



## **Environmental Assessment of Projects**

### ***Transmission Line Projects Requiring New Right-of-Way***

When new transmission line projects involve new rights-of-way, we gather environmental screening information. The environmental assessments provided in this section are high-level and not nearly the level of investigation that will accompany a permit application to construct transmission facilities.

Table RS-1 lists the new transmission lines requiring new right-of-way and whether high-level environmental screening information is provided in this report or can be found in application materials already filed with the Public Service Commission.

Table RS-2 provides environmental screening information for the lines listed in Table RS-1.

Exhibits RS-1 through RS-14 identify the approximate end-points and study areas for each project for which high-level environmental screening information is provided

### ***Transmission Line Projects on Existing Right-of-Way***

Table RS-3 lists the new, rebuilt or reconducted transmission lines requiring no new right-of-way, and whether high-level environmental screening information is provided in this report or can be found in application materials already filed with the Public Service Commission.

Table RS-4 provides environmental screening information for the lines listed in Table RS-3.

The projects listed in Tables RS-1 through Table RS-4 do not reflect the entire number of projects included in this assessment that will require some level of environmental assessment. Rather, these projects will require selection of new rights-of-way and are likely to result in new environmental impacts. The environmental screening information highlights some of the environmental concerns that will need to be considered during any route identification process for these projects. Other projects will require environmental assessment, and those assessments will be conducted in the course of finalizing the scope for each of those projects.

Table RS-1  
Transmission Lines Requiring New Right-of-Way

Identified need	Potential solutions	Approx. line mileage		System need year	Projected In-service year	Planning zone	Environmental screening provided?	Comments and/or Corresponding Exhibit Number
		Total	New ROW					
economic benefits	Construct Pleasant Prairie-Zion Energy Center 345-kV line	7	7	2014	2013	5	Yes	Exhibit RS-1
relieve overloads or low voltages under contingency	Construct Old Mead Road-Chandler double circuit 138-kV lines and operate at 138/69	4	4	2014	2014	2	Yes	Exhibit RS-2
T-D interconnection request	Construct double-circuit 138-kV line to serve Milwaukee County T-D interconnection	2	2	2015	2015	5	Yes	Exhibit RS-3
relieve overloads or low voltages under contingency	Bay Lake: Holmes - Escanaba 138-kV two circuit project	54.9	15.3	2016	2016	42	Yes	Exhibit RS-4
relieve overloads or low voltages under contingency	Bay Lake: Green Bay - Morgan - Plains - National 345 kV line construction	155	155	2016	2016	42	Yes	Exhibit RS-5
relieve overloads or low voltages under contingency	Bay Lake: Green Bay - Morgan 138 kV line construction	23	23	2016	2016	4	Yes	Exhibit RS-6
reliability, economics and policy benefits	Badger Coulee: La Crosse area - North Madison - Cardinal 345-kV line construction	118	118	2018	2018	3	Yes	Exhibit RS-7
accommodate new generation	Construct Erdman-Howards Grove-Plymouth #4-Barnhart 138-kV line	18	18	2018	2018	4	Yes	Exhibit RS-8
relieve overloads or low voltages under contingency	Construct Fairwater-Mackford Prairie 69-kV line	4	4	2018	2018	1	Yes	Exhibit RS-9
reliability, economics and policy benefits	Cardinal Bluffs: Dubuque County area - Cardinal 345-kV line construction	80	80	2019	2019	3	Yes	Exhibit RS-10
T-D interconnection request,relieve overloads or low voltages under contingency	Construct Spring Valley-North Lake Geneva 138-kV line	19.0	19.0	2020	2019	35	Yes	Exhibit RS-11
T-D interconnection request,relieve overloads or low voltages under contingency	Construct a new 69-kV circuit from Twin Lakes to the new substation	1.0	1.0	2020	2019	35	Yes	Screening information included in Spring Valley - North Lake Geneva write-up. (Exhibit RS-11)
relieve overloads or low voltages under contingency	Construct a Lake Delton-Birchwood 138-kV line	5	5	2020	2020	31	Yes	Exhibit RS-12
relieve overloads or low voltages under contingency	Construct a Hubbard-East Beaver Dam 138-kV line	10	10	2022	2022	34	Yes	Exhibit RS-13
relieve overloads or low voltages under contingency, economics	Construct Shoto to Custer 138-kV line	6.9	6.9	2022	2022	4	Yes	Exhibit RS-14

Table RS-2  
Environmental Screening Information for Lines Requiring New Right-of-Way

Pleasant Prairie - Zion Energy Center 345-kV line		
	General Description	New 345 kV transmission line
	Length (miles)	Approximately 6
#1	Screening Area (Sq. mi.- length X width)	Approximately 11.3
#2	Corridor Sharing Opportunities	Existing 345 kV and 138 kV corridors, a railroad corridor, a state highway corridor, and a county highway corridor provide sharing opportunities. There are no state owned lands over which any of the proposed routes cross. There is a former landfill site owned by the City of Kenosha that may require special consideration. Otherwise, the corridor sharing opportunities described above fall within State Highway and RR rights-of-way.
#3	Public Lands	Smaller, isolated wetland areas as well as small tributaries to the Des Plaines River are found within the study area.
#4	Sensitive Resources	There are several cultural resources within the study corridors. The potential for encountering these cultural and historic resources is low to medium.
#5	Cultural Resources	The possible routes identified traverse mainly industrial and agricultural land that include isolated pockets of wetland, including farmed wetlands.
	Miscellaneous	
Old Mead Road to Chandler Double Circuit 138/69 kV Line		
	General Description	New line
	Length (miles)	approximately 4
#1	Screening Area (Sq. mi.- length X width)	approximately 15.8
#2	Corridor Sharing Opportunities	Federal, state, & County highways, railroads, and existing transmission line rights-of-way offer opportunity for corridor sharing.
#3	Public Lands	A State of Michigan owned boat landing and park is located in the project area.
#4	Sensitive Resources	The Escanaba River, Reno Creek and associated tributaries and wetlands are located in the screening area.
#5	Cultural Resources	No known cultural resources have been identified in the project area however the potential exists for sites to exist along the Escanaba River corridor.
	Miscellaneous	West Gladstone airport is in the screening area.

Table RS-2  
Environmental Screening Information for Lines Requiring New Right-of-Way

Western Milwaukee County Electric Reliability Project		
	General Description	New 138 kV transmission line
	Length (miles)	Approximately 3
#1	Screening Area (Sq. mi. - length X width)	Approximately 2.6
#2	Corridor Sharing Opportunities	Existing transmission lines, city streets, and state highway offer possible corridor sharing opportunities.
#3	Public Lands	DNR Forestry Education Center, Milwaukee County Grounds, and several county parks: Wisconsin Avenue, Cannon, and Gravel Sholes, Hansen Golf course are located in the screening area.
#4	Sensitive Resources	Rare Species Conservation Habitat, Underwood Creek/Parkway, Monarch Butterfly Habitat (nesting and foraging areas), and the Menomonee River are located in the screening area.
#5	Cultural Resources	There are several known burial areas and numerous historic areas and buildings located in the screening area.
	Miscellaneous	Milwaukee Regional Medical Center (MRMC) and MRMC Heliport are located in the screening area. Heavy residential development exists throughout study area. The proposed UWM research park; existing MMSD flood control facilities, Wauwatosa city Landfill, and Wisconsin Lutheran College also are located in the screening area.
Bay Lake: Holmes - Escanaba 138-kV two circuit project		
	General Description	2 New 138 kV transmission line
	Length (miles)	Approximately 55
#1	Screening Area (Sq. mi. - length X width)	Approximately 1,302
#2	Corridor Sharing Opportunities	Existing transmission lines, city streets, state highways, county roads, and railroads offer possible corridor sharing opportunities.
#3	Public Lands	Extensive scattered parcels of land in the Escanaba River and Copper Country State Forests (Michigan) and the Menominee River Natural Resource Area (Wisconsin) are located in the project area.
#4	Sensitive Resources	The Menominee River, Cedar River, Ford River, Escanaba River, numerous smaller streams, extensive wetland areas, and scattered smaller lakes are located in the project area. Hannahville Indian Reservation lands are located in the project area. Much of the project area is comprised of sparsely populated lands, undeveloped woodlands and wetlands. The likelihood of encountering rare species is moderate to high.
#5	Cultural Resources	Locations near the major rivers or the shore of Lake Michigan have a higher potential for discovery of cultural resources.
	Miscellaneous	

Table RS-2  
Environmental Screening Information for Lines Requiring New Right-of-Way

Bay Lake: Green Bay - Morgan - Plains - National 345 kV line	
General Description	New 345 kV transmission line
Length (miles)	Approximately 155
#1 Screening Area (Sq. mi.- length X width)	Approximately 3648
#2 Corridor Sharing Opportunities	Various existing transmission lines, federal, state, and county highways, and railroad rights-of-way offer possible sharing opportunities.
#3 Public Lands	State managed lands located in the project area include Governor Tommy G. Thompson Centennial State Park, Peshtigo River State Forest, Green Bay West Shores Wildlife area, Mountain Bay State Trail, Wiouwash State Trail, Nicolet State Trail, Newton Blackmour State Trails, numerous Wisconsin State Natural Areas, and scattered statewide habitat areas. In Michigan the project area includes lands that are part of the Copper Country State Forest and the Escanaba River State Forest and other scattered state owned parcels.
#4 Sensitive Resources	The Menominee, Oconto, Pensaukee, Pike, Peshtigo, Michigamme, and Suamico Rivers and numerous smaller streams and tributaries are located in the project area. Numerous wetlands and scattered lakes are present across the project area. With extensive areas of undeveloped lands, woodlands, wetlands, etc., the likelihood of encountering rare species is high. Records of rare species are known across the project
#5 Cultural Resources	WHS records identify numerous historic properties and archaeological sites within the project area and the Oneida, Potawatomi, and Hannahville Indian Reservation lands are also in the project area.
Miscellaneous	
Bay Lake: Green Bay - Morgan 138-kV line	
General Description	New 138 kV transmission line
Length (miles)	Approximately 23
#1 Screening Area (Sq. mi.- length X width)	Approximately 682
#2 Corridor Sharing Opportunities	Various federal, state, and county highways, existing transmission line, and railroad rights-of-way offer possible sharing opportunities.
#3 Public Lands	State managed lands located in the project area include Green bay West Shores Wildlife area, Mountain Bay State Trail, Wiouwash State Trail, Nicolet State Trail, Newton Blackmour State Trails, and scattered statewide habitat areas.
#4 Sensitive Resources	The Oconto, Pensaukee, and Suamico Rivers and numerous smaller streams and tributaries are located in the project area. Numerous wetlands and a few scattered lakes are present across the project area.
#5 Cultural Resources	WHS records identify numerous historic properties and archaeological sites within the project area and the Oneida Indian Reservation lands are also in the project area.
Miscellaneous	

Table RS-2  
 Environmental Screening Information for Lines Requiring New Right-of-Way

Badger Coulee: La Crosse area - North Madison - Cardinal 345-kV line		
	General Description	New 345 kV transmission line
#1	Length (miles)	Approximately 118
	Screening Area (Sq. mi.- length X width)	Approximately 4,234
#2	Corridor Sharing Opportunities	Various federal, state, and county highways, existing transmission line, railroad, and pipeline rights-of-way offer possible sharing opportunities.
		Richard J Dorer SP (MN), O L Kipp SP (MN), Perrot SP (WI), Wildcat Mountain SP (WI), Rocky Arbor SP (WI), Mirror Lake SP (WI), Natural Bridge SP (WI), Devils Lake SP (WI), Bluemounds SP (WI), Lake Kegonsa SP (WI), Governor Nelson SP (WI), numerous county parks, state natural areas, wildlife areas, trails, and recreational areas are located throughout the screening area. The Upper Mississippi River National Wildlife and Fish Refuge, The Leopold Wetland Management District, and Ft Mc Coy Military Reservation are among the federal lands located in the screening area.
#3	Public Lands	Large, contiguous wetland areas are concentrated near the Mississippi and Wisconsin Rivers and their tributaries. Numerous Wisconsin State Natural Areas exist in the route screening area. The probability of encountering threatened, endangered, and rare species is high.
#4	Sensitive Resources	The Cultural Map of Wisconsin identifies numerous cultural resources within the screening area. The potential for encountering cultural and historic resources is high within the screening area.
#5	Cultural Resources	Principal ecological landscapes include the southwest savanna, western coulee and ridges, central sand plains, and central sand hills in Wisconsin. The western portions of the screening area are located in Wisconsin's driftless area and the Mississippi River valley.
	Miscellaneous	
Erdman-Howards Grove-Plymouth #4-Barnhart 138-kV line		
	General Description	New Line
#1	Length (miles)	approximately 16.7
	Screening Area (Sq. mi.)	approximately 105
#2	Corridor Sharing Opportunities	Various federal, state, and county highways, existing transmission line, and railroad rights-of-way offer possible sharing opportunities.
#3	Public Lands	The Schuett Creek Fishery area and various county, city, town, and village parks are located in the project area.
#4	Sensitive Resources	The Sheboygan, Mullet, & Pigeon rivers and Otter, Fisher, and Seven Mile creeks along with associated tributaries and wetlands are located in the project area.
#5	Cultural Resources	The WHS database identifies a number of known archaeological and historic resources in the study area, particularly located near the Sheboygan River corridor.
	Miscellaneous	Sheboygan County memorial airport and Feldmann Field are located in the project area.

