STATE OF MINNESOTA

OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE ROUTE
PERMIT APPLICATION FOR
CAPX2020

SURREBUTTAL TESTIMONY OF

JEFFREY S. BROBERG

On Behalf of

INTERVENOR

ORONOCO TOWNSHIP

June 3, 2011

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME.

A. My name is Jeffrey S. Broberg.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN THIS PROCEEDING?

A. Yes. I provided rebuttal testimony on behalf of Intervenor Oronoco Township.

Q. HAVE YOU REVIEWED THE DIRECT AND REBUTTAL TESTIMONIES OF OTHERS IN THIS PROCEEDING?

A. Yes, I have.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. I am providing surrebuttal testimony to respond to the rebuttal testimony provided by North Route Group witnesses, Suzanne Rohlfing and Stephen Hackman, and by Applicant's witnesses, Tom Hillstrom and Grant Stevenson.

Q. WHAT EXHIBITS ARE ATTACHED TO YOUR SURREBUTTAL TESTIMONY?

A. **Exhibit 1**: Route Permit Application; Figure 5.1-2: Alma Crossing.

Exhibit 2: CapX2020 River Crossing Exhibit.

Exhibit 3: Summary Tables of Archaeological and Historical sites within one-half Mile.

II. NORTH ROUTE GROUP

Q. WHAT CONCERNS DO YOU HAVE REGARDING THE POSSIBILITY OF A ZUMBRO RIVER DAM BREACH ON THE DRILLED PIER CONCRETE FOUNDATIONS NEEDED AT THE ALTERNATIVE ROUTE?

A. None. As pointed out by the North Route Group, the Zumbro River Dam is deemed a "high hazard dam" that has the potential to fail and temporarily flood downstream as indicated by the Lake Zumbro Dam Emergency Inundation Map Probable Maximum Flooding ("PMF") Failure Scenario, as provided in **Exhibit 2**. This worst-case PMF Failure Scenario was used to determine the maximum number of transmission line structures that would be required to span the floodplain at the Alternative Route based on a 1,000-foot span width between structures, as indicated by the Applicant as the maximum span distance. Based on our assessment provided in **Exhibit 3**, we conclude the maximum number of structures located within the floodplain at the Alternative Route crossing would be three.

In the DEIS and the Route Permit Application, the Applicant has indicated it intends to cross 1.4 miles of the Mississippi River floodplain at the Kellogg/Alma crossing less than 2.5 miles downstream of the Alma Lock and Dam on the Mississippi River. (See **Exhibit 1**.) The Alma crossing is at a distance that is 27 times greater than crossing the Zumbro River floodplain at the Alternative Route (2,000 feet) just downstream of the Zumbro River Dam. (See **Exhibit 2**.) Similarly, the proposed Mississippi River crossing at Kellogg/Alma is located approximately 2.45 miles downstream of a dam that extends across the Mississippi River. Therefore, both of these

river/floodplain crossings would be located downstream of dams that have the potential to fail. According to the Federal Emergency Management Agency ("FEMA") and the 2007 National Inventory of Dams, there are 80,000 dams in the United States, of which one third pose a "high" or "significant" hazard to life and property if failure occurs. As such, the concrete pier foundation design at the Alternative Route would be constructed to the same standards that would be employed for crossing the Mississippi River floodplain at the Kellogg/Alma crossing.

Q. MS. ROHLFING AND MR. HACKMAN CONTEND ARCHEOLOGICAL AND HISTORICAL SITES SHOULD BE CONSIDERED WHEN SELECTING THE MODIFIED PREFERRED ROUTE, THE ALTERNATIVE ROUTE, OR THE ROUTE OPTION AS THE FINAL ROUTE. DO YOU AGREE WITH THIS STATEMENT?

A. Yes. According to the DEIS, the Applicant indicates the total number of archaeological and historical sites within one-half mile of the Modified Preferred Route (3P Route), Alternative Route (3A Route) and the Route Option (3P-Zumbro-N) is 21, 20, and 17, respectively. A copy of the archeological and historical summary tables as included in the DEIS is provided in **Exhibit 3**. Combined, the overall impact to archaeological and historic sites will be greatest along the Modified Preferred Route (3P Route).

Q. MS. ROHLFING AND MR. HACKMAN CONTEND MANY ARCHEOLOGICAL AND HISTORICAL SITES ARE NOT REPORTED IN THE DEIS. DO YOU AGREE WITH THIS STATEMENT?

