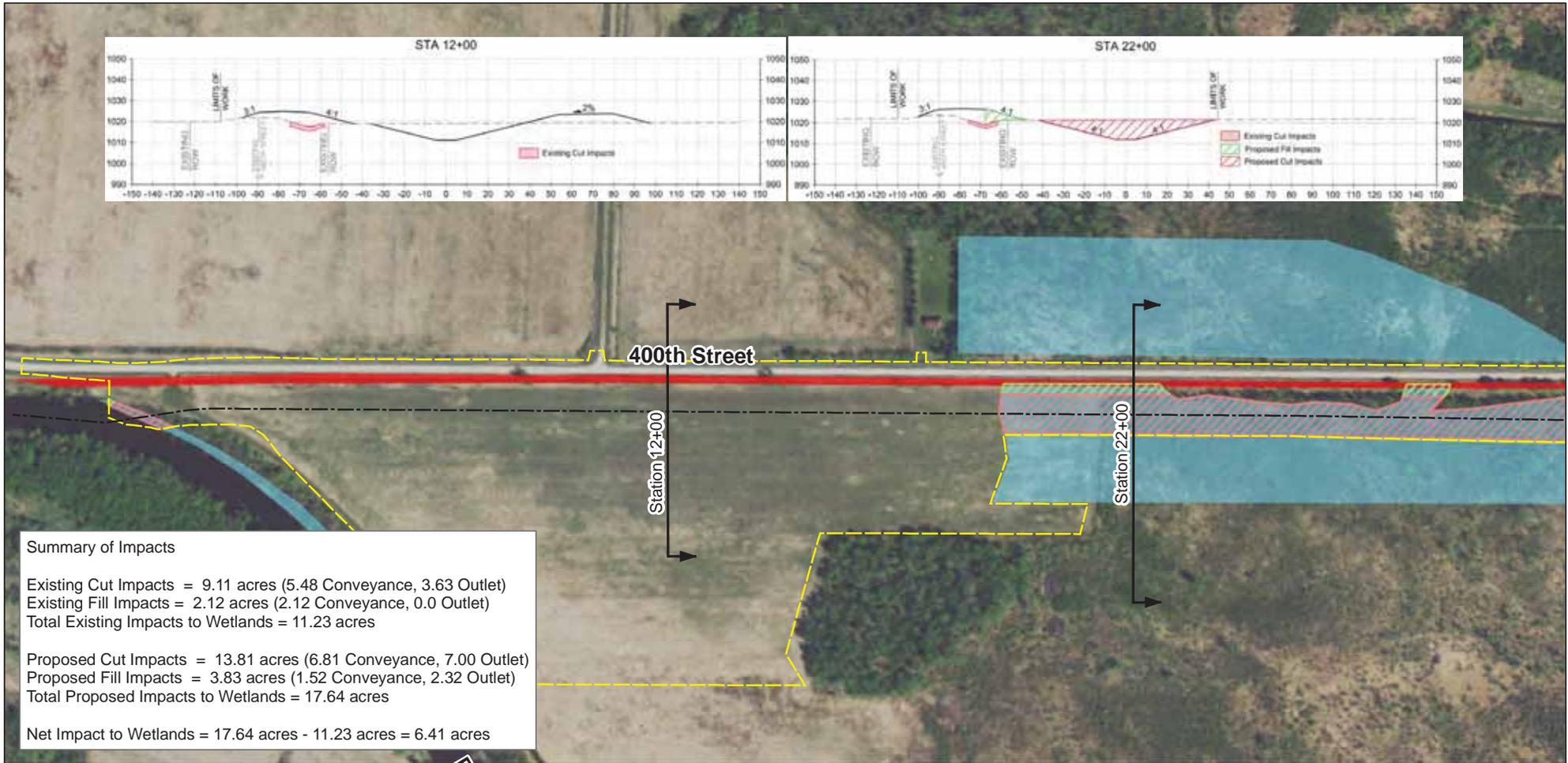


FIGURE 4. PROPOSED PROJECT FEATURES





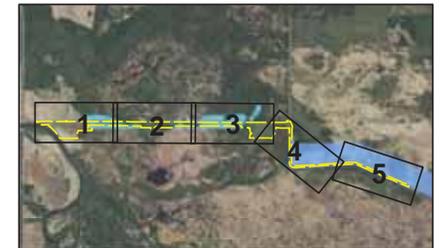
Wetland Impacts - Page 1 of 5
Roseau River Wildlife Management Area Project

