

ENVIRONMENTAL REVIEW

INTRODUCTION

As the Metropolitan Planning Organization (MPO) for the Oshkosh Urbanized Area, the East Central Wisconsin Regional Planning Commission is responsible for conducting the urban transportation planning process. This planning effort involves the implementation of the Transportation Equity Act for the 21st Century (TEA-21), which requires the consideration of the overall environmental, social, and economic effects of the metropolitan transportation plan.

An extensive issues identification process was completed to develop goals, policies, and objectives for the long range land use/transportation plan. The environmental assessment scoping process was initiated concurrently with the issue identification phase of the planning process. The issues were established through special committees and were subject to public review. Multimodal transportation, the connectivity of transportation and land use, and the potential environmental effects of these planning goals and objectives were addressed to meet the requirements established by TEA-21.

This chapter evaluates the potential environmental impact of goals, objectives, and recommendations contained in the long range land use/transportation plan. The assessment of potential environmental effects addresses economic, social, and natural resource impacts.

ENVIRONMENTAL JUSTICE

Environmental justice is a process which seeks to ensure that access to transportation systems and the transportation planning process is available to all, regardless of race or socioeconomic status. In terms of race, the Oshkosh Urbanized Area has a substantially low minority population which is fairly scattered ([Exhibit 74](#)). Public involvement efforts within the planning process to include minority groups have included notification to local minority organizations and agencies and disclaimers on public documents in Hmong and Spanish (the primary languages spoken by non-English speaking residents of the Urbanized Area) for further information and contacts.

In terms of low income populations, areas are more easily identified. In this case, consistent areas of low income populations were defined through the use of 2000 census tract data. These areas were categorized as less than 20 percent, 20 to 39.99 percent, 40 to 59.99 percent, and 60 or more percent of the total households. These areas are identified in [Exhibit 73](#). Also included within [Exhibit 73](#) is the location of identified Transportation Improvement Program (TIP) projects from 2006 to 2010 and their geographic relationship to these low income areas.

Efforts were made to include all individuals within the planning process. Public information meetings were held during all phases of the planning process. Advertisements were published in the local newspaper (*The Oshkosh Northwestern*) prior to public information meetings held throughout the entire planning process. Flyers and notices were distributed via mail and e-mail to various committees, organizations, and agencies throughout the planning process for distribution to as many individuals as possible. Presentations were made to local groups with further interest in the planning process. Locations of public information meetings were crucial in the public involvement process.

All meeting locations were selected to include easy access for all individuals, especially transit and alternative mode users, as well as facilities which catered to the mobility needs of the disabled. Various planning documents, including the draft of this plan were open to public comment. Public participation throughout the process is characterized as consistent.

A goal of the Oshkosh Metropolitan Planning Organization is to “provide a safe, efficient and environmentally sound transportation system that provides mobility for all segments of the population and supports the economy of the region”. As identified in Exhibits 73 and 74, it is graphically depicted that a good portion of short range and long projects are scheduled for areas of low income and/or minority (non-white) populations. Exhibits 75 and 76 show these populations in comparison to the fixed route transit system, in which many individuals within these populations rely on for transportation to major employment centers, medical facilities, post-secondary education, recreation, and shopping centers, etc. Although there are no major concerns at this time, these projects will continue to improve the accessibility, mobility, and safety of all users using all modes, while posing no significant negative impacts.

ECONOMIC AND SOCIAL IMPACTS

Economic Impacts. The effects of the land use/transportation plan have the potential to extend into economic and social arenas. Levels of service on roadways, multimodal opportunities, and accessibility for businesses are all issues to be considered. If levels of service on the transportation network decline during the planning period, the potential for more time spent on roadways would be significant. (Level of service is discussed further in the Congestion Impact section.) Additional business and personal travel time translates into increased transportation costs. However, economic incentives exist to keep business travel expenses to a minimum, and policies within the plan target the need to maintain acceptable levels of service on roadways.

Focusing on maintaining and improving existing facilities and multimodal opportunities will provide benefits to businesses and residents. The plan identifies policies, which if enacted, would ensure that appropriate types and levels of multimodal transportation services are provided to the area. Additionally, maintaining and/or improving transportation facilities will enable the transportation system to continue to provide adequate accessibility to agricultural supplies and markets. An integrated transportation system combining different modes, including rail and trucking facilities, enhances the movement of goods and services. Efficiently routing truck traffic and providing joint terminals and delivery services would increase the accessibility of distant suppliers. Enhanced accessibility and multimodalism will provide incentives for businesses to expand and improve the business climate to attract new businesses.

