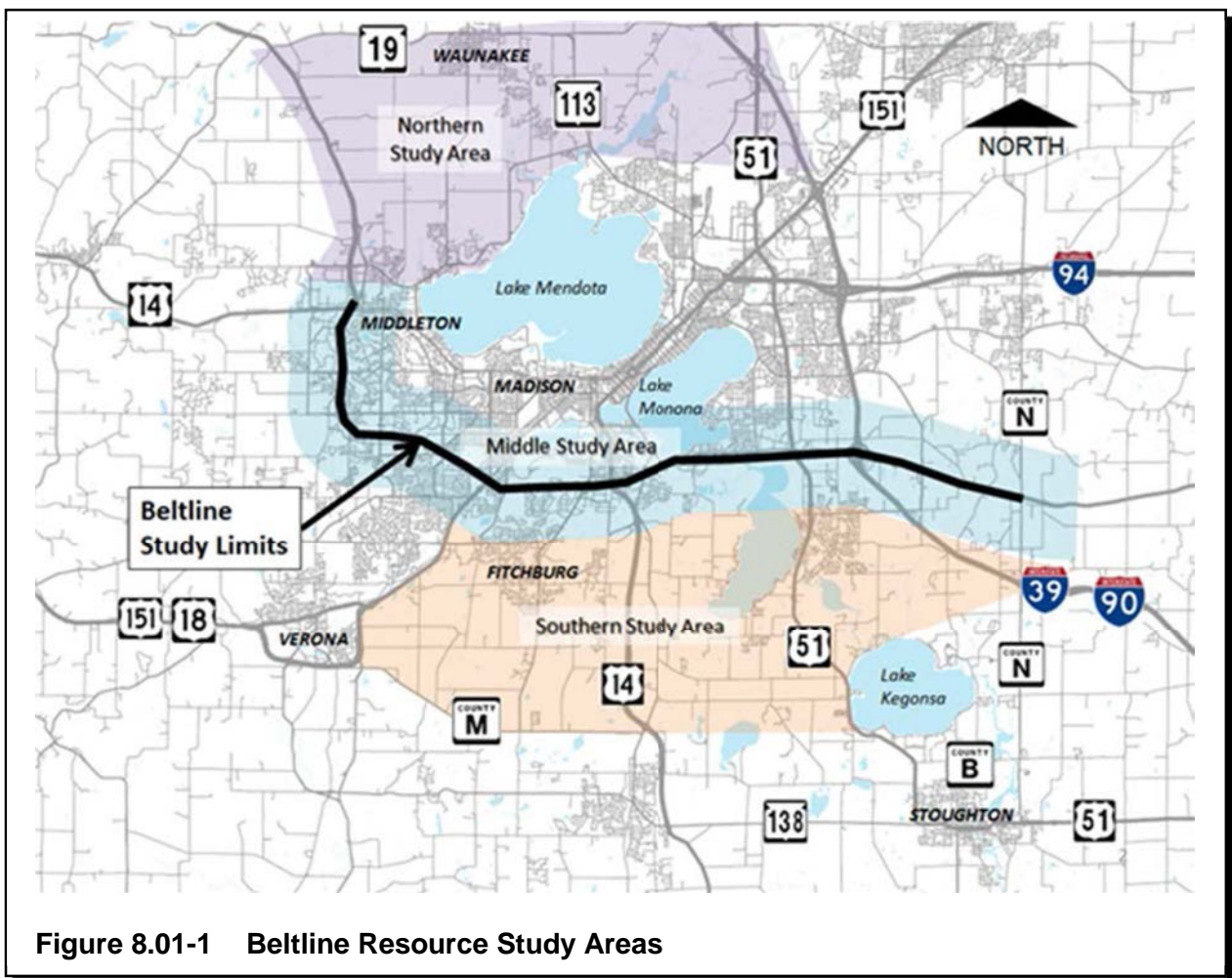


8.01 INTRODUCTION

Dane County and its natural environment (wetlands, uplands, savanna/forests, waterways, geology, springs, cultural resources, and wildlife) are well-studied and documented on a state, regional, and local level. This section summarizes some of the resources in the study area of potential transportation alternatives.

The Beltline PEL study area is divided into the three resource study areas illustrated in Figure 8.01-1. These are broad areas that will be reviewed for potential opportunities for improvements as part of the study. The northern area is generally defined as that area between US 12 and I-39 north of Lake Mendota and south of Waunakee. The middle area encompasses the existing Beltline corridor and adjacent area. The south area encompasses approximately the area between US 18/151 and I-39.

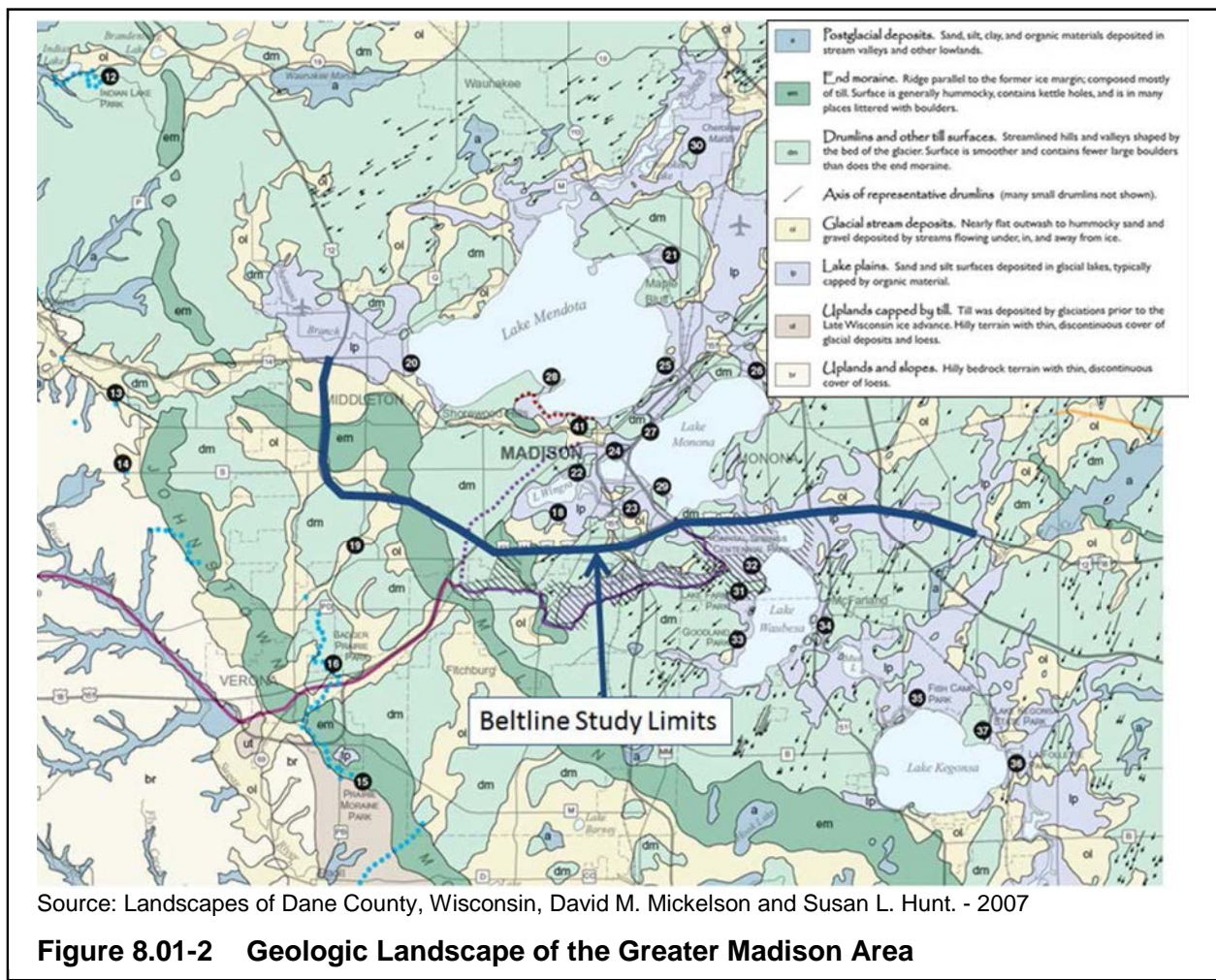


A. Formative Landscape

The majority of Dane County, including the PEL study area, lies within the Southeast Glacial Plains ecological landscape that contains some of the country's best examples of continental glacial activity. Drumlins, eskers, kettle lakes, kames, ground and end moraines, and other glacial features are evident throughout the area stretching from the long "ridge" known as the Kettle Moraine in eastern Wisconsin

to the Johnston Moraine in western Dane County near Mineral Point Road/County S and Timber Lane intersection, about 4 miles west of the Beltline. These glacial features formed between the Green Bay and Lake Michigan lobes (glacial fronts) during the Wisconsin Glaciation. In addition to the large and well-protected Kettle Moraine State Forest in eastern Wisconsin, many small kettle lakes and river systems such as the Yahara Chain of Lakes developed.

A map illustrating these and other unique geologic features and a summary of the Geologic Landscape of the Greater Madison Area are shown in Figure 8.01-2.



Many of the landscape's natural wetlands have been drained; however, many remain. The largest single wetland in the Southeast Glacial Plains ecological landscape is Horicon Marsh (a significant wetland area east of and beyond the study area). Within Dane County, the Yahara River system, its chain of lakes, and associated wetlands are regionally significant areas that are managed by a series of dams on three of the lakes (Mendota, Waubesa, and Kegonsa). The water quality and quantity (water management) influence recreation on the lakes, resource and habitat protection/restoration, and development. An aerial view of the existing Beltline crossing of the Yahara River is shown in Figure 8.01-3.

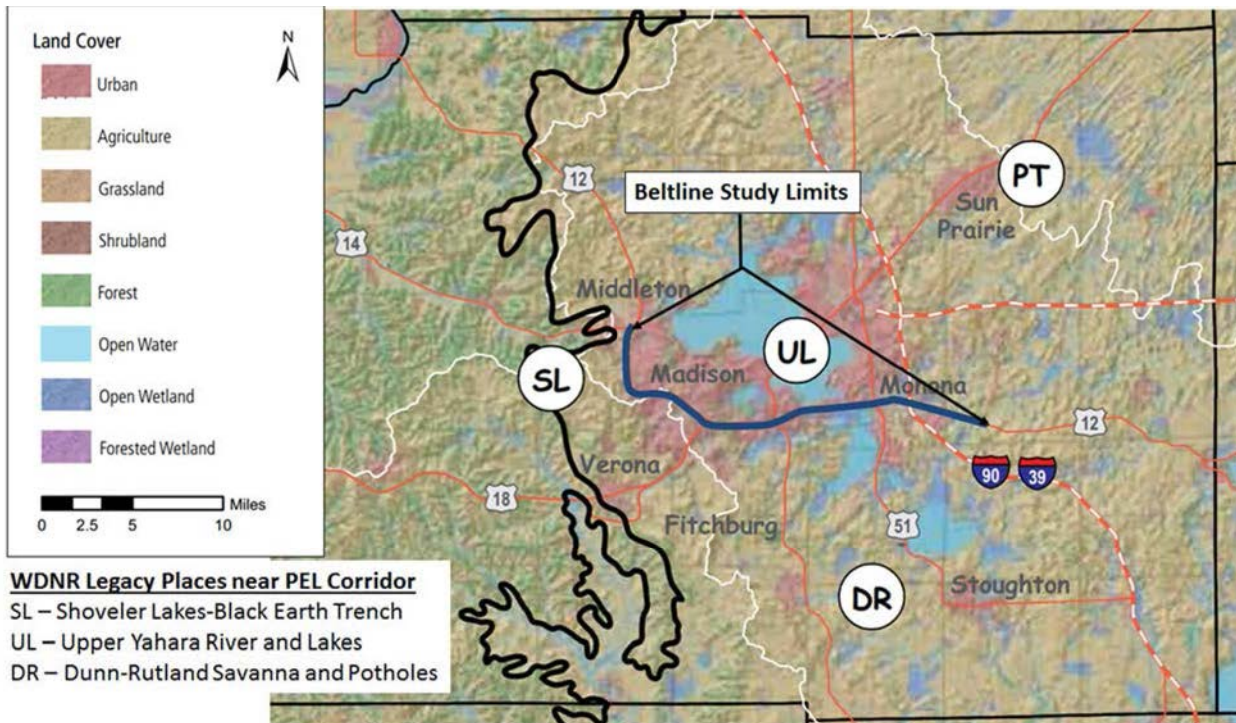


Figure 8.01-3 Existing Beltline Crossing of Yahara River

B. WDNR Legacy Places

The Wisconsin Department of Natural Resources (WDNR), *Wisconsin Land Legacy Report: An inventory of places to meet Wisconsin's future conservation and recreation needs, 2006* identifies 229 Legacy Places that the public and WDNR staff believe are highest priority for conservation. The WDNR states on its Web site that collectively the Legacy Places are what "makes Wisconsin Wisconsin." Together they identify places that are critical to meet Wisconsin's conservation and outdoor recreation needs over the next 50 years and are used as a guide as Wisconsin purchases properties for conservation.

Figure 8.01-4 shows the general locations of the three Legacy Places in Dane County near the PEL study area that are described in the following paragraphs.

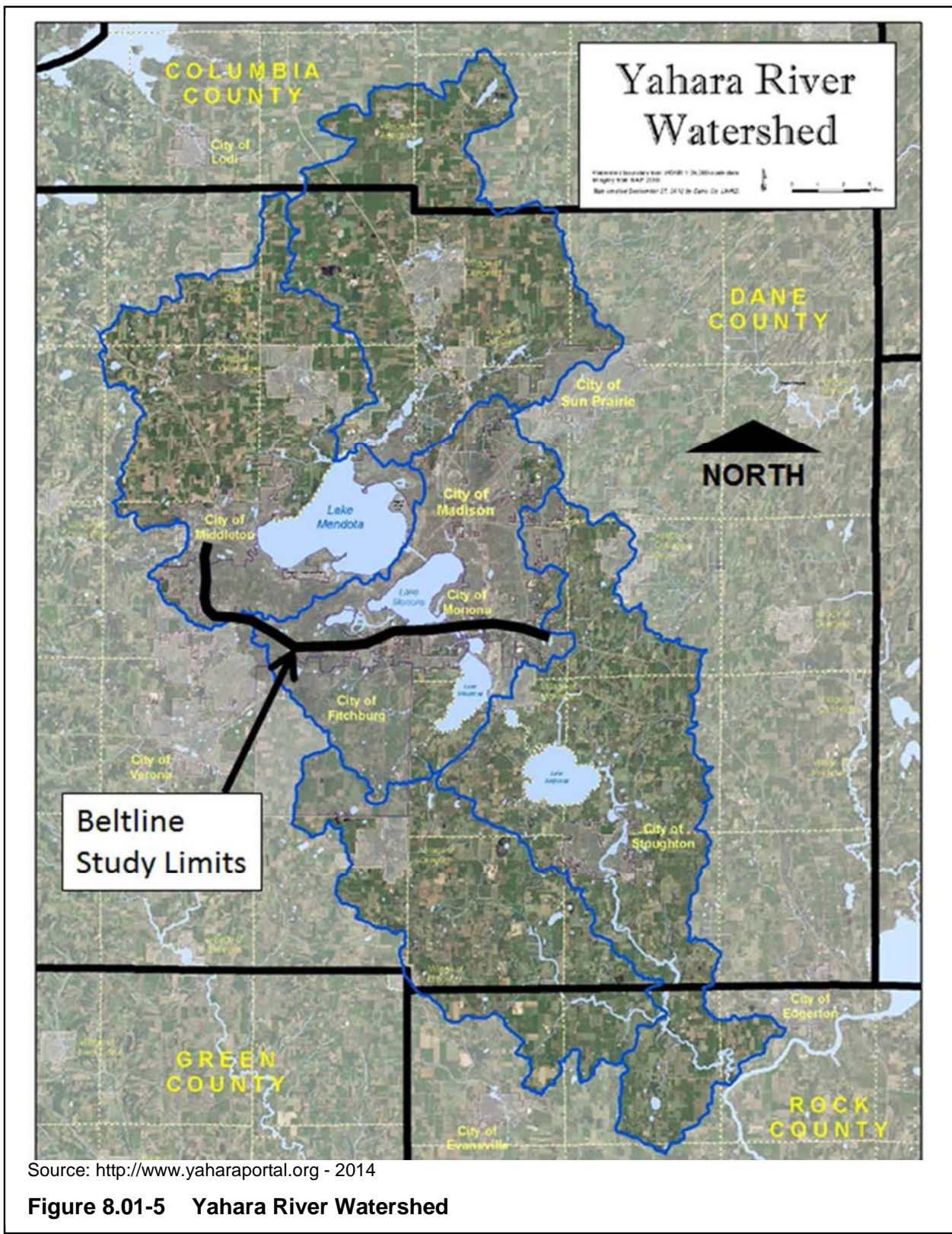


Source: <http://dnr.wi.gov/files/PDF/pubs/lf/LF0040seglacial.pdf> - 2014

Figure 8.01-4 WDNR Legacy Places

1. Upper Yahara River and Lakes (UL)

The most extensive WDNR Legacy Place near the PEL study limits is the Yahara River, its tributaries, dam-controlled lakes, and drained and undrained wetlands. This includes the Yahara River's origins in southern Columbia County in the fertile Arlington Prairie area through Lakes Mendota, Monona, Waubesa, and Kegonsa. An overview of the Yahara River watershed is shown in Figure 8.01-5.