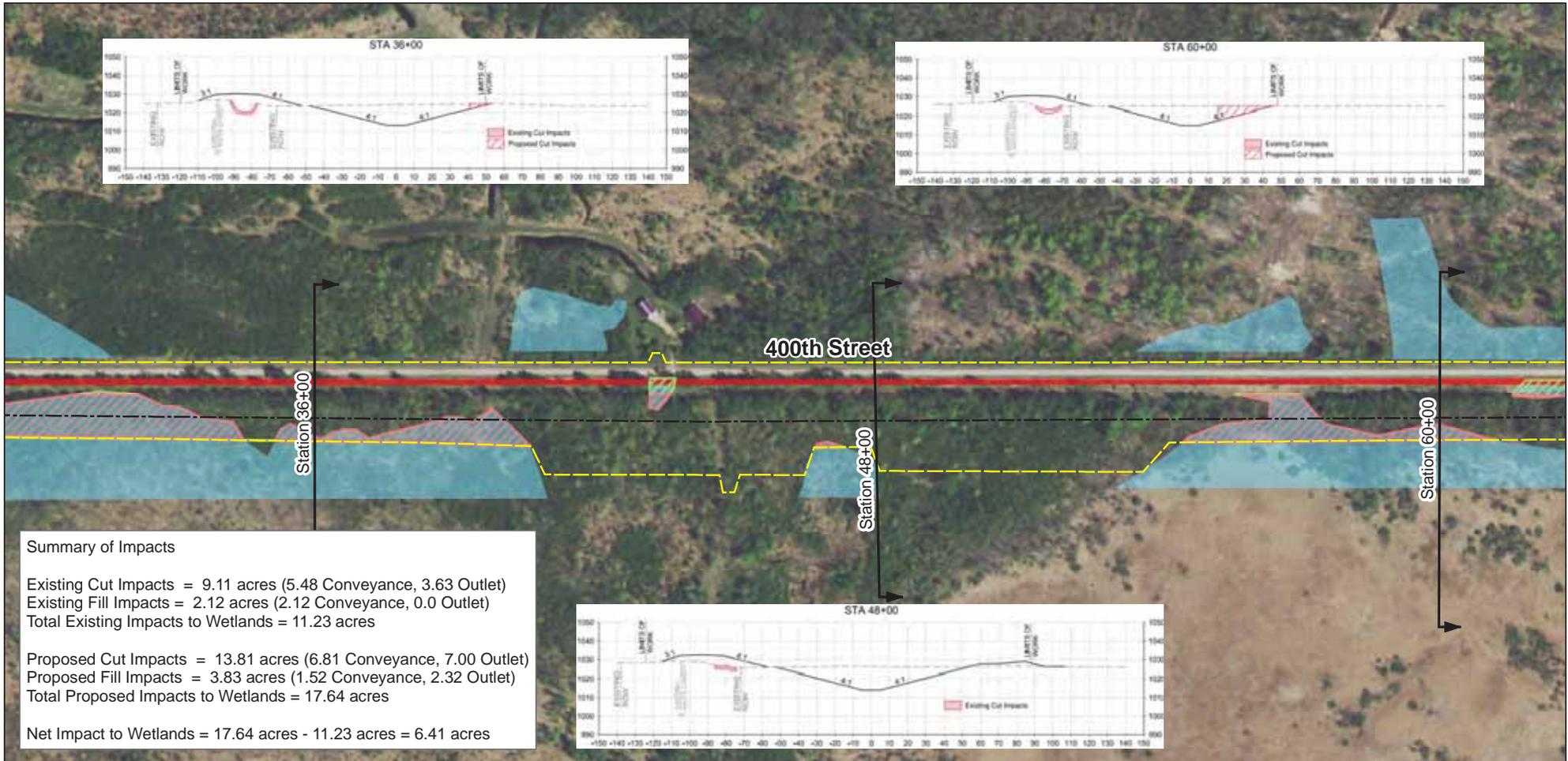
Roseau River Watershed District / MnDNR
 Roseau County, MN



Legend

- ↔ Cross-Sections
- - - Outlet/Conveyance Channel Alignment
- Construction Limits
- Public Waters Inventory (PWI)
- Delineated Wetlands
- Proposed Cut Impacts
- Proposed Fill Impacts
- Existing Cut Impacts
- Existing Fill Impacts





Summary of Impacts

Existing Cut Impacts = 9.11 acres (5.48 Conveyance, 3.63 Outlet)
 Existing Fill Impacts = 2.12 acres (2.12 Conveyance, 0.0 Outlet)
 Total Existing Impacts to Wetlands = 11.23 acres

Proposed Cut Impacts = 13.81 acres (6.81 Conveyance, 7.00 Outlet)
 Proposed Fill Impacts = 3.83 acres (1.52 Conveyance, 2.32 Outlet)
 Total Proposed Impacts to Wetlands = 17.64 acres

Net Impact to Wetlands = 17.64 acres - 11.23 acres = 6.41 acres

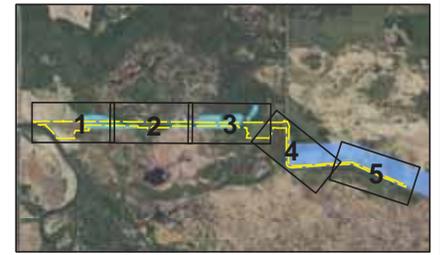
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Roseau River Wildlife Management Area Project