Social Impacts. One of the objectives within the long range transportation/land use plan is to make individual communities more attractive. The Oshkosh Urbanized Area has substantial shoreland along the Fox River, Lake Winnebago and Lake Butte des Morts. Much of this shoreland is already developed. This plan and the plan adopted by the City of Oshkosh include policies such as the preservation and redevelopment of waterfront areas for greater recreational use, preserving scenic easements for viewsheds, and creating multimodal recreational opportunities, such as bicycling or walking along a redeveloped waterfront or park area. Enacting these policies would make the Oshkosh Urbanized Area a more attractive place to work, live, and play.

Another social impact addressed by this plan is the effect transportation investments will have on each resident's ability to travel to and from work, school, a friend's house, or other important places inside and outside the community. In the recent past, transportation planning has focused on automobile travel, with public transportation planned for separately. Pedestrian and bicycle travel were considered to be recreational. This has contributed to the design and construction of auto dependent suburbs in Oshkosh and elsewhere. Auto-dependent designs not only reduce the mobility of non-drivers, but also create an artificial tax, as owning an automobile is no longer a choice, but a necessity.

This plan includes goals, policies, and objectives for public transportation, pedestrian, and bicycle travel as alternative modes. Providing alternative modes of transportation reduces traffic congestion, and provides individuals, particularly the elderly, the young, and the poor with greater independence of movement. It also makes automobile usage a matter of choice, rather than a necessity. The transportation plan has been developed to work with the land use plan to enable Oshkosh Urbanized Area residents and visitors to reach vital destinations quickly and safely.

Currently, only residents in portions of the Urbanized Area have a variety of modes to choose from. While the plan encourages the development of alternative modes, realistically, they can not be available everywhere. The density of existing development in some areas is too low for fixed route public transit to be a viable option. Many streets within the central city and some outside the central city are too narrow and busy for bicycle travel. Much of the existing development has occurred at densities or in land use patterns which make pedestrian and bicycle travel inconvenient. In some areas, no facilities were provided for pedestrian or bicycle travel. Right of way would have to be purchased to provide these facilities. Purchasing right of way in developed areas can be very expensive.

LAND USE IMPACTS

Policies within the plan state that the disruption and dislocation of neighborhoods, households, businesses, industries, and public and institutional buildings by construction or expansion of existing transportation facilities should be minimized. Integrated planning is an objective in the land use/transportation plan as a means to maintain a transportation system that supports current land use plans and desired patterns of future development. Plans for the area include the latest comprehensive plan for the City of Oshkosh (March 2005), a land use/development plan (completed 1995) and open space/recreation plan (completed 1996) for the Town of Algoma, a comprehensive plan for the Town of Black Wolf (March 1998), a land use plan (March 2001) and comprehensive plan (October 2003) for the Town of Nekimi, a comprehensive plan for the Town of Omro (June 2004), a comprehensive plan for the Town of Oshkosh (June 2003), and a comprehensive plan for the Town of Vinland (October 1998).

City of Oshkosh Comprehensive Plan. The objective of the land use section of the Oshkosh Comprehensive Plan is to provide recommendations for guiding new development in the peripheral areas, while promoting the redevelopment of many of the older sections of the city. Some recommendations are very similar to policies in the land use/transportation plan. One recommendation encourages in-filling of land areas already served by public facilities and services, which is more efficient than extending development into new areas that will require major extensions of public facilities and services. The plan also recommends exercising extraterritorial plat review powers to control the premature division of future development land outside of Oshkosh's

corporate limits which would foreclose opportunities for efficient development patterns in the future. The Oshkosh plan addresses peripheral development by stating that most new development has occurred in peripheral growth areas. Specifically, most new community development has occurred along the Highway 41 corridor and most new industrial development has occurred in planned industrial parks. As a result of this development pattern, the Oshkosh plan acknowledges that many sections of the central city are underutilized and in need of redevelopment.

Redevelopment of the central city will most likely result in the movement of existing warehousing and industrial uses to planned industrial parks. This will provide the opportunity for redevelopment of these sites for housing, office, and retail use. The Oshkosh plan states further that the best redevelopment opportunities are along and near the riverfront and lakefront in the central city. Many of these areas are targeted for housing. Investigations of the industrial sites after their relocation may indicate leakages or contamination of soils which would require reclamation. If so, the city should be prepared to help developers clean up these sites. Once the housing is in place, the potential of effluents flowing into the Fox River and/or Lake Winnebago will be much less than when the industrial uses occupied the land. The same is true of emissions. The elimination of these negative industrial externalities will enhance the waterfront and central city areas. The City's plan, which also suggests creating a riverwalk along the Fox River from City Center to the WIOUWASH Recreation Trail, will also enhance this area. Future residents for these areas will have quick and easy access to downtown and the university, plus a variety of transportation modes to choose from.

