What Moves You Berrien and Cass Counties: How Will We Arrive in 2040?

Niles-Buchanan-Cass Area Transportation Study

Long Range Transportation Plan

2013-2035

ACKNOWLEDGEMENTS

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INTRODUCTION

The 2040 Niles-Buchanan-Cass Area Transportation Study (NATS) Long Range Transportation Plan will explain how the communities in the planning area will address their transportation needs, what their priorities include, and how federal, state, and local dollars will be used to address highway, transit, airport, bikeway, and pedestrian walkway infrastructure needs.

This plan provides guidance to the area's local officials as they plan for the present and future development of their communities. The plan contains the planning framework and other necessary information to assist sound decision-making for the improvement of local transportation systems. It is revised every four years to maintain a consistent, twenty-five year look at the issues and needs of the NATS Urban Area. The Plan will also reference other local or regional agency plans as part of the NATS region's effort to coordinate community-wide multi-modal services.

The Chapin House in the City of Niles and former city hall until 2012.

There are two primary reasons to develop a comprehensive transportation plan.

1. **The 3 Cs of Transportation Planning: Cooperative, Continuing, and Comprehensive**
   Decisions are better when the decision makers, working in cooperation, have as much information as possible, and base their policy choices on a comprehensive analysis. Although the process of gathering information for analysis is always beneficial, it becomes even more important when investment decisions are expensive and the consequences long-lasting. Such is the case in transportation system infrastructure improvements; a great deal of money is spent on various transportation system improvements such as adding lanes to roads, repaving or reconstruction, or building pedestrian/bicycle facilities. These are expensive projects but are necessary to the economic and social life of a community.

2. **Federally-Mandated Transportation Planning Process for Urbanized Areas**
   NATS was established in 1973, following federal guidelines dictating that urban areas of a prescribed population density and an expectation of urban development must plan their transportation infrastructure together. The MPO is charged with maintaining a continuing, comprehensive, and cooperative transportation planning process to accommodate the federal obligation. At a minimum, the jurisdictions within the defined planning boundaries shall collaborate to set regional priorities for all modes of movement in the transportation system and determine their formula for producing the local, non-federal match required for federal assistance in planning and transportation-related activities.

STUDY AREA OVERVIEW

Berrien County

Berrien County is located in Michigan's southwest corner. The southern border of the County abuts Indiana's northern state line. The cities in the southern portion of the County are strongly influenced by the population and economics of the Indiana cities that lie in close proximity including South Bend, Mishawaka, and Michigan City. Chicago is also a powerful influence on many aspects of life in southwest Michigan. The strong links between Chicago and Berrien County include economic, environmental (both are within the Lake Michigan Watershed Basin), social, as well as transportation. A few towns in the far southwest portion of the County are even within the farthest reaches of the Chicago commuter shed. It is widely accepted that a Chicago "Mega-Region" includes Berrien County. Berrien County comprises a total area of 580 square miles and is bordered by Michigan's Cass County to the east and Van Buren County to the north and Indiana's LaPorte and St. Joseph Counties to the south. The western edge of the County comprises a portion of Michigan's Lake Michigan western "sunset" coastline. All told, Berrien County contains 42 miles of Lake Coastline.

Cass County

Cass County is the first county to the east of Berrien in Michigan's southwest corner. The southern border of the County abuts Indiana's northern state line. The cities in the southern portion of the County are strongly influenced by the population and economics of the Indiana cities that lie in close proximity including South Bend, Mishawaka, and Michigan City. Chicago is also a powerful influence on many aspects of life in southwest Michigan. Cass County comprises a total area of 508 square miles and is bordered by Michigan's Berrien County to the west, Van Buren County to the north, and Indiana's St. Joseph and Elkhart Counties to the south.

MPO STUDY AREA

The Niles-Buchanan-Cass Area Transportation Study (NATS) is the Michigan portion of the South Bend, Indiana, urbanized area as designated by the United States Census. The NATS area is defined by an area that includes communities in both Berrien and Cass Counties. The 2010 Census changed the urbanized area for the NATS study area. The change has occurred within Cass County. Mason Township will become the newest member to the NATS committees. A discussion of the committees can be found on page 15 of this planning document.

The current jurisdictions within the study area which include: Cities of: Niles, Buchanan, Village of Edwardsburg, Townships: Bertrand, Buchanan, Howard, Mason, Milton, Niles Charter, and Ontwa.

Map 1 - MPO Study Area

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PARTNERS IN INDIANA

The Michiana Area Council of Governments (MACOG) service area shares the northern Indiana border with Berrien and Cass Counties. The NATS study area is the Michigan piece of the South Bend, Indiana, urbanized area as designated by the United States Census. Coordination of transportation projects and planning documents are coordinated with the transportation staff at MACOG. www.macog.com/.

GOVERNANCE OF THE MPO

Southwest Michigan Planning Commission Governing Board

The Southwest Michigan Planning Commission (SWMPC) is one of 14 Regional Planning and Development Regions created in 1968 by Governor George Romney. This step was taken in response to a growing number of federal programs (housing, water quality, economic development, and transportation) that recognized the area-wide nature of many problems. The regional boundaries were established as a consistent geographic area upon which not only planning activities, but also the delivery of services could be based. Berrien, Cass, and Van Buren Counties were established as "Planning and Development Region IV." The full history of the SWMPC can be viewed at http://www.swmpc.org/history.asp. The Southwest Michigan Planning Commission (SWMPC) provides the staff for the MPO.

The SWMPC Governing Board reviews and affirms decisions of the NATS MPO Policy Committee. The SWMPC Governing Board reviews and approves the following documents that are produced by the MPO staff:

1. **Long Range Transportation Plan** (LRP)-which covers a twenty-five year period and is revised every four years.
2. **Unified Planning Work Program** (UWP)-describes the planning work to be accomplished in the fiscal year.
3. **Transportation Improvement Program** (TIP) - a four-year document which prioritizes all transportation improvement projects in the four-year period.
4. **Public Participation Plan** (PPP) - documents the standard expectations and procedures for public involvement in this region's transportation planning process.

In addition, the MPO may produce other documents, policies, or initiatives that may be determined to advance the efficient and effective use and development of the regional transportation system. In these instances, the SWMPC Governing Board is not obligated to review and affirm these decisions.

The MPO Committees

The MPO has two Committees which oversee and direct the MPO staff on a variety of topics, such as meeting preparation, public outreach, and document preparation. The two committees are the Technical Advisory Committee and the Policy Committee.

NATS Technical Advisory Committee

The NATS Technical Advisory Committee (TAC) is comprised of planners, transit operators, engineers, managers, and operators of transportation agencies, local units of government, the MDOT, the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA) and provides technical assistance to the MPO staff on transportation issues. They make recommendations to the Policy Committee on potential actions. Current representatives from the following agencies make up the membership of the Committee:

TAC Committee Members:

* Non-Voting member

Berrien County Community Development
Berrien County Road Commission
Bertrand Township
Buchanan Dial-A-Ride
Buchanan Township
Cass County Planning Commission
Cass County Road Commission Engineer
City of Buchanan
City of Niles Community Development
*Federal Highway Administration - Michigan Division
Four Flags Area Chamber of Commerce
*Federal Transit Administration
Howard Township
Michiana Area Council of Governments
Milton Township
*Michigan Department of Environmental Quality- Air Quality Division
*Michigan Department of Transportation - Multi-Modal Division
Michigan Department of Transportation - Southwest Region
Michigan Department of Transportation Statewide Planning Division
Michigan Department of Transportation- Transportation Service Center, Coloma
* Michigan Department of Transportation - Travel Demand
Niles Charter Township
Niles Dial-A-Ride
Ontwa Township
Pokagon Band of Potawatomi Indians
Southwest MI Economic Growth Alliance
*Southwest Michigan Planning Commission
Village of Edwardsburg

NATS Policy Committee

The NATS Policy Committee is composed of elected officials of local government, board members of transportation-related agencies, and designated officials from the MDOT, the FHWA, and the FTA. These officials are responsible for establishing local transportation policies, overseeing the planning process, and providing a forum for cooperative decision-making. The Policy Committee provides technical advice through the expertise of the TAC. Current representatives from the following agencies make up the membership of the Committee:

Policy Committee Members

* Non-Voting member

Berrien County Community Development
Berrien County Road Commission
Bertrand Township
Buchanan Dial-A-Ride
Buchanan Township
Cass County Planning Commission
Cass County Road Commission Engineer
City of Buchanan
City of Niles, (3 representatives)
*Federal Highway Administration - Michigan Division
Four Flags Area Chamber of Commerce (2)
*Federal Transit Administration
Howard Township
Michiana Area Council of Governments
Milton Township
*Michigan Department of Environmental Quality- Air Quality Division
*Michigan Department of Transportation - Multi-Modal Division
Michigan Department of Transportation - Southwest Region
Michigan Department of Transportation Statewide Planning Division
Michigan Department of Transportation, Transportation Service Center, Coloma
*Michigan Department of Transportation - Travel Demand
Niles Charter Township
Niles Dial-A-Ride
Ontwa Township
Pokagon Band of Potawatomi Indians
Southwest MI Econ. Growth Alliance
*Southwest Michigan Planning Commission
Village of Edwardsburg

Bi-State Coordinating Committee

The Bi-State (Michigan/Indiana) Coordinating Committee consists of representatives from the Niles and South Bend areas. Its function is to ensure the coordination of regionally significant activities across the state line and to resolve conflicts as they arise. Current membership is as follows:

Table 1 - Bi-State Coordinating Committee

Michigan		Indiana
Commissioner, Berrien County		Commissioner, Elkhart County
Commissioner, Cass County		Commissioner, St. Joseph County
Mayor, City of Niles		Mayor, City of Elkhart
Supervisor, Bertrand Township		Mayor, City of Mishawaka
Supervisor, Howard Township		Mayor, City of South Bend
Supervisor, Milton Township		Councilman, City of Elkhart
Supervisor, Niles Charter Township		
Supervisor, Buchanan Township		
Supervisor, Ontwa Township		
Ex Officio		
Michigan Department of Transportation		
Indiana Department of Transportation		
Federal Officials (as necessary)		

LEGISLATION

Moving Ahead for Progress in the 21st Century (MAP-21) (49 USC Chapter 53) constitutes the governing rules for transportation planning and decision making. New concepts and requirements originate from this legislation and therefore the MPO will be held responsible for implementing the changes. MAP-21 was signed into law by President Barack Obama on July 6, 2012. MAP-21 is a 27 month authorization that ends on September 30, 2014. MAP-21 continues the MPO and statewide transportation planning process established in previous federal transportation legislation. Some notable changes include the following:

- **Restructuring of Core Program-under MAP-21 (there are 5 program areas)**
    1. National Highway Performance Program
    2. Congestion Mitigation and Air Quality Program
    3. Surface Transportation Program
    4. Highway Safety Improvement Program
    5. Metropolitan Planning

- **Programs Eliminated**
    1. National Scenic Byways
    2. Transportation Enhancements
    3. Transportation, Community and System Preservation
    4. High Risk Rural Road Program
    5. Safe Routes to School
    6. Job Access Reverse Commute
    7. Railway-Highway Crossing Hazard Elimination in High Speed Rail Corridors

- **Performance Based Planning**-Continues the 3C process (continuing, cooperative, and comprehensive) and establishes and uses a performance based approach to decision making.

- **National Highway Performance Program**-Supports the National Highway system by reviewing the condition and performance of the system, makes progress toward performance goals, and tracks new facility construction.

- **Transportation Alternatives**-Consolidates Transportation Enhancements, Safe Routes to School and Recreation Trails Programs. It can also fund environmental mitigation and minor road construction. MPOs must run a competitive process for this funding source.

- **Transit**-Formula grant programs include urban areas, rural areas, elderly and disabled, bus and bus facilities, state of good repair and high density.

- **National Freight Policy**-Establishment of a national freight policy of mainly highway assets and creates a national freight network designated by critical rural freight corridors.

- **Environmental Streamlining Processes**- It is in the national interest to expedite delivery of surface transportation projects by substantially reducing the average length of the environmental review process.

A summary of MAP-21 can be found by visiting:

FHWA http://www.fhwa.dot.gov/map21/summaryinfo.cfm

FTA http://www.fta.dot.gov/legislation_law/about_FTA_14937.html

HISTORY OF THE STUDY AREA

Berrien County

Fort St. Joseph Museum in Niles, MI

Rene' de LaSalle arrived in Berrien County in 1679 and built Fort Miami at the mouth of the St. Joseph River. This would become the base for many explorations into the Mississippi River Valley. Toward the end of the Seventeenth Century, subsequent French explorers built Fort St. Joseph farther up the river at the present site of the City of Niles, Michigan. The County officially organized in 1831 and was named after U.S. Attorney General John M. Berrien. At that point, the County saw population increases during the 1830s. In 1834, settlers started to take advantage of the moderating affect of Lake Michigan on Berrien County's climate and of its sandy soils, which provided a perfect environment for agriculture, including a breadth of fruits and vegetables. Berrien County's fruit production continued to grow as did its population.

Fort St. Joseph - Niles

French explorers built Fort St. Joseph around the end of the seventeenth century, upriver from the mouth of the St. Joseph River at what is now the City of Niles. Fort St. Joseph was heavily utilized until the French left the area around 1763; the British then held the fort until it was captured by the Spanish in 1781. This international history provided Niles with the distinction of being a town of four flags. The original site of the fort is marked by a huge boulder with an historical marker that recounts the history of the fort. Today the history of the Fort is told at the Fort St. Joseph Museum. The Museum has many outstanding exhibits highlighting the Fort's unique history.

Cass County

Cass County was named after Lewis Cass who was the territorial governor of Michigan from 1813 to 1831. Early settlers came from the west, using Niles and Berrien County as the doorway to the east. Those early settlers included New Englanders, Southerners, and a large African-American and Native American population. The Potawatomi Indians had been long-time residents of Cass County prior to the arrival of white and African-American settlers. The Potawatomi were gradually forced off their land. Some Native Americans resisted and in 1837 were able to purchase 1,000 acres of land in Silver Creek Township. Descendants of the Potawatomi still make their homes in Silver Creek Township today.

An Indian trail that crossed the state from Detroit in the east to Chicago in the west is now the US-12 Heritage Trail. The trail had historically linked animal migratory habitat, Native American territory, first generation settlements, commerce routes, and cultural corridors.

The African-American story is particularly rich in Cass County. The county was a haven for many African-Americans migrating north during the mid-nineteenth century. Their migration was aided by Quakers who had also left the South because of their opposition to slavery. The Quakers helped slaves escape through the Underground Railroad, the route ran about two miles east of Cassopolis. The primary station for the Underground Railroad route in Cass County is the William Jones House.

TRANSPORTATION PLANNING: HOW WE GOT HERE

- The increased usage of automobiles in the early 1900s was what first sparked the coordinated planning of motorized highways and the transportation system more broadly.
- The Federal-Aid Highway Act of 1927, the introduction of national roadway standards and funding allotments in the 1920s the Act allowed highway construction to begin connecting the nation's population centers.
- In 1941-1945, highway expansion stopped and transit system ridership reached an all-time high. Streetcars, rail systems, and buses served as significant means of travel for Americans. The post-war period saw a huge demand for new vehicles and space for homes as soldiers came home.
- The Federal-Aid Highway Acts of 1944 and 1956 significantly increased funds for road building. Bolstered by housing policies that promoted a move to the suburbs, automobile-oriented planning came to dominate American transportation.
- Planners began using tools to make their study of transportation more relevant, such as travel studies, and forecasting for future travel patterns. In addition, organizations such as the American Association of State Highway and Transportation Professionals (AASHO) published manuals on conducting cost-benefit analysis of transportation projects. Planners and engineers coordinated with business leaders to use transportation planning as a tool not just to move people, but to encourage economic development in target areas.
- The 1960s saw a balanced highway and transit investments approach. The Federal-Aid Highway Act of 1962 mandated a continuous planning process that brings together stakeholders from the federal government, the state, and local communities to update transportation plans. The Urban Mass Transportation Act of 1964 was the first federal effort to encouraging the planning and area-wide mass transportation systems. These two Acts placed an emphasis on coordinating regional transportation planning with land use and taking into account the environmental and social costs that highway and transit projects impose on communities. It was during this time period, that the framework for Metropolitan Planning Organizations (MPOs) came into being.
- The start of the new millennium has reinvigorated regional transportation system planning with a new focus on multi-modalism and less emphasis on private automobile infrastructure. Even with this new focus however, private automobiles continue to dominate transportation planning. Mounting concerns about the impacts of the automobile on climate change and air quality, as well

as an aging national population have led transportation planners to renew their focus on balancing automobile infrastructure with planning for transit and non-motorized facilities. As U.S. Secretary of Transportation Ray LaHood said in 2010, "This is the end of favoring motorized transportation at the expense of non-motorized."[1] This new call for a system that supports all modes and all abilities is particularly timely for the southwest Michigan region, where an aging, diffuse population requires a diverse array of transportation options.

CURRENT TRANSPORTATION ASSETS

Roadways

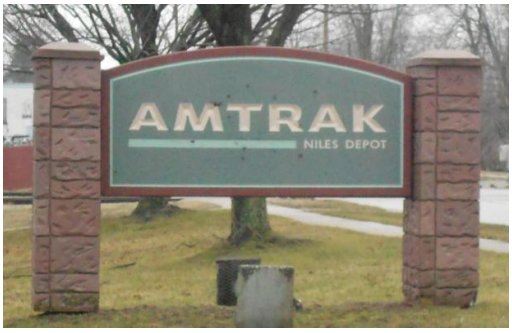
As of 2013, Berrien County has 749 miles of federal-aid eligible roads. In particular, Interstate 94 plays a prominent role in connecting Berrien County to the rest of Michigan and the nation. I-94 connects Berrien County with Detroit and Ontario, Canada to the east, and Chicago, Milwaukee, Madison, and Minneapolis-St. Paul to the west. I-196 also vectors north from I-94 and connects the Benton Harbor-St. Joseph area with Holland and Grand Rapids. In addition, US-31 is a divided highway that directly connects Berrien County to South Bend. US-12 provides an east-west connection across the state in the southern portion of Berrien and Cass counties. M-139, M-63, and Red Arrow Highway serve as north-south connectors and business corridors in the Berrien County. More detailed information about roadways can be found in the Intermodal Considerations section of the plan.

As of 2013, Cass County has 373.1 miles of federal-aid eligible roads. There are no Interstates that run through the county but there are several Michigan highways that provide connections within and outside of the County. M-40 and M-51 serve as the north-south connectors while M-60 and M-62 serve as the west-east connectors. US-12 provides an east-west connection across the state in the southern portion of the County.

Rail

Amtrak has two corridor passenger services in the NATS region including the Wolverine, and the Blue Water that focus on providing rail service between Detroit, Michigan and Chicago, Illinois.

- **The Wolverine** passenger service is a 304 mile line that offers three daily round trips from Chicago, Illinois to Pontiac, Michigan, with a stop in Niles, Michigan. The Wolverine operates over tracks



The Amtrak station located in Niles is the only passenger rail service in the study area.

[1] Vestel, Leora Broydo. "Transportation Department Embraces Bikes, and Business Groups Cry Foul." *The New York Times.* March 26, 2010. <http://green.blogs.nytimes.com/2010/03/26/transportation-department-embraces-bikes-and-business-groups-cry-foul/>.

owned by Norfolk Southern Railway, Amtrak, Conrail, and Canadian National Railway.

- **The Blue Water** is the second service that makes a daily stop in Niles, Michigan, from Chicago, Illinois to Port Huron, Michigan. The Blue Water operates on a 319-mile line that includes sections owned by Norfolk Southern Railway, Amtrak, and Grand Trunk Western Railroad. The 97-mile segment between Porter, Indiana and Kalamazoo, Michigan, is the longest segment of track owned by Amtrak outside of the northeast corridor.

In addition, the South Shore Line provides commuter service to Chicago, with fourteen daily departures from Michigan City and seven from South Bend. Each of these departure points is just a few miles from the Michigan-Indiana state line. More details about rail service can be found in the **Intermodal Considerations** section of the plan.

Transit

The NATS planning area is served by 3 transit agencies consisting of Berrien Bus (county-wide system), Buchanan Dial a Ride (serving the City of Buchanan and Buchanan Township), and Niles Dial a Ride (serving the City of Niles and Niles Charter Township). Cass County only has one transit provider within the study area and that is the Cass County Public Transit Authority. More details about transit service can be found in the Intermodal Considerations section of the plan.

Non-Motorized Facilities

NATS supports major regional efforts to improve facilities for non-motorized transportation and trails. NATS is part of the MDOT Southwest Region 9-County Non-Motorized Plan, which set out a 9 county regional vision of what the non-motorized transportation system in southwest Michigan should be. In addition, jurisdictions within NATS are closely linked to the ever expanding system within the MACOG area. More information about non-motorized facilities can be found in the Intermodal Considerations section of the plan.

Aviation

Southwest Michigan Regional Airport is the only public airport in Berrien County and is located in Benton Harbor. The airport has runways capable of handling jets. The airport handles executive travel, air courier, the Coast Guard, and some freight activity. In 2011, the airport completed safety upgrades to further lengthen the runways and accommodate more aircraft. The other airport is the Jerry Tyler Memorial Airport, owned and operated by the City of Niles. The airport services as a general utility airport with no commercial flight operations. More information about aviation facilities can be found in the Intermodal Considerations section of the plan.

PUBLIC PARTICIPATION

Federal Guidance on Participation

Building off the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation, the transportation reauthorization bill Moving Ahead for Progress in the 21st Century (MAP-21) continues to support previous federal public participation guidelines. The provisions that were set forth in SAFETEA-LU are as follows:

1. Representatives of users of pedestrian walkways, bicycle transportation facilities, the disabled are specifically added as parties to be provided with the opportunity to participate in the statewide and metropolitan planning processes.

2. To enhance the public participation process, the State department of transportation (DOT) and MPO should conduct public meetings at convenient and accessible locations at convenient times; employ visualization techniques to describe plans; and make public information available in an electronically accessible format such as on the Web.

3. The MPO is to develop a participation plan in consultation with interested parties that provides reasonable opportunities for all parties to comment.

SWMPC's Commitment to Public Participation

1. Public involvement is an important element of a high quality transportation planning process;
2. Effective transportation planning must include the participation of those whose everyday lives are critically affected by how they are able to get to work, home, school, shopping, and services;
3. It is essential to ask for public participation, not just wait for it. It is essential to respect and seriously consider input that is received, not just collect it;
4. Informing and educating the public about transportation planning issues and the transportation planning process is key to obtaining good quality public input; and
5. Additional emphasis should be placed on involving persons and groups typically under-represented in transportation planning or with special transportation needs, including low-income, minority, elderly, and disabled populations.

NATS intends to use the standards set forth in SAFETEA-LU, now MAP-21, as the basis for its public participation program, expanding on them to better meet the needs of the residents in the Niles-Buchanan-Cass Area Transportation Study.

MPO Commitment to Public Participation

The MPO is committed to engaging the public in varied and useful ways to garner as much public feedback as possible. The purpose of the Public Participation Plan (PPP) is to set forth the standard expectations and procedures for public involvement in this region's transportation planning process. This document similarly presents opportunities for the MPO to expand and enhance public engagement as needed to support our decision making processes. The success of any effort to develop plans for the maintenance and improvement of the transportation system is directly related to the general public support given to the development of the system. Individuals must be given the opportunity to put their beliefs, opinions, and

values into the overall plan. As representative bodies, the NATS committees must actively solicit the ideas and comments of the people they serve.

NATS Public Participation Plan

The NATS MPO updated its Public Participation Plan in April of 2012. This document is available online at http://www.swmpc.org/participation.asp or by contacting SWMPC staff for a hard copy (contact information is found below). The Public Participation Plan outlines the methods staff will use to publicize activities and to seek input and comments on all the major transportation documents, including the LRTP, TIP, UWP, and the Public Participation Plan itself. The following is a partial list of those means:

- Regular MPO Committee meetings
- Special meetings held by the MPO
- SWMPC quarterly meetings
- SWMPC website
- Presentations to local organizations
- Newspaper advertisements and articles
- Direct mailings
- Radio broadcasts
- Bi-weekly transportation email updates from the MPO

In general, the NATS transportation planning process is designed to be open to the public. Each month, on the fourth Tuesday, the TAC and Policy Committees meet at 1:30 and 2:30 p.m., respectively, to discuss projects and other items related to transportation in the region. Both committees meet at the City Council Chambers located at **1345 E. Main St., Niles, MI 49120**. The Committee meetings are always open to the public and provide for routine public comment on the agenda.

Agenda packets and announcements for regularly-scheduled NATS meetings are distributed to all members approximately seven calendar days before the meeting. Bi-weekly email messages are sent to Committee members, interested citizens, and other identified members of the public that transportation would impact. Meeting information is also posted on the SWMPC website at http://www.swmpc.org/nats.asp or by contacting the SWMPC at:

Southwest Michigan Planning Commission
185 East Main Street, Suite 701
Benton Harbor, Michigan 49022
Phone: (269) 925-1137
Fax: (269) 925-0288
www.swmpc.org/transportation.asp

In the event that a member of the public is unable to attend a meeting, the transportation staff at the SWMPC is available to discuss transportation issues by e-mail, letter, telephone, or in person.

Other general outreach activities include sending announcements and notices of proposed local transportation actions, MDOT public meetings, and other transportation-related events to local governments, local media, libraries, and town halls and posting them on the SWMPC website. In addition, the SWMPC publishes a quarterly newsletter (e-mailed and mailed to over 900 contacts) that includes NATS transportation news. Transportation staff members are also available to speak at community organization meetings or related functions throughout the year. Environmental justice regulations ensure the inclusion of a number of partners in touch with under-represented populations, and these efforts are further described in the Environmental Justice section of this document.

LONG RANGE TRANSPORTATION PLAN PUBLIC PARTICIPATION PROCESS

A LRTP is a long-term look at the priorities and objectives for the region, and is updated every four years in non-attainment and maintenance areas (such as NATS). According to the 2011 Public Participation Plan, the SWMPC must obtain public input on the list of goals and objectives, on the list of proposed priority projects, and on the draft document as a whole. Efforts to acquire this input are described below.

Long Range Plan Development

- Public Participation Plan – The principle document was reviewed, amended, and adopted in 2011. A later review and update was conducted in 2012 with specific attention paid to the development of targets for the MPO to achieve in the area of public participation and engagement. Table 2 outlines the targets set by the MPO.

- Table 2, *Public Participation Plan Goals Matrix*, outlines the strategy that the MPO staff have in place to improve participation with the public. The table highlights those areas that the MPO staff will complete in the next 12-24 months (High), 24-36 months (Medium), and 36-48 months (Low).

Table 2 - Public Participation Plan Goals

1. Visibility – Raise the Awareness of the MPOs and Their Role in Regional Transportation Planning		
Priority	*Activity*	*Measures*
High	1.1 Build contact list of the following: a. Area churches in the MPO planning region, with specific focus on environmental justice region. b. Human service agencies and organizations c. Senior centers/agencies d. Disability groups e. Schools in the planning region	• Check to see if lists are created. • Check the lists for accuracy and completeness.
High	1.2 Create a display explaining the role of MPO transportation planning to place in locations throughout the region.	• Count the number of communities the display in. • Count the number of public comments received before and after the placement of displays
High	1.3 Partner with agencies/organizations at community events to discuss transportation planning with the public	• County the number of agencies and organizations partnered with and the number of different events at which MPO transportation materials are presented and discussed.

***2. Engagement* – Continuously Involve the Public in the Transportation Planning Process**		
Priority	*Activity*	*Measure*
High	2.1 Issue frequent press releases to area newspapers regarding the efforts of the MPOs.	• Count the number of press releases sent and printed.
High	2.2 Send twice-monthly emails regarding the efforts of the MPOs to a complete transportation contacts list, which should include all interested individuals.	• Verify the transmission of twice-monthly emails. • Check the email contact list for accuracy and completeness.

High	2.3 Produce flyers and other publications regarding the efforts of the MPOs.	• Count the total number of flyers or other publications produced. • Count the number of locations flyers are distributed in, paying special attention to organizations like churches and senior centers.
High	2.4 Maintain the MPOs' websites, ensuring accurate meeting notices, MPO work program timelines, and notification of events and public input opportunities.	• Check the website at least monthly, making sure that all information is accurate and complete.
High	2.5 Respond to public comments received via email, phone, and written message.	• Check for timely response, made in the same form as the message was received (i.e., phone calls are returned, emails are replied to, and written messages are sent a return letter).
High	2.6 Maintain the SWMPC Facebook page by posting transportation related articles or opportunities of interest at least once weekly.	• Check the frequency of transportation-related Facebook updates. • Monitor the number of Facebook followers, and check for growth.
Medium	2.7 Utilize civic /community/religious present information to with their memberships and to gain feedback.	• Count the total number of presentations and input meetings held at such organizations. • Count the number of organizations reached out to and partnered with.
Medium	2.8 Develop procedure for responding to official public input that is transparent and can be recorded.	• Check that public input is compiled and prominently displayed on the SWMPC website • Check that press releases and/or emails are sent, explaining how public input has been incorporated into transportation documents.

3. Notification **– Notify the Public When Key Decisions Are Being Made and Provide Opportunities for Comment**		
Priority	*Activity*	*Measure*

High	3.1 Utilize displays, flyers, the official website, personal invitations, and emails to provide notification of important events.	• Keep sign in sheets to track number of attendees at events. • Use Google Analytics to track the total number of website views on transportation pages. • Keep track of the total number of flyers printed and distributed.
High	3.2 Display all meeting materials, such as agendas, minutes, and handouts, on the appropriate SWMPC website no less than 5 days in advance of the meeting date.	• Monitor the date of important events, and make note of whether meeting materials have been posted appropriately.

4. Communication **– Engage With Citizens About Transportation Topics in Ways That Are Informative and Understandable**		
Priority	*Activity*	*Measure*
High	4.1 Ensure that all communications and MPO plans are presented in a format understood by citizens, with written materials that do not surpass an eighth grade reading level.	• Encourage feedback from citizens about their ability to understand material, and note their difficulty.
Medium	4.2 Create standing citizen-involved subcommittees that focus on transportation topics such as freight, rail, and bicycling/walking.	• Make note of the number of subcommittees created.
Low	4.3 Create public service announcements or informational videos regarding various transportation topics.	• Make note of the number of announcements or videos created.
High	4.4 Continue to utilize Facebook postings to communicate with people regarding various transportation topics.	• Count the number of Facebook postings, as well as the number of interactions within postings.
High	4.5 Use maps, graphs, and other pictorial representation techniques to communicate various transportation issues more clearly to citizens.	• Track the number of informational displays made available to the public.

5. Cultivation **– Educate Incoming MPO Board Members and Advisory Committee Members About MPO Functions, Responsibilities, and Programs; Educate Regional High School-aged Children About the Internal Function of MPOs**		
Priority	*Activity*	*Measure*

Low	6.1 Create a manual for MPO board members detailing the workings of MPOs and their specific responsibilities	• Make note of the steps to create a manual (such as the formation of a subcommittee in charge of its guidance), as well as the existence of a finished manual.
High	6.2 Contact high school students regarding opportunities for internships with the MPO.	• Make note of inquiries from prospective interns. • Make note of number of regional outreach efforts.

6. Facilitation **– Make It Easy for All Citizens to Get Involved in Transportation Activities and To Be Heard**		
Priority	*Activity*	*Measure*
Low	6.1 Create of a citizen advisory committee that looks at barriers to public participation and possible solutions.	• Check for the existence of such a committee.
High	6.2 Encourage MPO member organizations to advertise dates and locations of transportation-related meetings through websites, newsletters, flyers, emails.	• Count the organizations that regularly post this information • Keep track of the methods by which organizations advertise events
Low	6.3 Have citizen representatives on the MPO Policy Committees	• Track the number of citizen representatives holding voting positions on the committees
Low	6.4 Make meetings available to citizens through recordings or webcast	• Track the number of meetings made available in video or audio form, either live or recorded on displayed on the SWMPC website.

7. Accessibility **– Hold Meetings at Convenient Times and Accessible Locations**		
Priority	*Activity*	*Measure*
High	7.1 Develop list of potential meeting locations that are on fixed bus routes and accessible by people who may walk or bike.	• Check that list is generated, and that it is accurate and complete
Medium	7.2 Partner with agencies holding community events to provide information and gain input in accessible places.	• Assess the transportation accessibility at partnered events.
Medium	7.3 Hold transportation meetings and other input sessions at a variety of times, both daytime and evening	• Track the times of public transportation events.

8. Compliance – Meet or Exceed the Spirit, Intent, and Requirements of MPO and Other Local, State, and Federal Statutes and Regulations		
Priority	*Activity*	*Measure*
High	9.1 Annually review the public participation plan for effectiveness.	• Check that annual review has been completed.
Low	9.2 Distribute a public survey every other year to help determine what works with the public participation plan and what needs improvement.	• Check that surveys have been distributed. • Count the number of survey responses and tally the results.

- **Goals and Objectives** - SWMPC staff conducted an initial review of the goals and objectives contained in the 2035 LRTP, there were two public input sessions with members of the public held on October 12, 2011 and October 19, 2011, continuous discussions at MPO Committee meetings were held in 2012 and 2013, which are open to the public, noticed by a yearly legal notice, and are also communicated via bi-weekly email communications to over 700 transportation stakeholders, staff reviewed federal regulations and state transportation documents for changes in policy, and the NATS Policy Committee approved the goals and objectives in January 2013.

- **Base Year and Future Year Socioeconomic Data –** Base year data was reviewed in 2011 as the U.S. Census information was released. A careful and detailed review of the three primary factors (population, employment, and households) was done with assistance from MDOT and Committee members. Future socioeconomic data review was done throughout 2012 with the same assistance as the base year data.

- **Plan Sections –** Once the goals and objectives were approved, SWMPC staff began drafting sections of the plan and brought those sections of the plan to the Committee members each month. The sections were conditionally approved until the final version of the plan was presented to the Committee members.

- **Public Input –** Public input was sought throughout the entire plan development.
    - Monthly MPO meetings provided one regularly scheduled means for which the public could comment on the plan development.
    - Three open house forums were held during the months of March, April, and May of 2013. Legal notices were sent regarding these forums.
    - Staff encouraged participation by various means throughout the process by utilizing bi-weekly emails to over 700 interested people, legal notices, flyers and postcards mailed to schools and community churches in the MPO area.

- In February 2013, a legal notice was sent to local media indicating that public comment was sought on the Goals and Objectives, Introduction, and Multi-Modal sections of the long range plan (See Appendix F for copy of all long range plan legal notices). This cycle was repeated throughout the planning process, to allow the public additional notice of their opportunity to comment on planning sections and other opportunities for them to comment at regularly scheduled meetings, or by providing comments via mail, fax, or email to the MPO staff. Until the plan is approved by FHWA, FTA, and MDOT, the MPO continued to accept public comments on the plan.

LRTP PROJECTS

Notices indicating a public comment period for the LRTP projects were sent via e-mail, postal mail, and Facebook (see Appendix F for copy of notices) to local media, local governments, schools, human service organizations, and members of the general public, all from the SWMPC contacts database. The formal comment period began April 20-April 29, 2013. The notice to the public contained detailed dates, times, and locations of the meetings at which public comment on the LRTP projects would be accepted, and described how to comment on the LRTP projects if meeting attendance was not an option. The public had the opportunity to comment in person at a special meeting held on April 19, 2013 where the projects were put out for the official public comment period. The public also had an opportunity to provide comments at the NATS Joint TAC and Policy Committee meeting held on April 30, 2013 at 1:30 p.m. at the Niles City Council Chambers or by submitting an email, phone call, fax, or mail to Transportation Staff at the SWMPC.

The Tables 3-4 lists the current LRTP projects and the Illustrative List of Projects. The Illustrative List highlights those projects in the region that are still important to the MPO but did not receive funding through the 2014-2017 Transportation Improvement Program cycle.

Table 3 – 2014-2017 Project Listing

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Project Cost
2014	BERRIEN	Berrien County	Red Bud Trail, Third St, and	Red Bud Trail from Buchanan	6.15	Resurface	Hot patching and single	CON		72	STU			18	CNTY	90000	112104	Exempt	100
2014	CASS	Cass County	Redfield St	Fir to Kline	1.27	Resurface	HMA (hot mix asphalt)	CON		166	STU			37	CNTY	203200	112864	Exempt	203
2014	CASS	Cass County	Elkhart Rd	From Redfield to May St.	1.33	Resurface	Partial Milling and Total	CON	ACC	11	STU					11417	112107	Exempt	175
2014	BERRIEN	MDOT	M-139	(Main Street) over St.	0.14	Bridge replacement	Bridge replacement	CON	AC	4,531	BRT	1,133	M			5664000	104152	Exempt	7,188
~~2014~~	~~BERRIEN~~	~~MDOT~~	~~US-31~~	~~at Niles Buchanan Road,~~	~~0~~	~~Roadside Facility~~	~~Expand existing lot to add~~	~~PE~~			~~ST~~		~~M~~				~~113932~~	~~NA~~	
2014	BERRIEN	Niles	Seventeenth St	Oak St to Eagle St	0.51	Resurface	Resurface	CON		159	STU			35	CITY	194300	112105	Exempt	233
~~2014~~	~~BERRIEN~~	~~Niles~~	~~Sycamore St~~	~~Thirteenth St to Seventeen~~	~~0.49~~	~~Resurface~~	~~Cold mill and resurface,~~	~~CON~~		~~101~~	~~STU~~			~~22~~	~~CITY~~	~~123000~~	~~100024~~	Exempt	148
2014	Berrien	Niles Dial A Ride	Free fare days	Niles area	0	Transit operations	Free Fare Days - This project will	T-ops		2	CM	1	CTF			2500	118114	Exempt	3
2014	BERRIEN	Niles Dial-a-Ride	Maintenance Software	Niles area		Transit maintenance	Purchase maintenance	T-Cap		2	5307	1	CTF			2500		Exempt	3
~~2014~~	~~BERRIEN~~	~~Niles Dial-a-Ride~~	~~Parking Lot~~	~~Niles area~~		~~Transit facility~~	~~Fill cracks, reseal, and restripe~~	~~T-Cap~~										~~Exempt~~	
2014	BERRIEN	Niles Dial-a-Ride	Preventative Maintenan	Niles area		Transit maintenance	Preventative maintenan	T-Cap		100	5307	16	CTF	9	TRAL	125000		Exempt	125
~~2014~~	~~BERRIEN~~	~~Niles Dial-a-Ride~~	~~Trolley Façade~~	~~Niles area~~		~~Transit maintenance~~	~~Refinish trolley wood~~	~~T-Cap~~										~~Exempt~~	
2014	BERRIEN	Niles Dial-a-Ride	Replacement Computers	Niles area		Transit operations equipment	Purchase and install up to 2	T-Cap		6	5307	1	CTF	1	TRAL	8000		Exempt	8
2014	BERRIEN	Niles Dial-a-Ride	Replacement Bus	Niles area		Transit vehicle additions/r	Replace one diesel cutaway	T-Cap		72	5307	12	CTF	6	TRAL	90338		Exempt	90
2014	BERRIEN	Niles Dial-a-Ride	Operating Assistance	Niles area		Transit operations	Public transit operations	T-Ops		85	5307	174	CTF	167	TRAL	426350		Exempt	426,350

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Project Cost
2014	Cass	Rideshare	Countywide	Countywide	0	Miscellaneous	Southwest MI Planning	EPE		12	CMG	0				12000	116815	Exempt	12
2015	BERRIEN	Berrien County	Range Line Road, Lake Street and	Range Line Road from Walton	5.1	Resurface	Hot mix patching and seal	CON		77	STU	0		17	CNTY	94	120689	N	41422
2015	BERRIEN	Berrien County	Madron Lake, North	Madron Lake from Warren	5.7	Resurface	Hot mix patching and seal	CON		77	STU	0		17	CNTY	94	120690	N	41422
2015	BERRIEN	Niles	Broadway	Fifth to Tenth	0.3	Resurface	Cold Mill and Resurface	CON		100	STU	0		23	CITY	122737	120686	N	122737
2015	CASS	Cass County	Adamsville Road	Stateline to May	1.5	Restore & Rehabilitate	Restore and Rehabilitat	CON		246	STU	0		54	CNTY	300	120687	N	41422
2015	Berrien	Niles Dial-A-Ride	Operating Assistance	Niles area		Transit operations	Public transit operations			$ 85,000	5307	$174,000	CTF	$167,350	TRAL	426350		$426,350	426350
2015	Berrien	Niles Dial-A-Ride	Preventive Maintenance	Niles area		Transit maintenance	Preventive maintenance			$101,000	5307	$ 16,413	CTF	$ 8,837	TRAL	126250		$126,250	126250
2015	Berrien	Niles Dial-A-Ride	Replacement Bus	Niles area		Transit vehicle additions/r	Replace one cutaway			$ 56,000	5307	$ 9,100	CTF	$ 4,900	TRAL	70000		$ 70,000	70000
2015	BERRIEN	Berrien Bus	Rural Operating Funds	Rural portion of NATS MPO		Transit operations	Public transit operations			$ 23,746	5311	$ 23,746	CTF			47492			$ 47,492
2015	Berrien	City of Buchanan	Bus Replacement	Buchanan area		Transit vehicle rehabilitati	Replace 2 small cutaway			$105,280	CMG	$ 26,320	M			131600		$131,600	131600
2016	BERRIEN	Berrien County	Bertrand, Third and State Line	Bertrand Road from US 31 to	5.1	Resurface	Hot mix patching and seal	CON		77	STU	0		17	CNTY	94	120685	N	41422
2016	BERRIEN	Berrien County	Galien-Buchanan, Bakertown	Galien-Buchanan from Boyle	5.5	Resurface	Hot mix patching and seal	CON		77	STU	0		17	CNTY	94	120688	N	41422
2016	BERRIEN	Buchanan	Red Bud Trail	South City limit to Front St.	0.5	Resurface	Cold milling and resurfacing	CON		254	STU	0		63	CITY	317	120695	N	41422
2016	BERRIEN	MDOT	US-31 NB	at Niles Buchanan Road	0	Roadside Facility	Expand and resurface	CON		45	ST	10	M	0		55	113735		55000
2016	CASS	Cass County	Fir Road	Stateline to Redfield	0.5	Resurface	HMA overlay with	CON		40	STU	0		9	CNTY	49	120693	N	49000
2016	CASS	Cass County	Fir Road	Redfield to US 12	1	Resurface	HMA overlay with	CON		18	STU	0		22	CNTY	40490	120694	N	40490

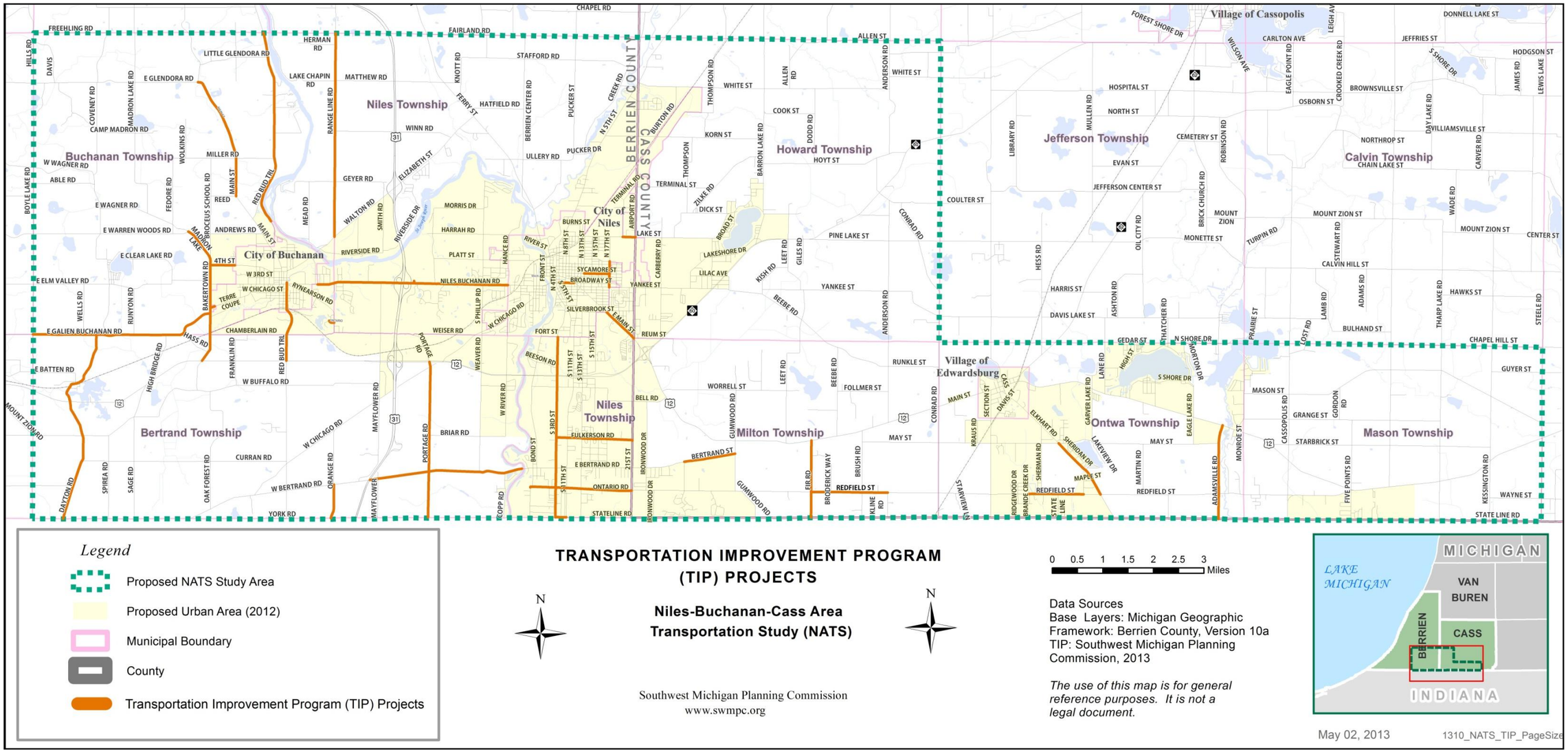
Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Project Cost
2016	CASS	Cass County	Adamsville Road	May Street to US 12	0.4	Restore & Rehabilitate	Crush and shape	CON		61	STU	0		13	CNTY	74	120696	N	74000
2016	Berrien	Niles Dial-A-Ride	Operating Assistance	Niles area		Transit operations	Public transit operations			$ 85,000	5307	$174,000	CTF	$167,350	TRAL	426350		$426,350	426350
2016	Berrien	Niles Dial-A-Ride	Preventive Maintenance	Niles area		Transit maintenance	Preventive maintenance			$101,000	5307	$ 16,413	CTF	$ 8,837	TRAL	126250		$126,250	126250
2016	Berrien	Niles Dial-A-Ride	Software Upgrades	Niles area		Transit operations equipment	Purchase scheduling software			$ 2,000	5307	$ 325	CTF	$ 175	TRAL	2500		$ 2,500	2500
2016	Berrien	Niles Dial-A-Ride	Parking Lot	Niles area		Transit facility	Fill crakes, reseal, and restripe			$ 7,200	5307	$ 1,170	CTF	$ 630	TRAL	9000		$ 9,000	9000
2016	BERRIEN	Berrien Bus	Rural Operating Funds	Rural portion of NATS MPO		Transit operations	Public transit operations			$ 23,746	5311	$ 23,746	M			47492			$ 47,492
2017	BERRIEN	Berrien County	Dayton, Orange, Third,	Dayton from US 12 to State	5.9	Resurface	Hot mix patching and seal	CON		77	STU	0		17	CNTY	94	120683	N	94000
2017	BERRIEN	Niles	Sycamore St	13th to 17th	0.5	Resurface	resurface	CON		101	STU	0		22	CITY	123	120692	N	123000
2017	CASS	Cass County	Redfield St	Brande Creek to Oak	1.1	Restore & Rehabilitate	Mill and structural overlay	CON		307	STU	0		68	CNTY	375	120691	N	375000
2017	Berrien	Niles Dial-A-Ride	Operating Assistance	Niles area		Transit operations	Public transit operations			$ 85,000	5307	$174,000	CTF	$167,350	TRAL	426350		$426,350	426350
2017	Berrien	Niles Dial-A-Ride	Preventive Maintenance	Niles area		Transit maintenance	Preventive maintenance			$101,000	5307	$ 16,413	CTF	$ 8,837	TRAL	126250		$126,250	126250
2017	Berrien	Niles Dial-A-Ride	Replacement Bus	Niles area		Transit vehicle additions/r	Replace one cutaway			$ 56,000	5307	$ 9,100	CTF	$ 4,900	TRAL	70000		$ 70,000	70000
2017	BERRIEN	Berrien Bus	Rural Operating Funds	Rural portion of NATS MPO		Transit operations	Public transit operations			$ 23,746	5311	$ 23,746	M			47492		47492	$ 47,492
2014*	CASS	Cass County	Bertrand Rd	Batchelor Rd to Gumwood	1.04	Resurface	Resurface	CON		81	STU			18	CNTY	99320	112106		99
2015	Berrien	City of Niles Dial-A-Ride	Replacement Tires	Niles area		Transit maintenance	Purchase replacement tires			$ 3,840	5307	$ 624	CTF	$ 336	CITY	4800		$ 4,800	4800
2015	Berrien	City of Buchanan	Buchanan Dial-A-Ride	Buchanan area		Transit operations	Three-bus demand-response			$ 25,821	5311	$ 79,979	CTF	$101,998	CITY	207798		$207,798	207798

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Project Cost
2015	Berrien	MDOT	US-31 NB	at Niles Buchanan Road,	0	Roadside facility	Expand existing lot to add	PE		6	ST	1	M			7000	113735	62000	
2016	Berrien	City of Buchanan	Buchanan Dial-A-Ride	Buchanan area		Transit operations	Three-bus demand-response			$ 25,821	5311	$ 79,979	CTF	$101,998	CITY	207798		$207,798	207798
2017	Berrien	City of Buchanan	Buchanan Dial-A-Ride	Buchanan area		Transit operations	Three-bus demand-response			$ 25,821	5311	$ 79,979	CTF	$101,998	CITY	207798		$207,798	207798
2017	Berrien	Berrien County Road	Niles-Buchanan and Red	Niles-Buchanan Road from	4.9	Resurface	hot mix asphalt and seal	CON		77	Surface Transportation	0		17	Local - County (BCRC)			93952	

Table 4 - Illustrative Listing of Projects

FY	County	Responsible Agency	Project Name	Limits	Length	Primary Work Typ	Project Description Summary	Phase	Advance Construct	Federal Amount	Federal Fund Source	State Amount	Local Amount	Local Fund Source	Total Project Cost
2017	Cass	CCRC	Mason Street	Calvin Center Road to Porter Township Line	3.8	Restore & rehabilitate	HMA Overlay, partial Maintenance partial Structural	CON	No	$ 353,290	STP - Urban Areas > 200,000 Population	0	$ 78,340	Other Local Funds (CCRC)	$ 431,630
2015	Berrien	City of Buchanan	River Street	Enterprise drive to the bridge over the St. Joseph River.	0.2	Resurface	HMA base crushing and shaping and resurfacing of River Street a distance of 1,000', including miscellaneous curb and gutter replacement, and sub grade under drains. The roadway through this area is experiencing moderate transverse cracking and minor sub base failures.	CON	No	$ 135,200	Surface Transportation Program (STP) - Any Area	0	$ 33,800	Local - City (City of Buchanan)	$ 208,300
2015	Cass	CCRC	Bertrand Street	Batchelor Road to Gumwood Road	1	Resurface	HMA Overlay with Shoulders and Striping	CON	No	$ 81,293	STP - Urban Areas > 200,000 Population	0	$ 18,027	Other Local Funds (CCRC)	$ 99,320
2017	Cass	CCRC	Redfield Street	Batchelor Road to Gumwood Road	1	Resurface	HMA Overlay with Shoulders and Striping	CON	No	$ 85,975	STP - Urban Areas > 200,000 Population	0	$ 19,065	Other Local Funds (CCRC)	$ 105,040

Map 2 - FY 2014-2017 TIP Projects



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LRTP DRAFT

Notices indicating a public comment period for the LRTP draft were sent via e-mail and postal mail (see Appendix F for copy of notices) to local media, local governments, schools, human service organizations, and some members of the general public, all from the SWMPC contacts database. The formal comment period began May 29, 2013-June 8, 2013. The notice to the public contained detailed dates, times, and locations of the meetings at which public comment on the LRTP draft would be accepted, and described how to comment on the LRTP draft if meeting attendance was not an option.

