

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Dairyland Power Cooperative for a Route Permit for
the Wabasha Relocation 161 kV Transmission Line Project in Wabasha County

MPUC Docket No. ET-3/TL-23-388

OAH Docket No. 5-2500-40184

**DIRECT TESTIMONY OF SAGE WILLIAMS
ON BEHALF OF DAIRYLAND POWER COOPERATIVE**

January 28, 2025

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer, and business address.

A. My name is Sage Williams. I am the Manager, Electrical Maintenance, at Dairyland Power Cooperative (Dairyland or Applicant). My business address is 3200 East Ave S, PO Box 817 La Crosse, WI 54602-0817.

Q. Briefly describe your educational and professional background.

A. I have 20 years of transmission electric utility experience, including substation construction, operations, training, and maintenance. I completed a union apprenticeship program and was a Journeyman electrician for six years before starting my career in the electric utility industry. I completed another apprenticeship program with my previous employer, Tri-State G&T, and was a Journeyman Substation electrician. In my time at Tri-State, I held many positions through the years such as Outage Coordinator, Substation Superintendent, Training Manager and most recently before joining Dairyland Power, Regional Maintenance Manager. When I joined Dairyland in 2022, my role was to manage transmission line projects as the Manager of Transmission Operations and Development. Presently, my role is Manager, Electrical Maintenance, responsible for maintaining Dairyland's transmission substations as well as our members' distribution substations. Maintaining and testing transformers, circuit breakers, relays, metering, and anything else associated with transmission and distribution substations.

Q. What is your role with respect to the Wabasha 161 kilovolt (kV) Relocation Project (Project)?

A. When the Project began, my role was to assist with project development. My duties included landowner and community engagement, overseeing environmental and engineering site surveys, permitting, project marketing and managing the design of the Project. In my present role, I remain involved in the Wabasha Relocation Project by providing planning support to the Project team.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your Direct Testimony?

A. On March 27, 2024, Dairyland submitted a Joint Certificate of Need and Route Permit Application (the "Application"). Dairyland later withdrew the Certificate of Need (CN) portion of the Application based on a legislative change. The purpose of my testimony is to: (1) provide an overview of the Project; (2) to discuss Dairyland's analysis of the alternatives included in the Minnesota Department of Commerce, Energy Environmental Review and Analysis (EERA) staff's scoping decision; and (3) respond to certain agency recommendations regarding potential measures to avoid or minimize impacts from construction of the Project.

Q. What sections of the Application are you sponsoring?

A. The sections of the application I am sponsoring are provided below:

Section 1	Introduction
Section 2	Regulatory Process
Section 3	Proposed Project
Section 4	Project Purpose and Need (Withdrawn as it relates to the CN)
Section 5	Alternatives to the Project (Withdrawn as it relates to the CN)
Section 6.3	Routing Conclusions
Section 7	Right-of-Way Acquisition, Construction, Restoration, and Operation and Maintenance
Section 10	Application of Rule Criteria
Appendix A	Project Maps
Appendix C	Commission's Exemption Order (Withdrawn)
Appendix D	CN Completeness Checklist (Withdrawn)
Appendix E	Notice of Intent to Submit Route Permit Application
Appendix F	Route Permit Completeness Checklist
Appendix G	Property Owners Within or Adjacent to the Proposed Route
Appendix H	Kellogg Substation Initial Layout

Q. What schedules are attached to your Direct Testimony?

A. The following schedules are attached to my Direct Testimony:

- **Schedule A**: Statement of Qualifications
- **Schedule B**: Alternatives Analysis

III. PROJECT OVERVIEW

Q. Please generally describe the Project.

A. The Project is being proposed by Dairyland in Wabasha County, Minnesota. Dairyland proposes to relocate the existing LQ34 161-kV transmission line that is currently located on the CapX2020 structures. The Project includes the installation of a new 13.3-mile 161-kV transmission line and the construction of a new Kellogg Substation, all within Wabasha County. Dairyland plans to utilize single-pole steel structures, all of which will be self-supporting, eliminating the need for guying. The typical pole heights will vary from 75 to 140 feet above ground, with spans between poles ranging from 250 to 1,000 feet. Dairyland anticipates initiating site preparation activities for the Kellogg Substation site between June and July 2026, followed by substation construction and 161-kV transmission line installation between June 2027 and July 2028.¹

Q. How does this Project relate to Xcel Energy's proposed Mankato to Mississippi River Transmission Project?

A. In July 2022, the Midcontinent Independent System Operator (MISO) approved a long-range transmission plan (LRTP), including a new Wilmarth-North Rochester-Tremval transmission line. This new 345-kV line, referred to as the Mankato to Mississippi River 345-kV Transmission Project in Minnesota, would utilize the

¹ Application at 1-4.

1 double circuit capability of the CapX2020 system between North Rochester,
2 Minnesota, and Alma, Wisconsin. Xcel Energy, Dairyland, Rochester Public
3 Utilities, and Southern Minnesota Municipal Power Agency filed certificate of need
4 and route permit applications for the Mankato to Mississippi River 345-kV
5 Transmission Project in Minnesota Public Utilities Commission (Commission or
6 MPUC) Docket Nos. E002/CN-22-532 and TL-23-157.²

7
8 To accommodate the new second 345-kV circuit that is part of the Mankato to
9 Mississippi River Transmission Project, the Dairyland 161-kV circuit must be
10 relocated from the existing CapX2020 structures. This relocation is necessary to
11 ensure continued power supply to the Wabaco Substation, which is crucial for
12 maintaining reliability in the town of Plainview and surrounding areas. The new
13 Kellogg Substation is required because the Mankato to Mississippi River 345-kV
14 Transmission Project's circuit across the Mississippi River will eliminate
15 Dairyland's existing LN340 69-kV transmission line Mississippi River crossing and
16 connection into the Alma Substation in Wisconsin. The new Kellogg Substation will
17 supply the LN340 69-kV transmission line. Finally, constructing a 161-kV
18 transmission path between Wabaco and Alma will maintain existing transmission
19 capacity and generation outlet provided by the transmission line.³

20
21 **Q. Why has Dairyland proposed the Project?**

22 A. The Project's primary purpose and need is to maintain existing transmission grid
23 capabilities and reliable service to area communities while relocating the existing
24 161-kV line from the CapX2020 structures to make way for a new 345-kV line –
25 the Mankato to Mississippi River 345-kV Transmission Project – that will require
26 use of the CapX2020 poles.⁴

² Application at 1-1.

³ Application at 1-2.

⁴ Application at 4-1; EERA Scoping Decision at 1 (Sept. 25, 2024) (eDocket No. 20249-210466-01).