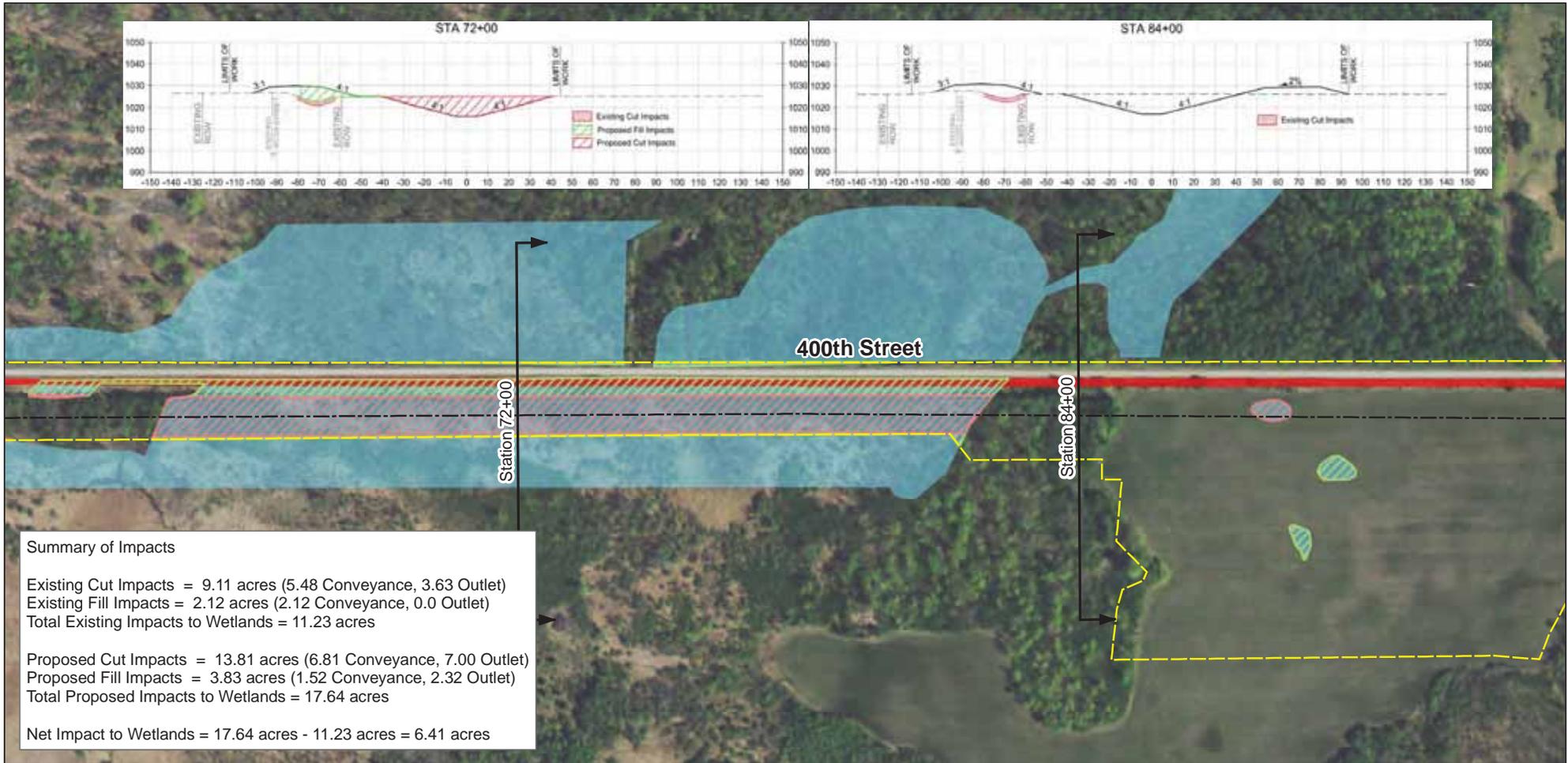
Roseau River Watershed District / MnDNR
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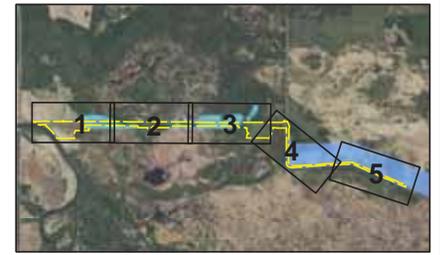
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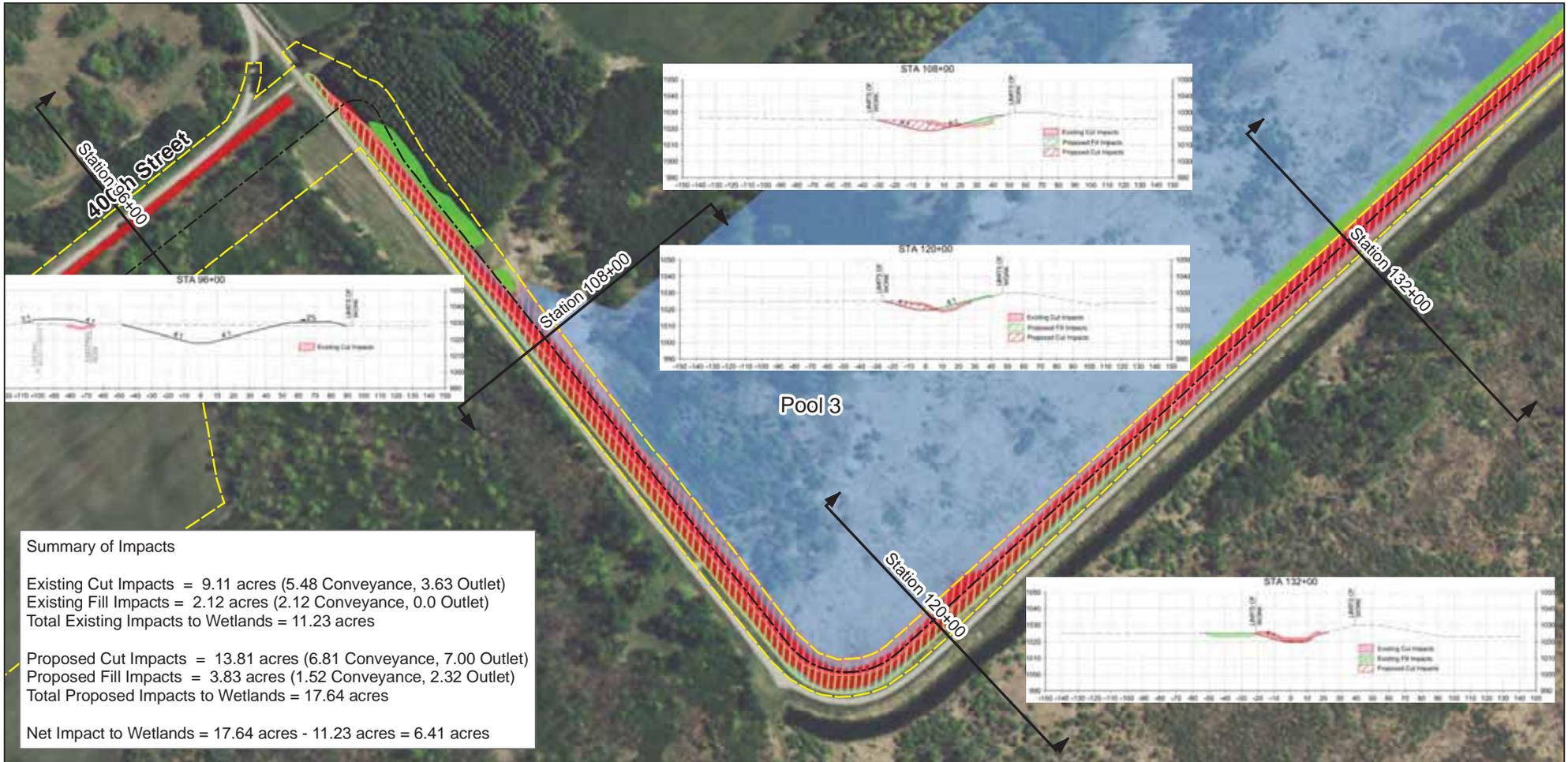
Roseau River Watershed District / MnDNR
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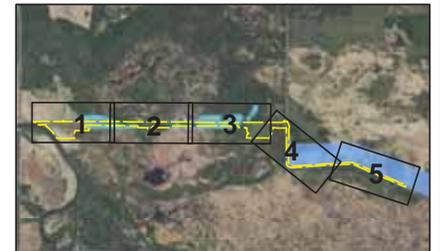
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Roseau River Wildlife Management Area Project