Table RS-2  
Environmental Screening Information for Lines Requiring New Right-of-Way

Fairwater-Mackford Prairie 69-kV line		
	General Description	New line
	Length (miles)	5
#1	Screening Area (Sq. mi.- length X width)	44.9
#2	Corridor Sharing Opportunities	State and County roads, railroad corridor, and existing electrical distribution lines routes located within the screening corridor offer the potential for corridor sharing.
#3	Public Lands	WDNR owns several parcels of "scattered wildlife" lands along the Grand River corridor.
#4	Sensitive Resources	The Grand river and associated wetlands are located in the project area.
#5	Cultural Resources	The WHS database identifies numerous archaeological, architectural and historic sites within the screening area. Cultural Map of Wisconsin does not identify any sites within the screening area.
	Miscellaneous	There is a moderate probability on encountering endangered resources.
Cardinal Bluffs: Dubuque County area - Cardinal 345-kV line		
	General Description	New 345 kV transmission line between Madison , Wisconsin area and Dubuque, Iowa area.
	Length (miles)	Approximately 86
#1	Screening Area (Sq. mi.- length X width)	Approximately 2,756
#2	Corridor Sharing Opportunities	Various federal, state, and county highways, existing transmission line, railroad, and pipeline rights-of-way offer possible sharing opportunities. White Pine Hollow State Forest Preserve (IA), Mines of Spain SP (IA), Governor Dodge SP (WI), Tower Hill SP (WI), (WI), Natural Bridge SP (WI), , Bluemounds SP (WI), Nelson Dewey SP, Governor Nelson SP (WI), Belmont Mound SP (WI), numerous county parks, state natural areas, wildlife areas, trails, and recreational areas are located throughout the screening area. The Upper Mississippi River National Wildlife and Fish Refuge is also located in the screening area.
#3	Public Lands	Large, contiguous wetland areas are concentrated near the Mississippi and Wisconsin Rivers and their tributaries. Numerous Wisconsin State Natural Areas exist in the route screening area. The probability of encountering threatened, endangered, and rare species is high.
#4	Sensitive Resources	The WHS database identifies archaeological and historic resources in the study area, particularly associated the Wisconsin and Mississippi River corridors.
#5	Cultural Resources	Principal ecological landscapes include the southwest savanna, western coulee and ridges, and central sand hills in Wisconsin. The western portions of the screening area are located in Wisconsin's driftless area and the Mississippi and Wisconsin River valleys.
	Miscellaneous	

Table RS-2  
 Environmental Screening Information for Lines Requiring New Right-of-Way

North Lake Geneva - Spring Valley 138-kV Line	
General Description	New Line
Length (miles)	approximately 19 miles of new line
#1 Screening Area (Sq. mi.- length X width)	approximately 140
#2 Corridor Sharing Opportunities	Existing transmission lines, state and county roads, and railroads located within the screening area offer the best possibility of corridor sharing.
#3 Public Lands	Numerous local parks, Big Foot Beach State Park, the New Munster state wildlife area and Camp Lake, Hooker Lake, and Silver Lake state fishery areas are located within the screening area.
#4 Sensitive Resources	Silver Lake, Camp Lake, Center Lake, Lake Mary, Hooker Lake, Montgomery Lake, Benedict Lake, Tombeau Lake, Pell Lake, Lilly Lake, Paddock Lake, Rock Lake, Lake Ivanhoe, Lake Geneva, Powers Lake and the Lower Fox (Illinois) River drainage basin are found within the screening area. The New Munster Bog Island, Silver Lake Bog, and Peat Lake State Natural Areas also are located in the screening area.
#5 Cultural Resources	The WHS database identifies several archaeological and historic resources in the study area, particularly associated with lakes and rivers, and historic buildings primarily concentrated in and near the City of lake Geneva.
Miscellaneous	
Twin Lakes - New substation 69-kV line (part of NLG-Spring Valley project)	
General Description	Connection to a mid-point substation as part of North Lake Geneva - Spring Valley. Screening information for this substation is included in NLG-Spring Valley write up above.
Length (miles)	
#1 Screening Area (Sq. mi.- length X width)	Included in above.
#2 Corridor Sharing Opportunities	
#3 Public Lands	
#4 Sensitive Resources	
#5 Cultural Resources	
Miscellaneous	



Table RS-2  
Environmental Screening Information for Lines Requiring New Right-of-Way

Lake Delton-Birchwood 138-kV line		
	General Description	New line
	Length (miles)	approximately 5
#1	Screening Area (Sq. mi.- length X width)	approximately 41
#2	Corridor Sharing Opportunities	Interstate Highway 90/94, US Highway 12, State Highway 23, several county highways and local electrical distribution lines.
#3	Public Lands	Mirror Lake State Park, Dell Creek wildlife area, Hulburt Creek Woods State Natural Area and Hulburt Creek fishery area.
#4	Sensitive Resources	State Natural Areas and State Parks, Dell Creek, Harrison Creek, Lake Delton, Mirror Lake, Lake Blass, International Crane Foundation are located within the screening area.
#5	Cultural Resources	Cultural Map of Wisconsin identifies Dawn Manor, Seth Peterson cottage, International Crane Foundation, and the H.H. Bennett Studio within the screening area.
	Miscellaneous	Ho Chunk tribal lands and the Baraboo Dells Airport are located in the screening area.
Hubbard - East Beaver Dam 138-kV line		
	General Description	New line
	Length (miles)	10
#1	Screening Area (Sq. mi.)	approximately 65
#2	Corridor Sharing Opportunities	Highway 33, county highways, and a railroad right-of-way offer possible sharing opportunities.
#3	Public Lands	Portions of Horicon Marsh and Shaw Marsh wildlife areas and the Wild Goose Trail are within the screening area.
#4	Sensitive Resources	Horicon and Shaw Marsh, Rock River, Pratt Creek, Schulz Creek, Crystal Creek, Park Creek and Beaver Dam River are located in the screening area.
#5	Cultural Resources	Cultural Map of Wisconsin does not identify any sites within the screening area.
	Miscellaneous	

Table RS-2  
Environmental Screening Information for Lines Requiring New Right-of-Way

Shoto-Custer 138-kV line		
	General Description	New line
	Length (miles)	6.9
#1	Screening Area (Sq. mi.)	54.3
#2	Corridor Sharing Opportunities	Existing transmission lines, state, county and local roads provide opportunities for corridor sharing.
#3	Public Lands	Several local parks and the Manitowoc County Airport are located in the project area.
#4	Sensitive Resources	The Manitowoc River, Wet Twin River, several unnamed tributaries and associated wetlands are located in the project area.
#5	Cultural Resources	The WHS database identifies numerous archaeological, architectural and historic sites within the project area.
	Miscellaneous	There is a low to moderate probability of encountering endangered resources.
<b>NOTES:</b>		
#1	Screening Area Width:	For lines 0-5 miles long, screening area width equals length of segment: for lines 5-15 miles long, screening area width equals 5 miles; for lines > 15 miles long, screening area width equals 30% of line length.
#2	Corridor Sharing Opportunities:	Identify dominant corridor types.
#3	Public Lands:	Identify properties by name.
#4	Sensitive Resources:	List major stream crossings, significant topographic features, designated natural areas, etc.
#5	Cultural Resources:	List resources shown on the statewide cultural resources map.

Table RS-3  
Transmission Line Projects on Existing Right-of-Way

Identified need	Lines to be rebuilt/reconducted on existing ROW	Approx. mileage of rebuilt, reconducted or uprated lines	System need year	Projected In-service	Planning zone	Environmental screening provided?
asset renewal	Partial rebuild Nine Mile-Roberts 69-kV line	54.6	2011	2012	2	Yes
relieve overloads or low voltages under contingency	Rebuild M38-Atlantic 69-kV line	22	2011	2013	2	Yes
asset renewal	Rebuild Doylestown-Rio Pumping Station 69-kV line	11.5	2013	2013	3	Yes
asset renewal	Rebuild Russell-McCue 138-kV line	2.7	2013	2013	3	Yes
economics, relieve overloads or low voltages under contingency	Construct Monroe County-Council Creek 161-kV line	17.9	2013	2014	1	Yes
economics, relieve overloads or low voltages under contingency	Uprate Council Creek-Petenwell 138-kV line	32	2013	2014	1	Yes
economics, relieve overloads, asset renewal	Rebuild Paddock-Town Line Road 138-kV line	7.0	2014	2014	3	Yes
relieve overloads under contingency	Rebuild Paddock-Shaw 69-kV line	7.0	2014	2014	3	Yes
relieve overloads under contingency	Rebuild Omro-Berlin 69-kV line	14.2	2014	2014	1	Yes
relieve overloads under contingency	Rebuild Nicholson-Barland 138-kV line	1.4	2014	2014	5	Yes
relieve overloads under contingency	Rebuild Kenosha-Lakeview 138-kV line	4.4	2014	2014	5	Yes
relieve overloads under contingency	Re-conductor Albers-Kenosha 138-kV line	4.0	2014	2014	5	Yes
relieve overloads or low voltages under contingency	Rebuild Straits-Pine River lines 6904/5 for 138 kV and operate at 69 kV	25.3	2014	2014	2	Yes
asset renewal	Rebuild St. Lawrence-Hartford 138-kV line	5.2	2014	2014	5	Yes
asset renewal	Underground cable replacement Redwood-First Avenue 69-kV line	0.8	2015	2015	4	Yes
asset renewal	Rebuild Concord-Cooney 138-kV line	10.9	2014	2015	5	Yes
asset renewal	Partial rebuild Merrill Hills-Waukesha 138-kV line	12.3	2015	2015	5	Yes
asset renewal	Rebuild North Point-Rocky Run 115-kV line	3.7	2016	2016	1	Yes
asset renewal	Rebuild Concord-Rubicon 138-kV line	13	2013	2016	3	Yes
asset renewal	Rebuild Rubicon-Butler Ridge 138-kV line	3.1	2016	2016	3	Yes
asset renewal	Rebuild Butler Ridge-Hartford 138-kV line	2.5	2016	2016	3	Yes
asset renewal	Rebuild Dam Heights-Portage 69-kV line	23.5	2018	2016	3	Yes
asset renewal	Rebuild Darlington-Hillman 138-kV line	18.7	2016	2016	3	Yes
asset renewal	Rebuild Dyckesville-Sawyer 69-kV line	24.8	2016	2016	4	Yes
asset renewal	Rebuild Paris-Albers 138-kV line	12.4	2018	2016	5	Yes
relieve overloads or low voltages under contingency	Uprate Royster to Sycamore 69-kV line	3.35	2016	2016	3	Yes
relieve overloads or low voltages under contingency, replace aging facilities	Rebuild Sun Valley Tap to Oregon 69-kV line	11	2016	2016	3	Yes
asset renewal	Partial rebuild Montello-Wautoma 69-kV line	20	2017	2017	1	Yes

Table RS-3  
Transmission Line Projects on Existing Right-of-Way

Identified need	Lines to be rebuilt/reconducted on existing ROW	Approx. mileage of rebuilt, reconducted or uprated lines	System need year	Projected In-service	Planning zone	Environmental screening provided?
asset renewal	Underground cable replacement Danz-University 69-kV line	2.7	2017	2017	4	Yes
asset renewal	Rebuild Edgewood-St. Martins 138-kV line	7.2	2014	2017	5	Yes
asset renewal	Rebuild Edgewood-Mukwonago 138-kV line	7	2014	2017	5	Yes
asset renewal	Partial rebuild Summit-Merrill Hills 138-kV line	14.7	2017	2017	5	Yes
asset renewal	Rebuild Hillman-Eden 69-kV line	28	2018	2018	3	Yes
relieve overloads or low voltages under contingency, replace aging facilities	Rebuild Colley Road-Brick Church 69-kV line	19.7	2021	2018	3	Yes
asset renewal	Rebuild Pioneer-Sobieski 69-kV line	10.7	2018	2018	4	Yes
asset renewal	Rebuild Sobieski-Bayport 69-kV line	10.2	2018	2018	4	Yes
asset renewal	Rebuild Oak Street-Highway V 69-kV line	6	2016	2018	4	Yes
asset renewal	Rebuild Finger Road-Danz 69-kV line	3.7	2016	2018	4	Yes
accommodate new generation	Convert Forest Junction-Howards Grove and part of Howards Grove-Holland 138-kV lines to double-circuit 345-kV operation	51	2018	2018	4	Yes
asset renewal	Rebuild Plover-Whiting 115-kV line	5.7	2019	2019	1	Yes
asset renewal	Underground cable replacement West Middleton-Stagecoach 69-kV line	4.3	2019	2019	3	Yes
asset renewal	Rebuild Goodman-Caldron Falls 69-kV line	21.3	2019	2019	4	Yes
asset renewal	Rebuild New Holstein-Custer 69-kV line	21.8	2019	2019	4	Yes
asset renewal	Underground cable replacement Lodestar-Erdman 69-kV line	5.3	2019	2019	4	Yes
asset renewal	Underwater cable replacement Straits-McGulpin 69-kV line	6.2	2020	2020	2	Yes
relieve overloads or low voltages under contingency	Construct Cardinal-Blount 138-kV line	5	2020	2020	3	Yes
asset renewal	Rebuild Butte des Morts-Neevin 138-kV line	3	2015	2020	4	Yes
asset renewal	Rebuild Mears Corners-Sunset Point 138-kV line	4.1	2016	2020	4	Yes
asset renewal	Rebuild Woodenshoe-Mears Corners 138-kV line	2.7	2016	2020	4	Yes
asset renewal	Rebuild Wesmark-Manrap 69-kV line	19.7	2016	2020	4	Yes
asset renewal	Rebuild Neevin-Woodenshoe 138-kV line	3.4	2016	2020	4	Yes
asset renewal	Rebuild North Appleton-Butte Des Morts 138-kV line	11.9	2017	2020	4	Yes
asset renewal	Underground cable replacement Erdman-Edgewater 69-kV line	0.7	2021	2021	4	Yes
relieve overloads or low voltages under contingency, economic benefits	Construct 69-kV double-circuit line between McCue and Lamar substations	4.0	>2027	2022	3	Yes
relieve overloads or low voltages under contingency	Rebuild West Middleton-Pheasant Branch 69-kV line with double circuit	5	>2027	2022	3	Yes