1
2 **Q. How much will the Project cost?**

3 A. The Project will cost approximately \$32.4 million dollars.
4

5 **Q. Do you have any other updates or clarifications to the Application?**

6 A. No.
7

8 IV. ALTERNATIVES ANALYSIS 9

10 **Q. Briefly describe the Applicant's Proposed Route for the project.**

11 A. Dairyland proposes to relocate the existing LQ34 161-kV transmission line that is
12 currently located on the CapX2020 structures. Dairyland identified a Proposed
13 Alignment that follows an approximately 13.3-mile route starting in the vicinity of
14 Structure X-Q3-75 on Dairyland's LQ34 161-kV transmission line northeast of the
15 Town of Plainview, Minnesota in Wabasha County to the new 4-acre Kellogg
16 Substation.⁵ The new 13.3-mile 161-kV transmission line will end where it enters
17 the Kellogg Substation from the west. To the north of the Kellogg Substation,
18 Dairyland structure X-N340-312 currently exists under the CapX2020 lines. This
19 structure, which is within the Proposed Route, will be replaced or converted to 161-
20 kV and brought directly into the northern side of the Kellogg Substation. The new
21 Kellogg Substation will then supply the LN340 69-kV transmission line, which
22 travels north-south between Kellogg and the Utica, Minnesota area. Dairyland will
23 modify approximately 1,500 feet of the existing 69-kV line to provide connection
24 into the new Kellogg Substation. The 69-kV take-off structure in the Kellogg
25 Substation may require some additional right-of-way (ROW) as compared to the
26 present ROW. Some 69-kV structures to the south of the Kellogg Substation will
27 likely need to be replaced to accommodate the changes in line configuration.⁶

⁵ Application at 1-4.

⁶ Application at 1-5.

1
2 Construction will occur within a 100-footwide ROW easement that Dairyland will
3 obtain to operate the transmission line. The 100-foot-wide ROW easement is
4 centered on the Proposed Alignment (or 50 feet on either side of the transmission
5 line).⁷

6
7 The Project Route Width (or Proposed Route) is a larger area that is inclusive of
8 the Proposed Alignment and the Kellogg Substation. Dairyland requests a
9 standard Route Width of 400 feet (200 feet on either side of the Proposed
10 Alignment) for most of the Project. Dairyland is requesting a wider Route Width in
11 some areas, up to 2,300 feet wide, to allow for additional route study and the
12 potential need to make minor modifications to the Proposed Alignment in these
13 areas.⁸

14
15 **Q. How many route segment alternatives are currently being evaluated for**
16 **proposed route?**

17 A. EERA will evaluate the seven route segment alternatives and six alignment
18 alternatives accepted by the Commission in its order of September 17, 2024.⁹

19
20 **Q. Can you briefly describe the proposed route alternatives for the Project?**

21 A. The Environmental Assessment Scoping Decision for the Dairyland Power
22 Cooperative 161-kV Wabasha Transmission Line Relocation Project, issued on
23 September 24, 2024 (the Scoping Decision), identified Dairyland's Proposed

⁷ Application at 1-4.

⁸ Application at 1-4.

⁹ Commission Order Accepting Dairyland's Proposed Route and the Routing Alternative Noted In Table 1 of EERA's August 30, 2024, Comments (Sept. 17, 2024) (eDocket No. 20249-210260-01 and 20249-210260-02).

Route, seven Route Segment Alternatives (RSA), and six alignment alternatives (AA) for study in the Environmental Assessment (EA). The alternatives include:

- RSA-A, with AAA-1 and AAA-2;
- RSA-B;
- RSA-C;
- RSA-D;
- RSA-E, with EAA-1 and EAA-2;
- RSA-F; and
- RSA-G, with GAA-1 and GAA-2.

Q. Has Dairyland conducted any analysis of these various route alternatives?

A. Yes. Dairyland has prepared an Alternatives Analysis, which is attached here in **Schedule B**.

Q. What kind of analysis was done?

A. Dairyland compared the environmental, engineering, and human impacts of the alternatives to the corresponding sections of the Proposed Route. In addition to reviewing these impacts, Dairyland conducted additional landowner outreach and engineering analysis.

Q. Based on the Alternatives Analysis, has Dairyland identified a preferred alternative?

A. Yes. Based on the analysis reflected in **Schedule B**, Dairyland finds that:

- The Proposed Route, as compared to RSA-AAA-1 and RSA-AAA-2, best balances the Commission's routing criteria by minimizing length, cost, number of landowners impacted, and maximizing co-location with existing ROWs. However, should the Commission elect to accept a route alternative in this area of the Project, Dairyland finds that its proposed RSA-AAA-2 As Modified is preferable to RSA-AAA-1 and RSA-AAA-2.
- The Proposed Route, as compared to RSA-B, RSA-C, RSA-D, RSA-EAA-1, RSA-EAA-2, and RSA-F, fares best by minimizing length, cost, and maximizing

1 co-location with existing ROWs. However, should the Commission elect to
2 accept a route alternative in this area of the Project, Dairyland finds that RSA-
3 B is preferable to RSA-C, RSA-D, RSA-EAA-1, RSA-EAA-2, and RSA-F.

- 4 - The Proposed Route, as compared to RSA-GAA-1 and RSA-GAA-2, fares best
5 regarding co-locating with existing ROWs as well as impacts to wooded areas,
6 State Forests, and sites designated by the Minnesota Department of Natural
7 Resources as Sites of Biodiversity Significance.

8
9 **V. MINIMIZATION MEASURES**

10
11 **Q. Has Dairyland continued to coordinate with tribes and agencies to minimize**
12 **the potential impacts of the Project?**

13 A. Yes. As described in more detail in Ms. Britta Bergland's direct testimony,
14 Dairyland has continued to meet with federal, state, and local agencies as well as
15 tribal governments to identify measures to further minimize the potential impacts
16 related to construction of the Project. Ms. Bergland's testimony reflects Dairyland's
17 commitments to implement certain minimization measures consistent with agency
18 comments received in this proceeding.