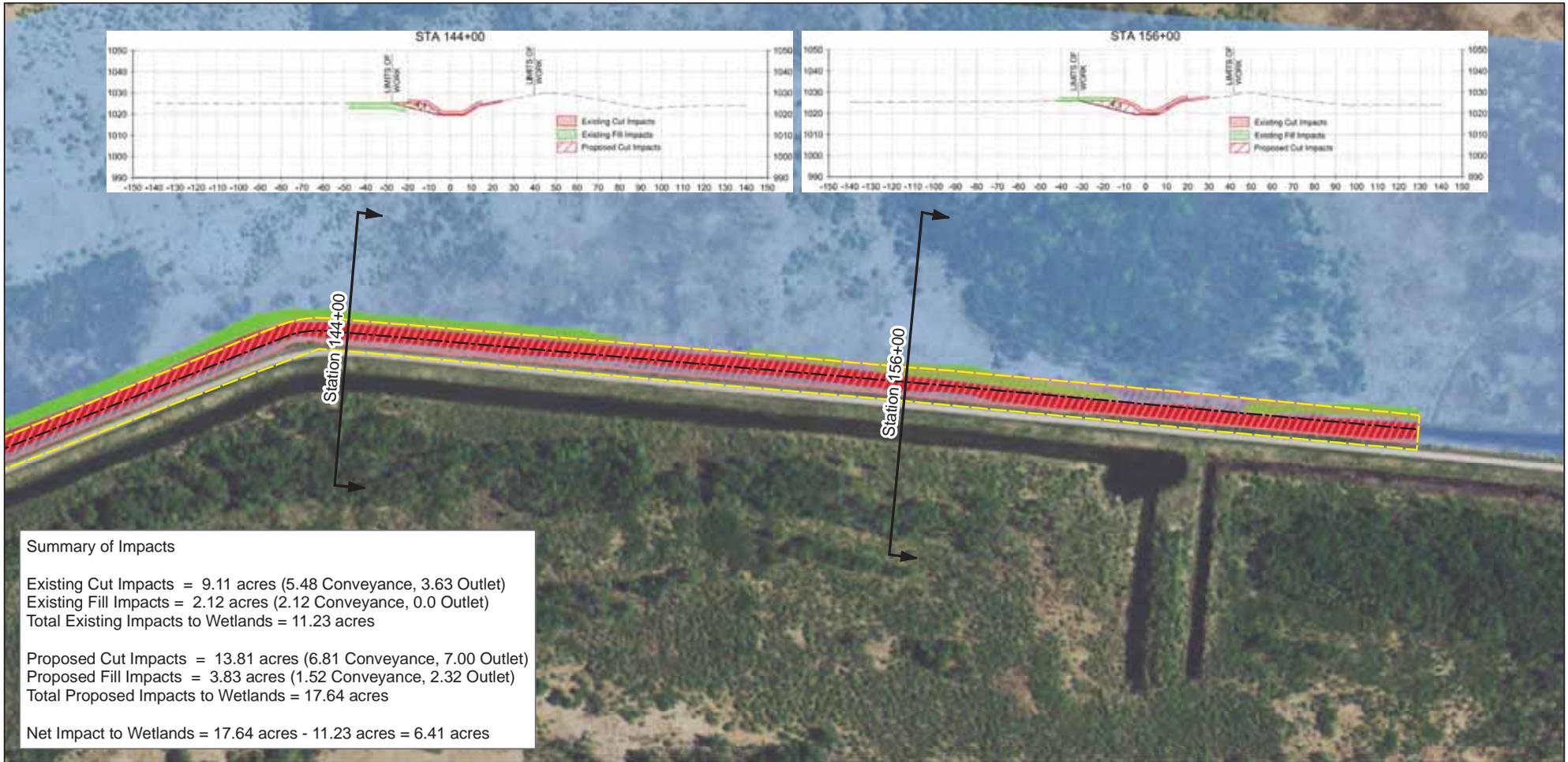
Roseau River Watershed District / MnDNR
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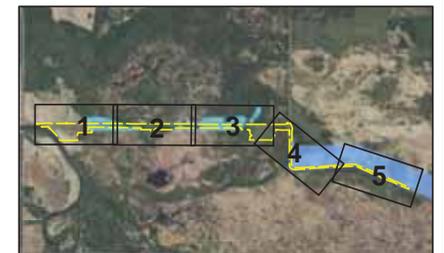
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Roseau River Wildlife Management Area Project