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<b>Nine Mile-Roberts 69-kV line partial rebuild</b>	
General Description	Asset renewal of 69-kV line
Length (miles)	54.6
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	There are numerous significant wetlands and waterways along the project route.
#5 Cultural Resources	Due to the undeveloped nature of much of the lands and the number of waterways along this line route, there is a moderate probability of identifying archaeological and historic sites in the vicinity of the corridor.
Miscellaneous	Several rare species are known to exist along the project route.
<b>M38-Atlantic 69-kV line rebuild</b>	
General Description	Rebuild
Length (miles)	22
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Copper Country State Forest
#4 Sensitive Resources	The existing line crosses the Pike, Otter, and Sturgeon Rivers along with associated wetlands and tributaries.
#5 Cultural Resources	Cultural resources may be found in the area in the proximity of the rivers located in the screening area.
Miscellaneous	
<b>Doylestown-Rio Pumping Station 69-kV rebuild</b>	
General Description	asset renewal of 69-kV line
Length (miles)	11.5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	
#4 Sensitive Resources	Grassy Lake Wildlife area, Grassy Lake state natural area, and U.S. Fish & Wildlife Service owned Manthey, Doylestown, Ludwig Waterfowl production areas are located along the project route. The route passes near Grassy Lake Wildlife area, Grassy Lake state natural area, Manthey, Doylestown, and Ludwig Waterfowl production areas and associated wetlands.
#5 Cultural Resources	There are no known archaeological sites listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route. Gilbert Field and Higgins airports are located near the route.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>Russell-McCue 138-kV line rebuild</u>	
General Description	asset renewal of 138-kV line
Length (miles)	2.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route. Lands owned by Rock County and currently in agricultural use are crossed where the line is adjacent to State Highway 14.
#4 Sensitive Resources	The majority of the line route follows state and county highways and the balance is located along agricultural field edges. No waterways or wetlands are identified along the route.
#5 Cultural Resources	The line passes a few historic properties identified in WHS records.
Miscellaneous	
<u>Monroe County-Council Creek 161-kV line</u>	
General Description	Construct line
Length (miles)	20
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	
#4 Sensitive Resources	Elroy-Sparta State Trail, Fort McCoy Barrens State Natural Area The existing line crosses a number of waterways and associated wetland areas, including: Farmers Valley Creek, Silver Creek, Chub Creek, Council Creek, South Fork Lemon weir River, and some unnamed streams.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies historic sites within the cities of Tomah and Sparta, along with the Elroy-Sparta state trail.
Miscellaneous	There is a moderate probability of encountering endangered resources.
<u>Uprate Council Creek-Petenwell 138-kV line</u>	
General Description	Rebuild 138-kV line
Length (miles)	32
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route.
#4 Sensitive Resources	The line crosses Kreyer Creek, Lemonweir River, Beaver Creek, S. Branch Yellow River, Yellow River, the West Petenwell Ditch (trout stream) and numerous unnamed tributaries along with associated wetlands. Much of the route passes through currently undeveloped woodlands and wetlands.
#5 Cultural Resources	Wisconsin Historical Society information identifies several known archaeological sites in the area with one near Necedah crossed by the line route.
Miscellaneous	Due to the proximity of this route to Necedah National Wildlife Refuge, Meadow Valley State Wildlife Area, Mill Bluff State Park, and the numerous streams, wetlands, and undeveloped lands located along this route, there is a moderate to high likelihood of encountering rare species on this route.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

Paddock-Town Line Road 138-kV line rebuild	
General Description	rebuild of 138-kV line
Length (miles)	7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route.
#4 Sensitive Resources	The line crosses un-named tributaries to the Rock River and Racoon Creek and a few associated wetlands but much of the line is located in agricultural lands or along roads.
#5 Cultural Resources	The line passes the Baldwin Cemetery in the Town of Beloit and there are a few historic properties located near the line that are identified in the WHS records.
Miscellaneous	

Paddock-Shaw 69-kV line re-conductor	
General Description	re-conductor of 69-kV line
Length (miles)	7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route.
#4 Sensitive Resources	The Rock River, Racoon Creek, and a few associated wetlands are crossed by the line route. Much of the route is located across agricultural fields and other indeveloped lands. Approximately 1 1/2 miles of the route passes through urban residential areas in the City of Beloit.
#5 Cultural Resources	Cultural resources may be found in the area in the proximity of the rivers located in the screening area.
Miscellaneous	

Omro-Berlin 138-kV line rebuild	
General Description	rebuild of 138-kV line
Length (miles)	14.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The line crosses State of Wisconsin owned glacial habitat restoration area parcels along Highway 91 and also passes along the edge of the Berlin Fen State natural area. No other state owned lands are known.
#4 Sensitive Resources	The line passes near the Rush Lake Important Bird Area and passes adjacent to the Berlin Fen State Natural Area. The route crosses 8 unnamed tributaries to the Fox River and wetlands associated with the streams.
#5 Cultural Resources	The line passes several archaeological sites and historic properties identified in the WHS records.
Miscellaneous	

Table RS-4  
 Environmental Screening Information for Projects on Existing Right-of-Way

<b>Nicholson-Barland 138-kV line rebuild</b>	
General Description	rebuild of 138-kV line
Length (miles)	1.5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The line does not cross public lands but does run near General Mitchell International Airport lands owned by Milwaukee County.
#4 Sensitive Resources	The line crosses a few isolated wetlands where it runs adjacent to a railroad corridor.
#5 Cultural Resources	No cultural resources are known along the line route.
Miscellaneous	

<b>Kenosha-Lakeview 138-kV line rebuild</b>	
General Description	rebuild of 138-kV line
Length (miles)	4.6
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route.
#4 Sensitive Resources	The line crosses Jerome Creek and a few isolated wetlands.
#5 Cultural Resources	No cultural resources are known along the line route.
Miscellaneous	

<b>Albers-Kenosha 138-kV line re-conductor</b>	
General Description	re-conductor of 138-kV line
Length (miles)	4.0
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands are identified along the project route.
#4 Sensitive Resources	The route passes through urban residential, commercial , and industrial settings. It does not cross any streams, wetlands, wooded areas, or other sensitive resource areas.
#5 Cultural Resources	One known archaeological site is located along the line route.
Miscellaneous	



Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>Straits-Pine River 69-kV rebuild</u>	
General Description	asset renewal of 69-kV line to 138-kV standards
Length (miles)	25.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	
#4 Sensitive Resources	The majority of the line is located in the Hiawatha National Forest. The route passes through extensive wetlands and wooded lands, runs adjacent to Chain and Platz lakes, and crosses numerous streams including the Pine River and its tributaries.
#5 Cultural Resources	
Miscellaneous	Based on the location of the line near the lake Michigan shoreline and tributary waterways there is a moderate to high probability of encountering archaeological sites along this route. There is a high probability of encountering rare species along this route.
<u>St. Lawrence-Hartford 138-kV line rebuild</u>	
General Description	asset renewal of 138-kV line
Length (miles)	5.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The route crosses the West Branch Rubicon River and an unnamed Rubicon River tributary as well as associated wetlands. One archaeological site and one historical site is listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.
<u>Redwood-First Avenue 69-kV underwater cable replacement</u>	
General Description	asset renewal of 69-kV line
Length (miles)	0.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The submarine portion of the line crosses Sturgeon Bay.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route due to the project crossing Sturgeon Bay.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

Concord-Cooney 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	10.9
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	Two major rivers - the Rock and Oconomowoc, are crossed by this project route, along with several tributaries and numerous significant wetlands.
#5 Cultural Resources	Several historic and archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a moderate to high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.
Merrill Hills-Waukesha 138-kV line partial rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	12.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses Brandy Brook (a trout stream) and runs adjacent to Pewaukee lakes, and also crosses several significant wetlands.
#5 Cultural Resources	Several historic and archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route due to the waterways, wetlands, and other habitats. Waukesha airport and Waukesha Memorial Hospital heliport are located in the general project area.
North Point-Rocky Run 115-kV line rebuild	
General Description	asset renewal of 115-kV line
Length (miles)	3.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The route crosses an impoundment of the Wisconsin River.
#4 Sensitive Resources	The route crosses extensive wetlands and also crosses an impoundment of the Wisconsin River. Habitat for several rare animal and plant species has been identified along the route.
#5 Cultural Resources	WHS records identify several archaeological and historic resources located near the line route.
Miscellaneous	

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

Concord-Rubicon 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	13
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses numerous waterways including two crossings of the Rock River, Mud Run Creek, and numerous wetlands.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Rubicon-Butler Ridge 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	3.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses the Rubicon River near the upstream end of the Neosho Millpond. The majority of the route crosses through active agricultural lands.
#5 Cultural Resources	No cultural resources are known along the line route.
Miscellaneous	

Butler Ridge-Hartford 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	2.5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses Butler Creek and unnamed tributaries to Butler Creek and the Rubicon River and wetlands associated with the waterways.
#5 Cultural Resources	WHS records identify a few known archaeological sites in the vicinity of the project.
Miscellaneous	

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>Dam Heights-Portage 69-kV line rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	23.5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The route crosses portions of the State owned Pine Island Wildlife area and the Federally owned Leopold Wetland Management District.
#4 Sensitive Resources	Numerous wetlands and waterways exist along this route. One of these waterways is a trout stream.
#5 Cultural Resources	Several archaeological sites are crossed by this line.
Miscellaneous	Numerous rare plant and animal species are known to occur along this route.
<u>Darlington-Hillman 138-kV line rebuild</u>	
General Description	asset renewal of 138-kV line
Length (miles)	18.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands were identified along the line route.
#4 Sensitive Resources	The route crosses the Galena River, Blockhouse Creek, Wood Branch, Vinegar Branch, and 24 unnamed waterways with limited wetlands. The majority of the route is located across active agricultural fields and the likelihood of encountering rare species is low.
#5 Cultural Resources	WHS records do not identify any known archaeological sites along the line route.
Miscellaneous	
<u>Dyckesville-Sawyer 69-kV line rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	24.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The line route crosses numerous significant waterways including Sugar Creek, Olson Creek, the Red River, and the Ahnapee River. The route also crosses numerous wetlands of both large and small scale.
#5 Cultural Resources	
Miscellaneous	The route crosses several archeological sites according to WHS. Several rare species are known to exist along the project route.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>Paris-Albers 138-kV line rebuild</u>	
General Description	asset renewal of 138-kV line
Length (miles)	12.4
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several waterways including the Kilbourn Road Ditch, Pike Creek, and several relatively small wetlands.
#5 Cultural Resources	Several archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low to moderate probability of encountering rare species along this route.
<u>Royster to Sycamore 69-kV line uprate</u>	
General Description	Uprate existing line
Length (miles)	3.4
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands were identified along the route.
#4 Sensitive Resources	Starkweather Creek and associated wetlands are located along the line route.
#5 Cultural Resources	There is one known archaeological sites located along the line route.
Miscellaneous	A portion of the route is located along a bike trail.
<u>Sun Valley Tap-Oregon 69-kV line rebuild</u>	
General Description	Rebuild
Length (miles)	11
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A-Existing transmission line corridor.
#3 Public Lands	Hook Lake and Grass Lake Wildlife Area and Natural Area, USFWS land
#4 Sensitive Resources	Potential crossing of a few unnamed streams, limited wetlands, low potential to encounter threatened and endangered species.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies no historic resources in the vicinity of the existing line
Miscellaneous	Storytown airport, Spiegel, Peterson, and Mc Manus Hoonch-na-shee-kaw fields are all located in the general project area.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>Montello-Wautoma 69-kV line partial rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	20
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The route crosses State owned lands in the White River Fishery area, the French Creek Wildlife Area, and lands along the shore of the Fox River.
#4 Sensitive Resources	
#5 Cultural Resources	The route crosses numerous waterways and associated wetlands. No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.
<u>Danz-University 69-kV underground cable replacement</u>	
General Description	asset renewal of 69-kV line
Length (miles)	2.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	One large wetland complex is crossed by the existing line route.
#5 Cultural Resources	One archeological site is crossed by the route according to WHS.
Miscellaneous	Rare plants are known to occur along this route.
<u>Edgewood-St. Martins 138-kV line rebuild</u>	
General Description	asset renewal of 138-kV line
Length (miles)	7.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Muskego Park Hardwoods is adjacent to the route
#4 Sensitive Resources	Several wetlands are crossed by the existing route.
#5 Cultural Resources	The route crosses several archaeological sites.
Miscellaneous	One historic occurrence of a rare plant occurs, as well as an existing rare plant community, along this route.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

Edgewood-Mukwonago 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses the Mukwonago and Fox Rivers and significant wetlands.
#5 Cultural Resources	The route crosses several archaeological sites.
Miscellaneous	There is a high probability of encountering rare species along this route with the extensive wetlands and rare plant communities occurring along the route.
Summit-Merrill Hills 138-kV line partial rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	14.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several unnamed waterways and associated wetlands and runs adjacent to three lakes.
#5 Cultural Resources	Several archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.
Hillman-Eden 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	28
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The line crosses the State owned Pecatonica State Trail near Belmont.
#4 Sensitive Resources	The route crosses numerous waterways including the Galena River, associated wetlands, and several unnamed trout streams.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<b>Colley Road-Brick Church 69-kV line rebuild</b>	
General Description	Rebuild 69-kV line
Length (miles)	20
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route.
#4 Sensitive Resources	The line route crosses Spring Brook, Little Turtle Creek (Outstanding/Exceptional Water Resource), a few unnamed streams and wetlands associated with the waterways. Most of the line route is located along public roads or in agricultural lands.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies the Clinton Village Hall and the Jefferson Prairie Norwegian Settlement near the existing corridor.
Miscellaneous	Due to the primarily agricultural setting of this line, there is a moderate likelihood of encountering rare species on this route.
<b>Pioneer-Sobieski 69-kV line rebuild</b>	
General Description	asset renewal of 69-kV line
Length (miles)	10.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	Existing transmission line corridor adjacent to railroad corridor for the majority of its length.
#3 Public Lands	No State owned lands are known along the route but the line route does cross several parcels owned by Oconto County including Pioneer Memorial County park.
#4 Sensitive Resources	The route crosses The Oconto and Pensaukee Rivers, Tibbet, Kirchner, Brookside, and Spring Creeks and ten unnamed tributaries. Wetlands along the route are primarily associated waterways. The route crosses through extensive wooded areas. There is a moderate likelihood of encountering rare species along this line.
#5 Cultural Resources	WHS records identify several known archaeological sites near the line route.
Miscellaneous	
<b>Sobieski-Bayport 69-kV line rebuild</b>	
General Description	asset renewal of 69-kV line
Length (miles)	10.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	Existing transmission line corridor adjacent to railroad corridor.
#3 Public Lands	The Mountain Bay State Trail is crossed near the southern terminus of the line. No other state owned lands are known along the line route.
#4 Sensitive Resources	The route crosses the Suamico River, Little Suamico River, Haller Creek, and 12 unnamed tributaries along with wetlands primarily associated with the waterways. The route follows a railroad corridor for its entire length and passes through a variety of land uses including urban, agricultural, woodland and other undeveloped lands. Based on the variety of habitats present there is a moderate likelihood of encountering rare plant or animal species along the route.
#5 Cultural Resources	WHS records identify a few known archaeological sites near the line route.
Miscellaneous	



Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>Oak Street-Highway V 69-kV line rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	6
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several significant waterways including the Fox River and the East River, and associated wetlands.
#5 Cultural Resources	Several archaeological sites are crossed by this line.
Miscellaneous	Several rare plant species are known to have historically occurred on or near this route.
<u>Finger Road-Danz 69-kV line rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	3.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses Baird creek and a small wetland.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low to moderate potential of encountering rare species along this route due to the generally urban setting.
<u>Convert Forest Junction - Howards Grove and part of Howards Grove-Holland 138-kV lines to 345-kV operation</u>	
General Description	Convert 138-kV lines to 345-kV operation
Length (miles)	51
#1 Screening Area (Sq. mi.- length X width)	Existing transmission line corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The line does not cross any large public lands.
#4 Sensitive Resources	The line crosses the Pigeon, Sheboygan, Manitowoc, Mullet, Onion, Meeme, and Branch (OEW) rivers, Mud Creek, and associated wetlands. The Brillion wildlife area is near the line route.
#5 Cultural Resources	There are a few known archaeological sites identified in the WHS records near or along the line route.
Miscellaneous	Sheboygan County Municipal airport is near the line route.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>Plover-Whiting 115-kV line rebuild</u>	
General Description	asset renewal of 115-kV line
Length (miles)	5.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses the Little Plover River, an exceptional resource water and trout stream, the Plover River Flowage, and significant floodplain wetlands.
#5 Cultural Resources	The route crosses several archaeological sites including several burial mounds.
Miscellaneous	There is a high probability of encountering rare species along this route, as many rare species occurrences are documented throughout the route, with significant undisturbed wetland and forest habitats.
<u>West Middleton-Stagecoach 69-kV underground cable replacement</u>	
General Description	Reconductor 69-kV line
Length (miles)	4.28
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses Black Earth Creek, an outstanding resource water, and its associated wetlands, as well as several smaller tributaries.
#5 Cultural Resources	No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route.
<u>Goodman-Caldron Falls 69-kV line rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	21.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The existing route crosses three trout streams, two of which are Outstanding or Exceptional Resource Waters. In addition the Peshtigo River near Caldron Falls and two other streams and associated wetlands are crossed by the route. A number of rare species are identified as occurring along and adjacent to the route.
#5 Cultural Resources	No cultural resources were identified along the route. However, the proximity of the route to a number of waterways raises the possibility of unknown cultural resources occurring.
Miscellaneous	

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>New Holstein-Custer 69-kV line rebuild</u>	
General Description	asset renewal of 69-kV line
Length (miles)	21.8 miles
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses as many as 15 creeks and associated wetlands.
#5 Cultural Resources	The route crosses several archeological sites according to WHS.
Miscellaneous	There is a moderate likelihood of encountering rare species on this route, based on several known occurrences in and adjacent to the project route.
<u>Lodestar-Erdman 69-kV underground cable replacement</u>	
General Description	asset renewal of 69-kV line
Length (miles)	5.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses the Pigeon River, but does not cross any significant wetlands.
#5 Cultural Resources	No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There are historic occurrences of several rare plant species along this route.
<u>Straits-McGulpin 138-kV underwater cable replacement</u>	
General Description	asset renewal of 138-kV line
Length (miles)	6.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The overhead portion of the route crosses wooded areas, while the underground portion crosses under Lake Michigan to McGulpin.
#5 Cultural Resources	There is a moderate - high probability of encountering archaeological resources along the near-shore area of Lake Michigan.
Miscellaneous	There is a high probability of encountering rare species along this route due to the waterways, wetlands, and other habitats.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

<u>Cardinal-Blount 138-kV line</u>	
General Description	Construct 138-kV line
Length (miles)	5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The existing line parallels a recreational trail and golf course.
#4 Sensitive Resources	This line is primarily through a highly urbanized area, much of the existing line is underground. There are a few small wetlands and unnamed streams near the existing overhead portions east of West Middleton.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies a number of historic resources in the vicinity of the existing corridor.
Miscellaneous	
<u>Butte De Morts-Neevin 138-kV line rebuild</u>	
General Description	asset renewal of 138-kV line
Length (miles)	3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The route crosses two unnamed creeks and associated wetlands. One archaeological site is listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.
<u>Mears Corners-Sunset Point 138-kV line rebuild</u>	
General Description	asset renewal of 138-kV line
Length (miles)	4.1
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several unnamed creeks and associated wetlands.
#5 Cultural Resources	No cultural resources are identified along this route, though one archaeological site is in close proximity.
Miscellaneous	There is a moderate probability of encountering rare species along this route due to the waterways and wetlands.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

Woodenshoe-Mears Corners 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	2.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses four unnamed waterways.
#5 Cultural Resources	
Miscellaneous	No historic sites are listed by WHS as occurring along this route. There is a low probability of encountering rare species along this route.

Wesmark-Manrap 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	19.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The line route crosses a number of significant waterways including the Manitowoc River.
#5 Cultural Resources	
Miscellaneous	The route crosses several archeological sites according to WHS. There is a low to moderate possibility of encountering rare species on this route, based on several known occurrences in and adjacent to the project route.

Neevin-Woodenshoe 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	3.4
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses six small, unnamed waterways and one wetland.
#5 Cultural Resources	No archaeological or historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.

Table RS-4  
Environmental Screening Information for Projects on Existing Right-of-Way

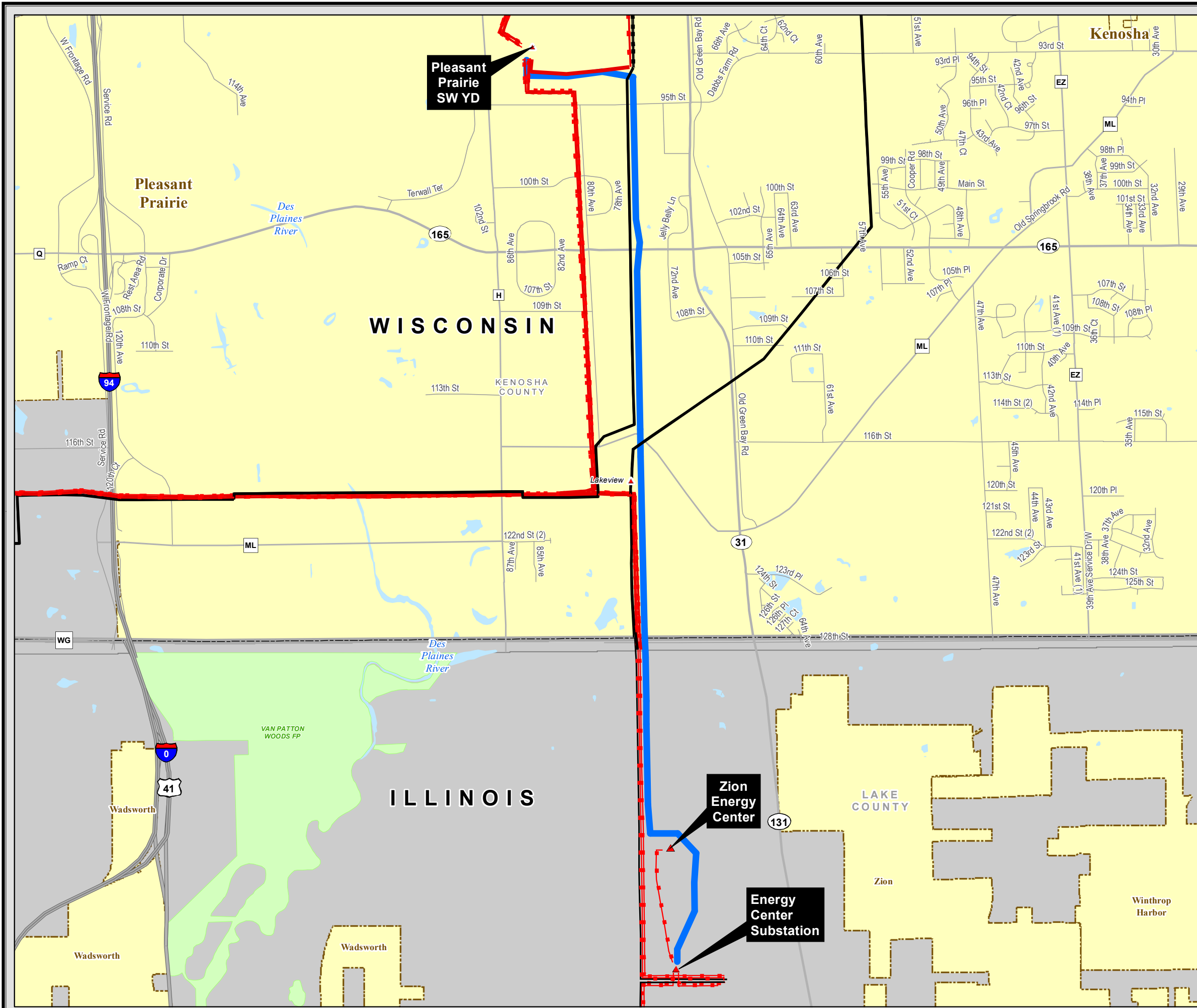
North Appleton-Butte de Morts 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	11.9
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The route crosses numerous waterways and associated wetlands. No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.
Erdman-Edgewater 69-kV underground cable replacement	
General Description	asset renewal of underground 69-kV line
Length (miles)	0.65 (Underground portion only)
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	One unnamed creek is crossed (underneath) by this route.
#5 Cultural Resources	No archaeological or historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.
McCue-Lamar 69-kV double-circuit line	
General Description	Add second circuit
Length (miles)	3.5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor along railroad.
#3 Public Lands	No state-owned lands were identified along the route.
#4 Sensitive Resources	There are no significant waterways or wetlands crossed along the route.
#5 Cultural Resources	There are no archaeological sites located along the line route identified in the WHS database.
Miscellaneous	There is a low likelihood of encountering rare species on this route.

Table RS-4  
 Environmental Screening Information for Projects on Existing Right-of-Way

West Middleton - Pheasant Branch 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Limited publically owned lands are located along the line route.
#4 Sensitive Resources	Black Earth Creek (an outstanding exceptional resource water), Pheasant Branch and scattered wetlands are present along the project route.
#5 Cultural Resources	The WHS records identify a few archaeological sites along the line route.
Miscellaneous	There is a low - moderate probability of encountering rare species. This line passes primarily through urban lands.

**NOTES:**

- |                                    |  |
|------------------------------------|--|
| #1 Screening Area Width:           | For projects on existing rights-of-way the screening area consists of the current location and lands immediately adjacent. |
| #2 Corridor Sharing Opportunities: | Identify dominant corridor types.  |
| #3 Public Lands:                   | Identify properties by name.   |
| #4 Sensitive Resources:            | List major stream crossings, significant topographic features, designated natural areas, etc.                              |
| #5 Cultural Resources:             | List resources shown on the statewide cultural resources map.  |



**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Pleasant Prairie-  
Zion Energy Center 345kV Line*



**Transmission Facilities**

- Transmission Sites
  - ▲ Substation/Switching Yard
- Transmission Lines
 

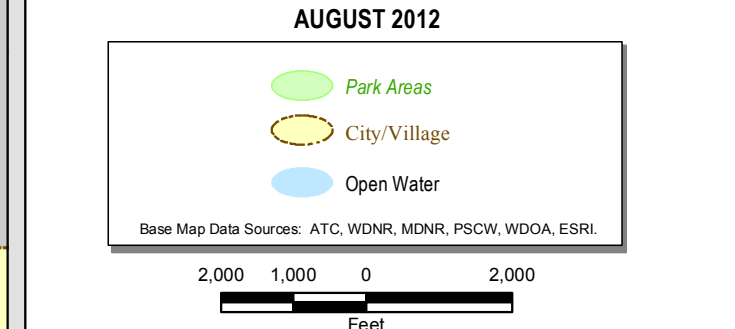
138 kV	345 kV
Single Circuit	Single Circuit
Double Circuit	Double Circuit

Approved Route

**AUGUST 2012**

- Park Areas
- City/Village
- Open Water

Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.

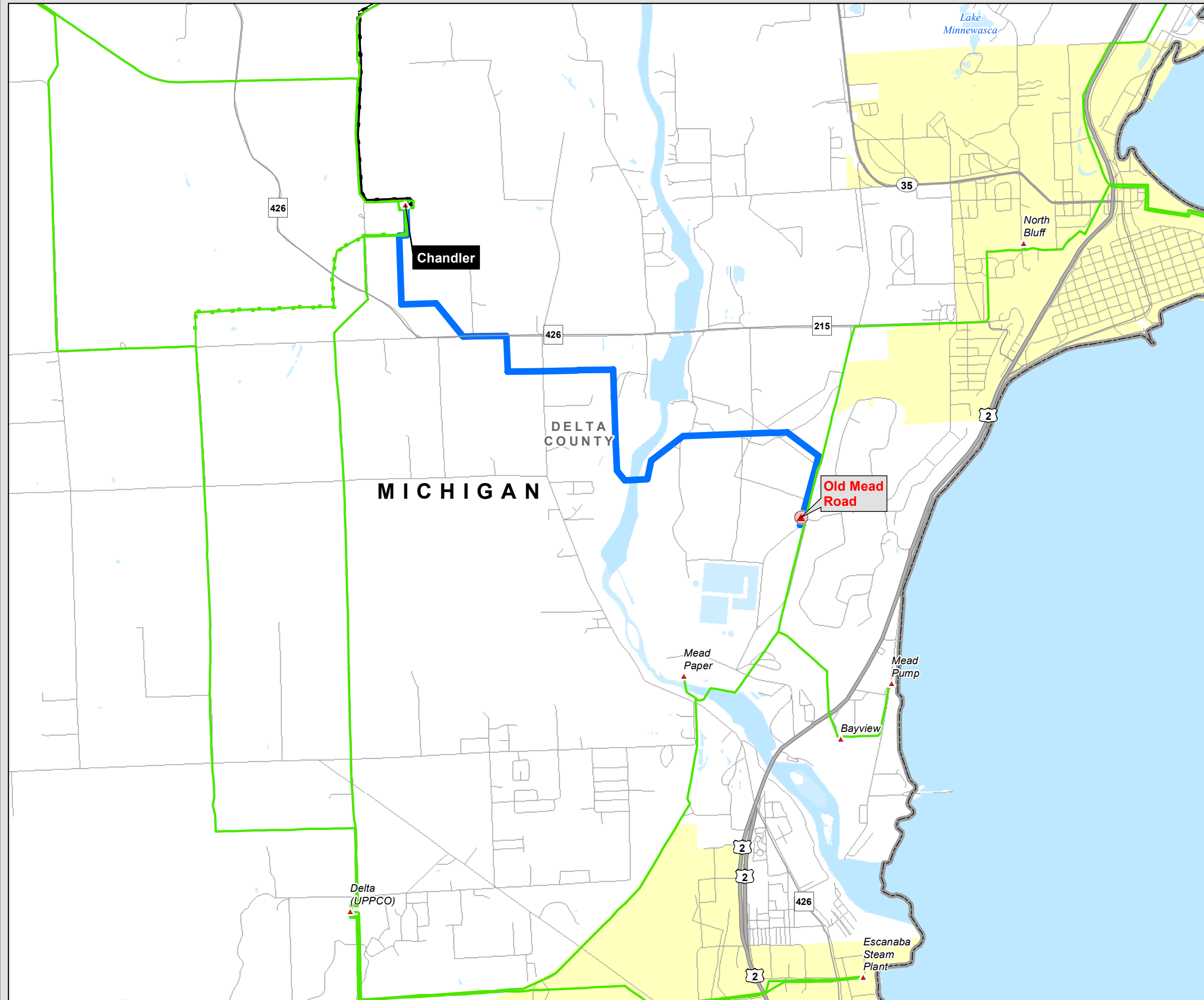


The information presented in this map document is advisory and is intended for reference purposes only. American Transmission Company owned and operated facility locations are approximate.





