

## **Summary of Findings of Cumulative Effects**

Cumulative effects include impacts on the environment from the proposed action which result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions.

### Past, Present, and Planned Actions

As discussed in this report, there are a number of past, present and planned projects, activities and outside influences that affect the project area. These projects, activities and influences have cumulative effects on resources in the study area. These projects and activities include, but are not limited to:

- Improvements to US12 corridor from Madison to Wisconsin Dells
  - New US 12 bridge over Wisconsin River
  - Reconstruction of US 12 in Sauk City
  - Expansion to four lane
  - US 12 bypass at Baraboo
- Construction of North Mendota Parkway
- Installation of utilities
- Land Use and Development
- Fluctuating energy costs and economic conditions

### US 12

Several upgrades to US 12 corridor have occurred over the past decade including expansion from a two lane highway to a four lane expressway between Parmenter Street interchange and WIS 19 West, a new bridge over the Wisconsin River, reconstruction in Sauk City, and expansion to four lane north of Baraboo. Future expansions and bypasses are planned for the US 12 corridor extending to Wisconsin Dells including at Baraboo. However, the US 12 corridor in the project area has experienced little change in land use patterns in the past two decades. The majority of the project area remains in agricultural use.

The improved travel conditions and access to Middleton/Madison may have the effect of encouraging new or expanded businesses in the region. The improvement to the highway system may encourage people to live farther from their place of employment as they perceive the expressway to result in a better or shorter commute. Some of these effects may be experienced in the project area.

### North Mendota Parkway

A plan was developed by Dane County titled The North Mendota Parkway Plan. The recommendations were adopted by the Dane County Board of Supervisors on May 6, 2010. The North Mendota Parkway is a planned four lane roadway linking US 12 to I-39/90/94. Capital funds to construct the planned roadway have not been identified. Local communities recognize and have adopted the plan for this roadway.

### Utilities

There are two known utility projects along the US 12 project corridor. The Galactic Wind project owned by Epic Systems is currently operational. The Badger Coulee Transmission Line is being planned by the American Transmission Company (ATC). The transmission line would run from north of the city of La Crosse to northern Dane County. The planned route would cross US 12. The mapping of the corridor would prevent the ATC line from conflicting with the Proposed Action. There is also ongoing coordination with WisDOT related to this project.

Other utility projects are possible, however, each would require coordination with local and state officials which involves compliance to local land use regulations and comprehensive plans.

Land Use and Development

The existing development patterns were evaluated. Potential induced changes to land use and development that may result from decisions made about the proposed transportation system were analyzed. Existing local plans and zoning were reviewed.

The town of Springfield has adopted "smart growth" plan. The majority of the project area is planned for "Agricultural Preservation". Unincorporated hamlet of Springfield Corners has a concept plan which is not officially approved which designates new residential, commercial and recreational space. Also the city of Middleton and the town of Springfield Intergovernmental Agreement establishes three joint planning areas for growth. The Proposed Action would not conflict with any of these plans.

According to data from the U.S. Census Bureau, the population in the town of Springfield experienced a 3.2% increase from 1990 to 2000 and a 1.0% decrease from 2000 to 2010. These rates are a slow, manageable growth rate for the community.

The table below shows the population forecasts for the town of Springfield between 2010 and 2040. Rural development is extremely restricted by Dane County. The county and town are progressive in ensuring agricultural preservation. Policies include restricting residential density to no more than one dwelling unit per 35 acres and allowing commercial development as necessary to support agricultural operations. As a result, rural development would have a negligible impact on the corridor. The data suggests that the annual population increase for the town of Springfield is expected to be about 0.07% per year which is modest and manageable. This growth rate is less than Dane County and Wisconsin statewide.

