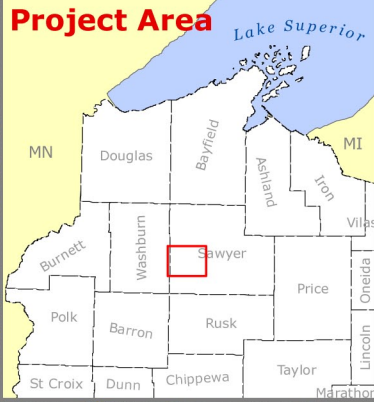
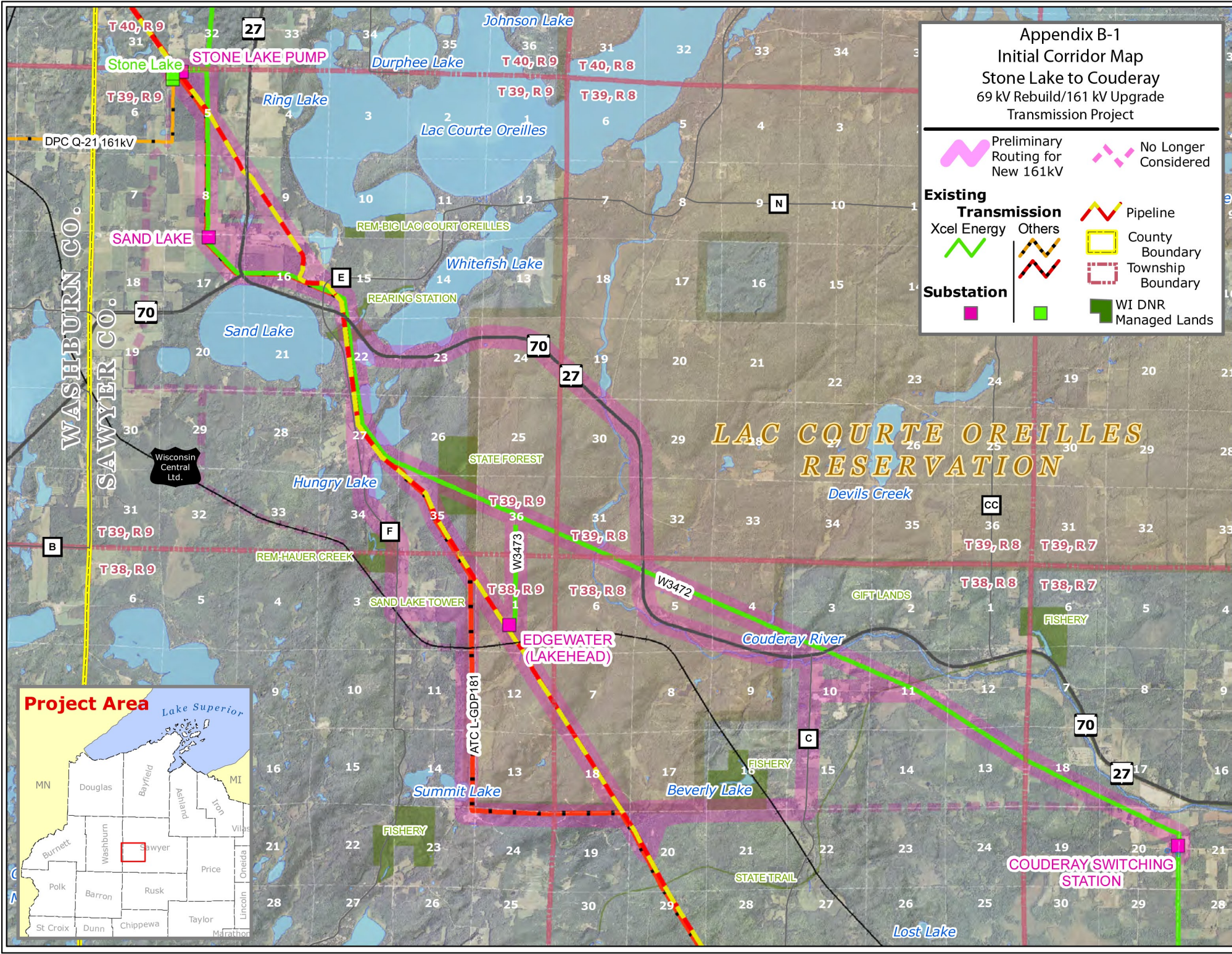
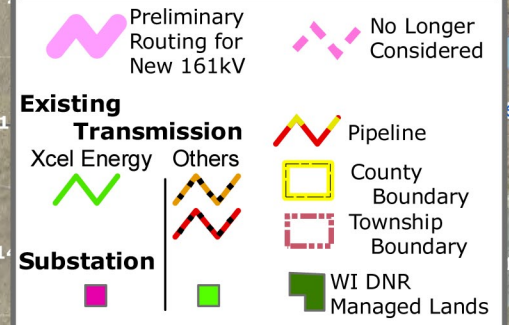


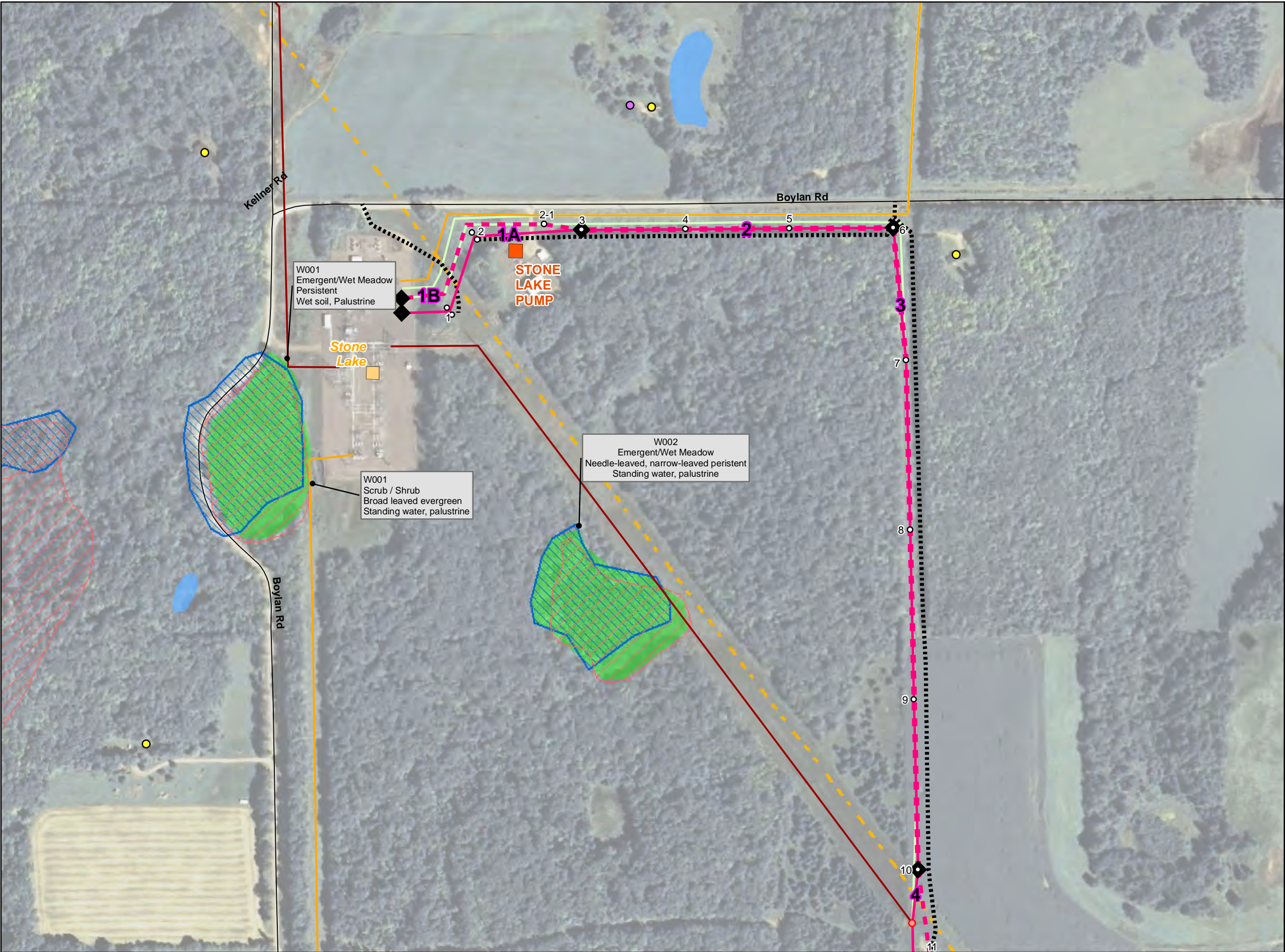
APPENDIX B

Transmission Facility Maps

- B-1 Initial Corridor Map
- B-2 Alternatives Considered but Not Proposed Map
- B-3 Detailed Figures – Environmental Features
 - Preferred Route
 - Alternate Route A
 - Alternate Route B
- B-4 Land Cover Maps
- B-5 USGS Topographic Maps
- B-6 Zoning and Land Use Maps
- B-7 Parcel Boundary and Street Maps
- B-8 Proposed Structure Design Drawings
- B-9 Visual Simulations
- B-10 Special Status Species Report [CONFIDENTIAL]
- B-11 Cultural Resources Report

Appendix B-1 Initial Corridor Map Stone Lake to Couderay 69 kV Rebuild/161 kV Upgrade Transmission Project





Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

Radisson Substation Site

Access Road

Staging Area

Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC

● Existing 345/69 kV Structure

Substation (Xcel)

Substation (Not Xcel)

Residence

Other Structure

Lac Courte Oreilles Reservation

Road

Railroad

Pipeline

Outstanding and Exceptional Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains

0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011

Page 1 of 27



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

Preferred Route 161 kV

Preferred Route 69 kV

Preferred Route 161/69 kV

Route Segment Endpoint

Proposed Transmission Structure

Radisson Substation Site

Access Road

Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

Existing 345/69 kV Structure

Substation (Xcel)

Substation (Not Xcel)

Residence

Other Structure

Lac Courte Oreilles Reservation

Road

Railroad

Pipeline

Outstanding and
Exceptional
Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains

XcelEnergy
RESPONSIBLE BY NATURE™

0400

Feet

↑

N

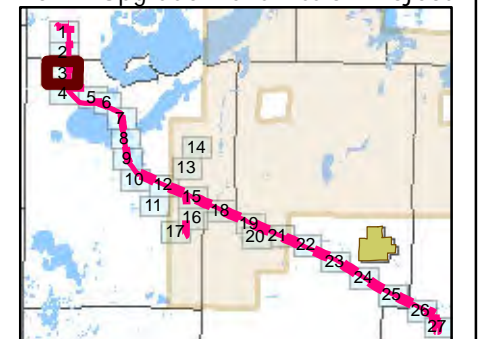
Sources: Wisconsin DNR, US Census, NAIP 2010

Date: 8/29/2011

Page 2 of 27

Path: \\Mspe-gis-file\gisproj\excel\139755\map_docs\vmxd\CPCNB3_Maps_11x17_4800_P.mxd

Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

▬ Access Road

▭ Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

● Existing 345/69 kV Structure

■ Substation (Xcel)

■ Substation (Not Xcel)

● Residence

● Other Structure

▭ Lac Courte Oreilles Reservation

— Road

— Railroad

— Pipeline

Outstanding and
Exceptional
Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

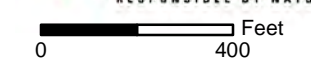
WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