Roseau River Watershed District / MnDNR
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Roseau River WMA Lateral Effect Clay Liner



Legend

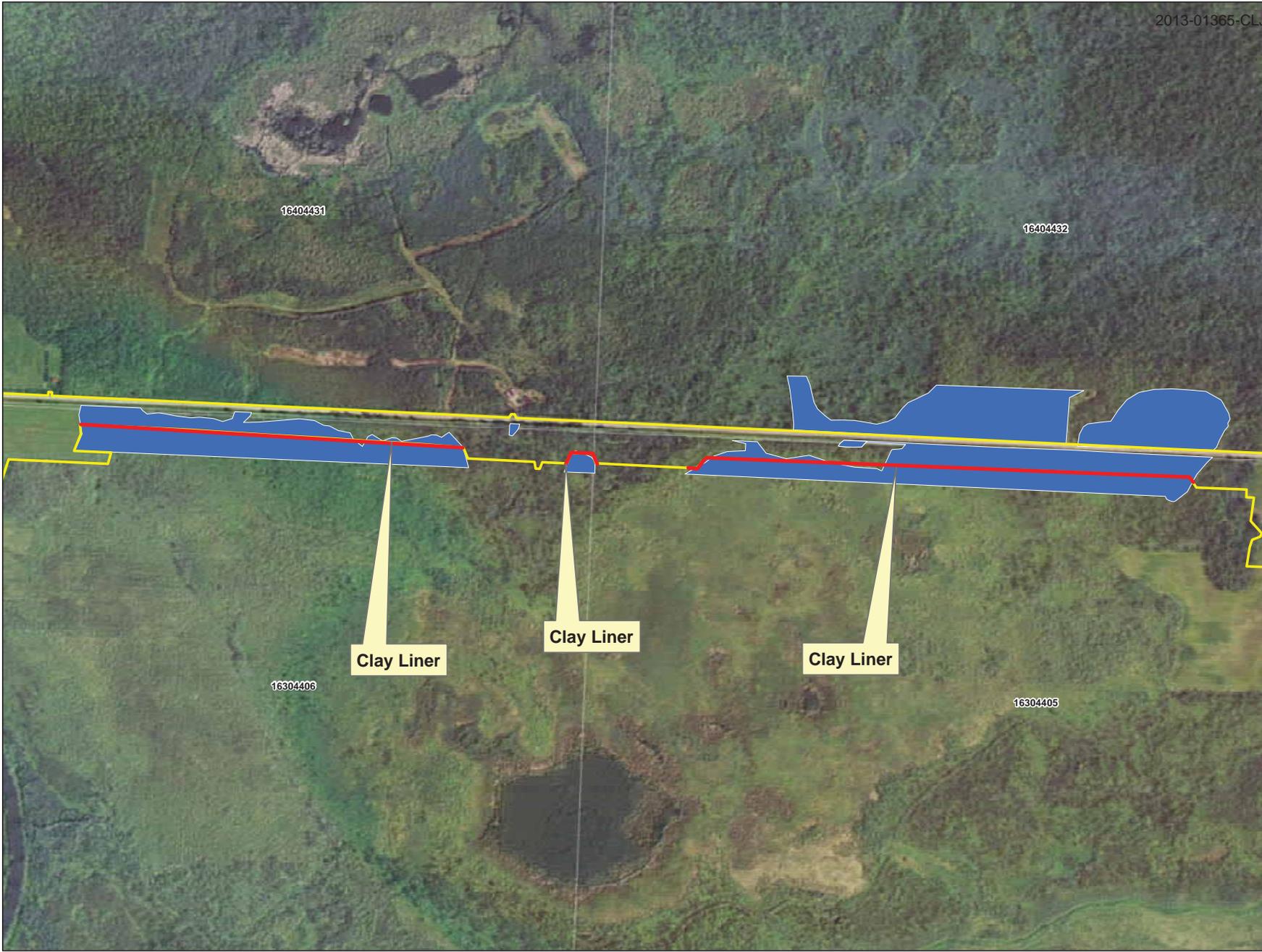
-  Construction Limits
-  Wetland Boundary