GOALS AND OBJECTIVES

The goals and objectives of the NATS LRTP are to guide the development of the 2040 LRTP, the NATS Transportation Improvement Program (TIP), and the overall transportation planning processes in the planning area. A brief explanation of these terms is provided below:

- Goals-Generalized statements which broadly relate the physical environment to values
- Objectives-Specific, measurable statements related to the attainment of goals

MAP-21

Under MAP-21, Congress has begun to outline a more performance based transportation system that will make State DOTs, MPOs, and local road agencies more accountable for the development and maintenance of the federally funded transportation system. What this means for the NATS MPO local agencies, is that any federal funds used on roadways, bridges, transit systems, in the NATS MPO will need to develop MPO performance targets in relation to the national performance measures set by US DOT. The following timeline has been developed and is important to outline to the reader to understand that as agencies set forth their measures, the NATS MPO will need to amend their planning documents to conform to the new regulations.

- US DOT - will have **18 months** after the start of the MAP-21 in October 2012 to develop national performance measures.
- State Performance Target - Within **one year** of the US DOT final rule on performance measures, States will set performance targets in support of those measures. States may set different performance targets for urbanized and rural areas. To ensure consistency each State must, to the maximum extent practicable
    - Coordinate with an MPO when setting performance targets for the area represented by that MPO; and
    - Coordinate with public transportation providers when setting performance targets in an urbanized area not represented by an MPO.
- MPO Performance Targets - Within **180 days** of States or providers of public transportation setting performance targets, MPOs are to set performance targets in relation to the performance measures. To ensure consistency, each MPO must, to the maximum extent practicable, coordinate with the relevant State and public transportation providers when setting performance targets. The targets are required in the Long Range Transportation Plan according to §1201; 23 USC 134(i)(2)(B)]. Performance Measures will be addressed in the next sections of this plan.

As of the completion of this plan, US DOT had not released national performance measures but has released the MAP-21 Planning Factors and National Performance Goals which must be incorporated into the development of the plan and most notably in the Goals and Objectives.

NATS REGIONAL VISION

By 2040, the NATS regional transportation system will make progress to provide for a safer and more efficient movement of people and goods to support a robust and growing local and regional economy. The transportation system will offer a variety of mode choices to all people for intra- and inter-regional travel. Consideration of the impact of these modes on the natural and built environment must be well-balanced with the provision of an acceptable level of mobility and accessibility. A multimodal system conserves natural resources and helps promote the integrity of neighborhoods and the entire region.

The NATS transportation network of roads, bridges, transit systems, rail lines, and trails, are the visible components of the work that transportation planning encompasses. The other areas that are more difficult to see are coordinating land use planning, economic development, environmental planning, safety, and congestion reduction. The goals and objectives seek to combine the visible and less visible components of transportation planning into a fully functioning system. Accordingly, NATS seeks to provide the transportation infrastructure and modes necessary to produce the highest quality of life and opportunities for its residents. This section will focus on the MAP-21 Planning Factors, National Performance Goals, and how the NATS Goals and Objectives align with these factors.

The goals and objectives that follow were developed using the following process:

- An initial review of the goals and objectives contained in the 2035 LRTP by MPO staff
- Conducting two public input sessions with members of the public held on October 12, 2011 and October 19, 2011
- Continuous discussions at MPO Committee meetings held in 2012 and 2013
- Review of federal regulations and state transportation documents
- NATS Policy Committee approval in January 2013
- Public Comment sought on Goals and Objectives in February 2013

It is important to note that the NATS goals and objectives are not in priority order.

GOAL 1 – Enhance Economic Vitality of Southwest Michigan

Objective: Improve competitiveness of the regional economy by expanding efficient and improved multi-modal facilities, modes, and linkages, promoting reliable and timely access to employment and service centers for workers, and preserving and strengthening the existing economic base.

GOAL 2 – Produce a Regional Transportation System that Connects People Safety with Their Destinations

Objective: Provide a system that contributes to access to a variety of destinations such as: cultural attractions, recreational facilities, open spaces, employment, and housing to fulfill needs for a healthful, satisfying living environment.

MDOT working to rebuild trunkline roadways.

GOAL 3 – Provide an Environment that Promotes Livable Communities and Environmental Responsibility

Objective: Produce a transportation system that contributes to an attractive, convenient living that minimizes air and water quality impacts.

GOAL 4 – Maintain Existing Transportation Assets

Objective: Maximize the quality of transportation system through sound long-term maintenance strategies, operational improvements, and technology.

GOAL 5 – Produce a Safe Transportation System

Objective: Support projects that reduce crashes for motorized and non-motorized users and produce a transportation system where people have safe transportation choices.

GOAL 6 – Ensure the Equitability and Accessibility of the System

*Objective***:** Promote greater accessibility to transportation for individuals of all backgrounds and all abilities.

To ensure that the MPO is aligning itself with the federal focus areas on transportation, the MPO staff completed Table 5 to highlight the integration of the federal focus areas in the MPO study area.

Table 5 - Aligning NATS MPO Goals with MAP-21 Planning Factors

MAP-21 Planning Factors	NATS Goals
Support the economic vitality of the metropolitan area, especially by enabling global competiveness, productivity, and efficiency.	1, 2, 6
Increase the safety of the transportation system for motorized and non-motorized users.	5
Increase the security of the transportation system for motorized and non-motorized users	5, 6
Increase the accessibility and mobility of people and for freight.	2, 6
Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.	1, 2, 6
Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	1, 2, 5
Promote efficient system management and operation.	1, 2, 4
Emphasize the preservation of the existing transportation system.	4

PERFORMANCE MEASURES

A key feature of MAP-21 is the establishment of a performance and outcome based transportation program. This is a significant change from the previous transportation legislation (SAFETEA-LU). The objective of this performance and outcome-based program is for states and MPOs to invest resources in projects that collectively will make progress toward the achievement of national goals. The SWMPC began preliminary discussions with the committee members regarding this topic once MAP-21 legislation was passed. SWMPC found it prudent to take a step back from the process and develop a listing of those areas in which further investigation and data collection would be beneficial to the member agencies. SWMPC staff will wait for federal regulations to be released and then proceed with formal selection and review of performance measures for the region based on those regulations. The following section will provide information on the focus of measures in MAP-21 legislation and then a review of factors that the MPO may want to further investigate after release of US DOT national measures and state targets.

NATIONAL PERFORMANCE MEASURES

MAP-21 requires the U.S. Secretary of Transportation, in consultation with states, MPOs, and other stakeholders, to establish national performance measures. MAP-21 establishes national performance goals for the Federal-aid highway program in seven areas:

Table 6 - National Performance Goals

Goal Area	National Goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair
Congestion reduction	To achieve a significant reduction in congestion on the National Highway System
System reliability	To improve the efficiency of the surface transportation system
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

The U.S. Department of Transportation (DOT) is to establish such measures within **18 months of** enactment of MAP-21. The timeline for completion would be March 2014.

The MPO is currently coordinating with the local agencies in order to prepare for the implementation of the national performance goals listed above in Table 6.

1. **Safety –** The MPO is currently working with the local road and transit agencies to identify problematic areas in the region to better understand how the MPO could improve safety for motorists and non-motorized transportation users.

2. **Infrastructure condition** – The MPO is working with local road agencies on the identification of PASER ratings that help to identify when preventative maintenance work should be done.

3. **Congestion reduction** – As there are little to no areas of congestion in the study area, those areas that have been identified in this plan will be discussed further in the implementation of the plan through a subcommittee.

4. **System reliability –** As the MPO areas continues to recover from the 2008 recession, the MPO will monitor areas with development pressure and will be proactive in discussions with local road and transit agencies on how to ensure that the movement of people can continue efficiently.

5. **Freight movement and economic vitality** – The MPO continues to monitor and gain information regarding the movement of freight commodities within the region.

6. **Environmental sustainability** – the MPO is continuously working with local watershed and environmental groups to reduce the potential impacts to species and environmentally sensitive areas identified in the Environmental Mitigation section of this plan.

7. **Reduced project delivery delays** – MPO staff continue to work with MDOT and other agencies to ensure that projects move forward following regulatory changes at the state and federal levels that would slow down project delivery.

STATE PERFORMANCE TARGETS

Within one year of the US DOT final rule on performance measures, states will set performance targets in support of those measures. States may set different performance targets for urbanized and rural areas. The timeline for completion would be March 2015. To ensure consistency each state must, to the maximum extent practicable:

- Coordinate with an MPO when setting performance targets for the area represented by that MPO;
- Coordinate with public transportation providers when setting performance targets in an urbanized area not represented by an MPO.

MPO PERFORMANCE TARGETS

Within 180 days of states or providers of public transportation setting performance targets, MPOs are to set performance targets in relation to the performance measures. The target for this to be complete would be September 2015. To ensure consistency, each MPO must, to the maximum extent practicable, coordinate with the relevant state and public transportation providers when setting performance targets. The targets are required in the Long Range Transportation Plan according to §1201; 23 USC 134(i)(2)(B).

- Reporting on progress-Requires states to report on the condition and performance of the NHS; the effectiveness of the investment strategy document in the state asset management plan for the NHS; progress toward achieving performance targets; and the ways in which the state is addressing congestion at freight bottlenecks. [§1203; 23 USC 150(e)]. States and MPOs will report to DOT on progress in achieving targets.

- Performance Measures- the use of evidence (data) to determine progress toward specific defined objectives.

As the SWMPC and NATS Committee members watch the development of these actions, we will incorporate changes into the long range plan to meet the newly developed federal and state measures. It should be noted that the current MAP-21 legislation expires on September 30, 2014, well before these requirements can be fulfilled.

FACTORS FOR FURTHER INVESTIGATION

As SWMPC staff began to navigate through the concepts of performance measures, it became clear that SWMPC and the Committee members wanted to identify issues of importance for the MPO to investigate. SWMPC along with NATS Committee members decided to only focus on the factors that the MPO can impact directly through the MPO committee structure. It is the hope that the review of the factors that the MPO can directly impact will help in determining baseline conditions then measurement can begin once it is clear what the MPO will be tasked with measuring. As federal regulations from the FHWA and FTA are released, the SWMPC will update this section of the LRP to reflect the changes that have been implemented.

Each factor listed below highlights information regarding: Why the issue is important; How SWMPC plans to measure the factor/gather information; and how the MPO process can impact this (if at all).

NATS MPO FACTORS

1. **Review the number of signals that could be optimized throughout the study area**
    - **a.** Optimized signals reduce travel time, allowing people to get to their destinations more efficiently and have the potential for assisting in economic activity. In addition, there are air quality benefits that arise when cars do not have to start and stop constantly.
    - **b.** SWMPC will use average daily traffic information to see the highest traveled roadways and look to use the Transportation Improvement Programs to see when signal projects had been done.
    - **c.** The MPO has direct review authority on the development of signal projects, as local STP and CMAQ funds can be used for these types of projects.

2. **Preserve agricultural and commercial economies by ensuring that transportation projects enhance and do not prevent the long term movement of products to local and regional markets.**
    - **a.** The agricultural market is integral to the local economic health of the region and the tourism industry.
    - **b.** SWMPC will gather information on the total amount of agricultural products being produced in the NATS region and how they are transported to local and regional markets. SWMPC will work with farm cooperatives, MSU Extension, and others to acquire this information.
    - **c.** The MPO has direct review authority on federal aid roadways where long distance travel would happen for the distribution of agricultural products.

3. **Review and inventory infrastructure connections (such as sidewalks, bus stops, bicycle lanes, paved shoulders) to key destinations identified by community members and local officials.**
    - a. Providing non-automobile access to destinations throughout the region is important due to the aging demographics of Michigan and specifically the study area.
    - b. SWMPC will inventory key destination areas, as identified by transit ridership logs, community outreach efforts, and discussions with local government agencies.
    - **c.** The MPO has review authority on the allocation of federal highway and federal transit funds. When projects are proposed, SWMPC transportation staff can provide data and other supplemental information to the committee members before a project is approved. A greater emphasis can be placed on creating connections within the transportation network.

4. **Identify and inventory the NATS environmental justice populations that can access fixed route transit within a ¼ miles walking radius.**
    - a. Providing non-automobile access to destinations throughout the region is important due to the aging demographics of Michigan and specifically the study area.
    - b. SWMPC will inventory key destination areas as identified by transit ridership logs, community outreach efforts, and discussions with local government agencies within the environmental justice populations.
    - **c.** The MPO has review authority on the allocation of federal highway and federal transit funds. When projects are proposed, SWMPC transportation staff can provide data and

other supplemental information to the Committee members before a project is approved. A greater emphasis can be placed on creating connections within the transportation network.

5. **Identify roadways in the region that receive traffic volumes under design capacity and conduct studies on roadway redesigns.**
    a. As the population and average daily traffic count of roadways have decreased, the excessive capacity of roadways has not changed. Redesigning the roadways with pedestrians in mind will help to ensure that the transportation system meets the needs of all users. This policy would be in line with the State of Michigan's Complete Streets Policy.
    b. Identify roadways that have excessive capacity, in number of lanes or lane width that could be restriped to provide a complete street. Use volume/capacity ratios to determine roadways that have excess capacity.
    c. The MPO has review authority on the allocation of federal highway funds. When projects are proposed, SWMPC transportation staff can provide data and other supplemental information to the Committee members before a project is approved. A greater emphasis can be placed on creating connections within the transportation network.

6. **Reduce passenger vehicle miles traveled by providing alternative modes of transportation.**
    a. Allowing people to travel by different means such as by walking, biking, rail or using transit has been identified as a priority by the public and the NATS Committee members to ensure an interconnected transportation system.
    b. SWMPC staff will develop an inventory of the total miles traveled by modes of transportation (rail, transit, biking, walking, and passenger cars) in the region. Sources used will include, but are not limited to, commuting data from MDOT, Census Transportation Planning Package (CTPP), Rideshare, schools, the review of train travel data along the Blue Water and Wolverine lines.
    c. The MPO has review authority on the allocation of federal highway funds. When projects are proposed SWMPC transportation staff can provide data and other supplemental information to the Committee members before a project is approved. A greater emphasis can be placed on creating connections within the transportation network.

7. **Identify and inventory bicycle and pedestrian crash hot spots.**

    a. Making our entire transportation system safe for all users can help people more easily reach their daily activities safely, whether they are able to use an automobile or not.
    b. SWMPC will inventory crash statistics from the asset management database, MI state policy crash reports, MDOT, those identified by community outreach efforts, and discussions with local government agencies.
    c. The MPO has review authority on the allocation of federal highway funds. When projects are proposed, SWMPC transportation staff can provide data and other supplemental information to the Committee members before a project is approved. SWMPC staff could

encourage greater participation in the preliminary engineering and design of projects near the identified hot spots.

8. **Identify and inventory the number of traffic crash injuries/fatalities.**

    a. Making our entire transportation system safe for all users can help people more easily reach their daily activities, whether they are able to use an automobile or not. According to the National Highway Traffic Safety Administration (NHTSA)'s National Center for Statistics and Analysis, rural fatal crashes accounted for 57 percent of all traffic fatalities.
    b. SWMPC will inventory crash statistics from the asset management database, MI state policy crash reports, MDOT, those identified by community outreach efforts, and discussions with local government agencies.
    c. The MPO has review authority on the allocation of federal highway funds. When projects are proposed, SWMPC transportation staff can provide data and other supplemental information to the Committee members before a project is approved. SWMPC staff could encourage greater participation in the preliminary engineering and design of projects near the identified hot spots.

RESOURCES FOR PERFORMANCE MEASURES

SWMPC will continue to participate in learning opportunities and discussions as more information regarding performance measures becomes available. There are several resources that committee members and SWMPC staff can utilize to gain more knowledge. What follows is a brief listing of some of those resources.

- Federal Highway Administration (FHWA) http://www.fhwa.dot.gov/MAP21/
- Federal Transit Administration (FTA) http://www.fta.dot.gov/map21/
- National Association of Regional Councils (NARC) http://narc.org/issueareas/transportation/
- National Association of Development Organizations (NADO) http://www.nado.org/
- Association of Metropolitan Planning Organizations (AMPO) https://www.ampo.org/

SOCIOECONOMIC DATA

This section discusses long-term trends in population, housing, and employment within the NATS region. It presents relevant data from past and present U.S. Census datasets to provide a snapshot of how the population, housing and employment situation in the NATS area arrived at its current state. The Travel Demand Model and Deficiency Analysis follows this section by projecting these trends and observations from local officials to anticipate future transportation needs.

A LOOK AT THE REGION'S PAST AND PRESENT SOCIOECONOMIC TRENDS

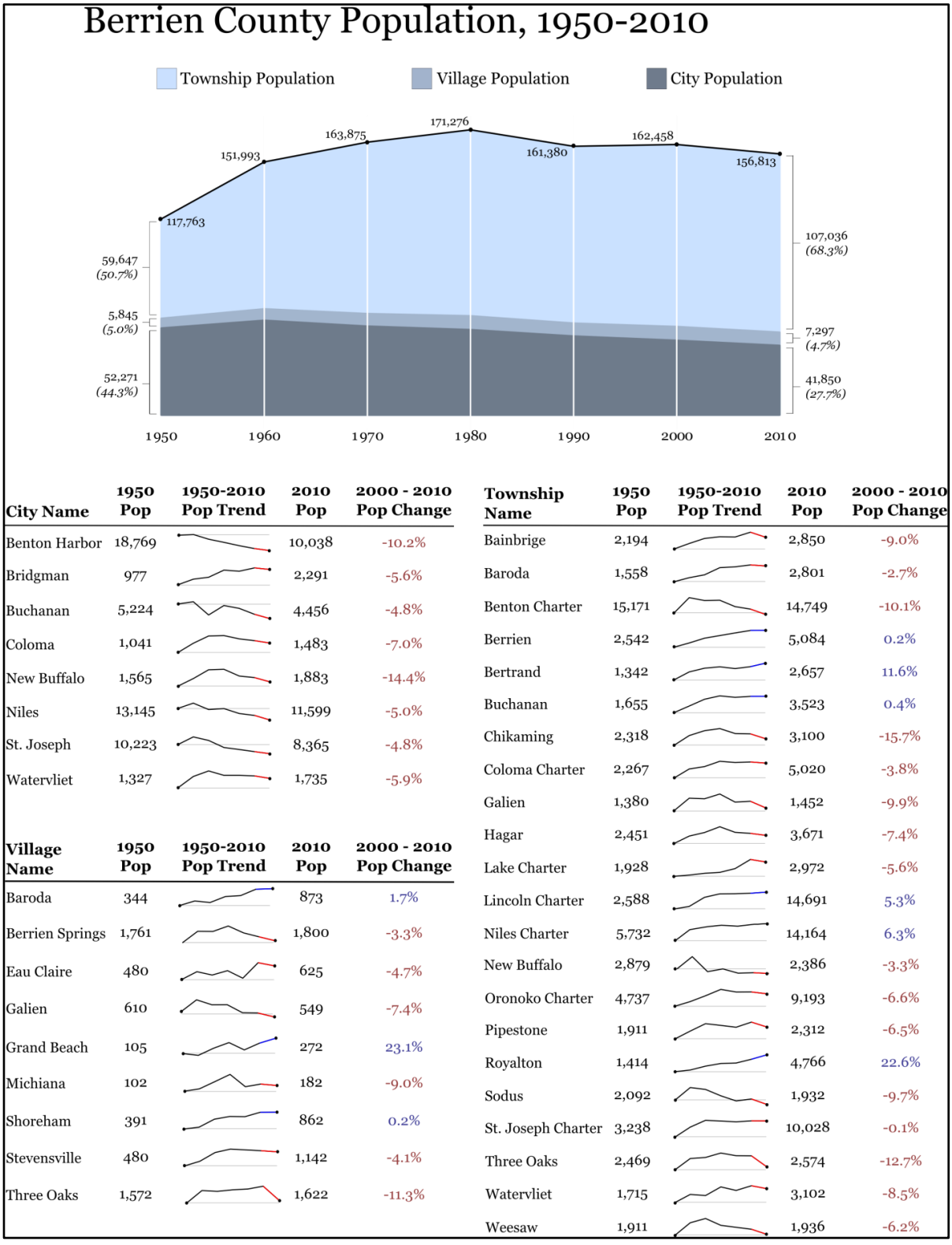
Information from various datasets shown in the graphics throughout this section draws from SWMPC's Data Extract, a regional profile which will be available by the summer of 2013. The Extract uses the County and municipality, rather than the MPO, as its unit of analysis. Still, examining trends in demographics and housing throughout Berrien and Cass Counties and at the municipal level can help explain conditions at the MPO level. The Extract also often compares Berrien and Cass Counties to economically similar counties throughout the United States to examine whether particular trends reflect national patterns.

POPULATION

Census data on total population between 1950 and 2010 show clearly that Berrien County has experienced a net loss in total population since 1980, although there was a slight increase in county population between 1990 and 2000. Figure 1 shows the share of the county population living in townships increased substantially between 1950 and 2010, while the share living in incorporated cities and villages declined. This shift of the population towards the townships has not been uniform however, and some townships even experienced a notable decline in population between 2000 and 2010.

In contrast, Figure 2 of Cass County's population trends show that the County's population continued to increase between 1990 and 2010 adding to the significant growth that occurred between 1950 and 1980. Like Berrien County, the share of Cass County's population living in townships has increased substantially, while the share living in cities and villages has declined. Of particular note to the NATS study area, Mason, Milton, and Ontwa Townships saw significant growth in population between 2000 and 2010.

Figure 1 - Berrien County Population, 1950-2010

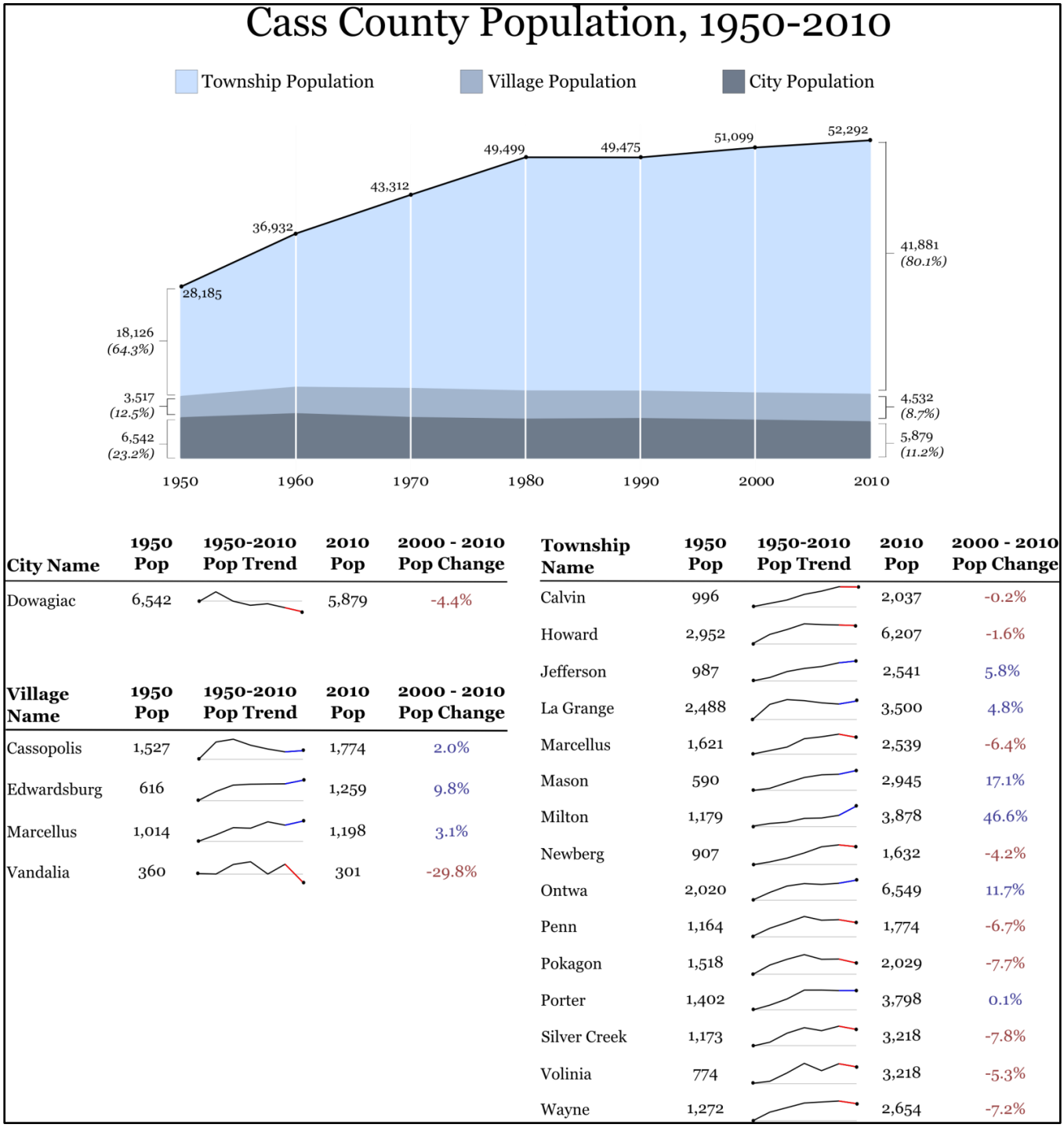


City Name	1950 Pop	1950-2010 Pop Trend	2010 Pop	2000 - 2010 Pop Change
Benton Harbor	18,769		10,038	-10.2%
Bridgman	977		2,291	-5.6%
Buchanan	5,224		4,456	-4.8%
Coloma	1,041		1,483	-7.0%
New Buffalo	1,565		1,883	-14.4%
Niles	13,145		11,599	-5.0%
St. Joseph	10,223		8,365	-4.8%
Watervliet	1,327		1,735	-5.9%

Village Name	1950 Pop	1950-2010 Pop Trend	2010 Pop	2000 - 2010 Pop Change
Baroda	344		873	1.7%
Berrien Springs	1,761		1,800	-3.3%
Eau Claire	480		625	-4.7%
Galien	610		549	-7.4%
Grand Beach	105		272	23.1%
Michiana	102		182	-9.0%
Shoreham	391		862	0.2%
Stevensville	480		1,142	-4.1%
Three Oaks	1,572		1,622	-11.3%

Township Name	1950 Pop	1950-2010 Pop Trend	2010 Pop	2000 - 2010 Pop Change
Bainbrige	2,194		2,850	-9.0%
Baroda	1,558		2,801	-2.7%
Benton Charter	15,171		14,749	-10.1%
Berrien	2,542		5,084	0.2%
Bertrand	1,342		2,657	11.6%
Buchanan	1,655		3,523	0.4%
Chikaming	2,318		3,100	-15.7%
Coloma Charter	2,267		5,020	-3.8%
Galien	1,380		1,452	-9.9%
Hagar	2,451		3,671	-7.4%
Lake Charter	1,928		2,972	-5.6%
Lincoln Charter	2,588		14,691	5.3%
Niles Charter	5,732		14,164	6.3%
New Buffalo	2,879		2,386	-3.3%
Oronoko Charter	4,737		9,193	-6.6%
Pipestone	1,911		2,312	-6.5%
Royalton	1,414		4,766	22.6%
Sodus	2,092		1,932	-9.7%
St. Joseph Charter	3,238		10,028	-0.1%
Three Oaks	2,469		2,574	-12.7%
Watervliet	1,715		3,102	-8.5%
Weesaw	1,911		1,936	-6.2%

Figure 2 - Cass County Population, 1950-2010



City Name	1950 Pop	1950-2010 Pop Trend	2010 Pop	2000 - 2010 Pop Change
Dowagiac	6,542		5,879	-4.4%

Village Name	1950 Pop	1950-2010 Pop Trend	2010 Pop	2000 - 2010 Pop Change
Cassopolis	1,527		1,774	2.0%
Edwardsburg	616		1,259	9.8%
Marcellus	1,014		1,198	3.1%
Vandalia	360		301	-29.8%

Township Name	1950 Pop	1950-2010 Pop Trend	2010 Pop	2000 - 2010 Pop Change
Calvin	996		2,037	-0.2%
Howard	2,952		6,207	-1.6%
Jefferson	987		2,541	5.8%
La Grange	2,488		3,500	4.8%
Marcellus	1,621		2,539	-6.4%
Mason	590		2,945	17.1%
Milton	1,179		3,878	46.6%
Newberg	907		1,632	-4.2%
Ontwa	2,020		6,549	11.7%
Penn	1,164		1,774	-6.7%
Pokagon	1,518		2,029	-7.7%
Porter	1,402		3,798	0.1%
Silver Creek	1,173		3,218	-7.8%
Volinia	774		3,218	-5.3%
Wayne	1,272		2,654	-7.2%

Regardless of whether the population lives in townships, cities, or villages, Berrien and Cass Counties have been experiencing significant demographic changes that will affect desired travel destinations and transportation needs.

In particular, Figures 3 and 4 illustrates the share of the total population that is aged 65 and over is higher in Berrien County and in Cass County than in the nation as a whole and many other economically similar counties.

Figure 3 - Berrien County, Population Age 65 and Over, 2010

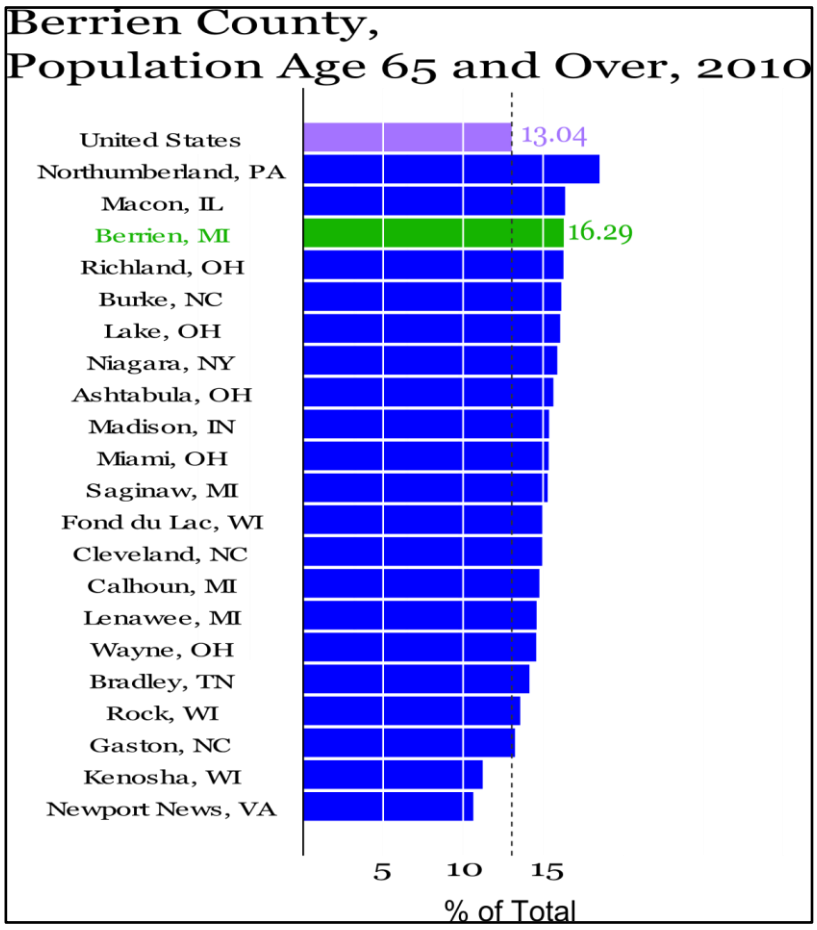
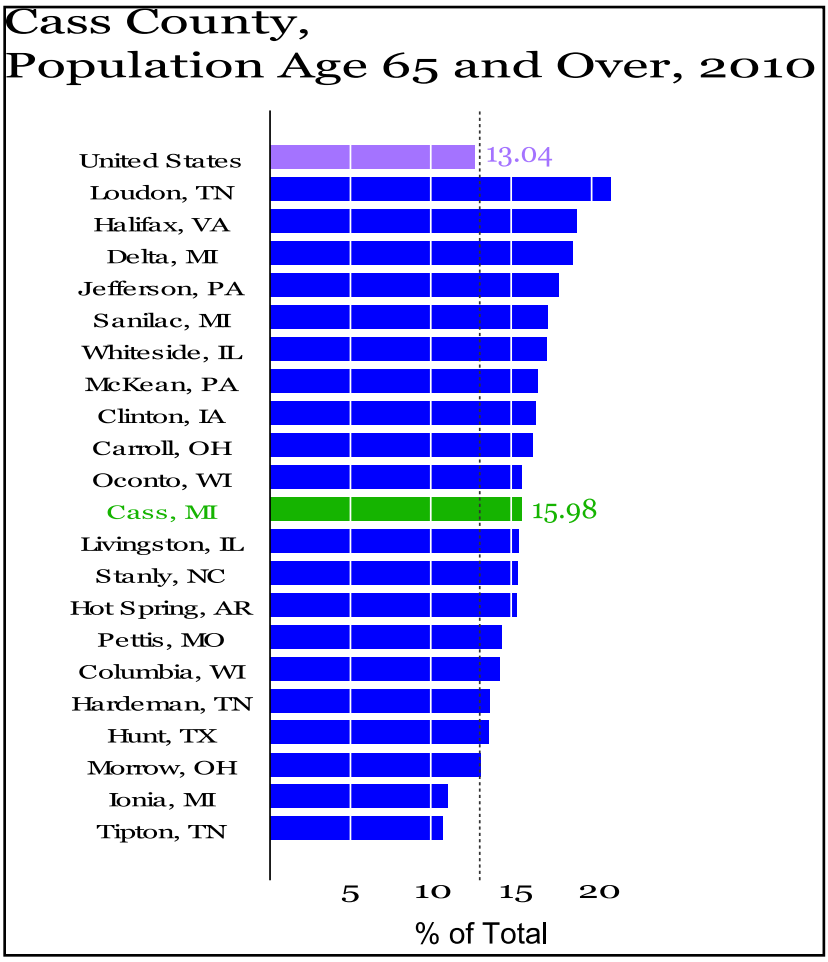


Figure 4 - Cass County, Population Age 65 and Over, 2010



This share of the population aged 65 and over represents an increase from 2000. Indeed, Berrien and Cass County's population in older age groups continues to increase, while its population aged 25-44, often considered the prime demographic group for new employment, declined. Figures 5 and 6, Berrien and Cass County population tree graphics show that the changes in age distribution of the population in Berrien County and Cass County from 2000-2010 both mirror national trends toward an older population.

Figure 5 - Berrien County Population Tree

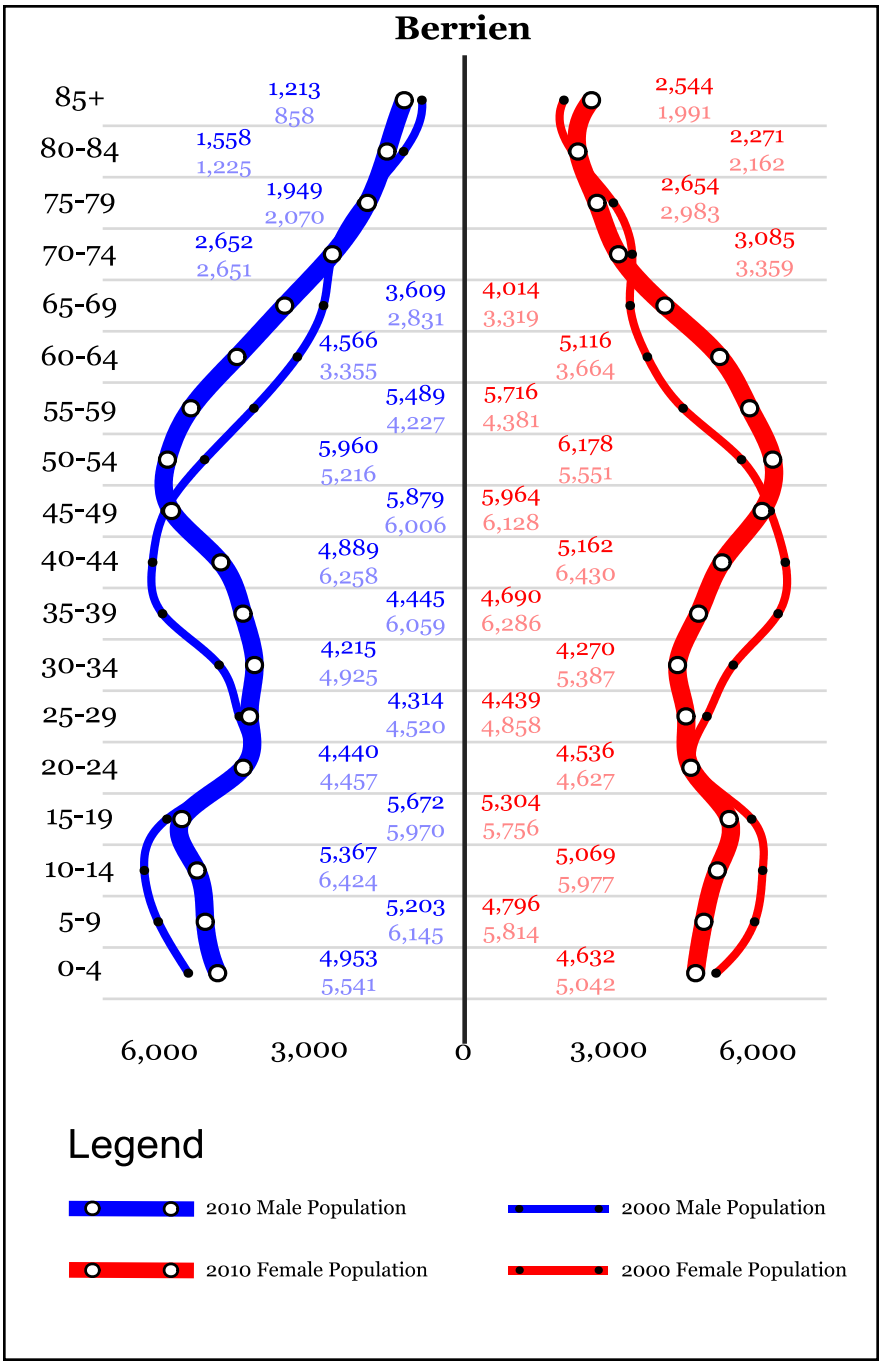


Figure 6 - Cass County Population Tree

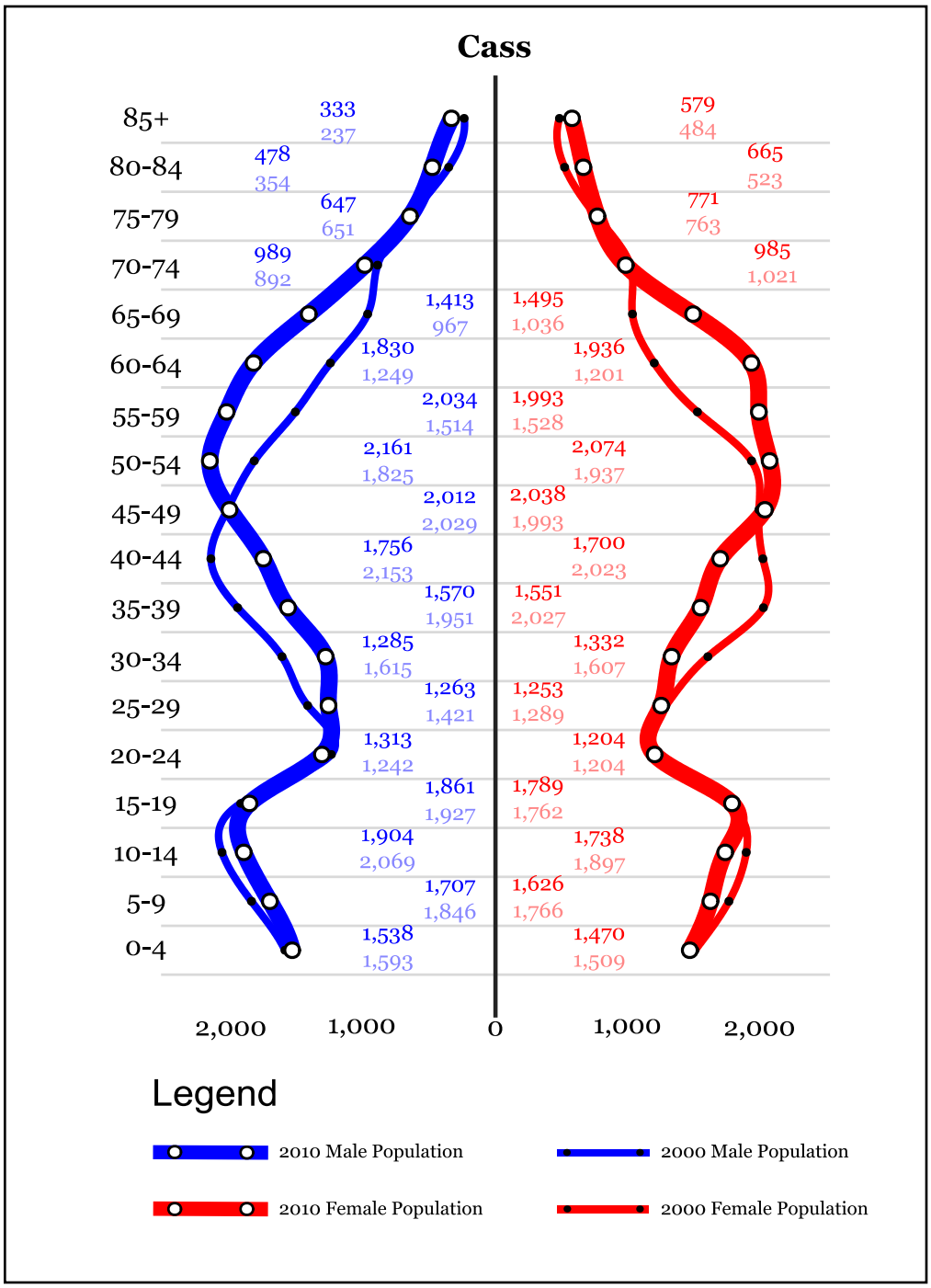
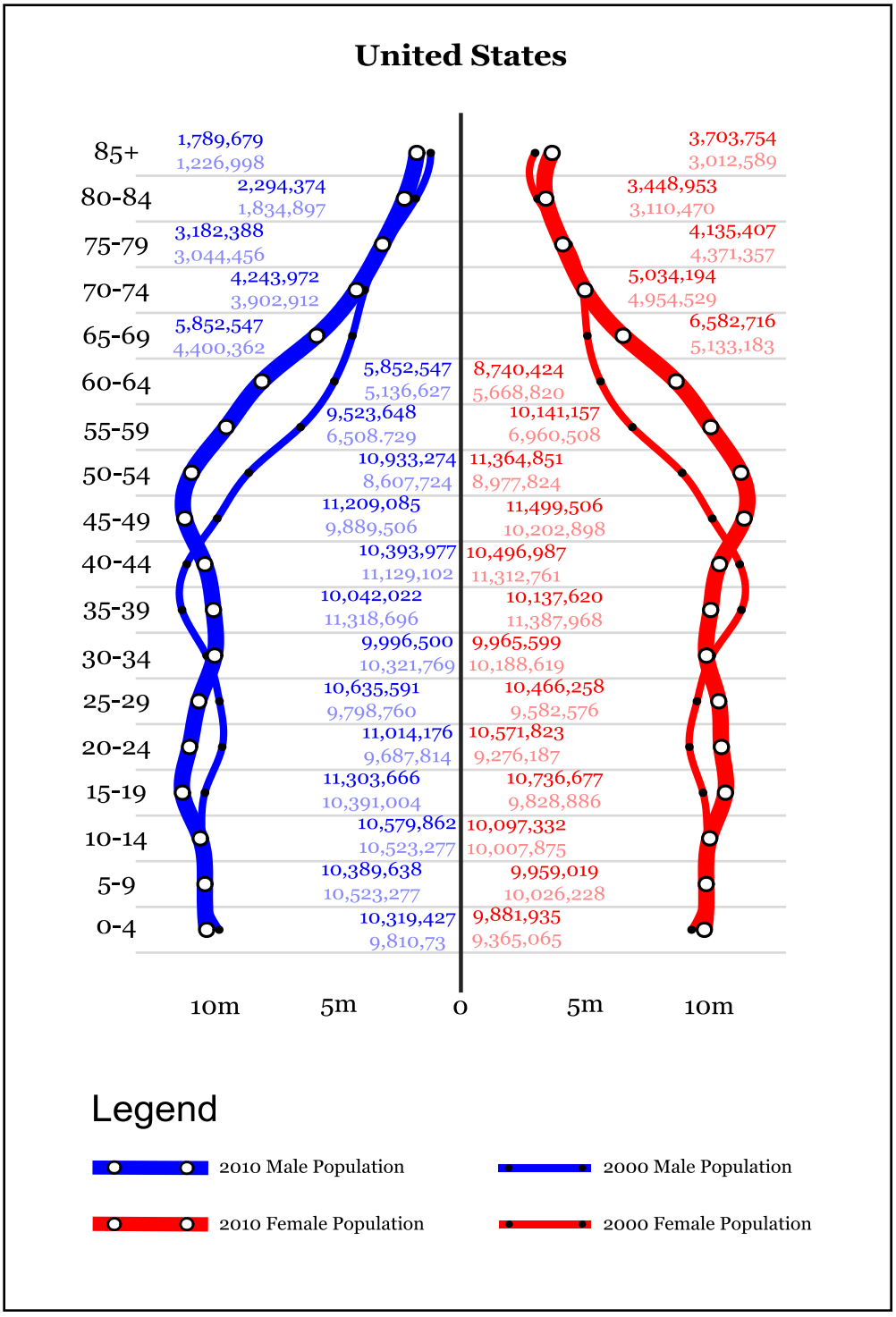
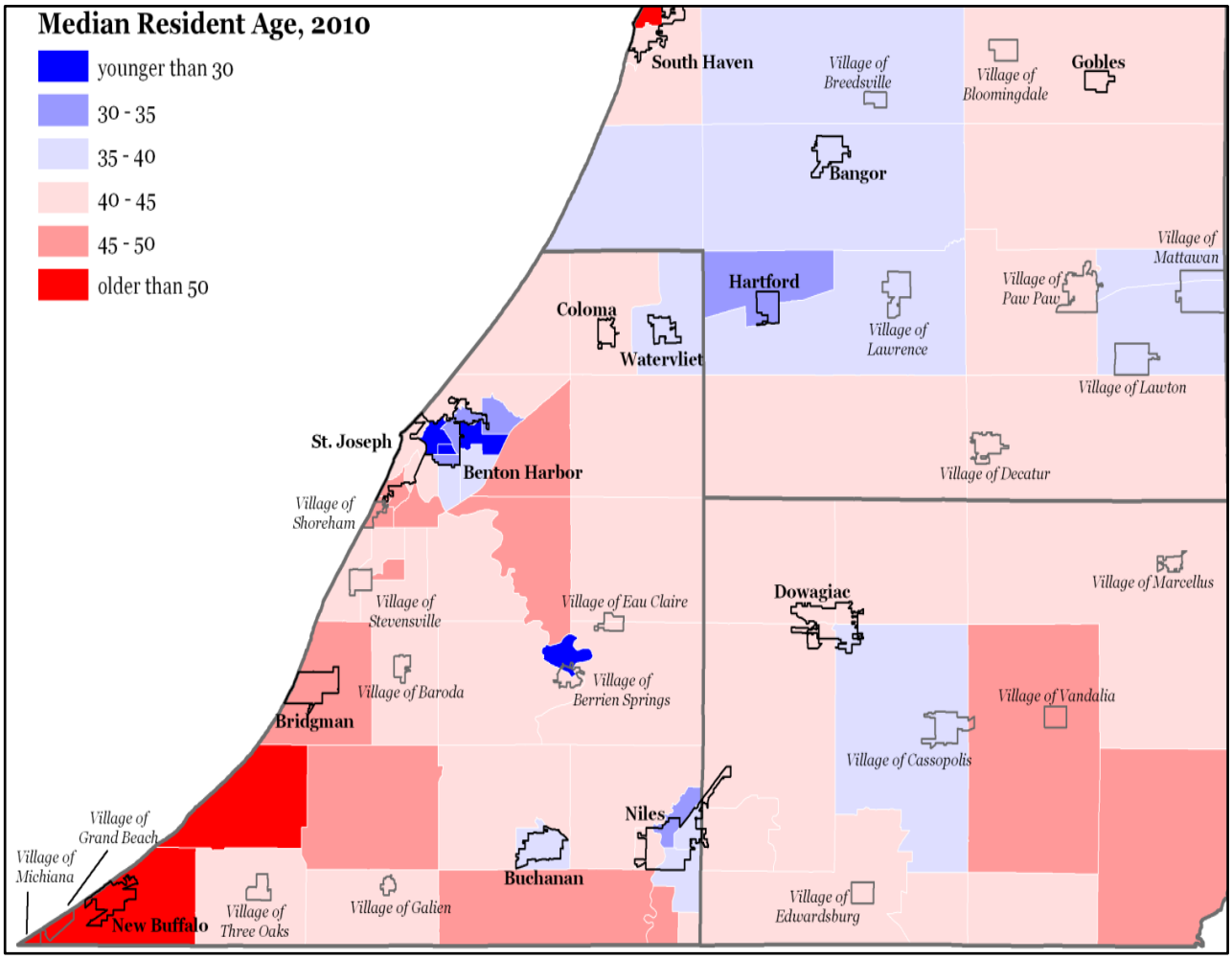


Figure 7 - United States Population Tree



This age distribution is not uniform throughout all the cities, villages, and townships of Berrien and Cass Counties. Map 3 shows the median age in each Census Tract of the SWMPC planning area. Berrien County still has a high level of age diversity among its communities. While municipalities in Cass County tend to have a generally older population, both counties will continue to require a variety of transportation solutions to truly service the entire NATS and southwest Michigan regions.