A. No. If archeological and historical sites are present, they should have been documented by the State Archeologist or through the State Historic and Preservation Office ("SHPO") databases. The information provided by Ms. Rohlfing and Mr. Hackman is only an opinion and is not supported by evidence from Minnesota authorities.

Q. MS. ROHLFING AND MR. HACKMAN CONTEND THAT SELECTION OF THE ALTERNATIVE ROUTE WILL HAVE A SIGNIFICANT IMPACT ON RECREATION, SPECIFICALLY TO SMALLMOUTH BASS FISHING DOWNSTREAM OF THE ZUMBRO RIVER DAM. DO YOU AGREE WITH THIS STATEMENT?

A. No. During May and August 2007, the Minnesota Department of Natural Resources ("DNR") Division of Fish and Wildlife conducted an open water creel survey of Lake Zumbro and a 24-mile Lower Zumbro River Creel Survey ("Survey"). This Survey was attached to my rebuttal testimony dated May 20, 2011 as Exhibit 5. The purpose of the Survey was to provide additional information regarding the special regulations and fishery on the Zumbro River and to provide baseline data on the open water angling effort, catch, and harvest for Lake Zumbro. For reference purposes the Alternative Route and the Route Option both cross the Zumbro River, whereas the Modified Preferred Route crosses Lake Zumbro.

Table 3 at page 15 and Table 14 at page 20 of the Survey show the following creel season fishing pressure estimates:

Table 1: Summary of Creel Season Fishing Pressure Estimates by Site for the Zumbro River and Lake Zumbro, MN.

Location in DNR Study	Route Alternative Location	Angler hours	Standard Error
Plunge Pool (Zumbro River)	Route Option	1948	364
Green Bridge (Zumbro River)	Alternative Route	1673	355
Lake Zumbro	Modified Preferred Route	Boat Anglers 25,158 Bank anglers 5,312 **All anglers 30,470**	2,735 710 3,005

(See Broberg Rebuttal, Ex. 5, pp. 15, 20 (May 20, 2011).)

We acknowledge the Plunge Pool (Route Option) and the Green Bridge (Alternative Route) of the Zumbro River have both been designated as "catch and release" reaches for smallmouth bass. However, based on data presented in Table 1, the fishing pressure on Lake Zumbro surpasses the fishing pressure of the Zumbro River by a factor of 15:1. Therefore, the Modified Preferred Route will have a larger impact on recreational users through visual and enjoyment impacts.

Table 2 below summarizes the primary and secondary species sought by anglers (%) in the Zumbro River and Lake Zumbro.

Table 2: Primary and Secondary Species Sought by Anglers (%) in the Zumbro River and Lake Zumbro, MN.

Species	Zumbro River		Lake Zumbro	
	Primary	Secondary	Primary	Secondary
Anything	25	None	28	4
Bass	6	None	12	10
Muskie	3	None	<1	0
Sauger	8	None	None	None
Smallmouth bass	52	None	2	1
Sucker	6	None	1	5
Channel Catfish	None	67	1	1
Trout	None	33	None	None
Black Crappie	None	None	19	34
Bluegill	None	None	22	30
Carp	None	None	0	1
Largemouth bass	None	None	1	1
Northern Pike	None	None	2	7
Panfish	None	None	12	6
Walleye	None	None	<1	0

(See id.)

As shown, Lake Zumbro offers many more recreational opportunities for fishing a greater variety of species including bass, crappie, bluegill, channel catfish, carp, largemouth bass, muskie, northern pike, pan fish, smallmouth bass, sucker, and walleye. Comparatively, the species diversity and fishing opportunities are not as abundant on the Zumbro River. In addition, Lake Zumbro also provides many other recreational opportunities including swimming, canoeing, water skiing, and boating. Therefore, the greatest impact to recreational fishing and other recreational opportunities will be realized on the along the Modified Preferred Route.

Q. MS. ROHLFING AND MR. HACKMAN CONTEND THE ALTERNATIVE ROUTE WILL BE MORE IMPACTED IF THE POLICY OF NON-PROLIFERATION IS NOT ADHERED TO AND A NEW TRANSMISSION LINE IS CONSTRUCTED COMPARED TO THE MODIFIED PREFERRED ROUTE. DO YOU AGREE WITH THIS STATEMENT?