Portions of the Upper Yahara River support cool to cold water fisheries and/or are exceptional resource waters. Even though it is a Legacy Place, the Yahara River between Lake Kegonsa

and Stoughton and all four of the Yahara lakes have been placed on the United States Environmental Protection Agency's (USEPA) list of impaired waters (303d list) for total phosphorus (effective 2013). Additional impairments for Lake Mendota and Lake Monona include polychlorinated biphenyls (PCBs). The lower reaches of the Yahara River are listed for total phosphorus and sediment.

There currently is a mix of state, county, and local-owned conservation lands and easements along the Yahara River system. These provide numerous outdoor recreation opportunities, resource protection, and conservation benefits. These include Cherokee Marsh (a combination of city, county, and state lands) and the Upper Waubesa, Lower Mud Lake, and Door Creek fishery areas, all part of the extensive Dane County Parks System. State owned areas include three state parks (Governor Nelson, Lake Kegonsa, and the newly created Capital Springs).

2. Dunn–Rutland Savanna and Potholes (DR)

On a statewide basis, prairie-pothole habitat is somewhat rare and confined to limited counties in southern Wisconsin and some counties north and northeast of Eau Claire. Small wetland pothole habitat is important for water quality and recharge purposes. This habitat is also important to ducks, migratory, and local wildlife for providing seasonal food and water amid fertile agricultural lands. The pothole areas of Dane County are listed as a WDNR Legacy Place because these land types are within a short drive of Madison and are relatively close to Janesville—presenting a chance to protect and restore an attractive natural setting in proximity to a densely populated and rapidly growing part of the state.

The Dunn–Rutland Savanna and Potholes consist of closed depressions and potholes and organic soil complexes of wetlands extending from the southern end of Lake Waubesa to about the Rock County line. United States Fish and Wildlife Services (USFWS) and WDNR protected pothole wetlands exist in Fitchburg, Dunn, Rutland, and Dunkirk Towns in Dane County. These areas are comprised of rolling topography, drumlins, and low glacial-till valleys containing scattered woodlots, wetlands, pothole lakes, small creeks, remnant grasslands, and oak savannas. Private conservation easements and a moderate amount of existing state and federal lands protect some of these features. The area includes approximately 6,200 acres of WDNR land within five WDNR management areas and approximately 1,590 acres of land within nine USFWS-managed Waterfowl Production Areas.

3. Shoveler Lakes–Black Earth Trench (SL)

The geologically significant Shoveler Lakes-Black Earth Trench Legacy Place is located to the west of the Beltline corridor PEL study area. Many conservation organizations in the Shoveler Lakes–Black Earth Trench Legacy Area own trail and wildlife lands. As a result, much of the Shoveler Lakes-Black Earth Trench is within the boundaries of the Ice Age Trail, Black Earth Creek Fishery Area, or the Cross Plains Reserve.

The Shoveler Lakes were much larger “preglacial” lakes in front of the terminal Johnstown moraine. These lakes drained to the Black Earth Trench and are sinkholes today. Potentially the nearest and most well-known glacial lake and sinkhole related to this geologic feature is the USFWS-owned and managed Shoveler's Sink. The property, which is comprised of 175 acres,

was restored in the early 1990s and is located within the limits of the Ice Age Trail. The site contains a sinkhole northwest of the intersection of Mineral Point Road and Timber Lane (about 4 miles west of the Beltline) and is shown in Figure 8.01-6.

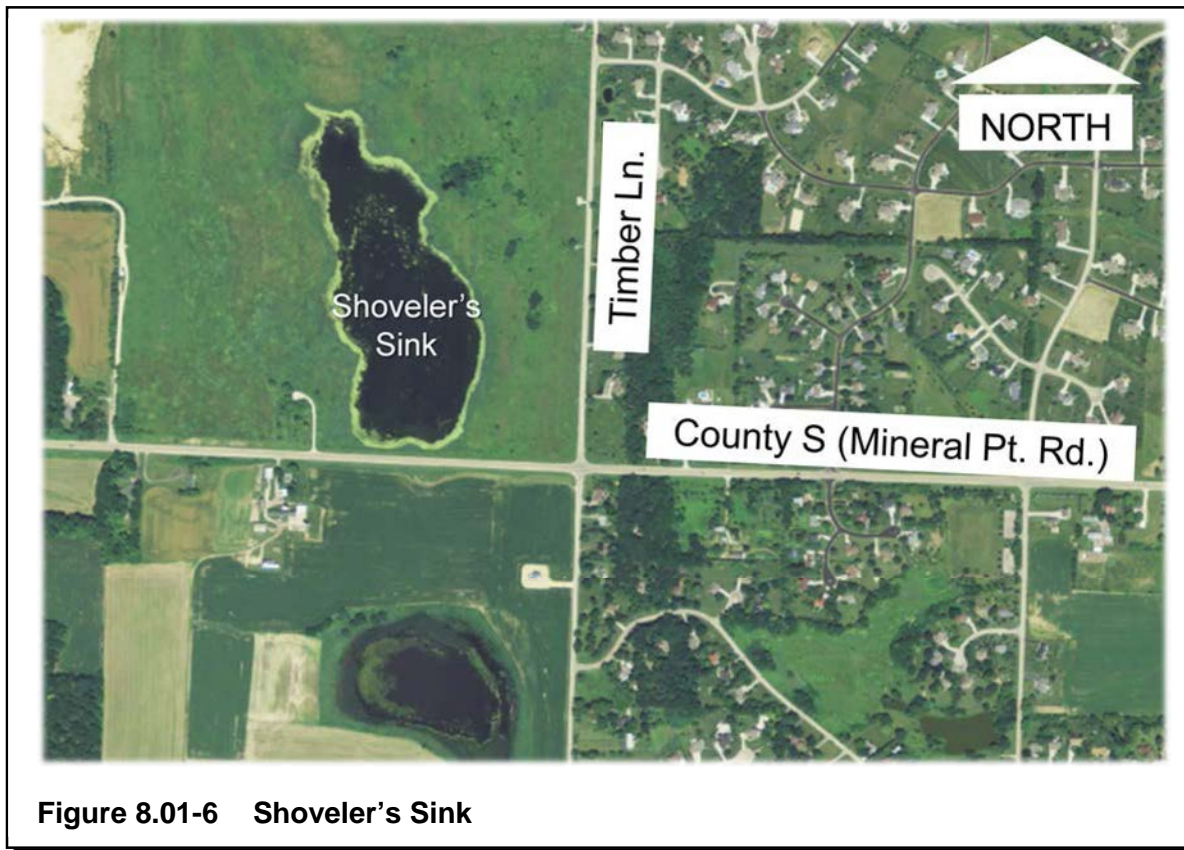


Figure 8.01-6 Shoveler's Sink

C. Environmental and Resource Protection Corridors

1. Capital Area Regional Planning Commission (CARPC)

The Capital Area Regional Planning Commission (CARPC) defines environmental corridors within its *Environmental Corridors Fact Sheet-2008* as “continuous systems of open space in urban and urbanizing areas, that include environmentally sensitive lands and natural resources requiring protection from disturbance and development, and lands needed for open space and recreational use. They are based mainly on drainage-ways and stream channels, floodplains, wetlands, steep slopes, and other resource features, and are part of a countywide system of continuous open space corridors.”

CARPC does not designate environmental corridors in rural towns that are in areas outside of urban or special sewer service areas. Figure 8.01-7 shows the primary and secondary functions of environmental corridor resource elements.

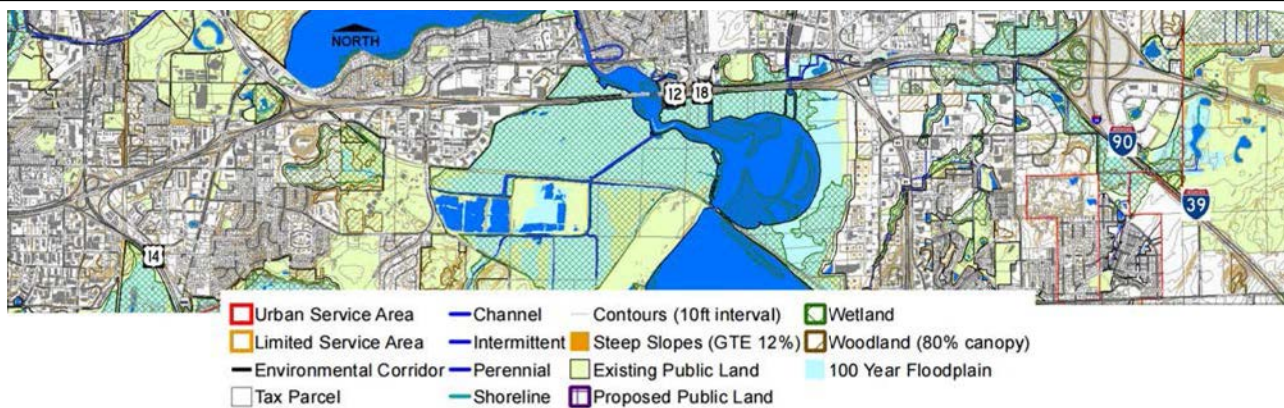
Open Space Functions of Environmental Corridor Resource Features		Resource Features							
Function		Lakes, Ponds & Streams	Wetlands	Floodplains	Shoreland Buffer Strip	Steep Slopes	Woodlands	Parks	Unique Vegetation or Geology
Protect Water Resources, Drainage & Hydrologic Functions	▲	▲	▲	▲		△			△
Provide Pollution Control		▲	△	▲	▲	△	△		
Protect Public Health, Safety & Property	▲	△	▲		▲			▲	▲
Provide Outdoor Recreation & Education Opportunities	▲	△	△	△		△	▲	△	
Provide Wildlife Habitat	▲	▲	△	△		▲	△	△	
Enhance Scenic Beauty & Shape Urban Form	▲	▲	△	▲	▲	▲	▲	▲	
▲ Primary Function		△ Secondary or Supplemental Function							

Source: www.danedocs.countyofdane.com/webdocs/PDF/capd/Env_Corridor_Fact_Sheet.pdf - 2008

Figure 8.01-7 Primary and Secondary Functions of Dane County Environmental Corridor Resource Elements

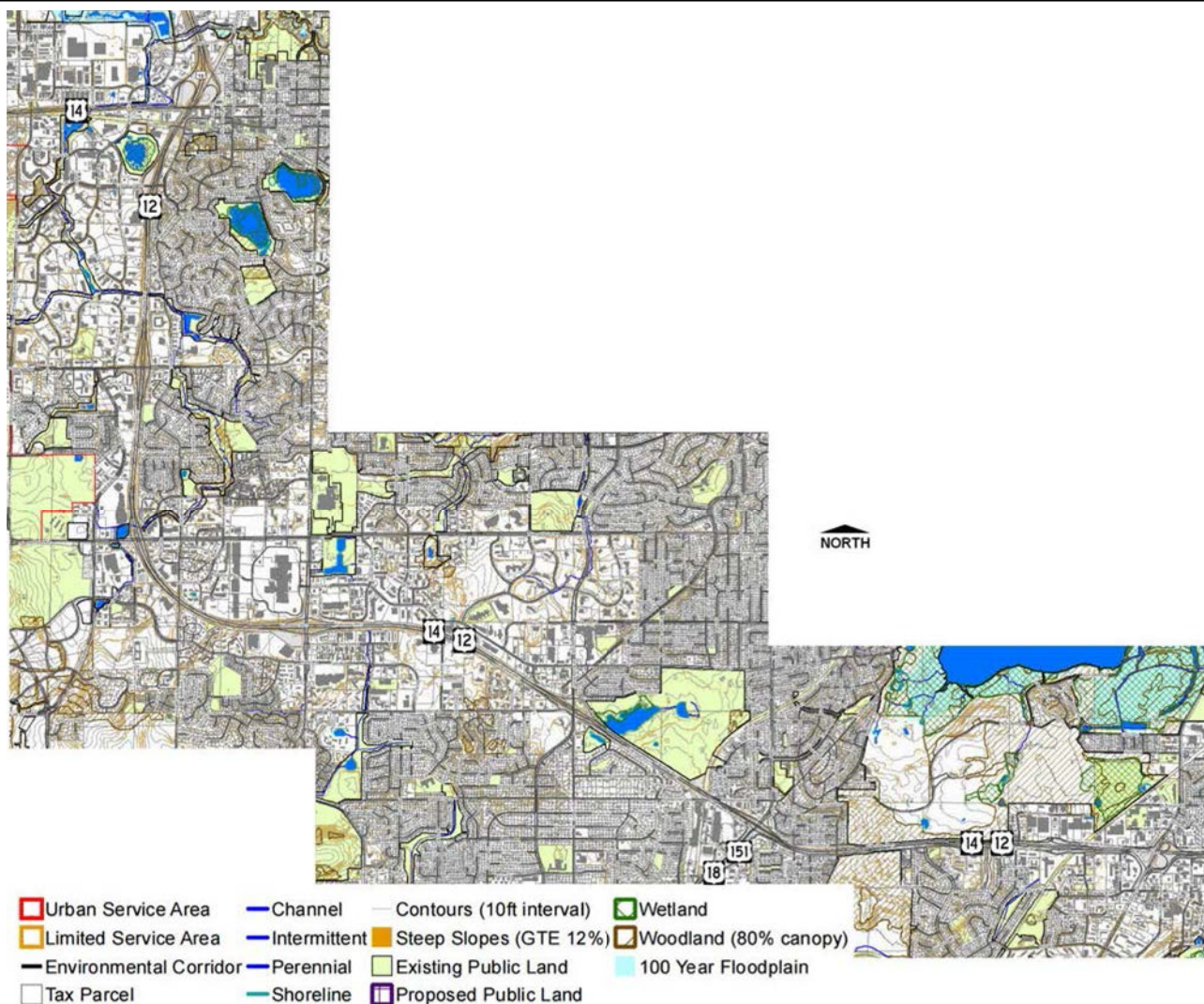
Environmental corridor mapping has regulatory status through CARPC. CARPC staff work with the local units of government to delineate the environmental corridors. Environmental resource elements can include parks, steep slopes, and areas of unique vegetation or geology. Figures 8.01-8a and 8.01-8b provide an overview of mapped environmental corridors near the Beltline. This corridor mapping is also available on a resource level. Currently there are 113 individual environmental corridors in the urban service area and 24 environmental corridors in limited urban service areas.

Environmental corridors are also used as a basis for open space and recreation planning and acquisition, such as development of park and open space plans for cities, villages, and the county. An important use of the corridors is in CARPC and WDNR review of sewer extensions and sewer service areas. This process helps direct urban development to areas outside of the environmental corridors. Modifications or alterations to environmental corridors are subject to CARPC reviews and require CARPC approvals for changes to boundaries.



Source: http://www.capitalarearpc.org/USA_ENV_maps.html - 2008

Figure 8.01-8a CARPC Environmental Corridors



Source: http://www.capitalarearpc.org/USA_ENV_maps.html - 2008

Figure 8.01-8b CARPC Environmental Corridors

2. Dane County

Within Dane County's Comprehensive Plan, there is a provision for Resource Protection Corridors that are defined "areas that are not suitable for structural development due to environmental sensitivity or because of the presence of fragile, irreplaceable resources." Resource Protection Corridors include the following categories of lands:

- a. Wetlands, as defined in state statute and including both the shoreland wetland and inland wetland districts under Chapter 11, Dane County Code.
- b. Shoreland setbacks and wetland buffers required under Chapter 11, Dane County Code.
- c. One percent regional floodplains, including the general floodplain district, floodway district and flood storage district, as described in Chapter 17, Dane County Code.
- d. Slopes exceeding 20 percent, except in towns with adopted town/county comprehensive plan language that specifically permits development on slopes of 20 percent or greater.
- e. Other areas identified in town, city or village plans adopted as part of the Dane County Comprehensive Plan, as areas specifically planned to protect natural or cultural resources, and where structural development is strictly limited.