F

1 inch = 500 feet

Drawn By: TMM

Date: 7/14/2015



Noracre South Wetland Restoration Site Vicinity Map



Legend

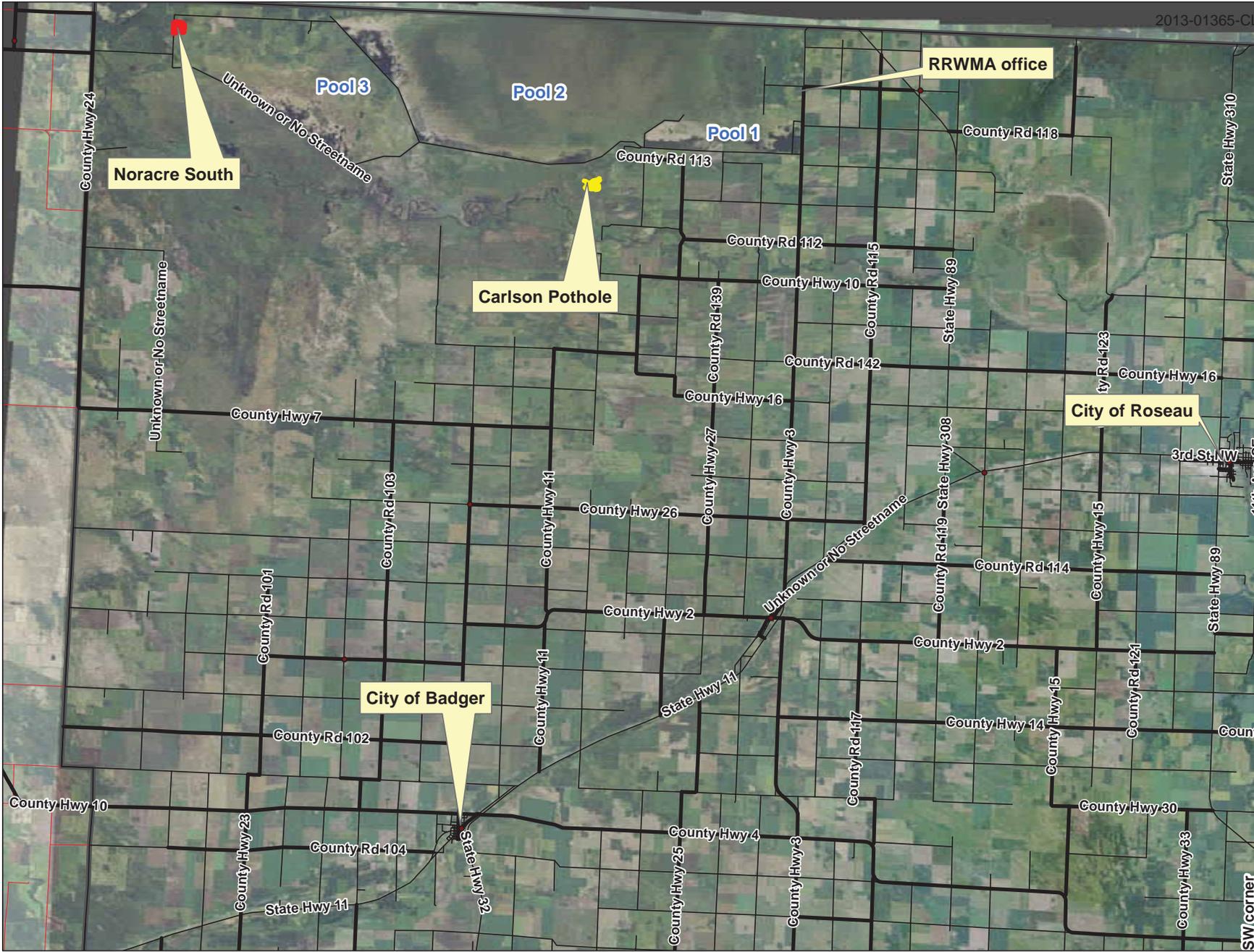
- Noracre South
- Carlson Pothole
- Roads