A. No. Although the Alternative Route currently does not have an existing bridge or existing distribution line at the proposed Zumbro River crossing, it does have the shorter Zumbro River crossing than the Modified Preferred Route: the Zumbro River crossing on the Alternative Route is 1,000 feet, whereas the Zumbro River crossing on the Modified Preferred Route is 1,500 feet. Accordingly, crossing the Zumbro River on the Alternative Route will have a smaller impact to recreational users, habitats, and humans than the crossing on the Modified Preferred Route

According to Schedule 8, revised on May 19, 2011, of Tom Hillstrom's Direct Testimony, the number of homes impacted within 0-500 feet of the centerline of the transmission line route for the Modified Preferred Route and the Alternative Route is 130 and 22, respectively.

Q. ON PAGES 11-15 OF THE NORTH ROUTE GROUP'S REBUTTAL TESTIMONY, CONCERNS ARE EXPRESSED ABOUT FORESTED LAND AND CLAIMS ARE MADE THAT THE TRANSMISSION LINE'S IMPACTS ON TREES ARE PERMANENT. WHAT ARE THE STANDARDS FOR CONVERTING FORESTED LAND TO NON-FORESTED LAND IN WABASHA COUNTY?

A. Based upon our review of the Wabasha County Zoning Ordinance and discussion with Mr. Floyd Reister, Wabasha County Planning and Zoning Director, show that Wabasha County allows forestry and forest land conversion as a permitted use for all land classifications. Therefore, any person with woods on private property can clear-cut and permanently remove the trees or cut all the trees to convert the forest for other non-forested uses without permits or regulation.

Q. ARE THE NORTH ROUTE GROUP'S CONCERNS LEGITIMATE?

A. No. Any argument that clearing of woods for the transmission line corridor has more impact than any other allowed forest use or forest conversion is false. There is nothing in local or state rules to suggest that sustainable forestry or land management is a standard or a requirement for landowners or for transmission line operators in Wabasha County.

Q. THE NORTH ROUTE GROUP RAISED ISSUES RELATED TO BUILDING AND MAINTAINING TRANSMISSION POLES ON KARST TERRAIN. DO YOU HAVE ANY EXPERIENCE WITH KARST HAZARDS?

A. Yes. I am a Minnesota Licensed Professional Geologist with over 20 years of experience with the identification, mapping, and mitigation of sinkholes and other Karst hazards in southeastern Minnesota.

Q. ARE KARST HAZARDS A CONCERN THAT WOULD FAVOR ONE ROUTE OVER ANOTHER?

A. No. In my experience Karst features occur on all three routes under review and the risks are similar for all of the routes. While the risks are similar, any specific Karst features that could present hazards can be successfully mitigated during construction. There are tens of thousands of transmission, utility, and communication poles and towers on Karst terrain. In my 20 years of experience, there has never been a failure of these types of structures in southeastern Minnesota caused by Karst features.

III. SURREBUTTAL TO APPLICANT'S REBUTTAL TESTIMONY

Q. ON PAGES 5-6 OF HIS REBUTTAL TESTIMONY, MR. HILLSTROM STATED THAT HE HAS "NEVER INTERPRETED [THE ROUTE SELECTION PROCESS] TO REQUIRE A COMPARISON OF THE TAXABLE PROPERTY VALUES." IN YOUR EXPERIENCE, DO MR. HILLSTROM'S STATEMENTS REFLECT THE ROUTE PERMIT DETERMINATION REQUIREMENTS IN MINNESOTA RULE 7850.4100?

A. No. Minnesota Rule 7850.4100 states, "In determining whether to issue a permit for a large electric power generation plant or high voltage transmission line, the commission shall consider the following . . ." and goes on to list 14 specific factors. These factors include the "effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation and public services" and "effects on land-based economics, including, but not limited to, agriculture, forestry, tourism and mining."

Minn. R. 7850.4100(A), (C). Mr. Hillstrom basically admitted that no consideration has been made of taxable land values, which are fundamental to land-based economics and a primary indicator of human settlement. Mr. Hillstrom ignores the rules that explicitly state that the review is "not limited to" the listed factors and then argues that "to my knowledge, [Minnesota Rule 7850.4100 has] never been interpreted to require a comparison of the taxable property values." (Hillstrom Rebuttal, p. 5.) I believe that the rule is clear: the Commission "shall consider . . . effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining." (Minn. R. 7850.4100(A).) The Commission shall consider all pertinent factors, including taxable land values. I believe that Mr. Hillstrom's admission is a de-facto acknowledgment that the Applicant's analysis of land-based economics is incomplete. An evaluation of land values shows that either the Alternative Route or the Route Option, both of which are in Wabasha County, would be preferable to the Modified Preferred Route in terms of future impacts on both human settlement patterns and land based economies. An evaluation of land values is also an important consideration for comparing the costs of acquiring the necessary right-of-way.