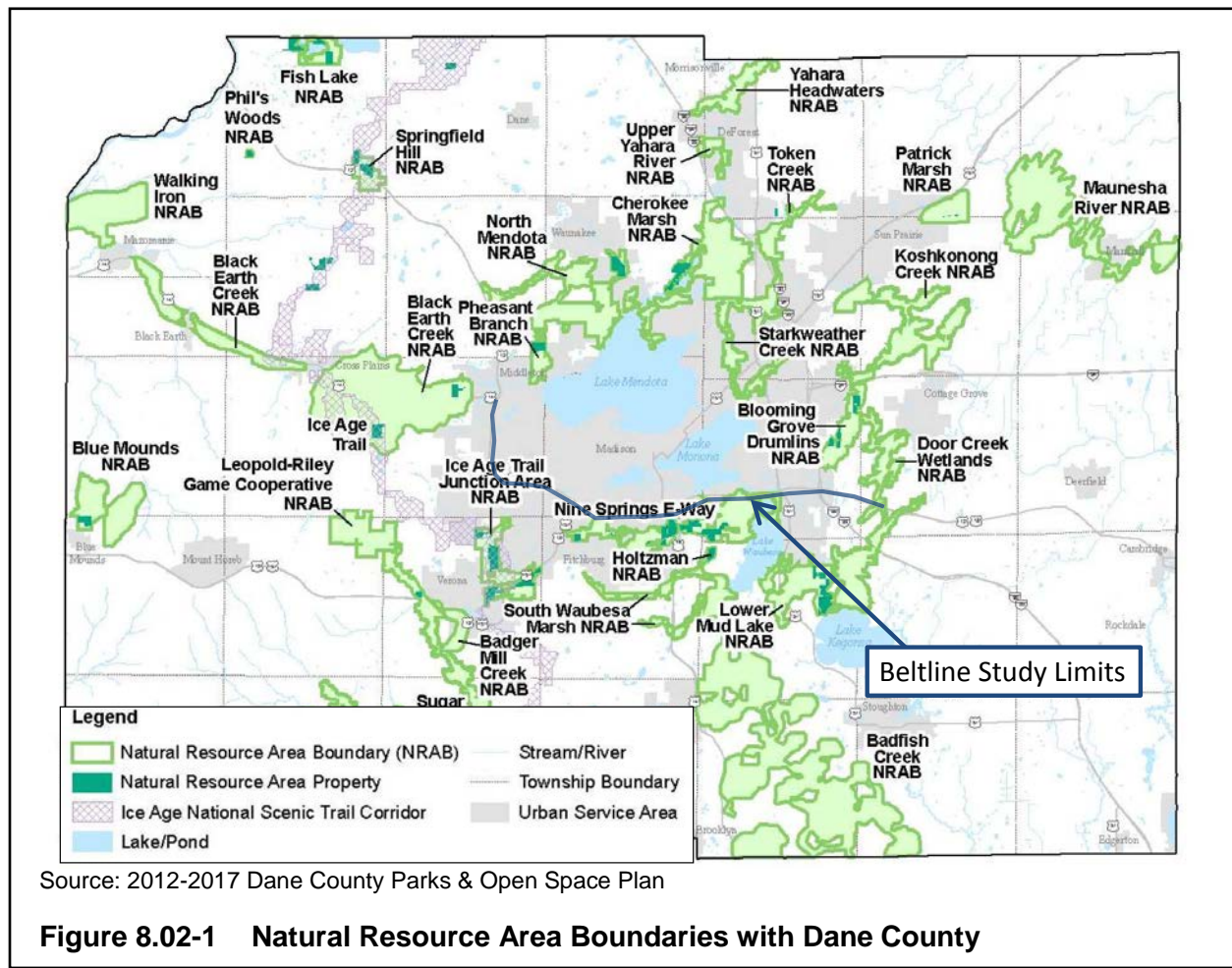
8.02 DANE COUNTY'S NATURAL AND PUBLIC RESOURCE AREAS

Natural Resource Area Boundaries (NRAB) are an effective environmental mapping system that is used to help identify resource protection concerns for areas where there are no existing or proposed utility service areas.

NRABs include resources within roughly six categories: Recreation Parks, Natural Resource Areas (NRA), Forests, Historical/Cultural, Wildlife, and Trails. NRABs typically include a stream corridor, valley, or floodplain that is vital in providing expansive habitat regarding the three needs of large and small animal wildlife (water, food, and survival/breeding cover).

Figure 8.02-1 provides an overview of natural resource areas and Dane County-designated NRABs included in the *2012-2017 Dane County Parks and Open Space Plan*. The PEL study area is within or in proximity to several of the NRABs shown in the figure.

Details of the *2012-2017 Dane County Parks and Open Space Plan* or specific NRABs are not discussed in depth because there can be a wide degree of variability in the components of NRABs (upland/wetland versus floodplain/steep slopes). However, additional discussion of NRABs and details on habitat are included in Sections 8.03 through 8.06 of this report.



A. Northern Study Area

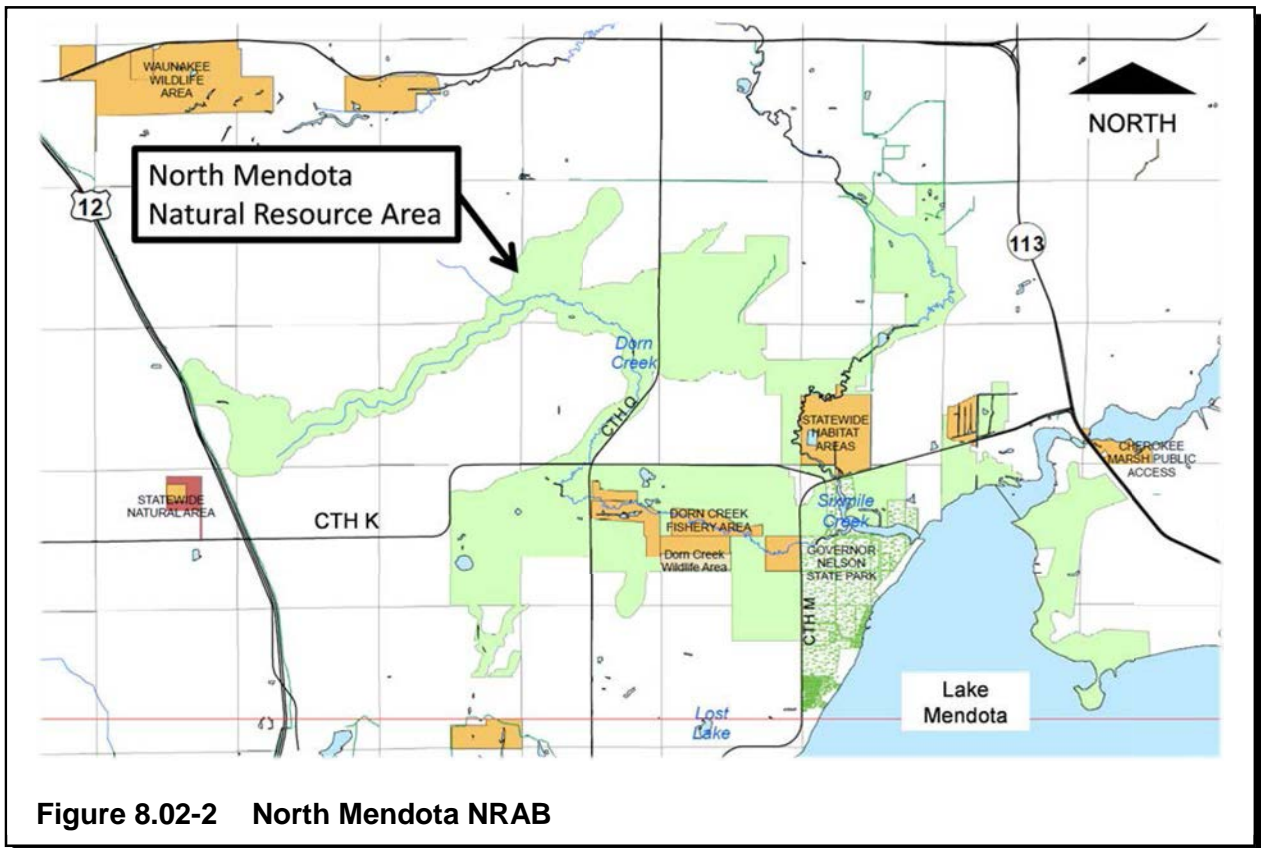
Designated Natural Resource Areas within the northern portion of the PEL study include four major creeks/watersheds draining into Lake Mendota. Named resource areas of significance in the Northern Study Area include:

- The North Mendota NRA which includes extensive private and conservation easements in the towns of Springfield and Westport.
- The Cherokee Marsh-Token Creek Waterways and NRAs north of the County K/WIS 113 west-east corridor.

1. North Mendota NRAB

Figure 8.02-2 shows the limits of the North Mendota NRAB. The North Mendota NRAB is located within the towns of Westport and Middleton and encompass about 4,600 acres of protection, of which approximately 10 percent is in state, regional, or local ownership. There are agricultural conservation easements held by private conservation organizations and agricultural conservation easements held by Dane County within the NRAB. The agricultural conservation

easements held by Dane County came to fruition from environmental commitments related to the US 12 WisDOT project from Middleton to Sauk City. These and other nonprofit based conservation easements or protections are present.

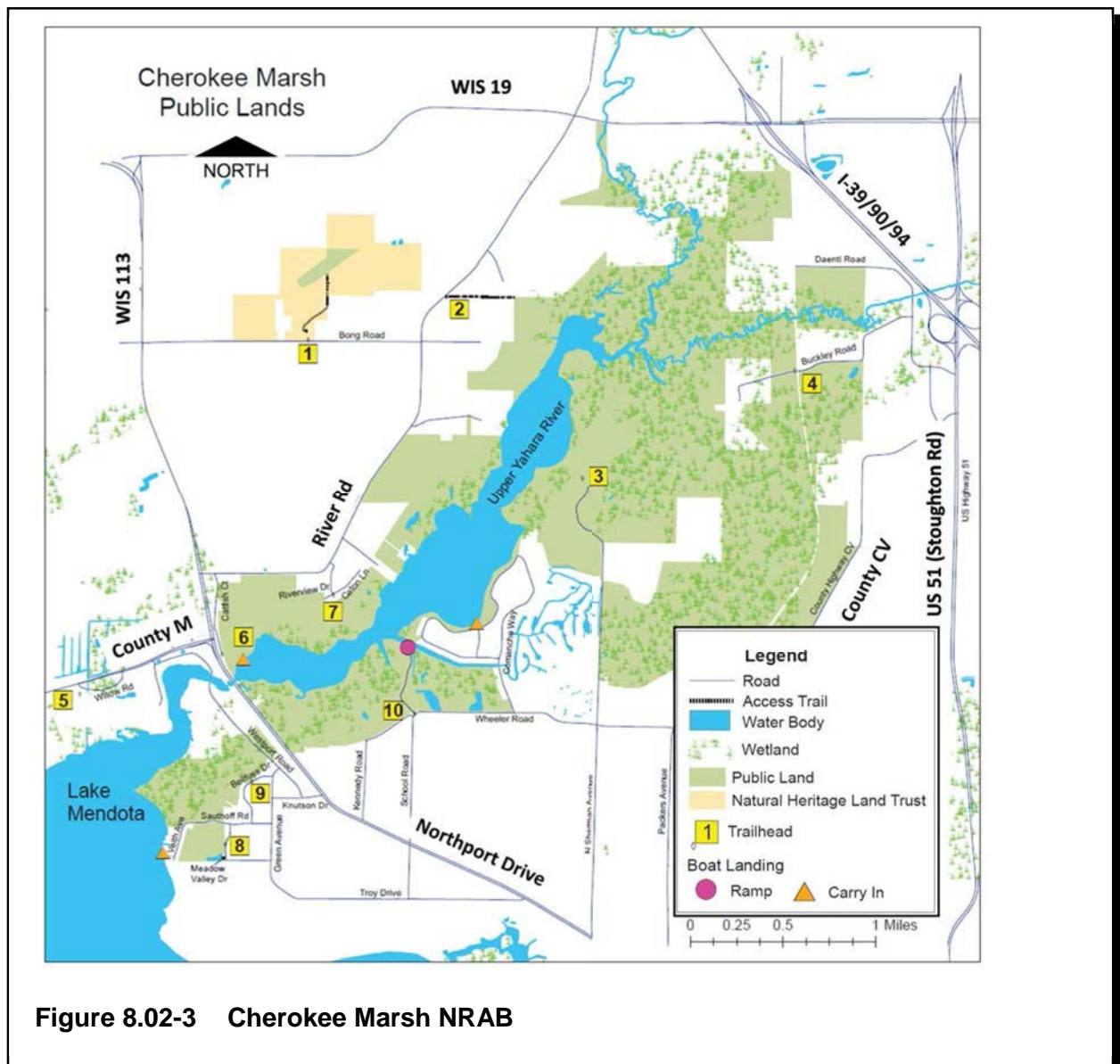


The boundary for the North Mendota NRAB was established in 2008 by Dane County Parks and was developed through a public consensus building process with the towns of Westport and Springfield, village of Waunakee, city of Middleton, WisDOT, WDNR, and other stakeholders. The planning effort was a component of the Dane County's North Mendota Parkway Study. Selection of the area included protection of waterways and wetlands and agricultural buffer areas. Some lands suggested as possible recharge areas for Fredrick Springs in the Pheasant Branch Conservancy are also included in the North Mendota NRAB mapping.

The North Mendota NRAB begins near WIS 113 and the Yahara River to the east and follows the north shore of Lake Mendota, including Six Mile and Dorn Creeks and their wetlands. County M, Q, and K form an irregular western boundary for the NRAB. Dorn and Six Mile Creeks contain about 175 acres of state fishery lands and public hunting areas. Governor Nelson State Park is located between Lake Mendota and County M. The project area is targeted to enhance water quality of the Yahara Chain of Lakes, protect agricultural interests and buffers, potentially protect stream or spring flow, and provide fish and wildlife habitat. Implementation of a segment of the proposed North Mendota bicycle and/or other bike/pedestrian trail(s) is currently being evaluated and is anticipated to provide connection from the village of Waunakee to Governor Nelson State Park and westward to Middleton. Additionally, there is an effort to investigate connecting more of these areas with the Pheasant Branch Conservancy NRAB.

2. Cherokee Marsh NRAB

Figure 8.02-3 shows that Cherokee Marsh NRAB is in the city of Madison and the towns of Burke, Windsor, and Westport and encompasses about 3,720 acres according to the *2012-2017 Dane County Parks and Open Space Plan*. Interest in, study, and protection of the area have continued since the 1950s. Initial acquisitions of the Cherokee Marsh NRAB were by the city of Madison and the state. Over 600 acres of the area is open water or shallow marsh lake bed with about 250 to 770 acres of Dane County ownership or easements. Additional governmental or stewardship land holdings include the WDNR (1,000+ acres), the city of Madison (1,300+ acres), and the Friends of Cherokee Marsh (400 to 600 acres). The general limits of the NRAB include hydric and upland soils forming the historic boundaries of the marsh and lie east of WIS 113 and west of I-39/90/94 within the watershed and marshes on the northeast side of Lake Mendota.



Cherokee Marsh (depending on which political or geographic boundary is used) is between 2,000 to 3,200 acres with extensive surrounding uplands. Cherokee Marsh is the largest and most significant wetland in Dane County. The marsh is located at the head of the Yahara Chain of Lakes northeast of Lake Mendota. It is a high quality wetland that acts as a nutrient filter and provides floodplain and stormwater storage. A variety of wetland habitats are present including forest and shrub wetlands, wet meadows, open marsh, and rare calcareous fens. These fens are wetlands fed by an upwelling of calcium-rich groundwater. The fens and quality wetlands of this area support many rare and endangered plants and wildlife. A 325-acre portion in the northeast section of the marsh is designated as a WDNR state natural area. Extensive hiking and paddling recreation uses exist on land holdings in the area. As with other areas of the Yahara Chain of Lakes, dams on the Yahara River have affected the vegetation in the marsh through the years. The marsh has suffered marsh losses from past draining and farming operations, development, raised water levels, sedimentation, and dredging. Today's lake level is estimated to be 5 to 8 feet higher than what it was before settlement.

The city of Madison has been conducting extensive vegetation and wetland management efforts on the south side of the Yahara River at Cherokee Marsh. Dane County has been working on removal of invasive species and prairie restoration on the north side of the Yahara River. Short- and long-term efforts include considering a land-based trail that provides connections to Dane County's Token Creek Park and the Upper Yahara River Natural Resource Area. Such a connection would be similar to a potential connection that the North Mendota NRAB intends to connect to Pheasant Branch Conservancy. Since much of the area on the north side of Lake Mendota is in urban service area boundaries, the NRAB and environmental corridor boundaries are similar and overlap. Acquisition efforts and vegetation management continue to be primary objectives for the area.

B. Middle Study Area

The prominent NRAs in the middle study area include the Ice Age Trail and easements/boundaries, the University of Wisconsin—Madison Arboretum (UW Arboretum), and the Lewis Nine Springs E-Way that is coupled with the Capital Springs State Recreation Area (CSSRA).

The Ice Age Trail Junction Area NRAB system is located in the southwest Madison area west of Verona Road. The area is intended to function as a multiuse trail corridor connecting Badger Prairie County Park to the city of Madison's Elver Park. The area includes both a paved trail and the Ice Age National Scenic Trail as a separate footpath west of the paved trail. The trail traverses the end of moraine of Dane County's last glacier, passing through oak savannas, prairies, and oak, hickory, and maple forests.

The Nine Springs E-Way NRAB corridor begins with the Capital City Trail and the Badger State Trail that is located near US 18/151 and the city of Verona. The Nine Springs Creek eastern boundary terminates at the CSSRA and other large WDNR conservation holdings on the north side of Lake Waubesa and Upper Mud Lake. The Nine Springs E-Way is a large land grouping and has many existing anchoring parcels within local or state ownership. Current county ownership for the area is approximately 560 acres and the cumulative resource boundary corridor is nearly 3,900 acres in size.

Additional proposed protection area sizes are summarized in the *2012-2017 Dane County Parks and Open Space Plan*.