19
20 **VI. CONCLUSION**

21
22 **Q. Does this conclude your Direct Testimony?**

23 A. Yes.

Christopher Sage Williams

sage.williams@dairylandpower.com

608-304-7416

EXPERIENCE

Manager, Electrical Maintenance

December 2024 - Present

Dairyland Power Cooperative
3200 East Ave. S. La Crosse, WI 54602

- Responsible for maintaining Dairyland's transmission substations as well as our members' distribution substations. Maintaining and testing transformers, circuit breakers, relays, metering, and other facilities associated with transmission and distribution substations

Manager, Transmission Operations and Development

January 2022 – December 2024

Dairyland Power Cooperative
3200 East Ave. S. La Crosse, WI 54602

- Reviewing and negotiating contract agreements with Member Cooperatives and Municipalities. Contractor oversight and process review. Scheduled and coordinated projects for two Dairyland Power transmission line construction crews. Worked with the PMO on schedule development, cost containment and change management. Delivered business development opportunities to Member and Municipalities as well as working on partnerships with transmission line contractors on overhead and underground transmission and distribution projects. Currently Project Managing Dairyland's LRTP4 Project. A \$207 million project that includes a 69/161 kV substation and 14 miles of 161 kV Transmission line in Minnesota and a 35-mile double circuit 345/161 kV Transmission line in Wisconsin. This is part of MISO's Long Range Transmission Planning Tranche 1 Portfolio of projects.

Transmission Maintenance Senior Manager – East Region

August 2021 – January 2022

Tri-State Generation and Transmission Assoc.
Northern Colorado Maintenance Center, Frederick, CO

- Provided transmission line, substation, telecommunication/ Supervisory Control and Data Acquisition (SCADA) maintenance management and construction assistance and guidance to the Vice President, Transmission Maintenance in the development of major corporate objectives, plans and budgets, and appropriate controls and reporting relationships. Responsible for the continuation of the Tri-State transmission safety program (Safe Start). Responsible for the maintenance of transmission line, substation, and telecommunications/SCADA system facilities. Responsible for the continued development of Tri-State Electrical and Civil construction crews. Focused on implementing a scheduling system that fosters consistency in scheduling both construction and maintenance projects.

Transmission Maintenance Manager – East Region

October 2018 – August 2021

Tri-State Generation and Transmission Assoc.
Northern Colorado Maintenance Center, Frederick, CO

- Provided transmission line, substation, telecommunication/SCADA maintenance management and construction assistance and guidance to the Senior Manager, Transmission Maintenance in the development of major corporate objectives, plans and budgets, and appropriate controls and reporting relationships. Responsible for the implementation and successful continuation of the Safe Start. Responsible for the maintenance of transmission line, substation, and telecommunications/SCADA system facilities.

Transmission Training and Scheduling Manager

September 2017 – October 2018

Tri-State Generation and Transmission Assoc.
Northern Colorado Maintenance Center, Frederick, CO

- Responsible for managing and leading training and development programs across the transmission maintenance and construction departments. Responsible for developing, implementing, and maintaining an effective work scheduling process between transmission construction, maintenance, and system operations. Facilitated discussions with internal training departments for continuity and consistency in training methods and curriculum. Worked with outside vendors for leadership, technical and specialized training in developing the most applicable, affordable, and efficient training for our employees.

Transmission Construction Services Superintendent

December 2015 – September 2017

Tri-State Generation and Transmission Assoc.
Tri-State Headquarters, Westminster, CO

- Responsible for planning, directing, and coordinating the construction of transmission substations in the Eastern and Southern maintenance regions, and for SCADA installations in the Eastern, Southern and Western maintenance regions. Supervised, motivated, and directed construction foremen and SCADA specialists.

Transmission Outage Coordinator

December 2014- December 2015

Tri-State Generation and Transmission Assoc.
Tri-State Headquarters, Westminster, CO

- Provided the necessary interface between System Operations, field personnel, neighboring utilities, member systems, and internal functional areas, to ensure continuity and consistency for required work activities on the interconnected transmission system.

Substation Construction Electrical Foreman

April 2008 – December 2014

Tri-State Generation and Transmission Assoc.
Rio Rancho Maintenance Facility, Rio Rancho, NM

- Responsible for the safe and efficient installation, modification, commissioning, maintenance, operation of lines, telecommunications, and substation equipment. Responsible for directing, coordinating, training, and monitoring others in all types of construction and maintenance of electrical equipment in substations.

TRAINING/EDUCATION

DPC Ex. ____, Williams Direct, Schedule A

Project Management Certificate – Colorado State University

February 2015

Denver Joint Electrical Apprenticeship
and Training Program

September 1996 – November 2000

**Dairyland Power Cooperative's
Route Alternatives Analysis for the
Wabasha Transmission Line Relocation Project**

January 2025

I. Background

The Environmental Assessment Scoping Decision for the Dairyland Power Cooperative 161 kilovolt (kV) Wabasha Transmission Line Relocation Project, issued on September 24, 2024 (the Scoping Decision), identified Dairyland's Proposed Route, seven Route Segment Alternatives (RSA) and six alignment alternatives (AA) for study in the Environmental Assessment (EA). The alternatives include:

- RSA-A, with AAA-1 and AAA-2;
- RSA-B;
- RSA-C;
- RSA-D;
- RSA-E, with EAA-1 and EAA-2;
- RSA-F; and
- RSA-G, with GAA-1 and GAA-2.

A description, as well as maps, of each of these alternatives is provided in the Scoping Decision. In addition to the analysis the Minnesota Department of Commerce, Energy Environmental Review and Analysis (EERA) unit will complete as part of the EA, Dairyland also evaluated each of these alternatives and provides its analysis here.

Based on the geographic proximity of the various RSAs and AAs, Dairyland compared the corresponding segment of the Proposed Route, as described in the Application, to these alternatives in three groups, based on where the RSAs and AAs generally share common start and end points:

1. Group 1 (RSA-AAA-1 and RSA-AAA-2);
 2. Group 2 (RSA-B, RSA-C, RSA-D, RSA-EAA-1, RSA-EAA-2, and RSA-F); and
 3. Group 3 (RSA-GAA-1 and RSA-GAA-2).
- Dairyland also developed a new AA, referred to "RSA-AAA-2 As Modified" for consideration by the Commission. This AA presents improvements to RSA-AAA-2 to minimize impacts on landowners along RSA-AAA-2, and is discussed alongside the RSAs in Group 1, below. An overview figure depicting all alternatives is presented as Figure 1.

II. Analysis**A. Group 1**

Dairyland understands that community members proposed the Group 1 alternatives, RSA-AAA-1 and RSA-AAA-2, to follow a fenceline/property line, move the transmission line further from identified building sites and wells that are currently in use, and avoid removal of trees near a landowner's home. Dairyland also developed a new AA, referred to "RSA-AAA-2 As Modified" for consideration by the Commission. This AA presents improvements to RSA-AAA-2 to minimize impacts on landowners along RSA-AAA-2.

Table 1 compares the environmental, engineering, and human impacts of RSA-AAA-1 and RSA-AAA-2 as compared to the corresponding section of the Proposed Route. RSA-AAA-2 As Modified is a slight refinement to RSA-AAA-2 and as such, the human and environmental features of this AA are similar to RSA-AAA-2. Figure 2 depicts the alternatives and Proposed Route relative to the environmental resources presented below.