Map 3 - Median Resident Age, 2010



HOUSEHOLDS AND HOUSING TRENDS

Census data between 1970 and 2010 shows a continuous decline in household size in Berrien County, mirroring national trends towards smaller families and more single-person households. The graphics below shows household size over time in Berrien County and Cass County, along with economically-similar counties, and the United States as a whole.

Households and Housing Trends

Census data between 1970 and 2010 shows a continuous decline in household size in Berrien County, mirroring national trends towards smaller families and more single-person households. The graphics below show household size over time in Berrien County and Cass County, along with economically-similar counties, and the United States as a whole.

Figure 8 - Average Household Size, Berrien and Comparison Counties, 1970-2010

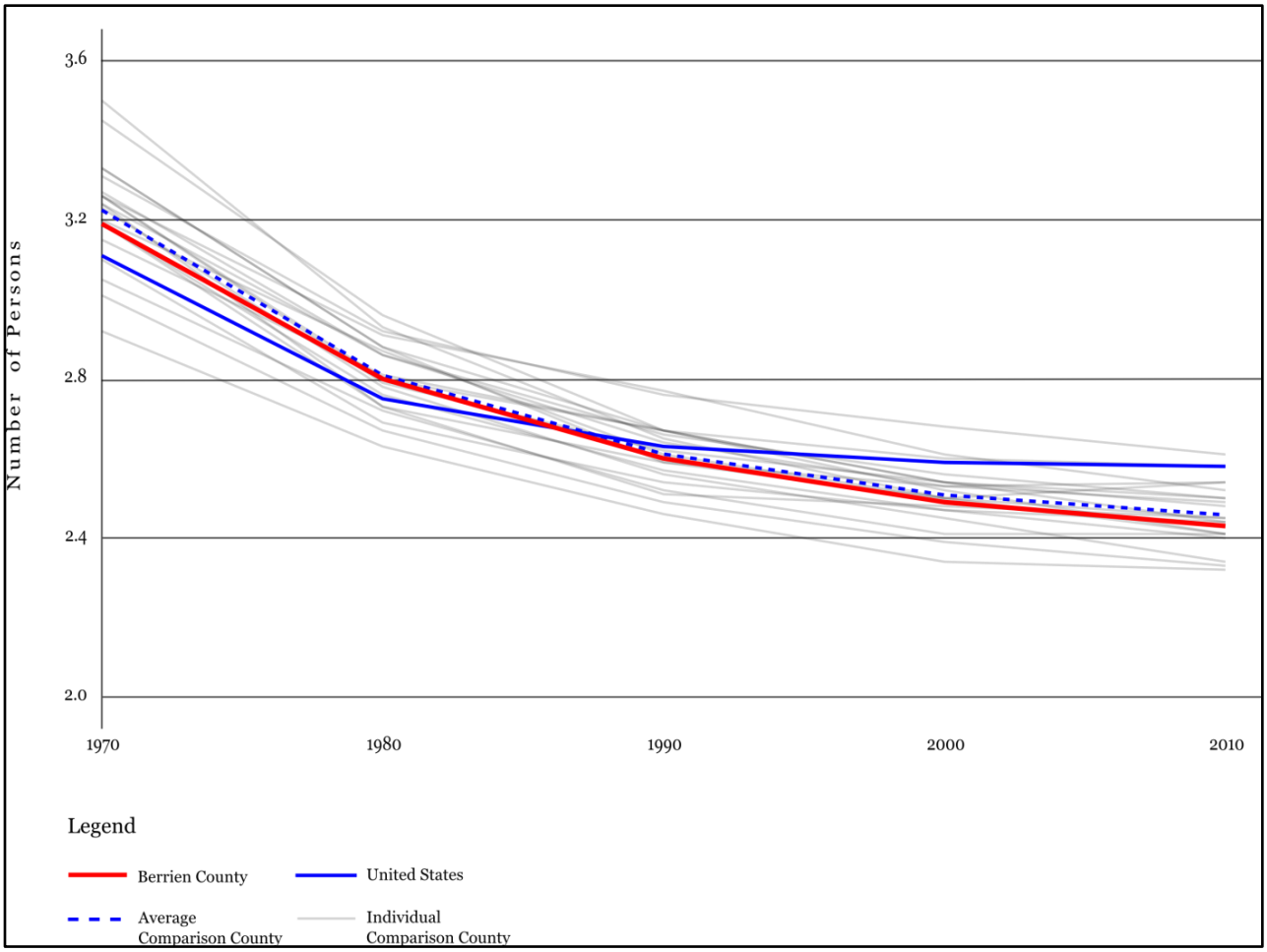
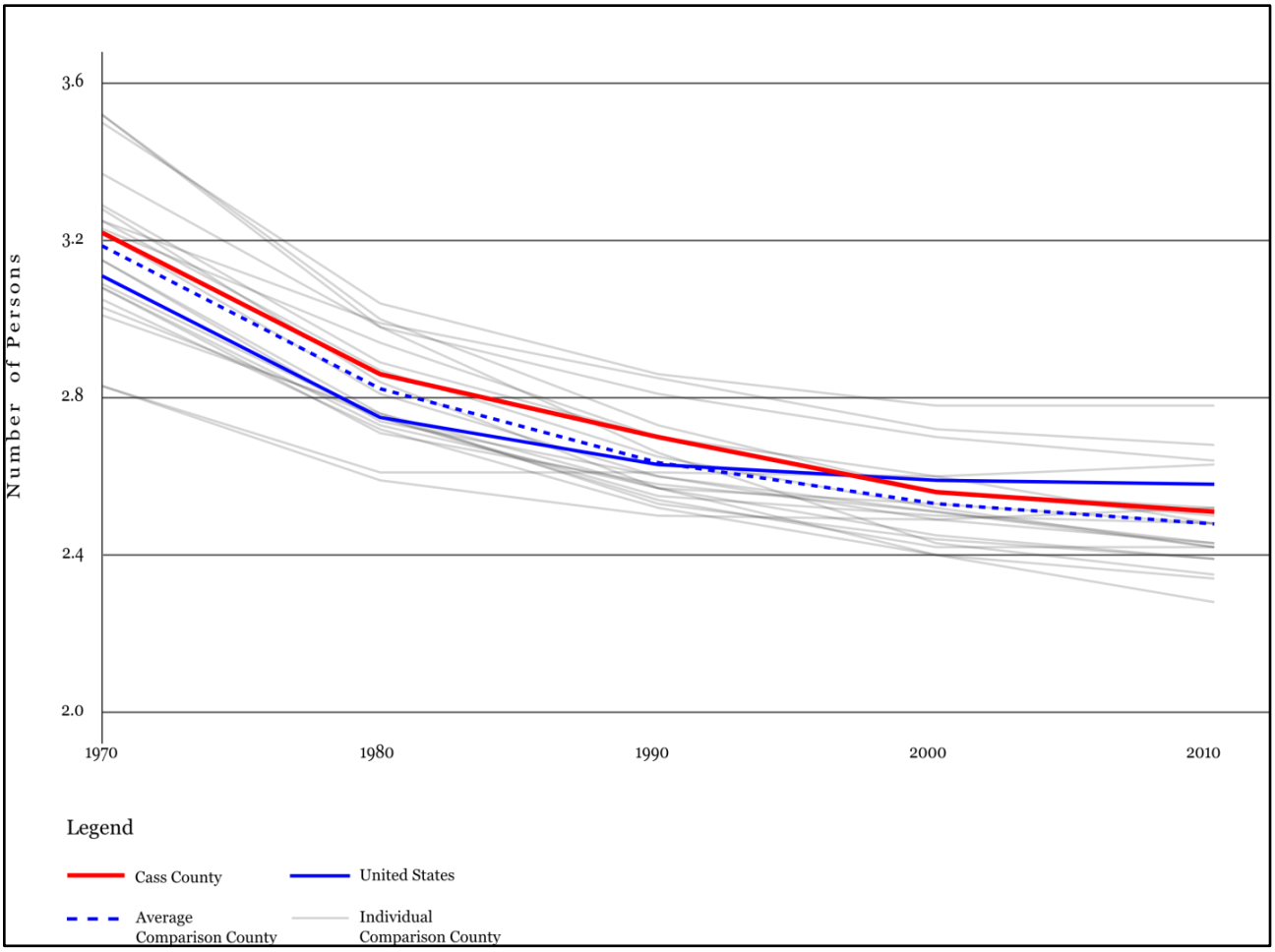
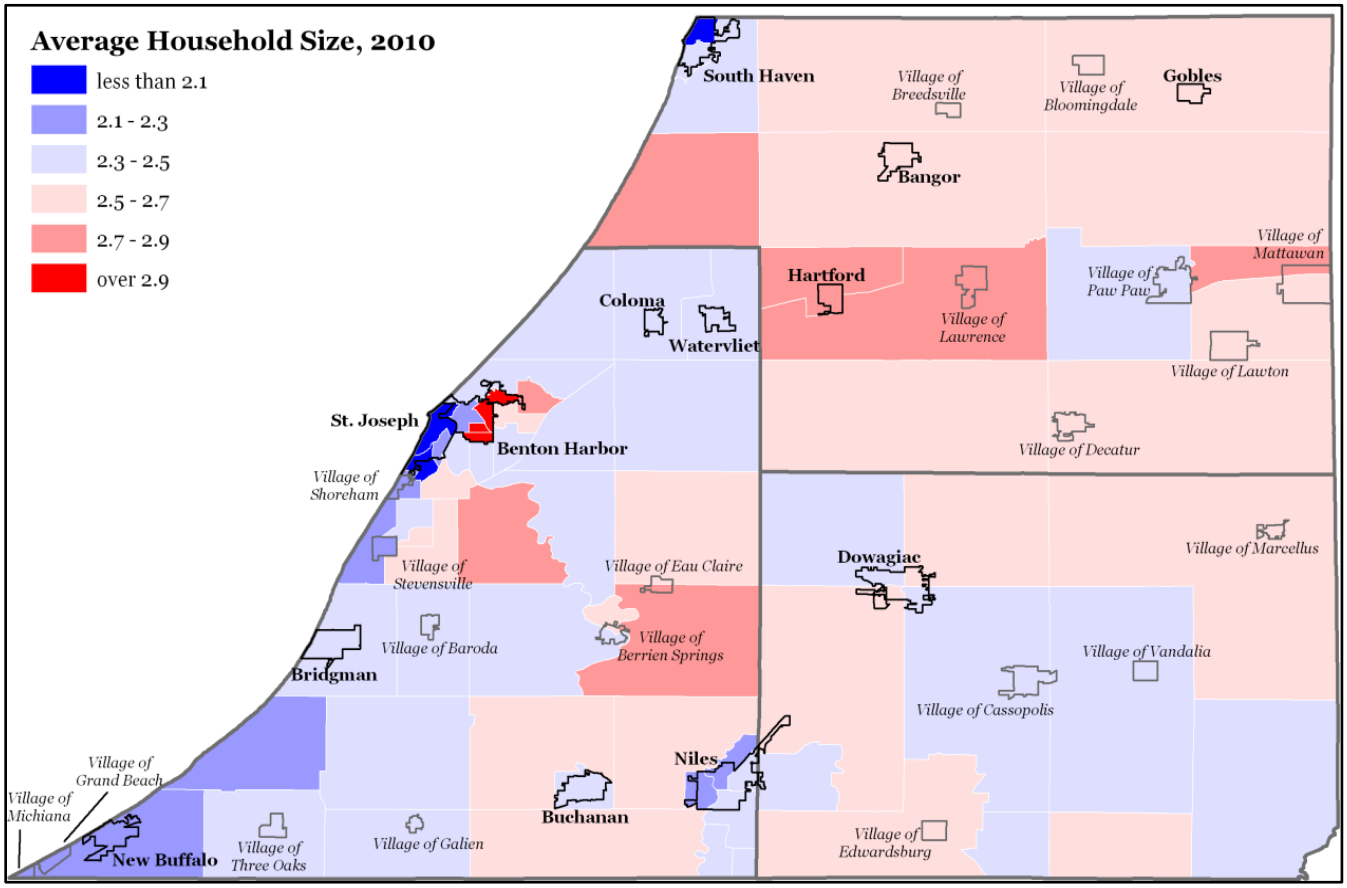


Figure 9 - Average Household Size, Cass and Comparison Counties, 1970-2010



Throughout the NATS area, average household size appeared to be relatively uniform. However, on a broader regional level, household size still varied considerably. Map 4, Average Household Size by Census Tract, shown below, illustrates the variety in household size throughout southwest Michigan, indicating a need to provide a transportation network that supports families and single persons of all ages.

Map 4 - Average Household Size, 2010



Despite shrinking household size, new housing construction between 2000 and 2010 in Berrien and Cass Counties appears to have been predominantly single-family, mirroring the continued national trend. The graphic in Figure 10 below illustrates new housing construction starts between 2000 and 2010, and the share of those starts that were single family for Berrien County and Cass County, as well as economically similar counties, and the United States as a whole.

Figure 10 - Total and Single Family Housing Starts, Berrien County

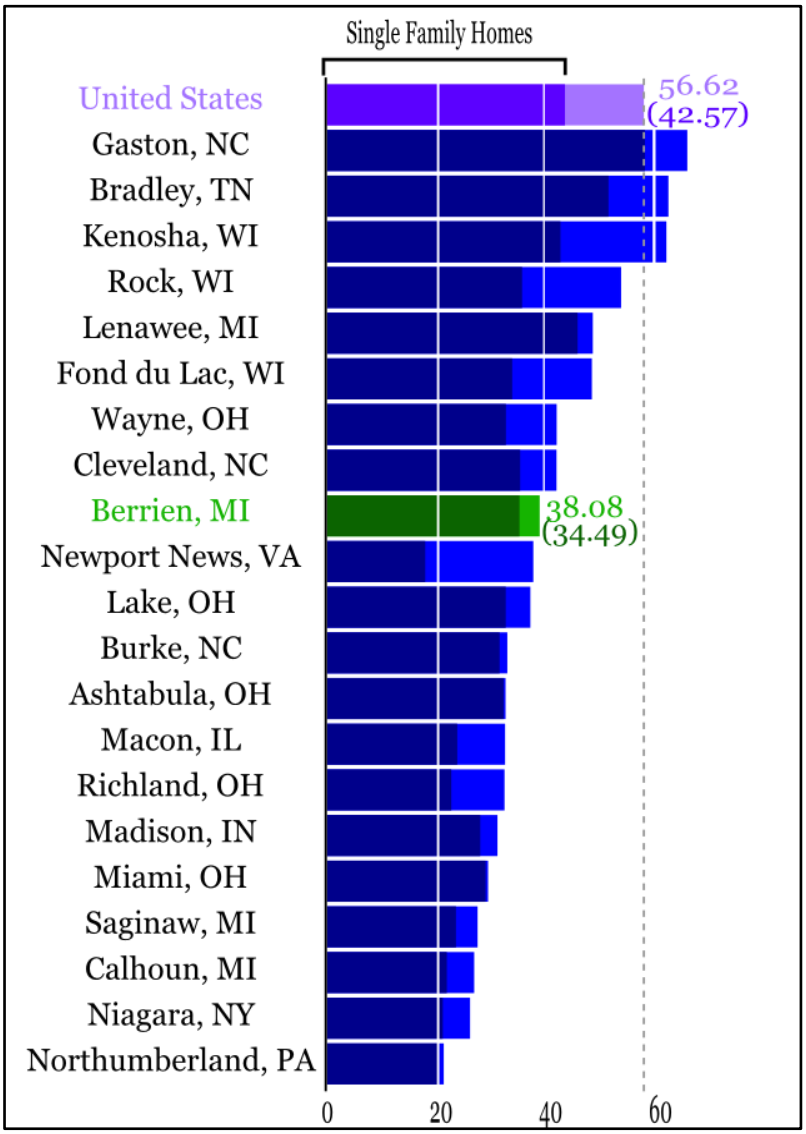
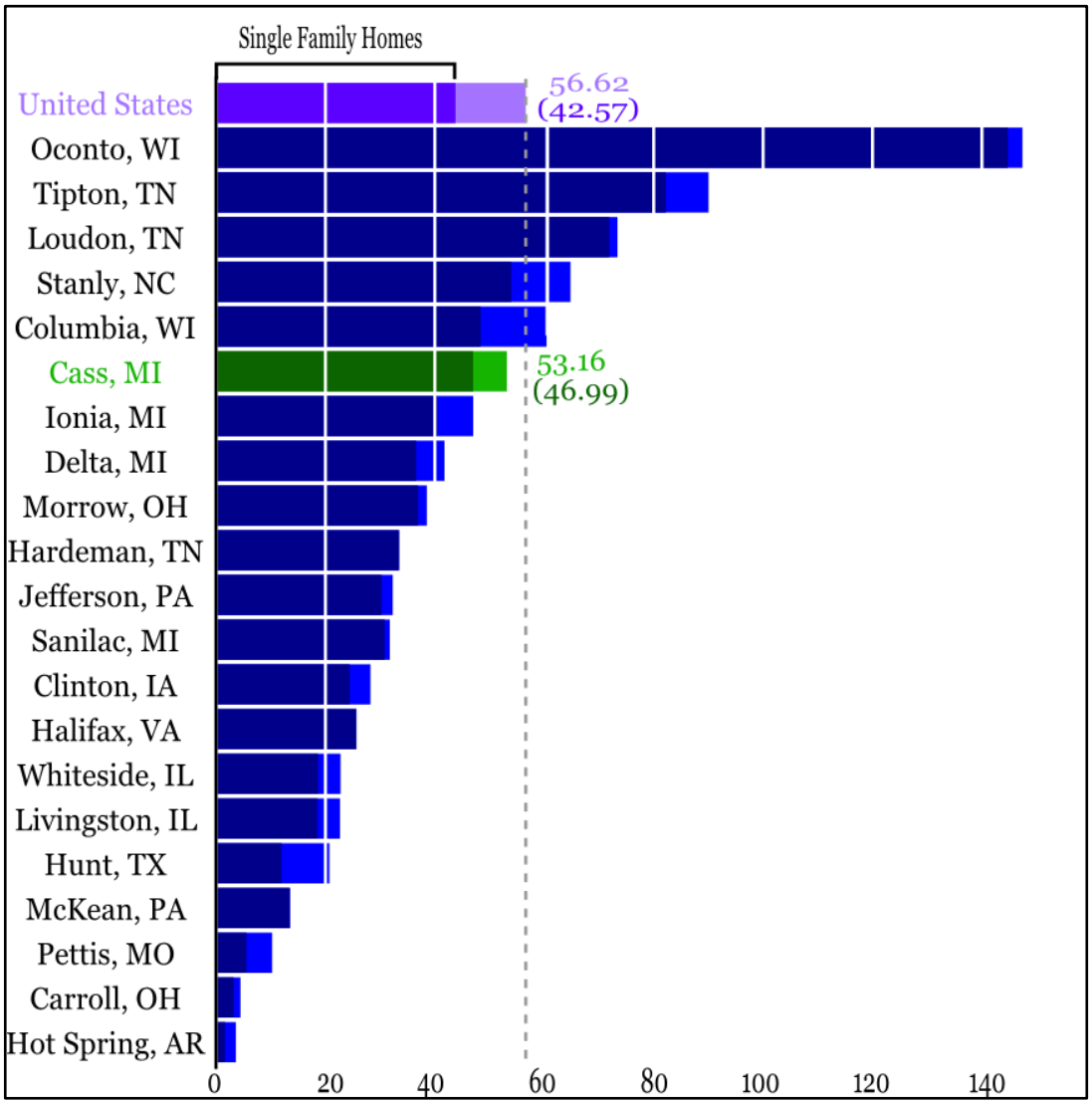


Figure 11 - Total and Single Family Housing Starts, Cass County



EMPLOYMENT

Examining employment by economic sector in Figures 12 and Figures 13, Berrien County had continued to experience a decline in manufacturing jobs between 1998 and 2010. While the total number of workers in Berrien County had declined, the share of total employment that falls in both the healthcare and social assistance and the retail sectors had increased during that time. In Cass County, the number of workers in manufacturing decreased most sharply out of all the sectors. However, unlike Berrien County, Cass County has not seen a significant increase in the share of employment in other sectors, and as such, total non-farm employment has declined far more steeply between 2006 and 2010.

This employment distribution would suggest that areas within the NATS region that have job opportunities in healthcare, social assistance, or retail might be poised to see an employment growth, and therefore, a potential increase in travel to these areas for work related purposes in the future. However, the total number of workers in Cass County continues to decline dramatically, indicating that movement of population towards some portions of the NATS area may be for residential purposes only.

Figure 12 - Berrien County Non-Farm Employment by Industry, 1998-2010

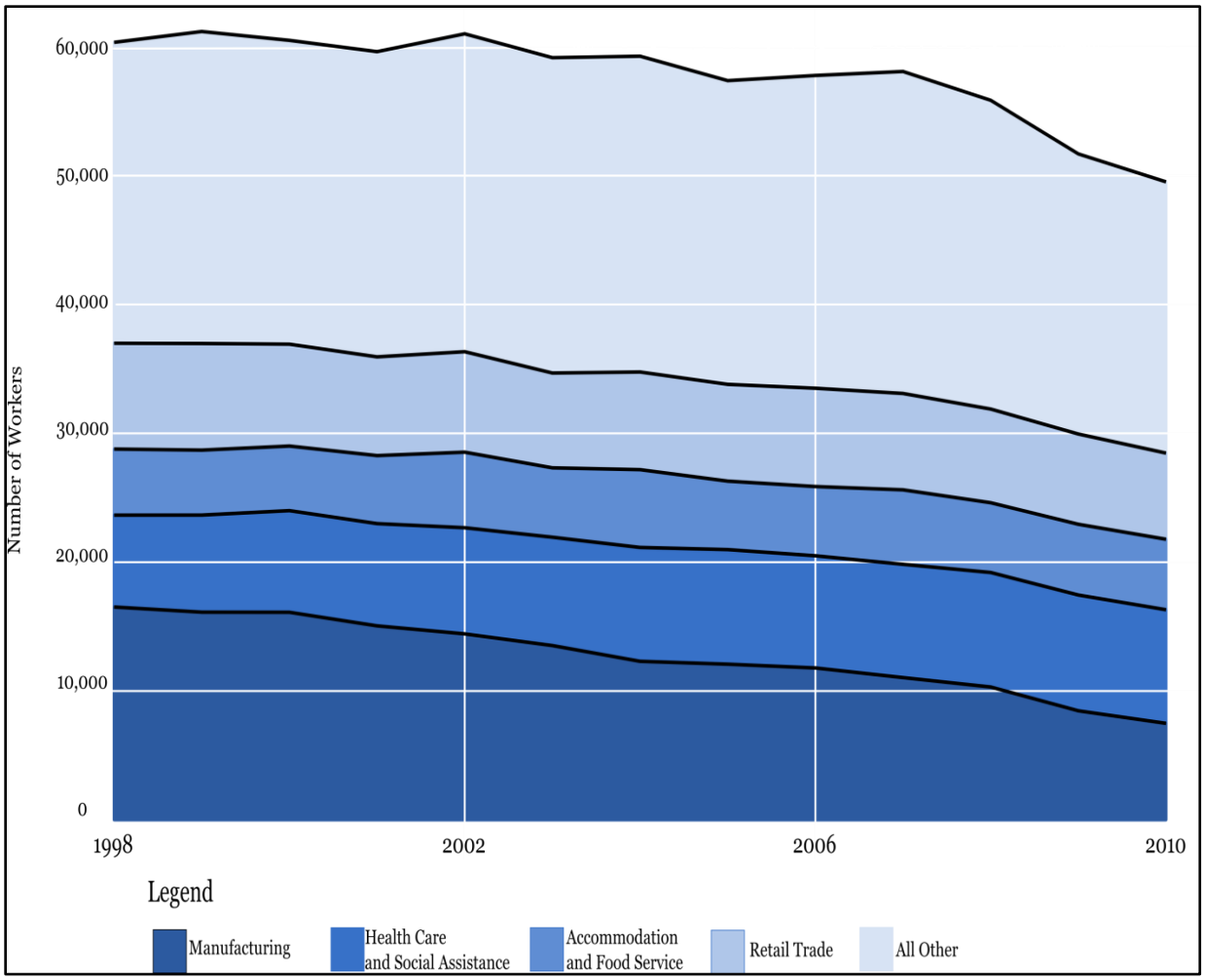
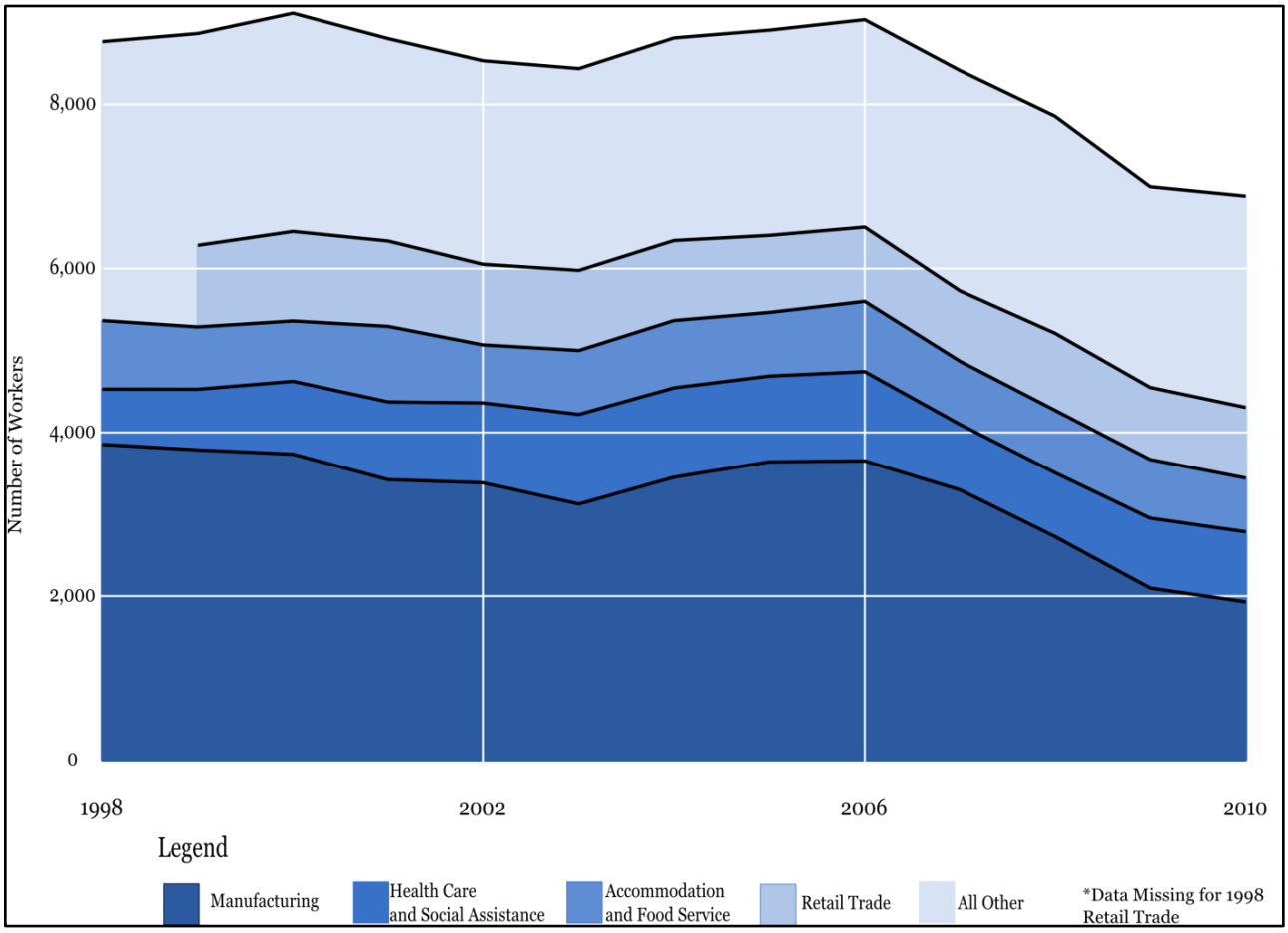


Figure 13 - Cass County Non-Farm Employment by Industry, 1998-2010



BUILDING A TRAVEL DEMAND MODEL AND DEFICIENCY ANALYSIS

This section has presented a brief snapshot of population, housing, and employment trends in Berrien and Cass Counties, based on observed data. In the section that follows, these data, along with information from local officials, are fed into a modeling process in order to forecast the location and volume of future travel demand throughout the NATS region.

TRAVEL DEMAND MODEL AND DEFICENCY ANALYSIS

A travel demand model is a forecasting tool used to assess travel supply and demand. The existing road networks represent the supply side of the metric. The demand side is the product of urban data to determine where trips are generated from, how they are distributed, and what the mode choice will be. Using existing verifiable information like population numbers tied to geographic zones and employers with validated employee populations, the model can be calibrated for accuracy. From that base, projections can be made that relate to changes anticipated within the planning horizon through 2040. With the new data inputs, the model will generate findings that identify trouble spots within the network where the existing design capacities of the road or transit network will be exceeded.

Travel demand modeling can aid in policy suggestions for long range planning and short range studies (corridor studies and sub-area studies) because the results highlight the imperfections and inadequacies that will need to be addressed.

The travel demand modeling process was a collaborative effort between the SWMPC, MPO committee members, and the MDOT Statewide and Urban Travel Analysis Section. MDOT has taken the lead role in the travel demand modeling for "small MPO" areas throughout the state. Both entities collectively reach consensus on critical decisions in the development of the model with data largely generated and validated by the SWMPC.

MODELING AREA

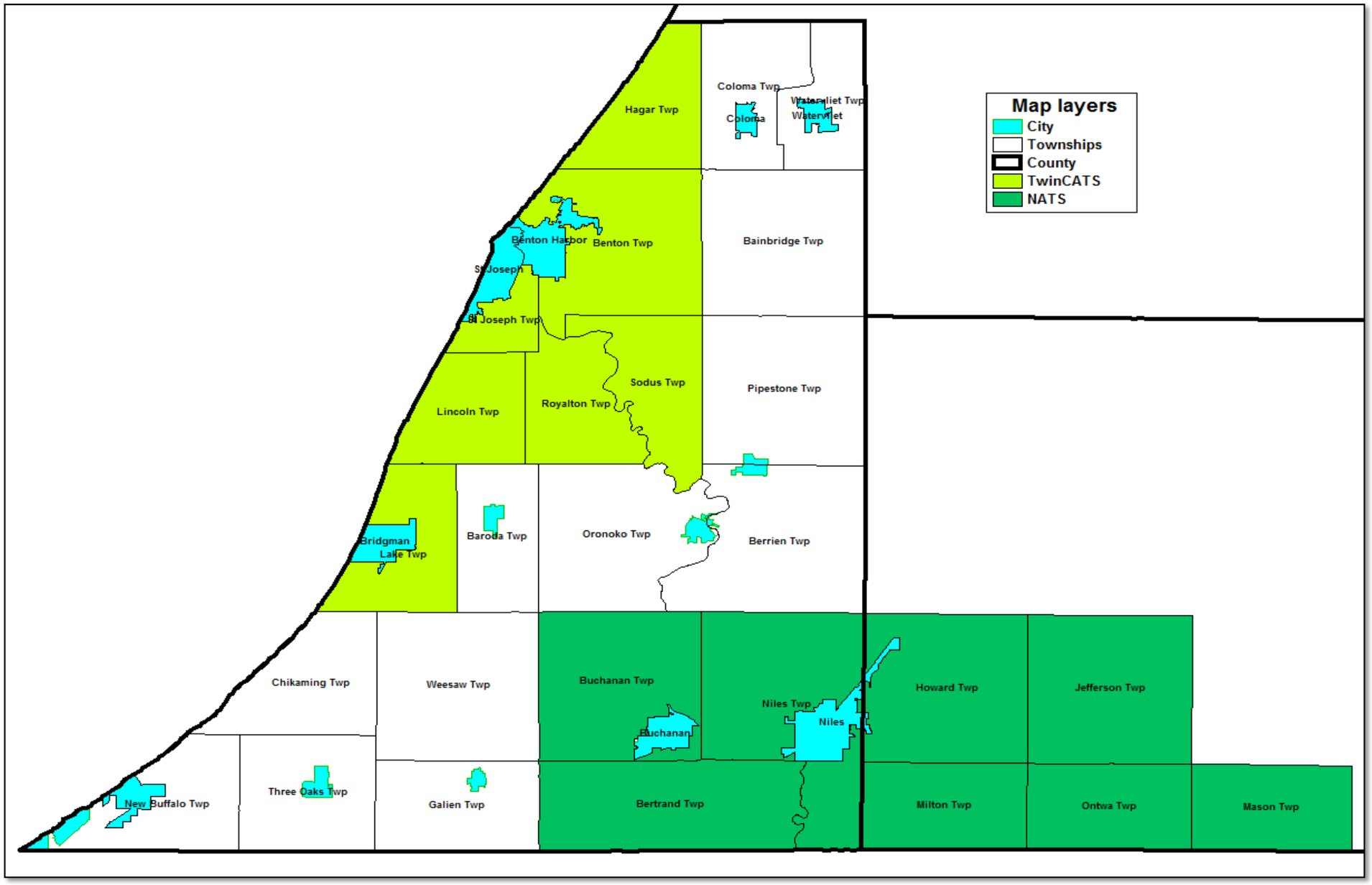
The 2010-2040 travel demand model combined the Twin Cities Area Transportation Study (TwinCATS) MPO and NATS TMA areas into one regional model, while also encompassing the remainder of Berrien County outside the MPO areas. The modeling area consists of: all cities, villages and townships in Berrien County; and the Village of Edwardsburg; and Howard, Milton, Ontwa, Jefferson, and Mason Townships in Cass County. These additional areas have been included for three primary reasons.

1. Though not all of the communities modeled are within a defined MPO area, however, they currently have an important impact on the transportation characteristics of both of the urbanized areas.

2. It is a possibility that some of the jurisdictions may be included after the 2020 U.S. Census urban geographic definition.

3. The Villages of Grand Beach and Michiana, while part of the TwinCATS MPO, were previously not included in the model, and it was decided that they should be included in the urban travel demand model. They are not geographically contiguous to the rest of the TwinCATS study area.

Map 5 - SWMPC Model Area



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The entire SWMPC travel demand model area totals 714 square miles. Within that area, the smallest subsection or Traffic Analysis Zone (TAZ) of the model is 0.01 square miles and the largest TAZ is 11.35 square miles. The total transportation network including all roads consists of approximately 1,230 miles.

MODEL DEVELOPMENT

Travel demand modeling is developed using TransCAD and transportation Geographic Information Systems (GIS) software. The computer simulation generates current and future traffic conditions. Deficiencies in the transportation network are identified as "generalized 24-hour" (daily) deficiencies, based on generalized 24-hour road and transit capacities and traffic assignment volumes.

There are two basic systems of data organization in the travel demand forecasting process.

1. The first system of data is organized based on the street system. Roads with a National Functional Class (NFC) designation as "Minor Collector" and higher are included in the network. The unit of analysis is called a "link." Usually, a link is a segment of roadway that is terminated at each end by an intersection. In a traffic assignment network, intersections are called "nodes." Therefore, a link has a node at each end.

The second data organization mechanism is the Traffic Analysis Zone (TAZ). TAZs are determined based upon similarity of land use, compatibility with jurisdictional boundaries, the presence of physical boundaries, and compatibility with the street system. Streets are generally used as zone boundary edges. All socioeconomic and trip generation information for both the base year and future year are summarized by TAZ. Table 7 below depicts the SWMPC TAZ structure.

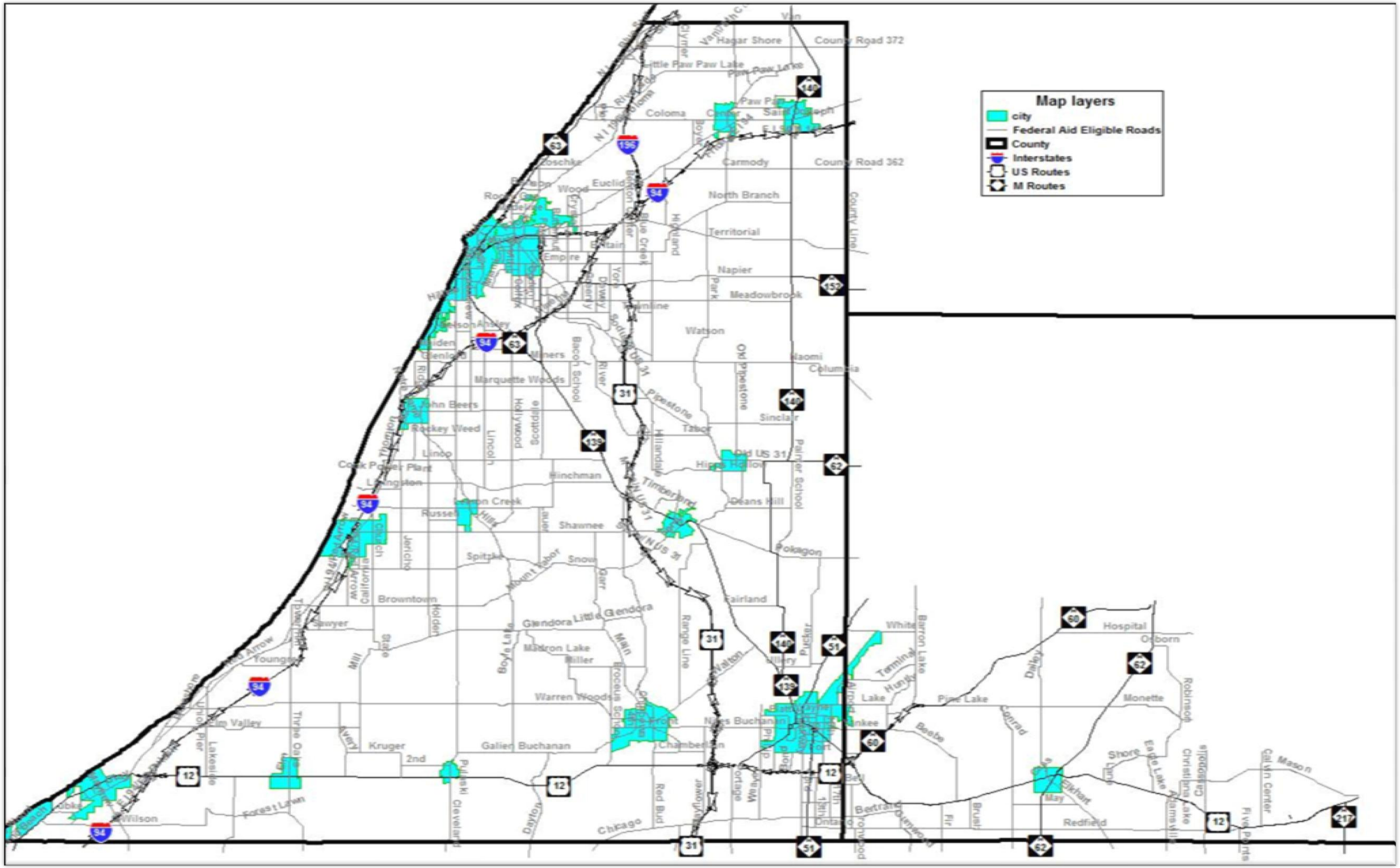
Table 7 - SWMPC Traffic Analysis Zone Structure

TAZ ID	Jurisdiction	County	MPO Area
1-7	Bridgman	Berrien	TwinCATS
8-26	Lake Charter Township	Berrien	TwinCATS
27-72	Benton Harbor - City	Berrien	TwinCATS
73-145	Benton Charter Township	Berrien	TwinCATS
146-169	Lincoln Charter Township	Berrien	TwinCATS
170-185	Royalton Township	Berrien	TwinCATS
186-235	Saint Joseph - City	Berrien	TwinCATS
236-237	Shoreham - Village	Berrien	TwinCATS
238-254	St. Joseph Charter Township	Berrien	TwinCATS
255-274	Sodus Township	Berrien	TwinCATS
275-280	Stevensville - City	Berrien	TwinCATS
281-285	Berrien Springs - City	Berrien	
286-289	Baroda - Village	Berrien	
290-303	Baroda Township	Berrien	
304-321	Oronoko Charter Township	Berrien	
322-339	Chikaming Township	Berrien	
340-352	Weesaw Township	Berrien	
353-373	New Buffalo Township	Berrien	
374-384	New Buffalo - City	Berrien	
385	Michiana-Village	Berrien	TwinCATS
386-387	Grand Beach-Village	Berrien	TwinCATS
388-390	Three Oaks - City	Berrien	
391-397	Three Oaks Township	Berrien	
398	Galien - Village	Berrien	
399-404	Galien Township	Berrien	
405-425	Buchanan Township	Berrien	NATS
426-439	Buchanan - City	Berrien	NATS
440-461	Bertrand Township	Berrien	NATS
462-510	Niles Charter Township	Berrien	NATS
511-563	Niles - City	Berrien	NATS
564-576	Hagar Township	Berrien	TwinCATS
577-579	Hagar Shores - Village	Berrien	TwinCATS
580-599	Coloma Township	Berrien	
600-605	Coloma - City	Berrien	
606-616	Watervliet Township	Berrien	
617-621	Watervliet - City	Berrien	
622-632	Bainbridge Township	Berrien	
633-646	Pipestone Township	Berrien	
647-649	Eau Claire - Village	Berrien	
650-665	Berrien Township	Berrien	
666-680	Milton Township	Cass	NATS

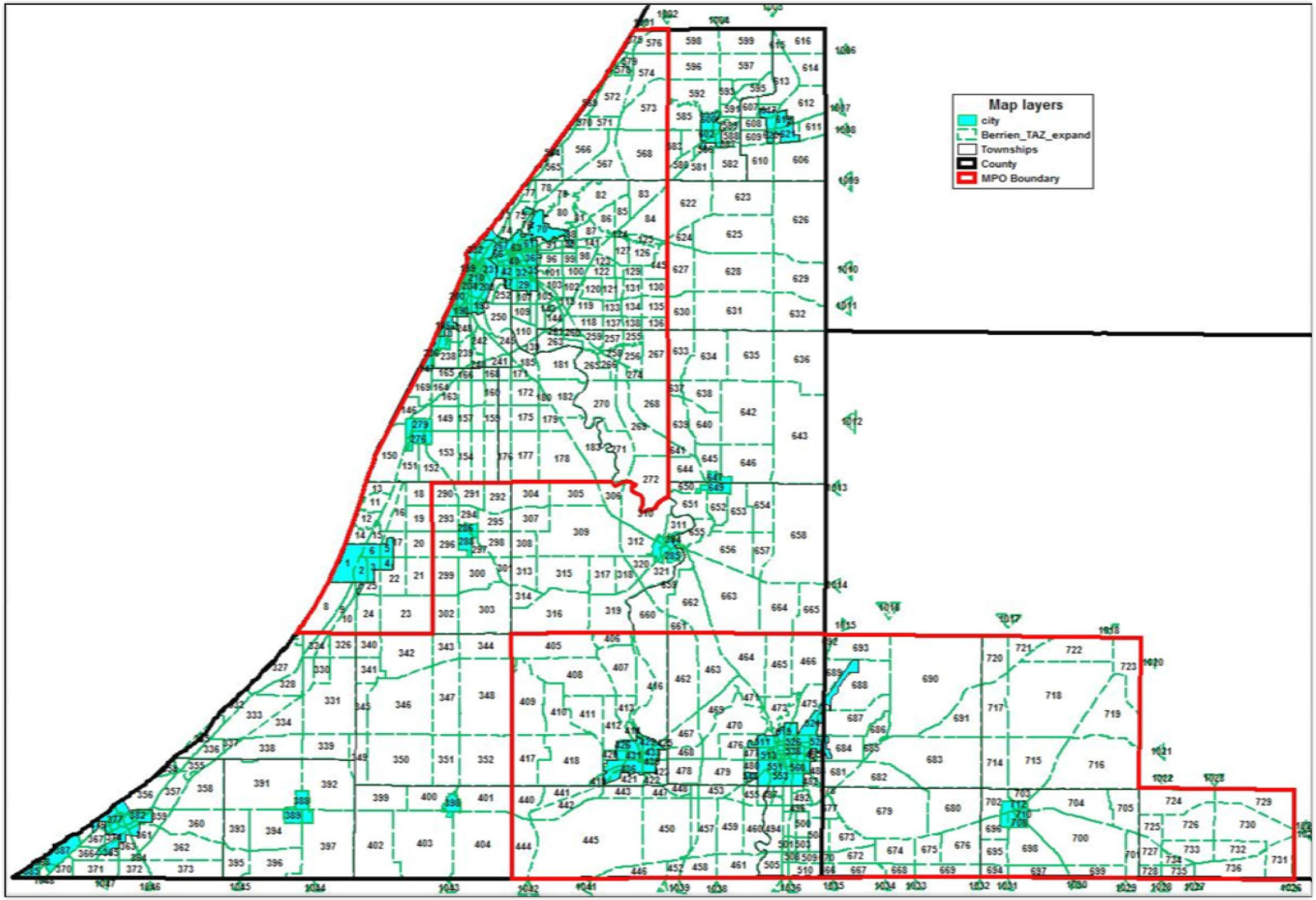
TAZ ID	Jurisdiction	County	MPO Area
681-693	Howard Township	Cass	NATS
694-705	Ontwa Township	Cass	NATS
706-713	Edwardsburg - Village	Cass	NATS
714-723	Jefferson Township	Cass	NATS
724-736	Mason Township	Cass	NATS
1001-1048	External Stations		

The two data systems - the street system (network) and the zone system (socioeconomic data) - are interrelated through the use of "centroids." Each zone is portrayed on the network by a point (centroid), which represents the weighted center of activity for that zone. A centroid is connected by a set of links to the adjacent street system. That is, the network is provided with a special set of links for each zone, which connect the zone to the street system. Since every zone is connected to the street system by these "centroid connectors," it is possible for trips from each zone to reach every other zone by way of a number of paths through the street system. Maps 6-8 show the street system and zone system are shown on the following pages.