Q. THE ROUTE APPLICATION ONLY REVIEWS LAND-BASED ECONOMIES FACTORS OF AGRICULTURE, FORESTRY, AND MINING. IN YOUR UNDERSTANDING OF THE RULES, IS THAT ALL THAT IS REQUIRED?

A. No. Minnesota Rule 7850.4100 requires that the Commission consider all 14 factors "including, but not limited to" the listed criteria. It is the Applicant's responsibility to

provide information to the Commission and it is clear that CapX2020 has not presented information on the full range of pertinent factors as required in the rule.

Q. WHY IS TAXABLE LAND VALUE COMPARISON A VALID MEASURE OF HUMAN SETTLEMENT AND LAND-BASED ECONOMIES?

A. Taxable land values are a function of multiple factors including the needs of the taxing authority (a measure of local investment in infrastructure, schools and local government services), comparable prices from recent land sales, parcel location, size, improvements, productive capacity, highest and best use (determined by land use regulations, land use opportunity and other factors) and market conditions. The taxable land values are a valid measure for comparison between properties or groups of properties along the routes being analyzed because it takes into account multiple factors that are applied consistently by the assessor. In addition, the taxable land values are validated because each landowner has the right and the opportunity to appeal the values, which can be adjusted by the local taxing authorities if deemed appropriate. These two factors assure that the taxable values are consistent and defensible, making this a valuable metric for comparison between the route alternates.

Q. IS THERE ANY JUSTIFICATION TO EXCLUDE AN ANALYSIS OF TAXABLE LAND VALUES?

A. Yes. It is not in the interest of the applicant to show that the Alternative Route is preferable to the Modified Preferred Route. While the taxable property value data is easily accessible, it also clearly shows the difference in land values based on all the factors that go into property assessments. When comparing the routes, we see a defining

difference between the land values. Taxable land value is not only a valid comparison, but it is a valid reason to choose the route with lesser impact on land-based economies.

Q. MR. HILLSTROM NOTED THAT ROUTE SELECTION BASED ON LAND VALUES FAVORS AFFLUENT COUNTIES AND NEIGHBORS AT THE EXPENSE OF LESS AFFLUENT COUNTIES AND NEIGHBORS. WHAT IS YOUR REACTION TO THIS STATEMENT?

A. It is simply a false assumption that any route decision based on land value assessments leads to discrimination against disadvantaged groups. Discrimination against less affluent, disadvantaged, or minority sectors is independent of land values, especially in agriculture production areas like Olmsted and Wabasha Counties where taxable land values are more reflective of factors such as productive capacity, field size, and future development. Therefore, low land value simply is not a measure of poverty or disadvantage. Choosing a route based on land cost is a legitimate choice, especially when land costs, as here, reflect future residential development. It is a misdirection to suggest that routes across lower value land categorically favor the wealthy and discriminate against the disadvantaged.

Q. ON PAGE 6 OF HIS REBUTTAL TESTIMONY, MR. HILLSTROM CITED ORONOCO TOWNSHIP QUESTIONS ABOUT WHY CAPX2020 DID NOT FOLLOW THE STATE OF MINNESOTA'S NON-PROLIFERATION POLICY AND WHY CAPX2020 DID NOT PROPOSE AN ALTERNATIVE TO CO-LOCATE ALONG THE EXISTING 69kV LINE THROUGH MAZEPPA. MR. HILLSTROM COMMENTED THAT THERE WERE THREE REASONS THIS

WAS NOT A "GOOD ROUTING OPPORTUNITY." CAN YOU COMMENT ABOUT HIS REASONING TO REJECT CO-LOCATION AND REJECT THE PRINCIPLE OF NON-PROLIFERATION?