Table 1. Comparison of Human and Environmental Features Crossed by the Proposed Route and Group 1 Route Alternatives ^a

Resource / Characteristic	Proposed Route	RSA-AAA-1	RSA-AAA-2
Length (Miles)	1.6	2.6	2.6
Percent Collocated ^b	38%	25%	25%
Cost	\$2,471,882	\$3,601,690	\$3,601,690
Land Use Features			
Residences within 200 feet of centerline	0	0	0
Parcels (No. Crossed)	5	7	7
U.S. Highway 61 (Great River Road) – Scenic Byway (No. of Crossings)	0	0	0
Snowmobile Trails (No. Crossed)	1	1	1
MDNR-Administered Wildlife Management Area (WMA) Land (Miles Crossed)	0	0	0
MDNR-Administered State Forest Land (Miles Crossed)	0	0	0
MDNR Scientific Natural Areas (Miles Crossed)	0	0	0
MDNR State Forest Easements (Miles Crossed)	0	0	0
MDNR WMA Easements (Miles Crossed)	0	0	0
U.S. Fish and Wildlife Service (USFWS) Wildlife Refuge (Miles Crossed)	0	0	0
U.S. Army Corps of Engineers Land (Miles Crossed)	0	0	0

DPC Ex. ____, Williams Direct, Schedule B

Resource / Characteristic	Proposed Route	RSA-AAA-1	RSA-AAA-2
The Nature Conservancy Easement (Miles Crossed)	0	0	0
MDNR / USFS Forest Legacy Program, Forest Stewardship Easement (Miles Crossed)	0	0	0
Geologic Features			
Regions Prone to Karst (Miles Crossed)	1.6	2.6	2.6
Surface Water Features			
National Wetlands Inventory (Miles Crossed)	0	<0.1	<0.1
MDNR Rivers and Streams (No. Crossed)	2	3	3
MDNR Lakes and Reservoirs (Miles Crossed)	0	0.1	<0.1
MDNR Shallow Lakes (Miles Crossed)	0	0	0
MDNR Public Water Basin/Wetlands (Miles Crossed)	0	0	0
Impaired Streams (No. Crossed)	0	0	0
Floodplains (Miles Crossed)	0	0	0
Trout Streams (No. Crossed)	0	0	0
MDNR Public Water Watercourses (No. Crossed)	0	0	0
Proximity to Designated Calcareous Fen (Distance from in Miles)	>5	>5	>5
Rare and Sensitive Resources			
Rusty Patch Bumblebee Low Potential Zones (Miles Crossed)	1.6	2.6	2.6
Rusty Patch Bumblebee High Potential Zones (Miles Crossed)	0	0	0
Important Bird Area (Miles Crossed)	0	0	0
Minnesota Biological Survey Sites of Biodiversity Significance with Good, High or Outstanding Ranking (Miles Crossed)	0	0	0
MDNR Native Prairies (Miles Crossed)	0	0	0
Minnesota Native Plant Communities with S1, S2, or S3 ranking (Miles Crossed)	0	0	0
Notes: ^a To provide a reasonable comparison between the Proposed Route and Route Alternatives, resource impacts were assessed based on “miles crossed” by the Proposed Alignment or Route Alternatives. ^b Collocation is defined as any utility, road or trail located within 200 feet either side of the centerline based on the proposed clearing width.			

As shown in Table 1, the Group 1 alternatives are approximately 1.0 mile longer than the Proposed Route because they depart from the existing Dairyland LQ34 161-kV transmission line (the Wabaco-Alma transmission line or LQ34 line) further southwest than the Proposed Route. This additional length would result in the addition of approximately \$1.1 million to the Project costs. They are also approximately 13% less collocated than the Proposed Route, as their additional length occurs in areas that are not adjacent to existing roadways. The Group 1 alternatives also cross two additional parcels.

After the Group 1 alternatives leave the LQ34 line and travel north and west, they would cross a small pond as identified by the Minnesota Department of Natural Resources (MDNR). This pond is avoided by the Proposed Route. This pond is not classified as a Public Water Basin or Wetland. The pond is surrounded by trees and wetlands, and RSA-AAA-1 would result in a crossing of the open water portion of the pond, and more tree removal. RSA-AAA-2 passes to the north of the open water area of the pond and instead crosses the associated wetland and avoids most of the trees. Both alternatives would also parallel another small pond to the north and closer to Highway 42. These ponds are shown on Figure 2.

Dairyland has conducted additional landowner outreach and engineering analysis regarding these ponds. Landowner communication and site visits indicate that each of these ponds are equipped with earthen dams on the western sides of the features, and that impacts to the dams should be avoided. Regarding the more southerly pond, RSA-AAA-1 would likely require a structure to be placed near the berm at the point of inflection where the route alternative turns to the north, while RSA-AAA-2 would allow for that structure to be placed further to the north. Regarding the northern pond near Highway 42, Dairyland could place the structures to avoid the berm, but some tree clearing would be required where trees along the berm are located within the permanent easement.

The Group 1 alternatives would cross three intermittent streams as identified by MDNR, none of which are classified as Public Waters. The Proposed Route would cross two intermittent streams, also not classified as Public Waters. The alternatives would cross more regions prone to karst and more rusty patched bumblebee low potential zones because of their increased length. Otherwise, the environmental impacts of the Proposed Route and the Group 1 alternatives are similar.

Dairyland finds that RSA-AAA-2 would better meet the intent of these alternatives to locate the Project along existing property lines/field rows and avoid the placement of structures within agricultural fields, as compared to RSA-AAA-1. In addition, RSA-AAA-2 can be improved using an alternative alignment designed by Dairyland as shown on Figure 2, referred to as RSA-AAA-2 As Modified. This alignment modification is within the route widths of each studied RSA. It further minimizes agricultural impacts and impacts on the southerly pond (including the pond's earthen berm, open water area, and the trees and wetlands surrounding the pond) by aligning the transmission line further from the pond, and to allow for placement of fewer poles within active agricultural areas. It would also minimize the amount of tree clearing over the pond as compared to RSA-AAA-1 and RSA-AAA-2.

B. Group 2

Dairyland understands that the Group 2 alternatives were proposed to avoid the residences and dairy operations present along this section of U.S. Hwy 42.

Group 2 consists of six alternatives in total. Of these six, RSA-B, RSA-C, and RSA-D have generally similar start and end points and total lengths (See Figure 3). The remaining three – RSA-EAA-1, RSA-EAA-2, and RSA-F have the same starting point as the first three, but ending points further to the north, and thus a longer total length (see Figure 4).

