

**Staff Analysis of Proposed Amendment to the *Dane County Land Use and Transportation Plan and Water Quality Plan*, Revising the Verona Urban Service Area Boundary and Environmental Corridors in the Northwest portion of the City of Verona**

1. **Applicant:** City of Verona
2. **Description of Proposal**

The proposed amendment will add 10 acres to the northwest side of the Verona Urban Service Area. The area is owned by Epic Systems Corporation (Epic) and is located northwest of Northern Lights Drive at Ticklers Trail, adjacent to the Epic business campus. The entire 10-acre amendment is developable. The development plan for the area calls for a contractor's building and parking areas for construction workers. Epic, a maker of software for medical groups, hospitals and health care organizations, has experienced considerable growth since locating in the City of Verona in 2002, and has constructed several new buildings on its campus to accommodate this growth. For the last few years the proposed amendment area has been the site of over 20 construction trailers, portable toilets, and construction parking associated with the growth of Epic facilities. Anticipating continued expansion projects for the company, the City of Verona proposes adding the 10-acre site to the Verona Urban Service Area to accommodate a building to house construction offices and indoor toilet facilities, and a parking lot to accommodate construction vehicles and the automobiles of construction workers. The need for contractors' facilities is anticipated to extend three to five years or more, with potential repurposing of the building and/or addition of other facilities at a later time. (see Table 1 and Maps 1, 2 and 3)

**Table 1: Verona Urban Service Area, Northwest (Epic)**

Proposed Land Use	Density (units/acre)		Total ( ac.)	% of Total	Housing Units	No. of Persons	No. of Students	Existing Develop.	Environ. Corridor	Develop-able
	Proposal	VUSA								
Residential Total		4.2	0.0	0.0%	0	0	0			
Industrial/Office			10.0	100.0%				0.0		
Street R-O-W			0.0	0.0%						
Stormwater Facilities			0	0.0%						
Park & Open Space			0.0	0.0%						
<b>TOTAL</b>			<b>10.0</b>	<b>100.0%</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	<b>0.0</b>	<b>10.0</b>

Source: City of Verona Planning Submittal and Capital Area Regional Planning Commission

3. **Existing Environment**

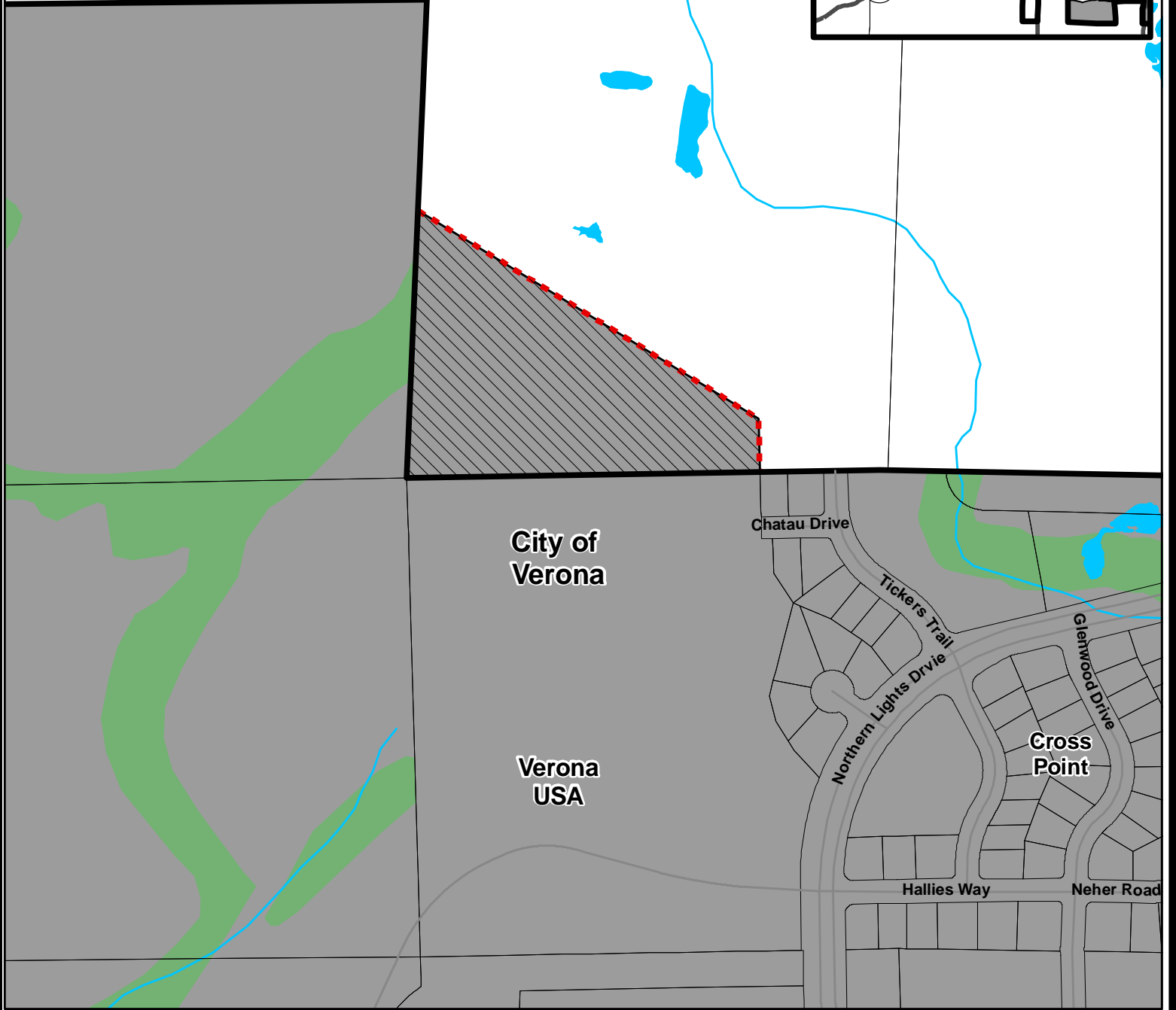
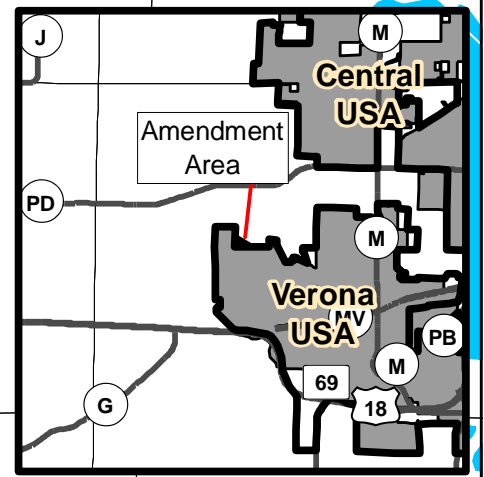
**Natural Resources.** The proposed amendment area is located on a ridgeline that separates the Lower Badger Mill Creek sub-watershed from the Sugar River Watershed in the Sugar-Pecatonica River Basin (see Map 4). Runoff will be directed to the Sugar River, approximately one mile distant, and will be controlled by an existing wet stormwater detention pond located in the northwest quadrant of the existing Epic site. The Sugar River is designated an Exceptional Resource Water (ERW) and coldwater trout stream. Water

quality in the Upper Sugar River is generally fair to good. The primary water quality problems are the result of agricultural and urban nonpoint sources of pollution.