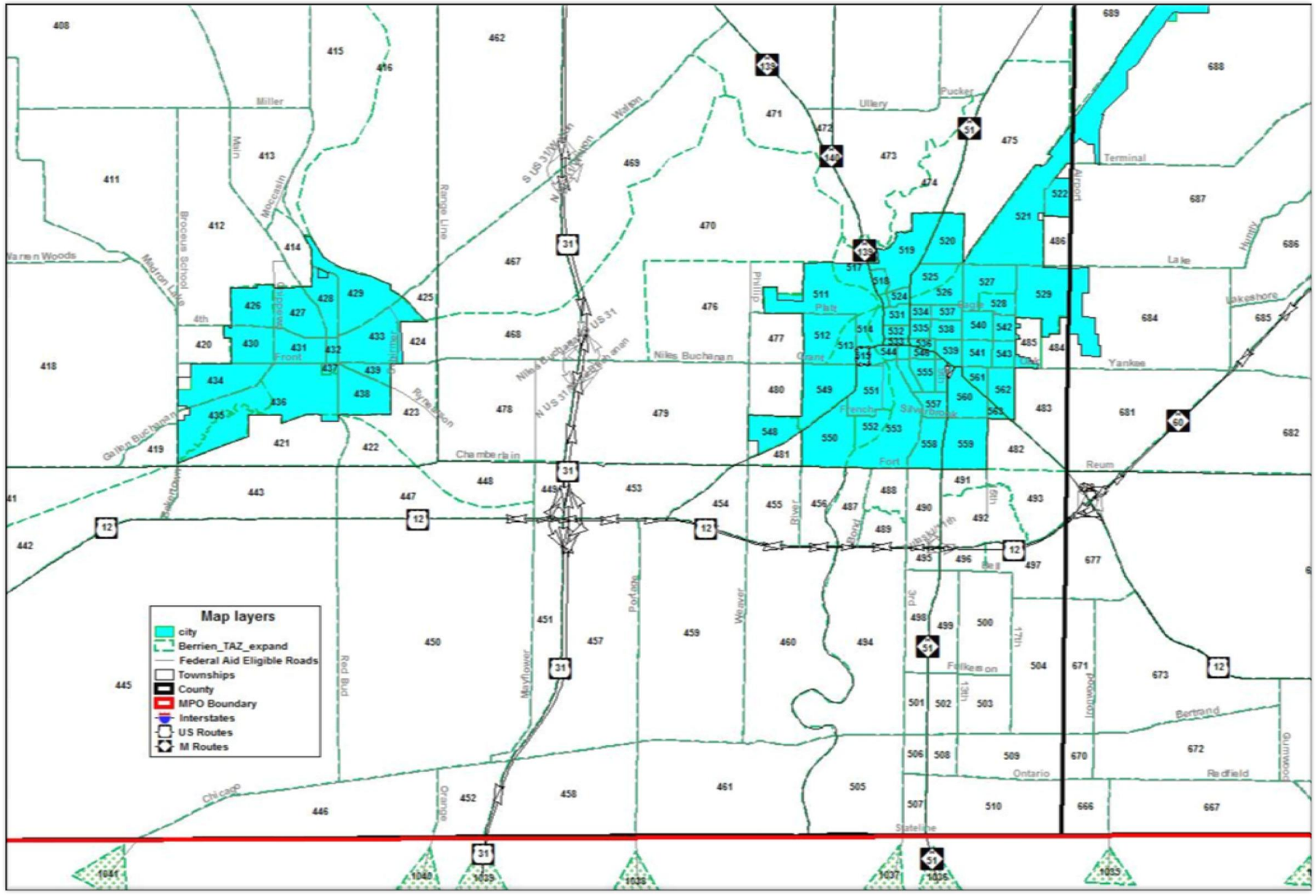
Map 6 - SWMPC Model Street System



Map 7 - SWMPC Traffic Analysis Zone Map



Map 8 - Niles and Buchanan Traffic Analysis Zone and Street Map



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The urban travel demand forecasting process has eight phases, which are described in the sections that follow:

1. **Socioeconomic Data Collection** - Socioeconomic and facility inventory data are collected;
2. **Trip Generation** - Calculates the number of trips produced within or attracted into a the basic geographic unit of the model, the TAZ;
3. **Trip Distribution** - Studies the trips produced in a TAZ and distributes them to all other TAZs, based on the attraction of those zones;
4. **Auto Occupancy** - Separating trips into single-occupancy vehicle, 2 person and 3+ person vehicles, as well as distinguishing trucks;
5. **Time-of-Day** - Separating trips into 4 time periods (AM Peak, Mid-day, PM Peak, and Night-Time (Off-Peak));
6. **Traffic Assignment** - Determines what routes are utilized for trips;
7. **Model Calibration/Validation** - Verifying that the volumes (trips) simulated in traffic assignment and authenticates traffic counts; and
8. **System Analysis** - Tests alternatives and analyzes changes in order to improve the transportation system.

PHASE 1: SOCIOECONOMIC DATA COLLECTION

Travel demand models are driven, in part, by the relationship of land use activities and characteristics of the transportation network. Inputs to the modeling process include the number of households, population-in-households, vehicles, and employment located in a given TAZ. These characteristics are generally referred to as socioeconomic data. The modeling process translates this data into vehicle trips on the modeled transportation network. Therefore, it is a necessary step in the long range planning process to evaluate local socioeconomic data.

Base Year Data

Socioeconomic data collection and verification was a collaborative effort between SWMPC, MPO Committee members, and MDOT. Household, population, and employment data from the 2010 U.S. Census, the 2005-2009 American Community Survey, Claritas and Hoovers employment databases, were collected, broken down into individual TAZs and compiled into tables and maps. Beginning in the spring of 2012, the tables and maps were sent to representatives from each local government for review and comment in order to bring the data up-to-date through data year 2010, the model's base year. Local partners were asked to provide detailed information about new development that had occurred since 2000 and where employers or population had been lost.

When the local revisions were recorded, the revised data was presented to the NATS Technical Advisory and Policy Committees in September of 2011. The revised socioeconomic data was approved by the TAC and Policy Committees in October of 2011. The data were then provided to MDOT for inclusion in the travel demand model.

Future Year Data

Verification of future year data covering the years from 2010 to 2040 began in January of 2012. The method was similar to efforts used to verify the base year data. Demographic and economic forecasts were sourced from Regional Economic Models, Inc. (REMI). The data was broken down by jurisdiction and forecasted in five-year increments. A percent change for each five-year period was applied against the 2010 base data.

Pears Mill
Buchanan, MI

Data was then further subdivided geographically by local TAZ. To do this, aerial photographs from 2010 and 2011 were compared to determine growth patterns and seek out areas where land use approximated a maximum build-out scenario. Local future land use maps and master plans were examined to determine where each municipality expected their additional growth to occur. Additionally, areas were identified that demonstrated a growth trend that was likely to continue. The magnitude of the growth in each TAZ was assessed against the total growth in the area. Each TAZ was thus represented as a percent of the total overall growth. Any loss in population, households, or employment was expressed as a negative percentage.

Data were then compiled into maps and tables and distributed to local government representatives and committee members for review and comment. Local partners were asked to use local knowledge, local plans, and projection efforts to determine where population, household, and employment growth (or decline) was likely to occur in their communities, and whether the REMI forecasts seemed reasonable. As with the base year verification efforts, local efforts to review the data were mixed. Staff pursued the highest possible input through phone calls, e-mail exchanges, and in-person meetings with representatives of local governmental units willing to evaluate the data.

At the conclusion of the process, the locally reviewed data projections were presented to the NATS Technical Advisory and Policy Committees and were approved in September of 2012. The data were then provided to MDOT for inclusion in the travel demand model.

It is important to note that the forecasting and distribution of future population, households, and employment data cannot be made with pin-point accuracy. The general nature of the data sources, changes in development plans, unforeseen economic or population factors, and the limits imposed by time and financial resources all conspire to impart elements of unpredictability into the process. Although efforts were made to allocate the data as accurately as possible, in a few instances, some minor errors in address

coding or unidentifiable employer names or addresses are predictable. As a result, some of the employment data allocated to one zone may actually belong in an adjacent zone. This does not change the overall effect of travel demand on the model because the net overall travel activity would be loaded onto the same adjacent network corridor. Therefore, household and employment data for individual zones should be considered as an estimate to be used as a guideline and not an exact total.

Population

In 2010, the SWMPC Model area had a population of 178,934. By 2040, due to the economic recession and the overall aging of the population, the area's total population is expected to reduce to of 173,895, a 2.81 percent decrease. Comparatively, the total population of the State of Michigan is projected to increase by 3.06 percent between 2010 and 2040 (REMI).

For the NATS area, the total population remains stable with a minimal reduction of 117 people or 0.2 percent. The cities and villages experience the greatest declines, while the townships in Cass County are projected to grow the most (consistent with the trends that occurred between 2000 and 2010. Milton Township is projected to see the greatest growth in population 19.99 percent, while Mason, Jefferson, and Ontwa also experience growth at 9.81 percent, 8.81 percent, and 4.36 percent. Overall, the projected growth in population is due to the increased growth of residents from the South Bend and Elkhart, Indiana urban areas. These two urban areas will continue to move towards one another, and are also moving north. These communities in Cass County are directly north of where these two urban areas are moving together.

Table 8 - NATS Total Population by Jurisdiction

Jurisdiction	2010	2015	2020	2025	2030	2035	2040	Percent Change
Buchanan - City	4,471	4,346	4,274	4,210	4,168	4,136	4,102	-8.25
Buchanan Twp	3,508	3,465	3,437	3,415	3,411	3,415	3,419	-2.54
Bertrand Twp	2,657	2,630	2,626	2,626	2,640	2,661	2,681	0.90
Niles - City	13,330	13,102	12,878	12,674	12,540	12,434	12,323	-7.55
Niles Charter Twp	12,306	12,222	12,138	12,073	12,074	12,104	12,131	-1.42
Howard Twp	6,335	6,390	6,433	6,449	6,447	6,444	6,438	1.62
Milton Twp	3,878	4,099	4,234	4,350	4,454	4,555	4,653	19.99
Edwardsburg - Vlg	1,259	1,265	1,243	1,216	1,185	1,155	1,125	-10.67
Ontwa twp	5,011	5,069	5,128	5,166	5,189	5,211	5,230	4.36
Jefferson Twp	2,820	2,689	2,781	2,861	2,932	3,001	3,068	8.81
Mason Twp	2,945	3,062	3,113	3,151	3,180	3,208	3,234	9.81
NATS Total	58,520	58,339	58,284	58,190	58,218	58,324	58,403	-0.20

The rural areas within the SWMPC Model area experienced a 3.89 percent reduction in total population (from 46,217 people in 2010 to 44,418 people in 2040). These areas contain the remainder of the communities within Berrien County that are not in either the TwinCATS or NATS MPO areas.

Households

Households in the SWMPC model area are projected to total 72,901 by 2040 or a 1.77 percent increase from the 2010 base year. By comparison the State of Michigan is projected to have a 10.81 percent increase in households from 2010 to 2040 (REMI). The rate of growth for households in the TwinCATS and NATS areas and in the State as a whole is considerably higher than that of the population, likely because the average household size is projected to decline. Therefore, there are some communities that see a decline in overall population, but increases in total households. Overall, the areas that are projected to see increases in population, or very minimal decreases in population all are projected to see increases in total households through 2040.

For the NATS area, the area experiences a 5.72 percent increase in households between 2010 and 2040 (from 23,341 to 24,675 households). All the townships are projected to increase, while the cities (Buchanan and Niles) and the Village of Edwardsburg experience declines. Milton Township is projected to see the greatest increase in households 35.58 percent, while the other townships in Cass County all see significant increases as well. Within the NATS area, of all the communities in Berrien County, Bertrand Township experiences the highest growth of 4.8 percent.

Table 9 - NATS Total Household by Jurisdiction

Jurisdiction	2010	2015	2020	2025	2030	2035	2040	Percent Change
Buchanan - City	1,911	1,894	1,898	1,888	1,883	1,871	1,853	-3.05
Buchanan Twp	1,325	1,324	1,334	1,335	1,339	1,339	1,333	0.61
Bertrand Twp	1,031	1,044	1,058	1,065	1,074	1,079	1,081	4.80
Niles - City	5,540	5,583	5,597	5,572	5,559	5,529	5,477	-1.13
Niles Charter Twp	4,906	4,947	4,989	4,996	5,014	5,016	4,999	1.89
Howard Twp	2,575	2,687	2,760	2,796	2,797	2,787	2,759	7.16
Milton Twp	1,390	1,515	1,625	1,714	1,782	1,840	1,885	35.58
Edwardsburg - Vlg	517	527	531	527	517	505	490	-5.22
Ontwa twp	1,982	2,053	2,126	2,171	2,189	2,198	2,193	10.63
Jefferson Twp	1,057	1,031	1,110	1,175	1,226	1,270	1,304	23.36
Mason Twp	1,107	1,173	1,225	1,261	1,282	1,296	1,302	17.63
NATS Total	23,341	23,780	24,253	24,500	24,660	24,730	24,675	5.72

The rural areas with the SWMPC Model area experience a minimal increase of 110 households between 2010 and 2040 0.6 percent increase.

Employment

In 2010, the total number of individuals employed in the SWMPC model area was 87,940. By 2040, SWMPC model area is projected to grow to 97,312 jobs a 10.66 percent increase. This is fairly consistent with the State of Michigan, which is expected to experience a 13.35 percent growth from 2010 to 2040 accordingly (Source: REMI).

For the NATS area, the total employment is expected to increase by 16.86 percent, greater than the state average of 13.35 percent. The City of Niles is projected to have the greatest increase of 969 total jobs 15.29 percent. Most of the communities are projected to have over a 15 percent increase in total jobs, whereas no community is projected to experience a decline in total jobs.

Table 10 - NATS Total Employment by Jurisdiction

Jurisdiction	2010	2015	2020	2025	2030	2035	2040	Percent Change
Buchanan - City	2,197	2,293	2,320	2,318	2,330	2,357	2,381	8.38
Buchanan Twp	435	442	445	451	452	458	463	6.44
Bertrand Twp	1,104	1,231	1,316	1,354	1,371	1,398	1,420	28.62
Niles - City	6,342	6,619	6,792	6,905	7,052	7,220	7,311	15.29
Niles Charter Twp	4,433	5,017	5,049	5,100	5,134	5,151	5,173	16.69
Howard Twp	1,025	1,129	1,146	1,165	1,186	1,216	1,256	22.52
Milton Twp	639	663	669	671	673	685	700	9.55
Edwardsburg - Vlg	1,022	1,109	1,156	1,202	1,226	1,296	1,327	29.87
Ontwa twp	1,322	1,392	1,407	1,427	1,464	1,517	1,552	17.40
Jefferson Twp	499	561	579	587	606	645	699	40.08
Mason Twp	439	458	452	446	445	449	455	3.61
NATS Total	19,457	20,915	21,331	21,626	21,939	22,392	22,737	16.86

For the rural areas, the projections show a 14 percent increase in total jobs (from 18,398 jobs in 2010 to 20,975 in 2040). The greatest increases are near New Buffalo, with the Four Winds Casino developed and expanded upon, along with other projected growth along the lakeshore.

PHASE 2: TRIP GENERATION

The trip generation process aims to determine the frequency of trips into and out of each TAZ. Those trips are defined as “person-trips” (trips per person). The calculation of trips per person is based on the socioeconomic characteristics of each zone, the median income of the household, the number of automobiles and dwellings. It should be explained that there are limitations to the detail of trip generation projections. The trips per person generated from or to each TAZ are not assigned characteristics such as direction, length, or time of occurrence. Analysis of relevant data is ultimately reduced to mathematical expressions for use in the modeling process. The relationship between trips per person making and land activity are expressed in equations for use in the modeling process. The formulas were derived from MI Travel Counts Michigan travel survey data (performed in 2004 and 2005) and other research throughout the United States. Roughly 2,040 surveys were taken within the small MPO areas throughout Michigan, and were used to determine the trip generation parameters for the SWMPC travel demand model. Productions were generated with a cross-classification look-up process based on household demographics. Attractions were generated with a regression approach based on employment, school enrollment and household demographics. In order to develop a trip table, productions (Ps) and attractions (As) must be balanced also referred to as normalization.

The SWMPC travel demand model also has a simple truck model that estimates commercial and heavy truck traffic based on production and attraction relationships developed from the Quick Response Freight Manual I (QRFM I). The QRFM I uses the employment data from the TAZs in its calculations.

Trips that begin or end beyond the SWMPC model study area boundary are called "cordon trips." These trips are made up of two components:

- Internal to external (IE) trips - start inside the study area and end outside the study area
- Through-trips (EE) - EE trips are those trips that pass through the study area without stopping.

A summary of the cordon volumes and distribution of those volumes is shown in the following table.

Table 11 - 2010 and 2040 External Station (Cordon) Trips

TAZ	Route Name	External Count	I-E Trips	% E-E Trips	E-E Trips	Count Source
1001	Blue Star Hwy (N)	1,642	1,559.90	5.0	82.10	Berrien County
1002	I-196/US-31 (N)	16,000	6,624.00	58.6	9,376.00	MDOT
1003	Clymer Rd (N)	366	358.68	2.0	7.32	Berrien County
1004	Coloma Rd (N)	456	446.88	2.0	9.12	Berrien County
1005	M-140 (N)	3,741	3,217.26	14.0	523.74	MDOT
1006	Hagar Shore Rd (E)	644	611.80	5.0	32.20	Berrien County
1007	Red Arrow Hwy (E)	4,400	4,276.80	2.8	123.20	Berrien County
1008	I-94 (E)	29,000	14,500.00	50.0	14,500.00	MDOT
1009	Carmody Rd (E)	451	441.98	2.0	9.02	Berrien County
1010	Territorial Rd (E)	950	910.10	4.2	39.90	Berrien County
1011	Napier (M-152) (E)	3,400	3,114.40	8.4	285.60	MDOT
1012	Columbia Ave (E)	620	620.00	0.0	0.00	Berrien County
1013	M-62 (E)	4,400	4,272.40	2.9	127.60	MDOT
1014	Pokagon Rd (E)	1,481	1,406.95	5.0	74.05	Berrien County
1015	M-51 (N)	5,800	4,350.00	25.0	1,450.00	MDOT
1016	Barron Lk Rd (N)	3,073	2,393.87	22.1	679.13	Cass County
1017	Dailey Rd (N)	2,700	1,350.00	50.0	1,350.00	Cass County
1018	M-60 (NE)	3,000	2,400.00	20.0	600.00	MDOT
1019	M-62 (N)	4,700	1,645.00	65.0	3,055.00	MDOT
1020	Brownsville St (E)	1,723	430.75	75.0	1,292.25	Cass County
1021	Calvin Hill St (E)	2,151	645.30	70.0	1,505.70	Cass County
1022	Cassopolis Rd (N)	1,872	374.40	80.0	1,497.60	Cass County
1023	Calvin Center Rd (N)	2,400	480.00	80.0	1,920.00	Cass County
1024	Mason St (E)	516	154.80	70.0	361.20	Cass County
1025	US-12 (E)	8,500	1,700.00	80.0	6,800.00	MDOT
1026	M-217 (S)	3,900	390.00	90.0	3,510.00	MDOT
1027	Five Points Rd (S)	976	488.00	50.0	488.00	Cass County
1028	Old M-205 (S)	9,112	2,278.00	75.0	6,834.00	Cass County
1029	Adamsville Rd (S)	2,177	1,088.50	50.0	1,088.50	Cass County
TAZ	Route Name	External Count	I-E Trips	% E-E Trips	E-E Trips	Count Source

1030	Elkhart Rd (S)	4,168	2,500.80	40.0	1,667.20	Cass County
1031	M-62 (S)	6,400	3,200.00	50.0	3,200.00	MDOT
1032	Conrad Rd (S)	2,100	1,575.00	25.0	525.00	Cass County
1033	Fir Rd (S)	2,600	2,080.00	20.0	520.00	Cass County
1034	Gumwood Rd (S)	5,329	4,263.20	20.0	1,065.80	Cass County
1035	Ironwood Rd (S)	4,557	3,645.60	20.0	911.40	Cass County
1036	M-51 (S)	15,400	12,320.00	20.0	3,080.00	MDOT
1037	3rd St (S)	3,288	2,630.40	20.0	657.60	Cass County
1038	Portage Rd (S)	3,417	2,733.60	20.0	683.40	Cass County
1039	US-31 (S)	16,000	12,800.00	20.0	3,200.00	MDOT
1040	Orange Rd (S)	963	857.07	11.0	105.93	Cass County
1041	Chicago Rd (S)	717	609.45	15.0	107.55	Cass County
1042	Dayton Rd (S)	259	253.82	2.0	5.18	Cass County
1043	Cleveland Ave (S)	1,337	1,310.26	2.0	26.74	Cass County
1044	Three Oaks Rd (S)	803	803.00	0.0	0.00	Cass County
1045	Basswood Rd (S)	323	323.00	0.0	0.00	Cass County
1046	M-239 (S)	6,400	5,888.00	8.0	512.00	MDOT
1047	I-94 (SW)	40,600	18,270.00	55.0	22,330.00	MDOT
1048	US-12 (SW)	11,500	11,500.00	0.0	0.00	MDOT
All	Total Externals	246,312	150,092.97	39.06	96,219.03	

Sources: MDOT, Berrien County Road Commission, Cass County Road Commission

The objective of this trip generation phase is to develop a trip table. An accurate trip table will show a balance between trips produced and trips attracted. To accomplish this, the study area's total attractions are factored to equal the study area's total productions. This balance is called normalization. The attractions are normalized based on trips produced because the trip production equations use household data, which generally provide a more accurate estimate of home-based trip making. The use of more accurate base data tends to produce greater reliability for the table as a whole. The SWMPC Model Area Trip Generation Summary identifies productions, attractions, and normalization factors for the study area, for 2010, 2020, 2030 and 2040.

PHASE 3: TRIP DISTRIBUTION

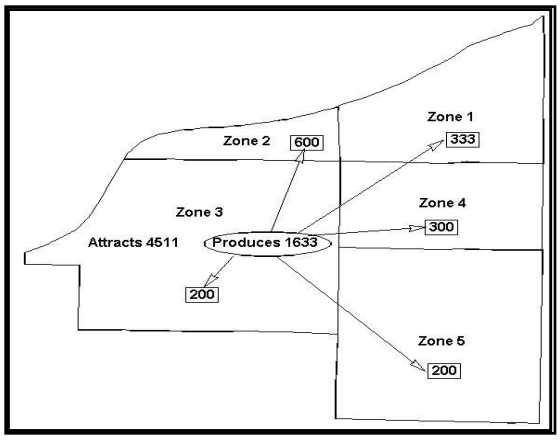
Trip distribution incorporates standardized equations used to determine how many of the trips produced in a zone will be attracted to each of the other zones. Potential connections are analyzed at the ends of trips produced in one zone to the ends of trips attracted to (in) other zones. The equations are based on variables that include travel time between zones and the frequency of activity in each zone. Trip purpose is an important factor in the analysis of these relationships. The trip relationship formula developed in this process is based on principles and algorithms commonly referred to as the Gravity Model.

The Gravity Model is the most widely used and documented technique for developing trip generation. It is originally derived from Newton's Law of Gravity. Newton's Law states that the attractive force between any two bodies is directly related to the masses of the bodies and inversely related to the distance between

them. Thus, in the trip distribution model, the number of trips between two areas is directly related to the level of activity in an area (represented by its trip generation) and inversely related to the distance between the areas (represented as a function of travel time) (see diagram below).

Research has determined that the Gravity Model equation alone does not adequately predict the distribution of trips between zones. In most models the value of time for each purpose is modified by an exponentially determined "travel time factor" or friction factor. Friction factors represent the average area-wide effect that various levels of travel time have on travel between zones. The friction factors used were developed from the process described in "Travel Estimation Techniques for Urban Planning", NCHRP 365, and they were created using the MI Travel Counts I Household Survey data.

Figure 14 - Trip Distribution Example



The primary input to the gravity model is the normalized productions and attractions by trip purpose developed in the trip generation phase. The second data input is a measure of the perceived separation between zones. This measure is an estimate of travel time over the transportation network. Zone-to-zone travel times are referred to as "skims."

In order to more closely approximate actual times between zones and also to account for the travel time for intra-zonal trips, the skims were updated to include terminal and intra-zonal times. Terminal times account for the non-driving portion of each end of the trip and were generated from a look-up table based on area type. They represent that portion of the total travel time used for parking and walking to the actual destination. Intra-zonal travel time is the time of trips that begin and end within the same zone. Intra-zonal travel times were calculated utilizing a nearest neighbor routine.

The Gravity Model utilizes productions and attractions by purpose, the friction factors by purpose, and the travel times, including terminal and intra-zonal. The by-purpose productions and attractions (trip table) is combined with the through-trip table and then balanced so that the zonal productions and attractions are equal. The resulting total trip table is used for subsequent analysis.

PHASE 4: AUTO OCCUPANCY

Auto Occupancy splits the trips into 3 breakdowns: single-occupancy vehicle (SOV), vehicles with two persons (Shared Ride 2), and vehicles with 3 or more persons (SR 3+). This step converts the person trips that were calculated through trip generation and trip distribution, to vehicle trips, so that they can be assigned to the road network (in phase 6).

PHASE 5: TIME-OF-DAY

Time of Day splits the trips into 4 time periods. These time periods include:

AM Peak:	7:00am-9:00am
Mid-Day:	9:00am-3:00pm
PM Peak:	3:00pm-6:00pm
Off-Peak	6:00pm-6:00am

PHASE 6: TRAFFIC ASSIGNMENT

The traffic assignment process takes the trips produced in a zone (trip generation) and distributed to other zones (trip distribution) and loads them onto the network via the centroid connectors. All the possible paths from each zone to all other zones are examined and all reasonable time paths from each zone (centroid) to all other zones are calculated. The NATS model runs a "user equilibrium" traffic assignment. This means that trips are assigned to paths that are the shortest distance between each combination of zones. As the volumes assigned to links approach capacity, travel times on all paths are recalculated to reflect the congestion. The remaining trips are assigned to the next shortest path. This process continues through several iterations until no trip can reach its destination by taking the next shortest path. The traffic assignment is run 4 times, one for each period described in Phase 5, and capacities are calculated for each time period as well. This assignment method reflects the alternative routes that motorists use as the shortest paths become congested. The assignment ultimately produces an assigned volume for each link. The assignments for each time period are then summed together to make a daily assigned volume for each link.

PHASE 7: MODEL CALIBRATION/VALIDATION

Model calibration/validation is the process of verification that the assigned volumes simulate actual traffic counts on the street system. When significant differences occur, additional analysis is conducted to determine the reason. Modifications may then be made to the network speeds and configurations, special trip generators, trip distribution, socioeconomic data, or traffic counts.

The purpose of the model calibration phase is to verify that the base year assigned volumes simulate actual base year traffic counts. When this step is completed, the model is considered statistically acceptable. This means that future socioeconomic data can be substituted for the base data. At that point the trip generation, trip distribution, and traffic assignment steps can be repeated and future trips can be simulated for systems analysis. It is assumed that the quantifiable relationships modeled in the base year will remain reasonably stable over time.

APPLICATIONS OF THE CALIBRATED MODEL

Once the base and future trips are simulated, a number of system analysis procedures can be conducted, including the following:

- Network alternatives to relieve congestion can be tested. Future traffic can be assigned to the existing network to show what would happen in the future if no improvements were made to the present transportation system. This process is often referred to as "deficiency analysis." From this, improvements can be planned that would alleviate demonstrated capacity problems. The NATS deficiency analysis can be found immediately after this section.

- The impact of planned roadway improvements or network changes can be assessed.

- A link can be analyzed to determine what zones are contributing to the travel on that link. This can be shown as a percentage breakdown of total link volume.

- The network can be tested to simulate conditions with or without a proposed bridge or new road. The assigned future volumes on adjacent links would then be compared to determine traffic flow. Thus, it is possible to appraise whether the bridge should be replaced and/or where it should be relocated.

- The impacts of land use changes on the network can be evaluated (e.g., what are the transportation impacts of a new major retail store or 200-unit housing development).

- Road closure/detour evaluation studies can be conducted to determine the effects of closing a roadway. This type of study is very useful for construction management and incident management.

- Model runs are a standard part of air quality conformity analysis.

Two issues are critical in using the model:

1. The modeling process is most effective for system-wide analysis. Although detailed volumes for individual intersection and "links" of a highway are an output of the model, additional analysis and modification of the model output may be required for project level analysis.

2. The accuracy of the model is heavily dependent on the accuracy of the socioeconomic data and network attributes provided by the local participating agencies, and the skill of the users in interpreting the reasonableness of the results.

Generally, three different scenarios are developed for the Long Range Plan:

1. **Existing trips on the existing system -** This is the calibrated, existing network scenario founded on the base year data. This is a prerequisite for the other two scenarios.

2. **Future trips on the committed system -** This alternative displays future capacity and congestion problems if no improvements to the system are made. This is called the “do nothing” alternative

and usually includes the existing system, plus any projects that are committed to be built in the future.

3. **Future trips on the future system -** This scenario is the future LRTP network. It includes suggested improvements to alleviate congested areas or corridors.

Applications of these basic procedures are important for identifying deficiencies as well as examining and evaluating the impacts of alternate solutions.

DEFICIENCY ANALYSIS

With the completion of the travel demand model, deficiencies in the roadway network were identified for the following years: 2010, 2020, 2030, and 2040. Deficiencies were identified based upon the volume to capacity ratios. This means that if the V/C ratio approaches 1.0 then the efficiency of the roadway to handle vehicle traffic becomes compromised in the form of congestion.

Table 12 - 2010 Deficiency Segments

Jurisdiction	Route Name	From	To	Length	Volume	V/C Ratio
Buchanan	Front Street	Main St	Red Bud Trail	.1 miles	9769	0.87
Niles	Main Street (US-12 BR)	M-139 (Front Street)	M-51 (5th St)	.25 miles	12095	0.90
Niles	Main Street (US-12 BR)	M-51 (12th Street)	13th Street	.1 miles	15550	0.82
Niles	Grant/Broadway Street	Parkway Street	3rd Street	.15 miles	11893	0.85

While none of the segments are at capacity at the base year, 2010, it is still significant to note that these segments are reaching capacity. There will need to be monitoring of these specific segments for additional development that may occur and change the traffic patterns.

Table 13 - 2020 Deficiency Segments

Jurisdiction	Route Name	From	To	Length	Volume	V/C Ratio
Berrien Springs	M-139 (Ferry Street)	Cass Street	Main Street	.07 miles	15805	0.87
Buchanan	Front Street	Main Street	Red Bud Trail	.1 miles	9515	0.84
Niles	**Main Street (US-12 BR)**	**M-139 (Front Street)**	**M-51 (5th Street)**	**.25 miles**	**13844**	**1.02**
Niles	Main Street (US-12 BR)	M-51 (12th Street)	13th Street	.07 miles	15871	0.83
Niles	Grant/Broadway Street	W of Parkway Street	3rd Street	.22 miles	11968	0.88
Niles	M-139 (Front Street)	Main (US-12 BR)	Sycamore Street	.07 miles	13402	0.94
Niles	M-51 (5th Street)	Lake Street	Burns Street	.25 miles	14234	0.83
Edwardsburg	US-12 (Main Street)	Edwardsburg WCL	Cass Street	.41 miles	14200	0.83
Edwardsburg	US-12 (Main Street)	M-62	Edwardsburg ECL	.2 miles	12351	0.80
Edwardsburg	M-62	Edwardsburg SCL	Elkhart Road	.38 miles	13523	0.80

It is clear from Table 13 that in Niles, Main Street (US-12 BR) from M-139 (Front Street) to M-51 (5th Street) is over capacity. However, by 2030 this segment is no longer projected to be over capacity. The other segment that is closer to being over capacity is also a segment in Niles on M-139 (Front Street) from Main (US-12 BR) to Sycamore Street. These segments will need to be monitored during the implementation of the plan and as the socioeconomic elements change. While Berrien Springs is not in the urbanized area or planning boundary, it is close enough to the NATS area that it still creates impacts on the regional transportation system. In addition, during the adjusted census urban boundary review in 2013, it was suggested to review the potential incorporation of the Berrien Springs urban area. While the NATS Policy Committee did not think that it was advisable to include that jurisdiction into the MPO area, it is still significant to the MPO and the travel patterns of the region.

Table 14 - 2030 Deficiency Segments

Jurisdiction	Route Name	From	To	Length	Volume	V/C Ratio
Berrien Springs	Main Street	Hamilton Street	Kephart Street	.21 miles	7144	0.82
Buchanan	Front Street	Main Street	Red Bud Trail	.1 miles	9532	0.84
Niles	Main Street (US-12 BR)	M-139 (Front St)	M-51 (5th St)	.25 miles	13136	0.97
Niles	Main Street (US-12 BR)	M-51 (12th St)	13th Street	.07 miles	15960	0.84
Niles	Grant/Broadway Street	Parkway Street	3rd Street	.15 miles	11957	0.85
Niles	M-139 (Front Street)	Main (US-12 BR)	Sycamore Street	.07 miles	11392	0.80

As noted from Table 14, Main Street from M-139 in Niles from Main Street (US-12 BR) from M-139 (Front Street) to M-51 (5th Street) is no longer over capacity. As stated previously, there are several segments that will need to be monitored during the implementation of the plan and as the socioeconomic elements change.

Table 15 - 2040 Deficiency Segments

Jurisdiction	Route Name	From	To	Length	Volume	V/C Ratio
Berrien Springs	Main Street	Hamilton Street	Kephart Street	.21 miles	7343	0.85
Buchanan	Front Street	Main Street	Red Bud Trail	.1 miles	9554	0.85
Niles	**Main Street (US-12 BR)**	**M-139 (Front St)**	**M-51 (5th St)**	**.25 miles**	**13849**	**1.02**
Niles	Main Street (US-12 BR)	M-51 (12th St)	13th Street	.07 miles	16156	0.85
Niles	Grant/Broadway Street	Parkway Street	3rd Street	.15 miles	12195	0.87
Niles	M-139 (Front Street)	Main (US-12 BR)	Sycamore Street	.07 miles	12479	0.87

In the year 2040, Table 15 shows that in Niles, Main Street (US-12 BR) from M-139 (Front Street) to M-51 (5th Street) is at capacity one again. Due to this roadway segment appearing twice as over capacity the MPO should work with the City of Niles and MDOT, since MDOT controls this segment of the roadway, to begin the discussion and design of a potential roadway expansion.

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Once the LRP is adopted there will be an Implementation Sub-Committee formed to assist the SWMPC transportation planners in implementing the plan. One of the tasks that can be dealt with is how to develop projects to meet the potential deficiencies in the transportation network in the future years.

US-31

While the completion of the US-31 corridor is not being currently planned for, there is justification for incorporating information about completion of the project by 2040. The extension would happen in the TwinCATS MPO boundary but the impacts of that completion would still be felt in the NATS region. A brief summary of what has occurred as a result of integrating the proposed US-31 freeway extension project from Napier to I-94 into the 2040 highway network is as follows:

- US-31 would have an increase of about 9 percent volumes at the Indiana state border.
- Approximately, 3700-3900 daily trips would travel in each direction on the proposed new route; this segment would be in the TwinCATS MPO.
- The Napier Road corridor would experience a reduction of about 7,000 trips daily (about a 36 percent reduction).
- The Napier Road bridge proposed V/C for 2040 would drop from 0.8 to 0.67.
- M-139 (northwest of US-31) would experience a reduction of about 1,500 trips daily (about a 10 percent reduction).

MODELING NEXT STEPS

SWMPC has started to discuss with MDOT modelers the possibility of what will come next in the modeling of the region. Key to the next modeling discussion will be the changes that are experienced with the seasonal second home market and how that impacts business and the transportation system. There is currently only speculation as to the impacts that this has on the region. SWMPC will begin working with MDOT modelers to develop the necessary tools and data collectors to accurately reflect the changes in population, households, and employment numbers during the summer season. SWMPC will also begin to collect traffic count data on a series of roadways, where they believe that seasonal traffic patterns change. In 2015, MDOT will be doing the MI Travel Counts III, a statewide and regional household travel survey to better estimate model parameters for the Statewide and MPO models. MDOT will utilize this data in the development of the next model for the 2045 LRTP. In addition, a greater emphasis will be placed upon early coordination with the Indiana DOT and the MPOs in northern Indiana to coordinate models and planning.

ASSESSMENT OF TRANSPORTATION MODES

Rail service is a vital transportation mode within the study area. Providing interconnectivity between modes for rail passengers to access destinations in the study area is a concern for a truly interconnected transportation system.

PASSENGER RAIL SERVICE

Amtrak is the only passenger rail service that operates in the study area. The National Railroad Passenger Corporation, doing business as Amtrak (reporting mark AMTK), is operated and managed as a hybrid public/private entity. Amtrak began operations to provide intercity passenger train service in the United States on May 1, 1971. On the public side of its public/private identity, Amtrak receives investment from the federal and state government. The only Amtrak station that is within the study area is in Niles. The structure was built in 1892, is listed on the National Register of Historic Places, and is a well known landmark within the community. Amtrak operates an engineering department branch at the Niles Amtrak station that maintains the 97-mile track segment between Kalamazoo and Porter, Indiana. From their Niles location, Amtrak employees maintain the track for high-speed service.

Michigan's three Amtrak lines are the Blue Water, Pere Marquette, and Wolverine.

Map 9 - Southwest Michigan Amtrak Passenger Service

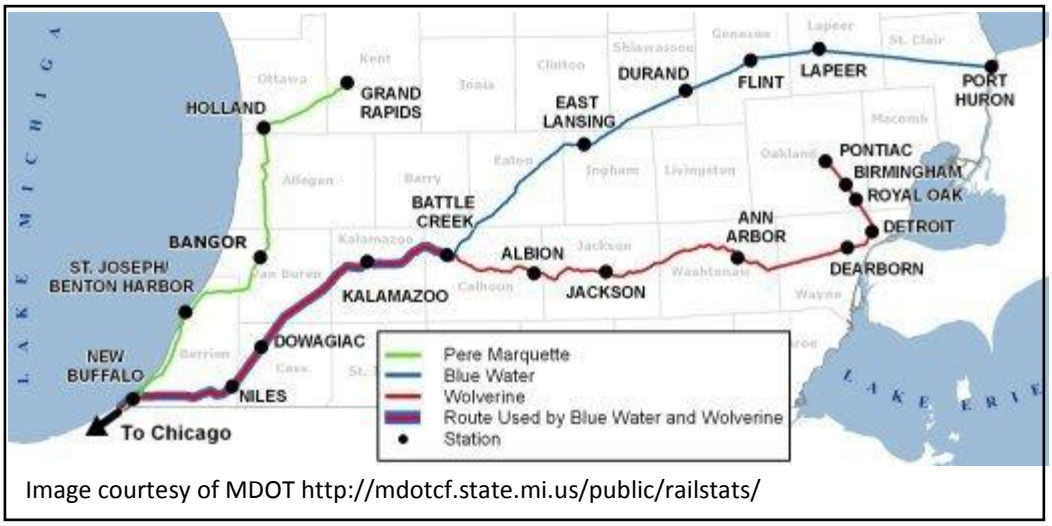


Image courtesy of MDOT http://mdotcf.state.mi.us/public/railstats/

Amtrak's three corridor passenger services in the NATS region including the Wolverine and Blue Water that focus on providing rail service between Detroit and Chicago, Illinois, and the Pere Marquette providing service between Chicago and Grand Rapids.

- **The Wolverine** passenger service is a 304 mile line that offers three daily round trips from Chicago, Illinois to Pontiac, Michigan, with a stop in Niles, Michigan. The Wolverine operates over tracks owned by Norfolk Southern Railway, Amtrak, Conrail, and Canadian National Railway.

- **The Blue Water** is the second service that makes a daily stop in Niles, Michigan, from Chicago, Illinois to Port Huron, Michigan. The Blue Water operates on a 319-mile line that includes sections owned by Norfolk Southern Railway, Amtrak, and Grand Trunk Western Railroad. The 97-mile segment between Porter, Indiana and Kalamazoo, Michigan, is the longest segment of track owned by Amtrak outside of the northeast corridor.

- **The Pere Marquette** provides a third train option that travels from Chicago to Grand Rapids daily. The line operates on CSX lines from Grand Rapids to Porter, Indiana then on a line owned by Norfolk Southern to Chicago, Illinois. The one Berrien County stop is in St. Joseph. Advocacy for the promotion of the Pere Marquette is provided by a group consisting of local governments, public transit agencies, chambers of commerce, metropolitan planning organizations, the Michigan Department of Transportation (MDOT), and Amtrak. The organization is called Westrain. The collaborative promotes the Pere Marquette and seeks to enhance the service while addressing service deficiencies.

Table 16 - Ridership and Ticket Revenue

Year	Ridership			Ticket Revenue (In Dollars)		
	Blue Water	Pere Marquette	Wolverine	Blue Water	Pere Marquette	Wolverine
2012	189,193	109,321	484,138	$ 6,094,659	$ 3,276,210	$ 17,704,897
2011	187,065	106,662	503,290	$ 5,797,878	$ 3,197,106	$ 18,769,770
2010	157,709	101,907	479,782	$ 4,741,560	$ 2,912,070	$ 16,909,193
2009	132,851	103,246	444,127	$ 4,111,375	$ 2,818,294	$ 15,041,919
2008	136,538	111,716	472,393	$ 4,158,742	$ 2,975,391	$ 16,243,510

Ridership since 2008 on the Blue Water has increased 38 percent and has increased 2.5 percent on the Wolverine line. A similar trend has been seen in the amount of ticket revenues throughout the system. An increase of 46 percent on the Blue Water and 8.9 percent on the Wolverine represent important gains. The sluggish performance of the Wolverine line may be due in part to the expiration of maintenance contracts between Amtrak and Norfolk Southern. The track conditions subsequently deteoriated and resulted in lower travel speeds along this corridor. The upper limit on passenger rail speed was reduced from 79 to 55 mph. With slower speeds and overall performance reductions, some potential passengers may have found the route to be a less viable choice.

Table 17 – Passenger Rail Boarding and Deboarding

Year	Boarding			Deboarding		
	Blue Water ***Niles*** New Buffalo	Pere Marquette St. Joseph	Wolverine ***Niles*** New Buffalo	Blue Water ***Niles*** New Buffalo	Pere Marquette St. Joseph	Wolverine ***Niles*** New Buffalo
2012	***3,702*** 3,260	5,118	***7,505*** 2,991	***2,529*** 3,495	5,700	***7,505*** 5,071
2011	***3,866*** 3,020	4,951	***7,663*** 2,291	***2,540*** 3,528	5,551	***7,663*** 4,279
2010	***3,606*** 2,578	4,622	***6,856*** 1,517	***2,278*** 2,647	5,221	***6,856*** 2,997
2009	***3,343*** 0	4,030	***5,513*** 0	***2,075*** 0	4,296	***7,264*** 0
2008	***3,509*** 0	3,963	***5,855*** 1	***2,037*** 0	4,387	***7,717*** 0

There have been consistent increases in those boarding (entering the train to begin a trip) and deboarding (leaving the train to end a trip) at the Niles station for both routes. This information is particularly useful when considering the improved inter-connectedness to which NATS aspires. Currently, there is no transit service for those arriving by train after 5:00 p.m. Monday through Friday. For arrivals by train on Saturday there is the option to take the Niles Dial A Ride (public transit with trips arranged through a call to the dispatch center) between the hours of 10:00 a.m. and 3:00 p.m. However, there are a couple of conditions. The demand response system requires a 24-hour reservation, which could make it difficult for rail passengers to schedule a transit ride if they do not know the exact time that they will arrive. The other issue is that there is no Sunday passenger rail service.

HIGH SPEED RAIL ALONG THE BLUE WATER AND WOLVERINE LINES

The 97-mile segment between Porter, Indiana and Kalamazoo, Michigan, is the longest segment of track owned by Amtrak outside of the northeast corridor. The Federal Rail Administration (FRA) has designated the Detroit to Chicago corridor as a high-speed corridor. The trains have increased their speeds from 95 mph to 110 mph on 80 miles of track between Kalamazoo and Porter, Indiana. The increased speeds in western Michigan set the stage for the expansion of 110 mph service from Kalamazoo east to near Dearborn on the track segment purchased by the Michigan Department of Transportation from Norfolk Southern Railway in December of 2012. This change will reduce the travel time an additional 30 minutes.

Chicago - Detroit/ Pontiac Passenger Rail Corridor Program

The Michigan Department of Transportation (MDOT) has initiated a program to evaluate passenger rail improvements for the Chicago-Detroit/Pontiac passenger rail corridor. The program is being prepared in partnership with the Indiana Department of Transportation (INDOT) and the Illinois Department of Transportation (IDOT), and in association with the Federal Railroad Administration (FRA).

The purpose of the program is to improve intercity mobility by providing an improved passenger rail service that would be a competitive transportation alternative to automobile, bus and air service between Chicago and Detroit/Pontiac, Michigan. The program will provide sufficient information for the FRA to potentially support future decisions to fund and implement a major investment in the passenger rail corridor.

Map 10 - High Speed Rail Corridor

Source: http://greatlakesrail.org/~grtlakes/

SOUTH SHORE LINE (SOUTH BEND, IN)

The South Shore Line, operated by the Northern Indiana Commuter Transportation District (NICTD), provides interurban electric commuter train service between South Bend, Indiana and Chicago, Illinois. The South Bend boarding site, located at the South Bend Regional Airport, links the South Shore with domestic airline service and inter- and intra- city bus service. Seven daily trains leave from South Bend bound for Chicago, with five trains offering return service. The weekend and holiday schedule offers eight trains that originate from South Bend and seven trains that provide return service. The South Bend Regional Airport is the only multimodal passenger facility operating in the Michiana area. South Bend Regional Airport offers connecting air service through Chicago, Cincinnati, Detroit, Atlanta and Minneapolis, intercity bus service to Chicago, Indianapolis, commuter rail service to Chicago and local bus service to the South Bend-Mishawaka area. Currently residents within the study area could connect to this system via the Niles Dial A Ride transfer point with Transpo at Auten Road, and then take Transpo to the South Bend Regional Airport where they can board the South Shore Line and travel to Chicago.

CAPITOL AND LAKESHORE LIMITED

The Capitol and Lakeshore Limited service has two trains that leave from the South Bend, Indiana train station in the evening and return in the morning. This service provides an additional connection to area residents for travel east to Cleveland, Pittsburgh, Washington D.C., Philadelphia, upstate New York, New York City, and Boston.

THE FUTURE OF HIGHER-SPEED RAIL

Federal

Momentum continues to grow across the country for greater investment in passenger rail service amid concerns over rising gas prices, climate change, and traffic congestion. On April 16, 2009, President Obama, together with Vice President Biden, and U.S. Transportation Secretary Ray LaHood, announced a new vision for developing high-speed intercity passenger rail in America. The vision calls for a collaborative effort by the federal government, states, railroads, and other key stakeholders to help transform America's transportation system through the creation of a national network of high-speed rail corridors. To achieve this vision, FRA published the High-Speed Rail Strategic Plan in April 2009 and launched the High Speed Intercity Passenger Rail (HSIPR) Program in June 2009. To realize President Obama's vision of giving 80 percent of Americans access to high-speed rail within the next 25 years, Congress made $8 billion available through the American Recovery and Reinvestment Act of 2009 (ARRA). Congress continued to build upon the Recovery Act by making available an additional $2.1 billion through annual appropriations for FY 2009 and 2010, using the framework initially established by the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), bringing the total program funding to $10.1 billion. Michigan has benefited from this investment in high speed rail through federal funding to purchase the Norfolk Southern line from Kalamazoo to Dearborn. Additional funding has been provided to begin work to increase speeds to 110 mph over the next few years.

Regional

The Midwest Regional Rail Initiative (MWRRI) is a cooperative, multi-agency effort that began in 1996 and involves nine Midwest states (Indiana, Illinois, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin) as well as the Federal Railroad Administration. The Midwest Regional Rail System (MWRRS) Plan elements include:

- Use of 3,000 miles of existing rail right of way to connect rural and urban areas
- Operation of a hub and spoke passenger rail system
- Introduction of modern, high-speed trains operating at speeds up to 110 mph
- Provision of multi-modal connections to improve system access

Map 11 - Midwest Regional Rail Initiative

The goal of the initiative is to develop a passenger rail system that offers business and leisure travelers shorter travel times, additional train frequencies, and connections between urban centers and smaller communities.