Table 2 compares the environmental, engineering, and human impacts of RSA-B, RSA-C, and RSA-D as compared to the corresponding sections of the Proposed Route.

Table 2. Comparison of Human and Environmental Features Crossed by the Proposed Route and Group 2 Route Alternatives ^a

Resource / Characteristic	Proposed Route	RSA-B	RSA-C	RSA-D
Length (Miles) ^b	1.3/1.4	1.6	1.7	2.0
Percent Collocated ^c	89%	52%	64%	64%
Cost	\$2,232,226	\$2,307,547	\$2,410,256	\$2,903,263
Land Use Features				
Residences within 200 feet of centerline	0	0	0	0
Parcels (No. Crossed)	4/5 ^d	4	3	5
U.S. Highway 61 (Great River Road) – Scenic Byway (No. of Crossings)	0	0	0	0
Snowmobile Trails (No. Crossed)	0	0	0	0
MDNR-Administered Wildlife Management Area (WMA) Land (Miles Crossed)	0	0	0	0
MDNR-Administered State Forest Land (Miles Crossed)	0	0	0	0
MDNR Scientific Natural Areas (Miles Crossed)	0	0	0	0
MDNR State Forest Easements (Miles Crossed)	0	0	0	0
MDNR WMA Easements (Miles Crossed)	0	0	0	0
U.S. Fish and Wildlife Service (USFWS) Wildlife Refuge (Miles Crossed)	0	0	0	0
U.S. Army Corps of Engineers Land (Miles Crossed)	0	0	0	0
The Nature Conservancy Easement (Miles Crossed)	0	0	0	0
MDNR / USFS Forest Legacy Program, Forest Stewardship Easement (Miles Crossed)	0	0	0	0

DPC Ex. ____, Williams Direct, Schedule B

Resource / Characteristic	Proposed Route	RSA-B	RSA-C	RSA-D
Geologic Features				
Regions Prone to Karst (Miles Crossed)	1.4	1.6	1.7	2.0
Surface Water Features				
National Wetlands Inventory (Miles Crossed)	0	0	0	0
MDNR Rivers and Streams (No. Crossed)	1	2	3	3
MDNR Lakes and Reservoirs (Miles Crossed)	0	0	0	0
MDNR Shallow Lakes (Miles Crossed)	0	0	0	0
MDNR Public Water Basin/Wetlands (Miles Crossed)	0	0	0	0
Impaired Streams (No. Crossed)	0	0	0	0
Floodplains (Miles Crossed)	0	0	0	0
Trout Streams (No. Crossed)	0	0	0	0
MDNR Public Water Watercourses (No. Crossed)	0	0	0	0
Proximity to Designated Calcareous Fen (Distance from in Miles)	>5	>5	>5	>5
Rare and Sensitive Resources				
Rusty Patch Bumblebee Low Potential Zones (Miles Crossed)	1.4	1.6	1.7	2.0
Rusty Patch Bumblebee High Potential Zones (Miles Crossed)	0	0	0	0
Important Bird Area (Miles Crossed)	0	0	0	0
Minnesota Biological Survey Sites of Biodiversity Significance with Good, High or Outstanding Ranking (Miles Crossed)	0	0	0	0
MDNR Native Prairies (Miles Crossed)	0	0	0	0
Minnesota Native Plant Communities with S1, S2, or S3 ranking (Miles Crossed)	0	0	0	0
Notes: ^a To provide a reasonable comparison between the Proposed Route and Route Alternatives, resource impacts were assessed based on “miles crossed” by the Proposed Alignment or Route Alternatives. ^b When compared to RSA-C, the Proposed Route is 1.3 miles long. When compared to RSA-B and RSA-D, the Proposed Route is 1.4 miles long. ^c Collocation is defined as any utility, road or trail located within 200 feet either side of the centerline based on the proposed clearing width. ^d When compared to RSA-C, the Proposed Route crosses 4 parcels. When compared to RSA-B and RSA-D, the Proposed Route crosses five parcels.				

As shown in Table 2, these alternatives are approximately 0.2 to 0.6 mile longer than the Proposed Route because they depart from the Highway 42 corridor and travel northerly before turning east to reconnect to the Proposed Route. This additional length would result in up to approximately \$670,000 of additional Project costs. They are also approximately 25-37% less collocated than the Proposed Route, due to their departure from the Highway 42 corridor. The Proposed Route crosses the same number of parcels as RSA-D, but one more than RSA-B and RSA-C.

The Proposed Route would cross one intermittent stream which is not classified as a MDNR Public Waters. RSA-B would cross two intermittent streams, and RSA-C and RSA-D would cross three intermittent streams. The alternatives would cross more regions prone to karst and more rusty patched bumblebee low potential zones because of their increased length. Otherwise, the environmental impacts of the Proposed Route and these route alternatives are similar. Table 3 compares the environmental, engineering, and human impacts of RSA-EAA-1, RSA-EAA-2, and RSA-F as compared to the corresponding sections of the Proposed Route.

Table 3. Comparison of Human and Environmental Features Crossed by the Proposed Route and Group 3 Route Alternatives ^a

Resource / Characteristic	Proposed Route	RSA-EAA-1	RSA-EAA-2	RSA-F
Length (Miles)	2.1	2.5	2.5	2.8
Percent Collocated ^b	92%	50%	47%	60%
Cost	\$3,320,950	\$3,498,980	\$3,594,843	\$3,724,942
Land Use Features				
Residences within 200 feet of centerline	0	0	0	2
Parcels (No. Crossed)	9	8	8	9
U.S. Highway 61 (Great River Road) – Scenic Byway (No. of Crossings)	0	0	0	0
Snowmobile Trails (No. Crossed)	0	0	0	0
MDNR-Administered Wildlife Management Area (WMA) Land (Miles Crossed)	0	0	0	0
MDNR-Administered State Forest Land (Miles Crossed)	0	0	0	0
MDNR Scientific Natural Areas (Miles Crossed)	0	0	0	0
MDNR State Forest Easements (Miles Crossed)	0	0	0	0
MDNR WMA Easements (Miles Crossed)	0	0	0	0
U.S. Fish and Wildlife Service (USFWS) Wildlife Refuge (Miles Crossed)	0	0	0	0
U.S. Army Corps of Engineers Land (Miles Crossed)	0	0	0	0