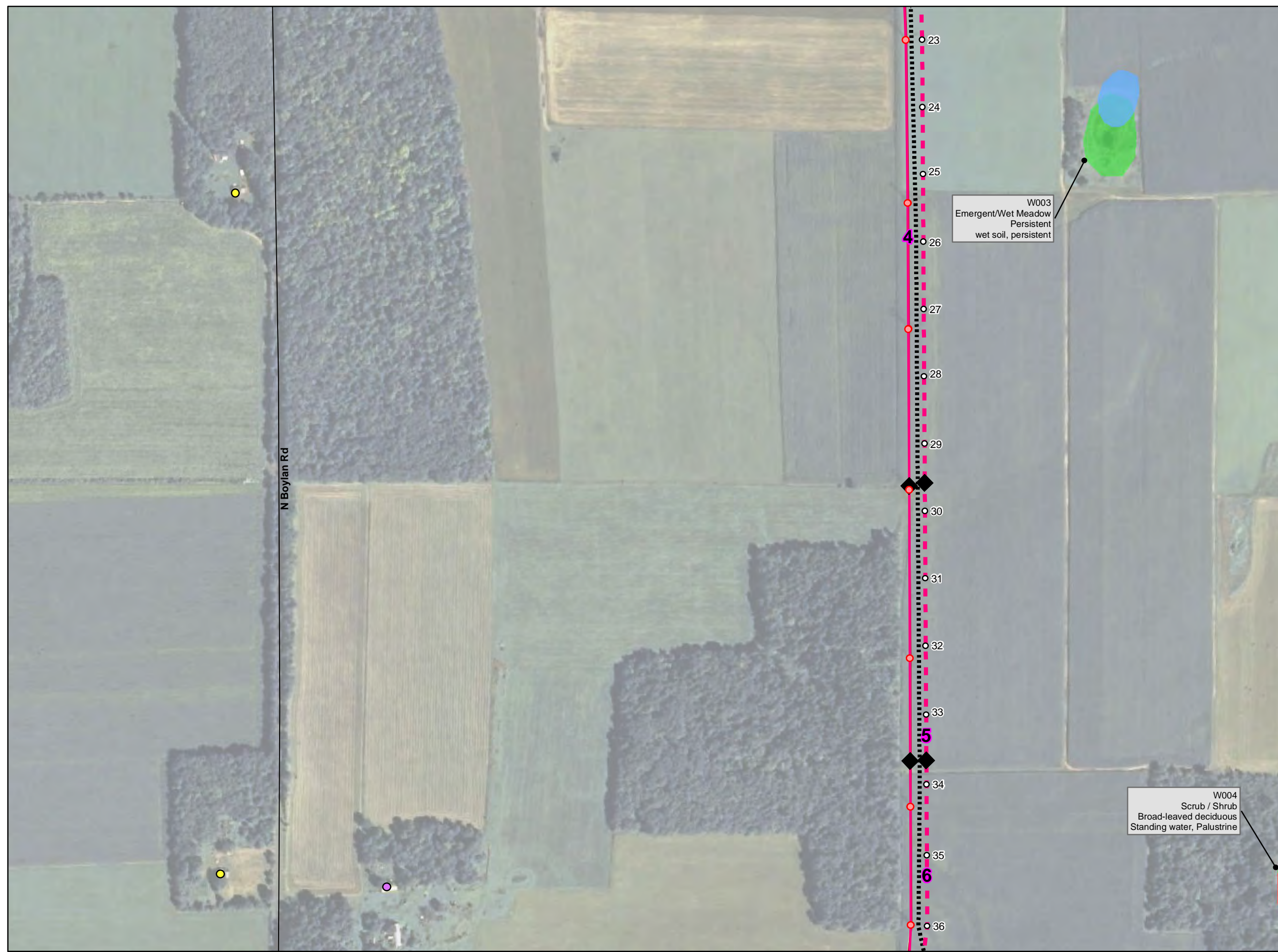
FEMA Floodplains

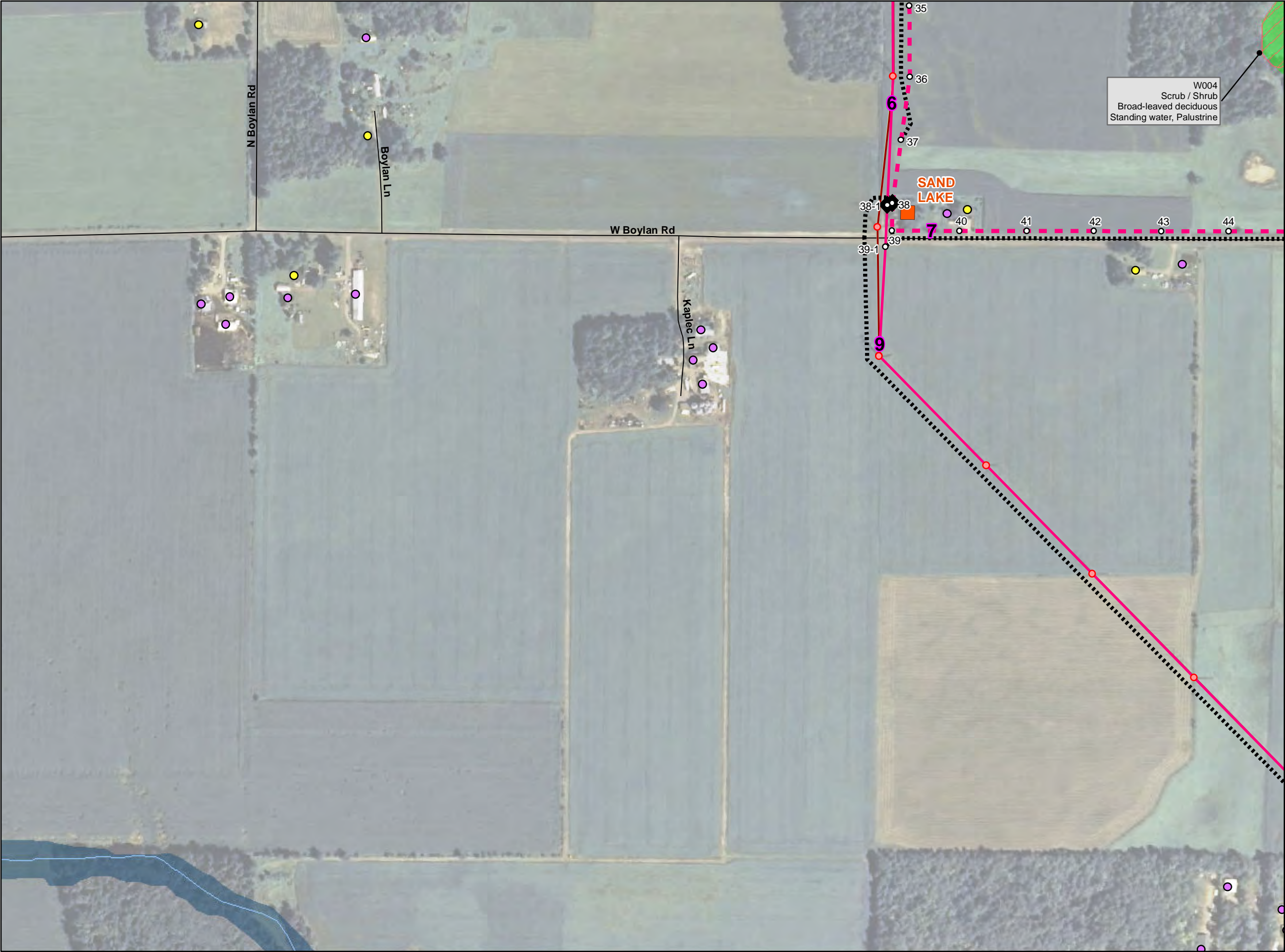


Sources: Wisconsin DNR, US Census, NAIP 2010

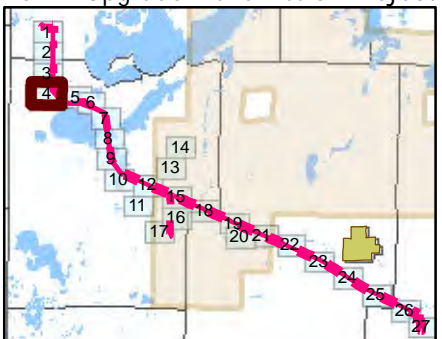
Date: 8/29/2011

Page 3 of 27

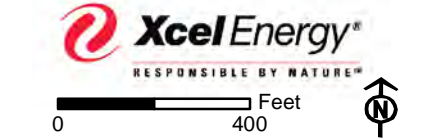




Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



- XX** Route Segment Number
- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
- Route Segment Endpoint**
- Proposed Transmission Structure
- Radisson Substation Site**
- Access Road
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Existing 345/69 kV Structure
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Residence
 - Other Structure
 - Lac Courte Oreilles Reservation
 - Road
 - Railroad
 - Pipeline
 - Outstanding and Exceptional Resource Waters
 - Trout Class Streams
 - Surface Water
 - Streams or Rivers
 - Hydric Soil
 - WWI Wetland
 - Field/Desktop-identified Wetland
 - DNR Managed Lands
 - County Forest
 - FEMA Floodplains





Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

⋯ Access Road

▭ Staging Area

Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC

● Existing 345/69 kV Structure

■ Substation (Xcel)

■ Substation (Not Xcel)

● Residence

● Other Structure

▭ Lac Courte Oreilles Reservation

— Road

— Railroad

— Pipeline

■ Outstanding and
Resource Waters

■ Trout Class Streams

■ Surface Water

■ Streams or Rivers

■ Hydric Soil

■ WWI Wetland

■ Field/Desktop-identified Wetland

■ DNR Managed Lands

■ County Forest

■ FEMA Floodplains

Xcel Energy
RESPONSIBLE BY NATURE™

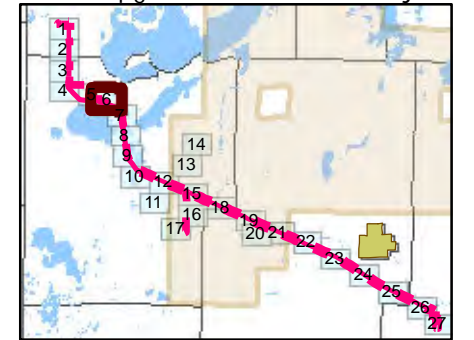
0 400 Feet

↑ N

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011

Page 5 of 27

Appendix B-3 Preferred Route Environmental Features Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project



XX Route Segment Number

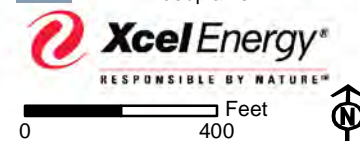
Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

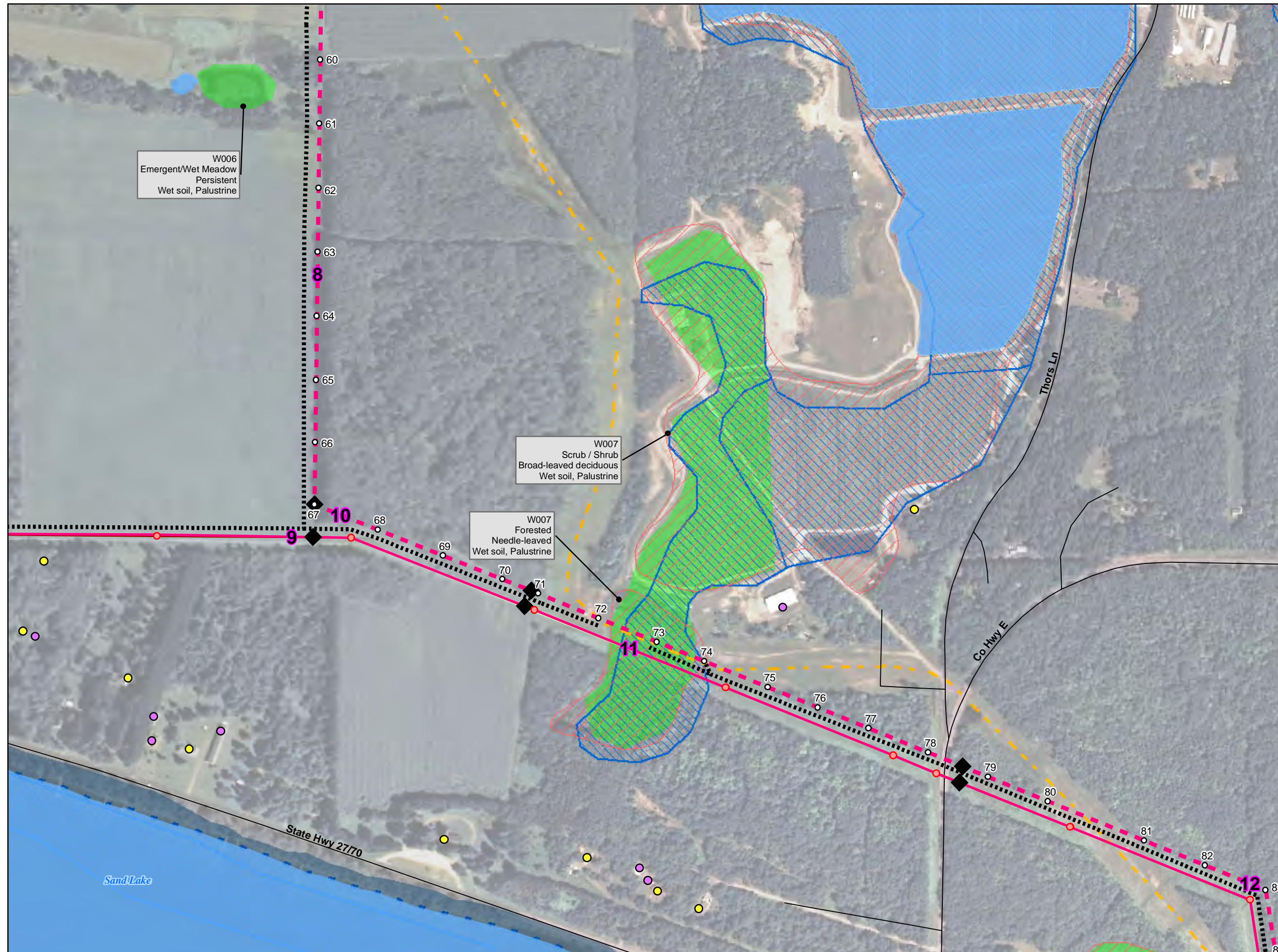
- Route Segment Endpoint
- Proposed Transmission Structure
- Radisson Substation Site
- Access Road
- Staging Area

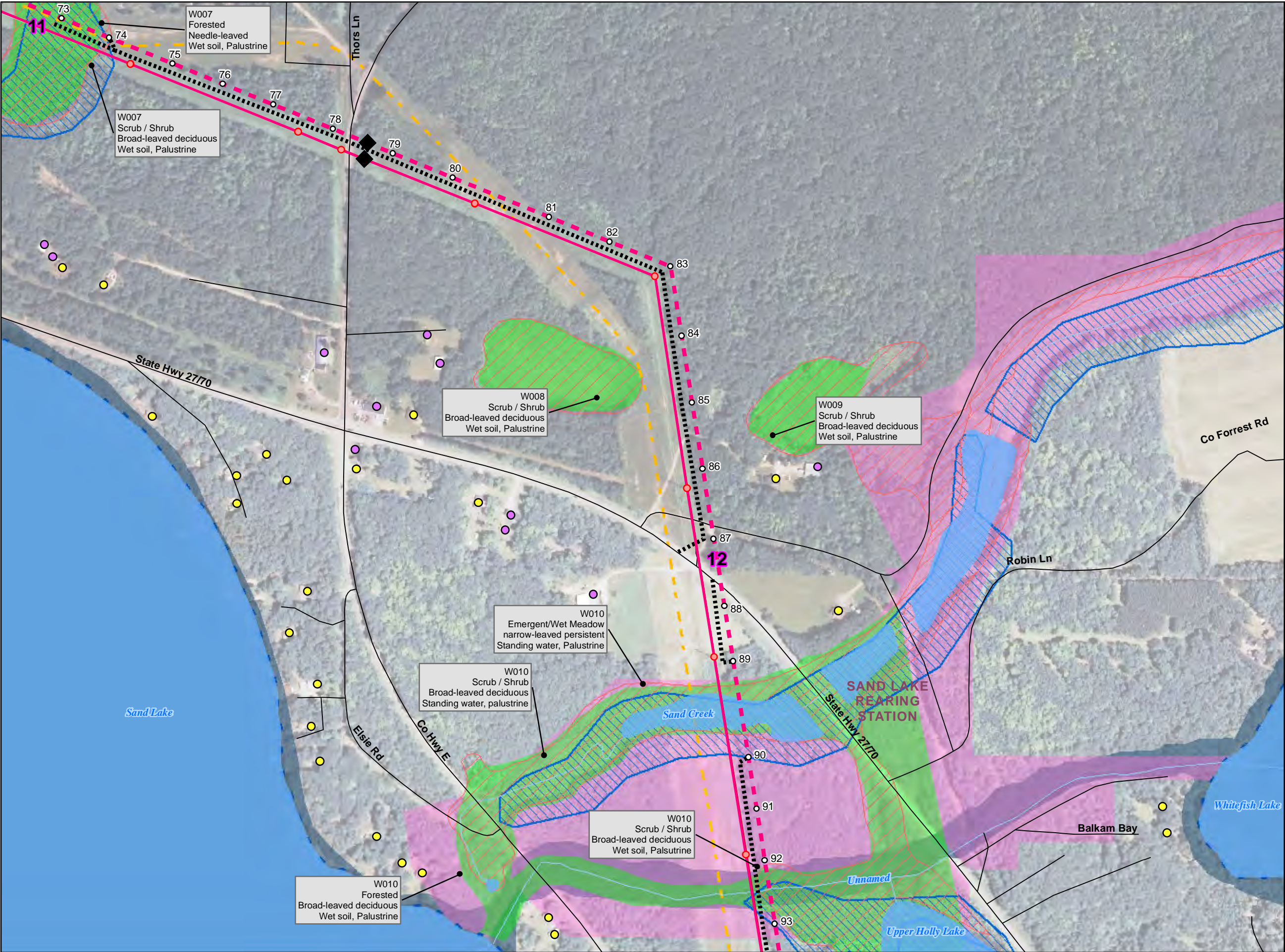
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- Railroad
- Pipeline
- Outstanding and Exceptional Resource Waters
- Trout Class Streams
- Surface Water
- Streams or Rivers
- Hydric Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains



Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011 Page 6 of 27





Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Route Segment Endpoint
- Proposed Transmission Structure
- Radisson Substation Site
- Access Road
- Staging Area

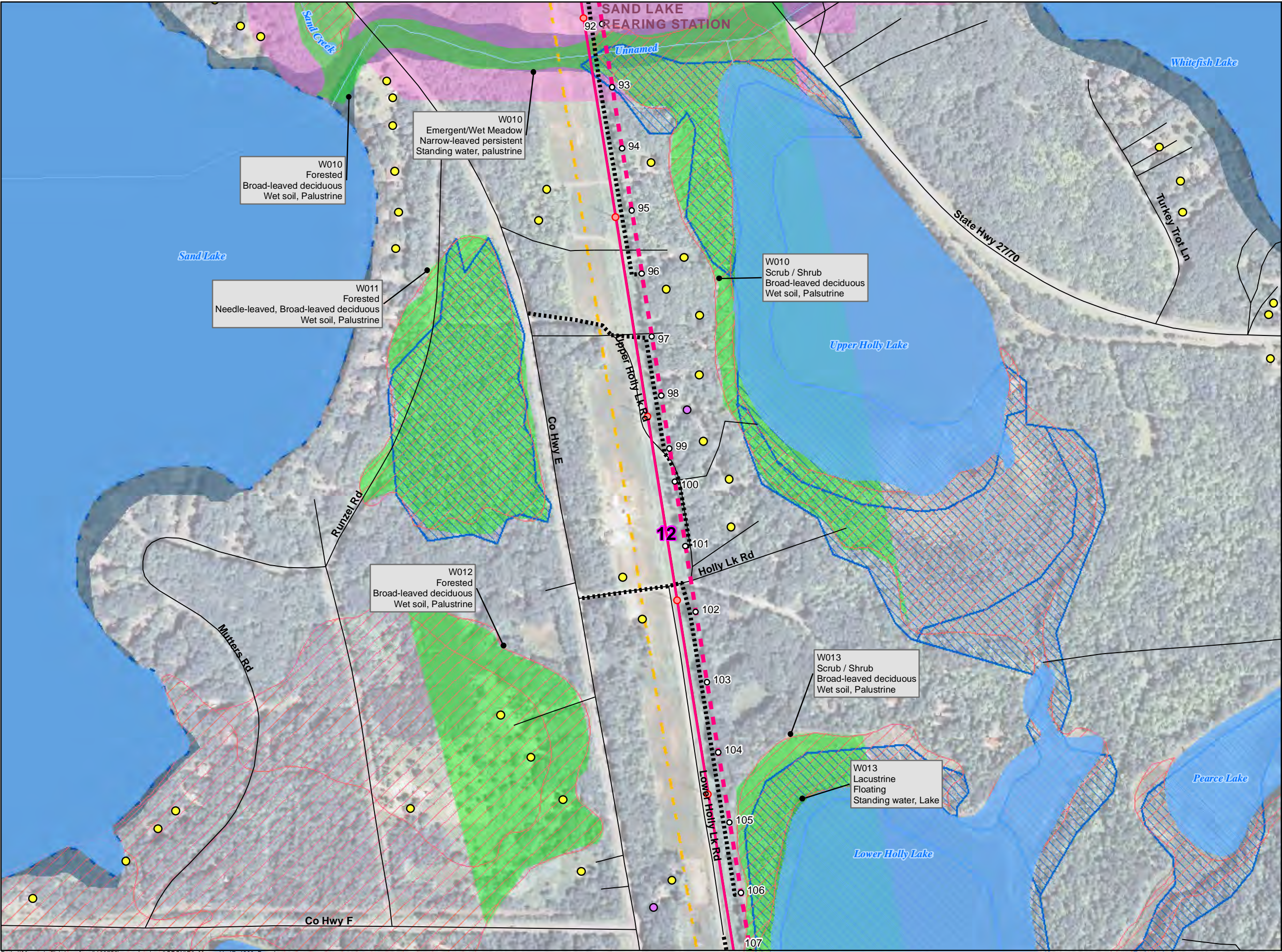
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- Railroad
- Pipeline
- Outstanding and Exceptional Resource Waters
- Trout Class Streams
- Surface Water
- Streams or Rivers
- Hydic Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains

Xcel Energy
RESPONSIBLE BY NATURE™

0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

▬ Access Road

▭ Staging Area

Existing Transmission

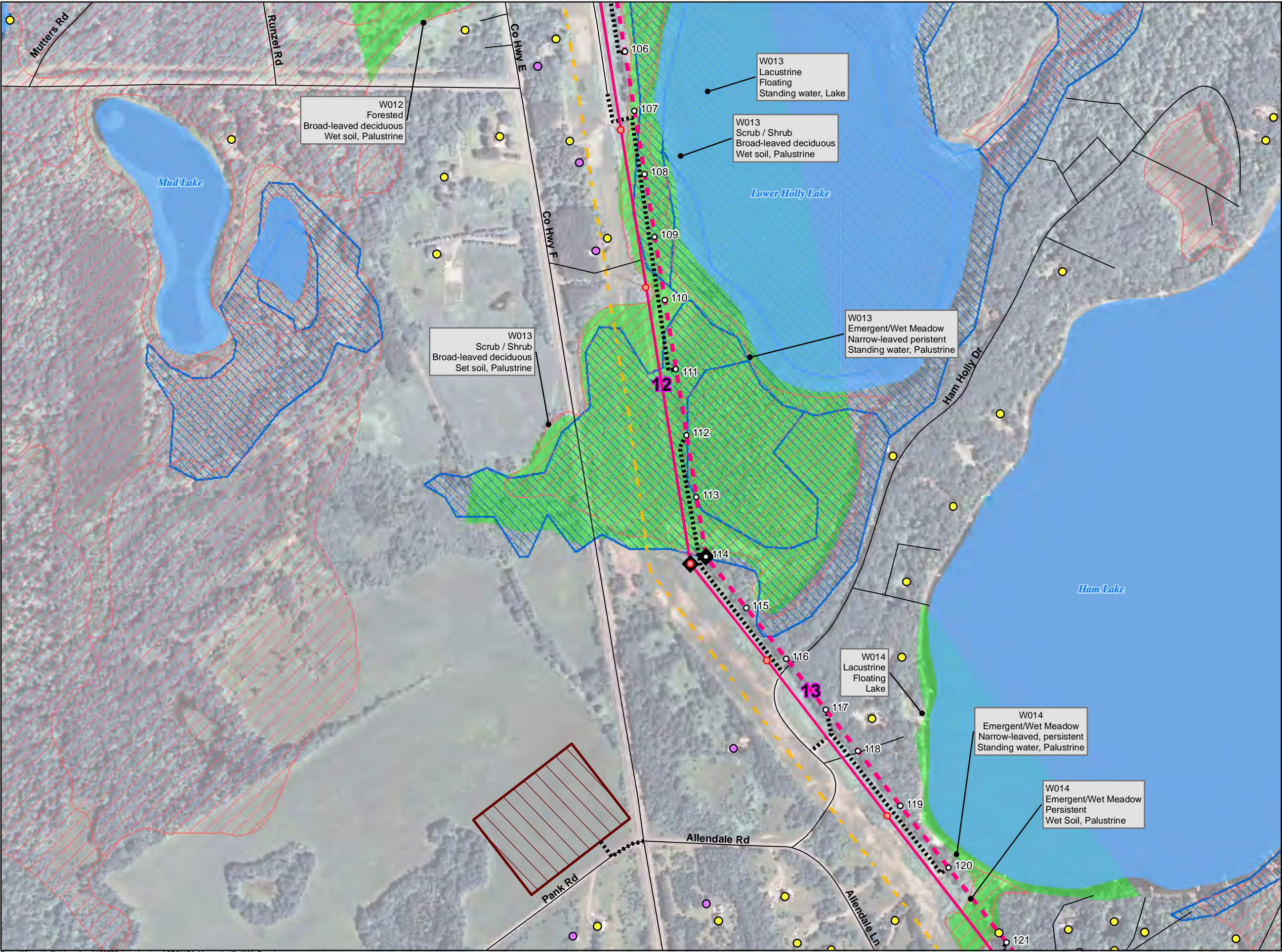
- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- Railroad
- Pipeline
- Outstanding and Exceptional Resource Waters
- Trout Class Streams
- Surface Water
- Streams or Rivers
- Hydric Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains

Xcel Energy
RESPONSIBLE BY NATURE™

0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011

Page 8 of 27



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

▬ Access Road

▭ Staging Area

Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- Railroad
- Pipeline

Outstanding and
Exceptional
Resource Waters

- Trout Class Streams
- Surface Water
- Streams or Rivers
- Hydric Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains

Xcel Energy
RESPONSIBLE BY NATURE™

0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011
Page 9 of 27

Path: \\Mspe-gis-file\gisproj\excel\139755\map_docs\vmxd\CPCN\B3_Maps_11x17_4800_P.mxd



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

▬ Access Road

▭ Staging Area

Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC

● Existing 345/69 kV Structure

■ Substation (Xcel)

■ Substation (Not Xcel)

● Residence

● Other Structure

▭ Lac Courte Oreilles Reservation

▬ Road

▬ Railroad

▬ Pipeline

▬ Outstanding and
Exceptional
Resource Waters

▬ Trout Class Streams

▬ Surface Water

▬ Streams or Rivers

▬ Hydric Soil

▬ WWI Wetland

▬ Field/Desktop-identified Wetland

▬ DNR Managed Lands

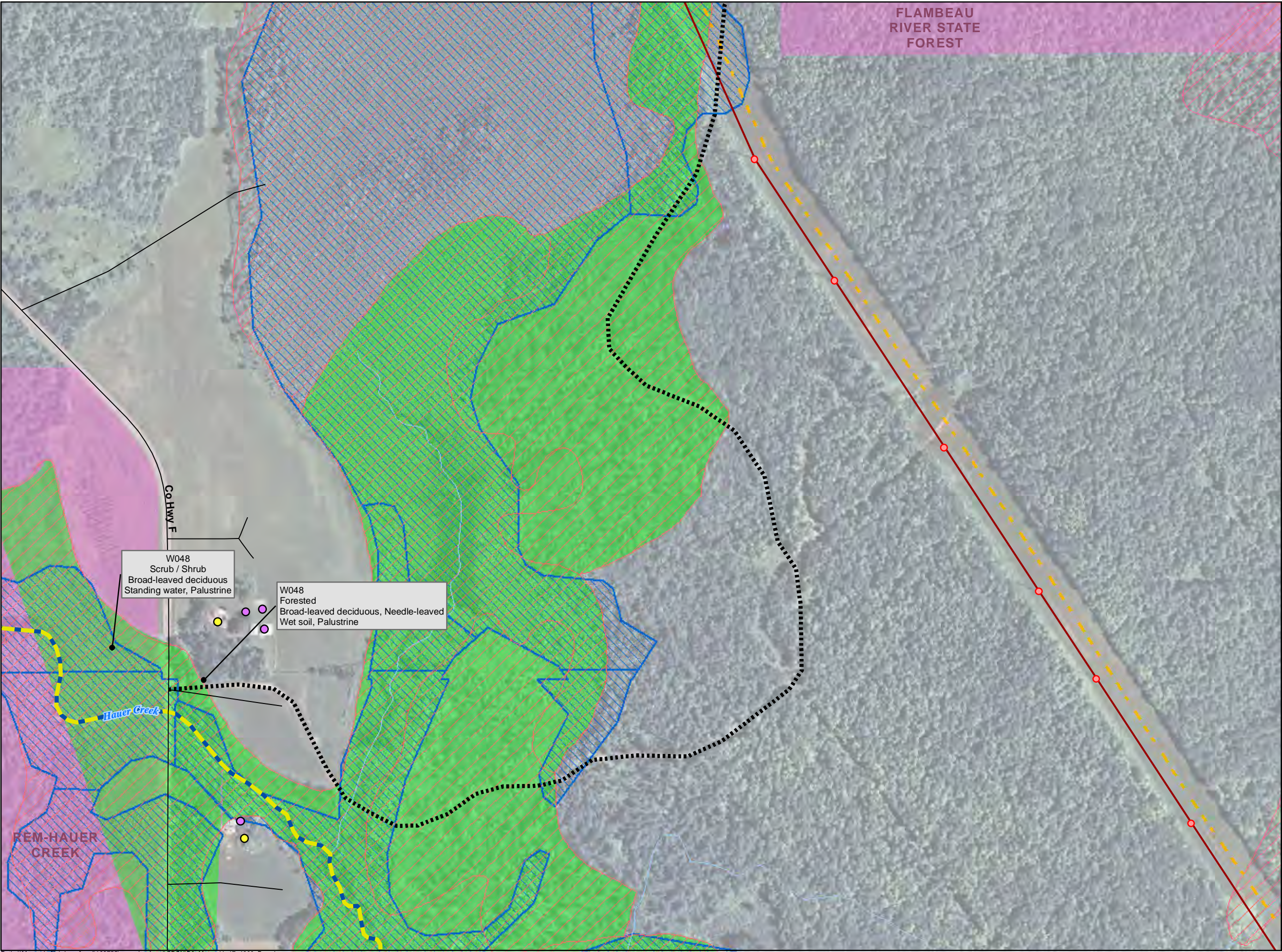
▬ County Forest

▬ FEMA Floodplains

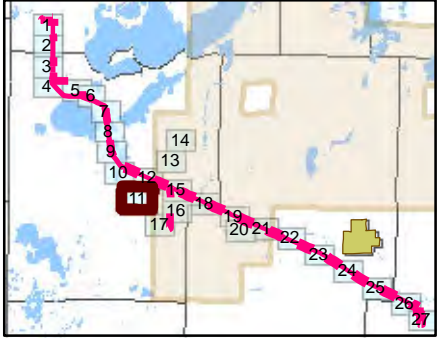
0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011