There are no wetlands, floodplains, drainageways, or other sensitive resources needing to be designated as environmental corridors within the amendment area. The WDNR Bureau of Endangered Resources maintains a map representing the known occurrences of rare species and natural communities that have been recorded in the Wisconsin Natural Heritage Inventory (NHI). The map does not indicate the presence of rare aquatic or terrestrial species within the amendment area.









The city forester conducted a tree survey of the amendment area to determine what tree species are present and to assess their suitability for preservation. The forester determined that the entire parcel is sparsely populated with small to medium size trees in fair to poor condition with many having visible disease problems. The dominant tree species are Chokecherry (75%) and Boxelder (25%). Dense stands of invasive woody shrubs including Honeysuckle and Buckthorn are also present. These species are generally considered to be invasive and are short lived, low value trees making them poor candidates for preservation.

Town of Verona



**Map 1 Verona Northwest**

**Amendment to the Verona Urban Service Area in the City of Verona**

-  Service Area to be added (10.0 acres)
-  Proposed Environmental Corridor (0.0 acres)
-  Existing Environmental Corridor
-  Incorporated Area
-  or  Water Feature
-  Existing Urban Service Area Boundary
-  Proposed Urban Service Area Boundary

11 Oct. 2010






0 400  
Feet

Prepared by staff of the CARPC.




**Map 2 Aerial (2005)**

**Amendment to the Verona Urban Service Area in the City of Verona**

-  Existing Service Area
-  Service Area Expansion Boundary
-  Tax Parcels
-  Environmental Corridor to be Added (0.0 acres)
-  Municipalities

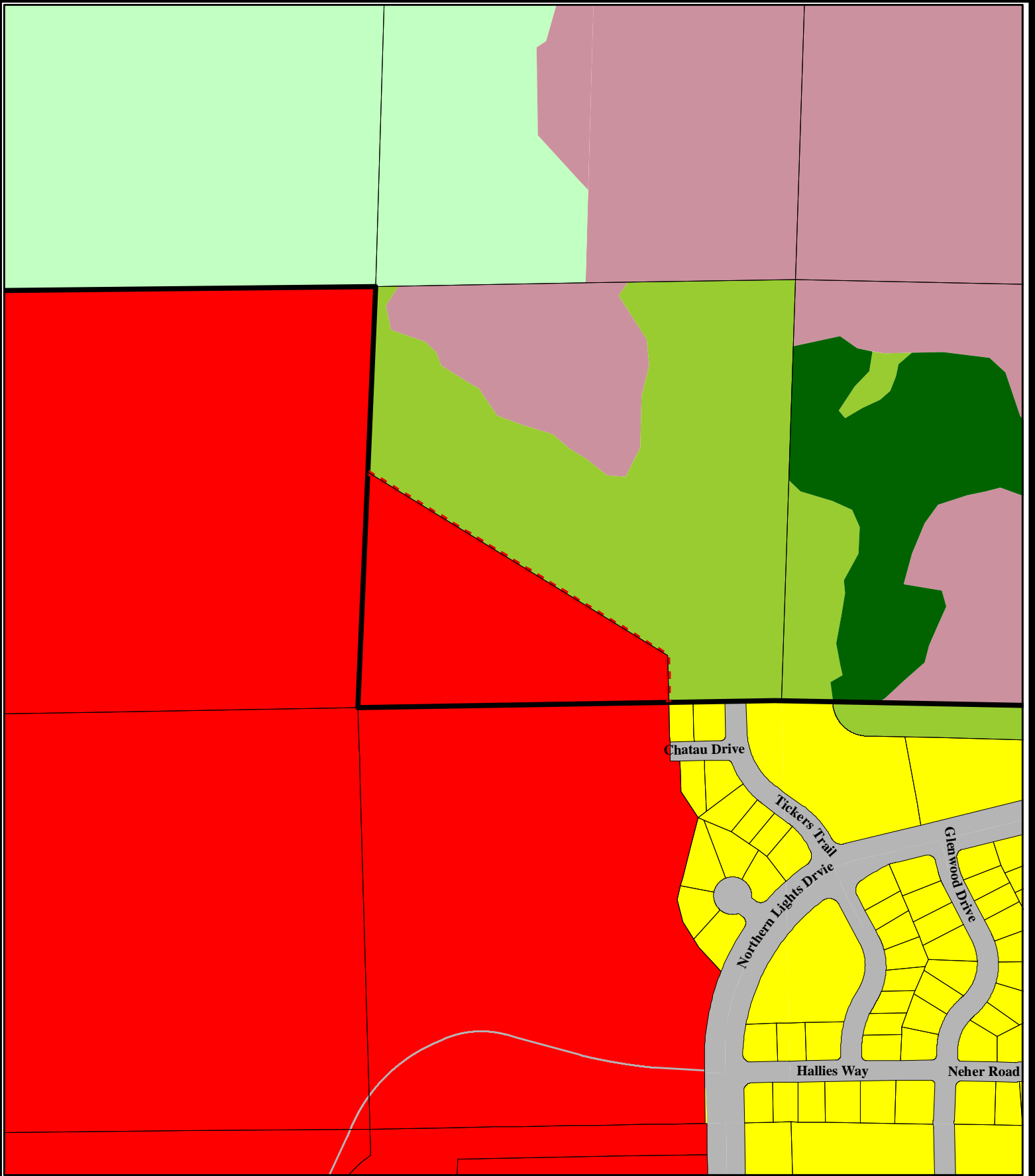
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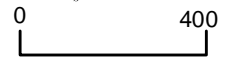
**Map 3 Proposed Land Use**