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Resource / Characteristic	Proposed Route	RSA-EAA-1	RSA-EAA-2	RSA-F
The Nature Conservancy Easement (Miles Crossed)	0	0	0	0
MDNR / USFS Forest Legacy Program, Forest Stewardship Easement (Miles Crossed)	0	0	0	0
Geologic Features				
Regions Prone to Karst (Miles Crossed)	2.1	2.5	2.5	2.8
Surface Water Features				
National Wetlands Inventory (Miles Crossed)	0	0	0	0
MDNR Rivers and Streams (No. Crossed)	2	4	4	5
MDNR Lakes and Reservoirs (Miles Crossed)	0	0	0	0
MDNR Shallow Lakes (Miles Crossed)	0	0	0	0
MDNR Public Water Basin/Wetlands (Miles Crossed)	0	0	0	0
Impaired Streams (No. Crossed)	0	0	0	0
Floodplains (Miles Crossed)	0	0	0	0
Trout Streams (No. Crossed)	0	0	0	0
MDNR Public Water Watercourses (No. Crossed)	0	0	0	0
Proximity to Designated Calcareous Fen (Distance from in Miles)	>5	>5	>5	>5
Rare and Sensitive Resources				
Rusty Patch Bumblebee Low Potential Zones (Miles Crossed)	2.1	2.5	2.5	2.8
Rusty Patch Bumblebee High Potential Zones (Miles Crossed)	0	0	0	0
Important Bird Area (Miles Crossed)	0	0	0	0
Minnesota Biological Survey Sites of Biodiversity Significance with Good, High or Outstanding Ranking (Miles Crossed)	0	0	0	0
MDNR Native Prairies (Miles Crossed)	0	0	0	0
Minnesota Native Plant Communities with S1, S2, or S3 ranking (Miles Crossed)	0	0	0	0
Notes: ^a To provide a reasonable comparison between the Proposed Route and Route Alternatives, resource impacts were assessed based on “miles crossed” by the Proposed Alignment or Route Alternatives. ^b Collocation is defined as any utility, road or trail located within 200 feet either side of the centerline based on the proposed clearing width.				

As shown in Table 3, these alternatives are approximately 0.4 to 0.7 mile longer than the Proposed Route because they depart from the Highway 42 corridor and travel northerly before turning east to reconnect to the Proposed Route. This additional length would result in up to approximately \$400,000 in additional Project costs. They are also approximately 32-45% less collocated than the Proposed Route, due to their departure from the Highway 42 corridor. The Proposed Route crosses the same number of parcels as RSA-F, but one more than RSA-EAA-1 and RSA-EAA-2. Notably, no homes are within 200 feet of the Proposed Route or RSA-EAA-1 and RSA-EAA-2, but two homes are within 200 feet of RSA-F, both along County Road 14.

The Proposed Route would cross two intermittent streams which are not classified as MDNR Public Waters. RSA-EAA-1 and RSA-EAA-2 would cross two more intermittent streams and RSA-F would cross three more intermittent streams. The alternatives would cross more regions prone to karst and more rusty patched bumblebee low potential zones because of their increased length. Otherwise, the environmental impacts of the Proposed Route and the Group 3 alternatives are similar.

Dairyland has conducted additional landowner outreach and engineering analysis regarding the Group 2 alternatives. The alternative RSA-B is most amenable to affected landowners as it is furthest from the residence and dairy operation located to the south along County Highway 14 and the home located to the north. Both RSA-C and RSA-D are closer to this home (see Figure 3). RSA-D crosses a forested area, open water pond, and wetland, all of which are avoided by RSA-B and RSA-C. RSA-EAA-1 and RSA-EAA-2 and RSA-F are longer and come closer to a dairy operation along County Highway 14 that has not been included in the routing efforts to date.

C. Group 3

Dairyland understands that the Group 3 alternatives were proposed to move the transmission line further from a landowner's dairy operations.

Table 4 compares the environmental, engineering, and human impacts of the alternatives as compared to the corresponding section of the Proposed Route. Figure 5 depicts the alternatives and Proposed Route relative to the environmental resources presented below.

Table 4. Comparison of Human and Environmental Features Crossed by the Proposed Route and Group 4 Route Alternatives ^a

Resource / Characteristic	Proposed Route	RSA-GAA-1	RSA-GAA-2
Length (Miles)	1.1	1.1	1.2
Percent Collocated ^b	100%	0%	0%
Cost	\$1,684,441	\$1,520,105	\$1,800,845
Land Use Features			
Residences within 200 feet of centerline	0	0	0
Parcels (No. Crossed)	4	5	6
U.S. Highway 61 (Great River Road) – Scenic Byway (No. of Crossings)	0	0	0

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Resource / Characteristic	Proposed Route	RSA-GAA-1	RSA-GAA-2
Snowmobile Trails (No. Crossed)	0	0	0
MDNR-Administered Wildlife Management Area (WMA) Land (Miles Crossed)	0	0	0
MDNR-Administered State Forest Land (Miles Crossed)	0.0	0.0	0.3
MDNR Scientific Natural Areas (Miles Crossed)	0.0	0.0	0.0
MDNR State Forest Easements (Miles Crossed)	0.0	0.0	0.0
MDNR WMA Easements (Miles Crossed)	0	0	0
U.S. Fish and Wildlife Service (USFWS) Wildlife Refuge (Miles Crossed)	0	0	0
U.S. Army Corps of Engineers Land (Miles Crossed)	0	0	0
The Nature Conservancy Easement (Miles Crossed)	0	0	0
MDNR / USFS Forest Legacy Program, Forest Stewardship Easement (Miles Crossed)	0	0	0
Geologic Features			
Regions Prone to Karst (Miles Crossed)	1.1	1.1	1.1
Surface Water Features			
National Wetlands Inventory (Miles Crossed)	0	0	0
MDNR Rivers and Streams (No. Crossed)	0	1	1
MDNR Lakes and Reservoirs (Miles Crossed)	0	0	0
MDNR Shallow Lakes (Miles Crossed)	0	0	0
MDNR Public Water Basin/Wetlands (Miles Crossed)	0	0	0
Impaired Streams (No. Crossed)	0	0	0
Floodplains (Miles Crossed)	0	0	0
Trout Streams (No. Crossed)	0	0	0
MDNR Public Water Watercourses (No. Crossed)	0	0	0
Proximity to Designated Calcareous Fen (Distance from in Miles)	2.8	2.8	2.8

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Resource / Characteristic	Proposed Route	RSA-GAA-1	RSA-GAA-2
Rare and Sensitive Resources			
Rusty Patch Bumblebee Low Potential Zones (Miles Crossed)	1.1	1.1	1.2
Rusty Patch Bumblebee High Potential Zones (Miles Crossed)	0	0	0
Important Bird Area (Miles Crossed)	0	0	0
Minnesota Biological Survey Sites of Biodiversity Significance with Good, High or Outstanding Ranking (Miles Crossed)	0	0.4	0.6
MDNR Native Prairies (Miles Crossed)	0	0	0
Minnesota Native Plant Communities with S1, S2, or S3 ranking (Miles Crossed)	0	0	0
Notes: ^a To provide a reasonable comparison between the Proposed Route and Route Alternatives, resource impacts were assessed based on “miles crossed” by the Proposed Alignment or Route Alternatives. ^b Collocation is defined as any utility, road or trail located within 200 feet either side of the centerline based on the proposed clearing width.			