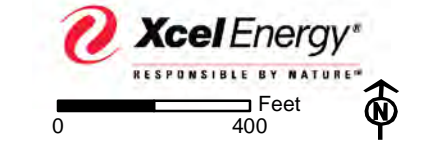
Page 10 of 27

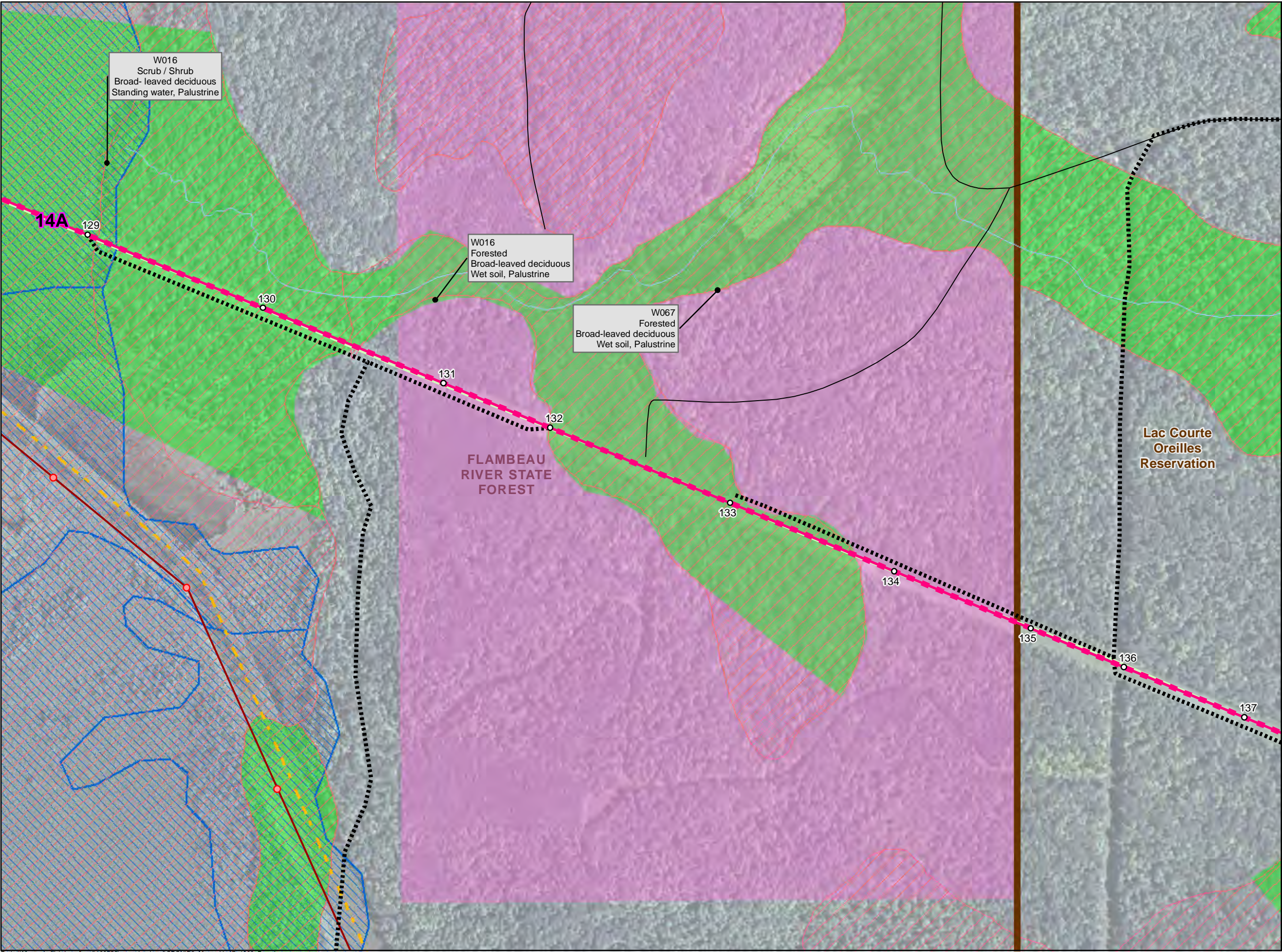


Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



- XX** Route Segment Number
- Route Alternatives**
- Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Route Segment Endpoint
 - Proposed Transmission Structure
 - Radisson Substation Site
 - Access Road
 - Staging Area
- Existing Transmission**
- 69kV AC
 - 161kV AC
 - 345kV AC
 - Existing 345/69 kV Structure
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Residence
 - Other Structure
 - Lac Courte Oreilles Reservation
 - Road
 - Railroad
 - Pipeline
 - Outstanding and Exceptional Resource Waters
 - Trout Class Streams
 - Surface Water
 - Streams or Rivers
 - Hydric Soil
 - WWI Wetland
 - Field/Desktop-identified Wetland
 - DNR Managed Lands
 - County Forest
 - FEMA Floodplains





Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

Preferred Route 161 kV

Preferred Route 69 kV

Preferred Route 161/69 kV

Route Segment Endpoint

Proposed Transmission Structure

Radisson Substation Site

Access Road

Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

Existing 345/69 kV Structure

Substation (Xcel)

Substation (Not Xcel)

Residence

Other Structure

Lac Courte Oreilles Reservation

Road

Railroad

Pipeline

Outstanding and
Exceptional
Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains

0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010

Date: 8/29/2011

Page 12 of 27

Path: \\Mspe-gis-file\gisproj\excel\139755\map_docs\vmxd\CPCN\B3_Maps_11x17_4800_P.mxd

Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

▬ Access Road

▭ Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

● Existing 345/69 kV Structure

■ Substation (Xcel)

■ Substation (Not Xcel)

● Residence

● Other Structure

▭ Lac Courte Oreilles Reservation

— Road

— Railroad

— Pipeline

Outstanding and

Exceptional

Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains



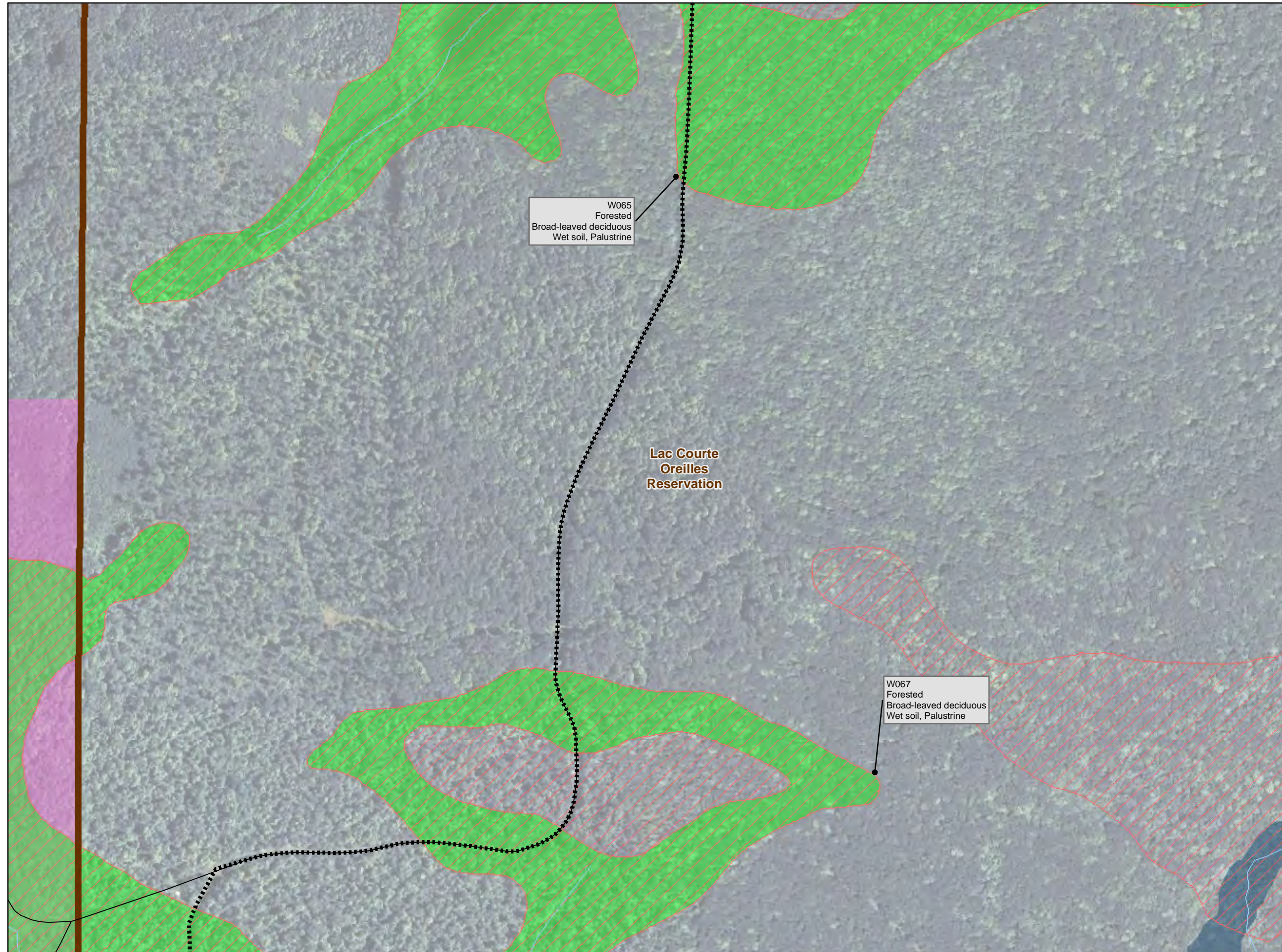
0 400 Feet



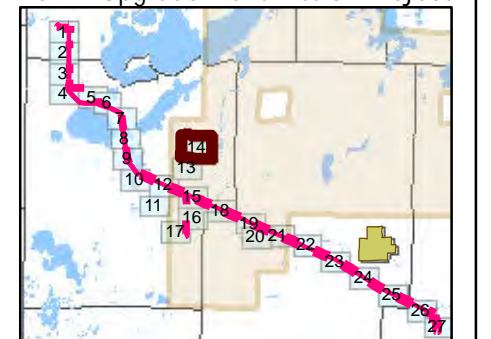
Sources: Wisconsin DNR, US Census, NAIP 2010

Date: 8/29/2011

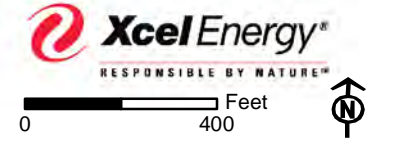
Page 13 of 27



Appendix B-3 Preferred Route Environmental Features Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project



- XX** Route Segment Number
- Route Alternatives**
 - Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
- Route Segment Endpoint
- Proposed Transmission Structure
- Radisson Substation Site
- Access Road
- Staging Area
- Existing Transmission**
 - 69kV AC
 - 161kV AC
 - 345kV AC
 - Existing 345/69 kV Structure
 - Substation (Xcel)
 - Substation (Not Xcel)
 - Residence
 - Other Structure
 - Lac Courte Oreilles Reservation
 - Road
 - Railroad
 - Pipeline
 - Outstanding and Exceptional Resource Waters
 - Trout Class Streams
 - Surface Water
 - Streams or Rivers
 - Hydric Soil
 - WWI Wetland
 - Field/Desktop-identified Wetland
 - DNR Managed Lands
 - County Forest
 - FEMA Floodplains



Appendix B-3 Preferred Route Environmental Features Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project



XX Route Segment Number

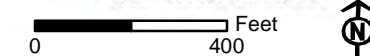
Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

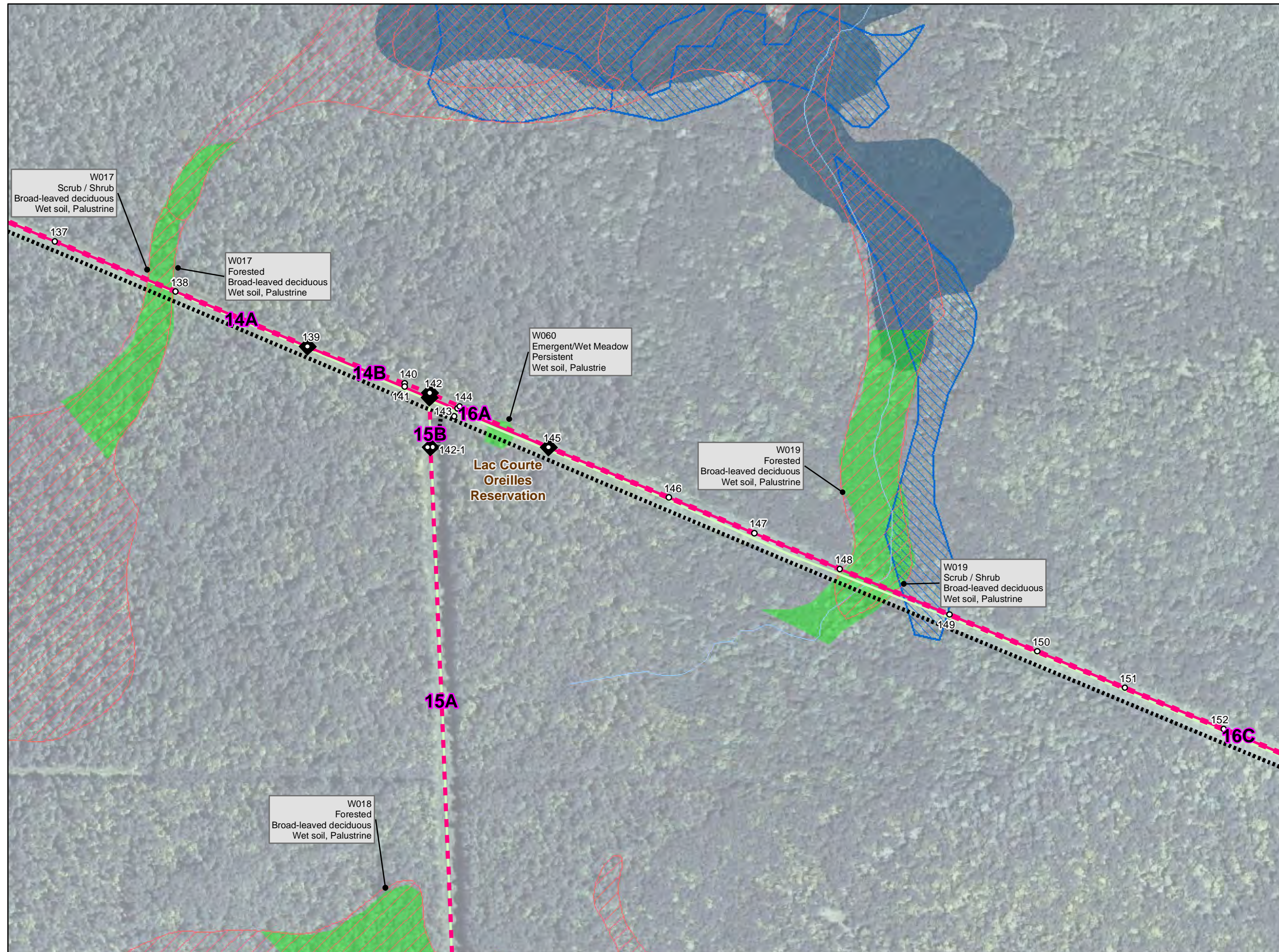
- Route Segment Endpoint
- Proposed Transmission Structure
- Radisson Substation Site
- Access Road
- Staging Area