**Amendment to the Verona Urban Service Area in the City of Verona**

- |                              |                               |                |
|------------------------------|-------------------------------|----------------|
| Tax Parcels                  | Communications or Utilities   | Right of Way   |
| Service Expansion Boundary   | Extractive                    | Single Family  |
| Current Service Area         | Industrial                    | Transportation |
| Agriculture                  | Institutional or Governmental | Two Family     |
| Cemetery                     | Multi-Family                  | Water          |
| Commercial Forest            | Open Land                     | Woodland       |
| Commercial Sales or Services | Outdoor Recreation            |                |

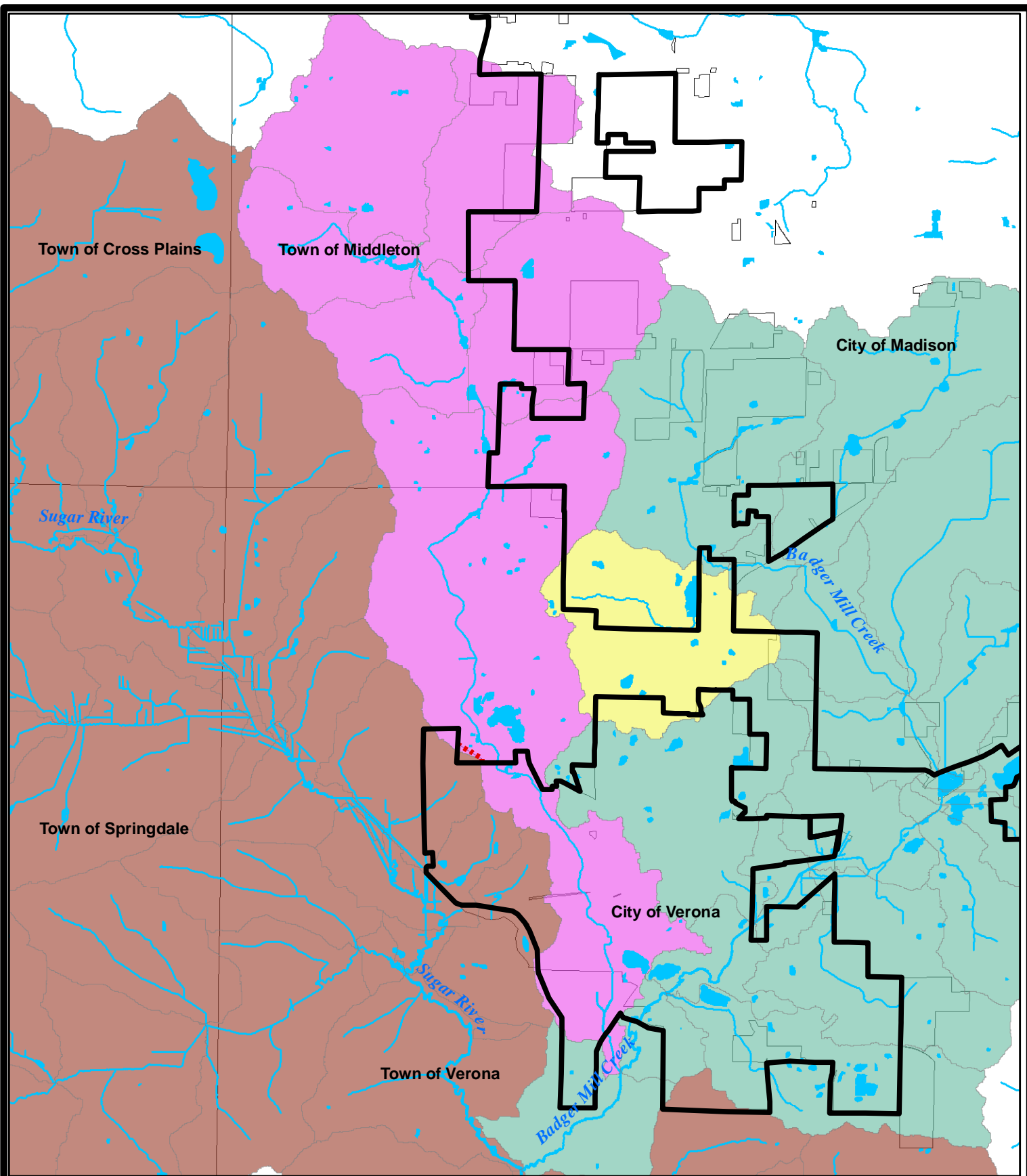


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Prepared by staff of the CARPC.




**Map 4 Upper Sugar River Subwatersheds**

**Amendment to the Verona Urban Service Area in the City of Verona**

- |   |   |
|---|---|
|  Existing Urban Service Area | <b>Subwatershed Name</b>  |
|  Service Expansion Boundary  |  Badger Mill Creek       |
|  Municipal Boundary          |  Lower Badger Mill Creek |
|   |  Upper Sugar River       |
|   |  Morse Pond              |

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### Soils and Geology

The Land Type Associations of Wisconsin classifies the amendment area as hills and valleys. Surface elevations in the amendment area range from around 1017 feet to 1051 feet (see Map 5).

According to the Natural Resource Conservation Service (NRCS) Soil Survey of Dane County, the majority of soils in the amendment area are in the Edmund - Sogn – Port Byron association. These soils are excessively drained to moderately well drained, shallow, very shallow, and deep silt loams that are underlain by dolomite or silt. Table 2 shows detailed classification for soils in the amendment area. Table 3 shows important soil characteristics for the amendment area (see Map 6).

Historically, the depth to groundwater is over 25 feet in the amendment area. No areas of hydric soils are located within the amendment area.

According to Wisconsin Geological and Natural History Survey mapping, the bedrock in the amendment area is in the Prairie du Chien Group, which is dolomite with some sandstone and shale. The depth to bedrock is shallow throughout the amendment area, ranging from 1 to 5 feet. NR 151 and Dane County Ordinance Chapter 14 prohibit the installation of infiltration systems for commercial parking lots in areas where the separation distance between the bottom of the infiltration system to the top of bedrock is less than 5 feet.

**Table 2**  
**Soils Classification**

Soil	% of Area	General Characteristics
Ashdale Silt Loam; AsB	33.2	Deep, well drained, gently sloping and sloping soils in valley fill positions in drainageways on dolomite ridges. Soils have high fertility, moderate permeability, and moderate hazard of erosion. Poses moderate limitations for development due to shallow bedrock.
Dodgeville Silt Loam; DpC	31.6	Moderately deep, well-drained, gently sloping to moderately steep soils on top of ridges and on upper side slopes on uplands. Soils have medium fertility, moderate permeability, and a severe hazard of erosion. Poses moderate limitations for development due to shallow bedrock.
Edmund Silt Loam; EdC2	35.2	Shallow, well-drained, gently sloping to moderately steep soils on uplands. Soils have low fertility, moderately slow permeability, and a very severe hazard of erosion. Poses moderate limitations for development due to shallow bedrock.