The periphery area targeted for the largest population growth, as defined by the East Central Wisconsin Regional Planning Commission, is the "West Planning Area". The West Planning Area is bounded by Highway 41 on the east, the Algoma town line on the west, STH 91 to the south, and Lake Butte des Morts on the north. The West Planning Area is anticipated to be the primary development area for Oshkosh. The City of Oshkosh and the Town of Algoma currently have a cooperative planning agreement for future growth.

The Oshkosh plan further states that urban services will be extended to Clairville Road and that most of the land area east of Clairville will be fully developed. Growth along Clairville Road has the potential to expand beyond the Oshkosh city limits. Further study of development on this roadway is necessary. Both the City of Oshkosh and the Town of Algoma have more vacant sewer service acreage east of Clairville Road, than the current projected growth can fill. Policies for rural development contained within the land use/transportation plan state the need to preserve agricultural land and open space characteristics of rural areas, which includes avoiding splits of agricultural land. East Central would encourage both jurisdictions to practice infilling and contiguous development to avoid further fragmenting farmland. Also, pushing development to Clairville Road and beyond puts additional development pressure on the Town of Omro, a rural community currently outside the metropolitan area boundary.

Agriculture is an essential part of Wisconsin historically, culturally, and economically. Consequently, the concern over the need for additional agricultural land to accommodate urban growth is addressed in several of the policies set forth in the land use/transportation plan. The planning and design of transportation facilities should promote compact development. Also, the relative accessibility provided by the highway system should be adapted to comprehensive plans by providing a higher level of accessibility to areas where development is to be encouraged. Providing increased accessibility to designated areas and adhering to a policy of preserving prime farmland should minimize the need to expand into agricultural areas. While the adopted policies support this notion, the land use plan, based on the sewer service area plan, allows for a significant amount of

growth in the rural sections of the Oshkosh area. Further curbing of such development would require voluntary action on behalf of the towns, cooperative boundary agreements, or land use regulation.

Town of Algoma. Due to its proximity to the urban fringe and its pro-growth stance, the Town of Algoma has experienced considerable residential growth in the last ten years. While its rate of growth is already declining, the town is expected to continue to experience significant growth during the planning period. Like all newly developing areas, the town's character is changing and it is experiencing fiscal, environmental, and traffic strains. As the town continues to grow, these strains will continue to increase. The town's plan recommends slowing the rate of growth to allow the town to "catch up", so that it can maintain its quality of life by balancing the need for additional services with the residents desire to maintain lower property taxes. The town plan also recommends infilling vacant lots in existing subdivisions, limiting new plats to areas where services are readily available, and insuring that new plats have proper stormwater management and drainage, good traffic flow, and protection of sensitive natural areas. If the town follows these policies, land use impacts can be reduced. If the town does not follow these policies, its growth will lead to further farm fragmentation, increased erosion and stormwater problems, increased potential for groundwater contamination, and higher costs.

CONGESTION IMPACTS

The impacts of congestion on a transportation system can be severe. For example, as traffic increases on a street, the likelihood of accidents will increase as well. A traveler on a severely congested street will probably experience frequent stops and starts, vehicles weaving through traffic to change lanes, and other hazardous situations that could result in an accident. Other negative effects of congestion include more significant wear on the street and vehicle, increased driver stress and vehicle emissions attributable to frequent acceleration and extended idling time. However, the provision of incentives to use modes of transportation other than the single occupant vehicle could reduce the number of vehicles on the Oshkosh street network.

The plan addresses the likelihood of congestion in the Oshkosh Urbanized Area and identifies methods of reducing traffic at these potentially hazardous locations. The plan's policies state that an efficient street and highway system must consider financially constrained improvements to minimize congestion and to keep travel times low. Some of these improvements include channelization, signalization, and/or removal of on-street parking to maintain adequate service. In addition, the use of alternative modes of transportation such as transit, walking, and bicycling should be strongly encouraged to minimize the number of cars on the network. All new road construction in any jurisdiction within the Oshkosh Metropolitan Area, should consider these alternative modes of transportation.

The standard used to evaluate traffic operating conditions and identify congestion is known as level of service (LOS).