F

1 inch = 12,000 feet

Drawn By: TMM

Date: 6/10/2015



Carlson Pothole Wetland Restoration Site Construction/Monitoring Graphic



Legend

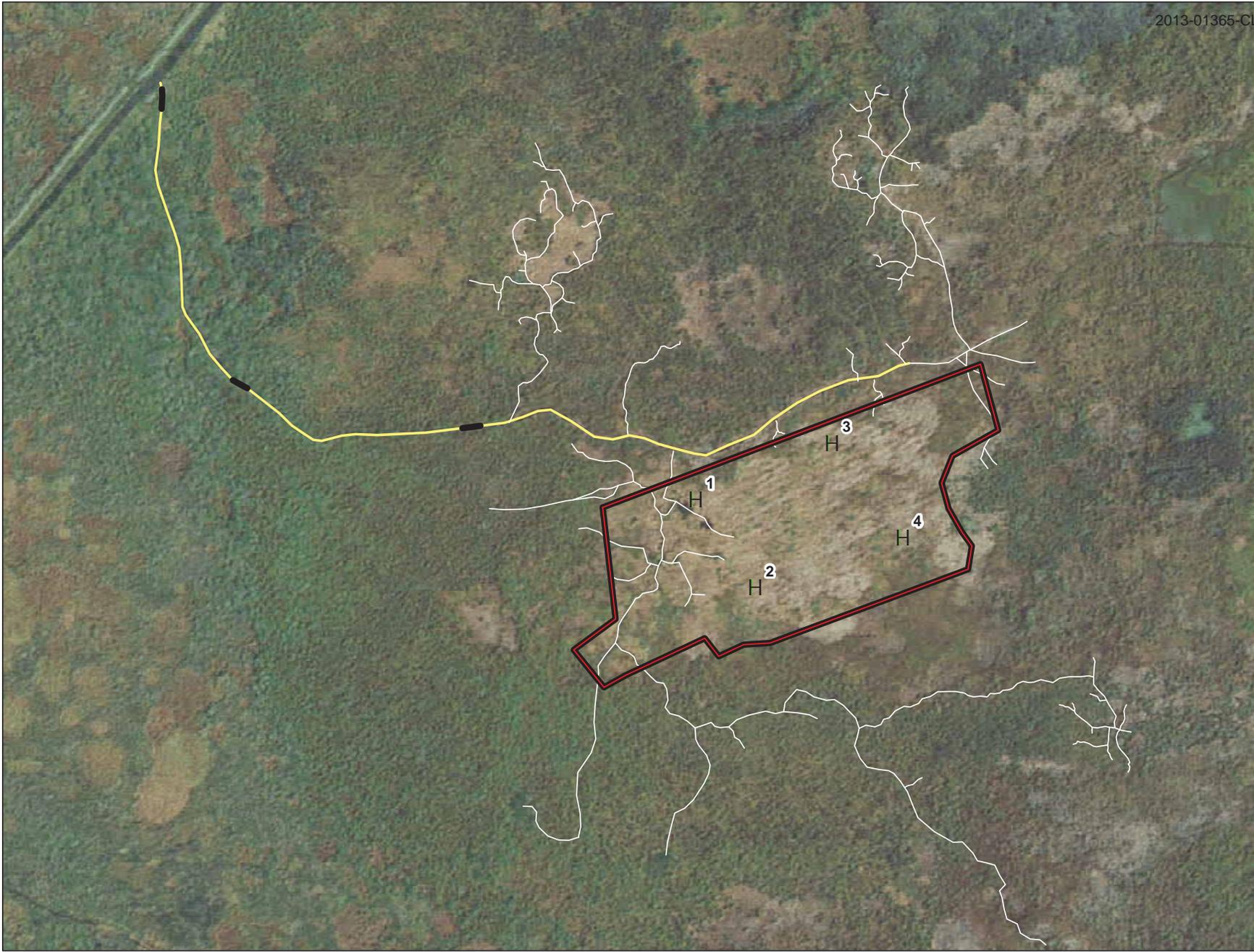
- H Monitoring Wells
- Ditch Plugs
- Carlson Pothole
- Carlson Drainlines
- Carlson Fireline

F

1 inch = 400 feet

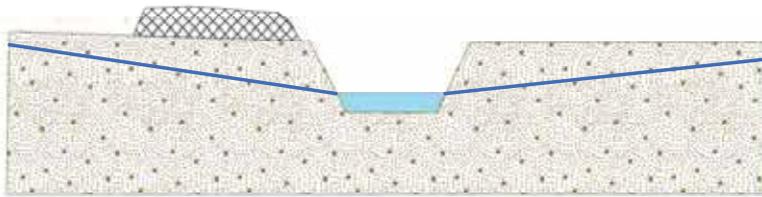
Drawn By: TMM

Date: 6/10/2015



Carlson Pothole Wetland Restoration Site Ditch Plug Exhibit

Existing Ditch Cross Section



Not to Scale

Legend

- Groundwater Level
- Ditch Spoil
- Existing Grade
- Surface Water

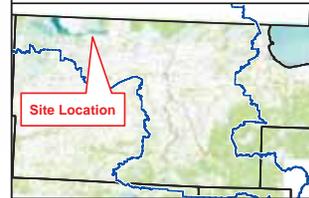
Proposed Ditch Cross Section (At Ditch Plug Location)