A. The non-proliferation policy, as cited in the Route Permit at Section 2.3.3, references Minn. Stat. § 216E.02, subd. 1 and precedent setting case law (People for Environmental Enlightenment & Responsibility (PEER), Inc. v Minnesota Environmental Quality Council, 266 N.W.2d 858 (Minn. 1978), which call upon the Commission to consider utilization of existing transmission corridors. Until Mr. Hillstrom's current testimony, there has been no evidence that the Applicant gave any consideration to the existing 69kV transmission route cited in Oronoco's DEIS response at page 9 of Attachment A and shown on CapX2020 documents.

Additionally, Mr. Hillstrom's reasoning for rejecting consideration of the non-proliferation policy fails for the following reason:

- Even though the existing line goes through Mazeppa and Zumbro Falls, the right-of-way ("ROW") easements already exist. In the first instance, the ROW easements must be assumed to be safe and protective of the existing landowners. In the second instance, the corridor already restricts new development or structures within the existing ROW. It is only logical to follow the non-proliferation policy to use the existing ROW, especially when compared with acquiring and developing new ROW.
- Even though Mr. Hillstrom cites a relatively high number of existing homes near the existing line, there is no data or analysis to provide a comparison against the proliferation of new routes.

- The connection of this existing 69kV ROW segment to Kellogg would simply continue to follow the 69kV route west, turning south one mile west of Millville along CR23 to the Modified Preferred Route, and would continue to use existing ROW in conformance with Minnesota's non-proliferation policy.

Mr. Hillstrom's testimony effectively chooses the impact on human development factor over the non-proliferation factor along the 69kV ROW. Yet, the Applicant ignores the impact on present and future human development on the Oronoco portion of the Modified Preferred Route.