This study includes the 435-mile corridor from the Twin Cities to Chicago. The Minnesota portion of the study includes approximately 150 miles in southeastern Minnesota from La Crescent to Minneapolis/St. Paul that could accommodate high-speed trains. Today, only one train brings passengers from Minnesota to Chicago in about eight hours travel time. With the MWRRI, Minnesotans could travel to Chicago on an additional six trains in five-and-half hours of travel time.

The MWRRI will provide a large increase in service and will cut travel time between destinations by 30 to 50 percent. In addition, new equipment with reduced maintenance requirements, an advanced train signaling

and control system, and line capacity improvements will help to establish and sustain a high-level of on-time performance.

As a result of faster trip times, more frequent and higher quality on-time service, rail ridership in the routes that encompass the MWRRI will increase greatly. This increase in ridership will help to reduce expected growth in automobile congestion on highways and reduce overcrowding and runway delays at regional airports. As stated in the description of the Pere Marquette line, the MWRRI would replace the Pere Marquette line with a feeder bus route from St. Joseph to Niles to connect to the Wolverine or Blue Water lines. Other alternatives being evaluated are to create a connection at New Buffalo for the Pere Marquette line to benefit from the higher speed line. The other option is to add a route from Grand Rapids to Kalamazoo to connect to the higher speed train in that location. This would offer two routes from Grand Rapids. The station communities along the Pere Marquette continue to monitor the activity with this rail plan.

To explore more about the MWRRI please visit:
http://www.dot.state.mn.us/passengerrail/mwrri/index.html.

STATE OF MICHIGAN

The State of Michigan Rail Plan of 2011 highlights the state's commitment to rail. "The Plan is based on the understanding that the maintenance and expansion of rail service is critical to the economic well-being of the citizens and businesses of Michigan. Railroads play a major role in the movement of freight within and throughout the state and provide vital connections to the global marketplace. Because rail access is essential to many companies, improved rail service provides an important tool in Michigan's business development efforts. Passenger rail service provides an alternative for traveling between major economic centers and helps to promote commerce and economic development, particularly in the areas adjacent to stations."[2]

To review or read the plan please visit:
http://www.michigan.gov/documents/mdot/MDOT_MI_SRP_public_review_draft_2011-05-23_600dpi_353776_7.pdf

The Michigan Department of Transportation (MDOT) has initiated a program to evaluate passenger rail improvements for the Chicago-Detroit/Pontiac passenger rail corridor. The program is being prepared in partnership with the Indiana Department of Transportation (INDOT) and the Illinois Department of Transportation (IDOT), and in association with the Federal Railroad Administration (FRA).

The purpose of the program is to improve intercity mobility by providing an improved passenger rail service that would be a competitive transportation alternative to automobile, bus and air service between Chicago and Detroit/Pontiac, Mich. The program will provide sufficient information for the FRA to potentially support

[2] Michigan State Rail Plan, 2011

future decisions to fund and implement a major investment in the passenger rail corridor. To learn more about this effort please visit www.greatlakesrail.org.

RAIL ADVOCACY

The Michigan Association of Railroad Passengers, Inc. (MARP) was established in 1973 as a consumer advocacy group to passenger rail services, improved travel conditions for passengers, and the preservation of historic rail stations. MARP is working with the Midwest High Speed Rail Association and National Association of Railroad Passengers (NARP) to achieve high speed rail throughout the Midwest.

AIRPORTS

MICHIGAN

Southwest Michigan Regional Airport (Benton Harbor, Michigan)

The Southwest Michigan Regional Airport (SWMRA) is the largest airport in Berrien County, and the only all-weather airport in Berrien, Cass, and Van-Buren Counties. Additionally, it is one of only twenty Michigan airports to have a full Instrument Landing System (ILS).

The ILS is an internationally normalized system for navigation of aircrafts upon the final approach for landing. It was accepted as a standard system by the International Civil Aviation Organization in 1947[3]*.*

Founded in 1934, the airport is overseen by the Southwest Michigan Regional Airport Authority formed in 1997. The Authority is responsible for the overall operations of the airport, and its board of directors is composed of representatives from the cities of Benton Harbor and Saint Joseph, townships of Benton Charter, Lincoln Charter, Royalton, and Saint Joseph Charter.

The airport is located in northeast Benton Harbor at an elevation of 649 feet above sea level. There are 66 aircraft based on-site and more than 400 US and Canadian companies use the facility annually. Total aircraft operations for 2010 were 36,372. There are 67 registered aircraft at the airport.

There are three runways. The first is the primary runway 10/28 with 6005 feet long by 100 feet wide to handle corporate jet traffic; the second is 14/32 with dimensions of 3,661 feet by 100 feet; and the third 18/36 with dimensions of 2,498 feet by 100 feet.

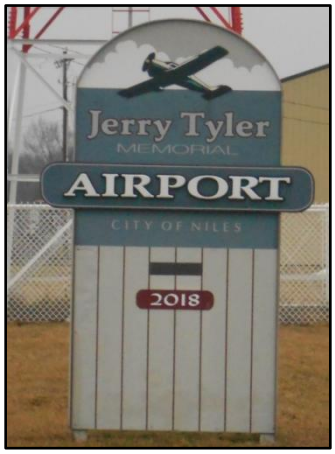
Scheduled airline service is not currently available. The Authority is currently involved in land acquisition for Runway Safety Area (RSA) improvements for the crosswind runway 14/42 to provide safety areas at each end of the runway. The SWMRA has on-site parking available for airport users in a completely fenced-in area. Avis and Enterprise offer car rental services at the airport with advance notice. Other operations:

[3] http://instrument.landing-system.com/

Military, Coast Guard and State Police activity; Just-In-Time (JIT) delivery; air courier delivery (UPS); and executive travel by local and visiting companies.

In 2012, approximately 429,248 gallons of jet, and aviation fuel were sold at the airfield. Additionally, the airport is used as a logistical base for medical emergencies and search and rescue operations. The majority of airport revenue is derived from fuel sales, hangar leases (both T-hangar and corporate hangars), and millages from participating jurisdictions. The success of the SWMRA provides primary and secondary economic benefits to the community at large. The economic impact (according to the Bureau of Transportation Planning, 91 Intermodal Section of MDOT) of the SWMRA to the community is estimated at slightly below $10 million as of January 2004. Additionally, the airport is directly linked to 101 full and part-time jobs.

Jerry Tyler Memorial Airport (Niles, Michigan)



Jerry Tyler Memorial Airport is a general utility airport, owned and operated by the City of Niles. The airport serves general aviation needs in the Michigan and Indiana areas. Situated on the northeast side of the city at 2018 Lake St., the airport features a NW/SE 4,100 foot paved runway and a NE/SW 3,300 paved runway. Approximately 35 aircraft are based at the airport.

The airport provides both corporate and recreational flyers with a conveniently located facility, offering an alternative to the more congested South Bend Regional Airport nearby. Hangar rentals and ground and tie-down leases are available for both private and corporate aircraft. The airport provides both corporate and recreational flyers with a conveniently located facility, thus relieving added congestion at nearby South Bend Regional Airport in South Bend. Joe Ray, the City's Public Works Director, also serves as the Michigan state-licensed Airport Manager.

A seven member airport advisory board assists with airport operations issues. The board meets on the 2nd Thursday of each month at 4:30 pm at the airport administration building[4].
A full list of the Jerry Tyler Memorial Airport projects for the next ten years can be found in Appendix D.

[4] http://www.ci.niles.mi.us/DeptsAndServices/DPW/JerryTylerMemorialAirport.htm

INDIANA

South Bend Regional Airport (South Bend, Indiana)

The airport offers commercial and freight service, and also offers aircraft fueling, servicing, storage and charter services from Atlantic Aviation. The airport is governed by the St. Joseph County Port Authority, which is a municipality in the State of Indiana. Its four bipartisan board members are appointed by the St. Joseph County Commissioners. The Airport Authority employs approximately 60 staff members. The mission of the St. Joseph County Airport Authority is; "to maximize the safety, service, efficiency and effectiveness of South Bend Airport for the traveling public, and to promote the value of the airport to the community." In addition to serving our commercial passengers, South Bend Airport also offers services and amenities to small, private aircraft. Passenger air travel is offered by Allegiant, Frontier, Delta, and United. Map 12 highlights the vast passenger connectivity that the airport provides throughout the country.

Map 12 - South Bend Regional Airport Flight Locations

Sources: http://www.flysbn.com/

NON-MOTORIZED TRANSPORTATION

Increased interest and attention has been building over the years on the incorporation of bicycling and walking into the transportation network. This section will focus on the non-motorized network that includes:

- Sidewalks-where information is available
- Four foot paved shoulders
- Five foot bicycle lanes
- Trails

FEDERAL EFFORTS

US Department of Transportation (US DOT)

"The DOT encourages states, local governments, and other government agencies, to adopt similar policy statements on bicycle and pedestrian accommodation as an indication of their commitment to accommodating bicyclists and pedestrians as an integral element of the transportation system. Transportation agencies and local communities should go beyond minimum design standards and requirements to create safe, attractive, sustainable, accessible, and convenient bicycling and walking networks. Such actions should include:

- Considering walking and bicycling as equals with other transportation modes.
- Ensuring that there are transportation choices for people of all ages and abilities, especially children.
- Going beyond minimum design standards.
- Integrating bicycle and pedestrian accommodation on new, rehabilitated, and limited-access bridges.
- Collecting data on walking and biking trips.
- Setting mode share targets for walking and bicycling and tracking them over time.
- Removing snow from sidewalks and shared-use paths.
- Improving non-motorized facilities during maintenance projects.

> "Increased commitment to and investment in bicycle facilities and walking networks can help meet goals for cleaner, healthier air; less congested roadways; and more livable, safe, cost-efficient communities. Walking and bicycling provide low-cost mobility options that place fewer demands on local roads and highways."
>
> Ray LaHood, US Secretary of Transportation

US DOT recognizes that safe and convenient walking and bicycling facilities may look different depending on the context — appropriate facilities in a rural community may be different from a dense, urban area. However, regardless of regional, climate, and population density differences, it is important that pedestrian and bicycle facilities be integrated into transportation systems. While DOT leads the effort to provide safe

and convenient accommodations for pedestrians and bicyclists, success will ultimately depend on transportation agencies across the country embracing and implementing this policy[5]."

STATEWIDE EFFORTS

MICHIGAN

- Michigan Transportation Law-"Michigan's state transportation law requires that a minimum of one percent of state transportation funds be spent for non-motorized transportation. Section 10k of Public Act 51 of 1951, as amended, allows for non-motorized plans, services, and improvements to a road, street, or highway, which facilitates non-motorized transportation by the widening of lanes, striping to designate bike lanes, or any other appropriate measure considered a qualified non-motorized facility for the purpose of this section. State law allows bicyclists to ride on all public roads except where restricted or on limited access highways. Therefore, bicyclists are found in travel lanes on streets, road shoulders, bike lanes, and shared use paths across the state". *Source Michigan Department of Transportation State Long-Range Transportation Plan 2005-2030 Non-Motorized Technical Report, 2007.*

- Michigan Department of Transportation (MDOT)-"The Michigan Department of Transportation is demonstrating its commitment to an integrated system through the inclusion of non-motorized projects in MDOT's standard operating procedures. The Fiscal Year (FY) 2018 Integrated Call for Projects (CFP) encourages project managers to integrate non-motorized solutions with roadwork when appropriate". In addition, the CFP emphasizes context sensitive solutions that support the state's Complete Streets Policy discussed below. *Sources: Michigan Department of Transportation State Long-Range Transportation Plan 2005-2030 Non-Motorized Technical Report, 2007; Michigan Department of Transportation 2018 Integrated Call for Projects, 2012.*

- Michigan Trails at the Crossroads: A Vision for Connecting Michigan, 2007. This document was produced by the Michigan Department of Natural Resources and the Michigan Department of Transportation. The document seeks to foster a connected shared use path system in Michigan by building new facilities and upgrading existing facilities throughout the state. The document also promotes the creation of an interconnected statewide system of shared use paths called "Discover Michigan Trails." The system would connect natural, tourist, and urban destinations. Modeled after the Michigan Trailways Act, a designation of the initial set of shared use paths would

[5]Ray LaHood, United States Secretary of Transportation
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/overview/policy_accom.cfm).

be established and then an appointed council of diverse interests would be charged to create a strategy and action plan to achieve the vision for the "Discover Michigan Trails" network, including developing guiding principles for public trail investments and a dedicated funding source for multi-use shared use paths. In accordance with this document and other initiatives, in 2012, Governor Snyder laid out his vision for a continuous 924-mile trail stretching from Detroit, to the border with Wisconsin in the UP, across the heart of the state. The trail would be accessible to hikers, bicyclists, and snowmobilers.

- Michigan Complete Streets Legislation: August 2010

  Complete Streets legislation signed on Aug. 1, 2010 gives new project planning and coordination responsibilities to city, county and state transportation agencies across Michigan. The legislation defines Complete Streets as "roadways planned, designed, and constructed to provide appropriate access to all legal users...whether by car, truck, transit, assistive device, foot or bicycle." The law further requires Complete Streets policies be sensitive to the local context, and consider the functional class, cost, and mobility needs of all legal users. Michigan leads the nation in the number of communities that have enacted Complete Streets policies. The State Transportation Commission officially adopted a Complete Streets policy on July 26, 2012, as required by PA 134 and PA 135 of 2010. The primary purpose of the new laws is to encourage development of Complete Streets as appropriate to the context and cost of a project. The focus on streets that serve all legal users is intended to increase transportation accessibility for all modes and all users without significantly impacting traffic movements. MDOT created a Complete Streets internal team to help implement the policy and work through the department's Context Sensitive Solutions (CSS) process. MDOT also participates in the statewide Michigan Complete Streets Advisory Council. This activity complements the goals of the MITP[6].

INDIANA

Michiana Area Council of Governments (MACOG)

MACOG shares a border with Berrien, Cass, and St. Joseph counties in northern Indiana. MACOG provides planning expertise to St. Joseph, Marshall, and Elkhart counties. In 2001, they released their Regional Bicycle Facilities Map which outlines all off and on-road bike routes in the MACOG region. Routes which were planned to remain unsigned were also identified. This plan serves as an excellent resource for those looking to connect to points surrounding the region and to southwest Michigan[7].

[6] http://www.michigan.gov/documents/mdot/MDOT_NewPolicyIntegrationWhitePaperFinal_397570_7.pdf

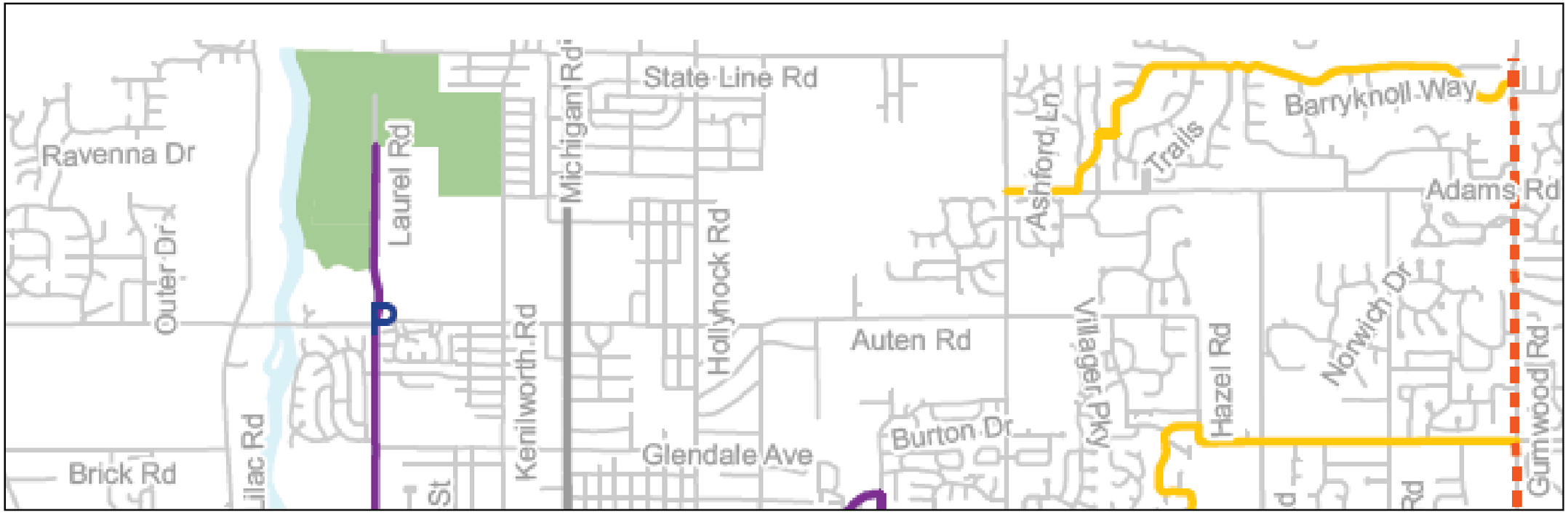
[7] www.macog.com/

Map 13 that follows shows the projects that are on the ground currently (the solid lines) and those projects that are being proposed (dashed lines) in the areas that would impact the NATS planning area. The three projects that the MPO should monitor would include:

1. Laurel Road (signed route), North – South Route,
2. Barryknoll Way (unsigned route), West – East Route,
3. Gumwood (proposed multi-use path) North – South Route.

As more projects come closer to connecting the two states, communication with our partner organization to the south will be important to ensuring that a seamless non-motorized transition from Michigan to Indiana occurs.

Map 13 - South Bend and Mishawaka Non-Motorized and Pedestrian Facilities



Source: Michiana Area Council of Governments Non-Motorized Transportation Plan

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Regional Efforts

Southwest Michigan Non-Motorized Transportation Plan

In 2011, the Southwest Michigan Planning Commission completed a nine-county non-motorized transportation plan on behalf of the Michigan Department of Transportation, which covered the nine counties in the MDOT southwest region (Allegan, Barry, Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, and Van Buren counties). The plan was intended to guide MDOT's investment in non-motorized facilities in the southwest region for five years.

Mud Lake Bog is owned and operated by Buchanan Township.

The plan provided a region-wide vision for a connected system of off-road shared use paths and on-road facilities (paved shoulders/bike lanes); encouraged dialogue and more coordinated planning among state, county, and local entities; and enhanced partnerships and increased communication among state, county, and local agencies regarding the implementation and operation (construction, maintenance, marketing, etc.) of non-motorized facilities.

This Plan highlights the major gaps in southwest Michigan to achieving a connected region-wide system. With extensive public participation, desired and planned non-motorized facilities were solicited and mapped. Regional priority corridors were identified along with local priority routes for each of the counties. There are five north-south and four west-east priority regional corridors and many of the local/county priority routes correspond to the regional corridors.

To complete a non-motorized system for the proposed corridors, a combination of on-road and off-road facilities will probably be necessary. The corridors are meant to be conceptual and for the most part do not pinpoint exact streets or sections of land. These corridors will serve as connectors for the region and to the surrounding regions as well. The priority corridors were grouped into two categories - north-south and west-east corridors. Below is a description of the priority regional corridors and Map 14 displays the corridors.

North-South Corridors:

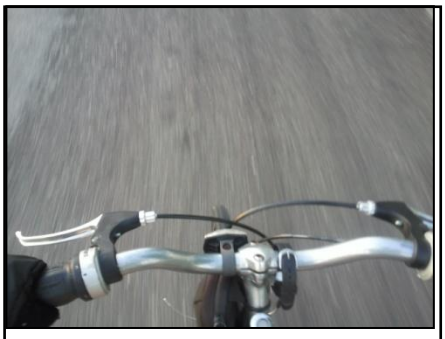
- **Lakeshore/USBR 35 (Dark Gray)** - This corridor follows the Lake Michigan shoreline and would also provide a portion of the United States Bicycle Route 35. In southwest Michigan, the route traverses through Saugatuck and Douglas in Allegan County, South Haven in Van Buren County and St. Joseph and New Buffalo in Berrien County.

- **M-40 (Pink)** - This corridor would follow M-40 connecting the communities of Allegan in Allegan County, Gobles and Paw Paw in Van Buren County, and Marcellus in Cass County.

- **M-66 (Green)** - This corridor would follow M-66 connecting the communities of Woodland and Nashville in Barry County, Battle Creek and Athens in Calhoun County, and Mendon and Sturgis in St. Joseph County.

- **I-69/Old US-27 (Light Gray)** - This corridor would follow I-69/Old US-27 as it traverses through the communities of Marshall and Tekonsha in Calhoun County and Coldwater in Branch County.

- **Wayland/Sturgis (Purple)** - This corridor would begin in Sturgis and connect to Mendon in St. Joseph County then proceed northwest connecting through Kalamazoo County and through the communities of Parchment and Kalamazoo, and finally head into Allegan County connecting Plainwell and Wayland.



Bicycling is a great way to see the beauty of our region.

West-East Corridors:

- **Great Lake to Lake Trail Route #1 (Brown)** - This is a statewide priority corridor that would connect the segments of the Kal-Haven Trail beginning in South Haven in Van Buren County to the Kalamazoo River Valley Trail and the City of Kalamazoo in Kalamazoo County, and the Battle Creek Linear Park in Calhoun County as it heads east to connect with Port Huron on Lake Huron.

- **US-12 (Blue)** - This corridor would follow the US-12 Heritage Route as it starts in New Buffalo in Berrien County and connects to Edwardsburg in Cass County, White Pigeon in St. Joseph County and shifting slightly northwest past Sturgis in St. Joseph County before heading to Coldwater in Branch County.

- **Holland-Nashville (Yellow)** - This corridor would follow 142nd Avenue in Allegan County, just outside of Saugatuck and would head east connecting Middleville, Hastings, and Nashville in Barry County.

- **M-60 (Red)** - This corridor would follow M-60, starting near the lakeshore in St. Joseph in Berrien County. It would head east through Dowagiac and Cassopolis in Cass County, and then connect Three Rivers and Mendon in St. Joseph County, and on to Athens and Union City in Branch County. It would pass through Burlington and Homer in Calhoun County before continuing east beyond the southwest Michigan region.

Map 14 - Regional Non-Motorized Routes

Existing and Planned Non-Motorized Map

June 24, 2011

TRANSPORTATION NETWORK

Primary Roads with Traffic Volume* (Vehicles per day)

	Unpaved	Paved	Paved 4ft Shoulder/ Bike Lane
Light - Under 2,500			
Medium - 2,500 to 10,000			
Heavy - Above 10,000			

Minor Roads‡ — no volume information

Limited Access Highways — Interchanges

Active Rail Line

Non-motorized Trails

Improved Multiuse (Paved or Crushed Fines)

Unimproved Multiuse (Gravel or Dirt)

North Country Trail

* Traffic volumes are estimated based on an average 24-hour period. Rush hour (peak period) traffic volume can be much greater than at other times of the day. Traffic volumes also vary by season and day of week.

‡ Minor roads generally have lower traffic volume but road width and surface type may make them less appropriate as a bike route. Consult local county road commissions for more information. www.micountyroads.org

COUNTY

Southwest Michigan Planning Commission
185 East Main Street Suite 701
Benton Harbor, MI 49022
Website: http://www.swmpc.org/

Miles 0 2 4 6 8 10

NON-MOTORIZED PLANS

Non-Motorized Plan

Type
- Off Road
- On Road
- Undetermined

Regional

East/West
- Lake to Lake Trails (Route 1)
- Holland/Nashville
- M-60
- US-12

North/South
- Lakeshore/USBR 35
- Wayland/Sturgis
- M-40
- M-66
- I-69/Old US-27

Local
- Local Link

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Priority Local Routes

The 9 county plan also highlighted the local priority routes as identified in Table 18. For the purposes of this plan, the local priority routes for Berrien and Cass Counties are listed.

Table 18 - Local Priority Routes

County	High	Medium	Low
Berrien	-Lakeshore Trail/USBR 35 (priority is off-road and connecting to the Marquette Greenway in IN)* -US-12 corridor* -St. Joseph to Niles (following M-63 corridor from St. Joseph to Berrien Springs to the state line connecting to IN)*	-Hickory Creek corridor (Stevensville to St. Joseph River to Silver Beach in St. Joseph City) -Along Ox Creek (Benton Harbor)	None identified
Cass	-Along Airline Railroad from Cassopolis to Vandalia to Three Rivers -Dowagiac River Water Trail (not shown on map)	None identified	None identified

**Denotes if local project is also identified as a priority regional corridor*

Local Efforts

Indiana-Michigan River Valley Trail, Niles

The partners are working to create a 34-mile trail connecting Niles, Michigan to Mishawaka, Indiana. The completed trail would be used by commuters, students, families and tourists. The trail would connect people to universities, schools, downtowns, parks, hospitals, historical and cultural areas, and businesses. In 2010, the City of Niles completed 2.25 miles of trail from Plym Park to 3rd/Fort Street. The trail needs to be completed south of the City of Niles. The Niles Township Parks Committee is actively working with partners to make this connection from Niles City to the Indiana state line. Niles Township has secured a 20 year lease agreement with Indiana-Michigan Power along the utility corridor to make this trail a reality. Funding has been secured and the trail will be constructed in 2014. In Indiana, the St. Joseph County Parks Department and partners are working to continue the trail to Roseland and onto South Bend and Mishawaka. St. Joseph County Parks and Michiana Council of Governments have conducted a traffic study at Cleveland Avenue and have found an affordable solution for getting trail users across this busy road. In South Bend, Indiana, an extension of the section known as the Northside Trail has been built. The extension will more-or-less parallel Northside Blvd. from 21st Street to Logan St. where it will link up with Mishawaka's Riverwalk.

Friends of McCoy Creek Trail, Buchanan

Friends of McCoy's Creek Trail was established by Resolution of the City of Buchanan in April 2004 as a subcommittee of the Buchanan Area Recreation Board. They have developed pathways through E. B. Clark Woods on the south side of McCoy's Creek and have continued the shared use path to downtown Buchanan along McCoy Creek and are now working to connect to Niles and New Buffalo.

INVENTORY OF FACILITIES

Table 19 outlines the total inventory of facilities in the NATS planning area. As more detailed mapping inventory is completed for the NATS Walk and Roll Plan, it will be easier to determine where the gaps in facilities are throughout the region. This will better help the MPO and member communities target areas that need to be completed to make the system more easily accessible for pedestrians and non-motorized users. The MPO does not have a map showing where all the local facilities are currently located.

Table 19 - Inventory of Non-Motorized Facilities

Community	Sidewalks	Paved Shoulders and Bicycle Lanes	Trails
City of Niles	87	0.25	2.25
City of Buchanan	38	X	4.3
Village of Edwardsburg (called)		X	X
Bertrand Township	NI	NI	NI
Buchanan Township	X	2.2	X
Howard Township	NI	NI	NI
Mason Township	X	X	X
Milton Township	X	X	X
Ontwa Township	X	X	X
Niles Township	15.14	11.85	X

NI=No information provided to MPO

BENEFITS OF NON-MOTORIZED TRANSPORTATION

Non-motorized transportation has become increasingly important as many people come to understand the numerous benefits that these facilities bring to a community. The benefits are very diverse and include advantages in economic, social, environmental, health, and overall quality of life.

The economic vitality of a community can be greatly affected by an environment that is supportive of non-motorized travel. Non-motorized facilities such as shared use paths provide a means of interacting with nature, neighbors, and businesses within a community. Many studies have shown the economic benefits of shared use paths to local businesses. In Michigan studies show that out-of-town shared use path users spend anywhere from $949 to $1,269 on lodging, restaurant, groceries, gas, and equipment per trip. Further, shared use paths can positively impact property values. For example, realtors indicated that homes along the Paint Creek Trail in Michigan were selling for about 10 percent more than comparable homes not located along the path.

Health and Quality of Life Benefits of Non-Motorized Facilities

- Reduces air pollution
- Encourages physical fitness
- Helps prevent obesity related chronic diseases
- Creates safer neighborhoods
- Provides safe alternative transportation options
- Helps connect people, neighborhoods and communities with each other and the outdoors

Non-motorized facilities provide an alternative form of transportation to the automobile. This can help reduce the amount of congestion on our roadways and reduces the amount of air pollution from vehicles. Poor air quality can contribute to respiratory problems and overall health issues in the population. Non-motorized facilities can also provide transportation options for the elderly, mobility challenged and those who cannot afford or chose not to have an automobile. Non-motorized transportation choices can also help people connect to public transit options such as train and bus stops.

Further, a connected non-motorized network will offer numerous health and safety benefits for the residents of southwest Michigan. As the obesity epidemic is quickly becoming one of the largest health problems facing Americans today, these facilities can provide a place for community members to easily and inexpensively engage in physical activity. Non-motorized facilities can also provide a safer route for students to walk or bike to school with less pedestrian-vehicular conflicts at intersections.

Despite the known benefits to non-motorized transportation, the general public does not choose non-motorized transportation very frequently outside of recreational uses. According to the American Community Survey the primary means of transportation to work in Michigan and within the NATS study area continues to be those driving alone. Table 20 shows that driving alone to work is a slightly more dominant commute mode in southwest Michigan than in the state as a whole.

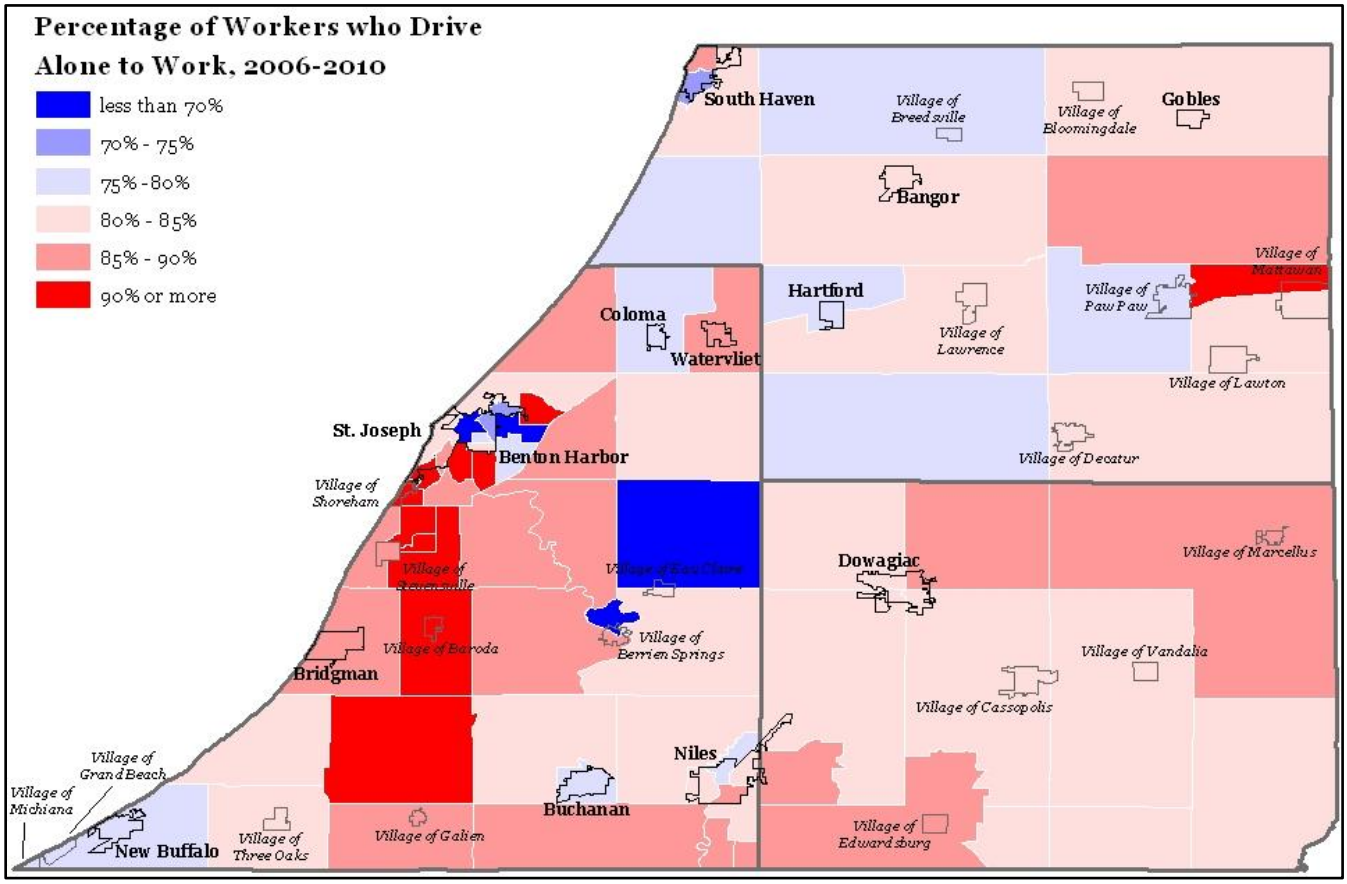
Table 20 - Percentage of People Who Drive Alone

	Michigan	Berrien County	Cass County
Total Number of Workers (Age 16 and older)	4,225,557	68,875	22,914
Drove alone	82%	84%	85%
Carpooled (2-3 person)	9%	8%	9%
Public Transportation	1%	.004	.002
Walked	2%	.026	.014
Bike	.004	.003	.000
Taxi, Motorcycle, and Other means	.007	.007	.005

Source: 2006-2010 American Community Survey Federal Information Processing Standards Codes (FIPS): 26027, 26, 26021

Still, the dominance of driving alone is not uniform throughout the study area. Map 15 highlights that certain areas of southwest Michigan contain higher concentrations of residents who tend to use a mode other than the personal automobile for their daily commute.

Map 15 Percent of Workers Who Drive Alone to Work



Commuting patterns alone do not fully explain the need for transportation alternatives to the personal automobile. Changes in demographics and market demand also contribute to a desire for infrastructure that supports a variety of forms of transportation.

CHANGING DEMOGRAPHICS

Elderly and Disabled Populations

Figures 15-16 demonstrates a clear increase in the population aged 50-74 between 2000 and 2010, and a clear decrease in the population aged 25-44 over that time. The trends suggest that while Southwest Michigan has a large number of people of working age, the population of the state and the study area will continue to age. As more people are unwilling or unable to drive alone, they will likely rely less on single occupancy vehicles as their primary means of travel. As an MPO, NATS needs to ensure that the transportation system is complete to provide all people the opportunity to travel by modes other than automobile. A particular challenge in this region is that the population is continuing generally to disperse from incorporated cities and villages into townships. In many cases, this shift in population increases the distance that residents have to travel to access vital resources such as food, healthcare, and employment. For senior citizens and persons with disabilities who are unable or uncomfortable with driving on their own, these distances can become prohibitive where alternatives do not exist.

Figure 15 - Berrien County Population Tree

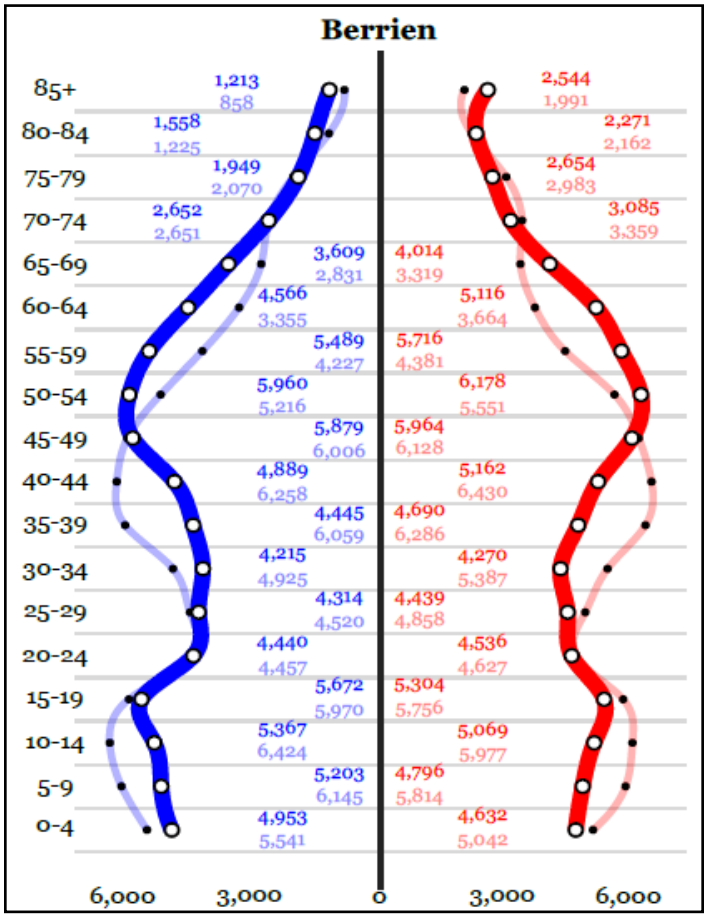
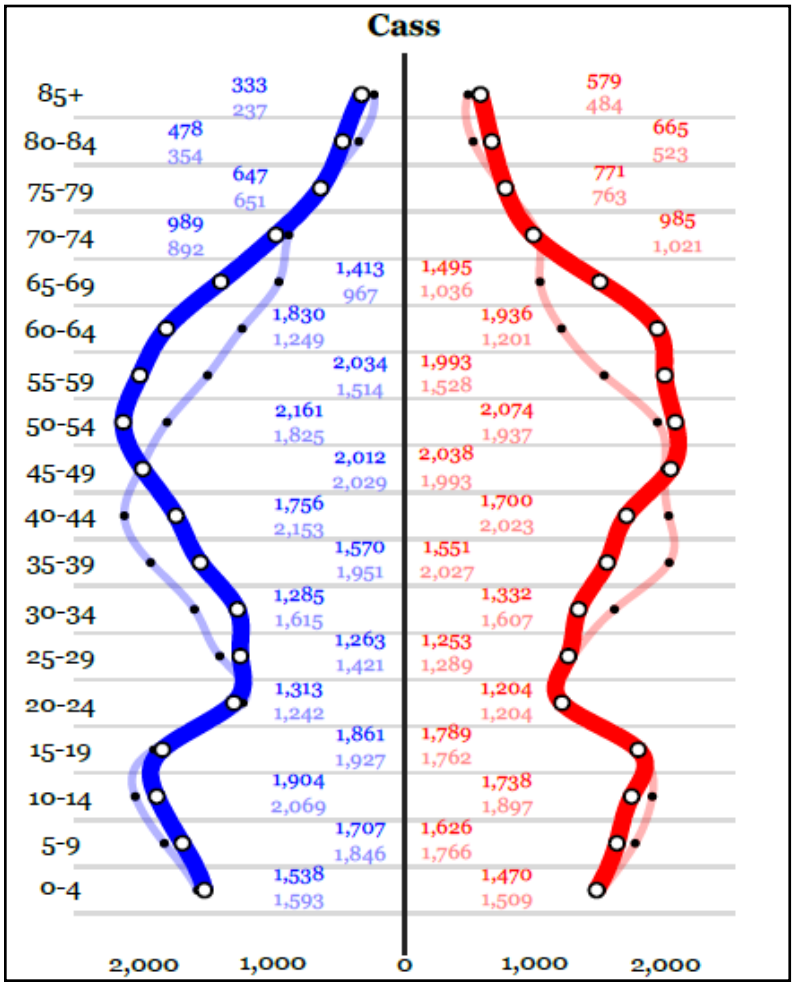


Figure 16 - Cass County Population Tree



Youth

A shortage of alternative facilities to the automobile creates challenges for more than just the elderly and disabled. One interesting change that has become more apparent is that many younger people now desire to live in communities where they do not have to own an automobile, or do not need to travel by car to meet their daily needs. These young people might wish to live in an area with good public transit and pedestrian and bicycle facilities that connect them with employment and cultural attractions.

> A survey by the National Association of Realtors conducted in March 2011 revealed that 62 percent of people ages 18-29 said they would prefer to live in a communities with a mix of single family homes, condos and apartments, nearby retail shops, restaurants, cafes and bars, as well as workplaces, libraries, and schools served by public transportation.
>
> *http://www.theatlanticcities.com/*

The ability for southwest Michigan to once again attract working age people to the region may hinge not just on availability of jobs, but on provision of these amenities. Certain nationwide findings support the provision of these amenities to retain and attract young workers:

- **Driving Restrictions**-Recent restrictions on driving -- later ages for licenses, limits on how many people can be in the car, restrictions on cell phone use and this has resulted in the share of 14 to 34-year-olds without a driver's license increased by 5 percentage points, rising from 21 percent in 2000 to 26 percent in 2010, according to the Federal Highway Administration[8].

- **Multi-Modal Youth-**Young people are also making more use of transit, bikes, and foot power to get around. In 2009, 16 to 34-year-olds took 24 percent more bike trips than they took in 2001. They walked to their destinations 16 percent more often, while their passenger miles on transit jumped by 40 percent. But money doesn't explain everything. Sixteen to 34-year-olds in households with incomes of more than $70,000 per year are increasingly choosing not to drive as well, according to the report. They have increased their use of public transit by 100 percent, biking by 122 percent, and walking by 37 percent[9].

- **Walkable Communities-**A separate 2011 Urban Land Institute survey found that nearly two-thirds of 18 to 32-year-olds polled preferred to live in walkable communities. The re-urbanization of America is giving more people access to public transportation. The advent of Zipcar and other car-on-demand businesses is eliminating the need to own and insure an expensive vehicle that often isn't driven much.

[8] http://www.theatlantic.com/business/archive/2012/08/why-are-young-people-ditching-cars-for-smartphones/260801/

[9] http://www.theatlanticcities.com/commute/2012/04/why-young-americans-are-driving-so-much-less-their-parents/1712/

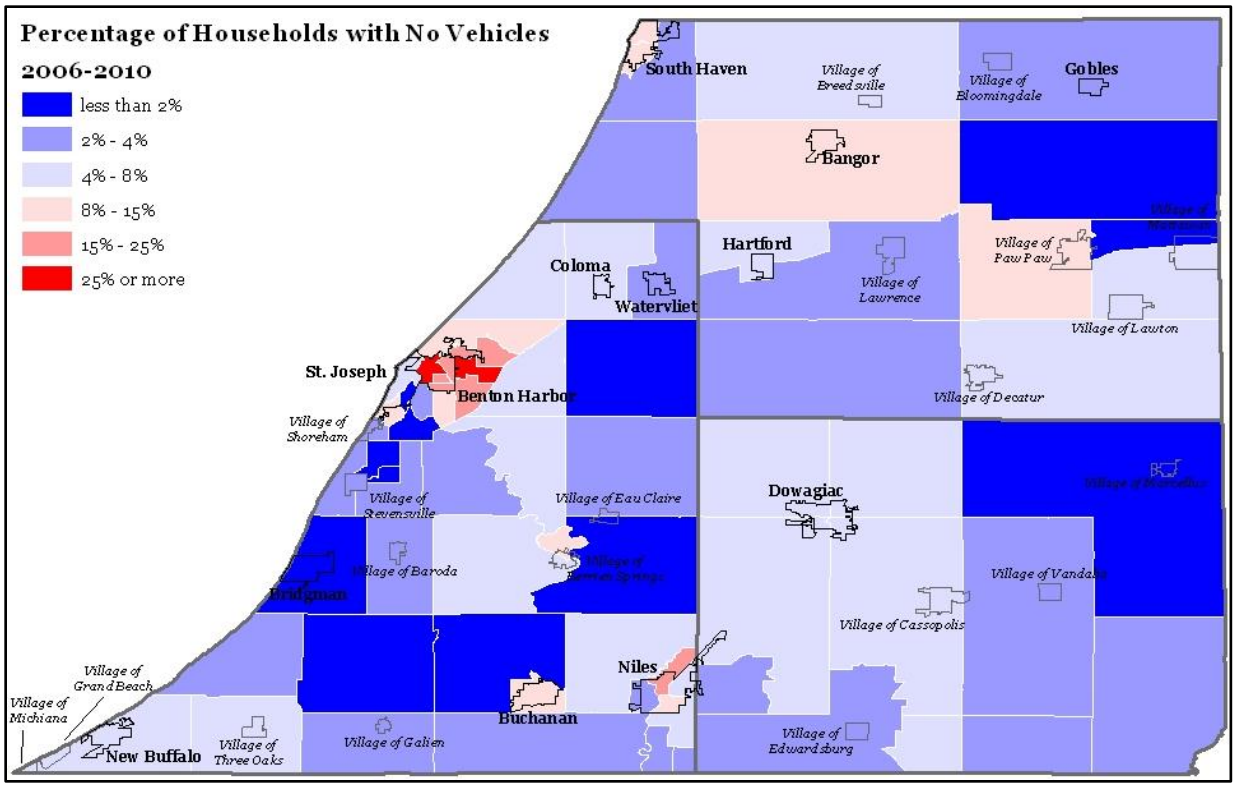
Low Income Populations

Another demographic group may require, and indeed, want personal automobiles to navigate their daily needs, but may be unable to afford the cost of owning a car, a cost which continues to rise. The total average cost of owning and operating a car is approximately $8,700 per year, and this figure assumes that gasoline prices remain under $4.00 per gallon.

The provision of sidewalks is intermittent and may be absent in many situations. Some of the jobs in these areas may also demand that employees reach and depart work during the evening hours, when transit is unavailable, and when walking and bicycling in the traffic lanes themselves may be even more unsafe than during daylight hours.

Aging and disability, a desire for less automobile-oriented living, and insufficient incomes all lead to a need to consider alternative modes to the automobile. Map 16 shows the percentage of zero-car households in each Census Tract of the southwest Michigan region. While the small urban centers appear to have generally higher percentages of zero-car households than more rural areas, this might not always be the case as the population continues to age. One of the stated goals of this plan is to improve the accessibility that these households have to critical services, employment and cultural attractions, regardless of the circumstances that lead to them not owning or operating a vehicle.

Map 16 - Percent of Households with No Vehicles



FREIGHT

Freight transportation, whether by rail, truck, or ship, contributes significantly to both traffic and economic activity in the southwest Michigan region. With the global extent of supply chains, changes in freight movement well outside the region may have tremendous impacts on the quantity and type of freight moving through the region, as well as the types of economic activity in Southwest Michigan.

Freight movement and large-scale infrastructure in nearby major metropolitan centers may have a substantial spillover effect in increasing traffic in southwest Michigan. Interstate I-290 in Illinois in 2011 was found to have the worst truck bottleneck of any freight-significant highway in the United States. Given that I-94, a major transportation link in Berrien County, connects directly to I-290, it is likely that a large portion of that traffic travels through the southwest Michigan region. In addition, transnational border crossings in Detroit and Port Huron, the busiest in the nation, send a large amount of truck traffic through this region, both into and out of Canada.

This section covers new federal legislation as well as the effects that all modes of freight transport have on the region, including recent projects far beyond the planning boundary of NATS.

MAP-21'S FOCUS ON FREIGHT

Moving Ahead for Progress in the 21st Century (MAP-21), which took effect on October 1, 2012, includes a renewed focus on the efficient movement of freight, and a goal of using effective freight planning to spur and support economic growth across the country. Freight provisions open up new possibilities for funding as well as promote the creation of a national framework for freight. In particular, MAP-21 provides for the following:

- The development of a report by USDOT by October 1, 2014 which assesses the current condition and performance of the nation's freight system.
- The development of national performance goals related to freight by April 1, 2014.
- The development of state performance measures related to freight movement on the Interstate system by one year after federal goals and measures are released.
- The development of state freight plans and progress reports on performance measures every 4 years.
- New freight activity eligibility under core highway programs.
- The completion of a nationwide truck parking facility survey by April 1, 2014

- Funding opportunities for states, MPOs, and local agencies that wish to upgrade truck parking facilities.

- An expansion of the Marine Highways program and increased funding for harbor upgrades.

- The establishment of a National Freight Policy Council, made up of state DOT officials and other freight stakeholders, to help develop a national freight policy[10].

FREIGHT RAIL

The CSX Corporation is based in Jacksonville Florida and is one of the nation's largest rail transportation providers. There are operations and networks in 23 states, the District of Columbia, and the Canadian provinces of Ontario and Quebec.

In Michigan, the CSX line is a class one carrier that connects the east to the west making many stops including Detroit, Lansing, and Grand Rapids. The CSX line from Grand Rapids travels along the lakeshore through southwest Michigan and onto Chicago. There are seven to eight trains traveling along the tracks on a daily bases. There is a mix of both passenger and freight. Use of CSX tracks has been on the decline in southwest Michigan. CSX still transports a wide variety of products including coal, iron, steel, passenger vehicles, and auto parts to points both east and west. Coal is the most heavily shipped product by rail. Major companies in the area that use CSX include TechniSand Inc. in Bridgman and Arlington Metals Corporation in Sawyer. In addition, Amtrak operates its Blue Water, Wolverine, and Pere Marquette passenger routes on CSX tracks.

A rendering of the proposed Detroit River International Crossing between Southwest Detroit and Windsor, Ontario.

On a national scale, two major railroad expansions may already be increasing the amount of freight that enters the southwest Michigan region. CSX's National Gateway Project, completed in 2011, allows freight trains from Maryland, Virginia, North Carolina Pennsylvania, West Virginia, and Ohio to be double-stacked with containers, dramatically increasing the amount of freight that can be moved. As part of the project, CSX also opened a new multi-modal freight terminal in North Baltimore, Ohio[11]. In addition, the Heartland

[10] http://www.fhwa.dot.gov/planning/freight_planning/talking_freight/12talking.cfm

[11] http://www.nirpc.org/media/5588/nirpc_freight__report_final_updated_8_30_2010.pdf

Corridor allow the routing of double-stacked trains from the port of Norfolk, Virginia to Columbus Ohio, and then onward to Chicago.