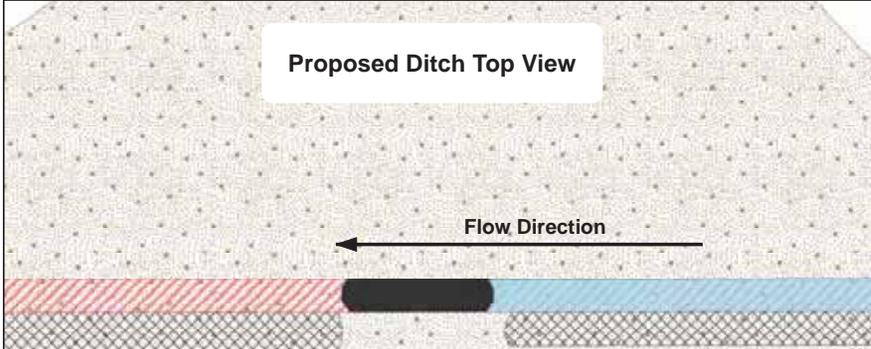
Not to Scale

Legend

- Groudwater Level
- Ditch Spoil
- Existing Grade
- Surface Water



Proposed Ditch Top View

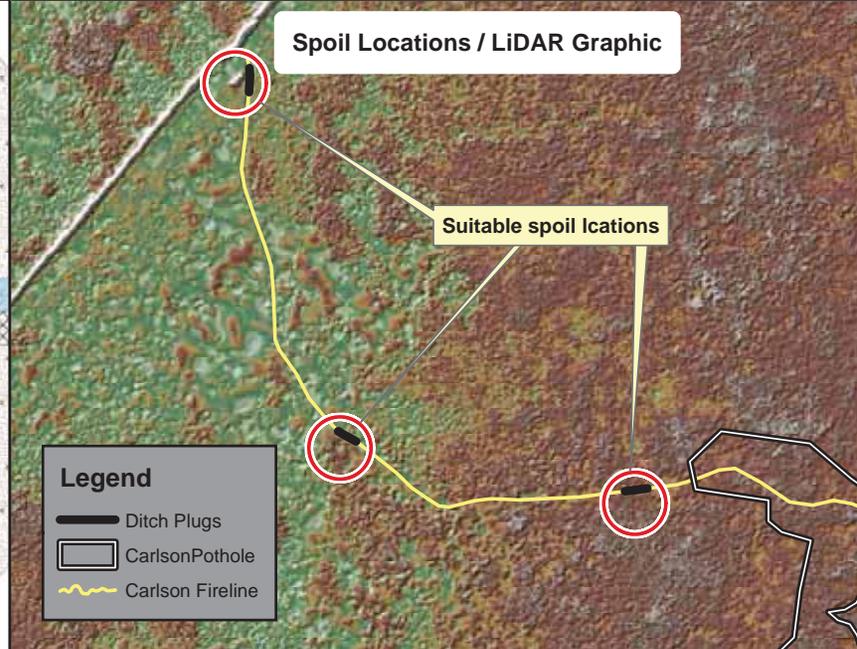


Not to Scale

Legend

- Ditch Plug
- Ditch Spoil
- Existing Ditch
- Existing Grade
- Water

Spoil Locations / LiDAR Graphic



Legend

- Ditch Plugs
- CarlsonPothole
- Carlson Fireline

Drawn By: TMM

Date: 3/4/2015



**Noracre South
Wetland Restoration Site
LiDAR Graphic**



Site Location

Legend

-  Noracre South
-  Roads

F

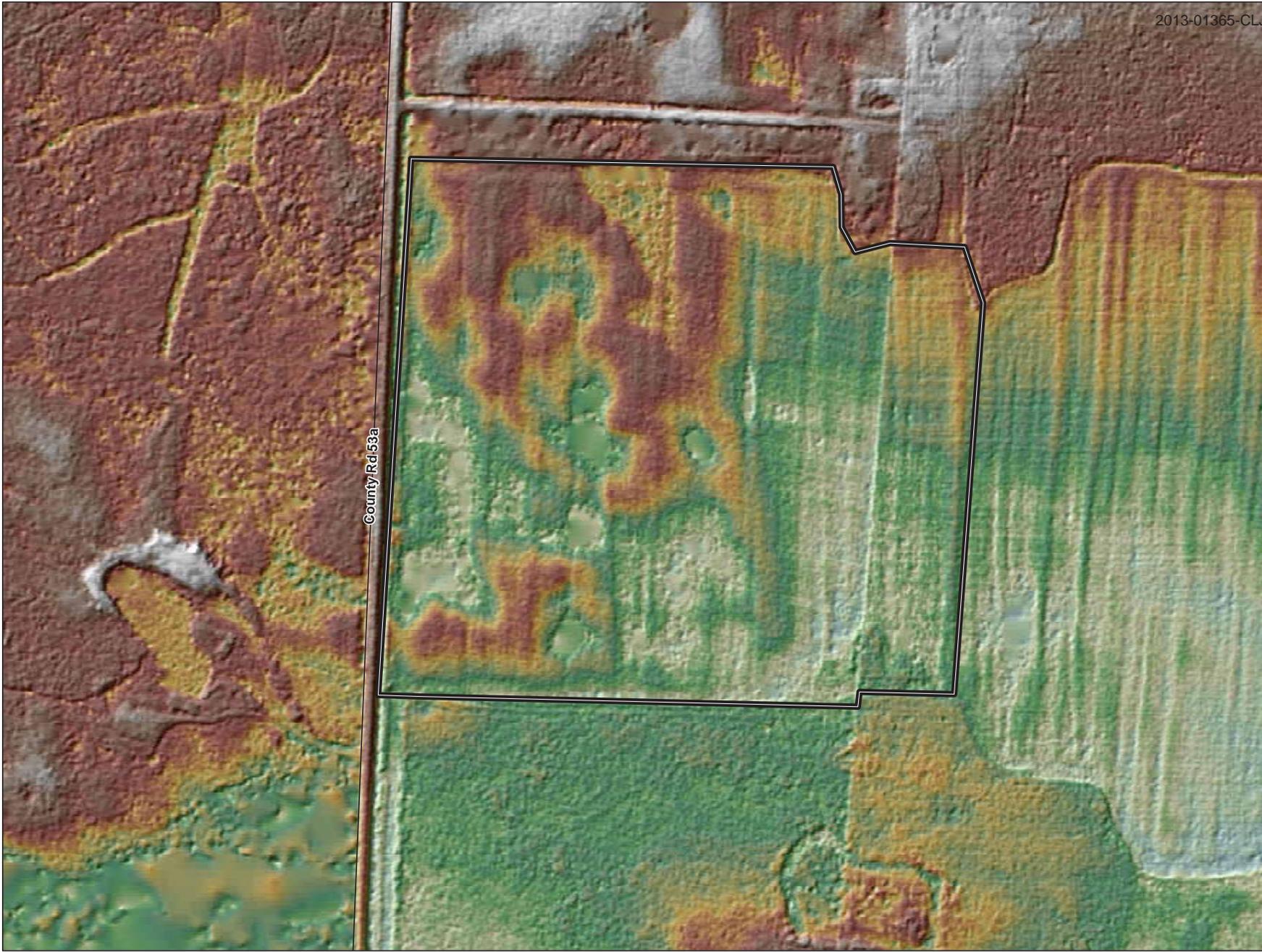
1 inch = 200 feet

Drawn By: TMM

Date: 6/10/2015



County Rd 53a



Noracre South Wetland Restoration Site Construction/Monitoring Graphic



Legend

- H monitoringwells
- Ditch Plugs
- ⊕ Site Limits
- Upland
- Wetland

F

1 inch = 200 feet

Drawn By: TMM

Date: 6/10/2015