IV. CONCLUSION

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

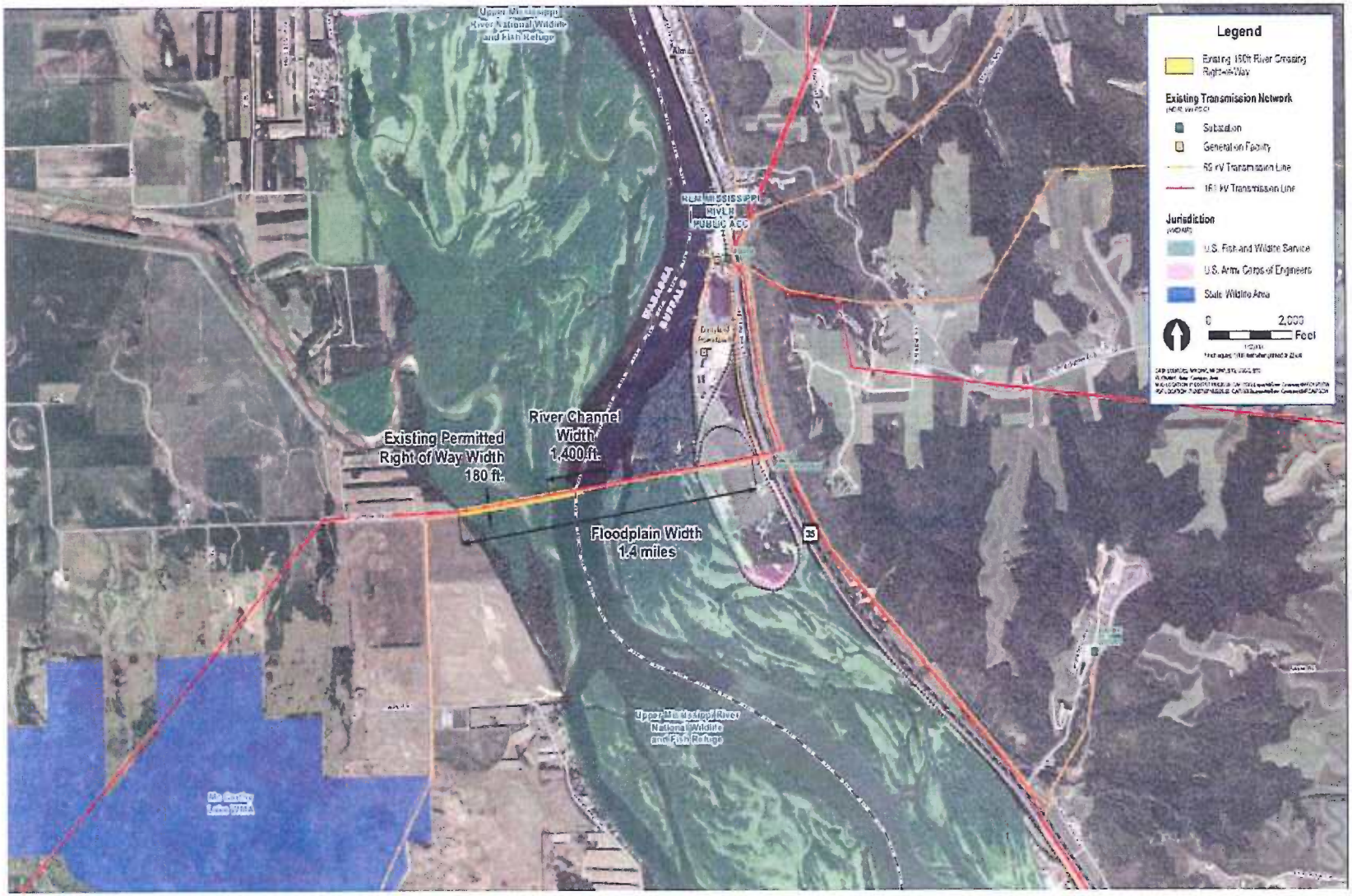

Figure 5.1-2: Alma Crossing


HIGHWAY 60
410TH AVE
617TH ST
380TH AVE
609TH ST
608TH ST
603RD ST
HIGHWAY 63
605TH ST
604TH ST
603RD ST
598TH ST
595TH ST
430TH AVE
DRIVEWAY
415TH AVE
404TH AVE
591ST ST
590TH ST
COUNTY ROAD 70
590TH ST
593RD ST
433RD AVE
585TH ST
COUNTY ROAD 71
390TH AVE
367TH AVE
DRIVEWAY
403RD AVE
COUNTY ROAD 7
COUNTY ROAD 1
575TH ST
421ST AVE
COUNTY ROAD 21
572ND ST
573RD ST
573RD ST
375TH AVE
351ST AVE
342ND AVE
570TH ST
330TH AVE
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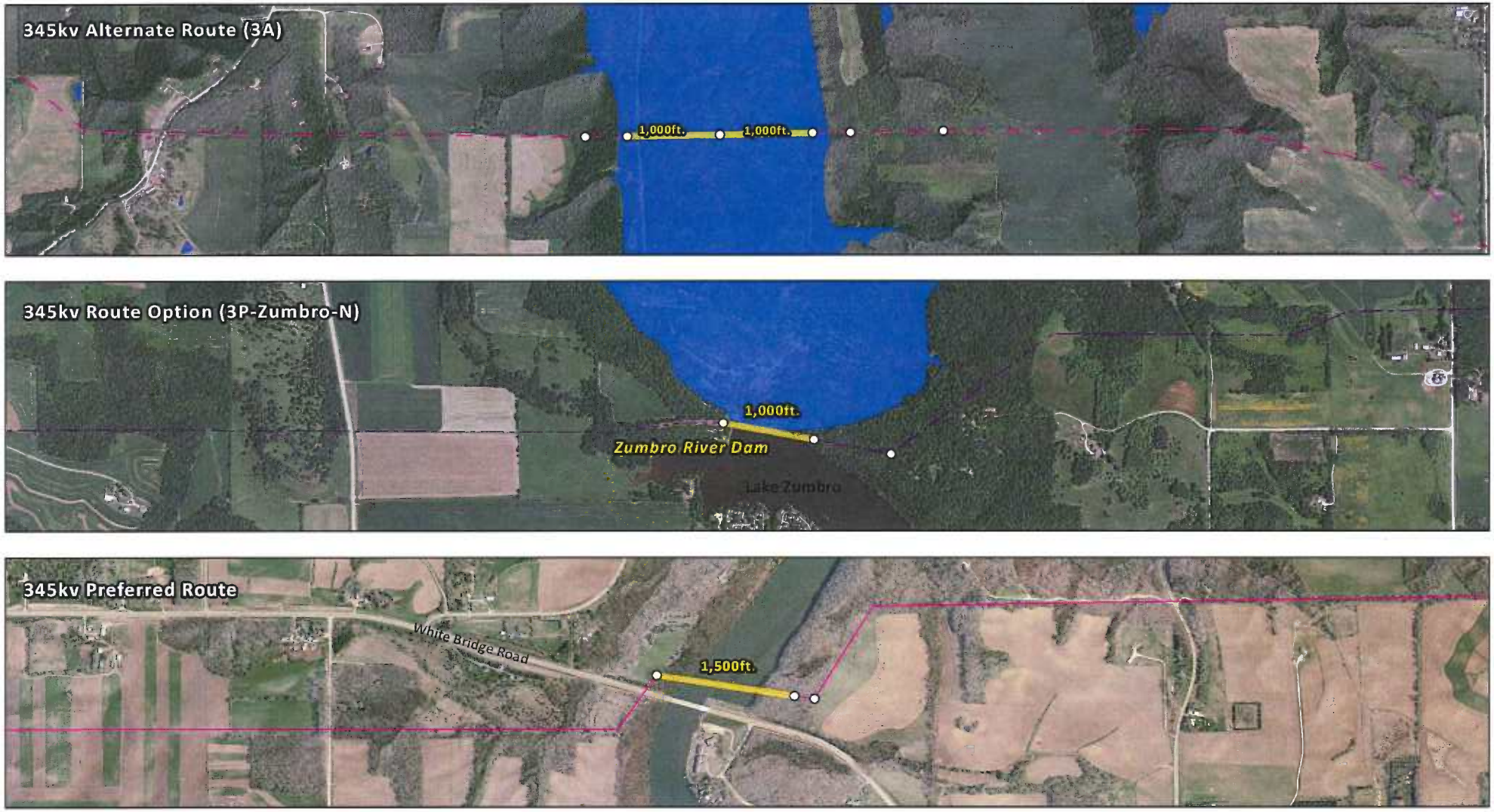
Miles
Lake Zumbro Dam Emergency Inudation Map
Probable Maximum Flooding (PMF) Failure Scenerio
Full Dam Break Only
rpu
we pledge, we deliver
Date: 4/19/2011
Map Location: L:\RPU\GIS\Maps\ZumbroDamBreak\PMFDamBreak11x17.mxd