Source: Dane County Soil Survey

**Table 3  
Soils Characteristics**

Characteristic	Soil Map Symbols (see Map 6)	% of Area
Prime Agricultural Soils	AsB	33.2
Hydric Soils (Indicates Potential / Restorable Wetlands)	None	0
Soils with Seasonal High Water Table (< 5')	None	0
Soils Associated with Steep Slopes (> 12%)	None	0
Soils Associated with Shallow Bedrock (< 5')	AsB, DpC, EdC2	100
Limitations for Buildings with Basements	AsB, DpC, EdC2	100

Source: Dane County Soil Survey

Groundwater Recharge

In 2009, the Wisconsin Geological and Natural History Survey published a report estimating the existing groundwater recharge rates in Dane County based on the soil water balance method. The study estimates the existing groundwater recharge rate in the amendment area to be 11 to 13 inches per year.

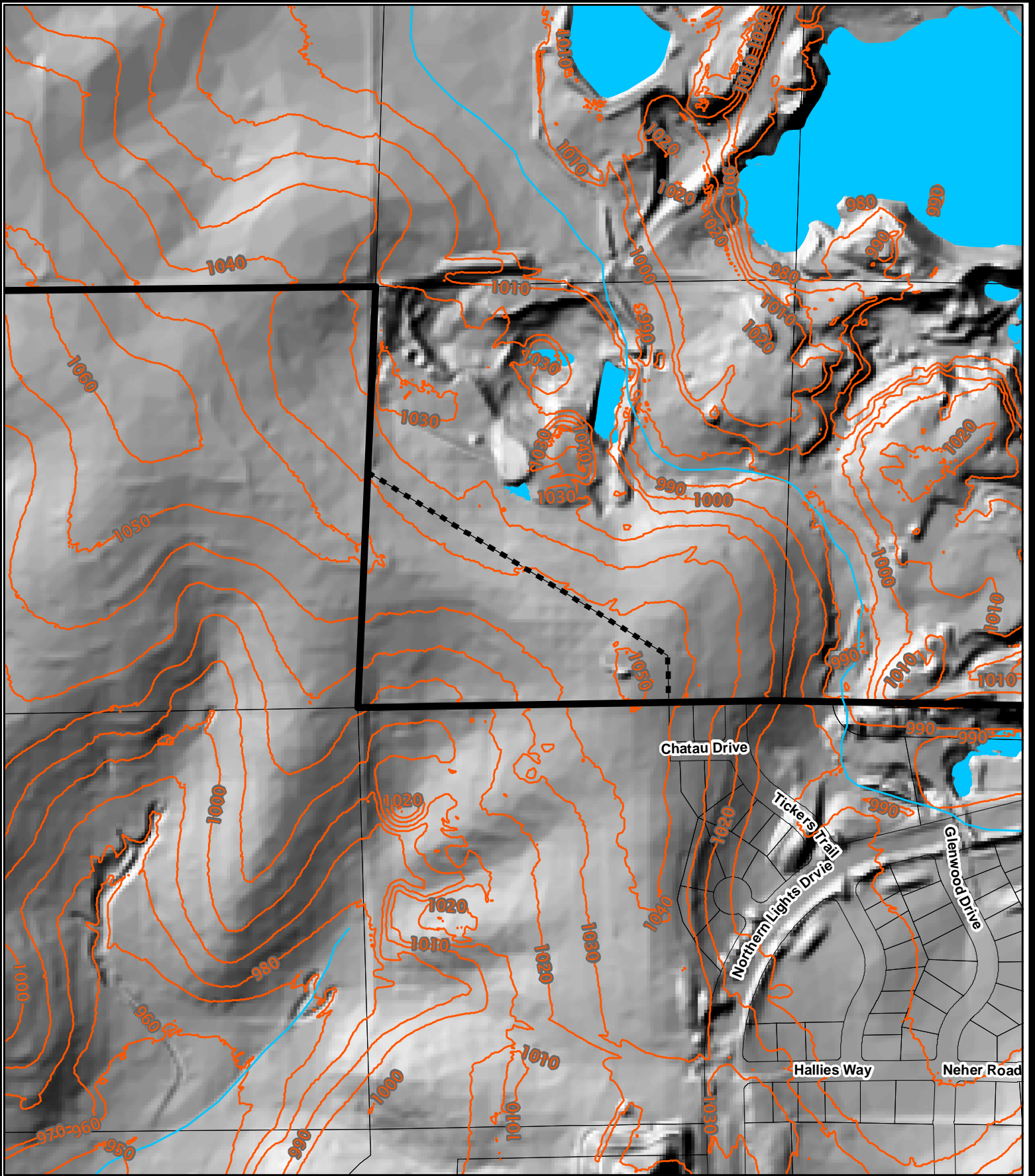
Archaeology

The Wisconsin Historical Society (WHS) reports that the amendment area may include burial sites. A portion of the amendment area is within a partially catalogued burial site protected under Wisconsin Stats. 157.70. Permission from the Director of the Wisconsin Historical Society is required prior to any ground disturbing activity within the catalogued burial site, and this may require a detailed study. If burial sites are found in the amendment area they must be included in environmental corridors.

**Land Use.** The area to be added to the Verona Urban Service Area is within the City of Verona and owned by Epic Systems Corporation. Currently zoned Rural Agriculture (RA), the Verona City Council will consider rezoning the area to Suburban Industrial (SI), consistent with the rest of the Epic campus, on October 11, 2010. The land is currently open and used for construction trailers and parking, with no agricultural use.