As shown in Table 4, the Group 3 alternatives are generally the same length as the Proposed Route. However, they are entirely greenfield routes, whereas the Proposed Route is entirely collocated with Highway 42. RSA-GAA-1 crosses one more parcel than the Proposed Route, and RSA-GAA-2 crosses two more parcels. RSA-GAA-1 would cost approximately \$160,000 less than the Proposed Route, while RSA-GAA-2 would cost approximately \$116,000 more.

Notably, RSA-GAA-2 crosses a parcel owned and administered by the MDNR as part of the Richard J. Dorer Memorial Hardwood State Forest for approximately 0.3 mile (see Figure 5). This area is entirely wooded, with no existing corridors along the alternative. An unimproved trail is visible on aerial photography, located generally in the vicinity of the crossing. The MDNR would need to issue Dairyland a License to Cross Public Lands to permit this crossing. RSA-GAA-1 is located outside of the MDNR parcel on private land, but on land equally as wooded and not collocated with an existing right-of-way.

The Proposed Route would cross no waterbodies in this area, but RSA-GAA-1 and RSA-GAA-2 would cross one intermittent stream within the wooded area noted above, on private land. All routes would cross the same miles of land in regions prone to karst, the same miles of land within a rusty patched bumblebee low potential zone and be within 2.8 miles of a designated calcareous fen. RSA-GAA-1 and RSA-GAA-2 would cross a Minnesota Biological Survey Site of Biodiversity Significance for 0.4 mile and 0.6 mile, respectively (see Figure 5). The Proposed Route avoids such areas. This site is associated with the heavily wooded area discussed above and is known as the Snake Creek Bluffs South site. It has a biodiversity significance rating ranging from Below to Moderate.

Dairyland's Proposed Route east of State Highway 42 and the dairy operation to the west of the highway was proposed to move the transmission line further from the dairy operation as well as avoid clearing the row of trees along the eastern road right-of-way. This route seeks to best balance a desire to collocate with existing rights-of-way, avoid creation of new utility corridors in greenfield areas, and avoid clearing in forested areas, some of which are within a State Forest and designated as a Site of Biodiversity Significance by the MDNR.

Conclusion

Based on Dairyland's analysis of the potential impacts of the accepted route alternatives and the Commission's routing criteria, Dairyland requests the Administrative Law Judge recommend, and the Commission accept, the following findings regarding the accepted route alternatives for the Wabasha Relocation Project:

- Regarding the Group 1 Alternatives, Dairyland finds that the Proposed Route best balances the Commission's routing criteria by minimizing length, cost, and number of landowners impacted, and maximizing co-location with existing rights-of-way. It has a greater percentage of collocation than the alternatives and avoids more water resources. However, should the Commission elect to accept one of the route alternatives, Dairyland finds that RSA-AAA-2 is preferable to RSA-AAA-1 as it better follows section lines and minimizes impacts on the southerly pond and associated wetland and trees. Then, Dairyland's proposed RSA-AAA-2 As Modified is preferable to EERA's RSA-AAA-2, as it improves RSA-AAA-2, further minimizing impacts to agricultural operations by minimizing the number of structures needing to be placed in open fields.
- Regarding the Group 2 Alternatives, Dairyland finds that the Proposed Route fares best by minimizing length, cost, and maximizing co-locating with existing rights-of-way when compared to all other alternatives. However, Dairyland supports the Commission's acceptance of alternative RSA-B as compared to the other alternatives in Group 2, as it has the support of affected landowners, is the shortest alternative under consideration, crosses the fewest waterbodies, and crosses fewer parcels than the other alternatives, while achieving the stated goal on minimizing impacts to dairy operations and residences along Highway 42.
- Regarding the Group 3 Alternatives, Dairyland finds that the Proposed Route fares best as compared to both alternatives. The Proposed Route was designed to maximize collocation with Highway 42 while providing additional distance from the dairy operation on the west side of the highway. Both alternatives would result in new greenfield corridors through heavily wooded areas, some within a MDNR State Forest. In addition, these alternatives are located partially within a MDNR Site of Biodiversity Significance.