C. Southern Study Area

Prominent NRAs in the south study area that could be affected by corridors include the Holtzman NRAB, South Waubesa Marsh NRAB, and the Lower Mud Lake NRAB.

The Holtzman NRAB is a 63-acre tract located in the town of Dunn, just south of the Capital Springs Recreation Area, and is included in the WDNR maintenance agreements associated with the Capital Springs Recreation Area. It was donated to Dane County with the intent that it remain a nature preserve. Currently there is no public access.

The *2012-2017 Dane County Parks and Open Space Plan* provides some information on the South Waubesa Marsh NRAB. It is a 2,069-acre tract in the town of Dunn, located on the southwest end of Lake Waubesa. It includes segments of Swan and Murphys Creek. The marsh includes deep peat deposits and major springs and seepages that provide water to Lake Waubesa. The Nature Conservancy and WDNR are the primary public landowners.

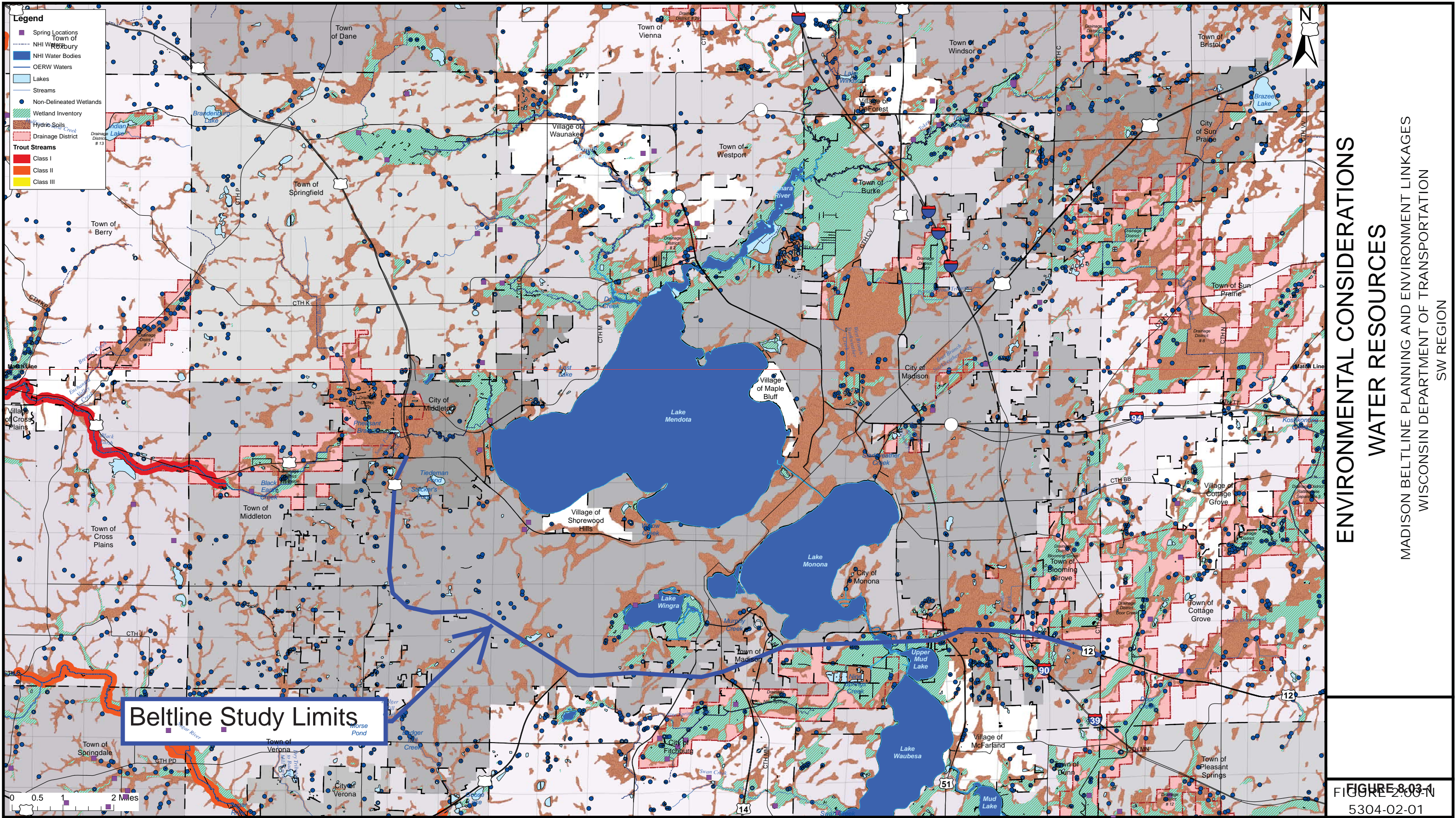
8.03 DRAINAGE DISTRICTS, WETLANDS, WATERWAYS, HYDRIC SOILS, AND SPRINGS

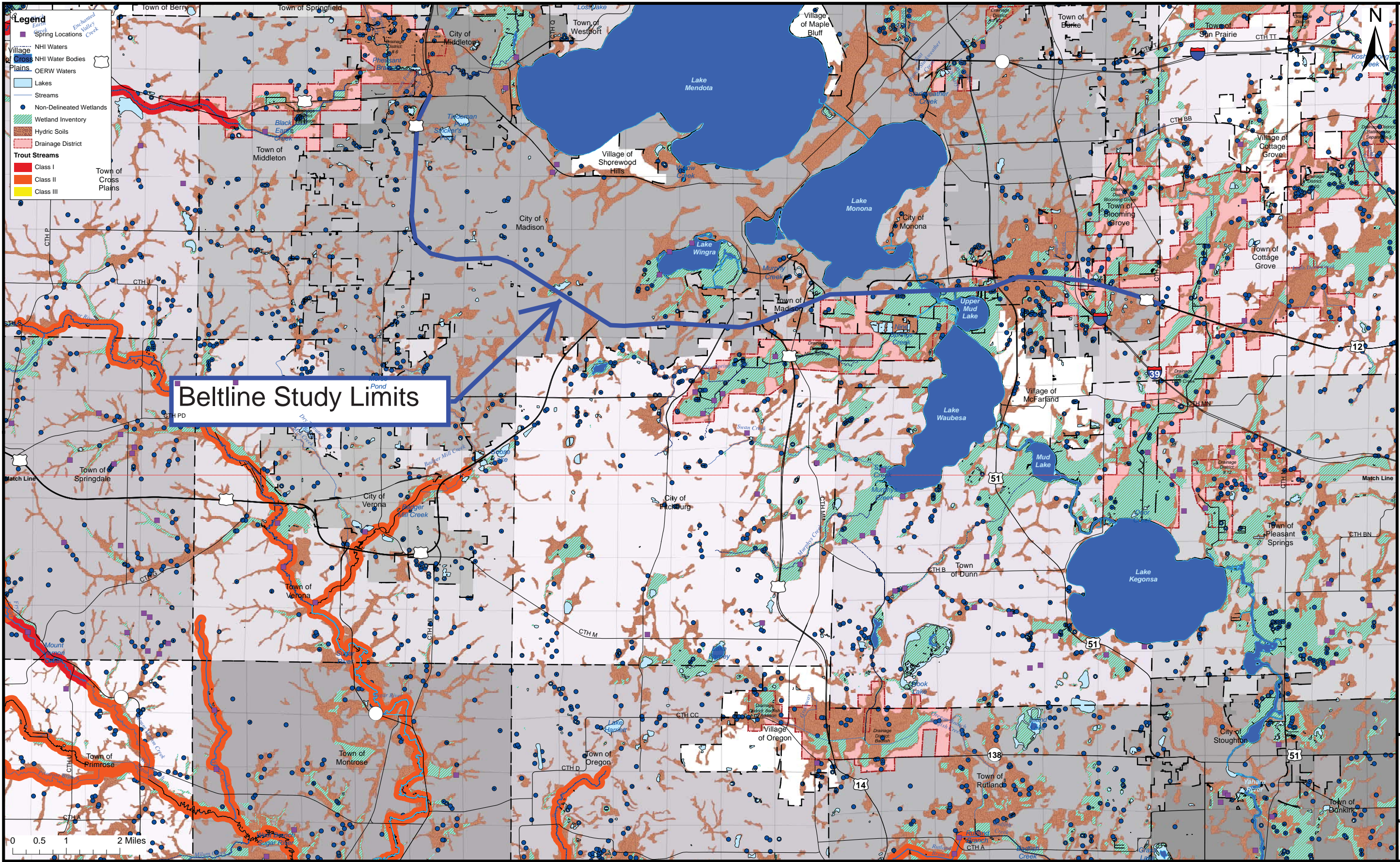
Limiting environmental factors including wetlands, waterways, and hydric soils are discussed in this section. Also, the presence of drainage districts (modified wetlands) and springs is important because of the administration and coordination requirements that can result from alterations to a district. Figures 8.03-1 and 8.03-2 provide a county-wide overview of the drainage districts, wetlands, waterways, hydric soils, and springs in the general study area.

A. Drainage Districts

Several hydric soils and reverted wetlands are present within various drainage districts that located within the study area. These drainage districts are present amid the various Madison and Dane County roadway, park, and surrounding community developments.

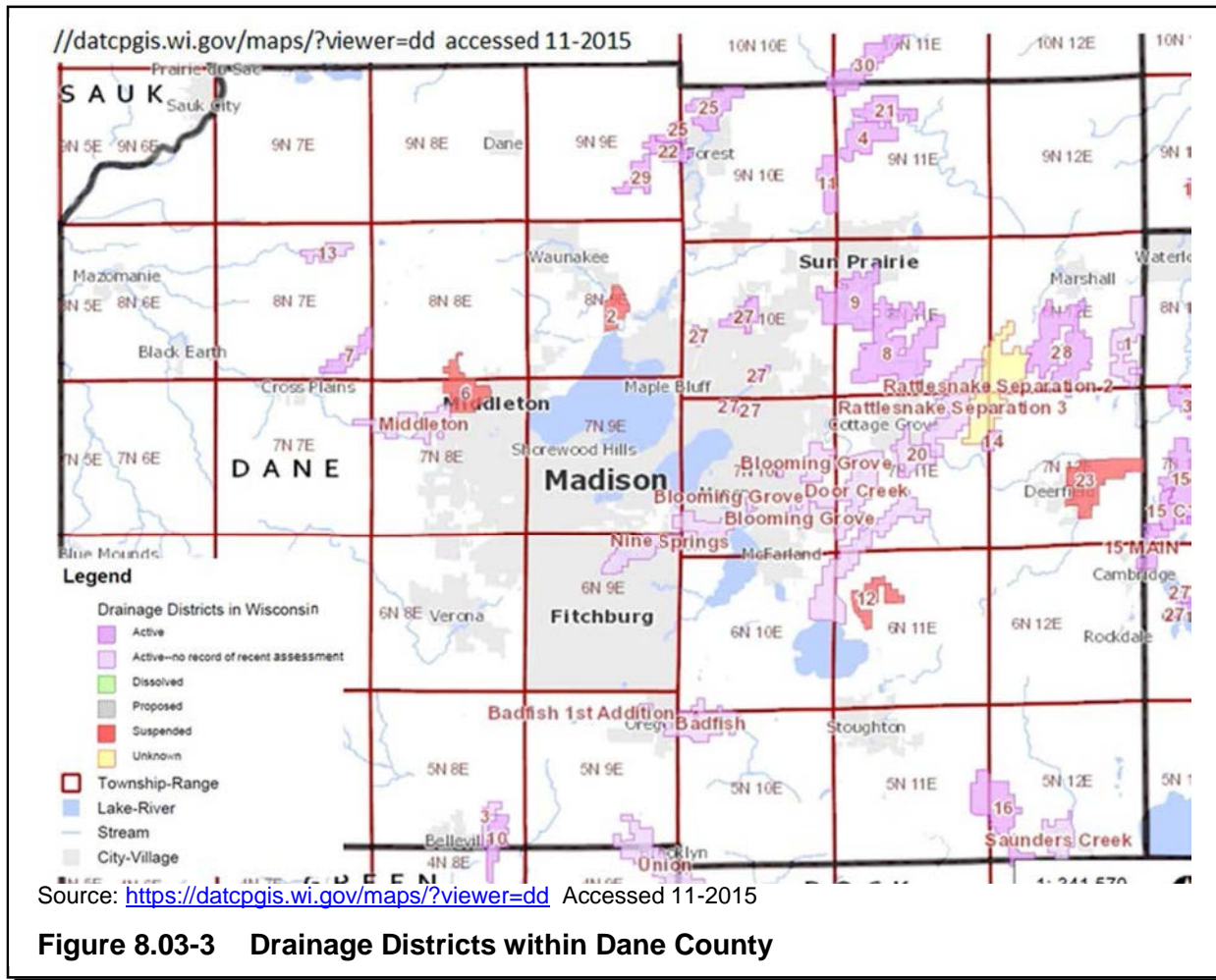
Drainage district maps from the Department of Agriculture, Trade, and Consumer Protection (DATCP) show a large number of drainage districts within the floodplain and idle land of the Madison area. Figure 8.03-3 shows the drainage districts within Dane County and their activity status according to 2015 online DATCP records.





ENVIRONMENTAL CONSIDERATIONS
WATER RESOURCES

MADISON BELTLINE PLANNING AND ENVIRONMENT LINKAGES
WISCONSIN DEPARTMENT OF TRANSPORTATION
SW REGION



The predominant status of drainage districts in the Madison area is active, but with no record of assessments. Drainage districts that are active and have assessments for management, such as Sun Prairie No. 8 or No. 9, are distant from the project.

1. Northern Study Area

Drainage districts within the northern study area south of WIS 19 and north of the Beltline include the Middleton Drainage District (about 1,400 acres) and three unnamed districts (Dane County No. 6, No. 2, and No. 27). Drainage District No. 27 is listed as active without a record of assessments. It includes five small and scattered areas. The Middleton Drainage District is listed as active, similarly without a record of assessments. Drainage District No. 2 and No. 6 are listed as suspended and not active. A portion of the Blooming Grove Drainage District is close to the northern study area near I-39; however, the majority of the Blooming Grove Drainage District is located east of I-39.

2. Middle Study Area

There are no drainage districts within the middle study area.

3. Southern Study Area

There are three moderately sized drainage districts in the southern study area between the Beltline and County D/WIS 138 (southern limits) and between County J/WIS 69 (or US 151) (west) and I-39 (east). These inactive drainage districts range in size from about 1,300 to 3,000 acres and include Badfish Creek (about 1,800 acres), Nine Springs Creek (about 3,000 acres), and Blooming Grove (about 1,600 acres). Drainage District No. 12 is a small drainage district northeast of Lake Kegonsa that is predominantly in county and private conservation ownership and is listed as suspended.

B. Wetlands, Hydric Soils, and Waterways

Figures 8.03-1 and 8.03-2 provide a countywide overview of the wetlands, waterways, and hydric soils in the general study area.

Waters identified using WDNR's Natural Heritage Inventory (NHI) program database are also shown on Figures 8.03-1 and 8.03-2. NHI waters are waters with occurrences of threatened and endangered aquatic species. Nearly all of the Yahara River Chain of Lakes contain state rare and/or threatened and endangered species. The WDNR does not release exact locations of protected species.

The *2012-2017 Dane County Parks and Open Space Plan* has two designations for streams (expanded from WDNR classifications), Tier I and Tier II streams are categorized using varying sets of criteria based on the designated biological use, current level of protection or enhancement and the likelihood of establishing conservation within the stream corridor.

Tier I streams have one or more of the following attributes/designations:

- Coldwater-high value from a biological and recreational standpoint. They support cold-water fish communities, and flow is supplied primarily from spring discharge.
- Streams which have been enhanced or protected through an existing conservation program. Restoration or enhancement programs may include but are not limited to: Priority Watershed Projects, Targeted Resource Management, WDNR Habitat Projects, Natural Resources Conservation Service, and other non-profit or conservation organization work. Most if not all have existing easements on them. Priority may be given to those streams/segments where easements have expired or will expire soon.
- Streams which have been identified under the 303(d) designation resulting from non-point source pollution or habitat degradation.
- Streams classified as Outstanding Water Resources (OWR) or Exceptional Water Resources (EWR) by WDNR.
- Streams identified as sensitive in the Dane County Water Body Classification Study
- Streams within the boundary of an approved Dane County Resource Protection Area Plan.

Tier II streams have one or more of the following attributes/designations:

- Warm water streams that may exhibit a sensitivity to development or have the ability to be restored or enhanced through management actions.
- Streams within the boundary of an approved Dane County Resource Protection Area Plan.
- Streams identified in WDNR Basin Plans with “high” or “medium” designations for habitat improvement.