Land uses adjacent to the amendment area are as follows:

- North: Open, extractive, agriculture (Town of Verona)
- South: Vacant, commercial (City of Verona)
- East: Open, woodland, extractive (Town of Verona)
- West: Agriculture (City of Verona)



**Map 5 Elevation**

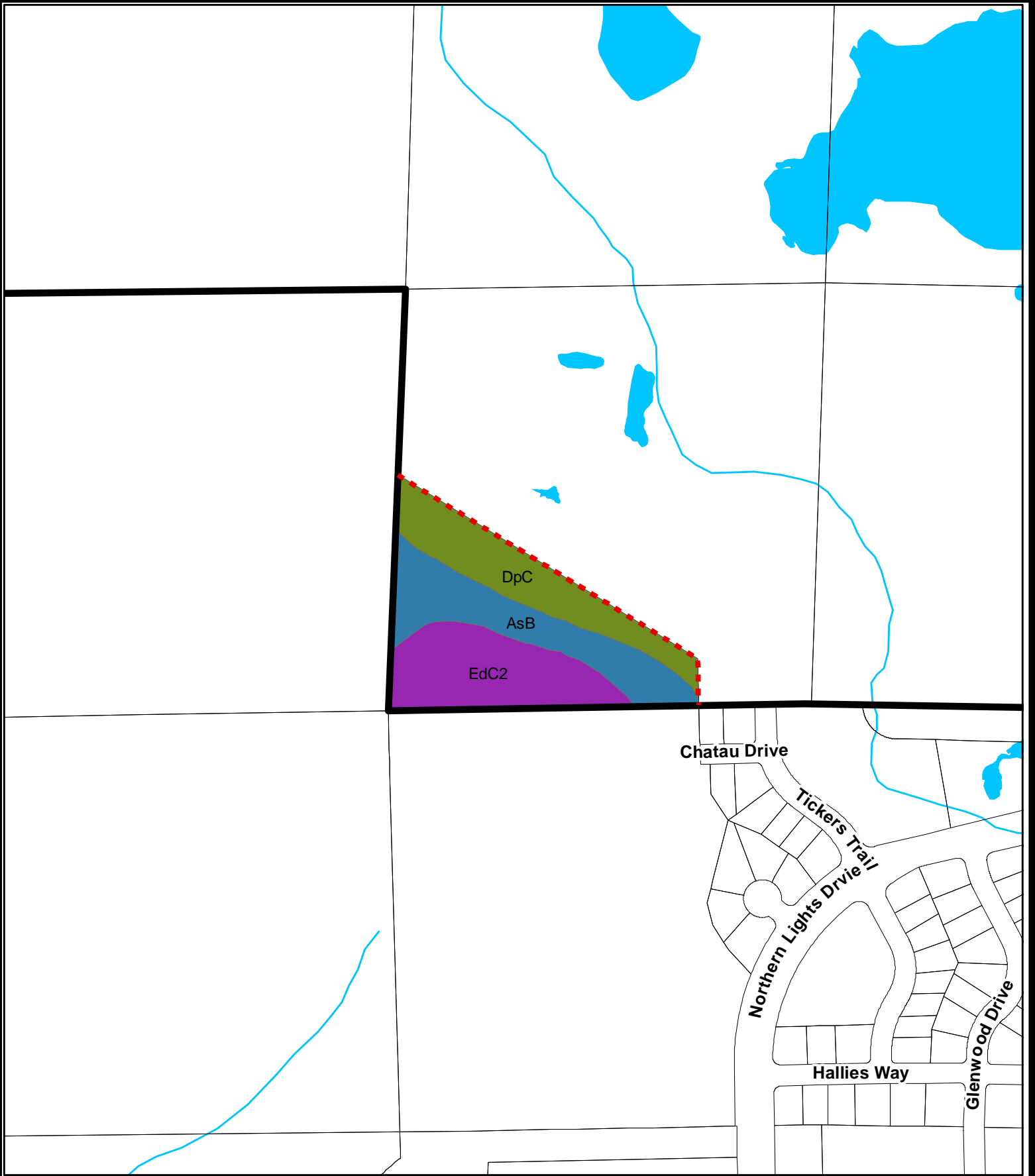
**Amendment to the Verona Urban Service Area in the City of Verona**

- Existing Service Area Boundary
- Service Expansion Boundary
- Lakes and Ponds
- River or Stream
- Contours (10ft) 2009

11 Oct. 2010





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Prepared by staff of the CARPC.

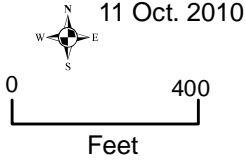


**Map 6 Soil Type**

**Amendment to the  
Verona Urban Service  
Area in the City of Verona**

-  Existing Urban Service Area
-  River or Stream
-  Service Expansion Boundary
-  Lake or Pond

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Prepared by staff  
of the CARPC.

**Existing Transportation System.** The proposed amendment area is in the Epic Systems campus off of Northern Lights Drive on the northwest side of the city. Northern Lights Drive connects to West Verona Ave, a four-lane divided east-west minor arterial, to the south and Nine Mound Road, a two-lane north-south collector, to the east at the intersection with Cross Country Road, a two-lane east-west collector. The other major roadway serving the area is County Trunk Highway (CTH) PD, a two-lane east-west principal arterial.

The Epic Systems campus is served by one Metro commuter bus route (Route 55) that operates between the West Transfer Point and the Epic Systems campus and uses Verona Avenue. The route has 3 a.m. and 3 p.m. weekday peak period trips. The Madison Area Transportation Planning Board's Rideshare Etc. Program provides ride-matching services for individuals interested in car- or vanpooling. Dane County contracts with a private provider, Transit Solutions, for limited group ride service for the elderly and persons with disabilities. The routes serve trips to nutrition sites, senior center activities, adult day care, and shopping. The Retired Senior Volunteer Driver Escort Program (RSVP) uses volunteer drivers to provide individual rides for the elderly, primarily to medical appointments.

The unpaved Military Ridge Trail runs just to the west of the Epic Systems campus and connects to the Capital City Trail and newly constructed Ice Age Trail, providing an off-street bicycle route into the Madison area. West Verona Avenue has bike lanes. The section of Nine Mound Road from Acadia Way to Meister Road was just reconstructed with bike lanes, while the segment south of that is wide enough to accommodate bicyclists. The northernmost segment of Nine Mound Road and Cross Country Road lack bicycle accommodations and are less suitable for bicycling. CTH PD has paved shoulders, but relatively high traffic volumes and speeds, making it least suitable for bicycling. Northern Lights Drive through the Epic Systems campus has sidewalks. Cross Country Road and Nine Mound Road (except for the newly reconstructed segment) lack sidewalks. There are also sidewalks connecting the campus buildings.

#### **4. Consistency or Conflict With Adopted Plans and Policies**

The City has submitted findings by the Verona Plan Commission and Common Council that the proposed expansion of the Verona Urban Service Area is consistent with the *City of Verona Comprehensive Plan*. The proposed amendment area is described in the Plan as an area where expansions of the existing Epic campus and commercial land uses ancillary to the existing campus are anticipated.

The amendment presents no conflict with the *Dane County Parks and Open Space Plan*.

The extension of water service to the proposed amendment area is consistent with the *Water System Master Plan* prepared for the City of Verona by EarthTech in September 2006.