**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
Construct Old Mead Road to Chandler  
Double Circuit 138kV Lines



**Transmission Facilities**

**Transmission Sites**

- ▲ Substation/Switching Yard

**Transmission Lines**

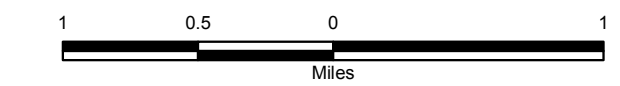
69 kV	138 kV	345 kV
Single Circuit	Single Circuit	Single Circuit
Double Circuit	Double Circuit	Double Circuit

- ▲ Proposed Substation
- ▬ Proposed Route

**AUGUST 2012**

- Park Areas
- City/Village
- Open Water

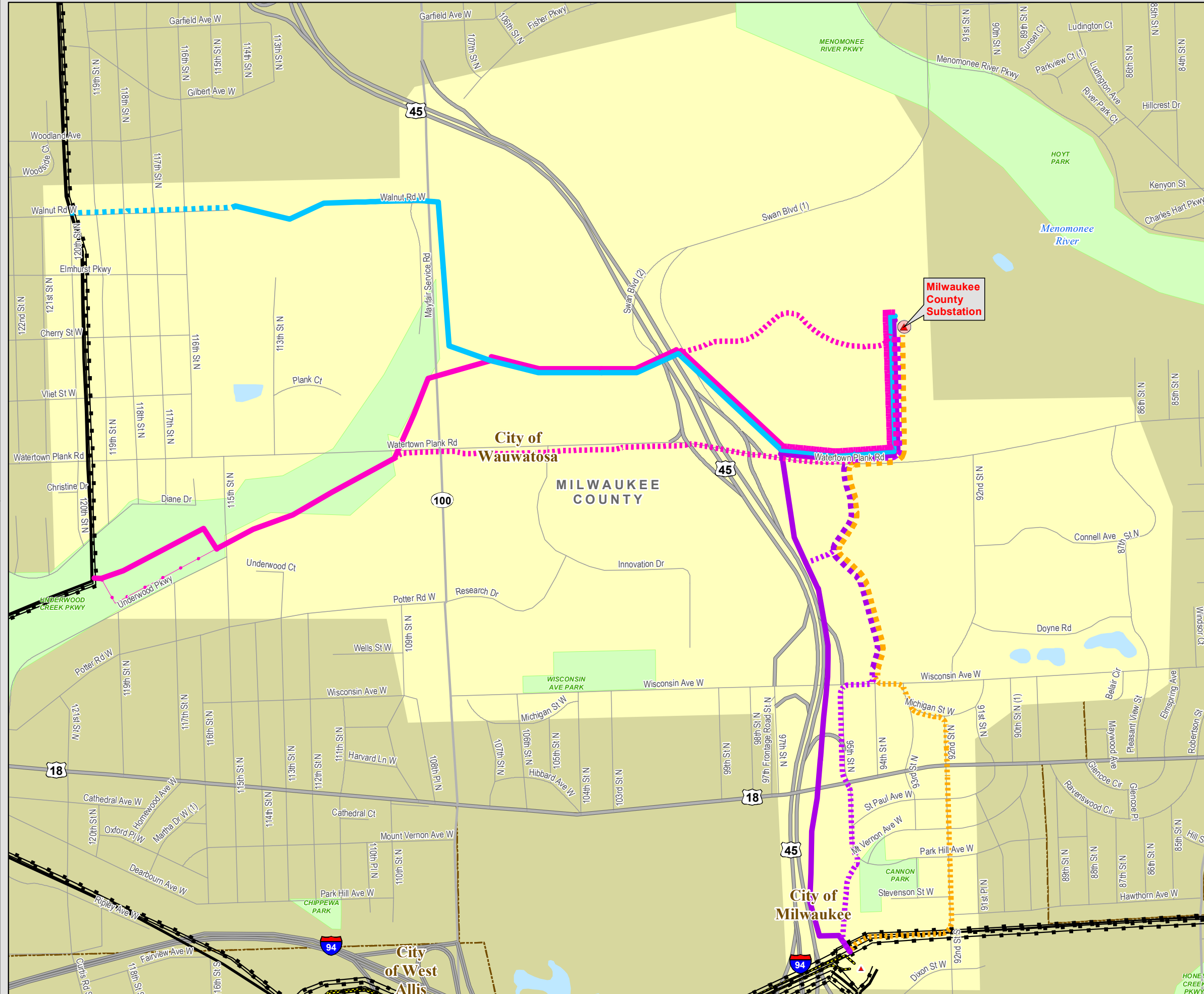
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, ESRI.



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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
Construct Double Circuit 138 kV Line to  
Serve Milwaukee County T-D Interconnection



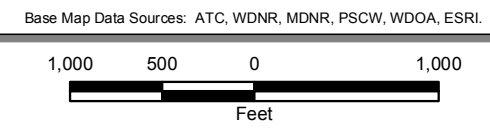
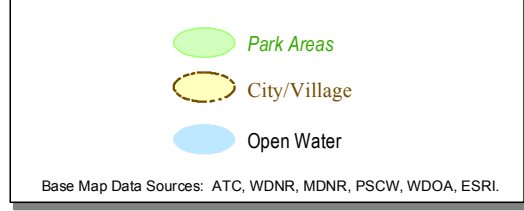
**Transmission Facilities**

- Transmission Sites
  - ▲ Substation/Switching Yard
- Transmission Lines
  - 138 kV
  - Single Circuit
  - Double Circuit

- Route A (Overhead)
- Route A (Underground)
- Route B (Overhead)
- Route B Alternative (Overhead)
- Route B (Underground)
- Route C HWY 45 (Overhead)
- Route C 95th St. (Underground)
- Route D (Underground)

Study Area

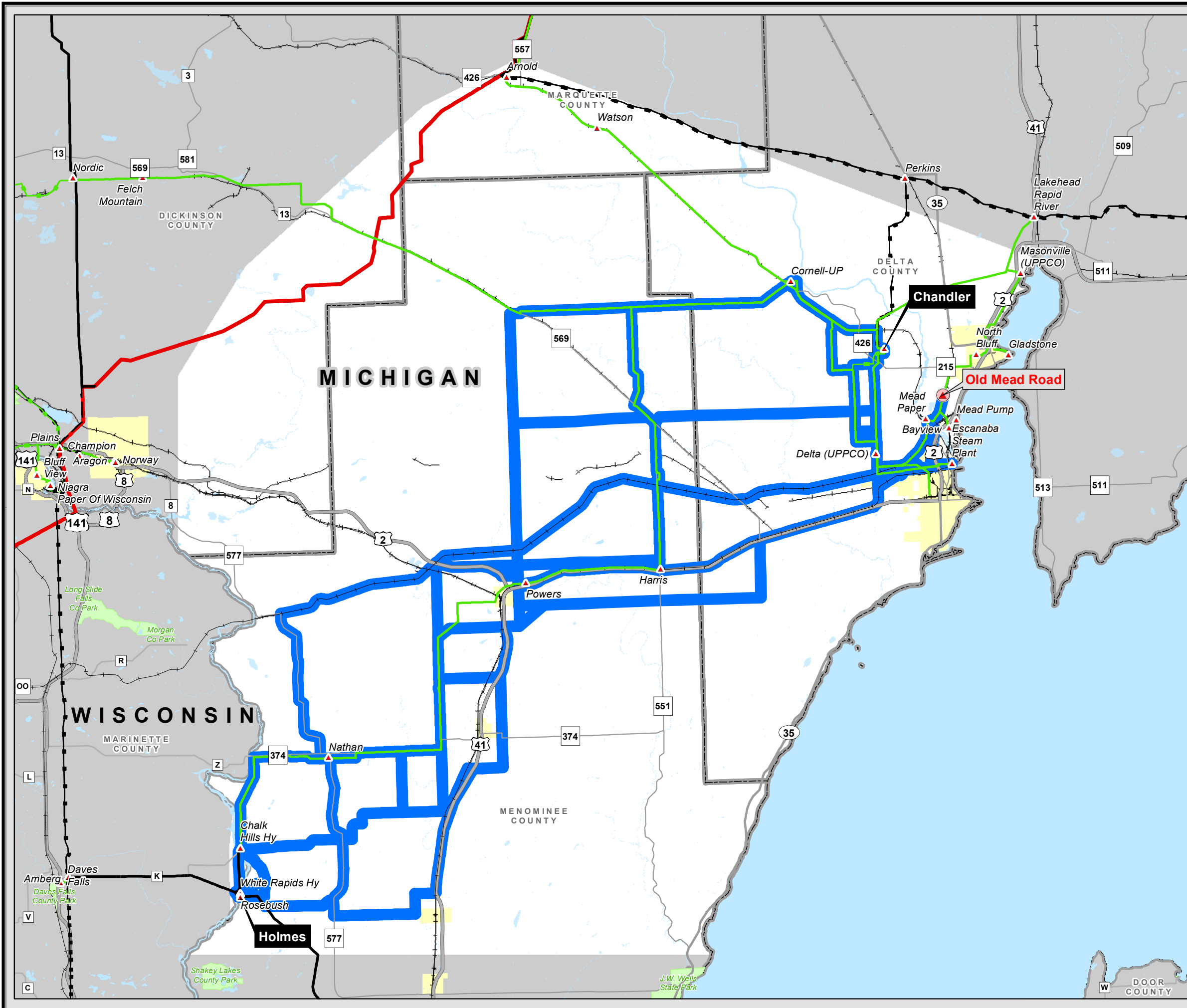
**AUGUST 2012**



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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
Bay Lake: Holmes to Escanaba  
138kV Two Circuit Project



**Transmission Facilities**

- Transmission Sites
- ▲ Substation/Switching Yard

**Transmission Lines**

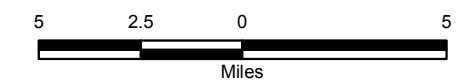
- |                         |                          |                          |
|-------------------------|--------------------------|--------------------------|
| 69 kV<br>Single Circuit | 138 kV<br>Single Circuit | 345 kV<br>Single Circuit |
| 69 kV<br>Double Circuit | 138 kV<br>Double Circuit | 345 kV<br>Double Circuit |

- ▲ Proposed Substation
- Blue Line Potential Corridors
- Grey Oval Project Area

**AUGUST 2012**

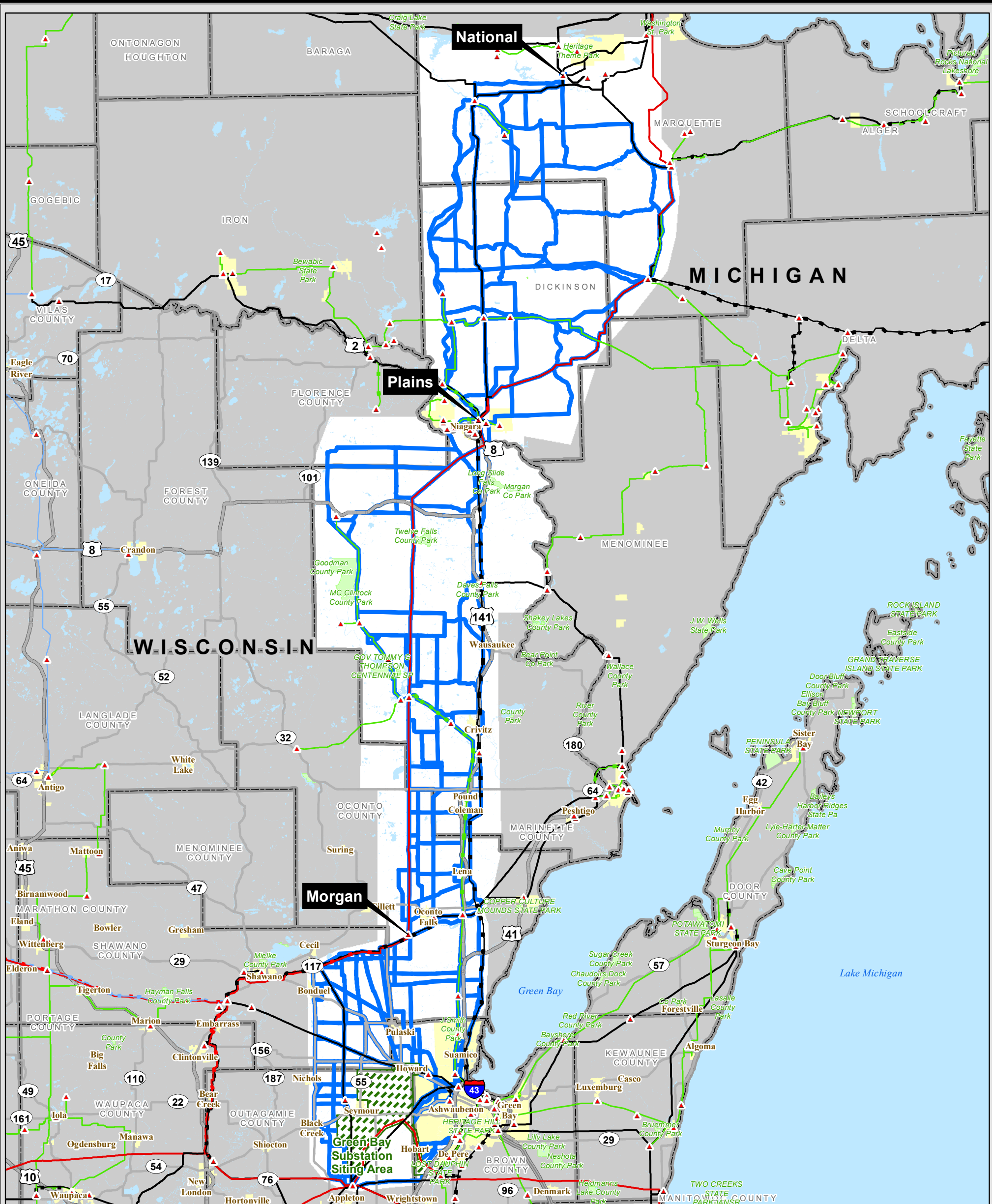
- Green Oval Park Areas
- Yellow Oval City/Village
- Blue Oval Open Water

Base Map Data Sources: ATC, WDNR, MDNR, PSCW, ESRI.