EXHIBIT 2



CapX2020 River Crossing Exhibit

0 1,000 2,000
Feet

Full Dam Break Scenario

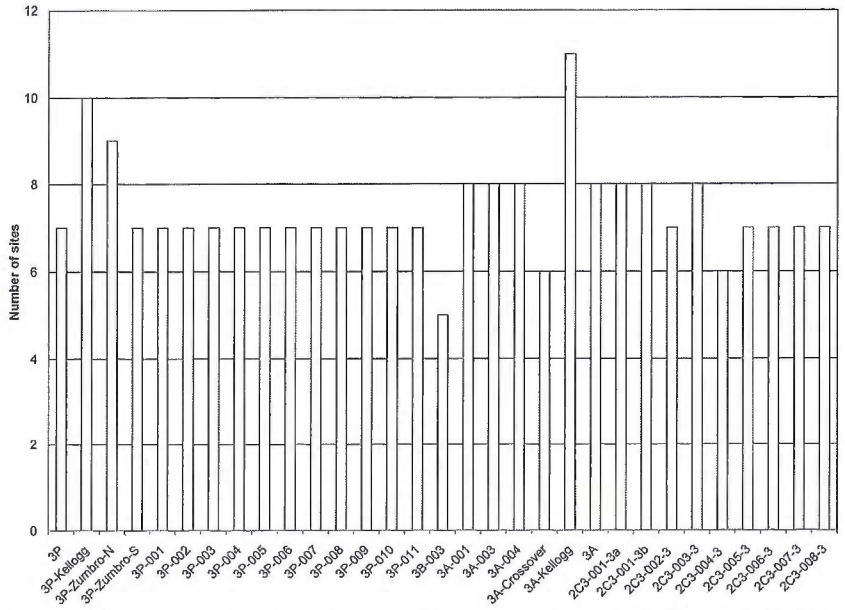
- Potential Pole Locations

CapX2020 Route Options (w/ .25mi Buffer)

- 345kV Preferred Route (3P)
- 345kV Alternative Route (3A)
- 345kV Route Option (3P-Zumbro-N)
- River Crossings

Date: 5/31/2011

Figure 8.3.4.10-1 Number of archaeological sites within one-half mile of each route alternative - Segment 3



*Note, a portion of each of the "C" route alternatives would have a parallel alignment between Segments 2 and 3. Because of this, impacts in these areas are double counted. See Section 8.2.4 for further information on parallel alignments. The calculated impacts for the portions that are double counted are available in Appendix J.