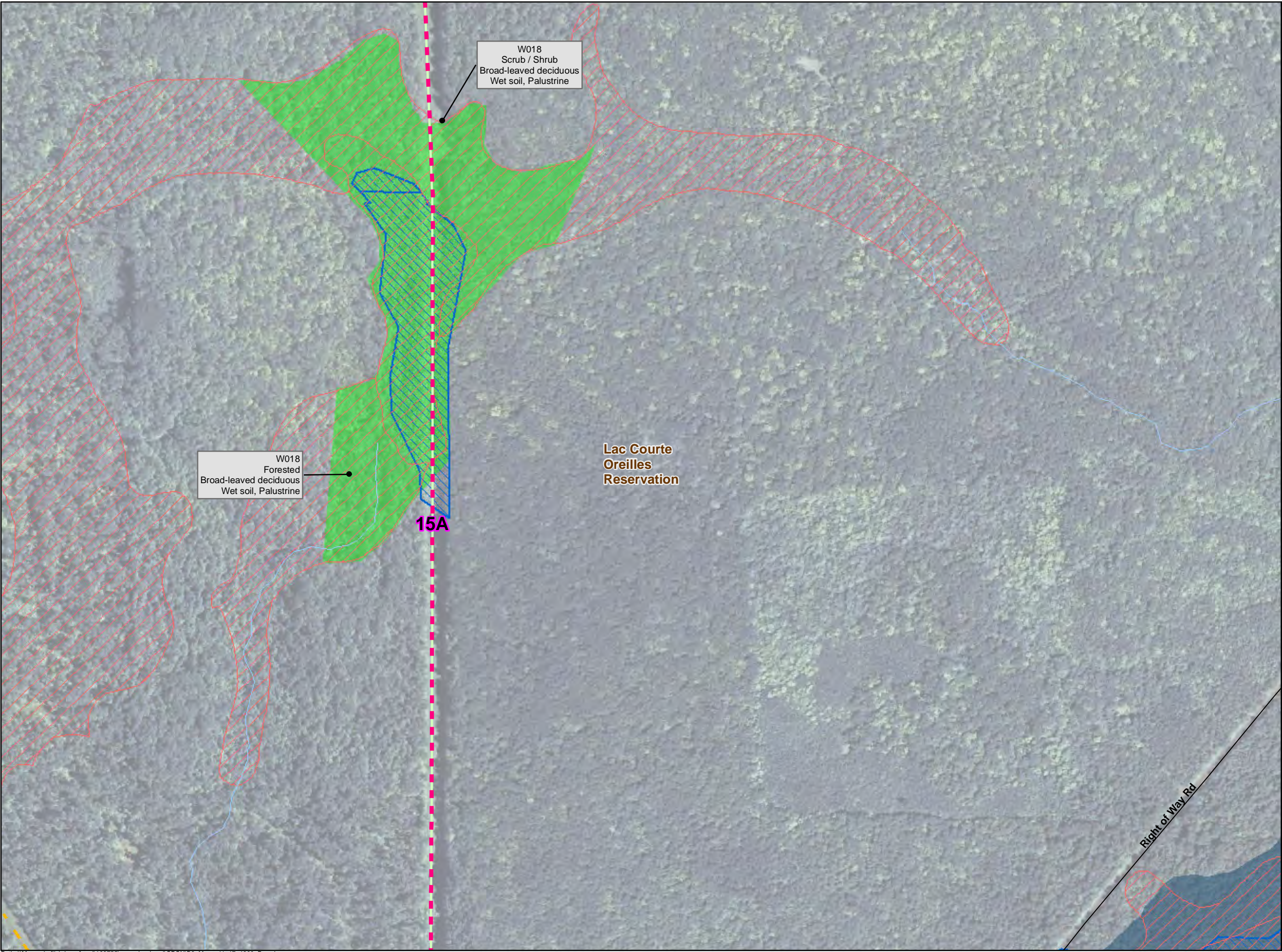
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- Railroad
- Pipeline
- Outstanding and Exceptional Resource Waters
- Trout Class Streams
- Surface Water
- Streams or Rivers
- Hydric Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains



Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011 Page 15 of 27





Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

Preferred Route 161 kV

Preferred Route 69 kV

Preferred Route 161/69 kV

Route Segment Endpoint

Proposed Transmission Structure

Radisson Substation Site

Access Road

Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

Existing 345/69 kV Structure

Substation (Xcel)

Substation (Not Xcel)

Residence

Other Structure

Lac Courte Oreilles Reservation

Road

Railroad

Pipeline

Outstanding and
Exceptional
Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains

RESPONSIBLE BY NATURE™

0400

Feet

↑

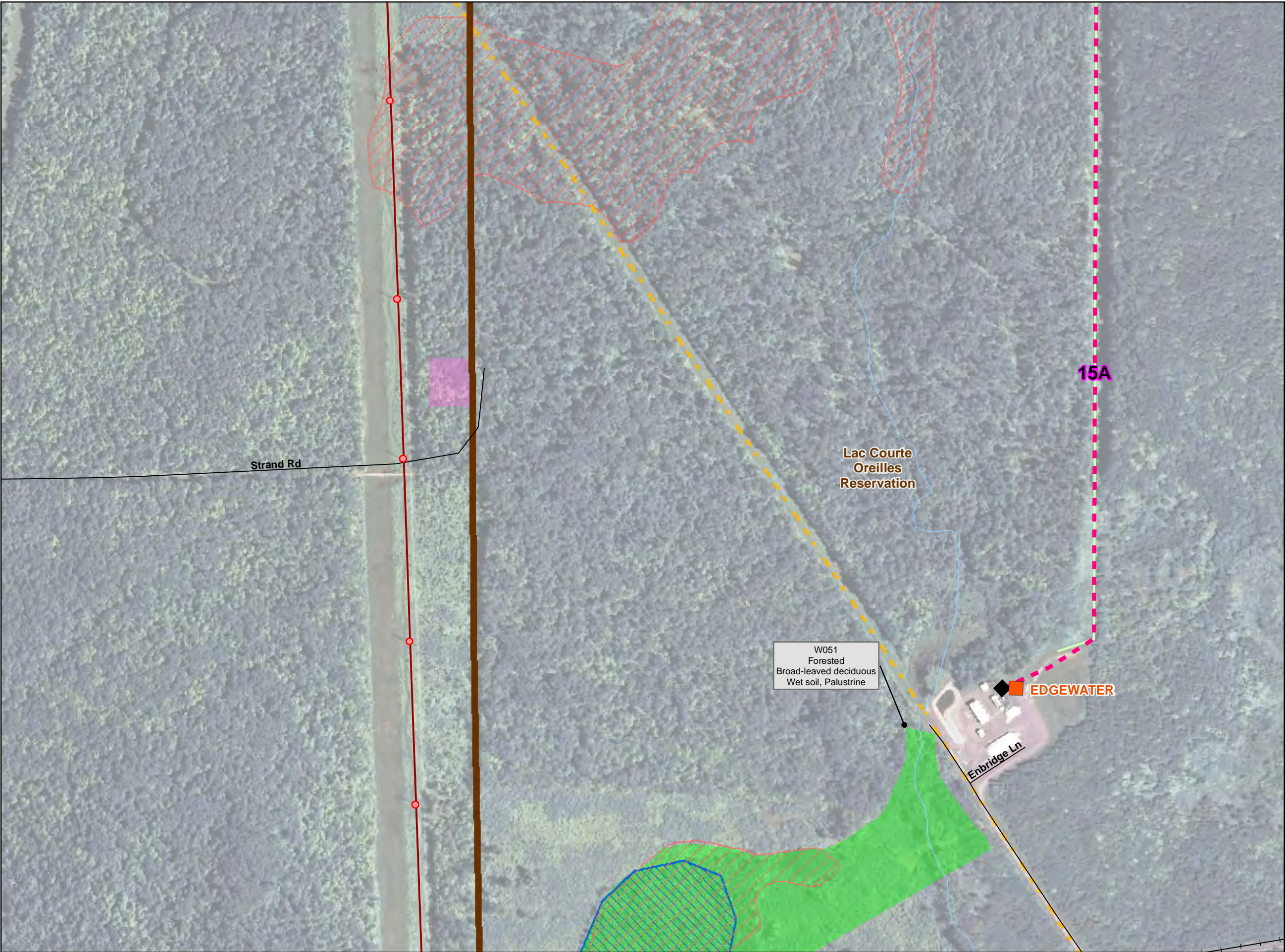
N

Sources: Wisconsin DNR, US Census, NAIP 2010

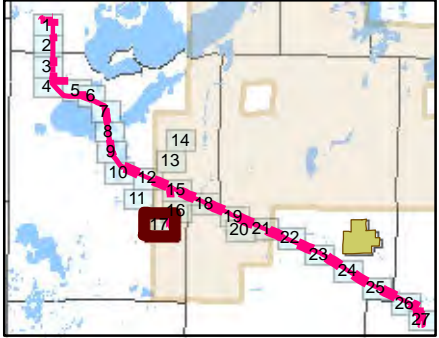
Date: 8/29/2011

Page 16 of 27

Path: \\Mspe-gis-file\gisproj\excel\139755\map_docs\vmxd\CPCN\B3_Maps_11x17_4800_P.mxd



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

Route Segment Endpoint

Proposed Transmission Structure

Radisson Substation Site

Access Road

Staging Area

Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC

Existing 345/69 kV Structure

Substation (Xcel)

Substation (Not Xcel)

Residence

Other Structure

Lac Courte Oreilles Reservation

Road

Railroad

Pipeline

Outstanding and

Exceptional

Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

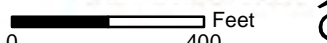
WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains

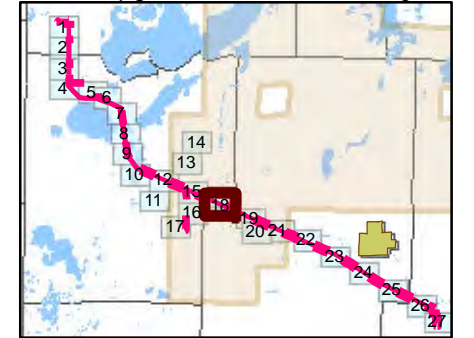


Sources: Wisconsin DNR, US Census, NAIP 2010

Date: 8/29/2011

Page 17 of 27

Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project



XX Route Segment Number

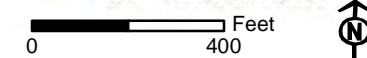
Route Alternatives

- Preferred Route 161 kV
- - - Preferred Route 69 kV
- · - · - Preferred Route 161/69 kV

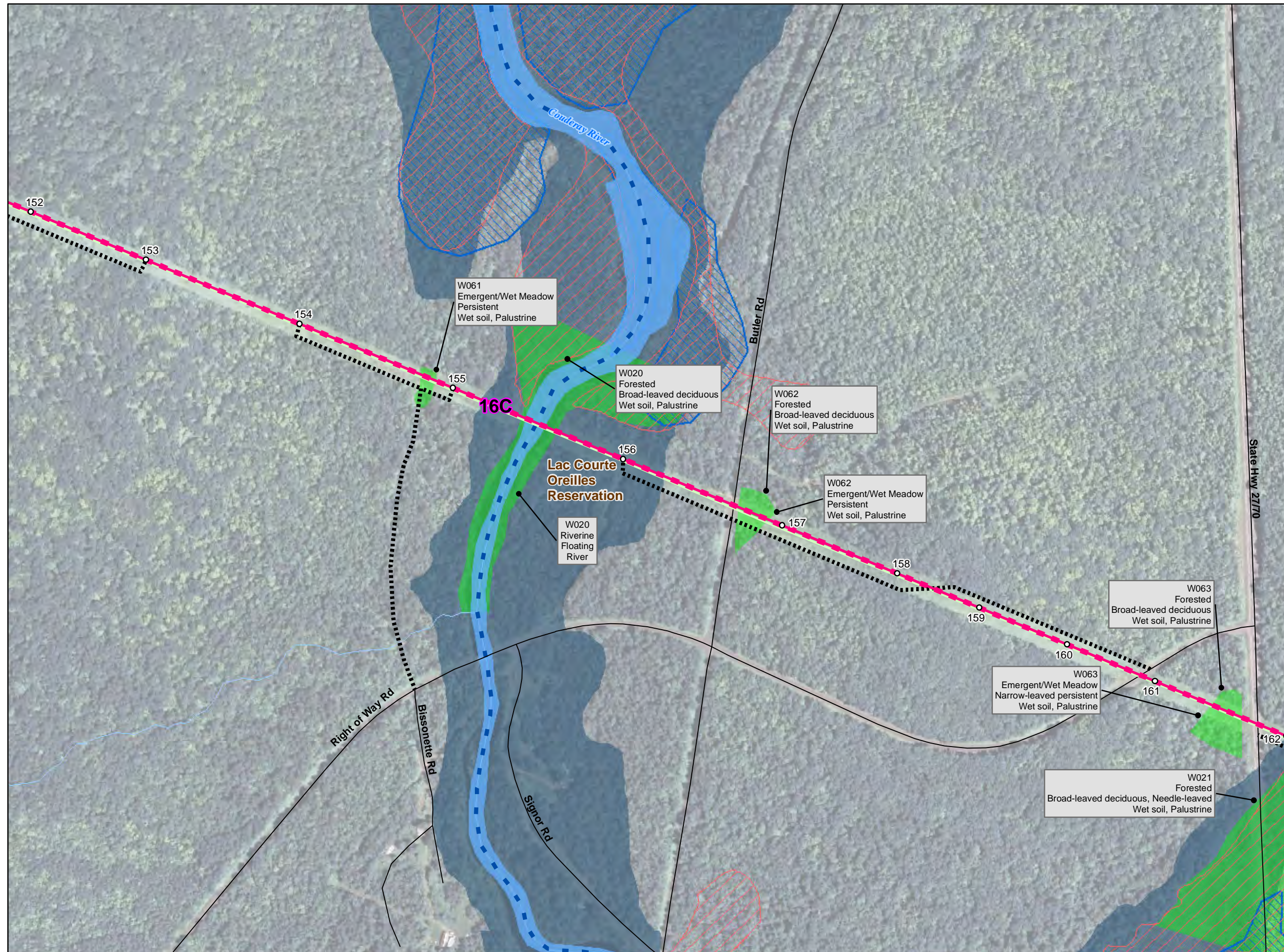
- ◆ Route Segment Endpoint
- Proposed Transmission Structure
- Radisson Substation Site
- Access Road
- Staging Area