*Projected Population Data, 2040*

<u>Entity</u>	<u>2010 Population</u>	<u>2040 Population</u>	<u>2010-2040 Change (%)</u>
<u>Town of Springfield</u>	<u>2,734</u>	<u>2,790</u>	<u>2.0</u>
<u>Dane County</u>	<u>488,073</u>	<u>606,620</u>	<u>24.3</u>
<u>Wisconsin</u>	<u>5,686,986</u>	<u>6,491,635</u>	<u>14.1</u>

*Source: Wisconsin's Future Population: Projections for the State, Its Counties and Municipalities, 2010 - 2040, & MCD and Municipal Population Projections, 2010-2040, Wisconsin DOA, Dec. 2013*

Economic Conditions and Energy Prices

Conditions in the US economy fluctuate from year to year. These fluctuations affect the economic activities that, in turn, affect land resources. Economic conditions that favor business development or home building may result in greater land conversions to these uses. Similarly, a downturn in economic conditions may slow the pace of land conversions. These are the conditions that the region has been experiencing since 2008, which has curtailed growth and development in the town of Springfield.

Similarly, recent decreases in energy costs are likely to affect the choices of individuals regarding travel and home construction; these choices may in turn affect land conversions for development. The project area may experience effects to the extent the conditions affect the number of individuals/families that seek to live in the area.

Over the decades, the elements listed above have had and would continue to have cumulative effects on the following resources: agricultural lands, wetlands, and springs. These resources are discussed in more detail below.

#### Agricultural Lands

As discussed previously, agriculture is the primary land use in the project area. Population growth and development would continue to lead to the incremental loss of farmland in the project area. Population growth is modest since Dane County and the town of Springfield preserve farmland through policies and regulations limiting residential densities and commercial development in agricultural areas. In general, the town of Springfield prefers to have development occur where planned in unincorporated hamlet of Springfield Corners. Development activity may be drawn towards the areas where interchanges are planned but areas that currently have access via existing at-grade intersections have not attracted any significant amount of development.

In summary, some cumulative impacts to agricultural lands have occurred and would continue to occur in the project area, with or without the implementation of the Proposed Action.

#### Wetlands

Because of the topography of the area, there are few wetlands in the project area. Wetlands in the north section which are located east of US 12 and north of County P would be avoided by the Proposed Action. About 0.8 acres of wetlands would be impacted in the central section located west of US 12 near Meffert Road. The incremental filling of wetlands has occurred over time as the result of development, conversion of land to agricultural uses, and roadway projects. Wetlands are protected by federal, state and/or county regulations concerning building in floodplains and wetland areas. The Proposed Action would provide mitigation, and future projects in the project area should do the same.

#### Water Resources

The drainageways are vulnerable to agricultural and urban runoff. Agricultural sources of runoff include cropland erosion, barnyard runoff and manure spreading on fields. Urban runoff sources include increased stormwater runoff from developments and roadways. The Dane County Land and Water Resource Management Plan addresses the agricultural nonpoint source pollution and also protects groundwater quality.

The Proposed Action is outside of the zone for the Middleton Wellhead Protection Plan and Ordinance and therefore would not have an impacts.

The Frederick Springs recharge area is located in the south section of the project area. Potential impacts and any necessary mitigation would be determined according to the Dane County Land and Water Resource Management Plan. From a quantity standpoint, the cumulative impacts to the springs as a result of the Proposed Action would not be expected to be significant. There are already impacts on the springs from existing roads and development of impervious areas. Incremental development in the area could affect the springs, with or without the implementation of the Proposed Action. The Proposed Action would provide mitigation, and future projects in the project area should do the same.

#### Summary

Although it is anticipated that US 12 projects may focus development at access points and frontage areas adjacent to the corridor, future growth and development has been planned for by the town of Springfield.

The US 12 Preferred Alternative would require the filling of 0.8 acres of wetlands. WisDOT intends to mitigate these impacts in compliance with federal and state requirements.

US 12 would contribute to increases in stormwater runoff both directly and indirectly (i.e., runoff coming from the expanded highway and runoff associated with development). Future highway design and improvements would incorporate best management practices for managing runoff both during and after highway construction. The WisDNR and USACE would monitor these improvements and ensure compliance.

The state has limited control regarding cumulative effects that are due to economic conditions and energy prices.

The cumulative effect of the Proposed Action and other actions would be the incremental loss of agricultural land and other natural resources in the area. The Proposed Action, when considered within the context of other past and reasonably foreseeable actions, would not likely contribute to significant population growth or development in the project area. For this reason, further cumulative effects analysis is not warranted.