Along most of the A route alternatives, eight archaeological sites have been documented within one mile of the route centerline. One of the sites was listed as a lithic scatter that has been determined as not eligible for listing on the NRHP. Eligibility of the remaining sites has not been determined (MVAC 2008). Two of the A route alternatives, 3A-Kellogg and 3A-Crossover pass near 11 and 6 sites, respectively.

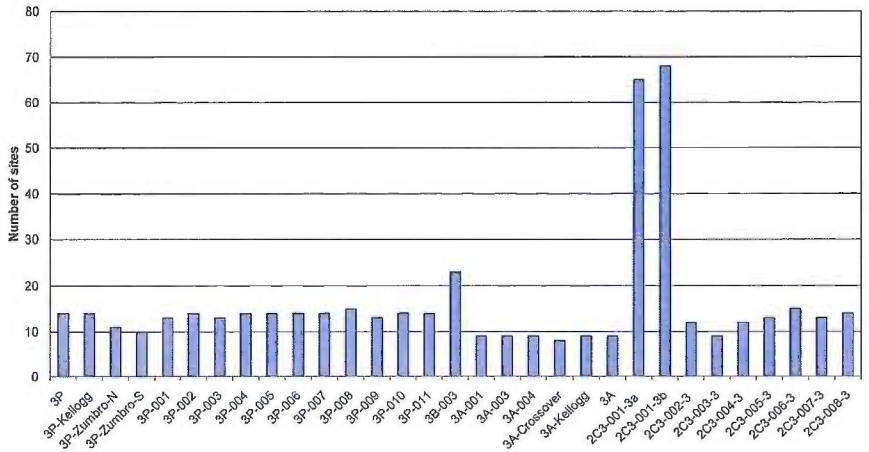
The B and C route alternatives have potential impacts to archaeological sites that range from six to eight sites.

Actual impacts to any archaeological sites will not be known until a route and alignment are selected. However, the applicant would work to design an alignment of the transmission line that would avoid archaeological resources (see the Mitigation discussion below).

Figure 8.3.4.10-3 compares the number of historical architectural sites within one-half mile on either side of the proposed centerline for each route alternative in this segment. The P route alternatives are approximately equivalent in the number of nearby historic sites, potentially affecting 13 to 15 sites. The 3P-Zumbro-N and 3P-Zumbro-S route alternatives would affect up to 11 sites.

The A route alternatives are also approximately equivalent in the number of nearby historic sites, potentially affecting nine sites. Most of the B and C route alternatives would also affect 9 to 15 sites. Two notable exceptions are route alternatives 2C3-001-3a and 2C3-001-3b, which would affect 65 and 68 historic sites, respectively.

Figure 8.3.4.10-2 Number of historic sites within one-half mile of each route alternative - Segment 3



*Note, a portion of each of the "C" route alternatives would have a parallel alignment between Segments 2 and 3. Because of this, impacts in these areas are double counted. See Section 8.2.4 for further information on parallel alignments. The calculated impacts for the portions that are double counted are available in Appendix J.

There are no NRHP sites located within one-half mile of the P or A route alternatives.

Mitigation

Project planning and engineering efforts would strive to avoid any sites within the proposed route width for each alternative. Route alternatives 3A-Crossover and 2C3-004-3 have the fewest archaeological sites potentially within one-half mile of the route centerline. Route alternative 3A-Crossover also has the fewest historical architectural sites potentially within one-half mile of the route centerline. However, the proximity analysis is based on the SHPO TSR information; actual proximity to archaeological and historic sites is not known. Therefore, at this time it is not clear which route would have the fewest actual impacts on archaeological or historical resources or what the magnitude of the impacts would be. Specific mitigation plans cannot be made until a complete NHRP assessment of potentially affected sites has been made.

For cultural resources within the route width, once a route is permitted by the Commission, archaeological investigations would be required to locate resources sites and to develop specific mitigation plans. Mitigation plans could entail compensation for the losses of properties that are eligible for listing on the NRHP. Section 7.10 provides an overview of potential impacts to archaeological and historical resources and outlines general steps that would be taken to mitigate impacts to these resources.

8.3.4.11 Transportation and Public Services—Analysis of Segment Alternatives for North Rochester Substation to Mississippi River

ROW Sharing

Sharing ROW with existing infrastructure satisfies Minnesota's policy of non-proliferation and reduces the additional ROW needed for the transmission line and can minimize impacts to adjacent property (see Section 4.4). In areas where ROW is shared, however, there is the potential for impacts to transportation along the shared corridors. The possible impacts are discussed

EXHIBIT 3