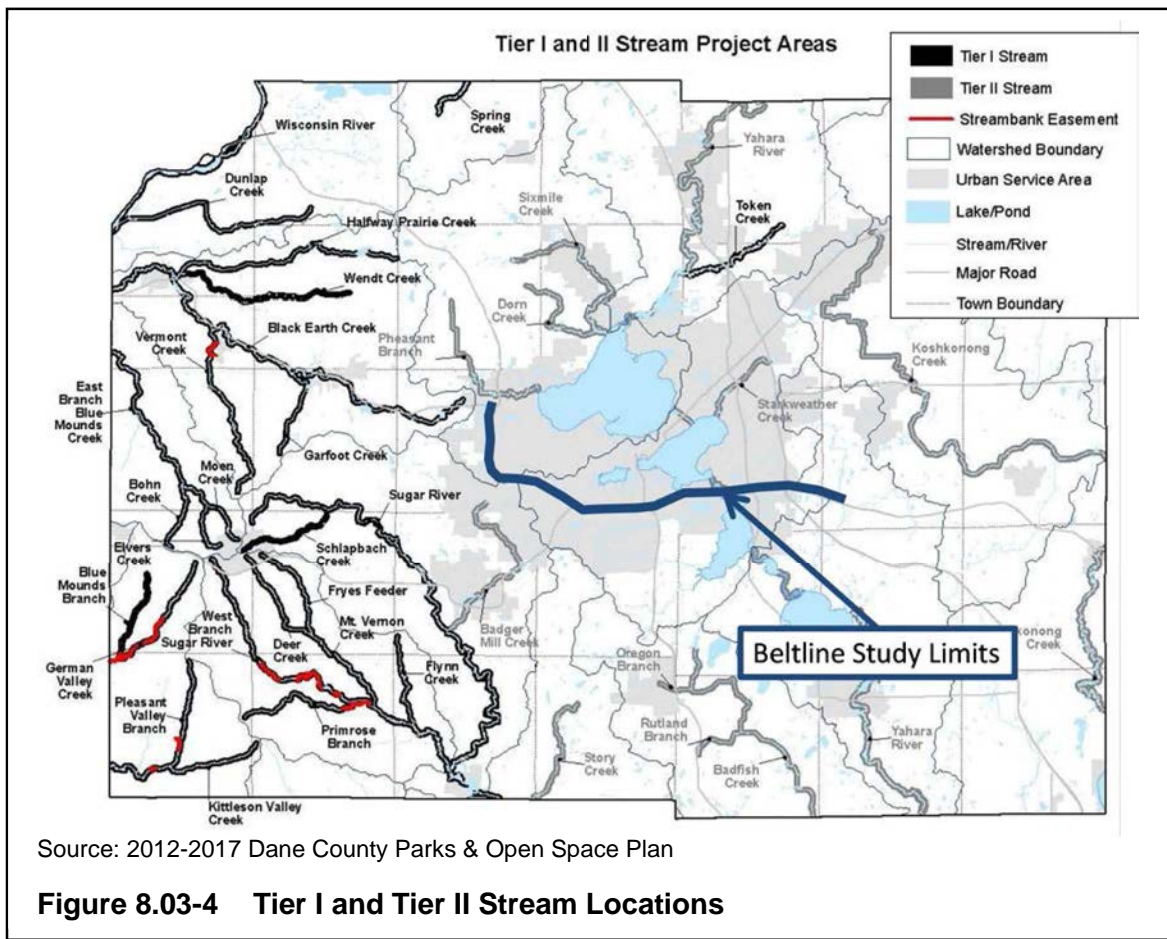
Impaired waters under Section 303(d) of the Clean Water Act include the southern Yahara River and Chain of Lakes system, Pheasant Branch Creek, and Nine Springs Creek. In fall 2013, all four Yahara Chain of Lakes were added to the impaired waters list for impairments of total phosphorus.

1. Northern Study Area

The watershed drainage areas of Pheasant Branch Creek, Dorn Creek, Six Mile Creek, Token Creek, and the Yahara River include extensive wetlands and hydric soil areas. These areas are located north of Lake Mendota in the towns of Middleton, Springfield, Westport, and Burke. The Pheasant Branch Creek area includes floodplains, city of Middleton parkland, and Pheasant Branch Conservancy NRAB lands intended for expansion or other resource protection efforts. There are also Pheasant Branch watershed lands west of US 12/14. As mentioned, additional NRABs in the northern study area include North Mendota, Cherokee Marsh, and Token Creek. Additional NRABs exist to the far north of the study area (near the Upper Yahara River) and northeast (near Starkweather Creek).

Resource area boundaries in the northern study area include extensive wetlands and restorable wetlands and provide resource protection and watershed management for the Yahara River Chain of Lakes. Much of the watersheds in the northern study area are agricultural. The Yahara River Marshes and Cherokee Marshes are over 3,200 acres.

The Yahara River and Cherokee Marsh North Unit contain the most hydric soils in the area. Token Creek is more distant to the study area, but it is a Tier 1 (higher quality, cold water stream) that is located to the northeast of the study area. Six Mile Creek is an ERW also present in the watershed. Figure 8.03-4 shows Dane County designated Tier 1 and Tier II stream locations within Dane County in relation to the Beltline study limits (these same areas are also shown previously in Figures 8.03-1 and 8.03-2).



2. Middle Study Area

The western portion of the existing Beltline corridor is constructed on and in proximity to the Milton Moraine while the eastern portion of the Beltline corridor includes the areas of end moraines and glacial stream depositions (and resulting hydric soils) located between the UW Arboretum/Lake Wingra and the Yahara River lake plains/floodplains.

No apparent NHI waters or cold-water streams appear to be present within the middle study area. However, nearly all of the Yahara River Chain of Lakes contain state designated rare and/or threatened and endangered species.

The Upper Mud Lake wetlands and designated conservation lands of the Capital Springs Centennial Park (and CSSRA) include extensive wetlands and hydric soils.

Additional discussion of the UW Arboretum and WisDOT-owned and constructed wetland mitigation sites associated with the Yahara River/Upper Mud Lake wetland complex near the US 51 (Stoughton Road) and Beltline interchange is in Section 8.07.

In addition to the Upper Mud Lake/Yahara River wetlands, there are various wetlands and conservancy holdings adjacent to the Beltline corridor. These include wetlands associated with

Esser Pond and bikeway complex in Middleton, Odana Hills Pond and Wetlands, the Yahara River and Upper Mud Lake Marshes, and tributaries to the Yahara River and Koshkonong Creek. Actual stream crossings of the Beltline corridor primarily involve the Yahara River and Starkweather Creek tributaries on the west and north side of Lake Waubesa.

Wetlands and tributaries are located east of I-39/90 at Mill Pond Road and near the Yahara Hills Golf Course. Wetlands and the watersheds associated with crossings of Door Creek, Little Door Creek, and Koshkonong Creek and its tributaries are also located east of I-39/90. Door Creek is a large agricultural and slightly urban-encroached waterway that outfalls to the Door Creek Marshes on the north side of Lake Kegonsa.

3. Southern Study Area

The southern study area contains the largest extent of wetlands and conservation lands. Wetlands include those associated with potholes, channelized drainage districts, and the Yahara River and its tributaries. The South Waubesa Marsh NRAB and Lower Mud Lake NRAB both lie within the southern study area.

No waters identified using WDNR's NHI databases or cold-water streams appear to be present within the southern study area.

C. Springs

The Madison area contains springs as alluded to in names of various resource areas such as Nine Springs Creek, Nevin Fish Hatchery and Springs, and the Capital Springs State Recreation Area (CSSRA).

Figures 8.03-1 and 8.03-2 show the locations of springs within Dane County and relation to the Beltline study limits.

1. Northern Study Area

Within the northern portion of the study area, there are seven mapped spring locations. These include the springs of the Pheasant Branch Creek and Dorn Creek. Between WIS 113 and I-39, there are two mapped spring locations near the east branch of Starkweather Creek. Neither of the two springs are near roadways or the main waterways of the Yahara River, Cherokee Marsh, or the west branch of Starkweather Creek.

2. Middle Study Area

The middle study area does not contain mapped springs from US 12/14 (west) to I-39/90 (east). Five springs are mapped greater than 0.5 miles from the corridor and are located in the Nine Springs E-way and the CSSRA (within the Nine Springs Drainage District).

3. Southern Study Area

The southern PEL study area contains two mapped springs near County M and a few east of Oregon along the WIS 138 corridor. The town of Dunn has two groupings of springs. These are north and northeast of Oregon. There are four springs associated with the unnamed creek north of Schneider Drive and southeast of Keenan's Creek. There are also eight springs draining to the southwest part of Lake Kegonsa in the eastern-flowing watershed drainage between Halverson Road and Schneider Drive..

8.04 FORESTED LANDS AND UPLANDS

Most of Dane County originally consisted of oak savanna forest openings and not closed canopy forests. Fire suppression during early colonization of Wisconsin did not greatly modify the mainly open landscape of Dane County. Livestock grazing of pastures and woodlots tend to maintain a similar landscape. With the development of large-scale farming operations in Dane County, there has been a general decline in grazing. This has allowed succession of fields, pastures, and wood lots into woody habitats. There has also been an increase in set-aside lands in the county that has brought about changes in vegetation. This, in combination with the lack of grazing and pasture management, has allowed some savanna areas to develop into closed forests. Figures 8.04-1 and 8.04-2 show the forested areas in and adjacent to the study area.

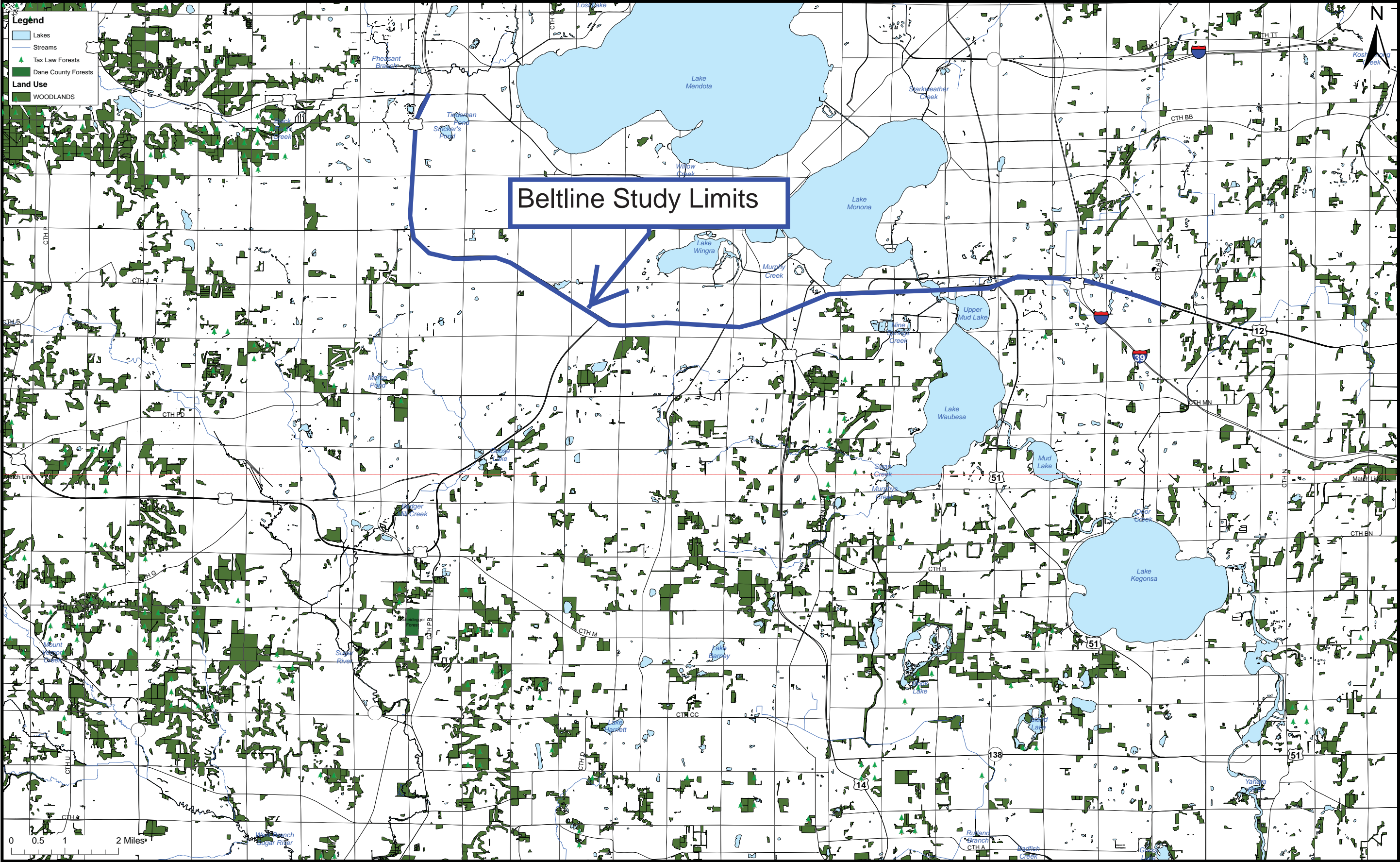
A. Northern Study Area

The four towns within the northern study area are generally less forested than other towns to the far west or southeast. The Pheasant Branch Conservancy has been active in managing woodlots and savannas and restoring savanna and prairie habitat types in the city and town of Middleton. The fertility of many of these northern Dane County towns has encouraged the past and continued agricultural clearing, development, and management of areas bordering forested lands. Areas that may have been previously grazed by dairy operations are now either cash cropped or being developed.

Based on available mapping, there appears to be few woodlands of substantial size in the area bounded by US 12, WIS 19, and US 51. About eight to ten woodlands exist over 30 acres. Forested areas of this size support forest interior species, depending on the type of land use bordering them and the vegetation types present. These larger woodlands (>30 acres) typically provide the habitat needed by various small animals. However, woodlands of 80 acres or more are more optimal for wildlife. Larger forested blocks exist north of WIS 19 and are located along portions of Token Creek. It appears about three of the approximately five larger woodlots in the northern towns contain Managed Forest Tax Law land, which promotes long-term forest management and foster interest in protection.

B. Middle Study Area

There are about three wooded areas over 30 acres between Middleton and the town of Blooming Grove within the middle study area. Two of these wooded areas are within the UW Arboretum. The large forested tracts (>30 acres) or uplands of significance along the Beltline corridor include north (mixed deciduous and coniferous woodlands) and south (pine forest) areas of the UW Arboretum.



ENVIRONMENTAL CONSIDERATIONS

FORESTED LANDS

MADISON BELTLINE PLANNING AND ENVIRONMENT LINKAGES
WISCONSIN DEPARTMENT OF TRANSPORTATION
SW REGION

Areas adjacent to the Beltline include pine plantations and successional woods that screen the UW Arboretum from the Beltline and surrounding developments. Some wooded and combination wetland complexes exist along the Beltline at Upper Mud Lake and environmental corridors stretching from the Lewis Nine Springs E-Way NRAB to Lake Waubesa.

C. Southern Study Area

Wooded resource areas in the southern study area are a mix of aggregated forested and wetland lands associated with the South Waubesa Marsh NRAB, Lower Mud Lake NRAB, and Door Creek Wetlands NRAB. There are also scattered steeply sloping lands that have reverted to forest cover from the decrease in cattle grazing operations.

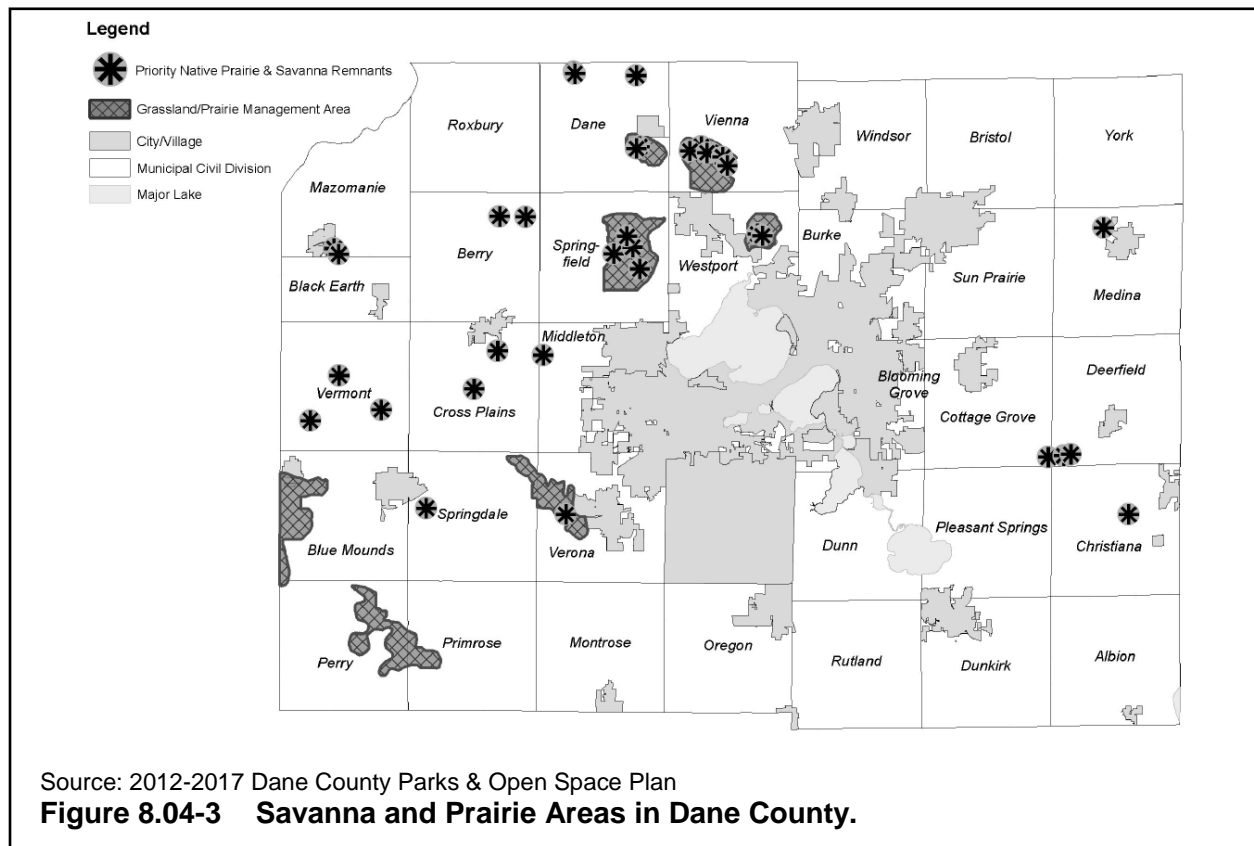
About 20 to 30 forest areas over 30 acres are present in the towns of Verona, Fitchburg, and Dunn. These forested blocks typically have a core area of woods with a width/depth of less than 500 feet with additional small wooded extensions or projections along fence lines. The largest portions of forested lands are northwest of County M/US 14, near the southwest portion of Lake Waubesa, and some forest and shrub-land expansion that extends to the Yahara River north of Lake Kegonsa. About five woodlots appear to be enrolled in Managed Forest Law programs administered by WDNR.¹

The forested areas present near US 51/I-39/90 east of Stoughton include about ten sites in more traditional 40-plus acre (quarter-quarter section) blocks. These areas are typically associated with larger WDNR or shared resource agency lands. Prominent areas include Hook Lake, which contains a forest island amidst a floating bog and large forested blocks southeast of County PB and County M and areas east and northwest of US 51/County B.