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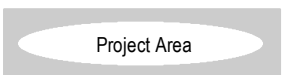
**Transmission Facilities**

- Transmission Sites
- ▲ Substation/Switching Yard

**Transmission Lines**

- 69 kV Single Circuit
- 69 kV Double Circuit
- 115 kV Single Circuit
- 138 kV Single Circuit
- 138 kV Double Circuit
- 345 kV Single Circuit
- 345 kV Double Circuit

- Green Bay Substation Siting Area
- Potential Corridors



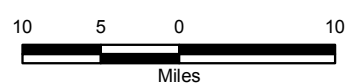
**AUGUST 2012**

**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY  
Bay Lake:  
Green Bay-Morgan-Plains-National  
345kV Line**



- Park Areas
- City/Village
- Open Water

Base Map Data Sources: ATC, WDNR, MDNR, PSCW, ESRI.

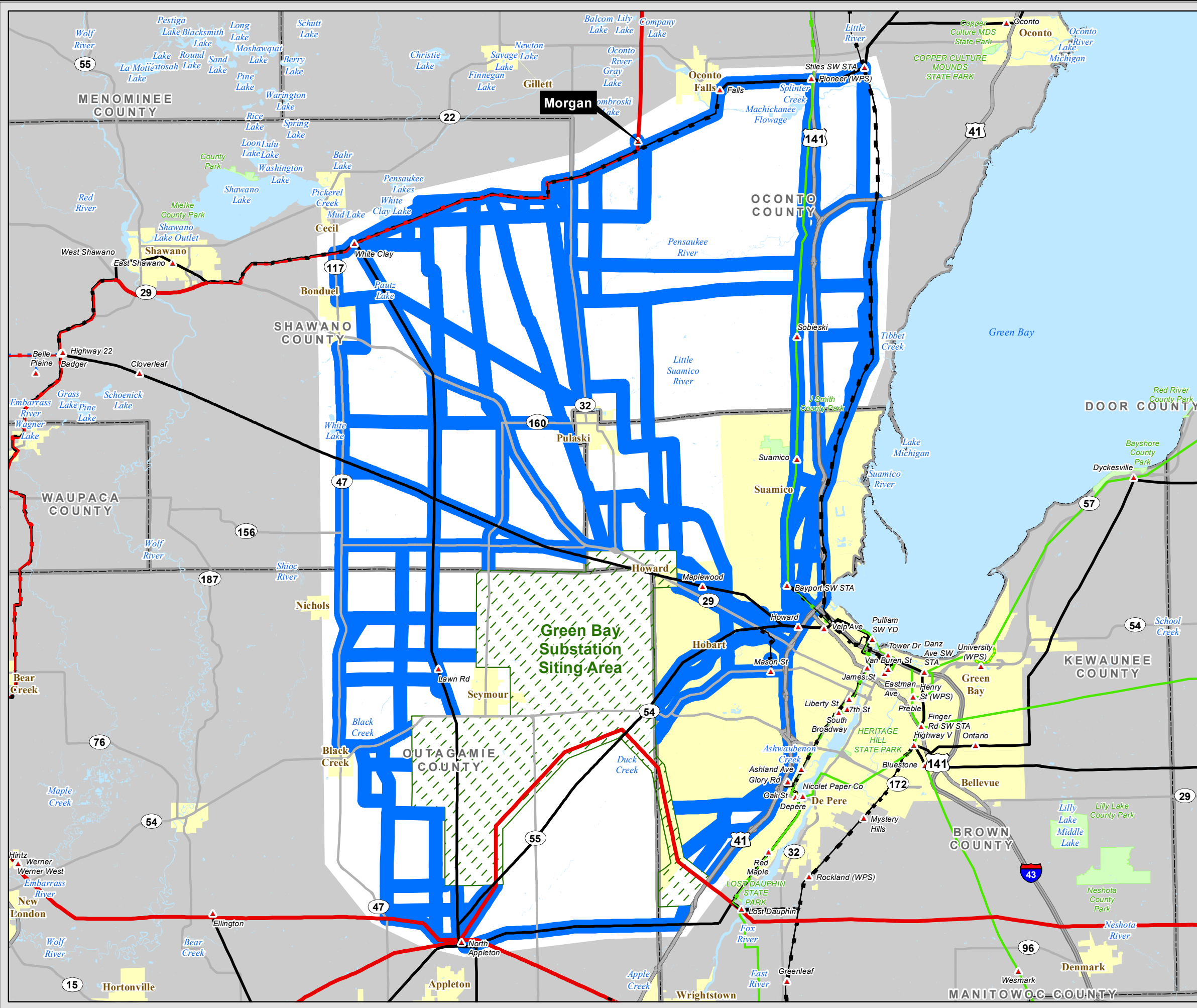


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# TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY

Bay Lake: Green Bay to Morgan 138kV Line



**Transmission Facilities**

**Transmission Sites**

- ▲ Substation/Switching Yard

**Transmission Lines**

69 kV Single Circuit	138 kV Single Circuit	345 kV Single Circuit
69 kV Double Circuit	138 kV Double Circuit	345 kV Double Circuit

- Green Bay Substation Siting Area
- Potential Corridors
- Project Area

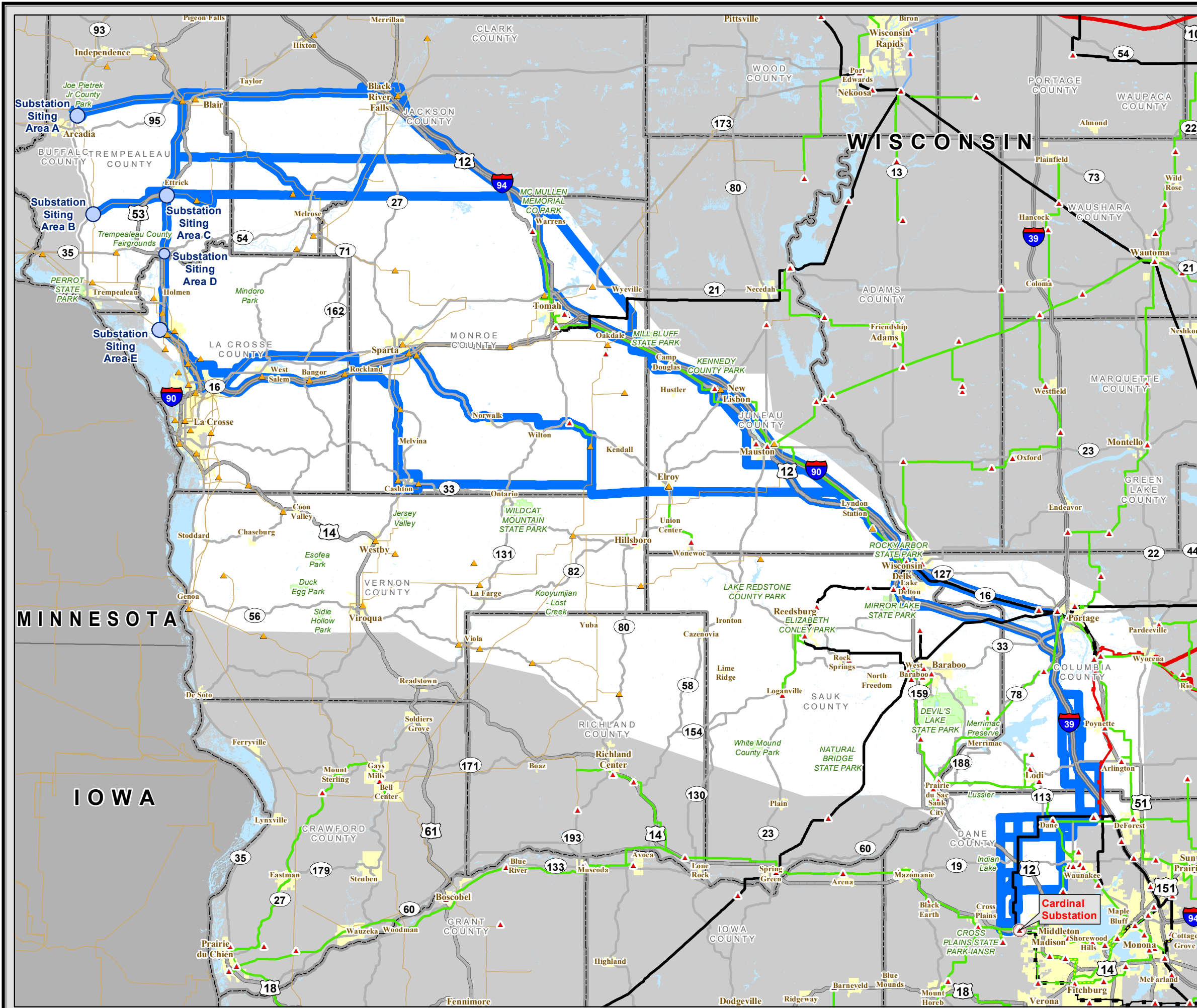
**AUGUST 2012**

- Park Areas
- City/Village
- Open Water

Base Map Data Sources: ATC, WDNR, MDNR, PSCW, ESRI.

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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Badger Coulee 345kV Line*



**Transmission Facilities**

- Transmission Sites
  - ▲ Substation/Switching Yard
  - ▲ Non-ATC Substation
- Transmission Lines
  - 69 kV: Single Circuit (green), Double Circuit (light green)
  - 115 kV: Single Circuit (blue)
  - 138 kV: Single Circuit (black), Double Circuit (grey)
  - 345 kV: Single Circuit (red), Double Circuit (dark red)
  - Non-ATC Transmission Line (orange)

- Potential Substation Siting Area (blue circle)
- Preliminary Routes (blue line)
- Study Area (grey oval)

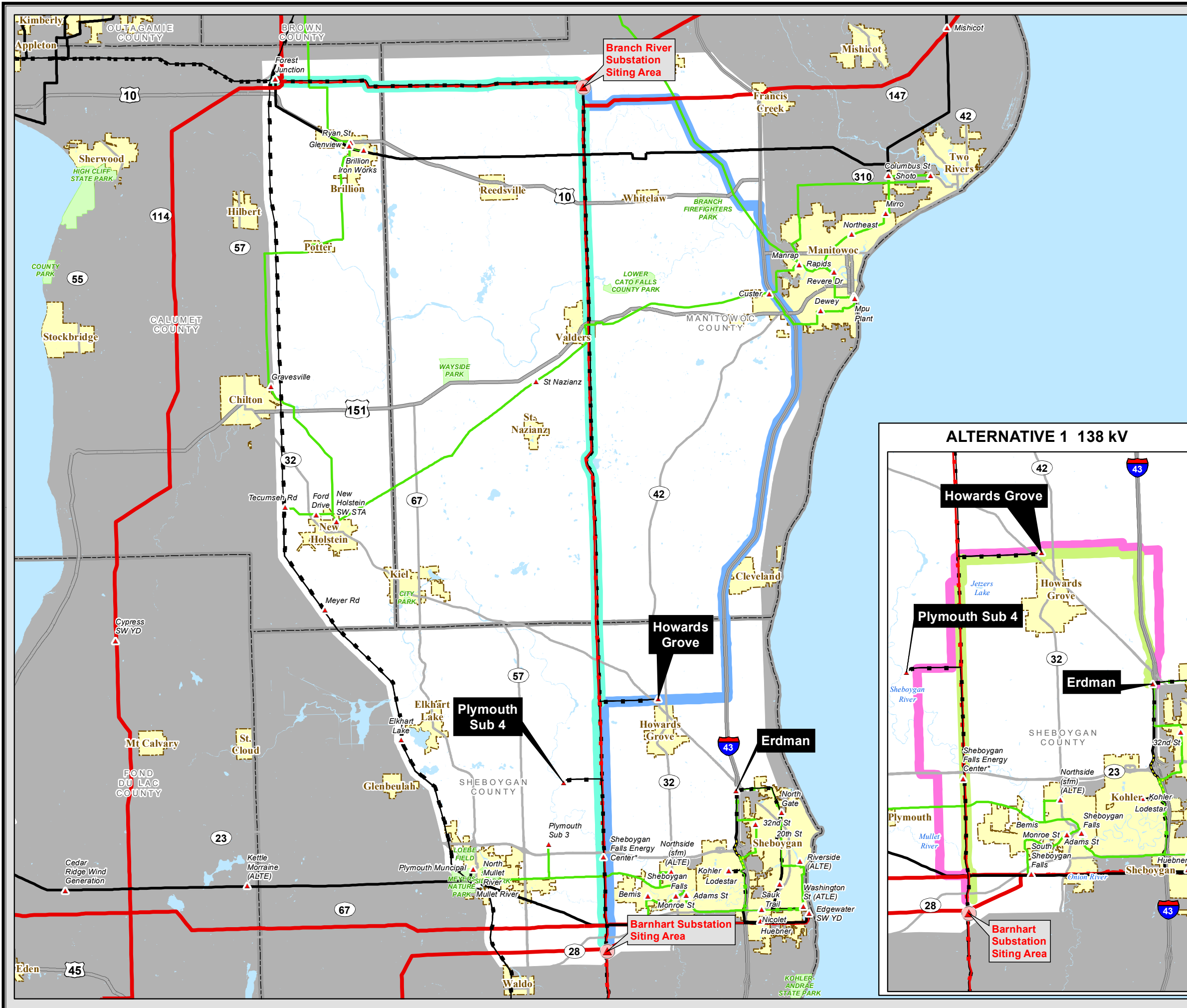
**AUGUST 2012**

- Park Areas (green oval)
- City/Village (yellow oval)
- Open Water (light blue oval)

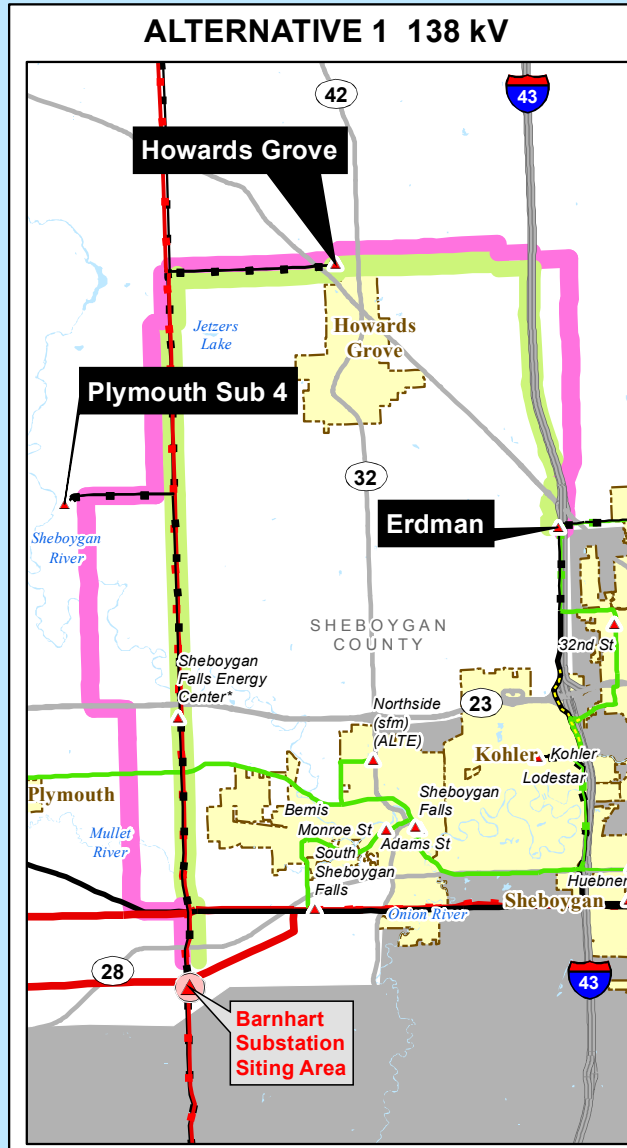
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.