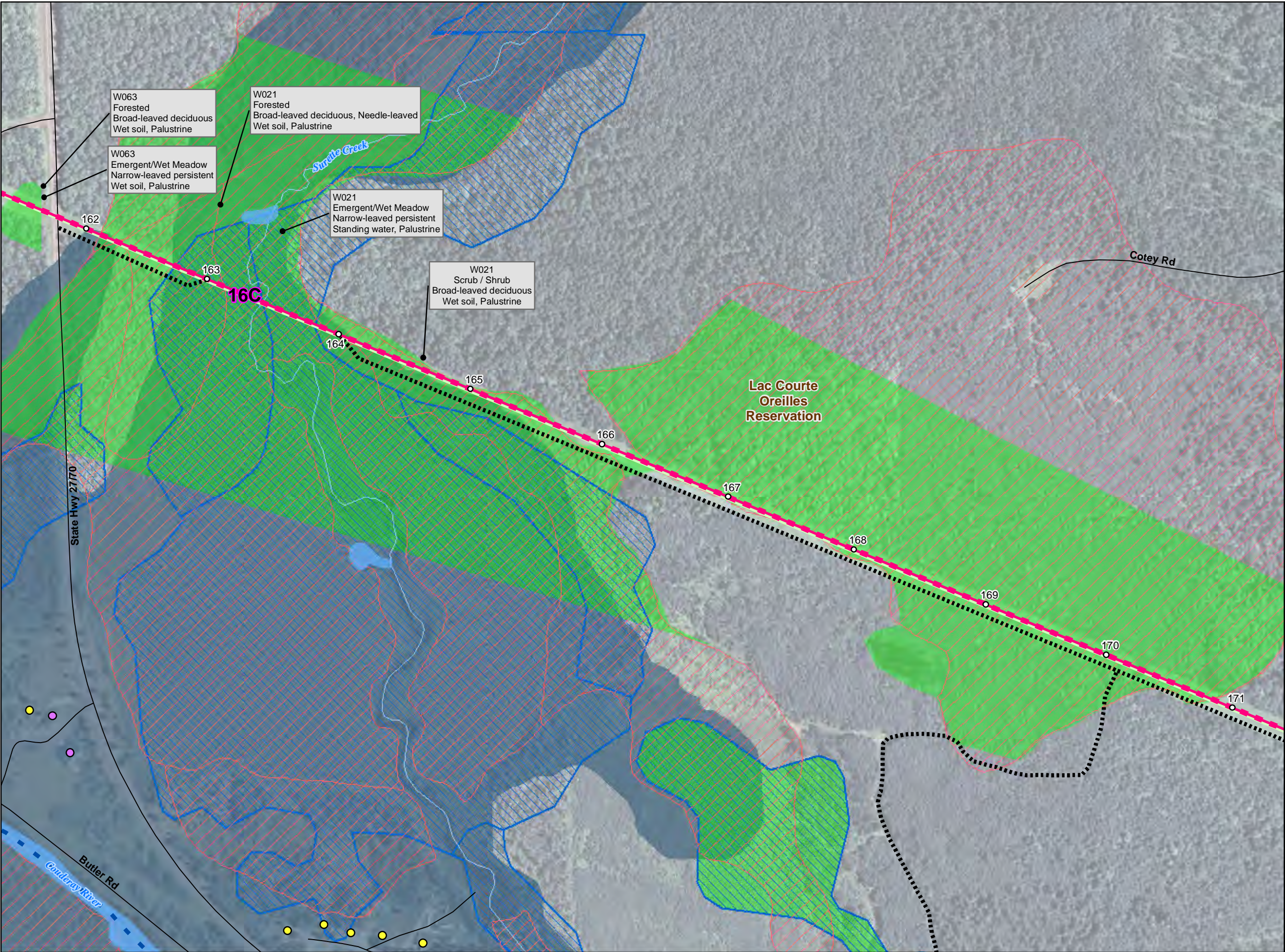
Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- + — Railroad
- - - Pipeline
- Outstanding and Exceptional Resource Waters
- Trout Class Streams
- Surface Water
- ~ Streams or Rivers
- Hydric Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains



Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011 Page 18 of 27





Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

Preferred Route 161 kV

Preferred Route 69 kV

Preferred Route 161/69 kV

Route Segment Endpoint

Proposed Transmission Structure

Radisson Substation Site

Access Road

Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

Existing 345/69 kV Structure

Substation (Xcel)

Substation (Not Xcel)

Residence

Other Structure

Lac Courte Oreilles Reservation

Road

Railroad

Pipeline

Outstanding and
Exceptional
Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains

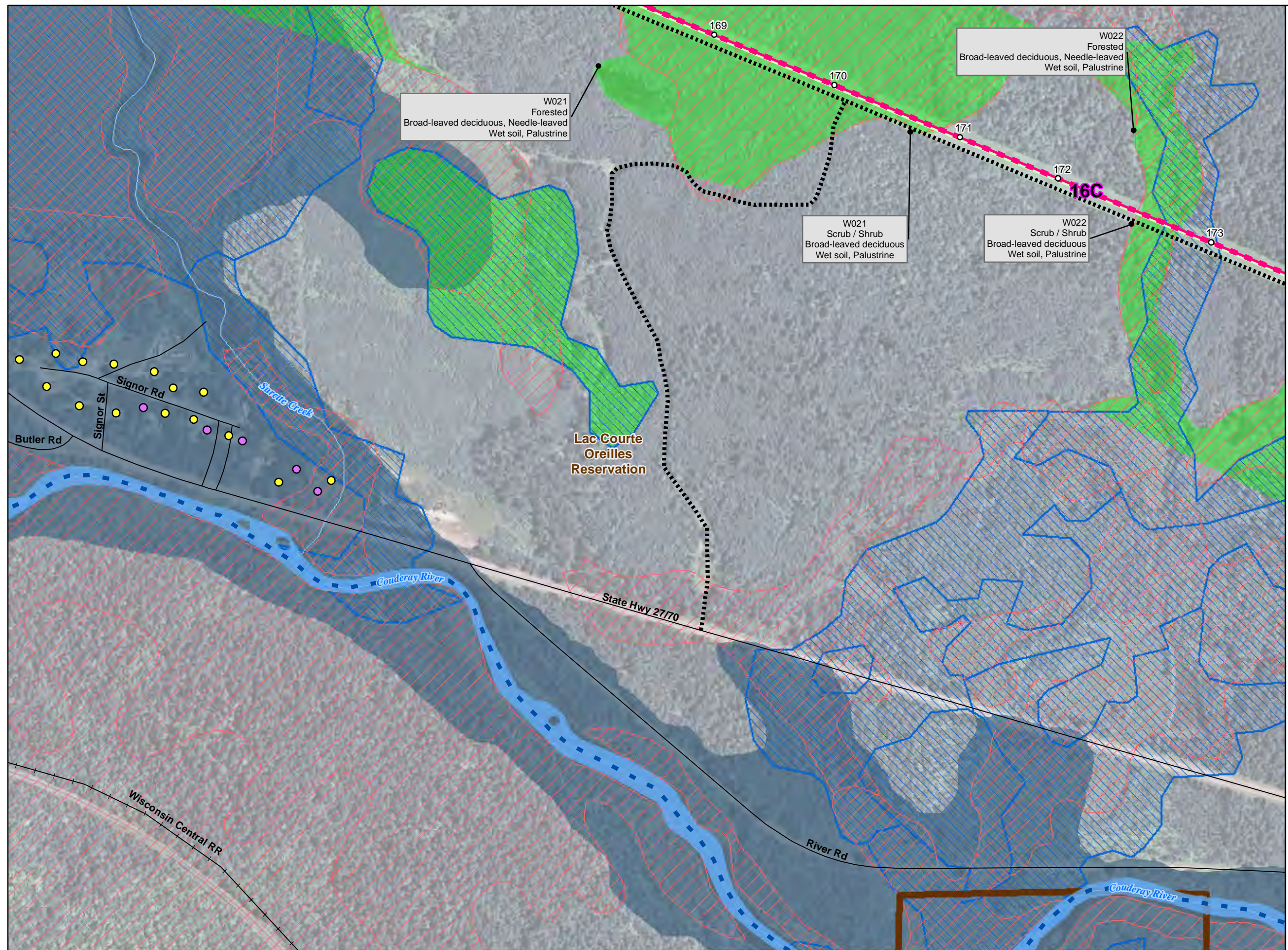
0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010

Date: 8/29/2011

Page 19 of 27

Path: \\Mspe-gis-file\gisproj\excel\139755\map_docs\mxd\CPCN\B3_Maps_11x17_4800_P.mxd



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

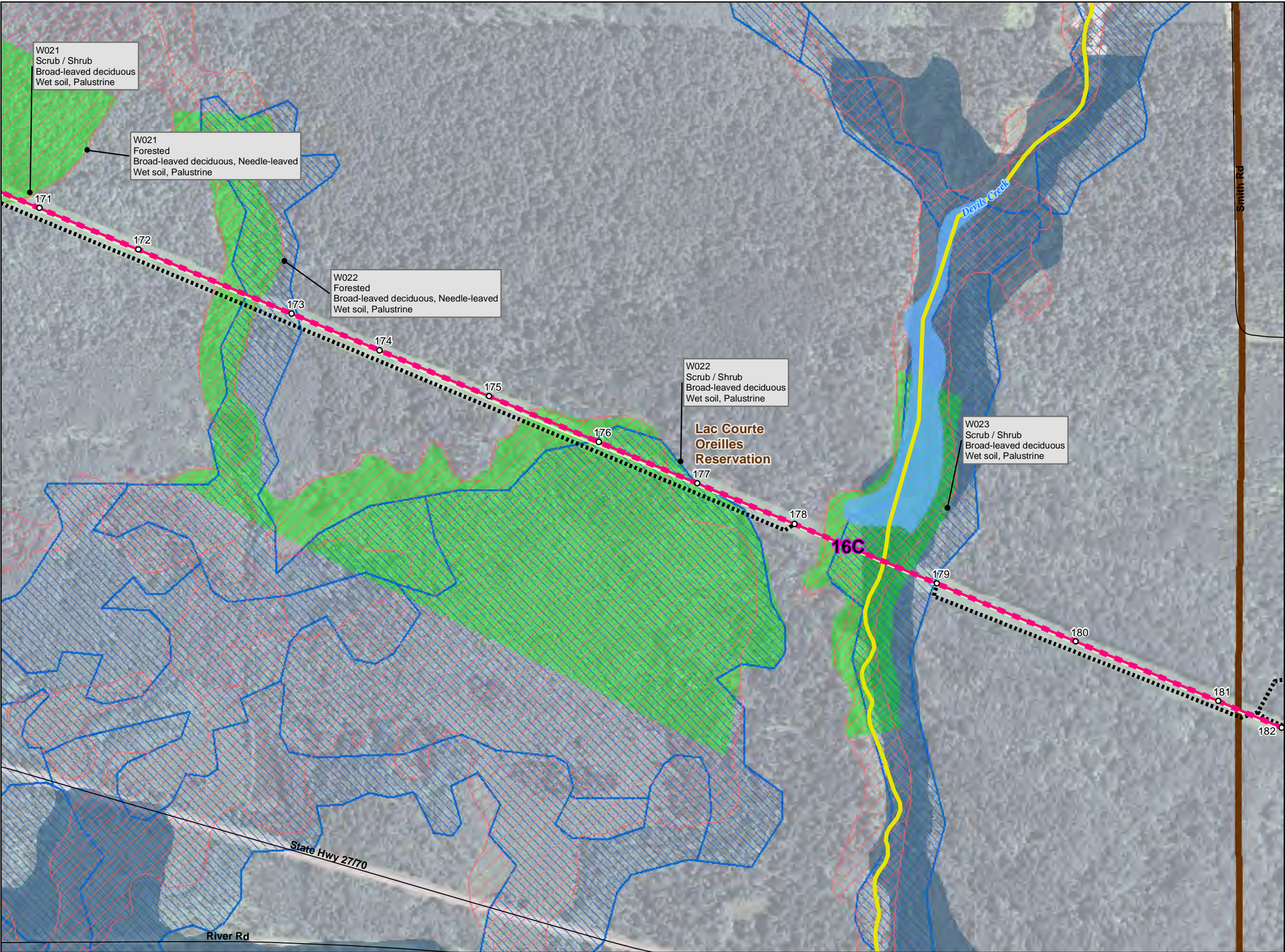
- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV
- Route Segment Endpoint
- Proposed Transmission Structure
- Radisson Substation Site
- Access Road
- Staging Area

Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- Railroad
- Pipeline
- Outstanding and
Exceptional
Resource Waters
- Trout Class Streams
- Surface Water
- Streams or Rivers
- Hydric Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains

0 400 Feet
Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011

Page 20 of 27



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

⋯ Access Road

▭ Staging Area

Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- Railroad
- Pipeline
- Outstanding and Exceptional Resource Waters
- Trout Class Streams
- Surface Water
- Streams or Rivers
- Hydric Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains

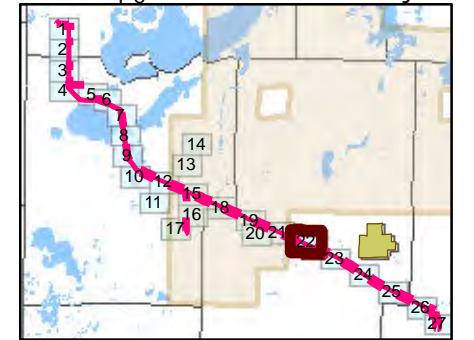
Xcel Energy
RESPONSIBLE BY NATURE™

0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011
Page 21 of 27

Path: \\Mspe-gis-file\gisproj\excel\139755\map_docs\vmxd\CPCN\B3_Maps_11x17_4800_P.mxd

Appendix B-3 Preferred Route Environmental Features Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project



XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

⋯ Access Road

▭ Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

● Existing 345/69 kV Structure

■ Substation (Xcel)

■ Substation (Not Xcel)