While neither of these projects will directly impact railroad tracks or services in southwest Michigan, they will each substantially increase the quantity of freight that moves across the country. Some of the increased number of trucks needed to move that freight away from their rail destinations will no doubt cross through or deliver freight into the Southwest Michigan region, perhaps along with an increased number of freight ships on the St. Joseph River or Lake Michigan.

TRUCKING

The efficient movement of freight within and through the NATS area is important to industry, retail, and agriculture for international and regional trade. On a national scale, over-the-road trucking still makes up the largest modal share of domestic freight transport, both in terms of volume of freight and dollar value. While there has been a reduction in total freight moved by truck in the wake of the 2008 recession, USDOT still projects that trucking movement will increase and continue to be the predominant mode of freight travel in 2040.[12]

The recession did not appear to slow down truck freight movements to and from Canada, as both exports and imports increased between 2005-2011. The Ambassador Bridge in Detroit is currently the most active commercial transnational border crossing in North America. It is likely that much of the freight that crosses the Ambassador Bridge passes through this region before reaching its end user. With the proposed Detroit River International Crossing, the capacity to haul freight across the border will increase, likely leading to an increased number of trucks passing through the southwest Michigan region en-route.

Regions adjacent to NATS also see a substantial share of truck traffic. The Northern Indiana Planning Commission (NIRPC) found trucking to be the predominant mode of freight movement within its planning boundaries, accounting for nearly double the volume of freight moved through all other modes combined. Similarly, the Michiana Area Council of Governments (MACOG) found in its 2004 study that regional producers of non-metallic minerals, a major economic base in the region, were heavily dependent on trucks to export their goods[13].

[12] Federal Highway Administration, Office of Freight Management and Operations. (2012). Freight Facts and Figures 2012.

[13] http://www.macog.com/PDFs/MPO/D05stfnl.pdf

THE CHICAGO EFFECT

The proximity of this region to Chicago will continue to have profound impacts on freight movement through the TwinCATS region. Chicago is in a unique position nationally as it continues to be both a rail and trucking hub. Chicago is the busiest port in the Western Hemisphere in terms of twenty-foot equivalent unit (TEU) container traffic. According to Chicago Metropolitan Area's Freight Drill-Down Report, Chicago's status as a freight center allows it to experience a multiplier effect. For example, when there is growth in the air transport sector, demand in the rail transport sector. With this multiplier effect, it is inevitable that many products seen in Chicago's freight distribution facilities will pass through the NATS region, or reach end users here, at some point in the supply chain[14].

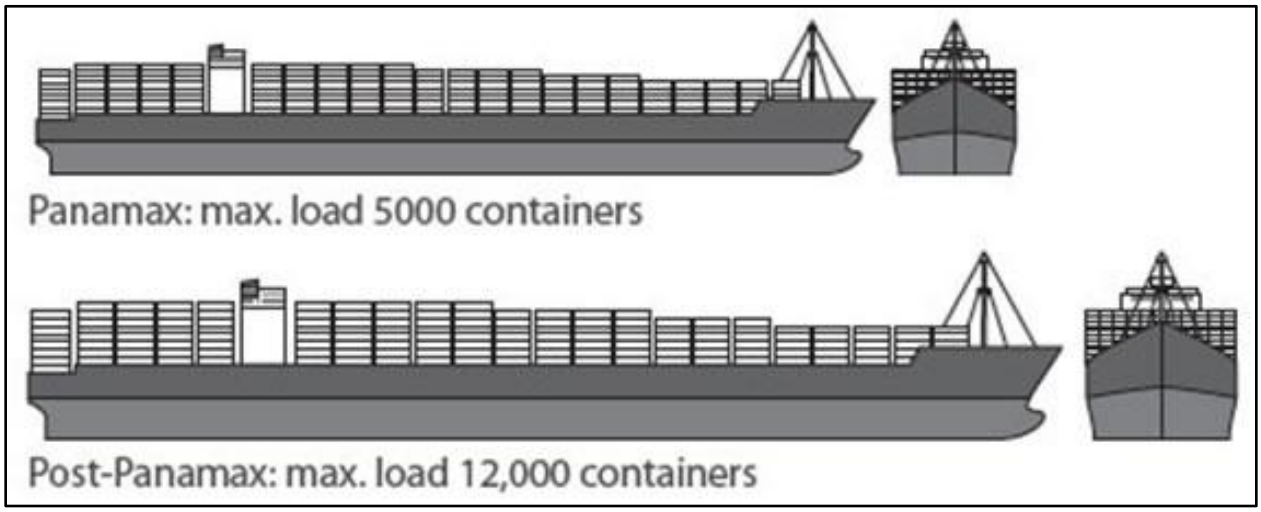
THE PANAMA EFFECT

Unlike Chicago, Panama may seem a world away from southwest Michigan. Yet an ongoing expansion of the Panama Canal, known as Panamax, will increase the speed and efficiency of freight movement across the globe, and will create significant new freight traffic in southwest Michigan. With the expansion of the Panama Canal, larger ships will be able to pass through, doubling the number of containers that can be sent in a single shipment. By 2015, the ports of Norfolk, Baltimore, New York, and Miami will all have the capacity to accommodate these larger container ships in their ports, earning the designation of "post-Panamax ready, Figure 17 displays what the new Panamax vesicles will look like. The arrival of these larger ships will also increase demand among suppliers to quickly and cost-effectively distribute those goods to their end destination, over road, rail, air and inland waterways. The commonplace existence of global supply chains means that the end markets or destinations for these goods are increasingly dispersed. In southwest Michigan, the Panamax expansion would likely mean a greater number of trucks on the road, and possibly increased weight carried by these trucks[15].

[14] http://www.cmap.illinois.gov/c/document_library/get_file?uuid=80610300-0acd-4e57-8d74-293ddc637c14&groupId=20583

[15] http://www.colliers.com/en-us/us/~/media/files/marketresearch/unitedstates/colliers_portreport_2012q2_final.ashx?campaign=Colliers_Port_Analysis_NA_Aug-2012

Figure 17 - Post Panamax Ship Capacity



Within the region, portions of US-31 and I-94 are already showing wear from constant traffic of heavy trucks. In order to maintain these important routes for suppliers and other roadway users alike, careful monitoring and enforcement of established truck weight limits will be necessary.

FREIGHT IN NATS

Within the NATS region trucking has been a significant mode of freight movement. The Table 20 shows average daily traffic volumes of commercial vehicles for selected major roadway segments within the NATS region in 2000, 2007, and 2011. Not surprisingly, I-94 is the dominant roadway on which the commercial traffic travels. The overwhelming dominance of I-94 indicates that freight trucks may stop at points off the highway for mandatory rests or to drop off goods at retail establishments. Trucks are also helping move agricultural products to markets both within and beyond our region, and no doubt help connect suppliers in our region with end users. Yet the predominant use of the interstate by freight traffic does suggest that the NATS region is not itself a major hub or distribution center for freight operations.

Table 21 also shows a possible significant effect of the economic recession of the late 2000s on truck freight movement both on I-94 and on regular roadways. While most roadway segments saw a decline in commercial traffic between 2000 and 2007, many roadway segments saw a steeper decline between 2000 and 2011, and all experienced a net decline between 2000 and 2011. The closure of additional manufacturing facilities in Chicago, northern Indiana, and the NATS region in response to the economic downturn may have contributed to the decline in freight trucking movement in recent years.

Table 21 - NATS Region Commercial Average Daily Traffic: Sample of Major Roadway Segments

Route	From	To	2000 CADT	2007 CADT	2011 CADT	Percent Change from 2000-2011
US-31	BUCHANAN RD	US-31 BR (WALTON ROAD)	2139	2353	1870	-12.58
US-31	JCT US-12	BUCHANAN RD	2139	2353	1870	-12.58
US-31	US-31 BR (WALTON RD)	SNOW RD	2307	1840	1814	-21.37
US-31	SNOW RD	JCT M-139	2307	1840	1814	-21.37
US-12	JCT M-51 (OLD US-33)	JCT M-60	1412	1144	789	-44.12
US-12	JCT M-60	WCL EDWARDSBURG	653	525	275	-57.89
US-12	JCT M-40	JCT M-103	653	525	275	-57.89
US-12	JCT M-62	OLD M-205	653	525	275	-57.89
US-12	MASON ST	JCT M-40	653	525	275	-57.89
US-12	WCL EDWARDSBURG	JCT M-62	653	525	275	-57.89
M-60	END DIVIDED S OF LEET RD	SCL CASSOPOLIS	590	392	348	-41.02
M-60	JCT M-60 BR NILES	BEGIN CONCRETE SURFACE	590	392	348	-41.02
M-60	JCT US-12	JCT M-60 BR NILES	977	965	653	-33.16
M-60	N JCT M-62	ECL CASSOPOLIS	635	541	473	-25.51
M-60	S JCT M-62	N JCT M-62	573	541	473	-17.45
M-60	SCL CASSOPOLIS	S JCT M-62	590	392	348	-41.02
M-60	BEGIN CONCRETE SURFACE	END DIVIDED S OF LEET RD	590	392	348	-41.02
M-62	JCT US-12	NCL EDWARDSBURG	364	276	345	-5.22
M-62	N JCT M-60	NCL CASSOPOLIS	193	217	101	-47.67
M-62	NCL EDWARDSBURG	SCL CASSOPOLIS	364	276	345	-5.22
M-62	SCL CASSOPOLIS	S JCT M-60	364	276	345	-5.22
M-62	SCL EDWARDSBURG	JCT US-12	464	353	174	-62.50

** Source: Michigan Department of Transportation Traffic Monitoring Information System (TMIS). The figures represent the estimated mean daily traffic volume for commercial vehicles. Values are calculated using the same procedures as AADT. Major Roadway Segments were defined as roads with AADT of over 10,000.*

FREIGHT MOVEMENT BY RAIL

Currently, southwest Michigan has two Class I railroads operated by Canadian National Railway and CSX Transportation. Class I railroads are national companies that primarily offer services for national and intermodal shippers and markets. Table 22 highlights the Class I railroads in southwest Michigan and the main commodities that are transported. In addition, Map 17 highlights the locations of the Class I Railroads throughout the state of Michigan and their impact within the planning region.

Table 22 - Class I Railroads and Commodities

	Canadian National	CSX Transportation
Main Commodities	Petroleum, chemicals, grain, fertilizers, coal, metals, forest products, minerals, automotive parts	Agricultural products, automotive products, chemicals, coal, food, machinery, metals, minerals, paper, pulp, transportation equipment
Number of Miles in MI	1,017	569

Source: MDOT Rail Plan

The MPO does not have sufficient data to suggest how the Class I railroads directly impact southwest Michigan. The Michigan State Rail Plan has more detailed information regarding how rail impacts the state. As part of the implementation of this plan, the SWMPC will be working to gather more information regarding the impacts of rail in southwest Michigan.

Map 17 - Michigan's Railroad System

BENEFITS OF RAIL IN MICHIGAN

The Michigan State Rail Plan offers more information regarding the benefits of rail transportation than what the MPO currently has access to. Rail transportation has the potential to provide significant benefits for the State of Michigan. Both passenger and freight rail services provide an alternative to less efficient transportation modes. By diverting passengers from automobiles and freight from trucks, rail provides significant benefits from reducing congestion and wear and tear on roadways, to reducing fuel consumption and reducing emissions of pollutants. Passenger and freight rail service in Michigan provides significant economic and environmental benefits to the state.

Economic Benefits

Efficient freight and passenger rail service provides important economic development benefits to Michigan communities. Industrial development can be thwarted by the lack of freight rail service. Freight rail service is a key location factor for many new companies seeking to locate or expand in Michigan. Enhanced passenger rail service can provide important economic development benefits to Michigan communities by providing improved accessibility, connectivity and travel efficiency. An economic impact analysis has been prepared for the MWRRI Plan which recommends 110 mph high-speed rail service in the Chicago-Detroit/Pontiac corridor and enhanced service in other Michigan corridors. This analysis estimates that improved passenger rail service in Michigan will result in 6,970 new permanent jobs, $680 million in increased property values around Michigan stations and a $138 million increase in annual household income statewide.

> Rail transportation is also a catalyst for economic development and job creation. Access to freight rail transportation helps to encourage the development of new businesses and the expansion of existing businesses. Passenger rail services can be an important catalyst for shaping communities and spurring growth around rail stations

Environmental Benefits

Rail service provides important environmental benefits to Michigan residents. Rail can move freight three times more efficiently than trucks on a per ton-mile basis. The U.S Environmental Protection Agency (EPA) estimates that a typical freight train emits only one-third the pollution of a truck on a ton-mile basis. Transportation by rail saves approximately $266 million annually in pavement damage and reduces truck congestion on Michigan roadways. Passenger rail travel has similar environmental benefits. Data from the Oak Ridge National Laboratory indicates that intercity passenger rail consumes 17 percent less energy per passenger mile than airlines and 21 percent less energy per passenger mile than autos. Intercity passenger rail produces 60 percent fewer carbon dioxide (CO_2) greenhouse gas emissions per passenger mile than the average auto and about half (50 percent) of the greenhouse gas emissions per passenger mile of an airplane. Intercity passenger rail also generates fewer emissions per passenger mile of other pollutants such as oxides of nitrogen (NOx), volatile organic compounds (VOCs) and carbon monoxide (CO). Intercity passenger rail service provides “downtown to downtown” connectivity that encourages urban infill and downtown redevelopment. This type of “transit-friendly” development is more energy efficient, resulting in fewer

harmful emissions and the ability to more efficiently provide urban services than in areas of low-density suburban sprawl[16].

Preservation in Roadway Pavement

"There is a logical connection to be made between more people and products being moved by rail and the extension of pavement life on our roads, highways, bridges, and interstates. According to an article about the benefits of rail; "Amtrak removes 8 million cars from the road…A single intermodal freight train can take up to 280 trucks or 1,100 cars off of the highway. Without rail as an option, freight shippers would have to add 50 million additional trucks on the roadways[17]". Additionally the American Association of State Highway and Transportation Officials, Transportation Invest in America Freight-Rail Bottom Line report of 2002 states; "that if all freight-rail were shifted to trucks tomorrow, it would add 92 billion truck vehicle-miles-of-travel to the highway system and cost federal, state, and local transportation agencies an addition-al $64 billion for highway improvements over the next 20 years. This $64 billion is a conservative figure that does not include the costs of improvements to bridges, interchanges, local roads, new roads or system enhancements. If these were included, the estimate could double"[18].

SAFETY ALONG RAIL CORRIDORS

Amtrak has partnered with the FRA and the State of Michigan to develop a radio-based train communication system, called the Incremental Train Control System (ITCS), which is designed to allow trains to operate safely at higher speeds. The ITCS is currently in place for high-speed revenue service on Amtrak-owned track in Michigan and works to prevent train-to-train collisions, train overspeed conditions, and protect on-track roadway workers.

Incremental Train Control System (ITCS), developed by General Electric Transportation Systems (GETS) is a communication-based signaling system overlaid on an existing signal system. This is one class of PTC that was designed to prevent train collisions and overspeed derailments. The program of upgrading 66 miles of Amtrak owned Michigan Line between Kalamazoo and New Buffalo, Michigan to allow 110-mph operation with this PTC system was initiated with a co-operative effort among FRA, Michigan Department of Transportation, and Amtrak. The program started in 1996 with a contract for Harmon Electronics, which has since been acquired by General Electric, to develop the first ITCS demonstration on this corridor. The main function of the system is to enforce signal authorities, civil speed limits and temporary speed limits. It was designed as a vital overlay to an existing CTC system with a wireless computer network of servers along these 66 miles with radio communication. The servers communicated with the equipped

[16] Michigan State Rail Plan, 2011

[17] http://www.amtrak.com/ccurl/216/645/CriticalLink2007_5.pdf

[18] http://rail.transportation.org/Documents/FreightRailReport.pdf

locomotives through the communication system consisting of a UHF radio network based on ATCS Spec 200 frequencies. Unique to this system is the employment of TDMA (Time Division Multiple Access) scheme to reduce the message collisions while in transmission. With this scheme, the communication to a number of locomotives can be conducted with greater ease. Unlike an office-centric system like IDOT PTC, all the communication tasks are performed locally device-to-device. Most of the decision-making processes are made with the host processors on-board the locomotives. A computer in the office however is necessary to transmit the temporary speed restrictions to the server and to download the health of the system when it is necessary. The train tracking system is based on GPS (Global Position System).

ITCS, being vital, means that it will ensure that all the messages are delivered properly and accurately, and will continuously perform surveillance of all devices and interfaces of the system to ensure they are in proper working conditions, and if not, a fail-safe fall back will be enforced. Another feature that is critical to high-speed operation is the advanced grade crossing activation. When the train approaches a crossing, continuous location tracking and calculation are performed and will activate the crossing gates using wireless communication, instead of the conventional track circuit, at the appropriate time to insure the optimum advanced activation time[19].

The system has been in revenue service since September 2000. At the beginning, the speed limit of 79 mph was kept to gain experience and confidence with the system. The maximum speed limit was subsequently raised to 90 mph in January 2002 and then to 95 mph in September 2005. The goal is to increase the speed to 110 mph in the 4th quarter of 2007.

AIRPORT FREIGHT SERVICE

The South Bend Regional Airport is north central Indiana's major airport handling airfreight. Three main carriers, FedEx, Airborne Express, and UPS, handle airfreight at the Airport. There are two other minor carriers of airfreight at the airport as well, Ameriflight and Mountain Air. Some of the passenger airlines also carry freight. These carriers include American Connection, ACA-Delta Connection, ASA-Delta, Air Wisconsin, Air Wisconsin ACA, US Trans State, Comair, Northwest, Pinnacle, Mesaba and PSA. As a true multi-modal facility the South Bend Regional Airport provides passenger service via inter- (ex: Greyhound) and intra-city Transpo-South Bend city bus service) buses, and the Chicago South Shore and South Bend interurban commuter railroads[20].

[19] http://www.fra.dot.gov/Page/P0287

[20] http://www.flysbn.com/

PUBLIC TRANSIT

Over the last four years a comprehensive effort has been made to understand the current role of public transit and mobility in Berrien and Cass Counties. This effort included several transit focused studies that called for the establishment of a structure to build and sustain coordination efforts and for improved integration between countywide rural and small urban service. This was documented in the following completed studies from 2010-2012; Berrien County Coordinated Human Service Transportation Plan, Berrien County Transit Study, Niles Dial a Ride Transit Study, and the Pokagon Band of Potawatomi Transit Feasibility Study. In 2011 the KFH group was selected to conduct a three-year countywide transit feasibility study with the purpose of identifying opportunities to create a countywide transit system in Berrien County. The study will provide detailed analysis of the following opportunities:

- Allow for additional rider benefits, such as better and increased services within the County and services that cross county and state boarders;
- Provide a more effective mechanism to address regional transportation issues;
- Provide greater opportunities for the creation of local dedicated funding sources for transit; and
- Achieve economies of scale with regard to capital, operating, administrative, and human resources.

Since 2010 a Mobility Manager has been in place that is funded through a grant from the Federal Transit Administration and is administered by Twin Cities Area Transportation Authority (TCATA). Working with the SWMPC and other agencies the Mobility Manager is responsible for short-range planning, management activities and projects for improving coordination among public transportation and other transportation service providers with the intent of expanding the availability of services to people with disabilities, older adults and low-income individuals.

CONSIDERATIONS OF TRANSIT IN THE STUDY AREA

- There are three independently operated public transit systems that have service areas located in the study area. Niles Dial a Ride (Niles DART) service area encompasses the City of Niles, Niles Township and the City of Buchanan. Buchanan Dial a Ride (Buchanan DART) provides service to the City of Buchanan and Buchanan Township. The communities that are located in Cass County are served by Cass County Public Transit. Berrien Bus provides limited service to all of the designated rural areas of Berrien County and should be considered the “spine” for connecting people with transit systems in the adjacent designated urban areas in the county.
- Transit is a critical transportation link for older adults, people with disabilities, and low income households. Many of the needs of these groups are being met, but there are large gaps in services that need to be addressed.

- Some level of public transit service is provided in the seven communities that encompass the study area. However, many of these areas are limited in the amount and frequency of service they receive, especially in more rural areas of the county.

- The three independently operated transit agencies have combined annual budgets totaling over $1.5 million. Two out of the three transit agencies receive local support in the form of a millage.

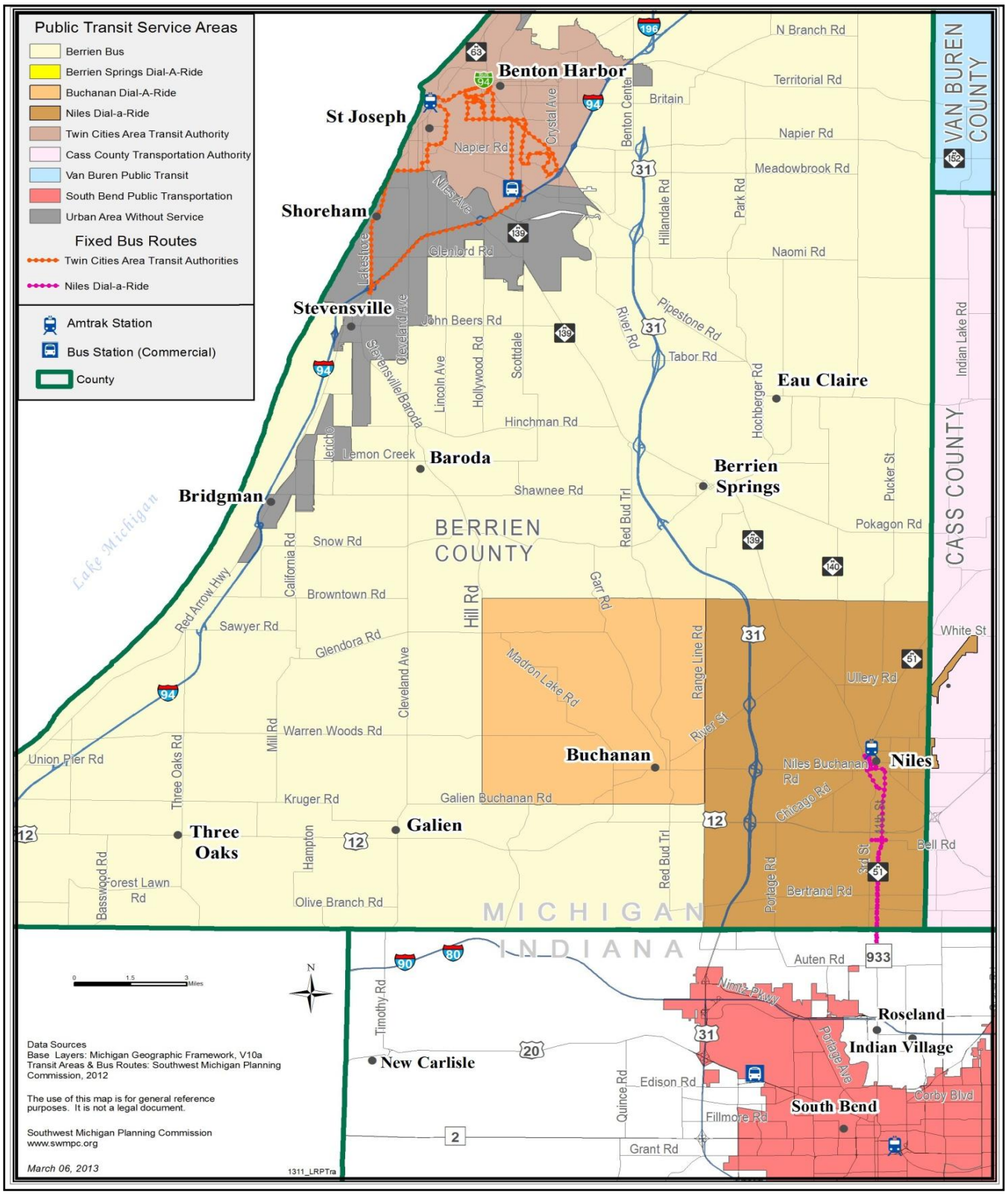
- Public transit services increase resident access to education, training, jobs, shopping, and other life sustaining activities in the NATS study area. In 2011 Niles Dial a Ride and Buchanan Dial a ride provided almost 39,000 trips to life enhancing activities.

TRANSIT OVERVIEW

The NATS study area receives services from four public transit providers. Two of which (Niles DART and Buchanan DART receive funding through the MPO and provide service within the study area. Because of this, these two providers will be examined in greater detail.

The two other providers; Cass County Public Transit, is the designated rural provider for Cass County and Berrien Bus provide services within the designated rural areas of the Berrien and Cass County. Both of these rural providers serve as the "spine" by bringing people in from rural areas into the urbanized activity centers of Niles, Buchanan, Benton Harbor, St. Joseph and Dowagiac. An additional system, Transpo, connects people to the South Bend, Indiana region. Transpo is the urban transit provider in the South Bend, Indiana urbanized area. Map 18 provides an overview that includes the four different providers in the study area. You can also view a table that highlights the different transit providers in Appendix C.

Map 18 - Public Transit Provider Service Areas



Trip Generators

There are five main activity centers in the study area, these activity centers include:

- Niles
- St. Joseph
- Benton Harbor
- Dowagiac, Cass County
- South Bend-Mishawaka area in St. Joseph County, Indiana

The five identified activity centers offer health care facilities, education facilities, retail stores, recreational attractions, government buildings, and human service/social agencies. Many of the destinations within the activity centers also serve as employment centers.

Table 23 provides an overview of the major transportation generators for people living in the study area and the public transit provider that would serve that destination. Example: City of Niles to Andrews – Niles DART provides service from City of Niles origin to Niles DART office where a passenger would transfers to Berrien Bus to reach their final destination at Andrews University.

Table 23 - Transit Trip Generators

Trip Generator	City	County	Type	Transit Serving Destination
Andrews University	Berrien Springs	Berrien	Education	Berrien Bus
Department of Human Services	Benton Harbor	Berrien	Medical/Education	Berrien Bus
Berrien County Court	City of St. Joseph	Berrien	Legal	Berrien Bus
Berrien County Court	City of Niles	Berrien	Legal	Niles DART
Lakeland Hospital	City of St. Joseph	Berrien	Medical	Berrien Bus
Lakeland Health Services	Royalton Township	Berrien	Medical	Berrien Bus
Mall Drive	Benton Township	Berrien	Shopping	Berrien Bus
Lakeland Dialysis Niles	Niles Township	Berrien	Medical	Niles DART
Four Winds Casino	New Buffalo	Berrien	Employment	Berrien Bus
Lake Michigan College	Benton Township	Berrien	Education	Berrien Bus
Eleventh Street Corridor	Niles	Berrien	Shopping	Niles DART
Lakeland Rehabilitation Services	Niles Township	Berrien	Medical	Niles DART
Lake Michigan College	Niles	Berrien	Education	Niles DART
Four Winds Casino	Dowagiac	Cass	Employment	Cass County Public Transit
Pokagon Health Services	Dowagiac	Cass	Medical	Cass County Public Transit
Southwest Michigan College	Dowagiac Township	Cass	Education	Cass County Public Transit
Grape Road Corridor	Mishawaka	St. Joseph	Shopping	TRANSPO
St. Joseph Regional Health Center	Mishawaka	St. Joseph	Medical	TRANSPO
The South Bend Clinic	South Bend	St. Joseph	Medical	TRANSPO
Memorial Hospital	South Bend	St. Joseph	Medical	TRANSPO

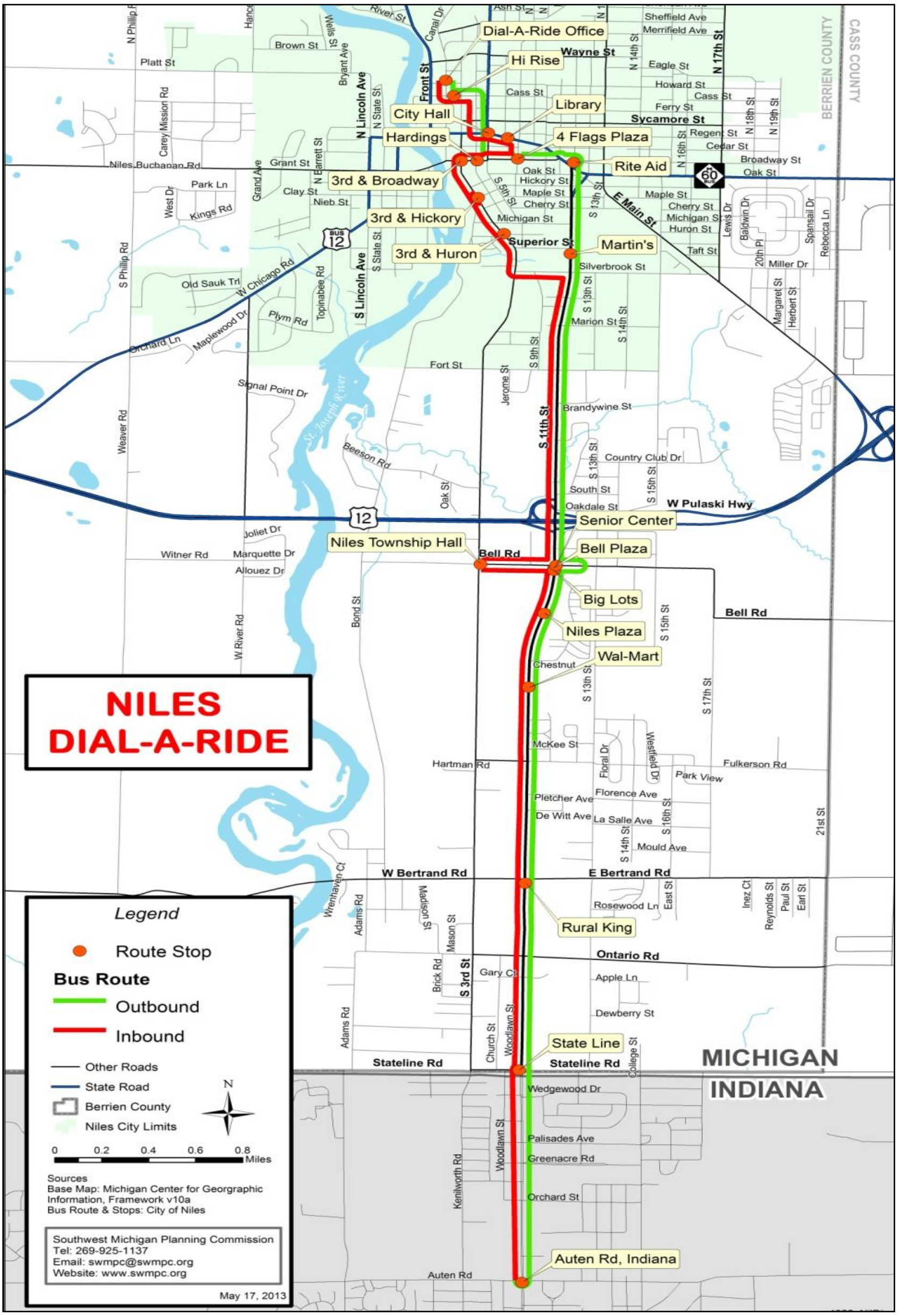
A closer examination of the transit agencies will be provided in this section. Niles Dial a Ride and Buchanan Dial a Ride will be examined much more closely as they are the primary service providers in the study area. A brief discussion of the two remaining agencies, Cass County Public Transit and Berrien Bus will be included.

NILES DIAL A RIDE

Niles Dial a Ride provides curb-to-curb service to the general public in the City of Niles and Niles Charter Township. Curb-to-curb customers are encouraged to call dispatch at least twenty-four hours in advance of their requested trip. Same day trips may be scheduled depending on availability.

Niles Dial a Ride also operates an hourly deviated fixed-route service that is available Monday – Friday from 10:00am to 5:00pm. The route stops at twenty-two origins and destinations that include; major retail, apartment and senior living facilities and also connects with Transpo at the state line to provide a connection to South Bend. Bus shelters are available at many of the stops and the stops are signed. The transportation facility located in downtown Niles offers a waiting area where passengers can connect to other public transit providers including Cass County Public Transit and Berrien Bus**.** Map 19 provides an overview of the fixed route service that Niles DART currently provides.

Map 19 - Niles DART Deviated Fixed Route Service



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Governance and Administration

Niles DART is organized under the State of Michigan Home Rule Act which authorizes cities to form transit systems. The City Council of Niles serves as the Niles DART Board. The Board is supported by a Local Advisory Council that meets on a quarterly basis to provide feedback and recommendations about Niles DART services. In 2011 DART allowed the operational contract for transit services to expire with an independent private contractor and brought the operation of services back in-house at the City of Niles. A Community Development Director oversees the entire management staff and reports to the City Council. The Transportation Coordinator acts as the Executive Director of the transit system and reports directly to the Community Development Director and is responsible for all administrative duties performed by the system.

Fare Structure

Passenger fares depend on the service type, the origin, and destination and the age or disability of the passenger. Reduced fares are available for adults age 60 and older and individuals with a disability. Passengers who qualify for a reduced fare are issued a reduced fare card to indicate they are eligible for the reduced rate. Table 24 indicates the fare structure that is currently in place at Niles DART.

Table 24 - Niles DART Fare Structure

Service Type	Geographic Location	Fare
Demand Response	Within the City of Niles	$3.00/$1.50 Reduced Fare
Demand Response	Niles and Bertrand Township	$4.00/$2.00 Reduced Fare
Deviated Fixed Route	Within the City of Niles	$2.00/$1.00 Reduced Fare

Additional fare items can be issued to those who frequently use the Niles DART. These fare media include:

- $10.00 Punch Card
- $1.00 Tokens (For use by human service agency clients)
- $15.00 Summer Fun Pass (Unlimited rides for youth during the summer months)

Funding

Niles DART operating costs are covered by a combination of federal, state and local funding as well as passenger fares. Over the last four years the City of Niles transit millage, (Niles DART's only source of local government funds) contributed to nearly 28 percent of Niles DART's operating revenue. Niles Township and Bertrand Township do not contribute any local operating revenue to the Niles DART system, but there is a $1.00 increase added to the fare structure for passenger trips into or out of those townships.

Because Niles DART is located within the South Bend/Elkhart, Indiana urbanized area, there is a Memorandum of Understanding in place between the Michiana Area Council of Governments, the South Bend Public Transportation Corporation, Niles DART, and the Southwest Michigan Planning Commission to define the process by which federal funds, made available from the U.S. Department of Transportation Federal Transit Administration (FTA), are allocated between Niles DART and the South Bend Public Transportation Corporation. A copy of this agreement can be found in Appendix A.

More than 50 percent of Niles DART's operating revenue is derived from the FTA and MDOT state operating funds. As shown in Table 25, a large portion of the Niles DART operation and capital funds are derived from multiple funding sources. Additional analysis of funding sources to be utilized by Niles DART and the other transportation agencies for the fiscal years of 2014-2017 can be found in the MPO Financial section of this plan.

Table 25 - Niles DART Operating and Capital Revenues FY 2008-2011

FY	Federal	State	Local	Farebox	Total
2008	$120,598	$224,492	$194,295	$89,600	$628,985
2009	$111,649	$190,144	$113,141	$63,367	$478,301
2010	$162,610	$190,144	$109,235	$57,268	$519,257
2011	$103,104	$190,144	$189,446	$61,095	$543,789

Source: MDOT PTMS Data

Table 25 shows the average operating and capital revenue from 2008-2011. Funding from the Federal Transit Administration (FTA) Sections 5307 and 5311 Programs accounted for approximately 51 percent of the system's operating revenue on average for FY 2009 and FY 2010. In March 2011, the system opted to discontinue receiving Section 5311 program funds so that it could maximize preventive maintenance funding provided by the Section 5307 program. This decision was made because the City was directed that it could no longer receive funding from both of these Federal programs.

Niles Dial a Ride bus
Source: Google images

Facilities

The Niles DART transportation facility, located at 623 N. Second Street in downtown Niles and is owned by the City of Niles. The facility includes vehicle storage, administrative offices, a large passenger waiting area and maintenance. This location also serves as a stop on the fixed route as well as a transfer point to Buchanan Dial A Ride, Cass County Public Transit and the Berrien Bus transit systems.

Vehicles

The Niles DART fleet includes five cutaway vehicles. All of the vehicles are wheelchair accessible. Vehicles are equipped with two-way radios. In 2008 a Ford 250 was purchased and is used to plow snow.

Vehicle Utilization

Niles DART passenger demand varies at different times of the day. To meet the demand, Niles DART assigns vehicles as indicated in Table 26.

Table 26 - Niles DART Vehicle Service

Time of Day	Number of Vehicles / Mode of Service
Weekdays	
7:00 am to 11:30 am	2 vehicles/demand response
11:30 am to 5:00 pm	3 vehicles/demand response
10:00 am to 5:00 pm	1 vehicle /deviated fixed route
Saturdays	
10:00 am – 3:00 pm	2 vehicles/demand response

SYSTEM PRODUCTIVITY

The FTA and MDOT-Passenger Transportation Division evaluate public transit services for effectiveness, which can by analyzed by passenger trips per mile or hour. Niles DART measures vehicle hours based on the hours that a vehicle is scheduled or actually travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service.

Table 27 highlights Niles DART productivity rate by service type. The industry standard for deviated fixed route productivity is five to six passengers per hour. According to the ridership and operating statistics in Table 27, the demand response mode of service in FY 2011 provided approximately 3.31 passengers per hour, whereas the deviated fixed route produced 4.25 one-way passenger trips per hour. On a national level, the average demand response passenger per hour productivity goal is at least two passengers per hour.

Table 27 - Niles DART System Productivity

Fiscal Year	Demand Response		Fixed Route	
	Passengers Per Mile	Passengers Per Hour	Passengers Per Mile	Passengers Per Hour
2008	0.32	3.99	0.21	2.37
2009	0.32	3.79	0.28	3.41
2010	0.31	3.8	0.35	4.73
2011	0.28	3.31	0.33	4.25

Source: Niles DART Transportation Development Plan

BUCHANAN DIAL-A-RIDE

Buchanan Dial A Ride (Buchanan DART) is a same day curb-to-curb shared ride transportation service that provides service to residents of the City of Buchanan and Buchanan Township. The service operates from 7:00 a.m. to 5:30 p.m. Monday through Friday and 9:00 a.m. to 3:00 p.m. on Saturdays. Customers must schedule trips at least one hour before the desired departure time. Regular shuttle service to Niles is available six days a week with twenty-four hour notice. The shuttle will deviate off the route to pick up passengers with advanced reservations between communities on the shuttle route. Buchanan DART provides connections to Berrien Bus at designated locations that allow customers to transfer and access locations outside of Buchanan. This is possible because the systems share the same facility, dispatchers, and brokered management firm, Transportation Management Inc.

Governance

Buchanan DART is organized under Public Act 279 and is overseen by five elected officials who serve on the Buchanan City Commission. The Buchanan City Commission is supported by a Local Advisory Council that meets on a quarterly basis to provide feedback and recommendations regarding the provision of transit services. In 2011 the Buchanan City Commission entered into an operational contract with Berrien County who sub-contracts with Transportation Management for transit services.

Fare Structure

Passenger fares depend on the service type, the origin and destination and the age or disability of a passenger. Reduced fares are available for older adults age 60 and older and individuals with a disability. Passengers who qualify for a reduced fare are issued a reduced fare card to indicate they are eligible for the reduced fare, see Table 28.

Table 28 - Buchanan DART Fare Structure

Service Type	Geographic Location	Fare
Demand Response	Within the City of Buchanan	$1.50/$.75 Reduced Fare
Demand Response	Buchanan Township	$4.00/$2.00 Reduced Fare
Buchanan/Niles Shuttle	City of Buchanan, Buchanan Township Niles,	$4.00/$2.00 Reduced Fare

FTA and MDOT evaluate public transit services for *effectiveness (doing the right things*) which can by analyzed by passenger trips per mile or hour. Buchanan Dial a Ride measures vehicle hours based on the hours that a vehicle is scheduled or actually travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service.

According to the ridership and operating statistics in Table 29 Buchanan Dial A Ride service has experienced a 26 percent decline in ridership over the last four years, expenses have increased by 31 percent during that same time period and there has been an 11 percent increase in the vehicle miles traveled. All of these factors illustrate why the cost per passenger trip has increased from $12.50 in 2008 to $22.50 in 2012.

Table 29 - Buchanan DART System Expenses Relative to Ridership

Fiscal Year	Passengers	Expenses	Vehicle Miles	Vehicle Hours	Cost/Pass	Cost/Hour	Passengers Per Vehicle Hour
2008	11,643	$147,892	39,109	3,417	$12.70	$42.56	3.5
2009	11,882	$175,786	47,330	3,626	$14.55	$47.69	3.3
2010	8,166	$172,340	41,580	3,564	$21.11	$48.36	4.0
2011	9,551	$192,052	46,570	3,771	$20.11	$50.93	2.5
2012	8,632	$194,187	43,384	3,718	$22.50	$52.25	2.3

Source: MDOT PTMS

Facilities

Dispatching, maintenance, vehicle storage, administration and a passenger waiting areas are shared with Berrien Bus in Berrien Springs. This is possible because Berrien Bus is also under contract Transportation Management for the provision of transit services in the designated rural areas of Berrien County.

Vehicles

Buchanan DART has three cut-away buses, two vehicles operate during peak hours and the third bus is used for backup. Vehicles are scheduled for replacement in 2015.

Funding

Table 30 shows the different funding streams that the transit system receives.

Table 30 - Buchanan DART Revenue 2008-2012

FY	Federal	State	Local	Farebox	Total
2008	$22,762	$ 55,141	$ 89,294	$12,562	$179,759
2009	$24,732	$65,013	$91,269	$14,244	$195,258
2010	$27,814	$47,707	$85,581	$11,007	$172,109
2011	$27,310	$69,729	$90,934	$14,729	$202,702
2012	$29,833	$69,976	$89,429	$12,637	$201,875

Source: MDOT PTMS

Federal and state revenues for Buchanan DAR have increased 10 percent over the last five years. Despite a 25 percent decline in ridership from 2008 as shown in Table 31, passenger fares have increased 36 percent and vehicle miles increased by 10 percent during the same period. It is unclear why this trend is happening since ridership is down and there has not been a fare increase over the last five years.

Table 31 - Buchanan DART System Average Fares Against Vehicle Miles

Fiscal Year	Total Passengers	Vehicle Miles	Farebox	Average Fare
2008	11,643	39,109	$12,562	$1.07
2009	11,882	47,330	$14,244	$1.32
2010	8,166	41,580	$11,007	$1.34
2011	9,551	46,570	$14,729	$1.54
2012	8,632	43,384	$12,637	$1.46

Source: MDOT PTMS

CASS COUNTY PUBLIC TRANSIT

Cass County Public Transit is a curb-to-curb, 24-hour advance reservation county-wide public transportation system serving the census-designated rural areas of Cass County. Cass County Public Transit also has a fixed, scheduled, shared ride service daily to and from Cassopolis to Niles, Edwardsburg, and Marcellus two times a day, and three times daily to Union and Dowagiac. Services are available to the general public, and rides are reserved on a first come first-served basis. Hours of operation are Monday through Friday 5:00 a.m. - 5:00 p.m. Because Cass County Public Transit offices and garage are located in Cassopolis, this community receives the highest frequency of service. Immediate request dial-a-ride service is available within Cassopolis from 8:00 a.m. to 5:00 p.m. Monday through Friday.

Cass County Public Transit
Source: Google Images

Cass County Public Transit also operates regularly scheduled curb-to-curb services for several human service agencies in Cass and Berrien Counties, including Cass County Mental Health (Woodlands), Cass County Council on Aging, Cass County Medical Care (nursing home), Michigan Works, and Cass Family Clinic in Niles. Cass County Council on Aging also contracts with Cass County Public Transit to provide shopping trips two times per month (first and second Thursday of the month) to Niles for $5.00 roundtrip for people over 60 years and older to several retail shopping locations such as Wal-Mart, Shelton's, Martins, Lunch).

BERRIEN BUS

Berrien Bus is a curb-to-curb, advance reservation county-wide public transportation system serving the census designated rural areas of Berrien County. Berrien Bus also has a fixed schedule service daily to Benton Harbor/St. Joseph four times daily and to Watervliet/Coloma and Niles twice daily. Services are available to the general public and rides are reserved on a first-come first-served basis. Hours of operation are Monday through Friday 5:00 am -5:00 pm. Because Berrien Bus offices and garage are located in Berrien Springs this community receives the highest frequency of service. Immediate request dial-a-ride service is available within Berrien Springs from 8:00 am to 4:45 pm Monday through Friday.

Berrien Bus also operates regularly scheduled curb-to-curb services for several human service agencies in Berrien County, including Berrien County Mental Health (Riverwood), Berrien County Juvenile Center and Blossomland Learning Center.

Berrien Bus provides scheduled daily shared ride service between certain areas within the county and must be reserved twenty four hours in advance. The shared ride service will deviate off the route to pick up passengers with advanced reservations between communities on the shuttle route. This information is displayed in Table 32.

Table 32 - Berrien Bus Scheduled Daily Shared Ride Service

Service		Pickup Times	Fare*
From:	To:		
Berrien Springs	St. Joseph / Benton Harbor	7:30 am, 10:am, 1:00 pm	$5.00
Benton Harbor	Berrien Springs	8:30 am, 10:45 pm 1:45 pm, 4:00 pm	$5.00
St. Joseph	Berrien Springs	8:45 am, 10:30 am, 1:30 pm, 4:15 pm	$5.00
Berrien Springs	Niles	8:00 am, 2:00 pm	$5.00
Niles	Berrien Springs	8:45 pm, 2:15 pm	$5:00
Niles	Benton Harbor	8:30 am, 12:00pm	$5.00
Watervliet/Coloma	Benton Harbor	9:15 am, 12:00 pm, 3:00 pm	$5.00
Benton Harbor/ St Joseph	Watervliet/Coloma	2:00pm	$5.00
Berrien Springs	Berrien Springs	8:00am - 4:00 pm	$2.50

Seniors, disabled, and children pay half fare.

TRANSIT DEPENDENT COMMUNITY DEMOGRAPHIC CHARACTERISTICS

Transit dependent populations are individuals considered by the transportation profession to be dependent upon public transit based on income, age, or disability. These characteristics prevent individuals in this demographic from driving and/or owning a reliable automobile, leaving ridesharing, public transit, and other community transportation options as the only forms of transportation available. Community specific demographic data is very useful for the understanding of citizen's current and potential travel trends, as well as the gaps it highlights in current transportation services.

Niles DART and Buchanan DART service areas are comprised of five communities: the City of Niles, Niles Charter Township, the City of Buchanan, Buchanan Township, and Bertrand Township. The four communities have a population of 36,400 people that reside in one of 14,800 households. The communities of Niles and Buchanan have population densities that can support more frequent fixed or flexed route services, while some of the townships with much lower population densities support less frequent demand response services that feed into the activity centers of Niles and Buchanan.

The service areas also are home to an older population with the median age of forty six in Bertrand Township and forty two in Buchanan Township. These demographic details are shown in Table 33. Both of these communities have a population older than the state of Michigan's median age of thirty-nine and Berrien

County's median age of forty-one. In Appendix B, we have also mapped where the populations of transit dependent populations are living. These factors need to be considered in planning future transportation services for older adults who one day will be faced with turning over their car keys. This issue will be explored in further detail in the following pages.

Table 33 - Population Characteristics

Transit Service Areas Population Characteristics	Niles Twp.	Niles	City of Buchanan	Buchanan Twp.	Bertrand Twp.	Michigan
Population	14,164	11,600	4,456	3,523	2,657	9,883,640
Pop. Density	380	2,003	1,782	110	77	175
Median Age	41	36.	38	42	46	39
Households	5,687	4,806	1,901	1,375	1,031	3,872,508

Source: 2010 US Census

Table 34, Transit Service Areas Economy, highlights the need to provide for more transportation options in the study area due to the unemployment rate, income per capita, and household income. The income per capita in the City of Niles is only $17,353, which includes all adults and children and is 44 percent lower than the per capita in Michigan. This further emphasizes the need to provide for multiple modes of transportation for those who simply cannot afford to own their own personal automobile.

Table 34 - Transit Service Areas Economy

Transit Service Areas Economy	Niles Twp.	Niles	City of Buchanan	Buchanan Twp.	Bertrand Twp.	Michigan
Unemployment Rate	8.20%	8.20%	8.20%	8.20%	8.20%	9.80%
Income Per Capita	$20,423	$17,353	$19,573	$18,681	$24,840	$23,797
Household Income	$40,403	$33,867	$37,583	$40,317	$56,940	$46,932

Source: Bureau of Labor Statistics

Table 35 indicates the commute time for those using different modes of transportation options. While there is some deviation among the individual categories to the overall statewide percentage, these deviations are not unexpected. The study area is largely rural and many people in this part of the study area live in Michigan and commute to northern Indiana for work and shopping destinations.