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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Erdman-Howards Grove-  
Plymouth #4-Barnhart 138kV Line*



**Transmission Facilities**

- Transmission Sites
  - ▲ Substation/Switching Yard
- Transmission Lines
 

69 kV	138 kV	345 kV
Single Circuit	Single Circuit	Single Circuit
Double Circuit	Double Circuit	Double Circuit

**ROUTE ALTERNATIVES**

- Proposed Substation
- Alternative 1 345 kV
- Alternative 1A 138 kV
- Alternative 1B 138 kV
- Alternative 2 345 kV
- Study Area

**AUGUST 2012**

- Park Areas
- City/Village
- Open Water

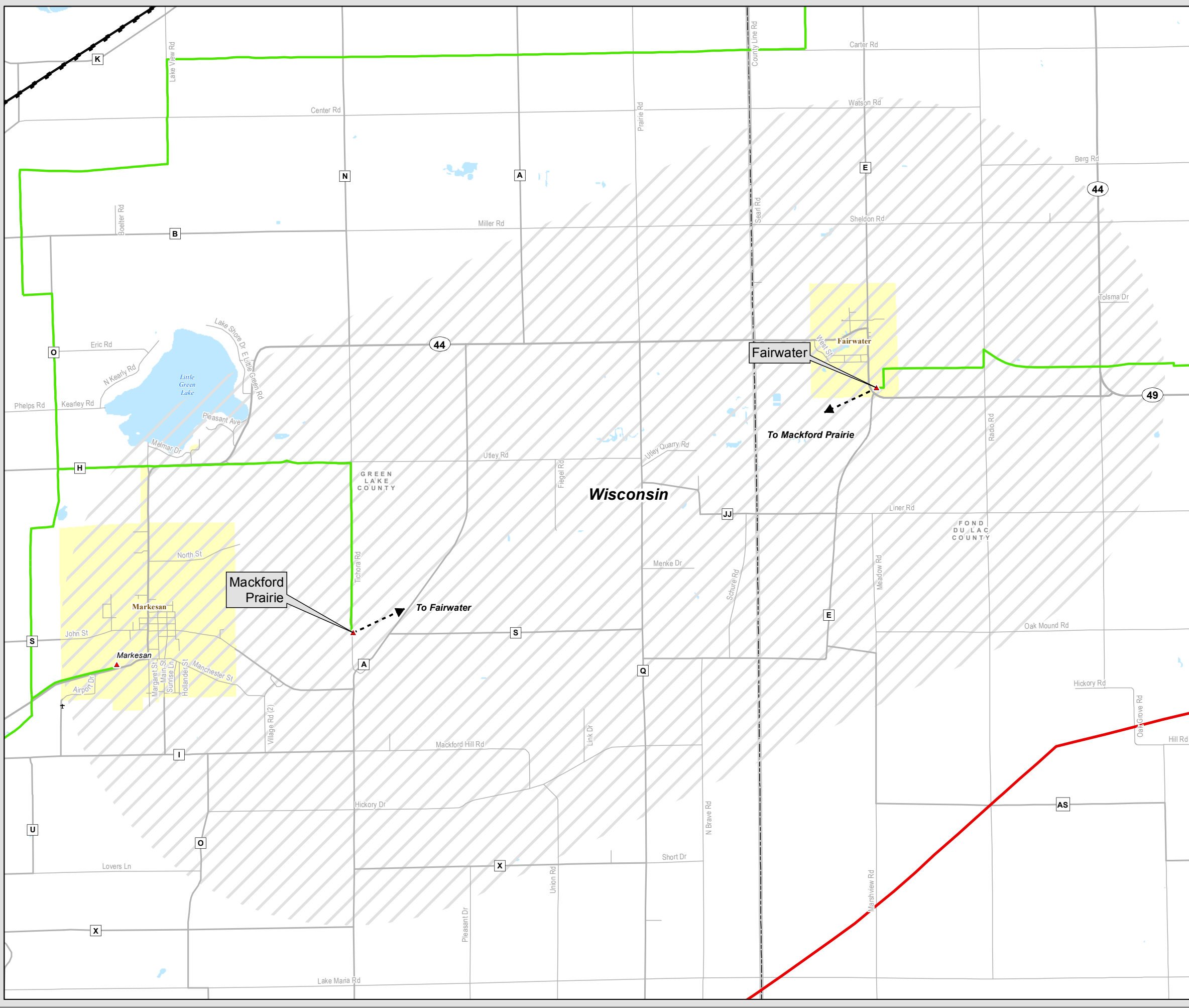
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.

4 2 0 4  
Miles

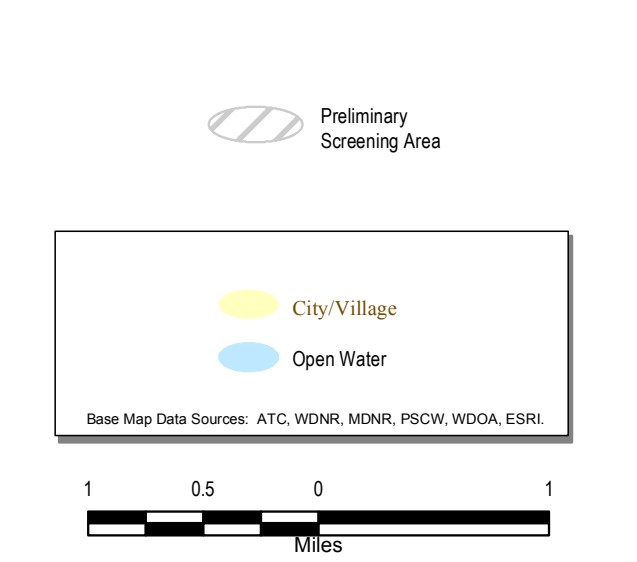
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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Fairwater-Mackford Prairie 69 kV Line*



- Transmission Facilities**
- Transmission Sites
  - ▲ Substation/Switching Yard
- Transmission Lines**
- |                      |                       |                       |
|----------------------|-----------------------|-----------------------|
| 69 kV Single Circuit | 138 kV Single Circuit | 345 kV Single Circuit |
| 69 kV Double Circuit | 138 kV Double Circuit | 345 kV Double Circuit |

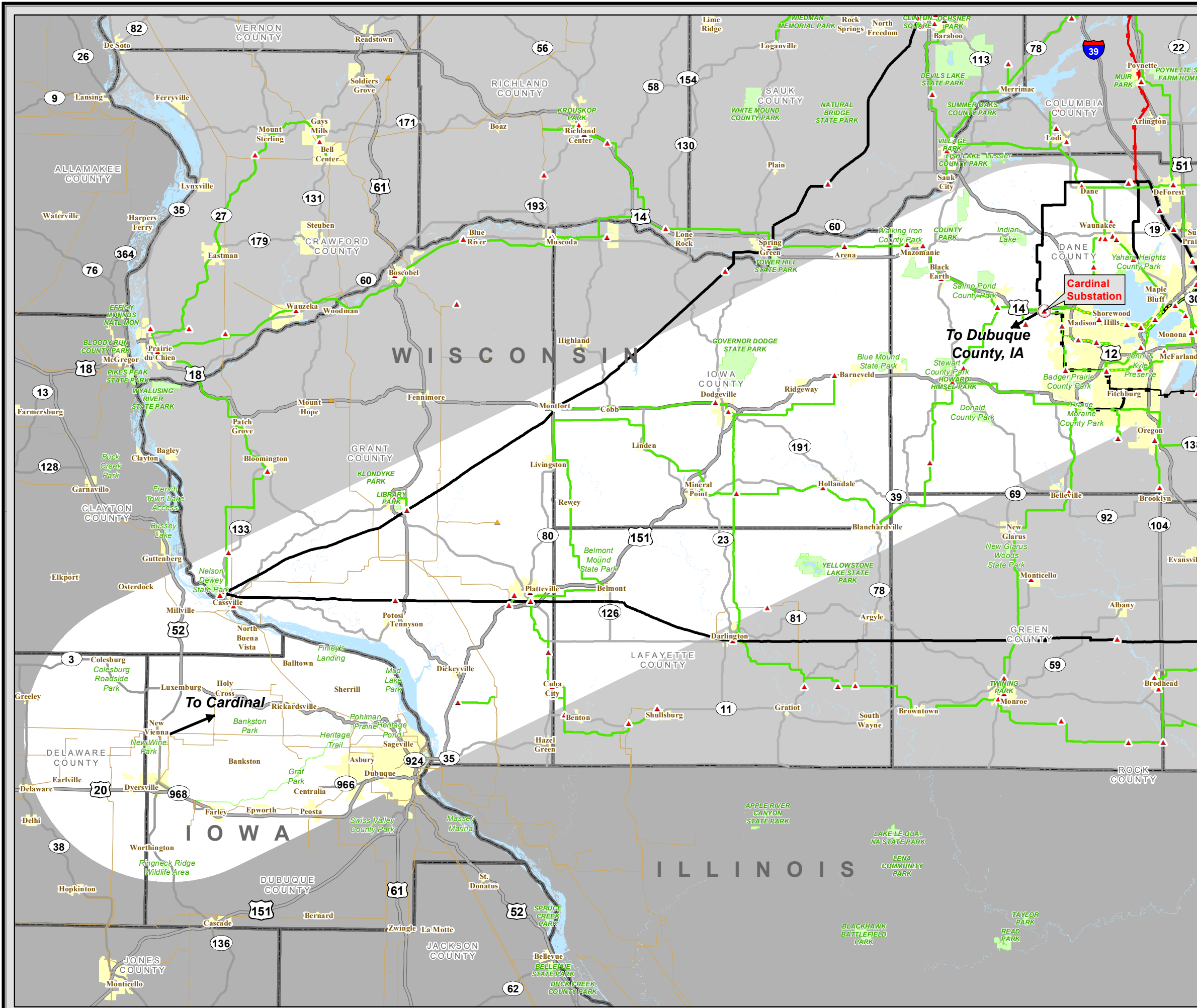


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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Cardinal Bluffs 345kV Line*



**Transmission Facilities**

**Transmission Sites**

- ▲ Substation/Switching Yard
- ▲ Non-ATC Substation

**Transmission Lines**

- 69 kV Single Circuit (Green line)
- 69 kV Double Circuit (Green line with double bars)
- 138 kV Single Circuit (Black line)
- 138 kV Double Circuit (Black line with double bars)
- 345 kV Single Circuit (Red line)
- 345 kV Double Circuit (Red line with double bars)
- Non-ATC Transmission Line (Orange line)

- ▲ Proposed Substation
- Preliminary Screening Area (Grey shaded area)

**AUGUST 2012**

- Park Areas (Green shaded area)
- City/Village (Yellow shaded area)
- Open Water (Blue shaded area)

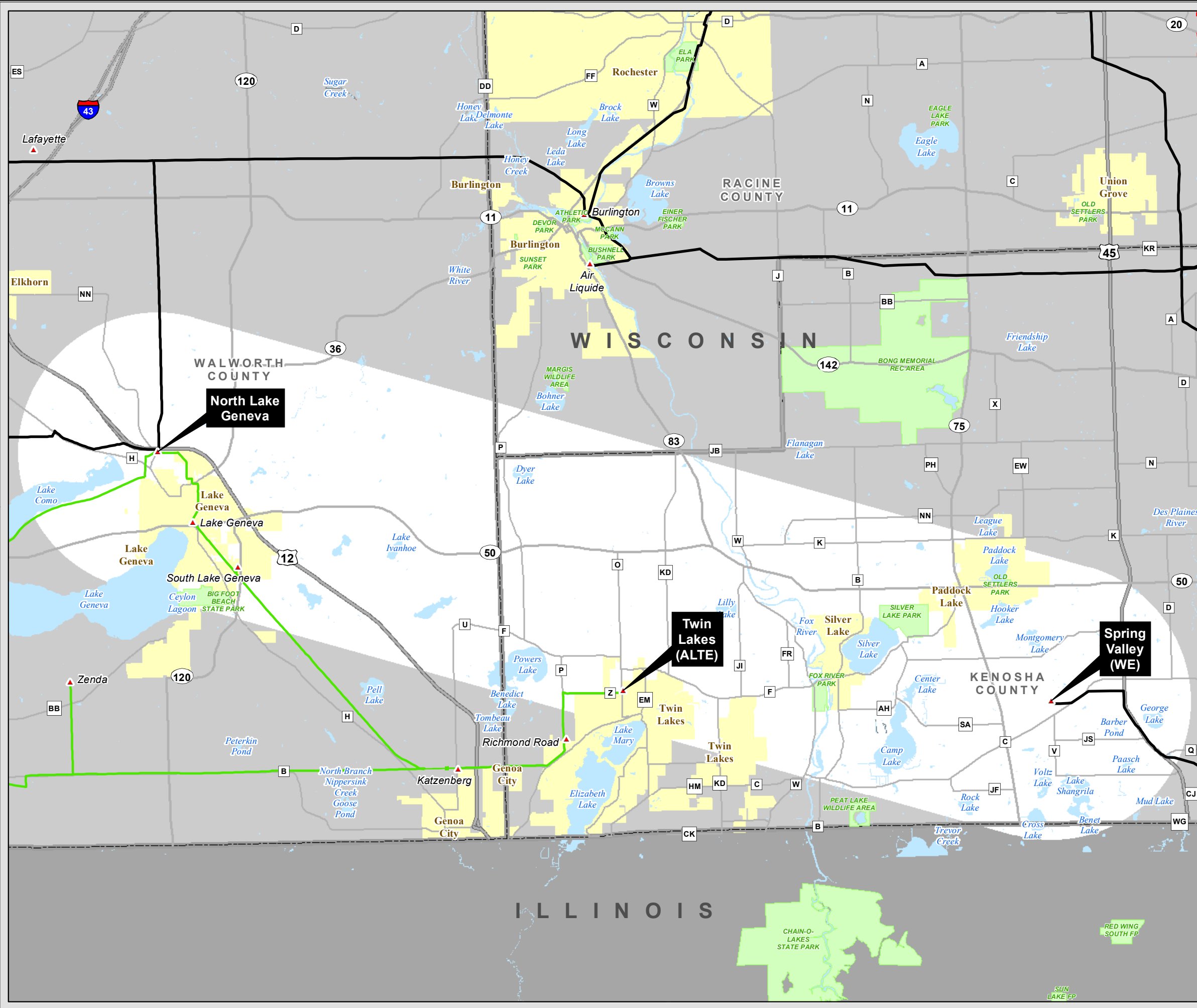
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
Construct Spring Valley-North Lake Geneva 138kV Line  
Construct Twin Lakes 69kV Line