Level of service. Level of service is typically broken into the following six categories:

Level of service A, is characterized by free traffic flow. Under these conditions, transportation system users are virtually unaffected by other users and travel safety and comfort are very high.

Level of service B, is characterized by stable traffic flow. LOS B conditions allow system users a significant amount of freedom to choose their own speeds, but a slight amount of interaction with others is common. Travel safety and comfort are also high under LOS B conditions.

Level of service C, is characterized by stable yet restricted traffic flow. Under these conditions, the amount of interaction with other transportation system users becomes significant, and the general level of comfort and convenience begins to decline.

Level of service D, is characterized by high-density traffic flow, lower speeds, and restricted maneuverability. LOS D conditions generally create uncomfortable and inconvenient traveling conditions; however, traffic flow is typically stable.

Level of service E, is characterized by unstable traffic flow and volumes that are at or slightly below capacity. Under these conditions, system users experience poor comfort and convenience levels, and accident exposure is increased.

Level of service F, is characterized by forced flow, traffic queues, and stop-and-go situations. Under these conditions, the amount of traffic that is present on a facility exceeds the amount that can be served, which creates the problems mentioned above. System users will typically experience low comfort and convenience, poor travel times, and high accident exposure on an LOS F roadway.

The land use/transportation plan uses LOS C as the minimum desirable level of service for each major roadway. During the development of this plan, the travel demand model (TDM) was used to identify which of the area's roadways will likely experience levels of service below this threshold (deficiencies) during the planning period. This process and its relationship to level of service are summarized below.

Modeling process. Estimating levels of service requires the collection of a significant amount of data. Included are both block level 2000 census data, such as population, household characteristics, employment and information describing the Oshkosh area street and highway network. Network information includes annual average daily traffic (AADT) volumes and facility types in terms of function, width, number of lanes, land use, speed and capacity. Statistical relationships, developed using travel surveys, link the socioeconomic data from the census to trip-making behavior. The relationships used by the travel demand model to simulate trips between traffic analysis zones (TAZs) within the study area. In addition to these internal trip exchanges, trips traveling through the study area are also included in the overall modeling effort. During calibration, these modeled trip exchanges were "assigned" or added to the computerized network of the study area's roadways and compared and calibrated to actual traffic counts.

Once the base traffic conditions were calibrated, the same relationships were used in creating the year 2035 model. The trip generation rates developed for the calibrated base year model are then applied to the socioeconomic projections to create the future (2035) model for the area. This process involved estimating growth or decline within each of the study area's TAZs through 2035 to estimate the levels of traffic generation within and between zones.

The assignment of traffic to the base and future networks is generally determined by each street's average speed and capacity. When creating the network, each street is assigned a speed and capacity in the model database. These attributes largely determine each street's relative

attractiveness to a vehicle traveling to, from, or within the Oshkosh study area; therefore, streets with the highest speeds, directness, and capacities will generally have the greatest number of vehicles assigned to them. As mentioned above, the calibration process helps to create a network that represents actual (or estimated future) traffic levels on each street in the model. Once this is completed, level of service can be estimated for the future network by comparing the traffic assignment for each street with its corresponding capacity. Those streets that equal or exceed a volume to capacity (v/c) ratio that represents LOS C (80 percent of capacity) could experience traffic levels identified as undesirable in this plan.

Potentially congested roadways. The roadway capacity improvement recommendations included in this plan resulted from the modeling of projected traffic on the existing network to determine areas of deficiency, and the subsequent modeling of alternative improvements. The resulting recommendations are intended to reduce future congestion problems in the Oshkosh area.

COMMUNITY AND NEIGHBORHOOD IMPACTS

Several policy statements in the plan support the development of a transportation system compatible with existing and future development patterns. The policies include minimizing the disruption of neighborhoods and reducing the penetration of neighborhood units by arterial streets.

Minimizing both of these activities will enhance the efficiency of the transportation network within communities. Policies also state that the location of new or relocation of existing facilities in or through recreational, historical, scenic, or cultural sites should be avoided whenever possible.

When identifying transportation projects for a long range plan, it is essential that existing and proposed land uses be considered to ensure that these projects do not isolate neighborhoods from important destinations. For example, it would not be wise to place a major street between an elementary school and a densely populated residential area, for many children could be forced to risk injury while walking to and from the school. Granted, proper signalization at intersections and clearly marked crossing zones could reduce the risk, but the presence of the street would certainly create a safety risk for the residents.

This plan considers the effects that major transportation investments could have on the Oshkosh Urbanized Area and its neighborhoods and attempts to minimize the negative impacts that could result from the projects proposed in the document.