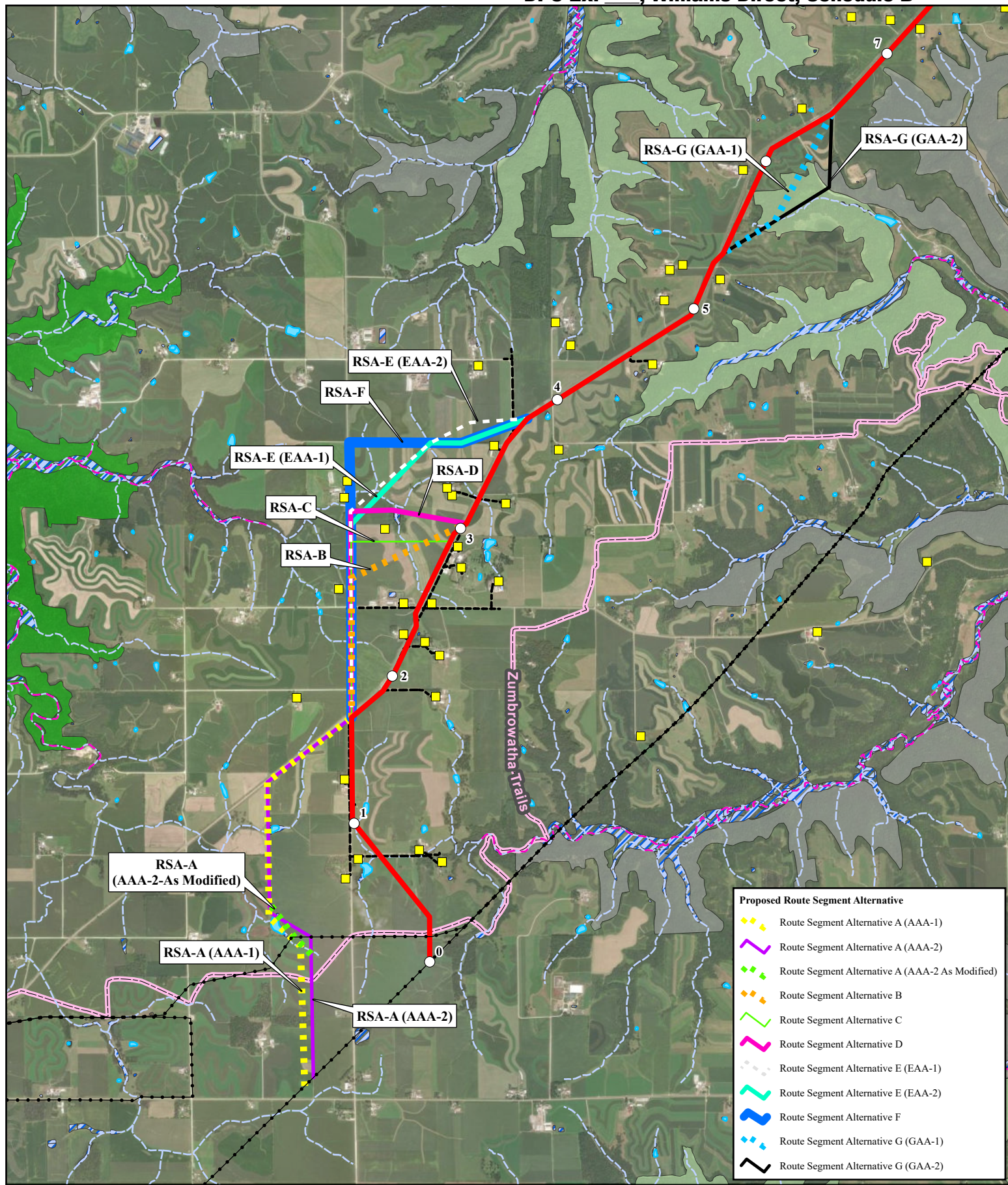


Figure 1
Alternative Analysis
Wabasha Relocation Project
 Dairyland Power Cooperative
 Wabasha County, Minnesota

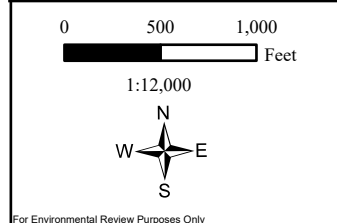
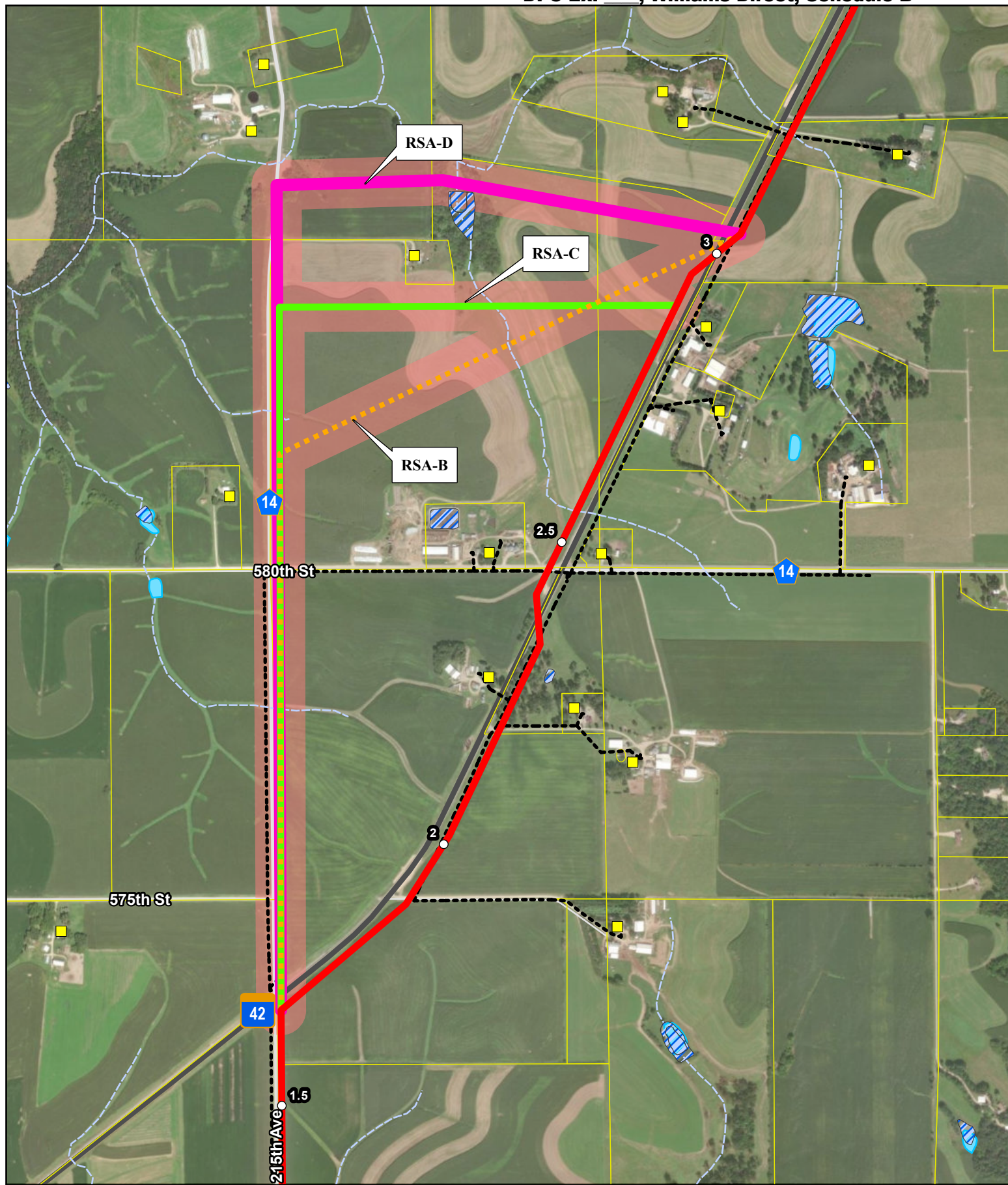


Figure 3
Alternatives Analysis:
RSA-B, RSA-C, and RSA-D
Wabasha Relocation Project
Dairyland Power Cooperative
Wabasha County, Minnesota

- Milepost
- Route Segment Alternative B
- Route Segment Alternative C
- Route Segment Alternative D
- Proposed 161-kV Transmission Line
- Route Segment Alternative Route Width
- Existing Distribution Line
- MDNR River or Stream
- MDNR Lake, Pond or Reservoir
- NWI Wetland
- Parcel
- Residence