**Transmission Facilities**

Transmission Sites  
▲ Substation/Switching Yard

**Transmission Lines**

69 kV Single Circuit	138 kV Single Circuit	345 kV Single Circuit
69 kV Double Circuit	138 kV Double Circuit	345 kV Double Circuit

**Preliminary Screening Area**  
AUGUST 2012

- Park Areas
- City/Village
- Open Water

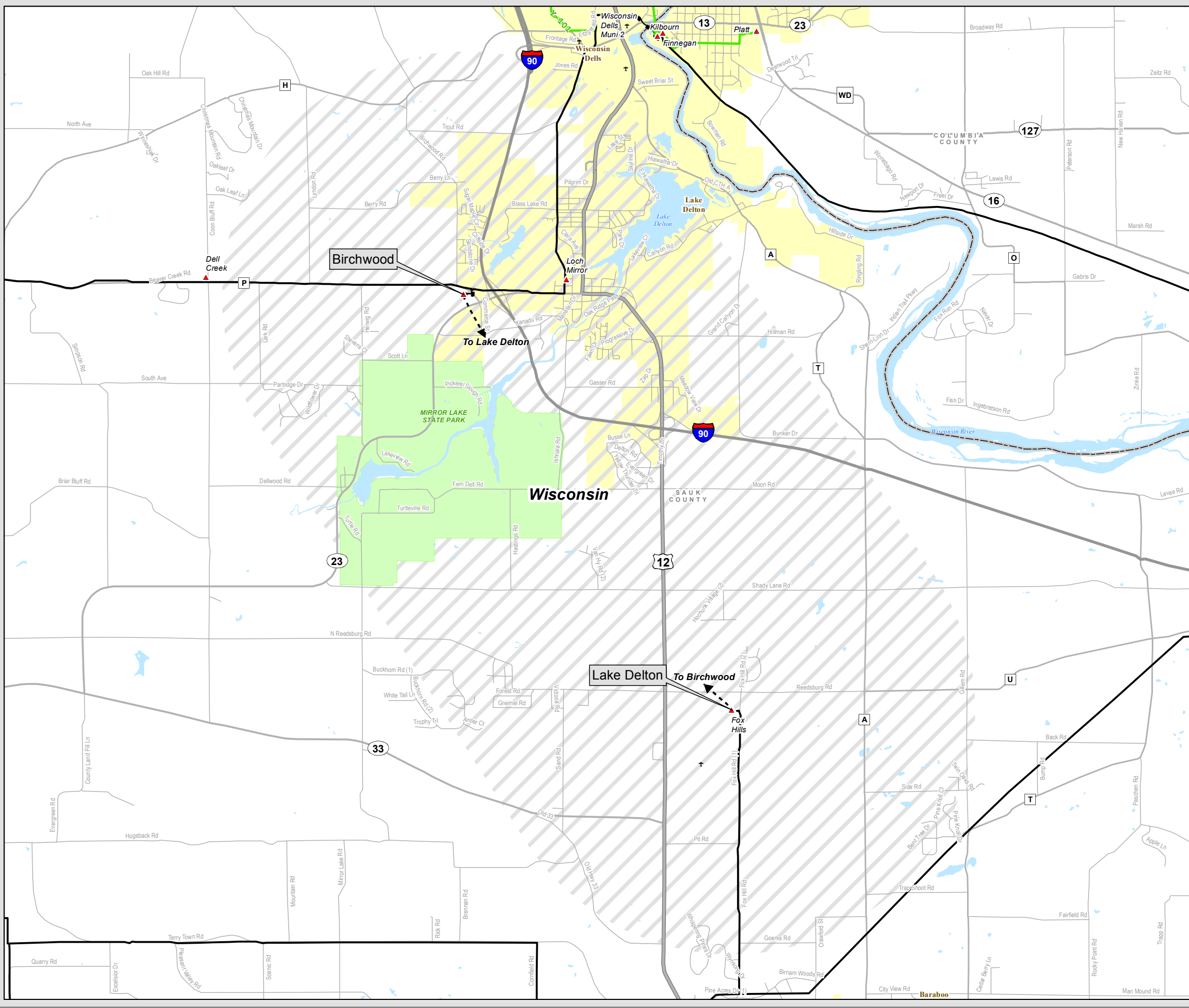
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.

2 1 0 2  
Miles

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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Lake Delton-Birchwood 138kV Line*



**Transmission Facilities**

- Transmission Sites
- ▲ Substation/Switching Yard

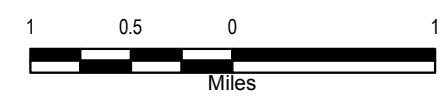
**Transmission Lines**

- 69 kV Single Circuit
- 69 kV Double Circuit
- 138 kV Single Circuit
- 138 kV Double Circuit

- Preliminary Screening Area

- City/Village
- Park Areas
- Open Water

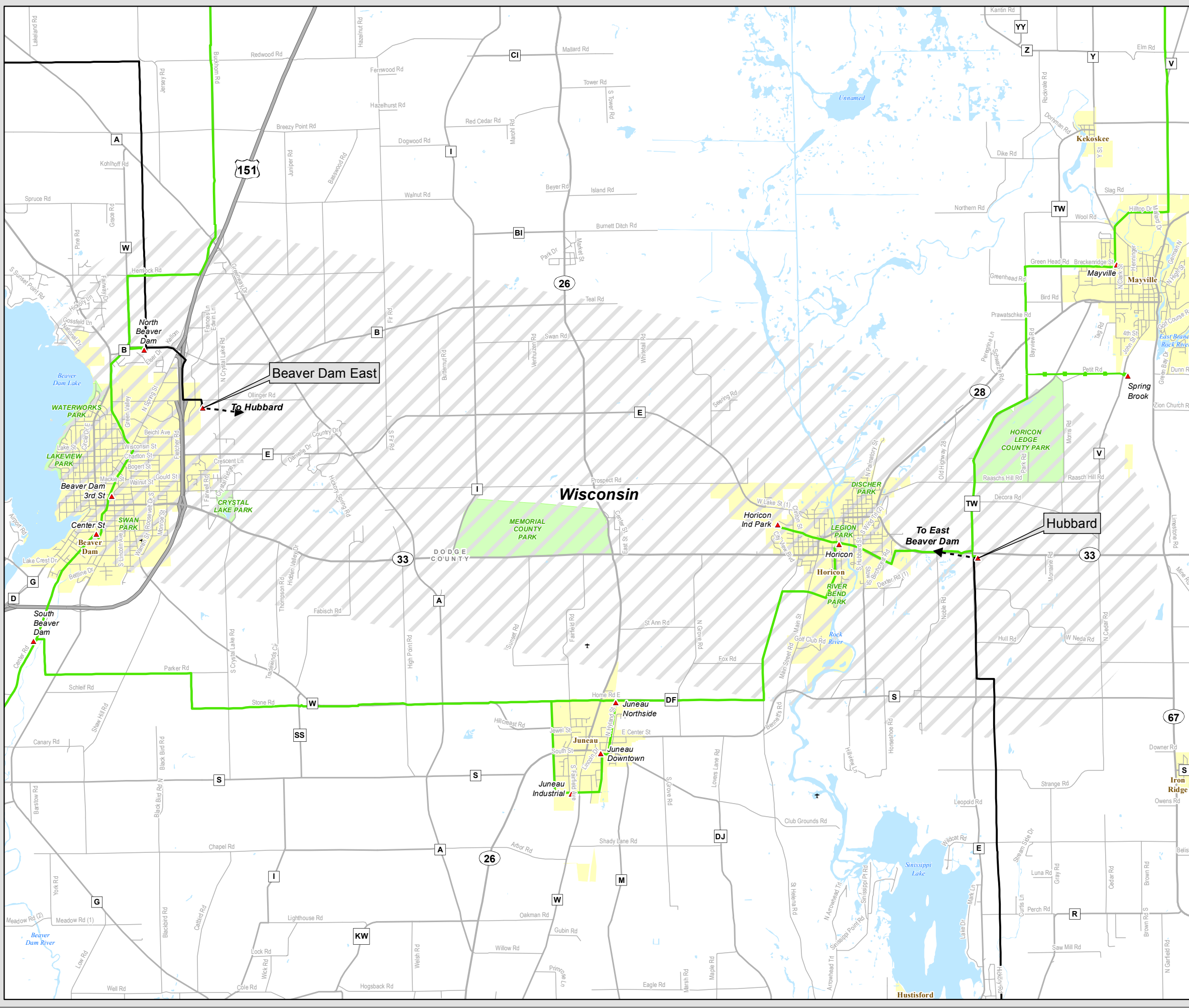
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Hubbard-East Beaver Dam 138kV Line*



**Transmission Facilities**

- Transmission Sites
- ▲ Substation/Switching Yard

**Transmission Lines**

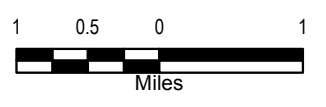
- 69 kV Single Circuit
- 138 kV Single Circuit
- 69 kV Double Circuit
- 138 kV Double Circuit

○ Preliminary Screening Area

City/Village
  Park Areas

Open Water

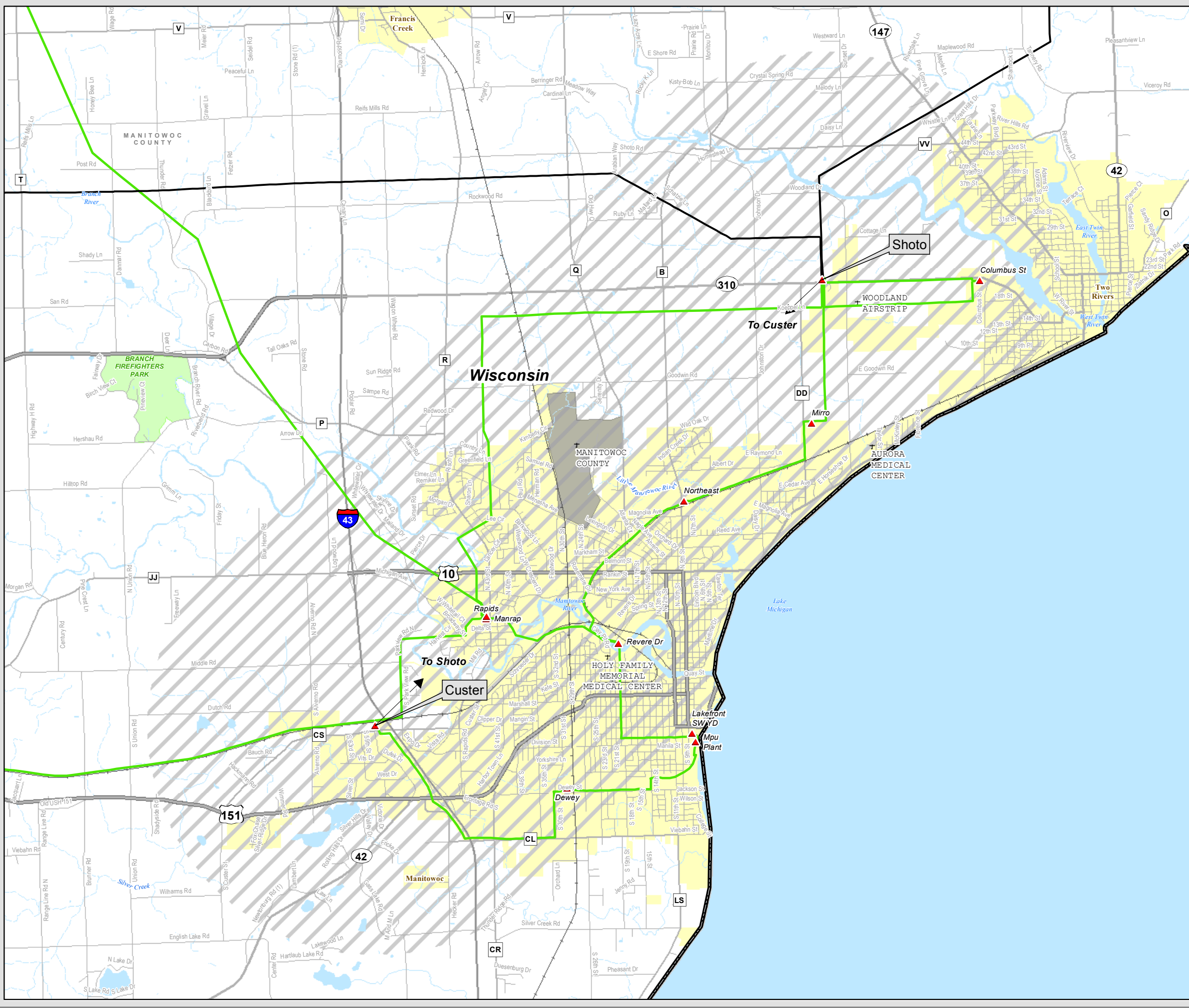
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Shoto to Custer 138 kV Line*



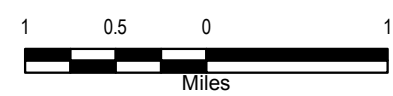
- Transmission Facilities**
- Transmission Sites
  - ▲ Substation/Switching Yard

- Transmission Lines**
- 69 kV Single Circuit (solid green line)
  - 69 kV Double Circuit (dashed green line)
  - 138 kV Single Circuit (solid black line)
  - 138 kV Double Circuit (dashed black line)

- ▲ Proposed Substation
- ▨ Preliminary Screening Area

- City/Village (yellow oval)
- Park Areas (green oval)
- Open Water (blue oval)

Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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