Noise Impacts. The consideration of the impact of noise is addressed in policies stating the need to meet national standards ensuring that residential areas, schools, and other areas with high concentrations of people are not exposed to harmful levels of noise from transportation facilities.

Visual Impacts. In an effort to develop attractive communities, the plan promotes designing transportation facilities to be aesthetically pleasing and sensitive to the natural landscape. Incorporating amenities such as boulevards, berms, and attractive landscaping is important in the design of major arterials in urbanized areas. For rural areas, the plan stresses the need to minimize views such as junkyards, billboards, and strip commercial development.

Historical and Cultural Impacts. As discussed previously, the disruption of neighborhoods, historic areas, and recreational areas is discouraged in the development of a transportation system.

When expansion, relocation, or new construction is proposed, the consideration of the costs and benefits of the new or updated facility must be weighed against the dislocation of these areas.

NATURAL RESOURCES

Water Resources. Many water resources are part of environmentally sensitive areas. The location of roadways through environmentally sensitive areas should be kept to a minimum. Maintaining natural water depths and implementation of construction site erosion control measures are ways to prevent sediment laden run-off from flowing into surface waters. Run-off control measures must be taken during any construction of a transportation facility. [Exhibit 77](#) shows wetlands and streams in the Oshkosh area.

The location of new developments should be planned in conjunction with both existing transportation facilities and land uses to promote sanitary sewer systems which will effectively and economically serve urban development. To facilitate compact development, vacant developable lands within the existing Urbanized Area should first be in-filled. Sanitary sewerage service to existing development should be provided whenever it is the most cost effective alternative for addressing failing on-site disposal systems.

Sewer service area plans play a significant role in development. East Central Wisconsin Regional Planning Commission, under a contract with the Wisconsin Department of Natural Resources (WDNR), prepares sewer service area plans, while the WDNR ultimately reviews and approves the plans. The Oshkosh Comprehensive Plan cites weaknesses in the sewer service amendment process, and the current plan scenario reflects some of the undesirable effects such as sprawl or "leapfrog" development. Because the sewer service area planning process is largely based on growth projections, the results of boundary limits established can in some instances be too restrictive or too liberal. If the boundary is too restrictive, development can be pushed into unsewered areas and into non-contiguous villages. If the boundary is too liberal, development can occur in a haphazard, or leap frog fashion. Communities have criticized East Central's projections for being too conservative and have fought for additional acreage allocations. In response to community's demands and to provide a choice of developable sites within the sewer service area boundary, East Central has historically provided excess acreage within the sewer service planning area. By providing this level of excess available acres, East Central is leaving the burden of controlling development to individual jurisdictions.

Air Quality. The Oshkosh Urbanized Area is currently an attainment area. To remain an attainment area, the plan supports efficient traffic control measures and the encouragement of transit, bicycle, and pedestrian travel. Air quality should be monitored to ensure that motor vehicles, including air and water craft, do not exceed the exhaust emission standards established by the Environmental Protection Agency (EPA).

Energy Consumption. The plan recognizes that energy supplies are uncertain and that the conservation of energy is important. The conservation of energy encompasses the need for development to occur at densities adequate to sustain reasonable urban services and to support multimodal transportation. The use of ride sharing, organized efforts such as Travel Demand Management (TDM) programs, and transit should be considered especially in areas where major employers are located, and the location of major businesses should consider the availability of

transit. Pedestrian and bicycle facilities should be made available where possible. Pedestrian and bicycle facilities can easily be incorporated concurrent with new development. It is more difficult and costly to incorporate these facilities into existing development. Lower densities also cannot be efficiently served by transit. While densities within the older portion of the City of Oshkosh are capable of sustaining transit, new development in the City and surrounding towns is not.

The design of highway facilities needs to include smooth pavements and the elimination of steep grades and sharp curves to conserve energy. Traffic flows and transportation facility locations should provide the fewest interruptions and shortest travel paths for the greatest number of trips. Efforts to improve energy conservation through improved fuel efficiency of vehicles and through educational programs on better driving travel habits are also necessary.

Ecosystems and Habitat Fragmentation. Minimizing environmental disruption and maintaining a quality environment is a priority of the land use/transportation plan. Locating and expanding roadways through environmentally sensitive areas should be kept to a minimum. These areas include wetlands, areas subject to flooding, steep slopes (areas with slopes greater than 12 percent), high bedrock, and areas where endangered plants and wildlife are found. Encouraging the presence of natural vegetation, especially along roadsides, offers protection to wildlife and a reduction in the need for herbicides.