The extension of sewer service to the proposed amendment area is consistent with the *Wastewater Master Plan* prepared for the City of Verona by EarthTech in February 2007.

The 2008 *MMSD Collection System Study* conducted by CARPC staff to update the assessment of the MMSD collection and treatment system needs, includes the 2030

population projection for the Verona Urban Service Area as the basis for the 20-year wastewater volume projection for the area. The proposed amendment does not change the 2035 population projection for the service area, and is therefore consistent with *MMSD Collection System Study*.

Revised Resolution RPC No. 952, which added 340 acres of the existing Epic property to the Verona Urban Service Area, required the City of Verona to limit the impervious cover on the Epic site to 20% excluding public roads. To date Campus 1, the Training Campus, and Campus 2 have been constructed, resulting in a total impervious area of 36 acres, which is 10.6% of the total site. With the proposed 10-acre amendment, it is anticipated that the impervious area could go up to 40 acres, which would increase the site imperviousness to 11.4%.

The area proposed to be added to the Verona USA is contiguous with the current urban service area to the west and south, and the proposed development supports two CARPC goals:

1. The expansion of the service area to provide for a construction office and parking facilities promotes economic development by supporting and facilitating the growth and expansion projects undertaken by Epic Systems Corporation, a major employer in the region.
2. The expansion supports the goal of promoting planning and design preserving environmental functions and protecting environmental resources by formalizing the construction office, sanitary facilities and parking uses on the site, allowing more effective containment and control of discharges related to these uses.

Prime agricultural soils comprise approximately 33 percent of the proposed amendment area (approximately 3.3 acres). The area has been identified by the City of Verona as a planned growth area and has not been cultivated in recent years. It is currently used for temporary construction trailers and parking.

The proposed addition of 10.0 developable acres is well within the forecasted 2035 land demand for the Verona Urban Service Area. The Verona Urban Service Area was last amended in August 2010 when the Badger Prairie LSA was merged with the Verona USA. Prior to the merger, the last amendment to the Verona USA was the Verona *Southeast* amendment, approved by the DNR June 10, 2010, that added 62.7 developable acres, leaving a forecasted 2035 land demand of 660.3 additional developable acres.

## 5. Proposed Urban Services

**Public Water System.** The Verona Water Utility will provide public water service to the proposed amendment area. The public water system currently consists of four groundwater supply wells (two with 1,500 gallons per minute (gpm) pumping capacity, one with 1,000 gpm pumping capacity, and one with 400 gpm pumping capacity) and three elevated storage towers (800,000 gallon total capacity). The system had a design peak water demand of 2,900 gpm in 2005, and has a forecast year 2010 peak demand of 4,200 gpm.

The proposed amendment area is located in the Central Pressure Zone. The existing towers allow water service to an elevation of 1,110 feet.

The City projects that the proposed amendment area will demand 6,000 gallons per day of water, based on an estimated 300 employees within the amendment area, at 20 gallons per day per employee. This water use estimate is reasonable based on the historical per capita rates for this type of land use. The existing water system has adequate capacity to serve the proposed amendment area.

In order to provide water service to the amendment area, the City plans to extend a 12-inch water main from the existing water main in the EPIC Campus through the amendment area and complete a loop by connecting to the existing water main on Northern Lights Road.

Guidelines for determining fire flow requirements are provided by the Insurance Services Office (ISO), which is responsible for evaluating and classifying municipalities for fire insurance rating purposes. The City has adequate storage to provide fire flows of at least 2,500 gpm for 2 hours in the amendment area. Verona has an ISO rating of 4, which meets the CARPC service guidelines.

**Wastewater.** The City of Verona will provide sanitary sewer service to the amendment area by installing an 8-inch diameter sanitary sewer from the MMSD's existing Lower Badger Mill Creek Interceptor. The interceptor connects to the Madison Metropolitan Sewerage District Pumping Station No. 17. From Pumping Station No. 17 the sewage is pumped eastward to the MMSD Nine Springs Valley Interceptor.

The City projects that the proposed amendment area will generate 6,000 gallons per day of wastewater, based on an estimated 300 employees within the amendment area, at 20 gallons per day per employee. The wastewater generation estimate is reasonable based on the historical per capita rates for this type of employment.

### MMSD

The Madison Metropolitan Sewerage District (MMSD) will provide wastewater treatment for the amendment areas. The MMSD Pumping Station 17 is expected to be at capacity during periods of peak flow around 2015. The MMSD is planning a capacity improvement for this pumping station. The Nine Springs Treatment Facility has a design capacity of 50 million gallons per day (mgd) and received an average of 43.5 mgd in 2009, including infiltration and inflow. It is expected to reach capacity by 2020 depending on growth rate assumptions. The MMSD has completed a long-range plan that evaluated various options for expanded treatment capacity to serve its current and future service area. For the 20-year planning

period, service to this area is expected to remain through current interceptor routes with expanded capacity of the system as the need is foreseen.

**Stormwater Management System.** The preliminary stormwater management plan for the amendment area is to convey the stormwater via a swale to an existing wet detention basin on the current EPIC Campus for sediment and peak runoff rate control. The existing basin was originally oversized in anticipation of future growth. With the addition of the amendment area, this basin will be at 60% of its design capacity. A new infiltration basin is planned near the existing detention basin to meet the volume control and groundwater recharge requirements for the amendment area.

There are 5 existing stormwater basins on the EPIC Campus, all of which are owned and maintained by EPIC.

#### Performance Standards

The City of Verona proposes stormwater management performance measures to meet or exceed standards required by the State of Wisconsin (NR 151), Dane County (Chapter 14), and City of Verona (Chapter 2) stormwater regulations, as follows:

1. Require post-construction sediment control (reduce total suspended solids leaving the site by at least 80%) for the average annual rainfall (State of Wisconsin standard) and the 1-year 24-hour design storm (Dane County, and City of Verona standard).
2. Require post-construction peak runoff rate control for the 2-, 10-, and 100-year, 24-hour design storms to “pre-settlement” peak runoff rates. The City of Verona Stormwater Ordinance requires a maximum runoff curve number of 58 for hydrologic soil group B (pre-settlement). This is a more stringent standard than either the Dane County Ordinance or NR 151, which allow higher runoff curve numbers and require a smaller range of design storms.
3. Require post-development stay-on volume of at least 90% of pre-development stay-on volume. This is the Commission’s adopted minimum standard for new urban service areas development and exceeds the 60% stay-on standard for commercial development currently required by State of Wisconsin, and Dane County regulations.
4. Require oil and grease control from parking lots in accordance with local ordinances.
5. Require thermal control in accordance with local ordinances.
6. Require construction site erosion control (limit total off-site soil loss to a maximum of 7.5 tons per acre per year) with the installation of best management practices prior to land disturbing activities in accordance with state and local ordinances.