● Residence

● Other Structure

▭ Lac Courte Oreilles Reservation

— Road

— Railroad

— Pipeline

Outstanding and

Exceptional

Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydic Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains

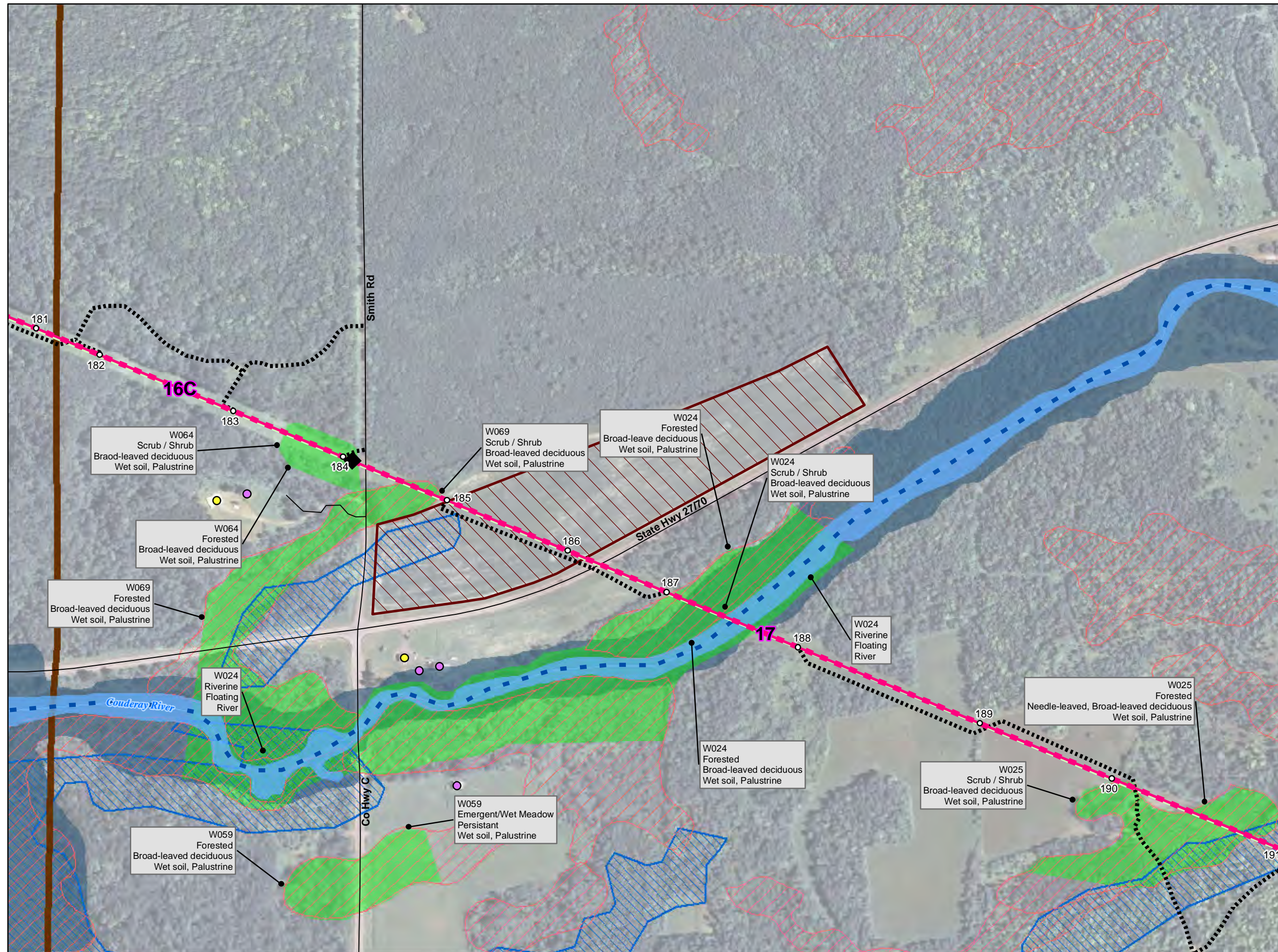
Xcel Energy
RESPONSIBLE BY NATURE™

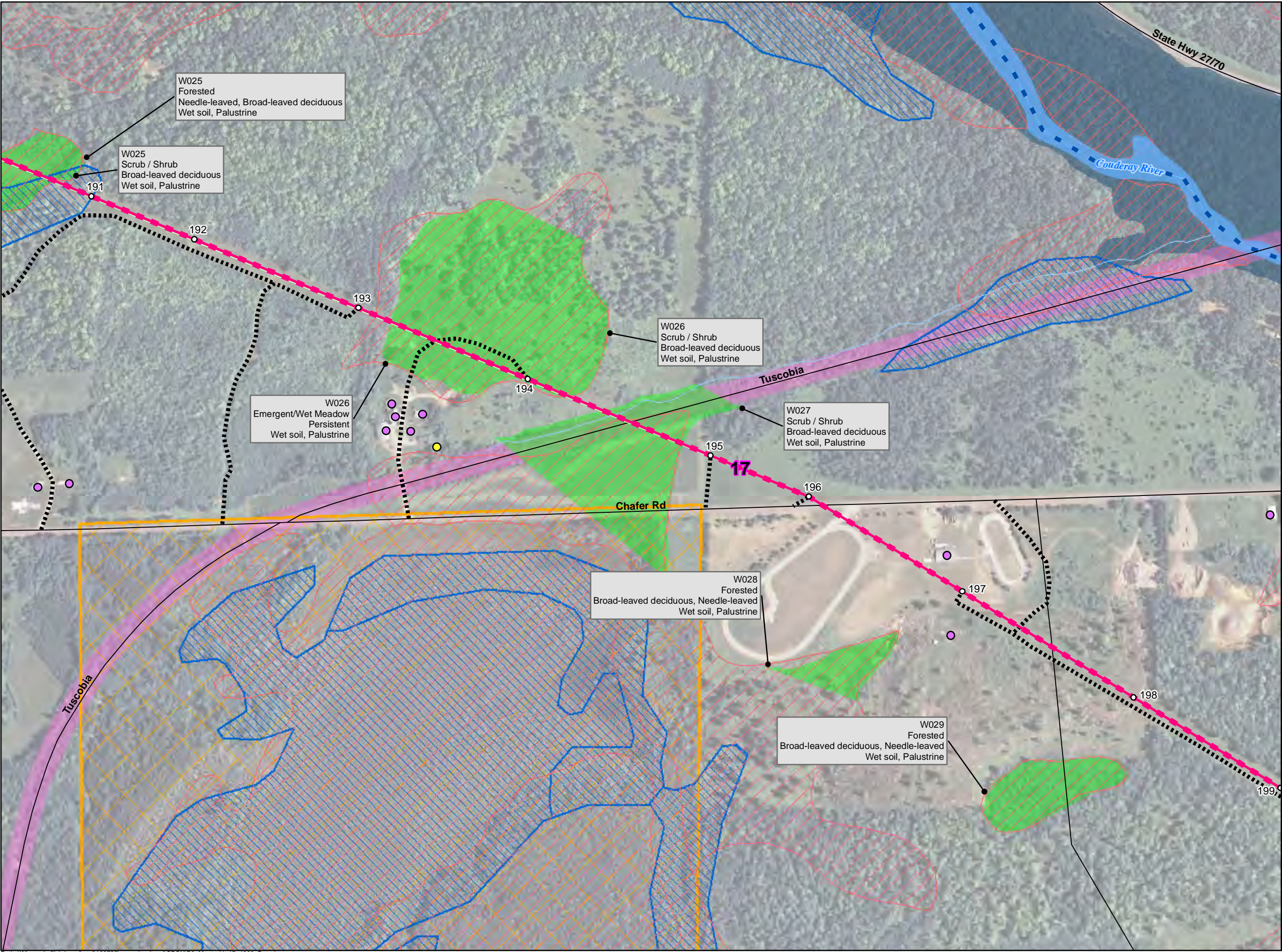
0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010

Date: 8/29/2011

Page 22 of 27





Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

Preferred Route 161 kV

Preferred Route 69 kV

Preferred Route 161/69 kV

Route Segment Endpoint

Proposed Transmission Structure

Radisson Substation Site

Access Road

Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

Existing 345/69 kV Structure

Substation (Xcel)

Substation (Not Xcel)

Residence

Other Structure

Lac Courte Oreilles Reservation

Road

Railroad

Pipeline

Outstanding and
Exceptional
Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains

RESPONSIBLE BY NATURE™

0 400 Feet

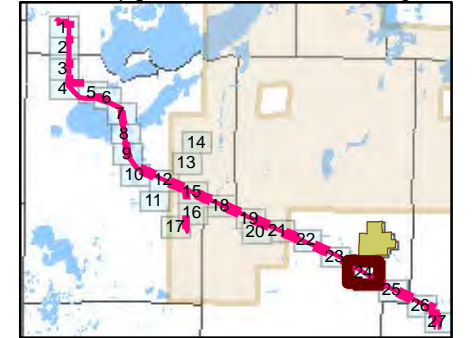
Sources: Wisconsin DNR, US Census, NAIP 2010

Date: 8/29/2011

Page 23 of 27

Path: \\Mspe-gis-file\gisproj\excel\139755\map_docs\vmxd\CPCNIB3_Maps_11x17_4800_P.mxd

Appendix B-3 Preferred Route Environmental Features Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project



XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

⋯ Access Road

▭ Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

○ Existing 345/69 kV Structure

▭ Substation (Xcel)

▭ Substation (Not Xcel)