D. Savanna and Prairie Habitat

Figure 8.04-3 shows the general locations of savanna and prairie habitat groupings in Dane County. Savanna is considered a forested land cover; however, it contains a predominance of open lands that may be managed for prairie, grazed, or in a state of conversion to forested cover. The majority of these wooded and prairie landscapes are distant from the study area.

¹ Managed Forest Law (MFL) is a landowner incentive program encouraging sustainable forestry on private woodlands. The enrollee agrees to sound forest management principles for reduced taxes. Some contract allow public access to enrolled MFL. The MFL program replaced two previous programs, Forest Tax Law and Forest Crop Law.



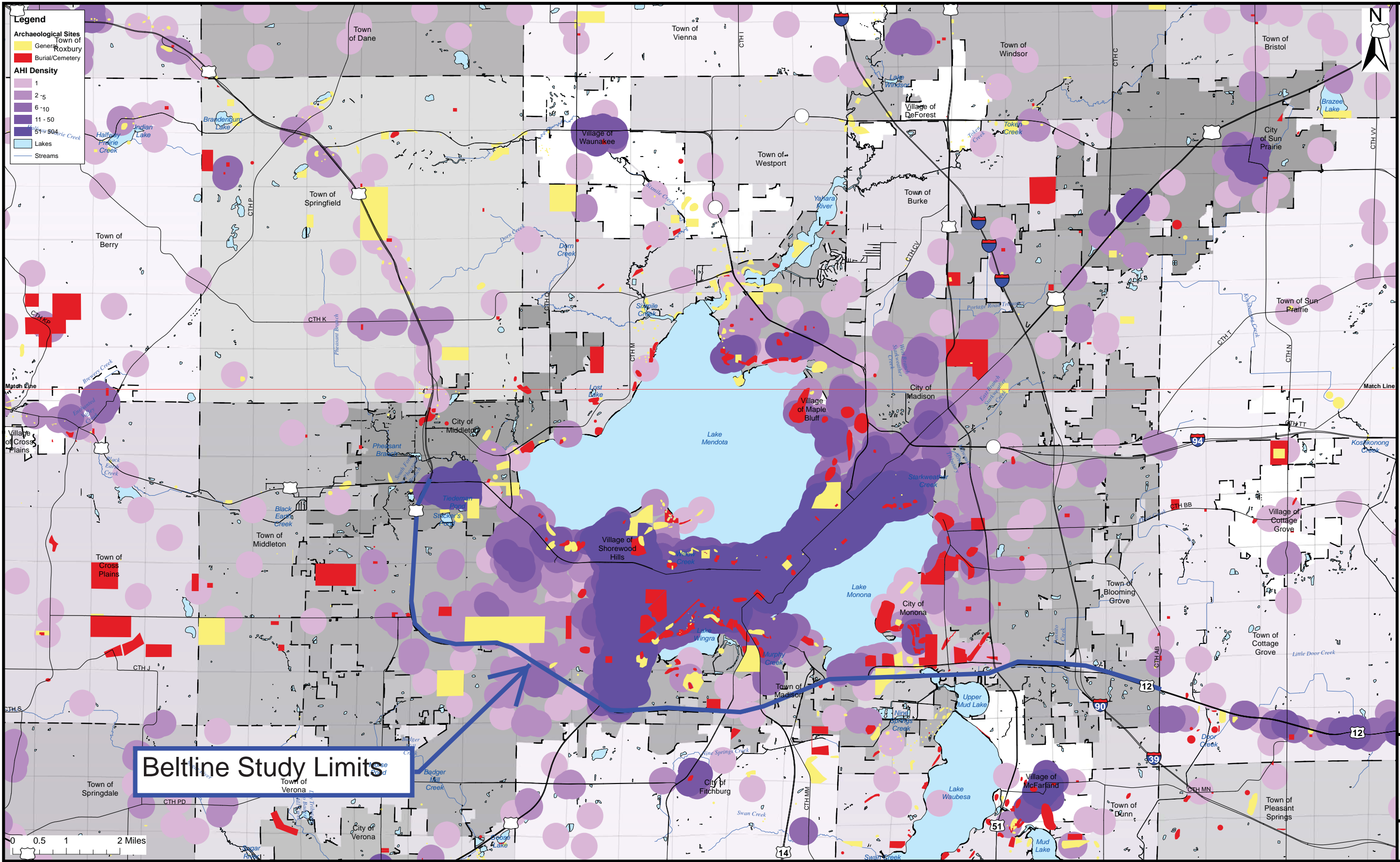
8.05 CULTURAL RESOURCES

A general overview of historical and archaeological cultural resources is provided in this section. Figures 8.05-1 and 8.05-2 provide an overview of the archaeological and Architecture and History Inventory (AHI) sites in the general study area.

Concentrations of AHI listed sites and archaeological sites are generally higher in the middle study area; however, both the northern and southern study areas contain AHI and archaeological resources. Further investigation will be needed to determine the significance of specific resources and whether they will be adversely affected by solutions being considered as part of the overall study.

Previous Beltline studies have identified two properties eligible or potentially eligible for the National Register of Historic Places (NRHP), the University of Wisconsin-Madison Arboretum and the George Vitense Golfland.

- The UW Arboretum is a 180-acre tract of land that wraps around the south, east, and west shores of Lake Wingra and extends south past the Beltline highway. The Arboretum is believed to be the site of the first large-scale experiments in ecological restoration in the world. Contributing resources include three sites, eight buildings, and nine structures. In 2003, the State Historic Preservation Officer agreed that the UW Arboretum was eligible for the National Register of Historic Places under Criterion A (history) in Conservation at the national level. It may also be eligible for National Historic Landmark status as well. Note that several effigy mounds also lie within the UW Arboretum.



ENVIRONMENTAL CONSIDERATIONS
ARCHAEOLOGICAL & HISTORICAL SITES
MADISON BELTLINE PLANNING AND ENVIRONMENT LINKAGES
WISCONSIN DEPARTMENT OF TRANSPORTATION
SW REGION

- The George Vitense Golfland is potentially eligible for the NRHP at the local level under Criteria C (architecture/engineering) and B (important persons) in entertainment and recreation. Under Criterion C, Golfland's two miniature golf courses, the California and the Wisconsin, embody the distinctive characteristics of "fairyland" courses of the 1950s-1960s. Under Criterion B, the entire site is significant for its association with George Vitense, who was important in the development of golf as a recreational hobby in Madison and was one of the most prominent golf teachers in the state. The site was developed between 1954 and 1963. Note that this investigation was performed in 2001-2003 and a formal Determination of Eligibility was not submitted. Site alterations in the last decade could change the eligibility of the site.

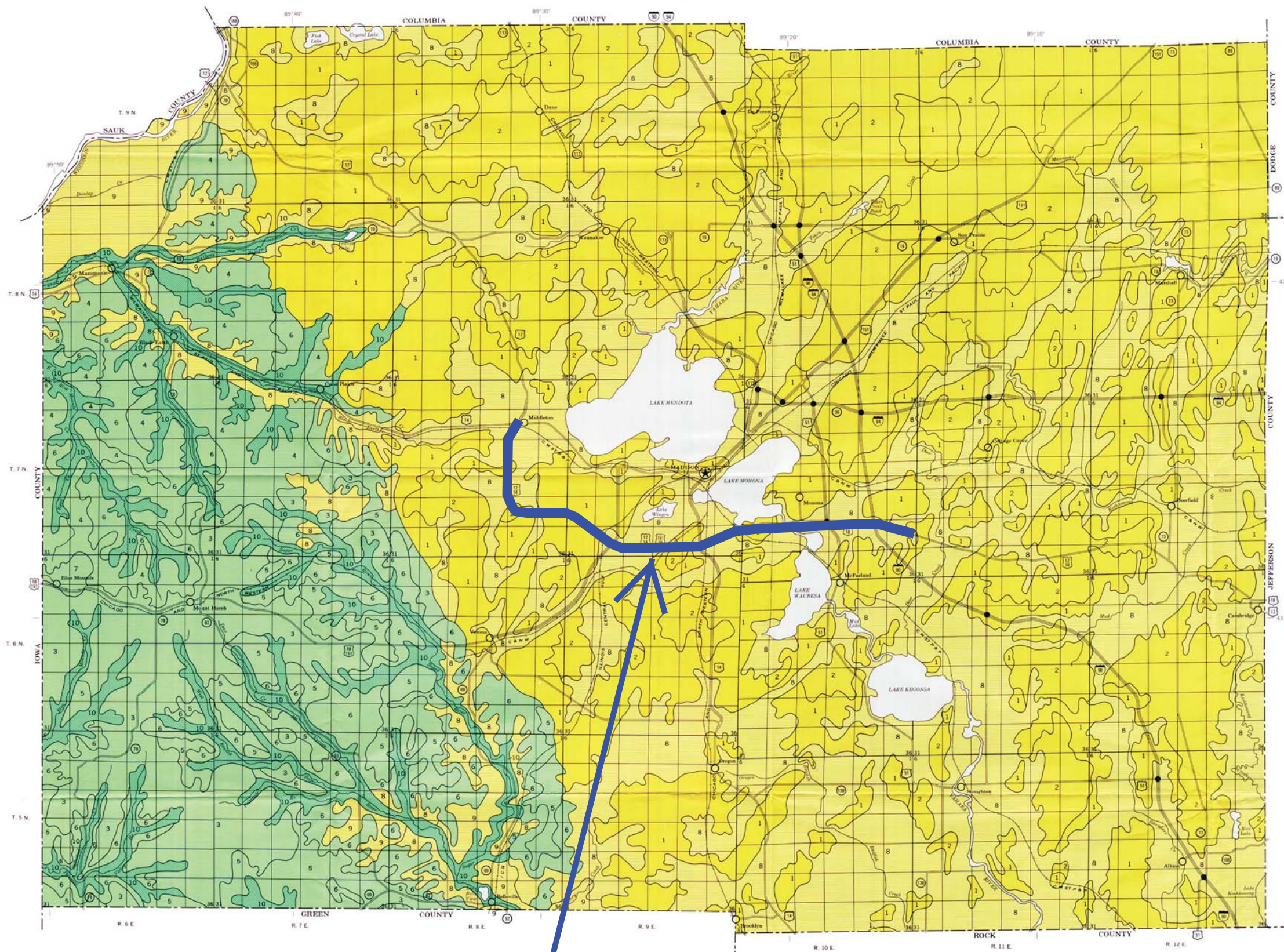
8.06 FARMLAND/SOILS

About three-quarters of Dane County consists of glaciated soil graded and leveled from the Green Bay lobe of the Wisconsin Glaciation. These glacially deposited soils include soils underlain with sandy loam glacial till of either the Dodge-St. Charles-McHenry Soil Association or the Plano-Ringwood-Griswold Soil Association.

The Dodge-St.Charles-McHenry soil association has a varied landscape that is characterized by drumlins and by ground, end, and recessional moraines. The landscape is mostly gently sloping to sloping. There are some areas on benches, in depressions, and drainageways that are nearly level and small acreages that are moderately steep to steep. The pattern of drainage in the association is irregular, but it is generally southerly and westerly. This association makes up about 25 percent of Dane County. About 25 percent are Dodge soils, 20 percent are St. Charles soils, and 15 percent are McHenry soils. The remaining 45 percent are minor soils, including 5 percent Sable silt loam soils. The minor soils in this association include Sable, Kidder, Whalen, Virgil, Westville, Military, and Pecatonica.

The Plano-Ringwood-Griswold Soil Association consists of mainly gently sloping areas on glacial uplands, with some area on uplands nearly level or sloping. There are small areas of moderately steep rises and ridges. Drainage is similarly southwesterly. The soil association makes up about 15 percent of the county with about 50 percent being Plano, 25 percent Ringwood, 10 percent Griswold, 5 percent Elburn, and the remaining 15 percent minor soils. Minor soils in this association include Elburn, Troxel, Radford, Huntsville, Sable, and Rockton soils. With the exception of Rockton soils, these minor soils are typically level to gently sloping and are mainly on low benches, in drainageways, and in depressional areas on uplands.

The study area is too large to describe individual soil details beyond the soils group association. Figure 8.06-1 shows the major USDA soil groups throughout the PEL study area and generally corresponds with the geologic landscapes of Dane County shown previously in Figure 8.01-1. Agricultural land use within Dane county is illustrated in Figure 8.06-2. Shown previously, Figures 8.03-1 and 8.03-2 show various other farmland-related features, including hydric soils and drainage districts. Drained lands in Dane County and much of southern Wisconsin sometimes contain the most agriculturally productive soils in the area.



- SOIL ASSOCIATIONS ***
- SOILS UNDERLAIN BY SANDY LOAM GLACIAL TILL**
- 1 Dodge-St. Charles-McHenry association: Well drained and moderately well drained, deep silt loams
 - 2 Plano-Ringwood-Grissold association: Moderately well drained and well drained, deep silt loams and loams
- SOILS UNDERLAIN AT A DEPTH OF LESS THAN 40 INCHES DOMINANTLY BY SANDSTONE, DOLOMITE, OR SHALE**
- 3 Edmund-Sogn-Port Byron association: Excessively drained to moderately well drained, shallow, very shallow, and deep silt loams that are underlain by dolomite or silt
 - 4 Elkmound-Stony and Rocky land-Dunbarton association: Somewhat excessively drained and well drained, shallow sandy loams and silt loams that are underlain by sandstone or limestone; and Stony and Rocky land-Dunbarton-NewGlarus-Seaton association: Well drained and moderately well drained, shallow, moderately deep, and deep silt loams that are underlain by limestone or sandstone
 - 5 Basco-Elkmound-Gale association: Moderately well drained to somewhat excessively drained, moderately deep and shallow silt loams and sandy loams that are underlain by sandstone
 - 6 Derinda-Dunbarton association: Moderately well drained and well drained, moderately deep and shallow silt loams that are underlain by shale or limestone
- SOILS FORMED IN OUTWASH MATERIAL**
- 8 Batavia-Houghton-Dresden association: Well drained and poorly drained, deep and moderately deep silt loams and mucks that are underlain by silt, sand, and gravel
 - 9 Meridian-Granby-Dickinson association: Well drained, poorly drained, and somewhat excessively drained, moderately deep and deep loams, loamy sands, and fine sandy loams that are underlain by sand and loamy sand
- SOILS FORMED IN ALLUVIUM**
- 10 Otto-Orion-Troxel association: Poorly drained to well drained, deep silt loams that are underlain by silt loam
- * Texture terms refer to the surface layer of major soils unless otherwise stated.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
WISCONSIN RESEARCH DIVISION OF THE COLLEGE OF AGRICULTURE
AND LIFE SCIENCES, UNIVERSITY OF WISCONSIN

GENERAL SOIL MAP **DANE COUNTY, WISCONSIN**

Scale 1:126,720
1 2 3 4 Miles

SECTIONALIZED TOWNSHIP											
6	9	4	3	2	1						
7	8	9	10	11	12						
18	17	16	15	14	13						
19	20	21	22	23	24						
30	29	28	27	26	25						
31	32	33	34	35	36						