Table 35 - Population Travel Behavior

Transportation	Niles Twp.	City of Niles	Buchanan Twp.	City of Buchanan	Bertrand Twp.	Michigan
Commute Time Minutes	23.6	22.4	28.4	23.9	22.5	26.3
COMMUTE MODE						
Auto (alone)	87.81%	84.88%	81.85%	85.72%	85.00%	82.51%
Carpool	7.55%	10.39%	9.33%	6.75%	3.92%	9.28%
Mass Transit	0.20%	0.18%	0.32%	1.04%	0.15%	1.35%
Work at Home	2.70%	2.26%	7.32%	3.81%	7.61%	3.45%

Source: US Census

Table 36 focuses on the occupations that are most prevalent in the study area. About 27 percent of the public transit service area population is employed in the service sector, warehousing, and transportation occupations. The majority of these occupations require shifts that begin or end after Buchanan DART and Niles DART hours of operation cease and many times public transit is not a commute option. With roughly 27 percent of the population employed in occupations that operate during non-traditional work hours it will be important for the transit systems to use thoughtful analysis in considering if their current routes or services go where needed and if the services operate early or late enough.

Table 36 - Population Occupations

Population by Occupation	Niles Twp.	City of Niles	Buchanan Twp.	City of Buchanan	Bertrand Twp.	Michigan
Management, Business, and Financial Operations	9.03%	9.07%	9.55%	9.55%	13.20%	14.04%
Professional and Related Occupations	13.78%	14.50%	12.31%	12.31%	15.32%	20.61%
Service	15.47%	16.70%	13.59%	13.59%	12.14%	14.45%
Sales and Office	25.21%	24.73%	23.78%	23.78%	21.43%	26.75%
Farming, Fishing, and Forestry	0.75%	0.19%	0.00%	0.00%	0.00%	0.70%
Construction, Extraction, and Maintenance	10.47%	8.81%	14.37%	14.37%	12.47%	9.42%

Source: Bureau of Labor Statistics

COMMUNITY MOBILITY OPTIONS FOR OLDER ADULTS

Reductions in mortality have resulted in increases in life expectancy that have contributed to the growth of the elderly population, especially in the oldest age brackets. This is in contrast to the early days of our nation when high fertility and high mortality kept the nation “young.”

In 2010, the U.S. Census Bureau reported that the dependency ratio, or the number of people 65 and older to every 100 people of traditional working ages, is projected to climb rapidly from 22 in 2010 to 35 in 2030. This

time period coincides with the time when baby boomers are moving into the 65 and older age category. This group of older adults may not be able to drive personal vehicles into their later years.

Age differences among older adults must be taken into account in transportation planning. In particular, people between the ages of sixty and seventy can have a different set of needs compared with people age eighty and above.

The need for more specialized demand-response transit service is likely. This is a much more expensive service and may require the reduction or elimination of other transit services currently being provided. It will be important for communities to consider all of the mobility options for people who need specialized transportation services Table 37 illustrates how this population continues to grow.

Table 37 - Senior Population

YEAR *Age of Population*	2000 *60-69*	2010 *60-69*	Percent Change	2000 *70-79*	2010 *70-79*	Percent Change	2000 *80+*	2010 *80+*	Percent Change
BERRIEN COUNTY									
Bertrand Township	197	346	76%	167	185	11%	79	113	43%
City of Buchanan	303	431	42%	298	248	-17%	238	213	-11%
Buchanan Township	319	416	30%	233	244	5%	96	127	32%
City of Niles	822	1060	29%	861	629	-27%	627	567	-10%
Niles Charter Township	1221	1671	37%	994	1000	1%	462	745	61%
CASS COUNTY									
Howard Township	520	931	79%	462	404	-13%	183	243	33%
Mason Township	226	305	35%	130	173	33%	55	88	60%
Milton Township	209	514	146%	144	220	53%	56	114	104%
Ontwa Township	577	758	31%	389	456	17%	165	248	50%

Source: US Census

Coordination with Senior Centers

Table 38 highlights the various Senior Centers in the study area and includes details regarding bus service, trips, and popular destinations. There is limited supplemental transportation available to adults sixty years and older from seven independently operated senior service centers and meal sites located throughout Berrien County and one senior center in Cass County. While all of these are not within the study area, it is important to understand that there are many providers of transit service. Each of the eight centers is supported financially by a countywide senior millage that provides approximately two million dollars annually in funding. This funding helps support activities, transportation, and facilities. Each of the senior centers provides transportation services to older adults (sixty and older) in their respective service areas. However, the frequency and service area varies from one senior center to the next.

Table 38 - Senior Service Providers

Senior Center	Communities Served	Destinations	Transportation Hours	Number of Vehicles	Popular Destinations
Benton Harbor Senior Center	Benton Harbor, Benton Twp.	St. Joseph, Royalton Twp. Lincoln Twp. St. Joseph Twp. City of Benton Harbor, Benton Twp.	Monday-Friday 9:00-4:00pm	Three-12 passenger vans (One lift equipped)	Lakeland Hospital Napier Ave. Royalton Twp.
City of Buchanan Senior Center	City of Buchanan, Buchanan Township	City of Buchanan, City of Benton, Harbor, Bertrand Twp. Battle Creek, Niles Twp	Monday-Friday 9:00-4:00pm	One-5-6 passenger van	Lakeland Hospital Niles
Central County Senior Center	Berrien Twp. Sodus Twp., Oronoko Twp. Pipestone Twp. Berrien Twp. Baroda Twp, Village of Baroda Village, Berrien Springs	Berrien County, Kalamazoo, Battle Creek	Monday-Friday 8:30-4:30pm	Five-vehicles ranging in size from 7 passenger to 24 passenger (One lift equipped)	Lakeland Hospital Napier Ave. Royalton Twp. Meijer-Benton Harbor
Niles Senior Center	City of Niles, City of Buchanan, Niles Twp	City of Niles, City of Buchanan Battle Creek (hospital) Medical destinations in South Bend	Monday-Friday 8:00-4:00pm	One-4-5 passenger mini vans	Lakeland Hospital Niles South Bend Medical trips
North Central Senior Services	City of Coloma, Coloma Twp, Hagar Twp, Watervliet Twp, City of Watervliet	Berrien County	Monday-Friday 9:00-3:00pm	Two-6 passenger vans and One-4 passenger sedan	Royalton Watervliet Meijer-Benton Harbor
St. Joseph Lincoln Senior Services	City of St. Joseph, St. Joseph Charter Twp. Lincoln Twp. Royalton Twp. Village of Stevensville	City of St. Joseph, St. Joseph Twp. Lincoln Twp. Royalton Twp. Village of Stevensville, Benton Twp. City of Benton Harbor	Monday-Friday 9:00- 12:00pm	One-12 passenger bus, One-7 passenger van, One-5 passenger SUV	Lakeland Hospital Napier Ave. Royalton Twp.

Senior Center	Communities Served	Destinations	Transportation Hours	Number of Vehicles	Popular Destinations
River Valley Senior Services	City of New Buffalo, Three Oaks Twp. Galien Twp. Lake Twp. City of Bridgeman	New Buffalo, Three Oaks, Galien Twp. Lake Twp. Bridgeman, St. Joseph, Watervliet, Battle Creek, Benton Harbor, Royalton Twp.	Monday-Friday 9:00-4:00pm	One-12 passenger van	Lakeland Hospital Meijer-Stevensville
Cass County Council on Aging	Cass County	Cass County, Battle Creek, Kalamazoo, South Bend, IN	Monday-Friday 8:00-5:00pm	One-23 passenger van with no lift	Dailey medical trips Niles Kalamazoo

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TRANSIT UNMET NEEDS AND ISSUES

In order to determine community needs regarding public transportation within and outside the study area several sources were used to uncover current issues and unmet needs.

Sources used to determine the unmet needs and issues were derived from the following plans:

1. Cass County Transportation Forum, 2010
2. Michiana Area Council of Governments Human Service Coordinated Public Transportation Plan, 2010
3. Berrien County Human Service Coordinated Public Transportation Plan, 2010
4. Berrien County Human Service Transportation Forum, 2009
5. Niles Dial A Ride Transit Development Plan, 2012

Service and Connectivity:

- Trips from Cass County to destinations in the Niles, Buchanan, and South Bend service areas can require up to three transit agencies; Cass County Transit, Niles DART, and Buchanan DART.

- There is no dialysis center or obstetrics unit located in Cass County. Residents must cross county lines into Niles to access service.

- Lack of specialized transportation services that allow trip-chaining – Mother needs to stop at a daycare before stopping at work location. Senior needs to stop at pharmacy after leaving doctor's appointment but before arriving at home.

- There is no intercity bus service (Greyhound) within the NATS study area. Residents must travel to South Bend or Benton Harbor, which can require the use of three different public transit systems.

- There is no public taxi service in the County of Cass.

- Use current demand-response services more efficiently to expand capacity of current services offered by integrating countywide rural service, small urban dial-a-ride services, and fixed-route services.
- Berrien Bus provides limited service to all of the designated rural areas of Berrien County and should be considered the "spine" for connecting people with transit systems in the adjacent designated urban areas in the County. It is possible that in the future, the three urban systems and the County rural system could be blended into one Berrien countywide system.

Visibility and Understanding of Transit:

- In the 2010 *Berrien County Human Services Coordination Plan and the 2012 Pokagon Band of Potawatomi Indians Tribal Transit Plan* focus groups indicated that one of the barriers that prevented older adults and others from using public transportation and specialized services was the

lack of good information sources on how to use transportation other than a personal automobile. In 2011 Niles DART conducted a public survey as part of their Transit Development plan.

- Table 39 highlights the issues facing public transit systems in regards to visibility and understanding of transit, by community of respondent.

- 72 percent of respondents from Niles Charter Township do not ride any of the transit systems that provide service in the NATS region.

- 45 percent of respondents from the same township were not familiar with the transportation provided by any of the local systems.

- According to these results, residents that reside within the City of Niles are both more aware of the services available and more likely to use them.

Table 39 - Awareness and Ridership Survey

Category	Niles		Niles Charter Twp.		Bertand Twp.		Response Totals	
	Familiar With	Ride	Familiar With	Ride	Familiar With	Ride	Familiar With	Ride
Niles DART	60.7% (51)	54.3% (44)	45.5% (5)	27.3% (3)	0	0	58.3% (56)	50.5%(47)
Berrien Bus	36.9% (31)	18.5% (15)	27.3% (3)	9.1% (1)	100 (1)	100 (1)	36.5% (35)	18.3%(17)
Buchanan DART	25.0% (21)	7.4% (6)	18.2% (2)	9.1% (1)	0	0	24.0% (23)	7.5%(7)
Cass County Transportation	11.9% (10)	1.2% (1)	9.1% (1)	0	0	0	11.5% (11)	1.1%(1)
None of the Above	27.4% (23)	40.7% (33)	45.5% (5)	72.7% (8)	0	0	29.9% (28)	44.1% (41)
Total Number of Respondents	84	81	11	11	1	1	96	93

Source Niles DART Public Survey, 2011

Hours:

- Cass County Public Transit, DART, and Buchanan Dial A Ride system hours preclude use by commuters and riders who work later shifts. There is no service after 5:00 p.m. on weekdays. There is no public service on Sundays in Berrien or Cass counties.

- Amtrak Rail service is available out of Niles but hours do not correspond with public transit hours of operation.

Berrien County Public Transit Feasibility Study:

- The *Berrien Countywide Public Transit Feasibility Study* is currently examining the possibility of either creating a countywide system or developing a consolidation plan.

- The Plan hopes to make travel between communities in Berrien County more seamless; the same fares, transfer procedure, schedule formatting, etc.

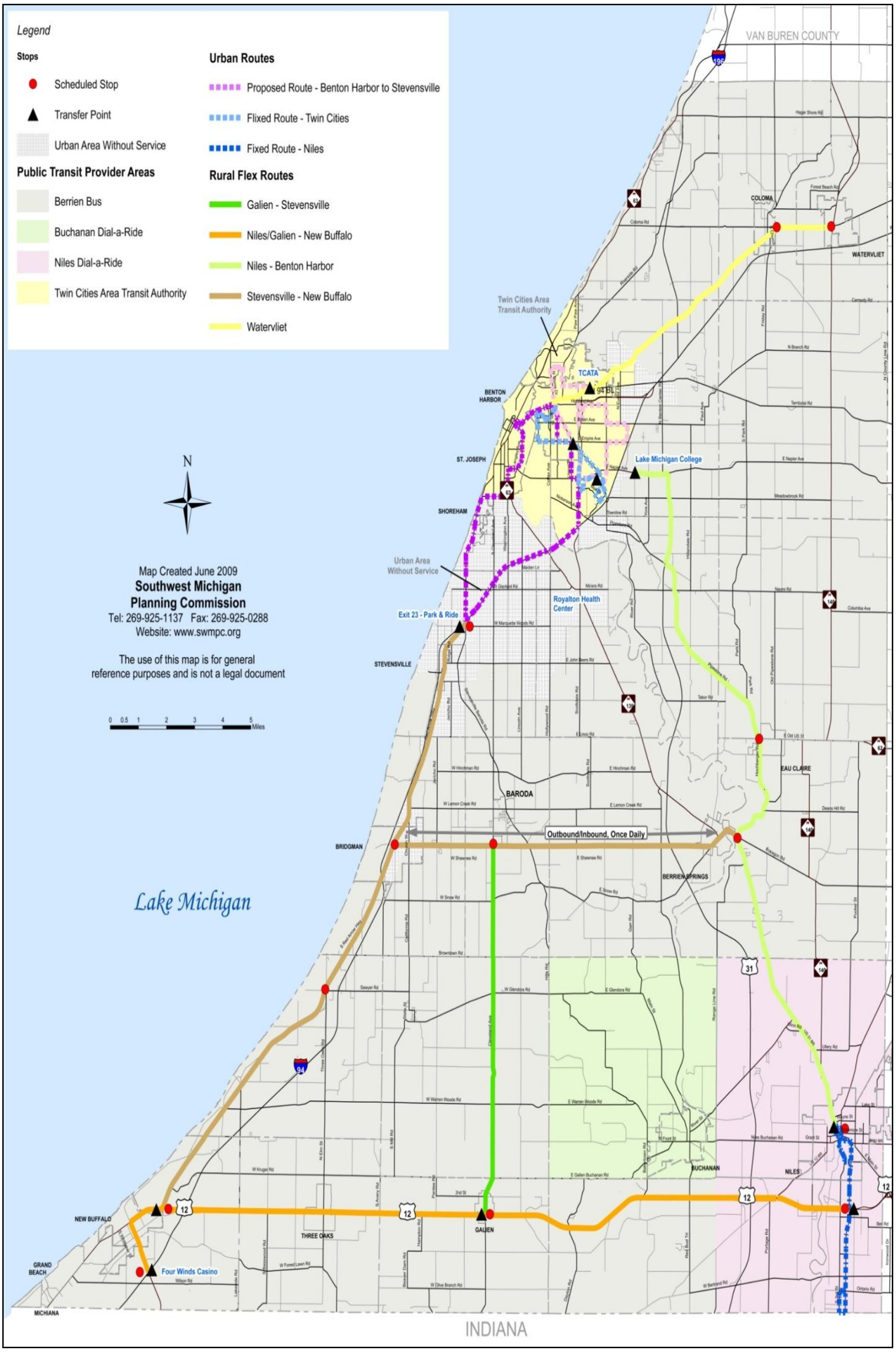
- Without this effort to move toward a more seamless countywide system, the four individual public transit systems may find themselves in a position where the State mandates a consolidation at which point it would be too late to transition at an orderly, locally-managed pace.

- It has been documented in the draft *Berrien Countywide Public Transit Feasibility Study* that there are two main barriers to the near-term effort for a countywide system; 1). Political - the sense of surrendering local authority of the transit system; 2). Systems structure and funding - the three urban systems receive local funding from local city millages (Niles DART, Buchanan DART, TCATA) while the rural system receives no local funding. Two of the systems are strictly demand-response and two of the systems are fixed route and demand response.

With this in mind, a proposed conceptual routes have been created in Map 20, including a combination of fixed routes in higher density areas and flex-route service in lower density areas with scheduled transfer points throughout the service area.

Since there are only two transit systems in Cass County, Cass County Public Transit and Dowagiac Dial a Ride, the main focus has been on the reformation of the four systems in Berrien County. More analysis needs to be performed to fully understand the issues facing Cass County transit providers.

Map 20 - Proposed Routes for Berrien County Transit



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RURAL AND URBAN PLANNING CONSIDERATIONS

Although there are many facets of the transportation networks, some may produce more significant impacts than others. Listed below are present and expected situations, the potential effects of which deserve special attention. Recognizing that transportation needs do not occur independently of land use, the NATS committees have identified a list of community concerns that have a direct impact on the area's transportation network.

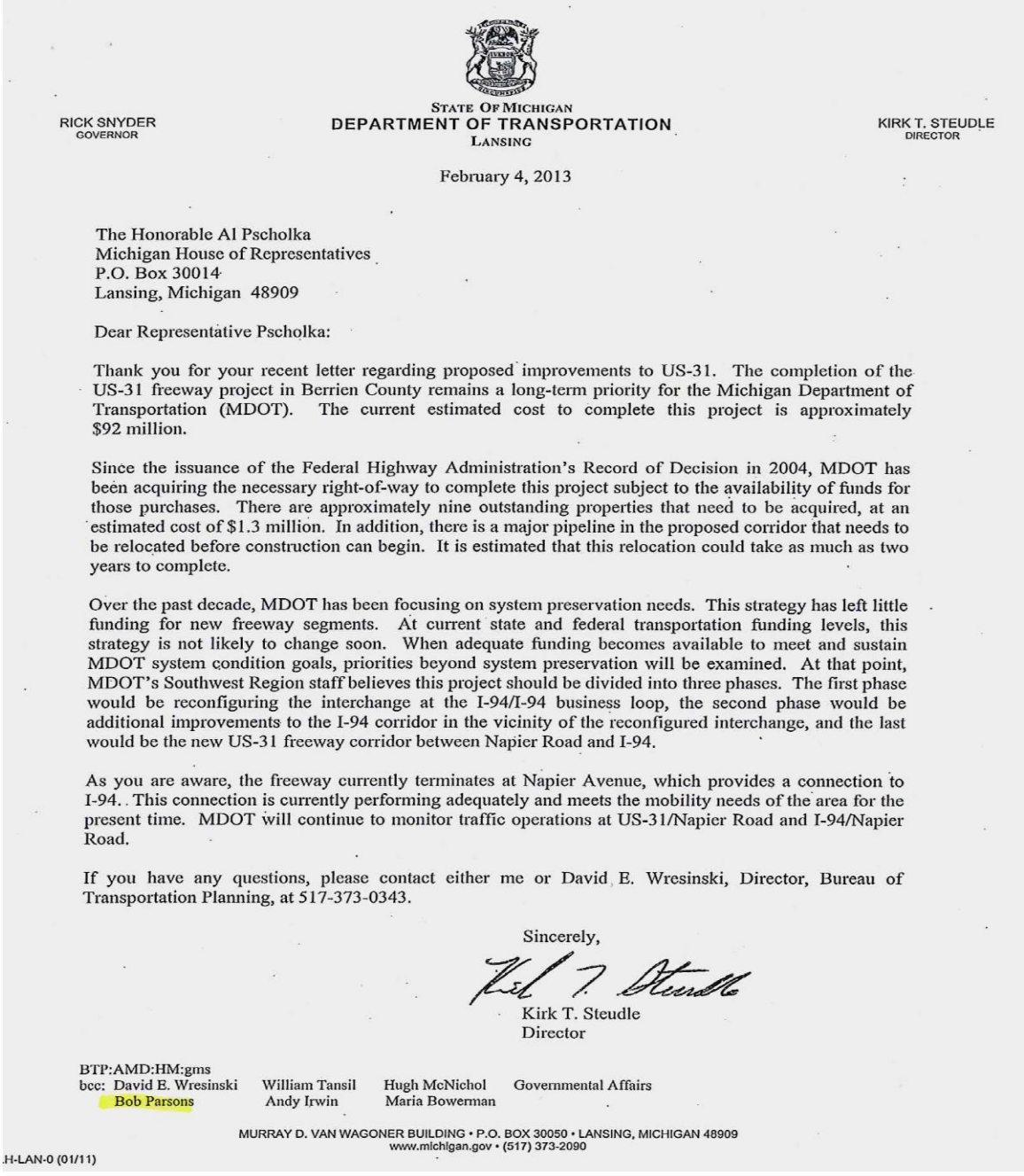
BERRIEN COUNTY

- **Harbor Shores -** During the 2009 TwinCATS LRTP update, construction was underway on the Harbor Shores golf course in Benton Harbor. The cities of St. Joseph and Benton Harbor, as well as Benton Charter Township, came together to partner with Harbor Shores Community Redevelopment, Inc. to develop and redevelop over 530 acres of land along the Paw Paw and St. Joseph Rivers near Lake Michigan. The $500 million, multi-year project is slated in the end to bring over 826 residential units, over 43,000 square feet of commercial and office space, two hotels, a conference center, a water park, and a Jack Nicklaus Signature golf course into the TwinCATS area. The golf course is currently open and hosted the Senior PGA championship in 2012 for the first time.

  The next major phase of development within the Harbor Shores project is known as Harbor Village at Harbor Shores. Harbor Village includes a hotel, condominiums, cottages, and a marina on the north bank of the St. Joseph River. Construction is expected to begin in the spring of 2013. The Environmental Assessment for the Harbor Village project, released in January 2013, found that no further roadway capacity expansion would be needed for the project, and that existing roadways are adequate for traffic coming to and leaving from Harbor Village. The assessment found that any significant new adverse air quality impacts from transportation would come during the construction process only, which was acceptable under EPA standards. In terms of transit connections, the project was well within Twin Cities Area Transportation Authority (TCATA)'s door-to-door service area and was also within an acceptable walking distance to TCATA's fixed route service. The project will also improve upon local trails by continuing to build the 12.2 mile non-motorized path system outlined in the Harbor Shores Master Plan. In particular, a non-motorized path on public property adjacent to the Harbor Village development will be developed in conjunction with the private development, improving pedestrian and bicycle access along the St. Joseph River, all through ADA-accessible facilities.

  The significance of this project to the region is unmistakable. Significant land use changes are taking place on previously vacant land, new residents will purchase second homes in the area, and many visitors will use the hotels, golf course, and marina, along with other businesses and services in Benton Harbor and St. Joseph. As the development continues to progress, regular updates will be provided at TwinCATS TAC committee meetings to review transportation impacts.

- **US-31 -** The completion of the US 31 freeway from Napier Avenue to the I-94 and I-196 interchange is a project that has been important to the people of southwest Michigan for over 30 years. In a recent correspondence dated February 4, 2013 from MDOT Director Kirk Steudle to State Representative Al Pscholka indicated that "the US-31 freeway project in Berrien County remains a long-term priority for the Michigan Department of Transportation (MDOT). The current estimated cost to complete this project is approximately $92 million dollars". A copy of the letter has been included in this section. It is clear that the completion of this highway is important to the local agencies of southwest Michigan but also to MDOT.



STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

RICK SNYDER
GOVERNOR

KIRK T. STEUDLE
DIRECTOR

February 4, 2013

The Honorable Al Pscholka
Michigan House of Representatives
P.O. Box 30014
Lansing, Michigan 48909

Dear Representative Pscholka:

Thank you for your recent letter regarding proposed improvements to US-31. The completion of the US-31 freeway project in Berrien County remains a long-term priority for the Michigan Department of Transportation (MDOT). The current estimated cost to complete this project is approximately $92 million.

Since the issuance of the Federal Highway Administration's Record of Decision in 2004, MDOT has been acquiring the necessary right-of-way to complete this project subject to the availability of funds for those purchases. There are approximately nine outstanding properties that need to be acquired, at an estimated cost of $1.3 million. In addition, there is a major pipeline in the proposed corridor that needs to be relocated before construction can begin. It is estimated that this relocation could take as much as two years to complete.

Over the past decade, MDOT has been focusing on system preservation needs. This strategy has left little funding for new freeway segments. At current state and federal transportation funding levels, this strategy is not likely to change soon. When adequate funding becomes available to meet and sustain MDOT system condition goals, priorities beyond system preservation will be examined. At that point, MDOT's Southwest Region staff believes this project should be divided into three phases. The first phase would be reconfiguring the interchange at the I-94/I-94 business loop, the second phase would be additional improvements to the I-94 corridor in the vicinity of the reconfigured interchange, and the last would be the new US-31 freeway corridor between Napier Road and I-94.

As you are aware, the freeway currently terminates at Napier Avenue, which provides a connection to I-94. This connection is currently performing adequately and meets the mobility needs of the area for the present time. MDOT will continue to monitor traffic operations at US-31/Napier Road and I-94/Napier Road.

If you have any questions, please contact either me or David E. Wresinski, Director, Bureau of Transportation Planning, at 517-373-0343.

Sincerely,

Kirk T. Steudle
Director

BTP:AMD:HM:gms
bcc: David E. Wresinski William Tansil Hugh McNichol Governmental Affairs
Bob Parsons Andy Irwin Maria Bowerman

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H-LAN-0 (01/11)

- **Berrien County Equestrian Centers -** A specialization is being seen throughout Berrien County in the form of expo centers. One such example that must be mentioned is the Expo Arena at the Berrien County Youth Fair http://www.expoarena.org/. The arena will include a 500-stall stable and will feature an indoor warm-up ring, a 4,000-seat show area that can be converted to 7,000 seats for concerts and a hospitality center with a 14,000-square-foot exhibition hall. Also included will be 18 classroom/sky boxes, locker and tack rooms and a 400- by 75-foot concourse for offices, shops and vendors. The marketing study estimated the arena could draw as many as 10,000 visitors for 39 weekends each year. Not only would those venues include horse shows and rodeos but also concerts, livestock, trade, boating and RV shows. Conventions, wedding receptions, proms, circuses and farm-implement, pet and house and garden shows also could be accommodated. There are other examples of these types of facilities located in Niles, the Lucky Horse Equestrian Center (71487 Kline Road, Niles) and the Concord Ridge Equestrian Center located on M-139 in between St. Joseph and Berrien Springs.

- **Southeast Berrien County Landfill (on Chamberlain Road) -** One of the issues at this facility is that three different jurisdictions have ownership of different parts of Chamberlain Road. Those communities are: Buchanan Township, Bertrand Township, and Niles Charter Township. Niles Charter Township has ownership of the east side of the road; Bertrand Township has ownership of the west side of the road, and Buchanan Township has ownership at the entrance to the facility.

- **Niles Industrial Park**- The Niles Industrial Park is located in the City of Niles near the Jerry Tyler Airport off of Lake Street. Improving the routes connecting to the Industrial Park and making access to the major highways is a key to the success of the businesses located there.

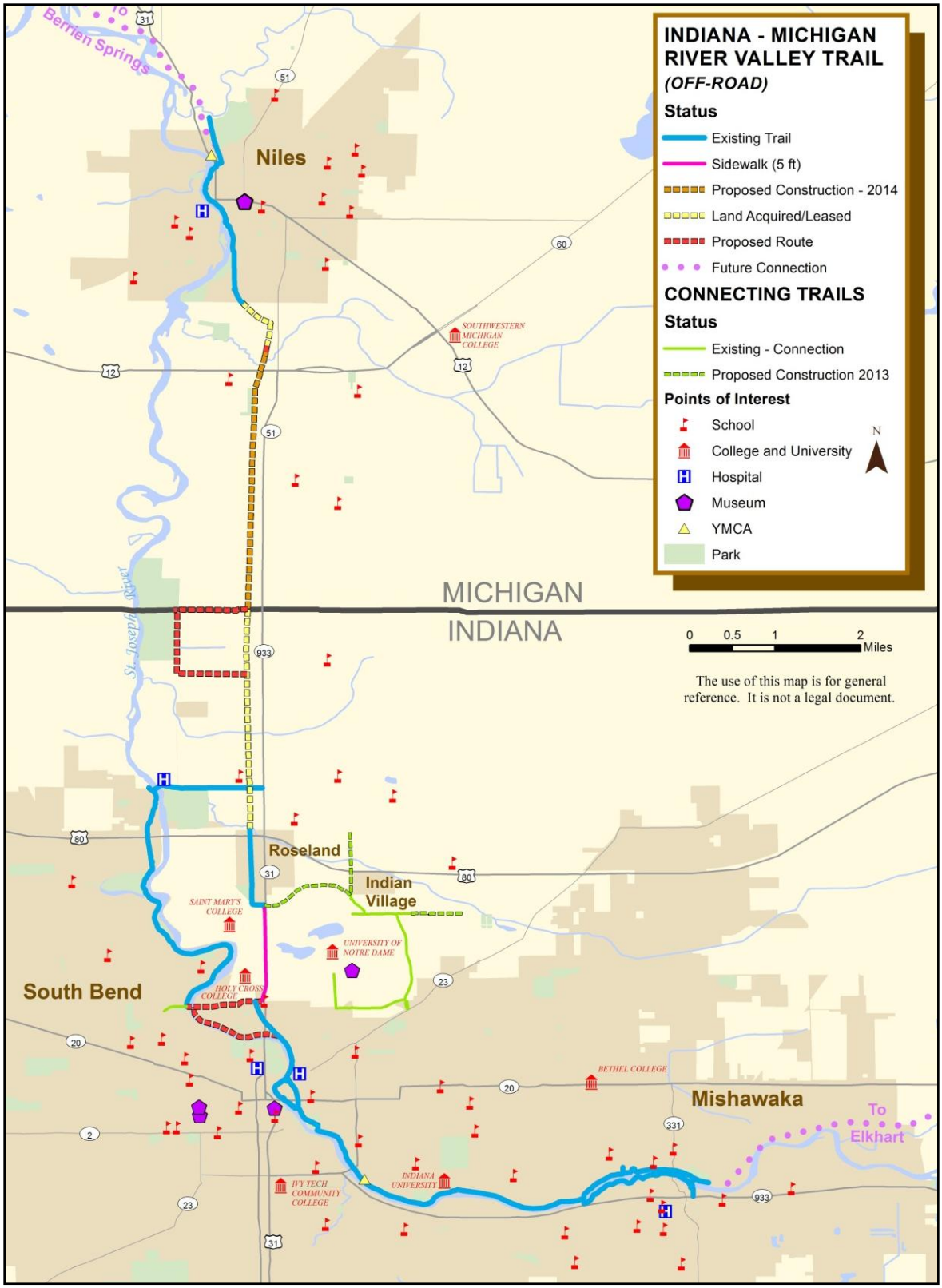
- **11th Street Corridor Improvement**-The Corridor Improvement Plan anticipates the future development of the 4.5 miles of the 11th Street (Michigan Highway 51) corridor through a series of development options and action plans. The project would focus on the corridor from Main Street to Stateline Road. The roadway has several unique challenges including ownership by the Michigan Department of Transportation. However, local land use planning and zoning is done by the City of Niles and Niles Charter Township. The partners that were involved in this plan wanted to review the roadway for its potential and what could be achieved through coordination. The plan analyzes several elements of the corridor:

    - Streets and Traffic Patterns
    - Driveway Access
    - Pedestrian Circulation
    - Aesthetics and Maintenance
    - Parking
    - Building and Public Spaces
    - Land Use
    - Sense of Place

The plan discusses how the implementation of the project could be handled. The recommendation discussed was to form the creation of a new inter-governmental body capable of both raising the necessary funds and providing of the construction and maintenance of corridor improvements. The plan emphasizes the importance of intergovernmental coordination with master planning and local zoning issues.

- **Indiana Michigan River Valley Trail-** The Indiana-Michigan River Valley Trail partners are working to create a 34-mile trail connecting Niles, Michigan to Mishawaka, Indiana. The completed trail would be used by commuters, students, families, and tourists. The trail would connect people to four universities and schools, four downtowns (Niles, Roseland, South Bend and Mishawaka), sixteen parks and two YMCAs, five hospitals or major medical facilities, historical and cultural attractions, and businesses offering eating, lodging and shopping. In 2013 the trail project was awarded funding from MDOT Transportation Enhancement, Transportation Alternatives funds, Michigan Natural Resources Trust Fund, to begin the engineering and then construction of the trail. This project will be a tremendous asset to the community and region.

Map 21 - Indiana Michigan River Valley Trail



CASS COUNTY

- **Traffic on the existing north-south routes** including, but not limited to, Gumwood, Fir, M-62/SR 23, and Ironwood, moving to and from the University Park Mall, individual strip malls and mega stores in the Mishawaka area (Indiana). These roadways provide the key connectors into Indiana and do not completely traverse the county. Roadways such as Dailey Road, Calvin Center, and Indian Lake Road do provide some of the longest north south extensions in the County; however they end at major highways and do not return to a county road. Some of the roadways turn to highways.

- **Four Winds Casino**-Is located on a 59-acre plot of land off the west side of M-51 near Edwards Street near Dowagiac, Michigan. The casino is projected to employ 100 people. While this project is located outside of the MPO this could impact the traffic patterns going south on M-51 into the MPO area.

- **Southwestern Michigan College-**SMC continues to construct year-round dorms for students. According to Jason Wilt, Director of Housing for SMC, in the Fall 2013 SMC will open their third student residential hall which will add 130 more private bedrooms to the current 260 student housing community. While this facility may be outside the MPO, as people from Cass County orient themselves toward the South Bend/Mishawaka area, the travel patterns of these students may also include their shopping and traveling through the MPO.

INDIANA

The Michiana Area Council of Governments (MACOG) handles the transportation planning and coordination of the transportation system in northern Indiana. Please refer to MACOG's LRP for more information http://www.macog.com/.

GENERAL CONSIDERATIONS

- **Commercial Traffic** - Any change in the density of population and intensity of land use activities will change the predicted traffic flows and possible congestion in those segments of the network. As employment opportunities spread far from the historic centers of the cities, they put a strain on the existing network. Many of these problems involve land use and development policies, and they often have the greatest affect on the townships. Concerns about population density, access management, and support of arterial routes have become important planning considerations because of increasing residential development pressures. Housing developments on the northern edge of Indiana are encroaching into Michigan through subdivision roads as developers buy and build on land that straddles the boundary between the states.

- **Land Use** - The preservation of open space and of the agriculture industry hinge on property owners' decisions and local implementation of state land use policy. As farmers sell their prime agricultural lands and these lands are developed into more sprawling communities, the strain to local jurisdictions becomes very real. As more and more people live in rural communities, additional infrastructure is

often not put into place to meet the growing diversity of needs by the public. We can see this in the form of people not being able to walk to vital services such as transit, shopping, and medical care facilities.

- **Telecommuting** - As more people and businesses are willing and able to allow their employees to work from home remotely the importance of having the right telecommunications becomes more significant. We have seen a shift already of people living in Michigan while working in Indiana and Chicago from their primary or secondary residence. If we see a greater shift in people needing to physically be in an office, there could be less traffic on our most heavily traveled roadways, thus cutting down on the wear and use of passenger vehicles. This could impact the air quality issues that face southwest Michigan but also the wear on our roadways.

FUTURE METROPOLITAN PLANNING AREA

During the development of this LRTP, NATS reviewed population, housing, employment, and travel patterns to see where potential connections to the urban area may exist in the future, specifically at the 2020 U.S. Census count. While the MPO will be monitoring other factors as indicated, the dominant factor monitored will be population. The U.S. Census urban areas are defined only by the population numbers. Federal statute governs the planning boundaries for Metropolitan Planning Organizations. Specifically, Title 23 Part 450.38 states that:

> (a) The metropolitan planning area boundary shall, as a minimum, cover the UZA(s) and the contiguous geographic area(s) likely to become urbanized within the twenty year forecast period covered by the transportation plan described in §450.322 of this part. The boundary may encompass the entire metropolitan statistical area or consolidated metropolitan statistical area, as defined by the Bureau of the Census.

Therefore, it is prudent for the MPO to monitor areas closely as the economy continues to recover in southwest Michigan and northern Indiana.

MONITORING FACTORS

As this LRTP was being developed, population, housing, employment, and travel patterns were reviewed for the base year of 2010 and were projected out to the plan end year of 2040. This information allows the MPO to monitor where development is being shifted to or where it is to be newly created. The specific factors that the MPO will use to monitor this information before the next Census count will be:

- Population
- Housing
- Employment

The MPO staff will use the American Community Survey (ACS) information which releases 1-year, 3-year and 5-year data products every year to monitor the above listed information. As the new Census information will not be released before the next long range plan update, the MPO will rely on the information changes that are supplied.

GEOGRAPHIES TO MONITOR

Map 22 highlights the areas that will be monitored over the functional life of this long range transportation plan. There are eight specific areas that the SWMPC will be monitoring until the next U.S. Census.

1. **Berrien Springs-Eau Claire Urban Cluster (Buchanan Township and Oronoko Township).**
   Prior to the 2010 Census information being released, SWMPC staff anticipated the connection of the NATS planning boundary with the Berrien Springs-Eau Claire urban cluster, given that the two areas were close to connecting in the 2000 Census. However, the Berrien Springs-Eau Claire cluster shrank. Berrien Springs population lost about 3 percent of their population and Eau Claire also lost about 4 percent of their population causing a potential contraction of the urban area. *(As of the writing of this section, the adjusted census urban area boundaries were being reviewed for this urban cluster and the final size of the urban cluster is not yet known.)* While this did show a contraction this is still an area that is regularly analyzed at the MPO level and by committee members and will thus continue to be monitored.

2. **North of City of Buchanan Limits-Red Bud Trail east to US-31 (Buchanan Township and Niles Charter Township)**
   This area experienced significant growth since the 2000 Census mainly due to development north of the St. Joseph River and continued development occurring along the US-31 corridor.

3. **Bertrand Road and US-31 East to Niles Charter Township (Bertrand Township and Niles Charter Township)**
   The pattern of development continues to come from South Bend, Indiana. There continues to be consistent interaction between the two regions in the form of households and travel patterns. Many people from southern Berrien County that live close to the Indiana state line work in the South Bend urban area.

4. **Redfield Street from Gumwood Road East to Ironwood Road (Milton Township and Ontwa Township)**
   The pattern of development continues to come from South Bend, Indiana. There is consistent interaction between the two regions in the form of households and travel patterns. Many people from southern Cass County that live close to the Indiana state line work in the South Bend urban area. And as the map indicates, the South Bend and Elkhart, Indiana urbanized areas continue to push north into Michigan.

5. **Village of Edwardsburg North into Jefferson Township (Village of Edwardsburg, Ontwa Township, and Jefferson Township)**

   The change from the 2000 and 2010 adjusted census urban areas has shown the trend of population, households, and businesses moving in a northerly pattern into the Village of Edwardsburg, continuing into Ontwa Township. This may continue to move northerly into Jefferson Township.

6. **Davis Lake Street South to North Shore Drive (Ontwa Township and Jefferson Township)**

   There is significant and consistent demand to live near or along one of many inland lakes throughout the study area. This pattern in Cass County has not slowed, as many people from Indiana and Illinois own second homes along many of the inland lakes in this region. According to township officials, many of these second homes are becoming primary residences for people as they retire to our region.

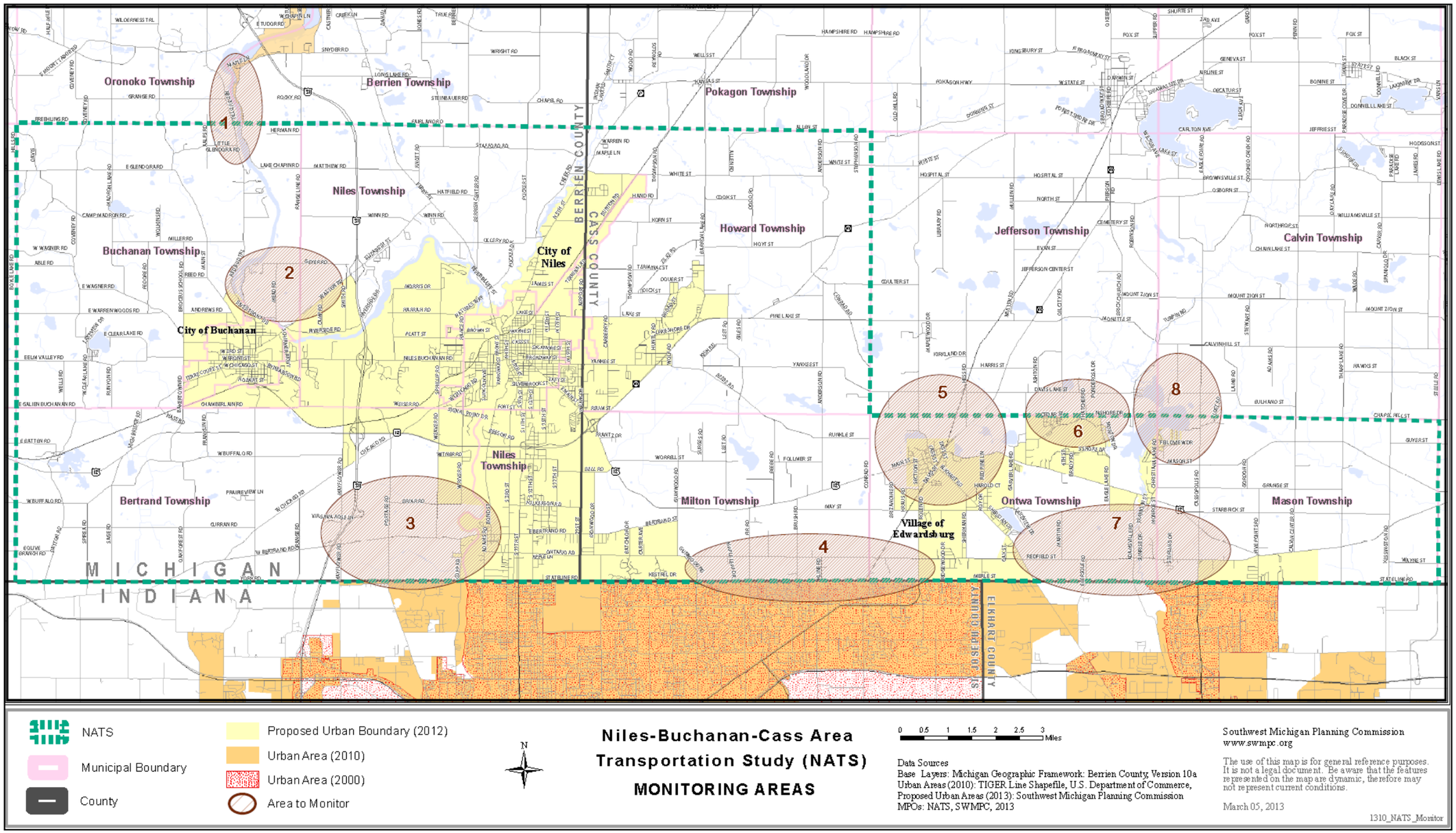
7. **Redfield Street from Elkhart Road East to Cassopolis Road (Ontwa Township and Mason Township)**

   Mason Township is the most recent addition to the planning area and this again is due to the northerly expansion of the South Bend and Elkhart, Indiana urbanized area. There continues to be consistent interaction between the two regions in the form of households and travel patterns. Many people from southern Cass County that live close to the Indiana state line work in the South Bend urban area.

8. **Christiana Road to Cassopolis Road from Mason Street to Calvin Hill Street (Calvin Township, Jefferson Township, Mason Township and Ontwa Township).**

   There is significant and consistent demand to live near or along one of many inland lakes throughout the study area. This pattern in Cass County has not slowed, as many people from Indiana and Illinois own second homes along many of the inland lakes in this region. According to township officials, many of these second homes are becoming primary residences for people as they retire to our region. With the presence of four lakes in this area: Eagle Lake, Christiana Lake, Juno Lake, and Painter Lake we anticipate that development around these lakes will continue.

Map 22 - Areas to Monitor in NATS Planning Area



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TRENDS IN THE OUTYEARS

This section will review some of the trends that are being projected for the study area. The following tables note where the biggest growth and reduction is projected to occur. The SWMPC will use this information to help committee members make transportation decisions that respond to trends in the population, households, and employment in the region. Table 40 highlights the population projects that the communities in the planning area may see over the life of the LRP. Table 41 highlights the Indiana population projects that will continue to impact the planning area.

Table 40 - Population Projections

Jurisdiction	2010	2020	2030	2040	Change from 2010-2040
Buchanan City	4,471	4,274	4,168	4,102	-8.20%
Buchanan Twp	3,508	3,437	3,411	3,419	-2.50%
Niles City	13,300	12,879	12,540	12,324	-7.33%
Niles Twp	12,306	12,137	12,074	12,131	-1.40%
Bertrand Twp	2,657	2,626	2,640	2,681	0.90%
Howard Twp	3,348	6,433	6,447	6,438	92%
Milton Twp	3,878	4,234	4,454	4,653	19.98%
Edwardsburg Village	1,259	1,243	1,185	1,125	-10.60%
Ontwa Twp	2,011	5,128	5,189	5,230	160%
Mason Twp	2,945	3,113	3,180	3,234	9.80%
Total	49,683	55,504	55,288	55,337	11.38%

The greatest population increases are being projected to occur in the following communities: Howard Township, Milton Township, Ontwa Township and Mason Township. Milton and Mason Townships show increases hovering near 10 percent while Howard projects to nearly double and Ontwa Township projects to more than double. This projection supports the SWMPC intent to monitor these areas as pointed out in the Geographies to Monitor section above. These areas are projected to see significant population increases that would impact the need to rethink where the transportation investments are being made in the region. As with the case for Ontwa Township for example, the projection over the next 30 years is for the community to grow by over 3,000 people. While this is still a comparatively small population increase within the region, this could stretch the infrastructure demands within the township. As we know from previous sections, the aging of our region will continue and as more people are moving further away from core service areas such as in cities and villages, there is a need to think about how to connect people with the vital services that they need.

Table 41 - Indiana Counties Population Projections

County Jurisdiction	2010	2020	2030	2040	Change from 2010-2040
St. Joseph	266,931	270,586	274,250	274,683	2.9 %
Elkhart	197,559	212,036	225,496	237,323	20.1%
Total	464,490	482,622	499,746	512,006	10.2%

Source: STATS Indiana www.stats.indiana.edu

As stated in the introduction of this document, NATS is part of the South Bend and Elkhart, Indiana urbanized area. Map 22 indicates where the St. Joseph and Elkhart counties are located in proximity to Berrien and Cass Counties. While there will still be some modest growth in St. Joseph County, Indiana as we have seen in Milton Township, the main growth will be happening in Elkhart County which coincides with the expansion of the urban areas into Mason and Milton Townships, which we can see in the projections in Table 41.

Table 42 - Household Projections

Jurisdiction	2010	2020	2030	2040	Change from 2010-2040
Buchanan City	1,977	1,898	1,883	1,853	-6.20%
Buchanan Twp	1,325	1,334	1,339	1,333	0.60%
Niles City	5,540	5,598	5,548	5,454	-1.50%
Niles Twp	4,906	4,989	5,013	4,999	1.80%
Bertrand Twp	1,026	1,058	1,074	1,080	5.20%
Howard Twp	2,575	2,760	2,797	2,760	7.10%
Milton Twp	1,390	1,625	1,782	1,885	35.60%
Edwardsburg Village	517	531	517	490	-5.20%
Ontwa Twp	1,982	2,126	2,189	2,193	10.60%
Mason Twp	1,104	1,225	1,282	1,302	17.90%
Total	22,342	23,144	23,424	23,349	4.51%

Not surprisingly the same trends are visible with respect to communities that anticipate more households in the future, Table 42. Milton, Ontwa, and Mason Townships are projecting to have at least double-digit percentage growth in the number of households from 2010 to 2040. One of the surprising communities is Bertrand which is anticipating households growing by 5 percent while their total population growth is only .9 percent. This may be a reflection of a national trend of less people per household. This could also mean that more people are choosing to age in their home. As noted in the description of population projections,

this shifting of where households are located should reflect the investments that will need to be made to accommodate the shifting demographics.

Table 43 - Employment Projections

Jurisdiction	2010	2020	2030	2040	Change from 2010-2040
Buchanan City	2,944	3,083	3,096	3,161	7.30%
Buchanan Twp	677	693	692	703	3.80%
Niles City	8,062	8,543	8,621	8,786	8.90%
Niles Twp	5,696	6,172	6,188	6,200	8.80%
Bertrand Twp	1,282	1,446	1,461	1,476	15.10%
Howard Twp	1,392	1,484	1,488	1,534	10.20%
Milton Twp	834	877	873	900	7.90%
Edwardsburg Village	1,214	1,338	1,370	1,437	18.30%
Ontwa Twp	1,785	1,887	1,884	1,952	9.30%
Mason Twp	439	452	445	455	3.60%
Total	24,325	25,975	26,118	26,604	9.37%

The employment projections for the region show modest gains throughout all jurisdictions, Table 43. This demonstrates that while Michigan and southwest Michigan are still recovering from the 2008 economic downturn, that the future for the region shows that gains are likely.

MPO FINANCIAL PLAN

The Transportation Improvement Program (TIP) is the list of road and transit projects that communities and agencies plan to implement over a four-year period. That list is required to be fiscally constrained; that is, the cost of projects programmed in the TIP cannot exceed the amount of funding "reasonably expected to be available" during that time. The financial plan is the section of the TIP that documents the method used to calculate funds reasonably expected to be available and compares this amount to proposed projects to demonstrate that the TIP is fiscally constrained. The financial plan also identifies the costs of operating and maintaining the transportation system in the Niles-Buchanan-Cass Area Transportation Study.