○ Residence

○ Other Structure

▭ Lac Courte Oreilles Reservation

— Road

— Railroad

— Pipeline

Outstanding and

Exceptional

Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

County Forest

FEMA Floodplains



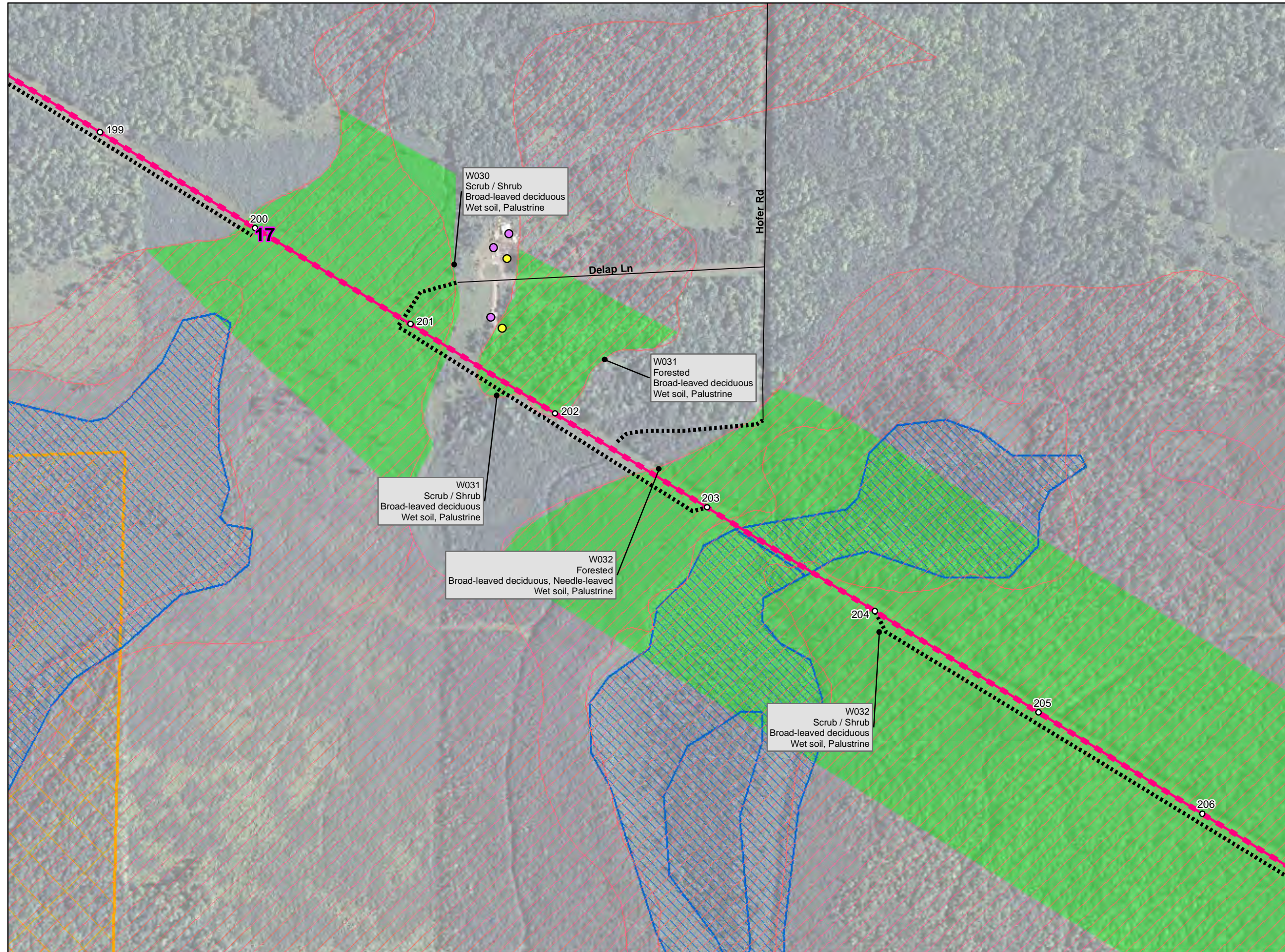
0 400 Feet

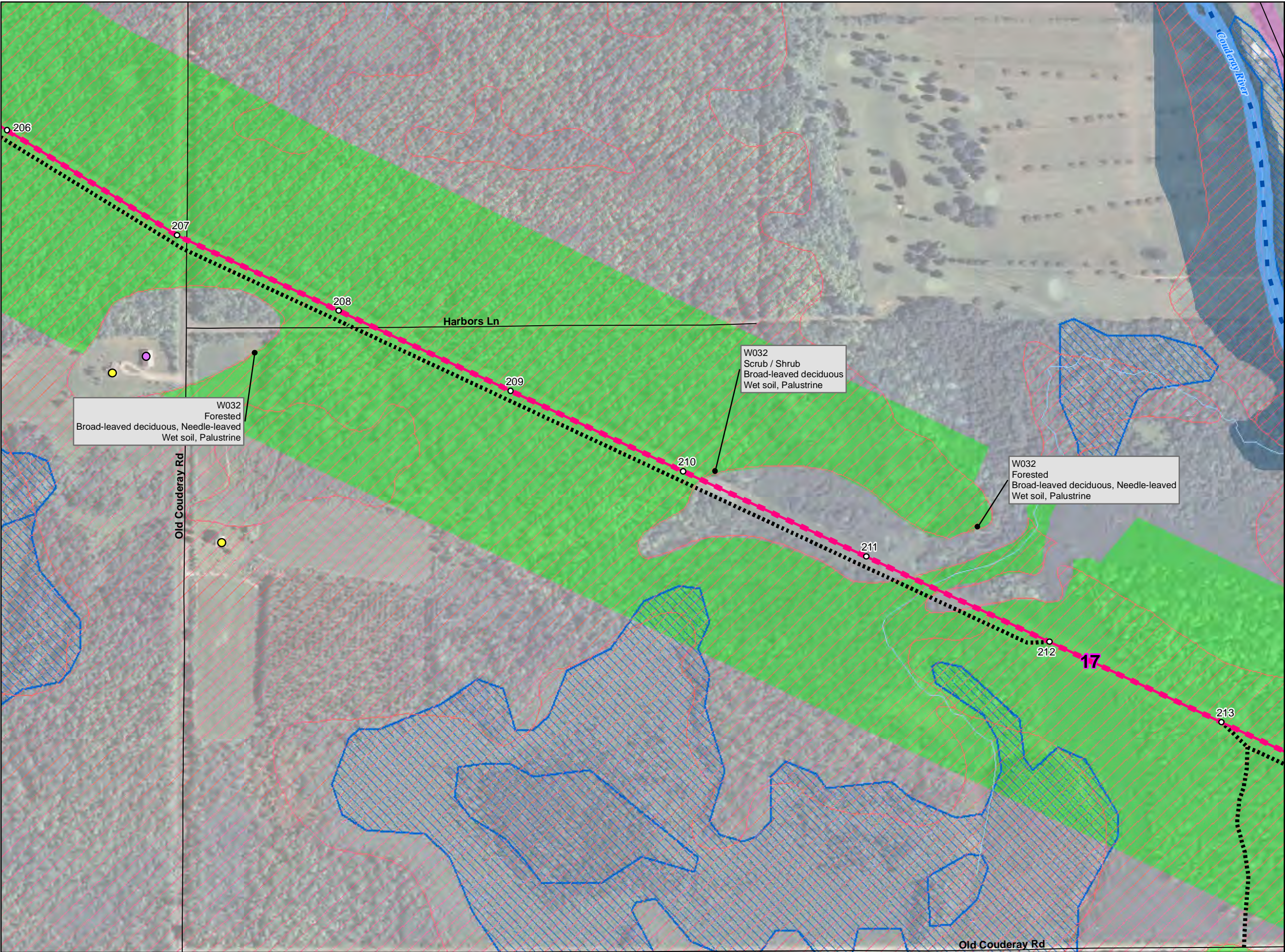


Sources: Wisconsin DNR, US Census, NAIP 2010

Date: 8/29/2011

Page 24 of 27





Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

Preferred Route 161 kV

Preferred Route 69 kV

Preferred Route 161/69 kV

Route Segment Endpoint

Proposed Transmission Structure

Radisson Substation Site

Access Road

Staging Area

Existing Transmission

69kV AC

161kV AC

345kV AC

Existing 345/69 kV Structure

Substation (Xcel)

Substation (Not Xcel)

Residence

Other Structure

Lac Courte Oreilles Reservation

Road

Railroad

Pipeline

Outstanding and
Exceptional
Resource Waters

Trout Class Streams

Surface Water

Streams or Rivers

Hydric Soil

WWI Wetland

Field/Desktop-identified Wetland

DNR Managed Lands

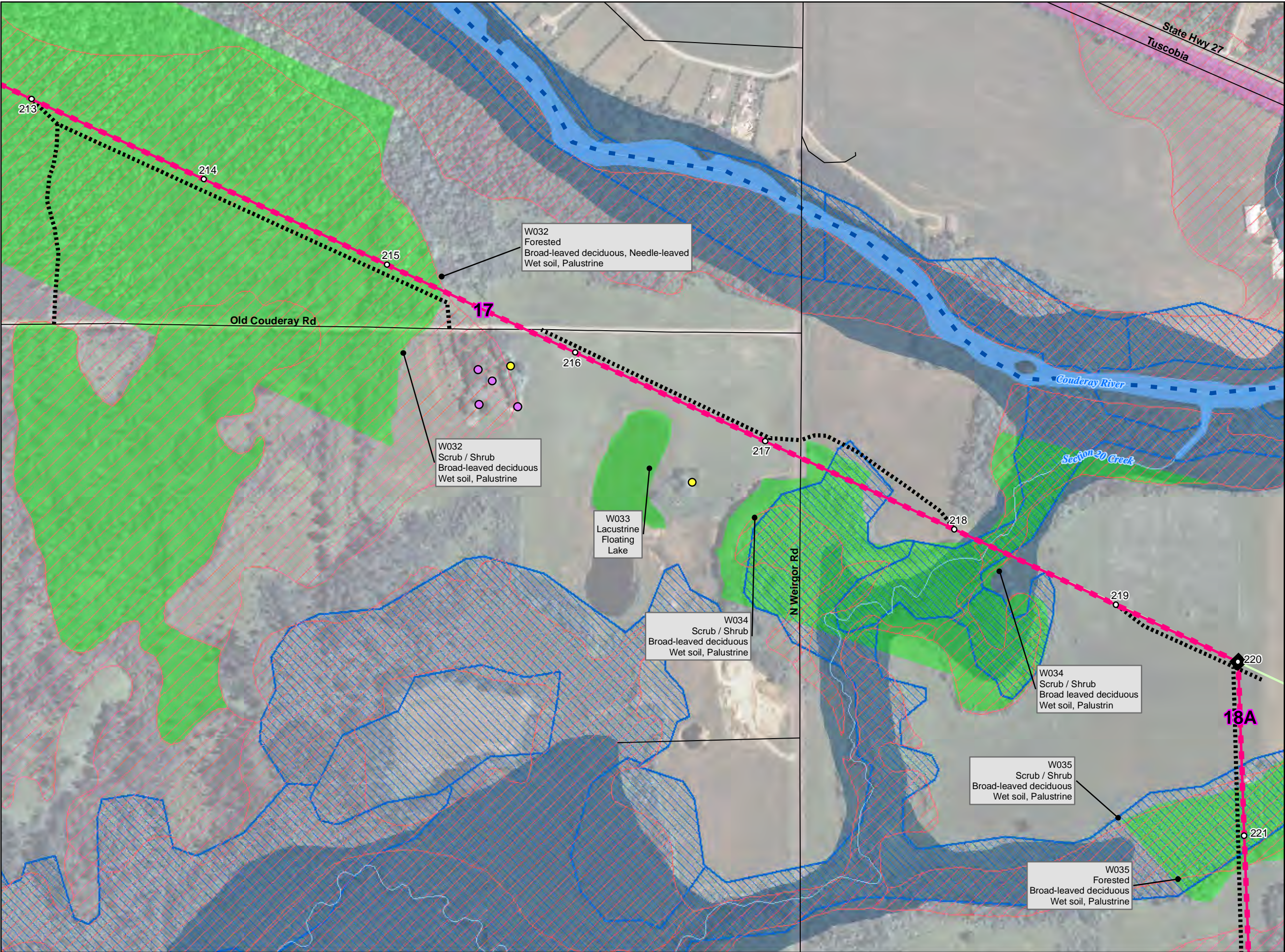
County Forest

FEMA Floodplains

0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011
Page 25 of 27

Path: \\Mspe-gis-file\gisproj\excel\139755\map_docs\vmxd\CPCN\B3_Maps_11x17_4800_P.mxd



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

▬ Access Road

▭ Staging Area

Existing Transmission

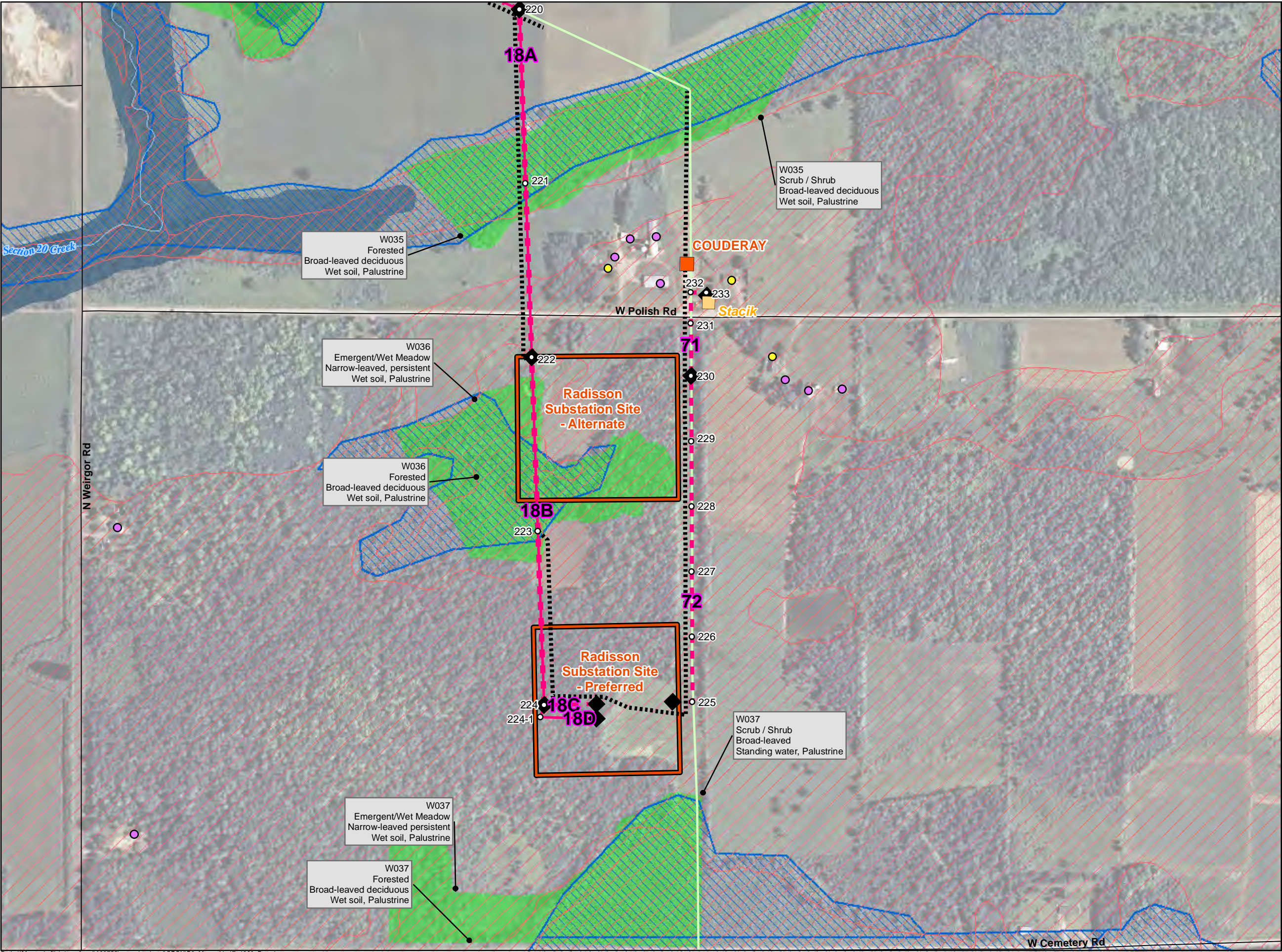
- 69kV AC
- 161kV AC
- 345kV AC
- Existing 345/69 kV Structure
- Substation (Xcel)
- Substation (Not Xcel)
- Residence
- Other Structure
- Lac Courte Oreilles Reservation
- Road
- Railroad
- Pipeline
- Outstanding and Exceptional Resource Waters
- Trout Class Streams
- Surface Water
- Streams or Rivers
- Hydric Soil
- WWI Wetland
- Field/Desktop-identified Wetland
- DNR Managed Lands
- County Forest
- FEMA Floodplains

Xcel Energy
RESPONSIBLE BY NATURE™

0 400 Feet

Sources: Wisconsin DNR, US Census, NAIP 2010
Date: 8/29/2011

Page 26 of 27



Appendix B-3
Preferred Route
Environmental Features
Stone Lake to Couderay
69 kV Rebuild /
161kV Upgrade Transmission Project

XX Route Segment Number

Route Alternatives

- Preferred Route 161 kV
- Preferred Route 69 kV
- Preferred Route 161/69 kV

◆ Route Segment Endpoint

○ Proposed Transmission Structure

▭ Radisson Substation Site

⋯ Access Road

▭ Staging Area

Existing Transmission

- 69kV AC
- 161kV AC
- 345kV AC

● Existing 345/69 kV Structure

■ Substation (Xcel)

■ Substation (Not Xcel)

● Residence

● Other Structure

▭ Lac Courte Oreilles Reservation

— Road

— Railroad

— Pipeline

■ Outstanding and Exceptional Resource Waters

— Trout Class Streams

— Surface Water

— Streams or Rivers

▨ Hydric Soil

▨ WWI Wetland

▨ Field/Desktop-identified Wetland

▨ DNR Managed Lands

▨ County Forest

▨ FEMA Floodplains

0

400

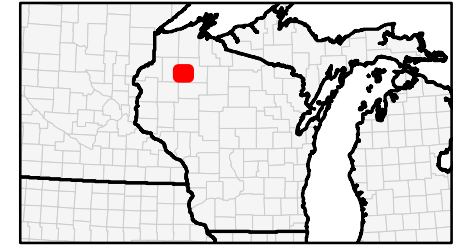
Feet

Sources: Wisconsin DNR, US Census, NAIP 2010

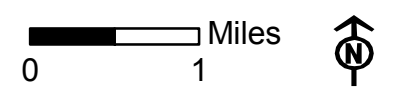
Date: 8/29/2011

Page 27 of 27

Appendix B-2 Alternatives Considered but not Proposed Stone Lake to Couderay 69 kV Rebuild / 161kV Upgrade Transmission Project



- City
- Substation (Xcel)
- Route Alternatives**
 - Preferred Route 161 kV
 - Preferred Route 69 kV
 - Preferred Route 161/69 kV
 - Alternate Route A 161 kV
 - Alternate Route A 69 kV
 - Alternate Route A 161/69 kV
 - Alternate Route B 161 kV
 - Alternate Route B 69 kV
 - Alternate Route B 161/69 kV
 - Route Considered but Not Proposed
- Radisson Substation Site
- Existing Transmission**
 - 69kV AC
 - 161kV AC
 - 345kV AC
- Road
- Railroad
- Lakes
- Streams or Rivers
- Lac Courte Oreilles Boundary



Date: 8/29/2011