**Environmental Corridors.** There are no natural features or stormwater management facilities located within the amendment area. Therefore, the proposed amendment area does not include any environmental corridors. If archaeological surveys reveal burial mounds on the site, environmental corridors will be required to protect the mounds.

**Public Safety Services.** The City of Verona will provide police services to the amendment area. 18 full-time sworn officers and two part-time sworn officers staff the Verona Police Department. The department also includes three office staff. Based on 2009 population estimates of 10,270 persons in the City of Verona, the ratio of sworn officers to population is approximately 1.75 officers per 1,000 residents. The Police Station is located at 111 Lincoln Street, approximately 2.8 miles from the amendment area.

The Verona Joint Fire Department, serving the City of Verona and the towns of Verona and Springdale, provides fire protection for the amendment area. The Joint Fire Department employs three full-time fire fighters and has 24 paid on-call fire fighters and four retired on-call volunteers. The fire station is located at 101 Lincoln Street in the city of Verona, approximately 2.8 miles from the amendment area. Response times district wide generally average between 5 and 8 minutes, depending on the time and day. The existing buildings on the Epic campus include sprinkler systems and the proposed contractors' office will also include a sprinkler system for additional fire protection. The City of Verona has an ISO fire rating of 4, well within CARPC fire protection guidelines.

EMS services for the amendment area are provided by Fitch-Rona Emergency Medical Services, serving the cities of Fitchburg and Verona. The EMS operates two stations: 5415 King James Way in Fitchburg, near the intersection of USH 18/151 and McKee Road, and Venture Court near the intersection of STH 69 and USH 18/151 on the south side of Verona. The distance from the Venture Court location to the amendment area is approximately 2.4 miles. Response time for emergency medical services to the amendment area is estimated at ten minutes or less.

**Streets and Sanitation Services.** The City of Verona requires owners of commercial, industrial and residential properties with more than 4 units to contract directly with a refuse collection service. Refuse collection and recycling services for city residential properties of less than four units are provided by the City through contracts with a private service, paid by residents as a separate charge on property tax bills. The City provides street maintenance, plowing and street sweeping for public streets within the city.

**School and Park Facilities.** The amendment area is within the Verona Area School District. There is no residential component to the proposed development and no new school children will reside within the amendment area.

The Military Ridge Bike Trail runs along the western boundary of the commercial campus of Epic Systems Corporation southwest of the amendment area, and the city park nearest the amendment area is just east of Northern Lights Drive in the Cross Point neighborhood.

**Urban Transportation System.** No public streets are proposed within the amendment area. Access to the parcel will be via a driveway connection to the existing campus private street circulation system with access to Northern Lights Drive. The city's official map includes planned future public streets serving the parcel with connections to Country Drive to the west and CTH PD to the north.

## 6. Impacts or Effects of Proposal

**Surface Water Impacts.** Development typically creates impervious surfaces (i.e., streets, parking areas, and roofs) and alters the natural drainage system (e.g., natural swales are replaced by storm sewer) resulting in increased stormwater runoff rates and volumes, as well as reduced infiltration. Development can also cause substantial short-term soil erosion and off-site siltation during construction activities. Scientific research has well documented that without effective mitigation measures, the potential impacts of development on receiving water bodies can include:

- Flashier stream flows (i.e., sudden higher peaks)
- Increased frequency and duration of bankfull flows
- Reduced groundwater recharge and stream base flow
- Greater fluctuations in water levels in wetlands
- Increased frequency, level (i.e., elevation), and duration of flooding
- Additional nutrients and urban contaminants entering the receiving water bodies
- Geomorphic changes in receiving streams and wetlands

Natural drainage systems attempt to adapt to the dominant flow conditions. In the absence of mitigation measures, the frequency of bank-full events often increases with urbanization, and the stream attempts to enlarge its cross section to reach a new equilibrium with the increased channel forming flows. Higher flow velocities and volumes increase the erosive force in a channel, which alters streambed and bank stability. This can result in channel incision, bank undercutting, increased bank erosion, and increased sediment transport. The results are often wider, straighter, sediment laden streams, greater water level fluctuations, loss of riparian cover, and degradation of shoreland and aquatic habitat.

If left unmanaged, these changes in hydrology combined with increased urban pollutant loading, can have a dramatic effect on the aquatic ecosystem of streams. It is important to realize that flow is a major determinant of the physical habitat in a stream, which in turn determines the biotic composition of stream communities. A growing body of literature documents that channel geomorphology, habitat structure, and complexity are determined by prevailing flow conditions, which in turn determine the biota that can inhabit the area. This is true for the fish as well as the aquatic insects upon which they feed. Studies of streams affected by urbanization have shown that fish populations either disappear or become dominated by rough fish that can tolerate the associated lower water quality levels.

The City proposes to mitigate the urban non-point source impacts of the proposed development by implementing various stormwater best management practices that are designed and constructed in accordance with performance standards that meet or exceed current minimum standards. While this will reduce the likely impacts of the proposed development, it does not completely address the potential impacts on the receiving waters. The design storms in the City's stormwater ordinance (2-, 10-, and 100-year storms) represent large events within the annual precipitation range for a watershed. These large storms occur less frequently and represent only a small fraction of the annual precipitation falling on a site and, consequently, the annual runoff flowing off developed areas. This peak flow rate control standard offers little to no control of runoff from the smaller, more frequent storms that produce most of the runoff reaching streams. It is runoff from these small storms that largely determine how a stream will function and transform in response to more erosive velocities and flashier stream flows. Therefore, CARPC staff recommends

that the 1-yr 24-hr storm also be included in the range of design storms used for peak flow rate control. The WDNR has also acknowledged that research is showing that the current standard is not protective of the bank-full condition and has proposed a change to NR 151 that will add peak flow rate control for the 1-yr 24-hr design storm.

The City of Verona's stormwater ordinance requires the use of "pre-settlement" curve numbers for agricultural land. When the pre-development condition is row crop agriculture, the city's requirement for peak rate control of the 2-year 24-hour design storm with "pre-settlement" curve numbers provides better peak rate control than the 1-year 24-hour design storm with "pre-development" curve numbers. However, if the pre-development condition is wooded, brushy, or pasture, then 1-year 24-hour design storm with "pre-development" curve numbers provides better control than the 2-year 24-hour design storm with "pre-settlement" curve numbers. This is the reason for staff recommendation that the 1-yr 24-hr storm be included in the range of design storms used for peak flow rate control.