Beltline Study Limits

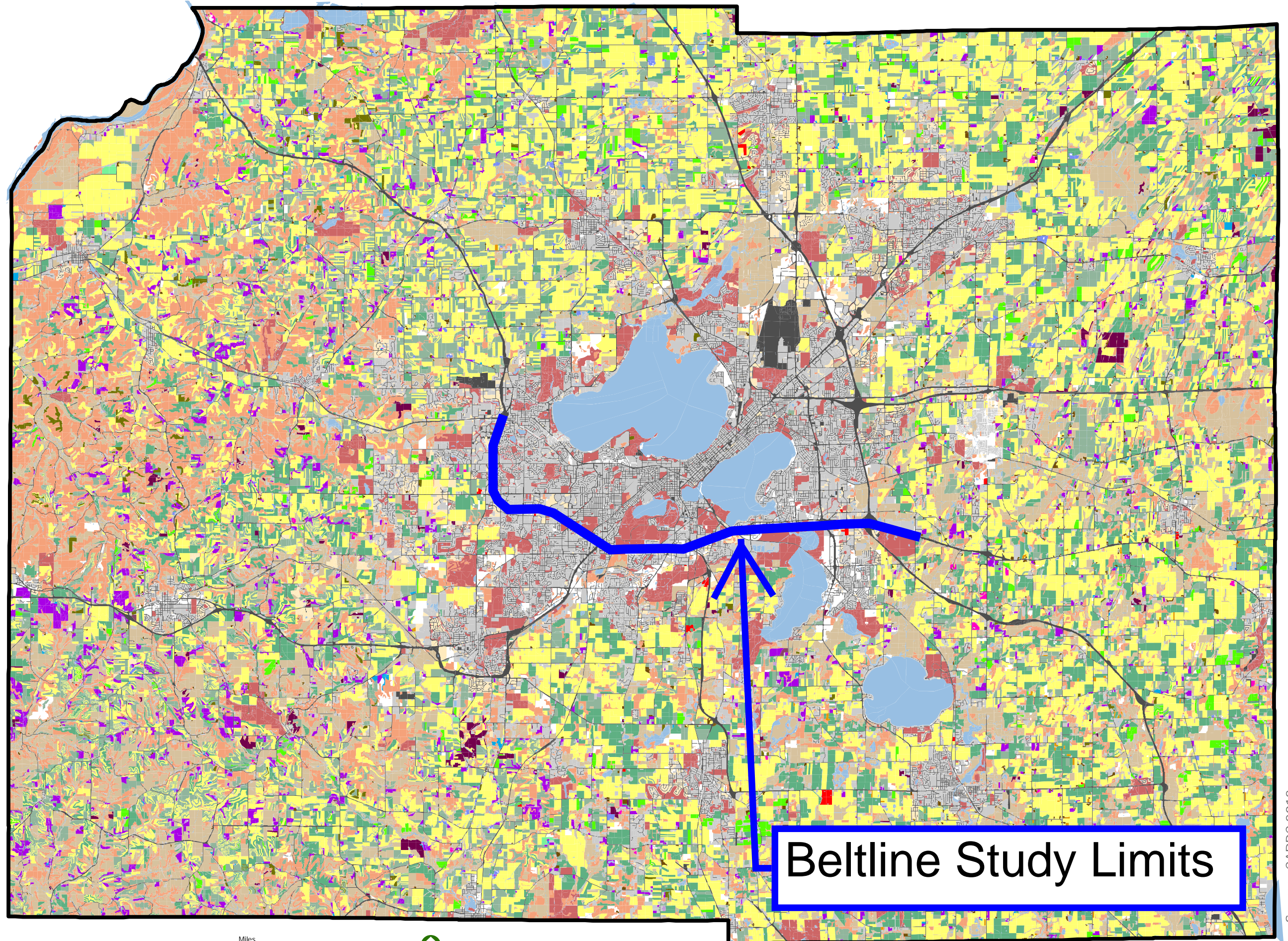
Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

Non Agricultural Land Use (2010)

- Developed Land
- Outdoor Recreation
- Transportation Related
- Vacant Subdivided Land
- Water

Agricultural Land Use (2010)

- Ag Buildings
- Corn Field
- Soybean Field
- Wheat Field
- Dry Pea and Bean Field
- Hay Field
- Tobacco Field
- All Other Crop Fields
- Beef Cattle Farm
- Dairy Farm
- Hog Farm
- Horse Farm
- All Other Animal Farm
- Pasture
- Fruit or Vegetable Farming
- Aquaculture
- Nursery
- Agricultural Support Services
- Open Land
- Woodlands



FPP 1 - 2010 Land Use

Dane County, WI

Source: CARPC 2012

A. Northern Study Area

Substantial areas of the northern study area are in partially developed or planned rural towns of Westport and Burke or the village of Waunakee. Soil productivity and prevailing agricultural conditions compete with development, proximity to services, and protection from flooding. The town of Springfield and areas near and south of US 12 and WIS 19 have the largest extent of prime farmland of all (northern/middle/southern) project areas in the PEL study area, and the town has expressed desires to maintain and preserve agricultural production.

The agricultural land in the northern study area is in high demand for continued dairy and agricultural production. A manure digester is located near large farms and helps address manure management and field application issues for large agricultural operations in the area. Some of the highest quality land in the county is present in the northern study area with agricultural land values and demand high.

B. Middle Study Area

The middle study area is an urbanized environment along the Beltline. Most farmland has ceased operation or is in alternative use. Open areas that are not wetlands, environmental corridors, or have development restrictions are generally subject to development pressures. Some vacant land is cropped until ultimate land uses are determined. Much of the rich and fertile drainage district lands are not farmed and have been allowed to revert to wetlands or other passive recreation or recreational areas.

C. Southern Study Area

Extensive portions of the city of Fitchburg and the town of Verona contain prime farmland and other large agricultural interests and protections. The city of Fitchburg includes an entire town and has a substantial farmland preservation program and comprehensive plan that substantially restricts development on farmland. Soils in the southern study area are prime or generally good, fertile, and well drained.

Shown in Figure 8.06-3, the town of Dunn has extensive protected lands. The majority of these lands are under town of Dunn conservation easements acquired through the town's Purchase of Development Rights (PDR) program that included the first PDR transaction/acquisition in Wisconsin. The town states the following:

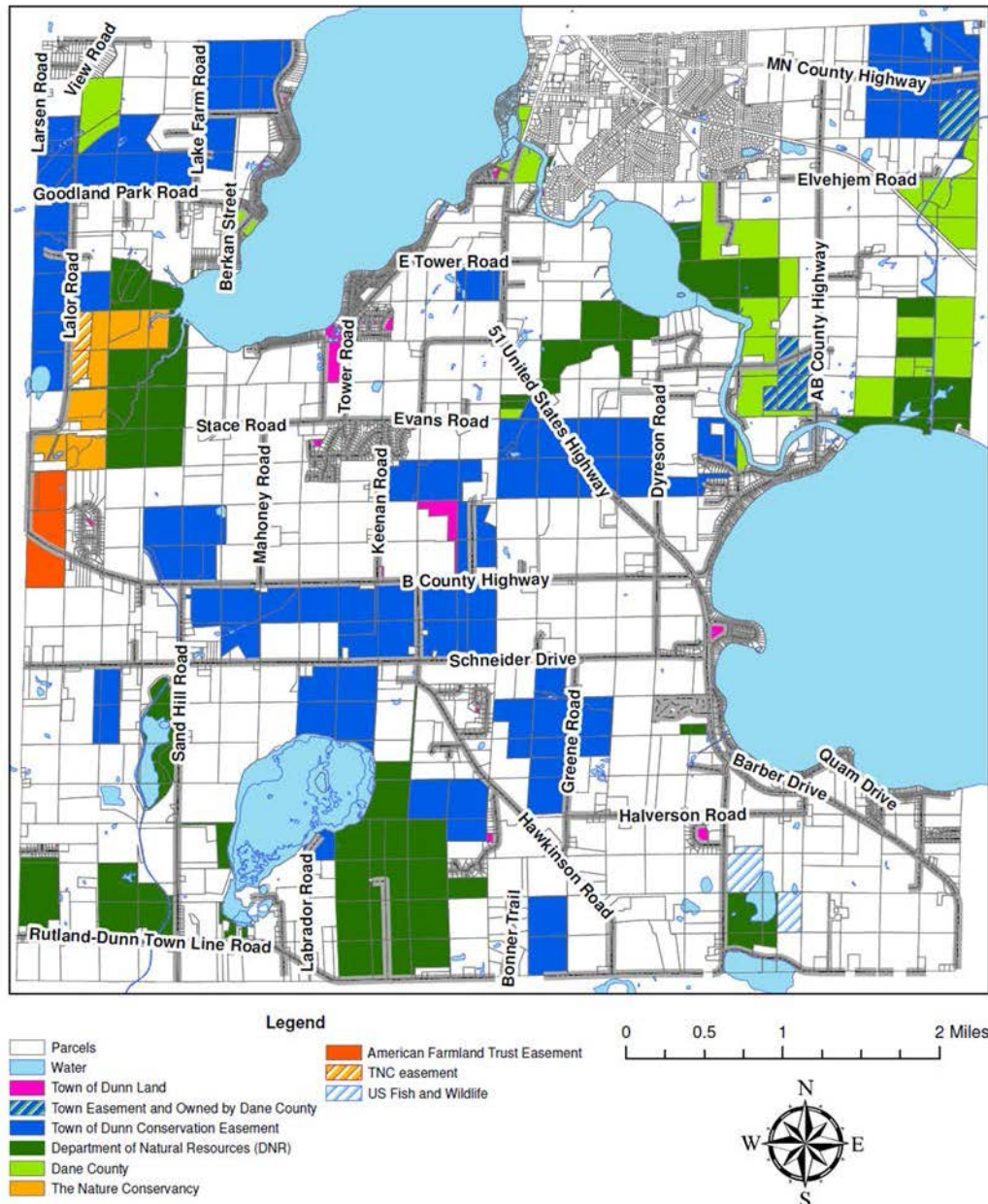
The Town of Dunn's PDR program is a voluntary farmland protection method that compensates landowners for inhibiting future development on their land. Through this program, the Town purchased the development rights to its first piece of property in April 1997 and continues to use this tool today in order to fulfill the four goals of the program:

- 1. Preserve viable farm operations and farmland to maintain the rural character of the Town of Dunn, with agriculture as the major economic activity.*
- 2. Permanently preserve scenic vista and environmentally significant areas (wetlands, lakes, streams, woodlots, etc.).*
- 3. Protect the town from the encroachment of neighboring cities and villages.*

4. Preserve “buffer zones” around significant environmental and/or agricultural areas.

According to online data from February 2013, the town has conservation easements on 27 properties with a total area of about 3,000 acres, which is about 16 percent of the town area.

Additional easements held by the WDNR, Dane County, The Nature Conservancy, and the USFWS account for an additional 2,700 acres of conservation holdings. These easements together with the town of Dunn’s easements discussed above protect about 31 percent of the town’s total area.



Source: <http://www.town.dunn.wi.us/resources/protectedlandsmat2013.pdf> - 2013

Figure 8.06-3 Town of Dunn Protected Lands

Areas to the far southeast within the town of Oregon also contain productive prime farmland primarily located along the level to rolling topography of the WIS 138 corridor east of Stoughton to I-39/90. Unlike the town of Dunn, few to no conservation easements exist in the town of Oregon area. Town of Pleasant Springs lands east and southeast of Lake Kegonsa include more small lakeside developments and more conservation-based lands with less production agriculture. The town of Dunkirk to the southeast of Stoughton includes extensive, contiguous prime farmland that has not experienced as much development and subdivision pressure as other parts of the study area.

8.07 RESOURCE AREAS ADJACENT TO THE BELTLINE

The following paragraphs describe specific park resources directly adjacent to the Beltline that could be affected by potential improvements directly on the Beltline. The paragraphs also describe if Section 4(f) protections apply to the resource. Section 4(f) refers to 23 CFR 771.135 and 23 CFR 774. These regulations state that FHWA cannot use land from significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

- There is no feasible and prudent alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from such use.

These paragraphs also note if LWCF was used in association with the resource, making protections associated with Section 6(f) applicable. Section 6(f) properties are properties acquired or improved in whole or in part using funds from the Land and Water Conservation Fund Act. 36 CFR 59 requires that once an area has been funded with LWCF assistance, it is continually maintained in public recreation use unless Nation Park Service approves substitution property of reasonably equivalent usefulness and location and of at least equal fair market value. Conversion of these lands to other purposes cannot occur unless:

- All practical alternatives to the proposed conversion have been evaluated.
- The fair market value of the property has been established and the proposed replacement property is of equal value or more.
- The proposed replacement property is of reasonably equivalent usefulness.

The WDNR is the agency responsible for determining if a property has LWCF associated with it.

A. Sauk Creek Park, City of Madison

Sauk Creek Park is a 4.2-acre neighborhood park adjacent to the east side of the Beltline south of Old Sauk Road. It includes a basketball court, a soccer field, and play equipment. It would qualify for protection under Section 4(f). It is unknown whether Land and Water Conservation Funds (LWCF) or other special funding sources were used for the park.

B. Orchard Ridge Park, City of Madison

Orchard Ridge Park is a 9.5-acre parcel on the south side of the Beltline east of Whitney Way. It includes a 0.75-acre pond/marsh that is connected to the Odana Pond system. About 4.6 acres is turf

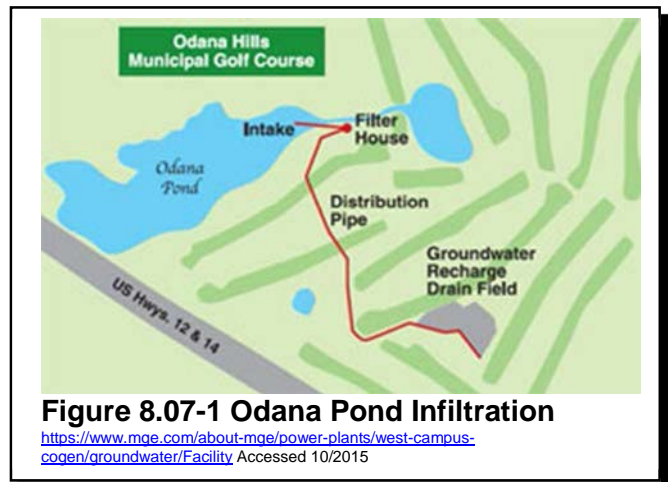
with the remainder being wooded. It would qualify for protection under Section 4(f). It is unknown whether LWCF or other special funding sources were used for the park.

C. Odana Hills Park, City of Madison

Odana Hills Park is a 12.8-acre neighborhood park that lies north of the Odana Pond. About 8.3 acres is turf with soccer facilities, with the remainder being wooded. It is distinct and separate from Odana Pond, which technically is a city of Madison stormwater facility. It would qualify for protection under Section 4(f). It is unknown whether LWCF or other special funding sources were used for the park.

D. Odana Pond, City of Madison

Odana Pond is a 23.9-acre parcel that is maintained by the city of Madison Stormwater Utility. Though adjacent to Odana Hills Park, it is not parkland and therefore not Section 4(f). Madison Gas and Electric has an infiltration facility on the pond and leading to the Odana Hills Golf Course. It is part of a mitigation plan to offset impacts of water use at UW's West Campus Cogeneration Facility. Groundwater is pumped from a well into the Yahara River during very dry periods when the river habitat could be affected by cogeneration facility water use upstream. The groundwater is recharged with stormwater taken from Odana Pond and infiltrated into a drain field at the golf course. Because of high chloride concentrations during the winter and spring months, pumping from the pond only occurs during a portion of the year.



E. Odana Hills Golf Course, City of Madison

This 171-acre 18-hole golf course is operated by the city of Madison Parks Department. The par-72 course includes a clubhouse with locker rooms. It would qualify for protection under Section 4(f). It is unknown whether LWCF or other special funding sources were used for the park.

F. Vitense Golfland Golf Course (privately owned)

As mentioned in Section 8.6, the George Vitense Golfland is located in the southwest quadrant of the Whitney Way interchange. Field surveys performed in 2001-2003 indicated it was potentially eligible for the NRHP at the local level under Criteria C (architecture/engineering) and B (important persons) in entertainment and recreation. Site alterations in the last decade could change the eligibility of the site. If it is eligible for the NRHP, then this site would qualify for protection under Section 4(f).