**Groundwater Impacts.** As natural areas are converted to urban development the ground/surface water balance in streams and wetlands shifts from a groundwater-dominated system to one dominated more and more by surface water runoff, with subsequent reductions in stream quality and transitions to more tolerant biological communities. Maintaining pre-development groundwater recharge helps to maintain baseflow and mitigate this impact. RPC staff recommends maintaining the pre-development annual recharge rate of 11 to 13 inches per year for this area as estimated by the Wisconsin Geological and Natural History Survey.

**Transportation System Impacts.** The proposed amendment is intended for a total of ten (10) acres of office uses. Initially, the property will be used for construction of a semi-permanent construction and contractors' office building with associated parking. In the future, this building may be removed and the property developed for office, food service, equipment storage, or other uses.

Construction of the new contractors' building is not anticipated to generate a significant amount of additional traffic to the site. The building will replace the 20 or so construction trailers currently used on the property. Depending upon the type and intensity of uses, the amendment area could generate up to 1,500 one-way vehicle trips on an average weekday if redeveloped in the future with office and support service uses.

In 2009, the average daily traffic (ADT) volume on West Verona Avenue west of Nine Mound Road was 5,900. The 2009 ADT volume on Nine Mound Road was 3,000 north of Verona Avenue and 1,600 north of Aspen Avenue. The 2009 ADT volume on Cross Country Road was 4,700 just west of CTH M and 1,200 a ¼ mile west of CTH M. The 2006 ADT volume on CTH PD west of CTH M was 7,000.

There is sufficient capacity on the area roadways to handle the expected traffic from the proposed amendment area.

**School System Impacts.** The amendment area is located in the Verona Area School District (VASD). There is no residential component to the proposed amendment and it will add no students to the district.

## **7. Alternatives**

As demonstrated by the current use of the property for temporary construction office, toilet and parking facilities, the property owner has determined that this location is optimal for supplying these services for the numerous construction projects associated with development of the Epic corporate campus. If the service area is not expanded, the existing temporary facilities will remain, providing less water quality protections from impacts of those uses.

## **8. Controversies, Comments Received, Unresolved Issues**

A public hearing before the Capital Area Regional Planning Commission is scheduled for November 11, 2010. The City of Verona notified the Town of Verona of the amendment application in June 2010. The Town of Verona is also notified by the CARPC public hearing notice sent, along with the staff analysis, 30 days prior to the hearing. To date, no comments on the amendment have been received from the Town or other parties.

## **9. Conclusions and Staff Recommendation**

The proposed amendment provides the full range of urban services and is within the twenty-year service area land demand for the Verona Urban Service Area. The Northwest Verona amendment area is contiguous with the current urban service area to the south and west and the proposed development supports CARPC goals as follows:

1. The expansion of the service area to provide for a construction office and parking facilities promotes economic development by supporting and facilitating the growth and expansion projects undertaken by Epic Systems Corporation, a major employer in the region.
2. The expansion supports the goal of promoting planning and design preserving environmental functions and protecting environmental resources by formalizing the construction office, sanitary facilities and parking uses on the site, allowing more effective containment and control of discharges related to these uses.

Prime agricultural soils comprise approximately 33 percent of the proposed amendment area (approximately 3.3 acres). The area has been identified by the City of Verona as a planned growth area and is currently used for temporary construction trailers and parking.

The existing stormwater ordinances in the City of Verona include performance standards that are more stringent than those in NR 151 and the Dane County Chapter 14 in some areas. The proposed amendment also includes the Commission's adopted volume control standard to control post-development runoff volumes to maintain at least 90% of the pre-development stay-on volume for the average annual rainfall period. These standards will help mitigate the adverse impacts of the proposed development.

The peak flow rate control requirement in the City of Verona stormwater ordinance includes a larger design storm (100-yr 24-hr) than required by NR 151 or Dane County Chapter 14. Increased peak flow rates from smaller storms can also result in erosive velocities and flashier stream flows. While the City's stormwater ordinance requires the use of "pre-settlement" curve numbers for agricultural land, the current land cover includes dense stands of shrubs which have a lower runoff curve number than agricultural land.

Therefore, staff recommends that the 1-yr 24-hr storm also be included in the range of design storms used for peak flow rate control. This has also been proposed by WDNR as a change to NR 151.

Infiltration and groundwater recharge is necessary to maintain base flow discharge to downstream water resources. Staff recommends a performance standard based on the WGNHS study pre-development groundwater recharge rates for the amendment area of 11 to 13 inches per year.

CARPC staff recommends approval of this amendment, based on the land uses and services proposed and conditioned on the City of Verona's acceptance, commitment, and pursuit of the following:

1. Submit a detailed stormwater management plan for CARPC and DCL&WCD staff review and approval prior to any land disturbing activities in the amendment area. The stormwater management plan should include the following:
  - a. Install stormwater and erosion control practices prior to other land disturbing activities. Protect infiltration practices from compaction and sedimentation during land disturbing activities
  - b. Control peak rates of runoff for the 1, 2, 10, and 100-year 24-hour design storms to "pre-settlement" levels (i.e. maximum Runoff Curve Number = 58 for agricultural land use and hydrologic soil group B)
  - c. Maintain the post development stay-on volume to at least 90% of the pre-development stay-on volume for the one-year average annual rainfall period, as defined by WDNR
  - d. Maintain pre-development groundwater recharge rates from the Wisconsin Geological and Natural History Survey's 2009 report, *Groundwater Recharge in Dane County, Wisconsin, Estimated by a GIS-Based Water-Balance Model* (an average of 12 in./yr. for the amendment area) or by a site specific analysis
  - e. Mitigate the thermal impacts of stormwater discharge in accordance with existing ordinances
  - f. Provide at least 80% sediment control for the amendment area in accordance with existing ordinances
  - g. Provide oil and grease control from parking lots in accordance with local ordinances
  - h. Stormwater practices should have perpetual legal maintenance agreements with the City, to allow the City to maintain facilities if owners fail to do so.
2. Continue to limit impervious cover on the total Epic site to 20% of the site excluding public roads.
3. Contact the Wisconsin Historical Society for permission prior to any ground-disturbing activities within the amendment area. Include any identified burial mounds in environmental corridors.

It is also recommended that the City of Verona pursue the following:

1. Attempt to maintain the post development stay-on volume to 100% of the pre-development stay-on volume for the one-year average annual rainfall period, as defined by WDNR.