G. UW Arboretum, State of Wisconsin Board of Regents

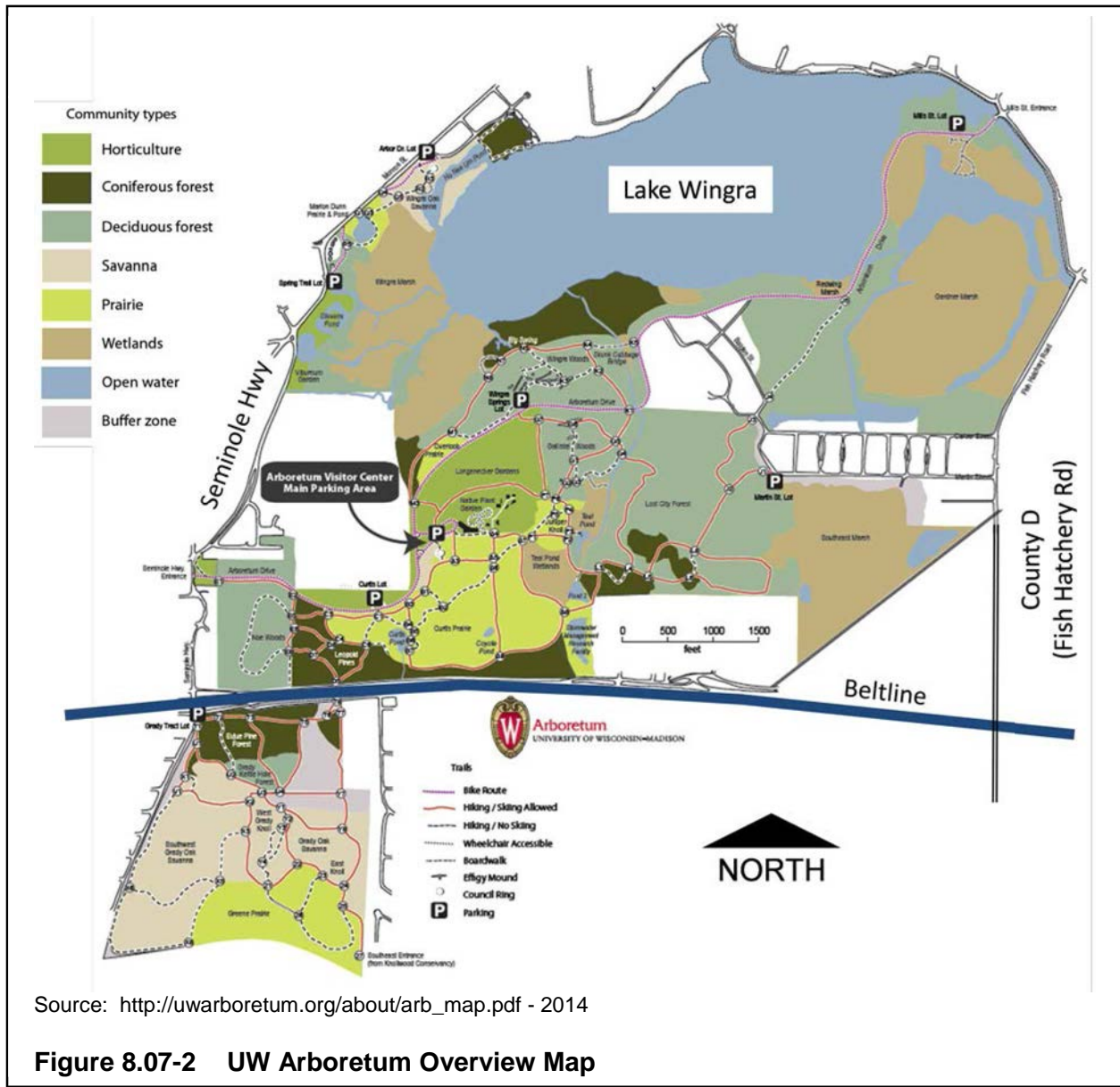
The UW Arboretum is located within the middle study area, shown in Figure 8.07-4. The UW Arboretum is a collection of restored ecological communities and horticultural gardens that is heavily used for research, education, and recreation purposes. The Arboretum includes lands north and south of the

Beltline. The Grady Tract is the arboretum parcel on the south side of the Beltline Highway that includes the Greene Prairie and Pine Woods. There are no buildings on the Grady Tract. The UW Arboretum property on the north side of the Beltline includes three recently restored or rehabilitated stormwater basins, a Visitor Center, and replications of eight to ten forestland cover types. The north area also contains the Curtis Prairie, a 60-acre site supporting one of the earliest restored tall grass prairies in the world. Adjacent to the Beltline lies a narrow wooded buffer area containing mixed conifer-deciduous tree species that screen the prairie from the visual impacts of the Beltline highway.

University and Civilian Conservation Corps crews reestablished many of the natural landscapes of Wisconsin on the site between the 1930s and the post-World War II period. The naturalized and managed prairie and forested tracts within the UW Arboretum are shown in Figure 8.07-2. The UW Arboretum has over 200 acres of restored and hundreds more of original or successional upland and lowland forests amid 1,200 acres of cumulative land holdings. The UW Arboretum contains deciduous and coniferous forest, savanna and prairie, wetlands, and horticultural gardens.

As mentioned in Section 8.6, in 2003, the State Historic Preservation Officer agreed that the UW Arboretum was eligible for the National Register of Historic Places under Criterion A (history) in Conservation at the national level. It may also be eligible for National Historic Landmark status as well.

Because it is a recreational area and wildlife refuge as well as a historic site of state, regional, or national significance that is open to the public, the Arboretum qualifies for protection under Section 4(f). Discussions with the Arboretum staff indicate the purchase of a 12.6-acre tract of land (Fisher Property) west of Fish Hatchery and south of Martin Street received LWCF monies. It is unknown whether other properties or amenities within the arboretum received LWCF monies or special funding sources.



H. Britta Park, City of Madison

Britta Park is located in the southeast quadrant of the Verona Road interchange south of the frontage road. The 1.6-acre neighborhood park will be impacted by Stage 3 of the Verona Road project, where roughly 60 to 70 percent of the park will be used for roadway purposes. Mitigation will include enhancements to nearby De Volis Park as well as screening walls/berms. A Final Section 4(f) determination for the park was approved in the June of 2011 Final Environmental Impact Statement (FEIS) for Verona Road.

I. Doncaster Park, City of Madison

Doncaster Park is a small neighborhood park located in the northeast quadrant of the Verona Road interchange. It is about 0.28 acres and includes play equipment. It would qualify for protection under Section 4(f). It is unknown whether LWCF or other special funding sources were used for the park.

J. Thut Park, City of Madison

Thut Park is a city of Madison neighborhood park located in the northwest quadrant of the West Broadway interchange off Nana Lane. It is 7.2 acres and includes play equipment, a basketball court, football fields, and a shelter. It would qualify for protection under Section 4(f). It is unknown whether LWCF or other special funding sources were used for the park.

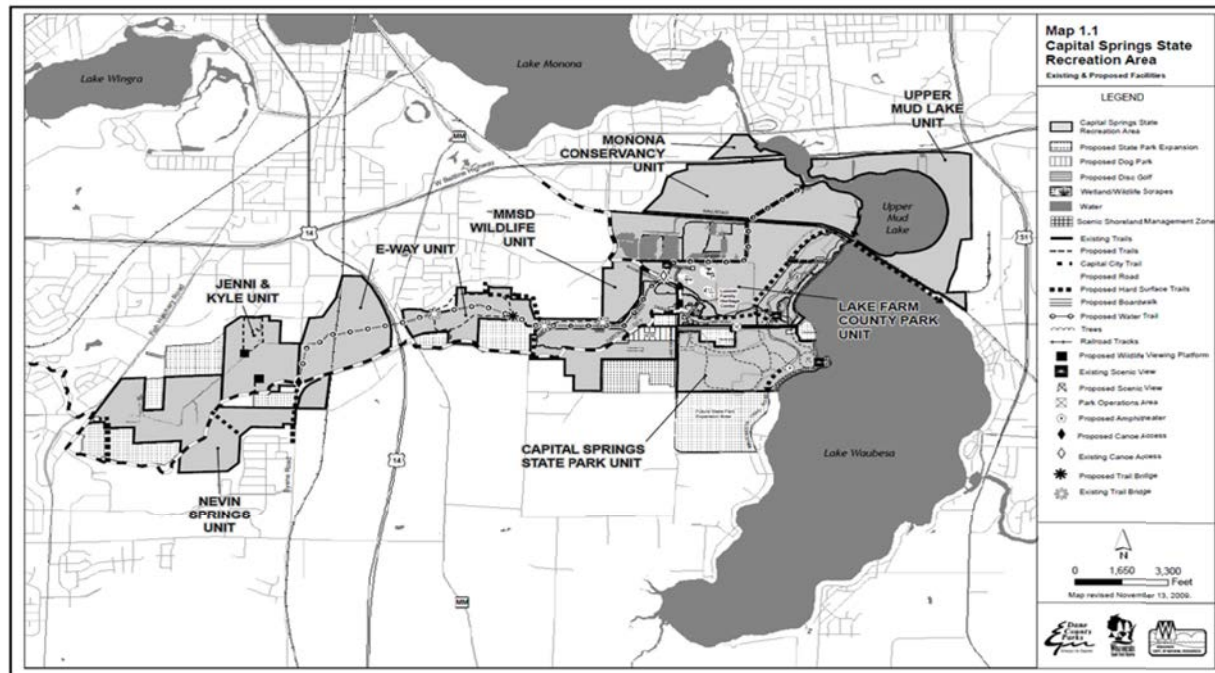
K. Ahuska Park, City of Monona

Ahuska Park is a city of Monona Park located on the north side of the Beltline east of the Monona Drive interchange. The 22-acre park includes play equipment, soccer/football fields, baseball fields, a volleyball court, tennis courts, and a shelter with restrooms. It would qualify for protection under Section 4(f). It is unknown whether LWCF or other special funding sources were used for the park.

L. Lewis Nine Springs E-Way and Capital Springs State Recreation Area (CSSRA), Multiple Owners

The Lewis Nine Springs E-Way (E-Way) and the CSSRA have extensive land holdings (existing and planned), existing habitat, and location. Shown in Figure 8.07-4, the CSSRA is located in the cities of Madison, Fitchburg, and Monona and the town of Dunn. It is made up of eight separate units with different ownership, including WDNR, WisDOT, Dane County, Madison Metropolitan Sewerage District, the city of Madison, and the city of Monona. The general limits of the CSSRA are the Beltline corridor (to the north), the town of Dunn (to the south), the Nine Springs Land Unit adjacent to County D (Fish Hatchery Road) (to the west), and Lake Farm County Park and Capital Springs State Park Unit on the west side of Lake Waubesa (to the east). The northern and northeast limits of the CSSRA also include the Monona Conservancy Unit and the Upper Mud Lake Unit.

Much of the northern portion of the CSSRA adjacent to the Beltline in the Upper Mud Lake Unit is owned by WisDOT and includes lands purchased for wetland mitigation for the 1980s Beltline expansion. The city of Monona also owns a portion of the recreation area, Monona Conservancy Unit, as does the WDNR. Figure 8.07-3 shows an overview of the resource. Figure 8.07-4 shows the ownership of parcels in the recreation area directly adjacent to the Beltline.



Source: http://danedocs.countyofdane.com/webdocs/PDF/lwrp/parks/Capital_Springs_Master_Plan_Draft.pdf

Source: Map 1.1 Capital Springs State Recreational Area (Existing/Proposed Facilities), Dane County, 11/13/09

Figure 8.07-3 Capital Springs State Recreational Area Overview

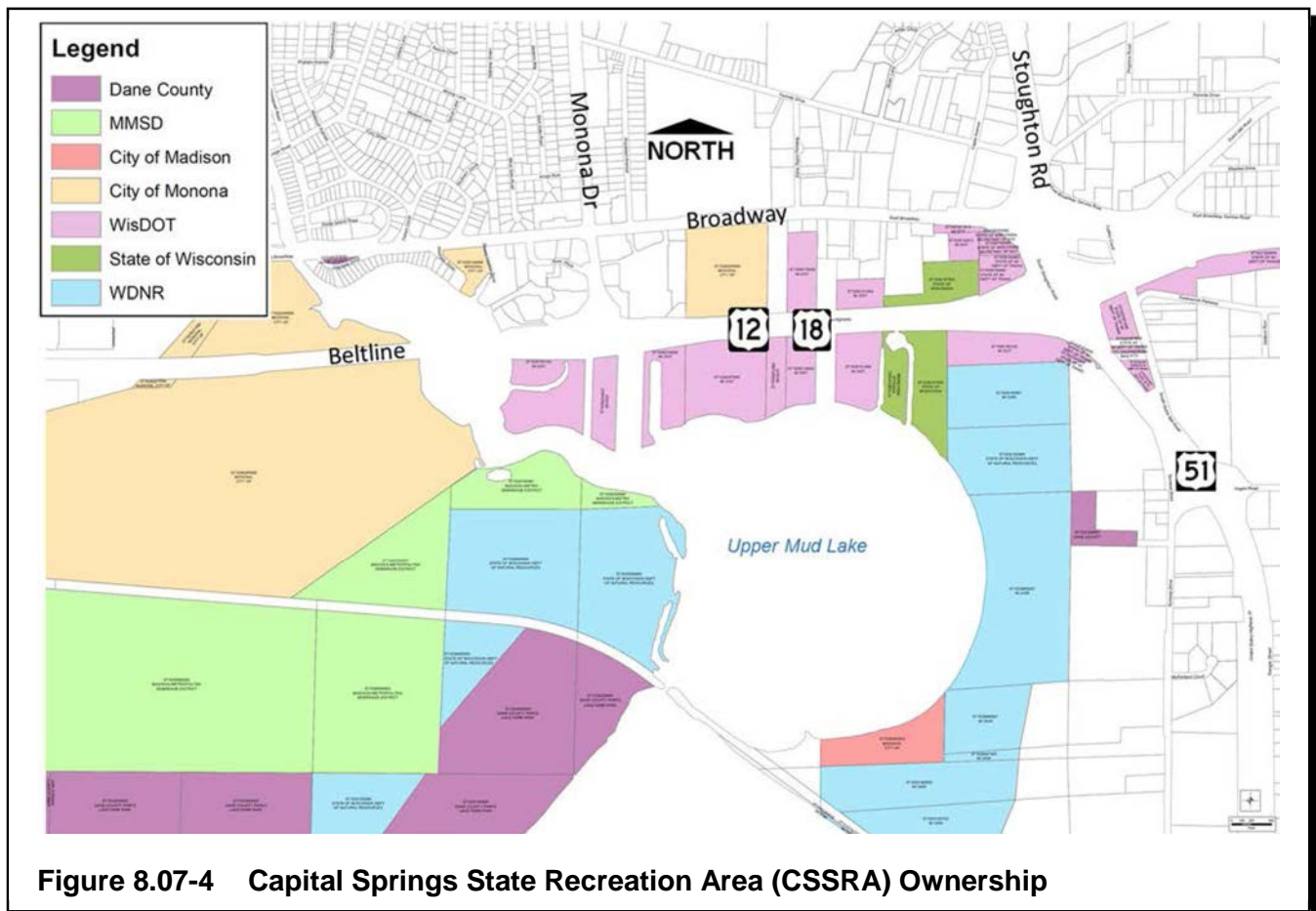


Figure 8.07-4 Capital Springs State Recreation Area (CSSRA) Ownership

Because it is a recreational area and wildlife refuge that is open to the public, much of the Capital Springs State Recreation Area (CSSRA) could qualify for protection under Section 4(f). However, portions of the CSSRA adjacent to the Beltline and owned by WisDOT could be considered highway right of way.² Discussions with the WDNR staff indicate a portion of the Upper Waubesa Fishery Area located in the southwest quadrant of the US 51 and US 12/18 Interchange along Upper Mud Lake and Lake Waubesa received LWCF monies. This area is northeast of Upper Mud Lake near the Stoughton Road interchange. Discussions with the WDNR staff indicate the entire Upper Waubesa Fishery area should be treated as Section 6(f) (see beginning of Section 8.07 for definition).

² 23 CFR 774.11(d), (h), and (i) state:

(d) Where Federal lands or other public land holdings (e.g., State forests) are administered under statutes permitting management for multiple uses, and, in fact, are managed for multiple uses, Section 4(f) applies only to those portions of such lands which function for, or are designated in the plans of the administering agency as being for, significant park, recreation, or wildlife and waterfowl refuge purposes. The determination of which lands so function or are so designated, and the significance of those lands, shall be made by the official(s) with jurisdiction over the Section 4(f) resource. The Administration will review this determination to assure its reasonableness

(h) When a property formally reserved for a future transportation facility temporarily functions for park, recreation, or wildlife and waterfowl refuge purposes in the interim, the interim activity, regardless of duration, will not subject the property to Section 4(f)

(i) When a property is formally reserved for a future transportation facility before or at the same time a park, recreation area, or wildlife and waterfowl refuge is established and concurrent or joint planning or development of the transportation facility and the Section 4(f) resource occurs, then any resulting impacts of the transportation facility will not be considered a use as defined in § 774.17. Examples of such concurrent or joint planning or development include, but are not limited to:

- (1) Designation or donation of property for the specific purpose of such concurrent development by the entity with jurisdiction or ownership of the property for both the potential transportation facility and the Section 4(f) property; or
- (2) Designation, donation, planning, or development of property by two or more governmental agencies with jurisdiction for the potential transportation facility and the Section 4(f) property, in consultation with each other.

M. Wetland Mitigation West of Stoughton Road, WisDOT

A unique feature of the area is the wetlands associated with 1984-1986 permitting/wetland mitigation for the WisDOT South Beltline project. There are WisDOT-owned and -constructed wetland mitigation sites in the northwest and southwest quadrants of the Beltline and US 51 (Stoughton Road) interchange that stretch west to the western limits of wetlands and a city of Madison bulkhead line west of the Yahara River. The wetland permit was USACE Permit #NCSCO-RF (85-136-02)

Permitting or monitoring data from the USACE permitting for the Beltline project did not identify special covenants or restrictions on the mitigation ponds or lands. The former mitigation site can be described as “red flag wetland” in accordance with the WisDOT Wetland Mitigation Banking Technical Guidelines.