SOURCES OF TRANSPORTATION FUNDING

The basic sources of transportation funding are motor fuel taxes and vehicle registration fees. Both the federal government and the State of Michigan tax motor fuel, the federal government at $0.184 per gallon on gasoline and $0.244 per gallon on diesel and Michigan at $0.19 per gallon on gasoline and $0.15 per gallon on diesel. Michigan also charges sales tax on motor fuel, but this funding is not applied to transportation. The motor fuel taxes are excise taxes, which mean that they are a fixed amount per gallon. The amount collected per gallon does not increase when the price of gasoline or diesel fuel increases. Over time, inflation erodes the purchasing power of the motor fuel tax.

The State of Michigan also collects annual vehicle registration fees when motorists purchase license plates or tabs. This is an important source of transportation funding for the state. Currently, roughly half of the transportation funding collected by the state is in the form of vehicle registration fees.

Cooperative Revenue Estimation Process

Estimating the amount of funding available for the four-year TIP period is a complex process. It relies on a number of factors, including economic conditions, miles travelled by vehicles nationwide and in the State of Michigan, and federal and state transportation funding received in previous years. Revenue forecasting relies on a combination of data and experience and represents a "best guess" of future trends.

The revenue forecasting process is a cooperative effort. The Michigan Transportation Planning Association (MTPA), a voluntary association of public organizations and agencies responsible for the administration of transportation planning activities throughout the state, formed the Financial Working Group (FWG) to develop a statewide standard forecasting process. FWG is comprised of members from the Federal Highway Administration (FHWA), the Michigan Department of Transportation (MDOT), transit agencies, and metropolitan planning organizations. It represents a cross-section of the public agencies responsible for transportation planning in our state. The revenue assumptions in this financial plan are based on the factors formulated by the FWG and approved by the MTPA. They are used for all TIP financial plans in the state.

HIGHWAY FUNDING FORECAST-FEDERAL

Sources of Federal Highway Funding

Federal transportation funding comes from motor fuel taxes (mostly gasoline and diesel). Receipts from these taxes are deposited in the Highway Trust Fund (HTF). Funding is then apportioned to the states. Apportionment is the distribution of funds through formulas in law. The current law governing these apportionments is Moving Ahead for Progress in the 21st Century (MAP-21). Under this law, Michigan receives approximately $1 billion in federal transportation funding annually. This funding is apportioned through a number of programs designed to accomplish different objectives, such as road repair, bridge repair, safety, and congestion mitigation. A brief description of the major funding sources follows.

National Highway Performance Program (NHP): This funding is used to support condition and performance on the National Highway System (NHS) and to construct new facilities on the NHS. The National Highway System is the network of the nation's most significant highways, including the Interstate and US highway systems. In Michigan, most roads on the National Highway System are state trunk lines (i.e., "I-," "US-," and "M-"roads). , However, MAP-21 expanded the NHS to include all principal arterials (the most important roads after freeways), whether state- or locally-owned. As a result of this change the NATS area will receive a small allocation of NHPP funds of roughly $13,000 a year. However, it should be noted that as of March 2013 all NHPP eligible roadways in the study area are MDOT controlled roadways. This may change if the classification of some roadways in the NATS urban area changes. This review will take place in the summer of 2013, after the TIP has been submitted.

Surface Transportation Program (STP): STP funds are designed for construction, reconstruction, rehabilitation, resurfacing, restoration, preservation, or operational improvements to federal-aid highways and replacement, preservation, and other improvements to bridges on public roads. Michigan's STP apportionment from the federal government is evenly split, half to areas of the state based on population and half that can be used in any area of the state. In FY 2014, Michigan's STP apportionment is estimated to be $269.8 million. The NATS region will receive approximately $488,696 which will be used by cities, villages, and the county road commissions. STP funds can also be flexed (transferred) to transit projects.

Highway Safety Improvement Program (HSIP): HSIP funds are intended to correct or improve a hazardous road location or feature or address other highway safety problems. Projects can include intersection improvements, shoulder widening, rumble strips, improving safety for pedestrians, bicyclists, or disabled persons, highway signs and markings, guardrails, and other activities. The State of Michigan retains all Safety funding and uses a portion on the state trunk line system, distributing the remainder to local agencies through a competitive process. Michigan's statewide FY 2014 estimated Safety apportionment is $64.5 million. While there is no specific allocation goes directly to the NATS MPO, local agencies are eligible to apply for these funds as stated above.

Congestion Mitigation and Air Quality Improvement (CMAQ): CMAQ funds are intended to reduce emissions from transportation-related sources. MAP-21 has placed an emphasis on diesel retrofits, but funds can also be used for traffic signal retiming, actuations, and interconnects; installing dedicated turn lanes; roundabouts; travel demand management such as rideshare and vanpools; transit; and non-motorized projects that divert non-recreational travel from single-occupant vehicles. CMAQ funds come to the MPO by means of a countywide allocation, since the MPO does not encompass the entire county. Therefore, there are CMAQ funds for projects in Berrien and Cass Counties that can be utilized for projects within the MPO. For FY 2014 Berrien County received an allocation of $578,210 and Cass County received $176,329. The distribution of the county funds are decided at publicly held county meetings, where all transit and road projects are discussed and voted upon.

Transportation Alternatives Program: TAP funds can be used for a number of activities to improve the transportation system environment, including (but not limited to) non-motorized projects, preservation of historic transportation facilities, outdoor advertising control, vegetation management in rights-of-way, and the planning and construction of projects that improve the ability of students to walk or bike to school. The statewide apportionment for Transportation Alternatives is estimated to be $26.4 million in FY 2014. The funding will then be split, 50 percent being retained by the state and 50 percent to various areas of the state by population, much like the STP distribution. NATS share of this funding is approximately $43,000 in FY 2014, and will be distributed to eligible applicants on a competitive basis.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF FEDERAL HIGHWAY FUNDS

Each year, the targets (amount NATS is expected to receive) are calculated for each of these programs, based on federal apportionment documentation and state law. Targets for fiscal year 2013, as provided by MDOT, are used as the baseline for the forecast. The Financial Work Group of the MTPA developed a two percent per year federal revenue growth rate for the FY 2014 through FY 2017 TIP period. If targets for each of fiscal years 2014-2017 are known (such as CMAQ), those amounts were used without adjustment. While this is less than the five percent growth rate over the past 20 years, the decrease in motor fuel consumption (due to less driving and higher-MPG vehicles) and the economic downturn and restructuring experienced by the nation in general and Michigan in particular made assumptions based on long-term historical trends unusable. Table 44 contains the federal transportation revenue projections for the 2014-2017 TIP.

Table 44 - Federal Highway Transportation Revenue Projections

FY	STP	NHPP	CMAQ Funds Berrien (Cass)	TAP	Total
2014	$488,696	$13,029	$578,210 $(176,329)	$43,398	$1,123,335 $(721,453)
2015	$498,470	$13,290	$578,210 $(192,817)	$44,266	$1,134,237 $(748,845)
2016	$508,439	$13,555	$578,210 $(192,817)	$45,152	$1,145,358 $(759,965)
2017	$518,608	$13,826	$578,210 $(192,817)	$46,055	$1,156,700 $(771,308)
TOTAL:	$2,014,214	$53,702	$2,312,841 $(769,782)	$178,873	$4,549,631 $(3,016,572)

Cass County allocation of funds added to total

HIGHWAY FUNDING FORECAST—STATE FUNDING

Sources of State Highway Funding

There are two main sources of state highway funding, the state motor fuel tax and vehicle registration fees. The motor fuel tax, currently set at 19 cents per gallon on gasoline and 15 cents per gallon on diesel, raised approximately $937.5 million in fiscal year 2011.[21] Like the federal motor fuel tax, this is also an excise tax that doesn't increase as the price of fuel increases, so over time, inflation erodes the purchasing power of these funds. Approximately $855.9 million in additional revenue is raised through vehicle registration fees when motorists purchase their license plates or tabs each year. The state sales tax on motor fuel, which taxes both the fuel itself and the federal tax, is not deposited in the Michigan Transportation Fund. Altogether, approximately $1.9 billion was raised through motor fuel taxes, vehicle registrations, heavy truck fees, interest income, and miscellaneous revenue in FY 2011.

The state law governing the collection and distribution of state highway revenue is Public Act 51 of 1951, commonly known as "Act 51." All revenue from these sources is deposited into the Michigan Transportation Fund (MTF). Act 51 contains a number of complex formulas for the distribution of the funding, but essentially, once funding for certain grants and administrative costs are removed, 10 percent of the remainder is deposited in the Comprehensive Transportation Fund (CTF) for transit. The remaining funds are then split between the State Trunkline Fund, administered by MDOT, county road commissions, and municipalities in a proportion of 39.1 percent, 39.1 percent, and 21.8 percent, respectively.[22]

[21] Michigan Dept of Transportation, Annual Report, Michigan Transportation Fund, Fiscal Year Ending September 30, 2011 (MDOT Report 139), Schedule A.

[22] Act 51 of 1951, Section 10(1)(j).

MTF funds are critical to the operation of the road system in Michigan. Since federal funds cannot be used to operate or maintain the road system (items such as snow removal, mowing grass in the right-of-way, paying the electric bill for streetlights and traffic signals, etc.), MTF funds are local communities' and road commissions' main source for funding these items. Most federal transportation funding must be matched with 20 percent non-federal revenue. In Michigan, most matching funds come from the MTF. Finally, federal funding cannot be used on local public roads, such as subdivision streets. Here again, MTF is the main source of revenue for maintenance and repair of these roads.

Funding from the MTF is distributed statewide to incorporated cities, incorporated villages, and county road commissions, collectively known as "Act 51 agencies." The formula is based on population and public road mileage under each Act 51 agency's jurisdiction.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF STATE HIGHWAY FUNDS

The base for the financial forecast of state funding is the FY 2011 distribution of MTF funding as found in MDOT Report 139. This report details distribution of funding to each eligible Act 51 agency in the state. Adding all of the distributions to cities, villages, and county road commissions in the NATS area an overall distribution total can be derived for the region. That amount that Berrien County Act 51 agencies can plan to receive in the NATS area was $10,914,931.04 million in FY 2011 and for Cass County it was $4,217,738.86.

The Financial Work predicted an increase of 0.4 percent in state revenues for fiscal years 2014 through 2017. Table 45 shows the amount of MTF funding cities, villages, and road commissions in the NATS area that are projected to receive during the four-year TIP period, based on the agreed-upon rates of increase.

Table 45 - Projected MTF Distribution to Act-51 Agencies for Highway Use

2014	2015	2016	2017	Total
$15,314,989	$15,376,249	$15,437,754	$15,499,505	$61,628,497

State funding is projected to grow much more slowly than federal funding during the four-year TIP period. This will have two effects on the region's highway funding: First, available funding for operations and maintenance of the highway system will most likely not keep pace with the rate of inflation, leaving less money for a growing list of maintenance work. Secondly, the federal highway funding will grow at a greater rate than non-federal money to match it. For those federal transportation sources requiring match, this means that some funding will go unused, despite the demand.

HIGHWAY FUNDING FORECAST—LOCAL FUNDING

Sources of Local Highway Funding

Local highway funding can come from a variety of sources, including transportation millages, general fund revenues, and special assessment districts. Locally-funded transportation projects that are not of regional significance are not required to be included in the TIP. Local funding support for projects in the TIP is significant and there are very few communities within the MPO that have dedicated revenue collected from an assessment on property taxes. There are no communities within the MPO that have dedicated transportation revenue.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF LOCAL HIGHWAY FUNDS

The current TIP covers fiscal years 2011 through 2014. The current TIP, plus FY 2010 from the previous TIP, were queried for all projects with funding codes indicating that local funding was or will be used. Local funds programmed by transit agencies were removed, as were advance construct funds. Advance construct (AC) means the agency uses its own money to build the project, and then pays itself back in a future year with federal funding. Because of the way AC projects are shown in the TIP, counting them exaggerates the amount of local funding actually used. When this was done, the five-year annual average of local funding totaled about $180,975.60 a year with total local funding for the 2010-2014 period totaling approximately $904,878.00. It's highly unlikely that there will be increases in local funding over the four-year TIP period. For the projects currently listed in the 2014-2017 TIP there will be approximately 486,412 in the form of local funding. Table 46 highlights the total local match amount for the currently programmed projects.

Table 46 - Local Match for Road Projects

NATS Funding Years	Road Projects with Local Match
2014	$107,993
2015	$111,754
2016	$142,265
2017	$124,400
Total	$486,412

DISCUSSION OF INNOVATIVE FINANCING STRATEGIES-HIGHWAY

A number of innovative financing strategies have been developed over the past two decades to help stretch limited transportation dollars. Some are purely public sector; others involve partnerships between the public and private sectors. Some of the more common strategies are discussed below.

Toll Credits: This strategy allows states to count funding they earn through tolled facilities (after deducting facility expenses) to be used as "soft match," rather than using the usual cash match for federal transportation projects. States have to demonstrate "maintenance of effort" when using toll credits—in other words, they must show that the toll money is being used for transportation purposes and that they're not reducing their efforts to maintain the existing system by using the toll credit program. Toll credits have been an important source of funding for the State of Michigan in the past because of the three major bridge crossings and one tunnel crossing between Michigan and Ontario. Toll credits have also helped to partially mitigate the funding crisis in Michigan, since insufficient non-federal funding is available to match all of the federal funding apportioned to the state.

State Infrastructure Bank (SIB): Established in a majority of states, including Michigan.[23] Under the SIB program, states can place a portion of their federal highway funding into a revolving loan fund for transportation improvements such as highway, transit, rail, and intermodal projects. Loans are available at 3 percent interest and a 25-year loan period to public entities such as political subdivisions, regional planning commissions, state agencies, transit agencies, railroads, and economic development corporations. Private and nonprofit corporations developing publicly owned facilities may also apply. In Michigan, the maximum per-project loan amount is $2 million. The Michigan SIB had a balance of approximately $12 million in FY 2011.

Transportation Infrastructure Finance and Innovation Act (TIFIA): This nationwide program, significantly expanded under MAP-21, provides lines of credit and loan guarantees to state or local governments for development, construction, reconstruction, property acquisition, and carrying costs during construction. TIFIA enables states and local governments to use the borrowing power and creditworthiness of the United States to finance projects at far more favorable terms than they would otherwise be able to do on their own. Repayment of TIFIA funding to the federal government can be delayed for up to five years after project completion with a repayment period of up to 35 years. Interest rates are also low. The amount authorized for the TIFIA program in FY 2014 nationwide is $1.0 billion.

Bonding: Bonding is borrowing, where the borrower agrees to repay lenders the principal and interest. Interest may be fixed over the term of the bond or variable. The amount of interest a borrower will have to pay depends in large part upon its perceived credit risk; the greater the perceived chance of default, the higher the interest rate. In order to bond, a borrower must pledge a reliable revenue stream for repayment.

[23] FHWA Office of Innovative Program Delivery. "Project Finance: An Introduction" (FHWA, 2012).

For example, this can be the toll receipts from a new transportation project. In the case of general obligation bonds, future tax receipts are pledged.

States are allowed to borrow against their federal transportation funds, within certain limitations. While bonding provides money up front for transportation projects, it also means diminished resources in future years, as funding is diverted from projects to paying the bonds' principal and interest. Michigan transportation law requires money for the payment of bond and other debts is taken off the top before the distribution of funds for other purposes. Therefore, the advantages of completing a project more quickly need to be carefully weighed with the disadvantages of reduced resources in future years.

Advance Construct/Advance Construct Conversion: This strategy allows a community or agency to build a transportation project with its own funds (advance construct) and then be reimbursed with federal funds in a future year (advance construct conversion). Tapered match can also be programmed, where the agency is reimbursed over a period of two or more years. Advance construct allows for the construction of highway projects before federal funding is available; however, the agency must be able to build the project with its own resources and then be able to wait for federal reimbursement in a later year.

Public-Private Partnerships (P3): Funding available through traditional sources, such as motor fuel taxes, is not keeping pace with the growth in transportation system needs. Governments are increasingly turning to public-private partnerships (P3) to fund large transportation infrastructure projects. An example of a public-private partnership is Design/Build/Finance/Operate (DBFO). In this arrangement, the government keeps ownership of the transportation asset, but hires one or more private companies to design the facility, secure funding, construct the facility and operate it, usually for a set period of time. The private-sector firm is repaid most commonly through toll revenue generated by the new facility.[24] Sometimes, as in the case of the Chicago Skyway and the Indiana Toll Road, governments grant exclusive concessions to private firms to operate and maintain already-existing facilities in exchange for an up-front payment from the firm to the government. The firm then operates, maintains, and collects tolls on the facility during the period of the concession, betting that it will collect more money in tolls then it paid out in operations costs, maintenance costs, and the initial payment to the government.

HIGHWAY OPERATIONS AND MAINTENANCE

Construction, reconstruction, repair, and rehabilitation of roads and bridges are only part of the total cost of the highway system. It must also be operated and maintained. *Operations and maintenance* is defined as those items necessary to keep the highway infrastructure functional for vehicle travel, other than the construction, reconstruction, repair, and rehabilitation of the infrastructure. Operations and maintenance includes items such as snow and ice removal, pothole patching, rubbish removal, maintaining the right-of way, maintaining traffic signs and signals, clearing highway storm drains, paying the electrical bills for street lights and traffic signals, and other similar activities, and the personnel and direct administrative costs

[24] http://www.fhwa.dot.gov/ipd/p3/defined/design_build_finance_operate.htm.

necessary to implement these projects. These activities are as vital to the smooth functioning of the highway system as good pavement.

Federal transportation funds cannot be used for operations and maintenance of the highway system. Since the TIP only includes federally-funded transportation projects (and non-federally-funded projects of regional significance), it does not include operations and maintenance projects. While in aggregate, operations and maintenance activities *are* regionally significant, the individual projects do not rise to that level. However, federal regulations require an estimate of the amount of funding that will be spent operating and maintaining the federal-aid eligible highway system over the FY 2014 through FY 2017 TIP period. This section of the Financial Plan provides an estimate for NATS planning area and details the method used to estimate these costs.

Tables 47-48 highlights the total lane miles (the miles of federal aid eligible roads multiplied by the total number of lanes) for the system, which is helpful in understanding how many miles of federal aid eligible miles are in the study area and what communities are responsible for.

Table 47 - Federal Aid Eligible Lane Miles

Federal Aid System	Federal Aid Lane Miles
State Trunkline	228.331
Local Federal Aid Roads	277.702
All Federal Aid Eligible	506.033

Source: Roadsoft

Table 48 - Federal Aid Miles by Jurisdiction

Jurisdiction	Total State Trunkline Miles	Total Local Federal Aid Eligible Miles	Total Federal Aid Eligible Miles
Bertrand Twp	25.42	16.247	41.667
Buchanan	0	6.056	6.056
Buchanan Twp	0	18.848	18.848
Edwardsburg	0	0.888	0.888
Howard Twp	12.929	17.06	29.989
Mason Twp	6.455	8.665	15.12
Milton Twp	10.779	16.911	27.69
Niles	6.05	10.669	16.719
Niles Twp	36.789	23.537	60.326
Ontwa Twp	10.23	13.934	24.164
Total	108.652	132.815	241.467

Source: Roadsoft

According to *Michigan's FY 2011-2014 State Transportation Improvement Program*, approximately $599.3 million will be available statewide for operations and maintenance costs in FY 2014 for the state trunk line highway system (roads with "I-," "US-," and "M-" designations).[25] About 228.331 lane miles of the state trunkline system are located the NATS region. Assuming an allocation of $6,500 per lane mile for the operations and maintenance cost, MDOT should spend approximately $1,482,000 in the NATS region in FY 2014. Since MDOT's operations and maintenance funding comes from state motor fuel taxes (the Michigan Transportation Fund), the agreed-upon rate of increase for state funds (0.4 percent annually) was applied to derive the operations and maintenance costs for FYs 2015, 2016, and 2017.

Local communities' and agencies' costs to operate and maintain their portions of the federal-aid highway system were estimated through discussions with the local agencies on an agreed upon average. This was then applied to the total lane mileage of federal-aid eligible roads in the NATS region. The assumption in this case is that local communities and agencies are spending every available operations and maintenance dollar, so funds expended equal funds available. Much of local agencies' operations and maintenance funding comes from the Michigan Transportation Fund, so the agreed-upon rate of increase for state funds (0.4 percent annually) was applied to derive the operations and maintenance costs for FYs 2014 through 2017. MDOT and local operations and maintenance funding available was then brought together for a regional total. This is summarized in Table 49.

[25] Michigan Department of Transportation. *FY 2011-2014 State Transportation Improvement Program* (January 2012), p. 9.

Table 49 - Projected Available Highway Operations and Maintenance Funding

FY	MDOT Estimate	Local Estimate
2014	$1,482,000	$1,110,808
2015	$1,487,928	$1,155,240
2016	$1,493,879	$1,201,449
2017	$1,499,854	$1,249,506
TOTAL	$5,963,661	$4,717,003

MPO staff received information from the Cass County Road Commission for the lane mile cost of the federal aid system in the amount of $2,175. Staff also received information from the Berrien County Road Commission for their portion of the federal aid system and their amount was $8,000 a mile. As this is only an estimate of the costs, a rate of $4,000 per lane mile was applied to the local estimate calculation.

HIGHWAY COMMITMENTS AND PROJECTED AVAILABLE REVENUE

The TIP must be fiscally constrained; that is, the cost of projects programmed in the TIP cannot exceed revenues "reasonably expected to be available" during the four-year TIP period. Funding for core programs such as NHP, STP, HSIP, and CMAQ are expected to be available to the region based on historical trends of funding from earlier, similar programs in past federal surface transportation laws. Likewise, state funding from the Michigan Transportation Fund (MTF) and the hybrid state/federal programs, are also expected to be available during the FY 2014 through FY 2017 TIP period. Funds from other programs are generally awarded on a competitive basis and are therefore impossible to predict. In these cases, projects are not amended into the TIP until proof of funding availability (such as an award letter) is provided. Funds from federal competitive programs are not included in the revenue forecast.

All federally-funded projects must be in the TIP. Additionally, any non-federally-funded but regionally significant project must also be included. In these cases, project submitters demonstrate that funding is available and what sources of non-federal funding are to be utilized.

Projects programmed in the TIP are known as *commitments*. As mentioned previously, commitments cannot exceed funds reasonably expected to be available. Projects must also be programmed in year of expenditure dollars, meaning that they must be adjusted for inflation to reflect the estimated purchasing power of a dollar in the year the project is expected to be built. The MTPA/Financial Work Group has decided on an annual inflation rate of 3.3 percent for projects over the TIP period. This means that a project costing $100,000 in FY 2014 is expected to cost $103,300 in FY 2015, $106,709 in FY 2016, and $110,230 in FY 2017. Since the amount of federal funds available is only expected to increase by 0.86 percent in 2014 and then 2 percent per year thereafter, and state funds by only 0.4 percent per year over the four-year TIP period, this means that less work can be done each year with available funding. Within the NATS region, all projects accommodated for inflation from the submitting agency.

Table 50 is known as a fiscal constraint demonstration. The demonstration is provided to the Michigan Department of Transportation, Federal Highway Administration, and Federal Transit Administration in order to show that the cost of planned projects does not exceed the amount of funding reasonably expected to be available over the FY 2014 through FY 2017 TIP period.

Table 50 - Highway Fiscal Constraint Demonstration

NATS	2014		2015		2016		2017	
Funding	Avail	Prog	Avail	Prog	Avail	Prog	Avail	Prog
STP	488,696	488,219	498,470	498,923	508,439	$525,834	518,608	561,004
NHPP	13,029	0.00	13,290	$0.00	13,555	$0.00	13,826	0.00
CMAQ Berrien County (Cass County)**	578,210 (176,329)	453,000 (176,329)	578,210 (192,817)	126,000 (192,817)	578,210 (192,817)	$459,000 $(192,817)	578,210 (192,817)	550,000 (192,817)
TAP	43,398	0.00	44,266	0.00	45,152	$0.00	46,055	0.00
TOTAL	1,299,662	1,117,548	1,327,053	817,740	1,338,173	$1,177,651	1,349,516	1,303,821
Net Balance*	182,114		509,313		160,522		45,695	

**Net Balance = Available funding less cost of programmed projects. A positive net balance means that available funding exceeds programmed project cost; a negative balance means that programmed project costs exceed available funding; and a zero net balance indicates that programmed project costs equal available funding.*

** The MPO does not encompass either the Berrien or Cass County as a whole the CMAQ funds are county wide allocation and some of the funds do come to the MPO but not all in the form of road projects and transit projects.

With the NATS region being considered a Transportation Management Area (TMA) due to its relationship with the South Bend and Elkhart Indiana urbanized areas, NHPP and TAP funds were allocated to the region. The newness of the program has not allowed the region to fully expend its entire fund to date, but are working with FHWA, FTA, and MDOT to ensure that the funds are fully programmed throughout the TIP years. In addition, the total Berrien County CMAQ funds have not been fully allocated to do, an August 2013 meeting has been called to fully program out those funds.

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TRANSIT FINANCIAL FORECAST—FEDERAL

Sources of Federal Transit Funding

Federal Revenue for transit comes from federal motor fuel taxes, just as it does for highway projects. Some of the motor fuel tax collected from around the country is deposited in the Mass Transit Account of the Highway Trust Fund (HTF). As of the start of fiscal year 2012 (October 1, 2011), the balance of the federal Mass Transit Account was $7.32 billion.[26] Federal transit funding is similar to federal highway funding in that there are several core programs where money is distributed on a formula basis and other programs that are competitive in nature. Here are brief descriptions of some of the most common federal transit programs.

Section 5307: This is one of the larger sources of transit funding that is apportioned to Michigan. Section 5307 funds can be used for:

- Capital projects
- Transit planning
- Projects eligible under the former Job Access Reverse Commute (JARC) program (intended to link people without transportation to available jobs).
- Some of the funds can also be used for operating expenses, depending on the size of the transit agency.
- One percent of funds received are to be used by the agency to improve security at agency facilities.

Distribution is based on formulas including population, population density, and operating characteristics related to transit service. Urbanized areas of 200,000 population or larger receive their own apportionment. As with the NATS area, the Michiana Area Council of Governments is the recognized recipient of the transit funds for the urbanized area and the apportionment goes to MACOG first then is apportioned to Niles Dial A Ride. Areas between 50,000 and 199,999 population are awarded funds by the governor from the governor's apportionment. In the NATS area, MACOG and South Bend TRANSPO are the designated recipients for the Indiana portion of the UZA; Niles is the designated recipient for the Michigan portion. Per an MOU, each year when congress apportions the funds, MACOG prepares a distribution table. Representatives from TRANSPO and from Niles convene to discuss and split the bus portion of the apportionment. A letter is signed and forwarded to MACOG. Because the Niles system is so much smaller than TRANSPO, the agreement has typically been based on Niles DART's funding needs, with TRANSPO accepting the remaining portion.

Section 5310, Elderly and Persons with Disabilities: This program is intended to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act

[26] http://www.fhwa.dot.gov/highwaytrustfund/index.htm.

(ADA) complementary paratransit services. Section 5310 incorporates the previous New Freedom Program and Elderly and Disabled Program. Operating assistance is also now available under this program.

Section 5311, Non-Urbanized Area Formula Grant: Funds for capital, operating, and rural transit planning activities in areas under population 50,000. Activities under the former JARC program (see Section 5307 above) in rural areas are also eligible. The state must use 15 percent of its Section 5311 funding on intercity bus transportation. The State of Michigan operates this program on a competitive basis. Areas in the NATS MPO that would be eligible for these funds are Berrien Bus, Cass County Public Transit, and Buchanan Dial A Ride. While Cass County Public Transportation is part of the MPO area, such a small portion of the urbanized area is in the MPO that the 5311 funds for this agency are listed in the State Transportation Improvement Program.

Section 5337, State of Good Repair Grants: Funding to state and local governmental authorities for capital, maintenance, and operational support projects to keep fixed guideway systems in a state of good repair. Recipients will also be required to develop and implement an asset management plan. Fifty percent of Section 5337 funding will be distributed via a formula accounting for vehicle revenue miles and directional route miles; fifty percent is based on ratios of past funding received. Currently, the NATS region is not eligible for these funds.

Section 5339, Bus and Bus Facilities: Funds will be made available under this program to replace, rehabilitate, and purchase buses and related equipment, as well as construct bus-related facilities. Each state will receive $1.25 million, with the remaining funding apportioned to transit agencies based on various population and service factors.

Congestion Mitigation and Air Quality Improvement (CMAQ): Intended to reduce emissions from transportation-related sources. MAP-21 has placed an emphasis on diesel retrofits, but funds can also be used for traffic signal retiming, actuations, and interconnects; installing dedicated turn lanes; roundabouts; travel demand management such a ride share and vanpools; transit; and non-motorized projects that divert non-recreational travel from single-occupant vehicles. CMAQ funds come to the MPO by means of a countywide allocation, since the MPO does not encompass the entire county. Therefore, there are CMAQ funds for projects in Berrien and Cass Counties that can be utilized for projects within the MPO. For FY 2014 Berrien County will receive an allocation of $578,210 and Cass County received $176,329. The distribution of the county funds are decided at publicly held county meetings, where all transit and road projects are discussed and voted upon.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF FEDERAL TRANSIT FUNDS

The base for the federal portion of the transit financial forecast is the amount of federal funding each transit agency received in the region in FY 2013, the first year of MAP-21. Given the extra obligation authority available at the state level, the MTPA rates of increase were used for FY 2014, rather than the lower MAP-21 factor (1.38 percent). Table 51 shows the federal transit forecast for the FY 2014-17 TIP period.

Table 51 - Federal Transit Revenue Projections

NATS FY	Sec 5307	Sec 5310 (Sen/Dsbld)	Sec 5311 (Rural) Op	Sec 5339 Bus & Bus Facilities*	CMAQ Funds Berrien (Cass)	Total
2014	$182,484	0	$44,607	0	$578,210 $(176,329)	$807,301 $(405,420)
2015	$185,002	0	$45,222	0	$578,210 $(192,817)	$808,434 $(423,041)
2016	$187,555	0	$45,846	0	$578,210 $(192,817)	$811,611 $(462,218)
2017	$190,143	0	$46,479	0	$578,210 $(192,817)	$814,832 $(429,439)
Total	$745,184	0	$182,154	0	$2,312,841 $(769,782)	$3,240,179 $(1,697,120)

TRANSIT FINANCIAL FORECAST—STATE

Sources of State Transit Funding

The majority of state-level transit funding is derived from the same source as state highway funding, the state tax on motor fuels. Act 51 stipulates that 10 percent of receipts into the MTF, after certain deductions, are to be deposited in a subaccount of the MTF called the Comprehensive Transportation Fund (CTF). This is analogous to the Mass Transit Account of the Highway Trust Fund at the federal level. Additionally, a portion of the state-level auto-related sales tax is deposited in the CTF.[27] Distributions from the CTF are used by public transit agencies for matching federal grants and also for operating expenses. Approximately $157 million was distributed to the CTF in FY 2011.[28]

[27] Hamilton, William E. *Act 51 Primer* (House Fiscal Agency, February 2007), p. 4.
[28] MDOT Report 139 for 2011, Schedule A.

Base and Assumptions Used in Forecast Calculations of State Transit Funds

The base for calculations of state transit funds is the amount transit agencies in the NATS region received in FY 2013. The CTF amounts in the NATS region were not constant from 2011 to 2013 due to the following reasons:

1. In the past, MDOT used toll credits for transit to match capital projects, except for facility and bus projects, which were matched with cash. MDOT no longer uses toll credits to match transit projects.

2. In previous years, Niles DART did not list operating expenses in the TIP. Under SAFETEA-LU, transit agencies in large urban areas (those with over 200,000 people) could not use federal 5307 funds to cover operating expenses. The current legislation, MAP-21, allows for agencies in large UZAs to use some of their 5307 funds for operating expenses, provided that the system runs 100 or fewer buses in fixed route service during peak hours. TRANSPO runs fewer than 100 buses, and the providers within the NATS area do as well, accordingly there is optimism that the NATS providers will be eligible to utilize some of the annual 5307 apportionment to the UZA for operating expenses.

Funding was adjusted upward by 3.75 percent for state match and 0.37 percent for state operating in FY 2014, the first year of the TIP, and then by the same percentage in FYs 2015 through 2017, in accordance with factors determined by the Financial Workgroup and approved by the Michigan Transportation Planning Association. The state-level CTF distributions to the NATS transit agencies are shown in Table 52, broken down by state match and state operating.

Table 52 - State Transit (CTF) Revenue Projections

FY	Sec 5307 State Operating	Sec 5307 Capital	Sec 5311 (Rural) Op State	Sec 5339 Bus & Bus Facilities (State)	Total
2014	$175,647	$30,087	$73,270	0	$279,004
2015	$176,296	$31,215	$73,541	0	$281,052
2016	$176,948	$32,385	$73,813	0	$283,146
2017	$177,610	$33,599	$74,086	0	$285,295
Total	$706,501	$127,286	$294,710	0	$1,128,497

The third column of Table 52, State match for JARC-Type Projects, shows the maximum amount of match that the state will provide to transit agencies using some of their Section 5307 funding for projects eligible under the Job Access and Reverse Commute program. This program was a stand-alone under the old SAFETEA-LU law, but has been folded into the Sec 5307 program under MAP-21. JARC projects are intended to connect persons without an automobile to job opportunities in many parts of the region.

TRANSIT FINANCIAL FORECAST—LOCAL

Sources of Local Transit Funding

Major sources of local funding for transit agencies include farebox revenues, general fund transfers from city governments, and transportation millages.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF LOCAL TRANSIT FUNDS

The base amounts for farebox, general fund transfers, and millages are derived the MDOT Public Transportation Management System from the reconciled 2011. Presuming that transit agencies spend all money that they receive each year, these data can be used for revenue projections as well, which is displayed in Table 53.

Table 53 - Local Transit Revenue Projections

FY	Berrien Bus	Niles DAR	Buchanan DAR	Total
2014	$364,649	$170,541	$105,663	$642,867
2015	$364,649	$170,541	$105,663	$642,868
2016	$364,649	$170,541	$105,663	$640,853
2017	$364,649	$170,541	$105,663	$640,853
Total	$1,458,596	$682,164	$422,652	$2,567,441

Source: Information was gathered from the PTMS data source and the year was the 2011 reconciled report-local revenue and farebox

DISCUSSION OF INNOVATIVE FINANCING STRATEGIES-TRANSIT

Sources of funding for transit are not limited to the federal, state, and local sources previously mentioned. As with highway funding, there are alternative sources of funding that can be utilized to operate transit service. Bonds can be issued (see discussion of bonds in the "Innovative Financing Strategies—Highway" section). The federal government also allows the use of toll credits to match federal funds. Toll credits are earned on tolled facilities, such as the Blue Water Bridge in Port Huron. Regulations allow for the use of toll revenues (after facility operating expenses) to be used as "soft match" for transit projects. Soft match means that actual money does not have to be provided—the toll revenues are used as a "credit" against the match. This allows the actual toll funds to be used on other parts of the transportation system, thus stretching the resources available to maintain the system.[29] However, MDOT is currently not allowing toll credits to be used as match.

[29] FHWA Office of Innovative Program Delivery at http://www.fhwa.dot.gov/ipd/finance/tools_programs/federal_aid/matching_strategies/toll_credits.htm.

TRANSIT CAPITAL AND OPERATIONS

Transit expenditures are divided into two basic categories, capital and operations.

1. *Capital* - refers to the physical assets of the agency, such as buses and other vehicles, stations and shelters at bus stops, office equipment and furnishings, and certain spare parts for vehicles.

2. *Operations* - refers to the activities necessary to keep the system operating, such as driver wages and maintenance costs. Most expenses of transit agencies are operations expenses.

Data on capital and operating costs were derived from the 2014-2017 TIP project requests from all eligible agencies. This did not include Cass County transit as their revenue is listed in the STIP. It is also assumed that the transit agencies are spending all available capital and operations funding, so that the amount expended on these items is roughly equal to the amount available. Table 54 shows the amounts estimated to be available for transit capital and operations during the FY 2014-FY 2017 TIP period.

Table 54 - Anticipated Amounts to be Expended on Transit Capital and Transit Operations

FY	Operations	Capital	Total
2014	$661,640	$226,858	$888,498
2015	$665,800	$332,650	$998,450
2016	$669,640	$137,750	$807,390
2017	$669,640	$196,250	$865,890
Total:	$2,666,720	$893,508	$3,560,223

These tables shows the total project costs for FY 2014-2017 capital and operations with federal, state, and local funds for all of the NATS transit agencies with the exception of Cass County Public Transit.

TRANSIT COMMITMENTS AND PROJECTED AVAILABLE REVENUE

The TIP must be fiscally constrained; that is, the cost of projects programmed in the TIP cannot exceed revenues “reasonably expected to be available” during the four-year TIP period. Funding for core programs such as Section 5307, Section 5339, Section 5310, and Section 5311 are expected to be available to the region based on historical trends of funding from earlier, similar programs in past federal surface transportation laws. Likewise, state funding from the state’s Comprehensive Transportation Fund (CTF), and local sources of revenue such as farebox, general fund transfers, and millages, are also expected to be available during the FY 2014 through FY 2017 TIP period. Funds from other programs are generally awarded on a competitive basis and are therefore impossible to predict. In these cases, projects are not amended into the TIP until proof of funding availability (such as an award letter) is provided. Funds from federal competitive programs are not included in the revenue forecast.

All federally-funded projects must be in the TIP. Additionally, any non-federally-funded but regionally significant project must also be included. In these cases, project submitters demonstrate that funding is available and what sources of non-federal funding are to be utilized.

Projects programmed in the TIP are known as *commitments*. As discussed previously, commitments cannot exceed funds reasonably expected to be available. Projects must also be programmed in the year of expenditure dollars, meaning that they must be adjusted for inflation to reflect the expected purchasing power of a dollar in the year the project is expected to be built. The MTPA/Financial Work Group has decided on an annual inflation rate of 3.3 percent for projects over the TIP period. This means that a project costing $100,000 in FY 2014 is expected to cost $103,300 in FY 2015, $106,709 in FY 2016, and $110,230 in FY 2017. Since the amount of federal funds available is only expected to increase by 3.75 percent per year, state match funds by only 3.75 percent per year, and state operating funds by 0.37 percent per year over the four-year TIP period, this means that funding will barely keep pace with inflation. All transit projects submitted were adjusted by the submitting agency.

Table 55 shows the summary financial constraint demonstration for transit. The demonstration is provided to the Michigan Department of Transportation, Federal Highway Administration, and Federal Transit Administration in order to show that the cost of planned projects does not exceed the amount of funding reasonably expected to be available over the FY 2014 through FY 2017 TIP period. To see the detailed fiscal constraint demonstration, refer to Appendix H.

Table 55 - Transit Fiscal Constraint Demonstration

FY	Available Federal Berrien (Cass)	Programmed Federal	Available State	Programmed State	Available Local	Programmed Local
2014	807,301 (405,420)	680,091 (405,420)	279,004	279,004	642,867	642,867
2015	808,434 (423,041)	356,224 (423,041)	281,052	281,052	642,868	642,868
2016	811,611 (462,218)	692,401 (462,218)	283,146	283,146	640,853	640,853
2017	814,832 (429,439)	786,622 (429,439)	285,295	285,295	640,853	640,853
Total	3,240,179 (1,720,118)	2,515,338 (1,720,118)	1,128,497	1,128,497	2,567,441	2,567,441

The total Berrien County CMAQ funds have not been fully allocated. To do so, an August 2013 meeting has been called to fully program these funds.

ANALYSIS OF FUNDING AND NEEDS

While the previous tables have shown fiscal constraint; i.e., that programmed funds do not exceed available revenues, the fact remains that the needs of the transportation system substantially outweigh the funding available to address them. A brief discussion of highway funding illustrates the problem.

On a statewide basis, a study headed by Michigan Rep. Rick Olson found that approximately $1.4 billion was needed annually through 2015 just to maintain the existing highway system. This could be expected to increase in future years to approximately $2.6 billion annually by 2023. Michigan currently receives about $1 billion from the federal government for transportation and raises an additional $2 billion through the MTF. After MTF deductions for administrative services and the Comprehensive Transportation Fund (transit), the state is left with approximately $1.8 billion in state funds, so there is a total of $2.8 billion for highways and bridges. If an additional $1.4 billion is required to keep the system at a minimally acceptable level of service, this indicates that the state only has about two-thirds of the funding necessary just to maintain the existing infrastructure. Any new facilities would, of course, increase the costs of the system to higher levels.

Table 56 displays project information for all of the fiscal years and provides more detailed information regarding funding requests from federal, state, and local sources, project details, year of construction, and the agency responsible for the project. Map 23, highlights the project locations throughout the region. Table 57 lists those projects that were not selected to receive funding during the TIP fiscal years, but will still be listed in the plan in case additional funds are received or if a project that is currently programmed cannot move forward.

Table 56 - TIP Project Listing

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Cost ($1000s)
2014	BERRIEN	Berrien County	Red Bud Trail, Third St, and Portage Rd	Red Bud Trail from Buchanan City limit to Miller Rd, Third St from Bell Rd to Fort St, and Portage Rd from US-12 to State Line	6.15	Resurface	Hot patching and single seal coat	CON		72	STU			18	CNTY	90000	112104	Exempt	100
2014	CASS	Cass County	Redfield St	Fir to Kline	1.27	Resurface	HMA (hot mix asphalt) structural resurface of existing HMA pavement in poor condition.	CON		166	STU			37	CNTY	203200	112864	Exempt	203
2014	CASS	Cass County	Elkhart Rd	From Redfield to May St.	1.33	Resurface	Partial Milling and Total Resurface	CON	ACC	11	STU					11417	112107	Exempt	175
2014	BERRIEN	MDOT	M-139	(Main Street) over St. Joseph River	0.14	Bridge replacement	Bridge replacement	CON	AC	4,531	BRT	1,133	M			5664000	104152	Exempt	7,188
~~2014~~	~~BERRIEN~~	~~MDOT~~	~~US 31~~	~~at Niles Buchanan Road, northwest quadrant of interchange, Niles Township, Berrien County. Niles Facility. Lot No. 711008~~	~~0~~	~~Roadside Facility~~	~~Expand existing lot to add capacity and mill and resurface existing portion of lot~~	~~PE~~			~~ST~~		~~M~~				~~113932~~	~~NA~~	
2014	BERRIEN	Niles	Seventeenth St	Oak St to Eagle St	0.51	Resurface	Resurface	CON		159	STU			35	CITY	194300	112105	Exempt	233
~~2014~~	~~BERRIEN~~	~~Niles~~	~~Sycamore St~~	~~Thirteenth St to Seventeenth St~~	~~0.49~~	~~Resurface~~	~~Cold mill and resurface, including construction of ADA ramps where required~~	~~CON~~		~~101~~	~~STU~~			~~22~~	~~CITY~~	~~123000~~	~~100024~~	Exempt	148

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Cost ($1000s)
2014	Berrien	Niles Dial A Ride	Free fare days	Niles area	0	Transit operations	Free Fare Days - This project will allow Dial-A-Ride to offer free fares on its fixed route during ozone action days. Dial-A-Ride will market this idea during the summer months and will announce that it is a free fare day when an ozone action day is declared by the MDNRE. This program will emphasize that people should commute via public	T-ops		2	CM	1	CTF			2500	118114	Exempt	3
2014	BERRIEN	Niles Dial-a-Ride	Maintenance Software	Niles area		Transit maintenance	Purchase maintenance equipment software upgrades	T-Cap		2	5307	1	CTF			2500		Exempt	3
~~2014~~	~~BERRIEN~~	~~Niles Dial-a-Ride~~	~~Parking Lot~~	~~Niles area~~		~~Transit facility~~	~~Fill cracks, reseal, and restripe parking lot and driveway~~	~~T Cap~~										~~Exempt~~	
2014	BERRIEN	Niles Dial-a-Ride	Preventative Maintenance	Niles area		Transit maintenance	Preventative maintenance	T-Cap		100	5307	16	CTF	9	TRAL	125000		Exempt	125
~~2014~~	~~BERRIEN~~	~~Niles Dial-a-Ride~~	~~Trolley Façade~~	~~Niles area~~		~~Transit maintenance~~	~~Refinish trolley wood façade~~	~~T Cap~~										~~Exempt~~	
2014	BERRIEN	Niles Dial-a-Ride	Replacement Computers	Niles area		Transit operations	Purchase and install up to 2 replacement office computers, associated software, and monitors	T-Cap		6	5307	1	CTF	1	TRAL	8000		Exempt	8
2014	BERRIEN	Niles Dial-a-Ride	Replacement Bus	Niles area		Transit vehicle additio	Replace one diesel cutaway bus	T-Cap		72	5307	12	CTF	6	TRAL	90338		Exempt	90
2014	BERRIEN	Niles Dial-a-Ride	Operating Assistance	Niles area		Transit operations	Public transit operations	T-Ops		85	5307	174	CTF	167	TRAL	426350		Exempt	426,350
2014	Cass	Rideshare	Countywide	Countywide	0	Miscellaneous	Southwest MI Planning Commission Rideshare Program	EPE		12	CMG	0				12000	116815	Exempt	12
2015	BERRIEN	Berrien County	Range Line Road, Lake Street and Main	Range Line Road from Walton Road North to Twp Line, Lake St from Niles to Cass County, and Main Street from Niles to Cass	5.1	Resurface	Hot mix patching and seal coat	CON		77	STU	0		17	CNTY	94	120689	N	41422
2015	BERRIEN	Berrien County	Madron Lake, North Main and Red Bud Trail	Madron Lake from Warren Woods to Bakertown, N Main from Reed to Glendora, and Red Bud Trail from Miller to Buchanan	5.7	Resurface	Hot mix patching and seal coat	CON		77	STU	0		17	CNTY	94	120690	N	41422
2015	BERRIEN	Niles	Broadway	Fifth to Tenth	0.3	Resurface	Cold Mill and Resurface	CON		100	STU	0		23	CITY	122737	120686	N	122737

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Cost ($1000s)
2015	CASS	Cass County	Adamsville Road	Stateline to May	1.5	Restore &	Restore and Rehabilitate with Crush and Shape	CON		246	STU	0		54	CNTY	300	120687	N	41422
2015	Berrien	Niles Dial-A-Ride	Operating Assistance	Niles area		Transit operati	Public transit operations			$ 85,000	5307	$174,000	CTF	$167,350	TRAL	426350		$426,350	426350
2015	Berrien	Niles Dial-A-Ride	Preventive Maintenance	Niles area		Transit mainte nance equipm	Preventive maintenance			$101,000	5307	$ 16,413	CTF	$ 8,837	TRAL	126250		$126,250	126250
2015	Berrien	Niles Dial-A-Ride	Replacement Bus	Niles area		Transit vehicle additio	Replace one cutaway bus			$ 56,000	5307	$ 9,100	CTF	$ 4,900	TRAL	70000		$ 70,000	70000
2015	BERRIEN	Berrien Bus	Rural Operating Funds	Rural portion of NATS MPO area		Transit operati	Public transit operations			$ 23,746	5311	$ 23,746	CTF			47492			$ 47,492
2015	Berrien	City of Buchanan	Bus Replacement	Buchanan area		Transit vehicle rehabili	Replace 2 small cutaway buses with two 2015 or newer cutaway buses			$105,280	CMG	$ 26,320	M			131600		$131,600	131600
2016	BERRIEN	Berrien County	Bertrand, Third and State Line	Bertrand Road from US 31 to St. Joe River, Third St from Fulkerson to State Line, State Line from 3rd to S 11th	5.1	Resurface	Hot mix patching and seal coat	CON		77	STU	0		17	CNTY	94	120685	N	41422
2016	BERRIEN	Berrien County	Galien-Buchanan, Bakertown, Fourth, and Terre Coupe	Galien-Buchanan from Boyle Lake to Bakertown, Bakertown from US-12 to Madron Lake, 4th from Bakertown to Buchanan, Terre	5.5	Resurface	Hot mix patching and seal coat	CON		77	STU	0		17	CNTY	94	120688	N	41422
2016	BERRIEN	Buchanan	Red Bud Trail	South City limit to Front St.	0.5	Resurface	Cold milling and resurfacing of Red Bud Trail a distance of 2,700', including miscellaneous curb and gutter replacement, ADA sidewalk ramps, misc. sub grade under drains, sections of full depth pavement replacement and pavement markings. The roadway through this area is experiencing	CON		254	STU	0		63	CITY	317	120695	N	41422
2016	BERRIEN	MDOT	US-31 NB	at Niles Buchanan Road	0	Roadside	Expand and resurface existing carpool lot	CON		45	ST	10	M	0		55	113735		55000
2016	CASS	Cass County	Fir Road	Stateline to Redfield	0.5	Resurface	HMA overlay with shoulders and striping	CON		40	STU	0		9	CNTY	49	120693	N	49000
2016	CASS	Cass County	Fir Road	Redfield to US 12	1	Resurface	HMA overlay with shoulders and striping	CON		18	STU	0		22	CNTY	40490	120694	N	40490

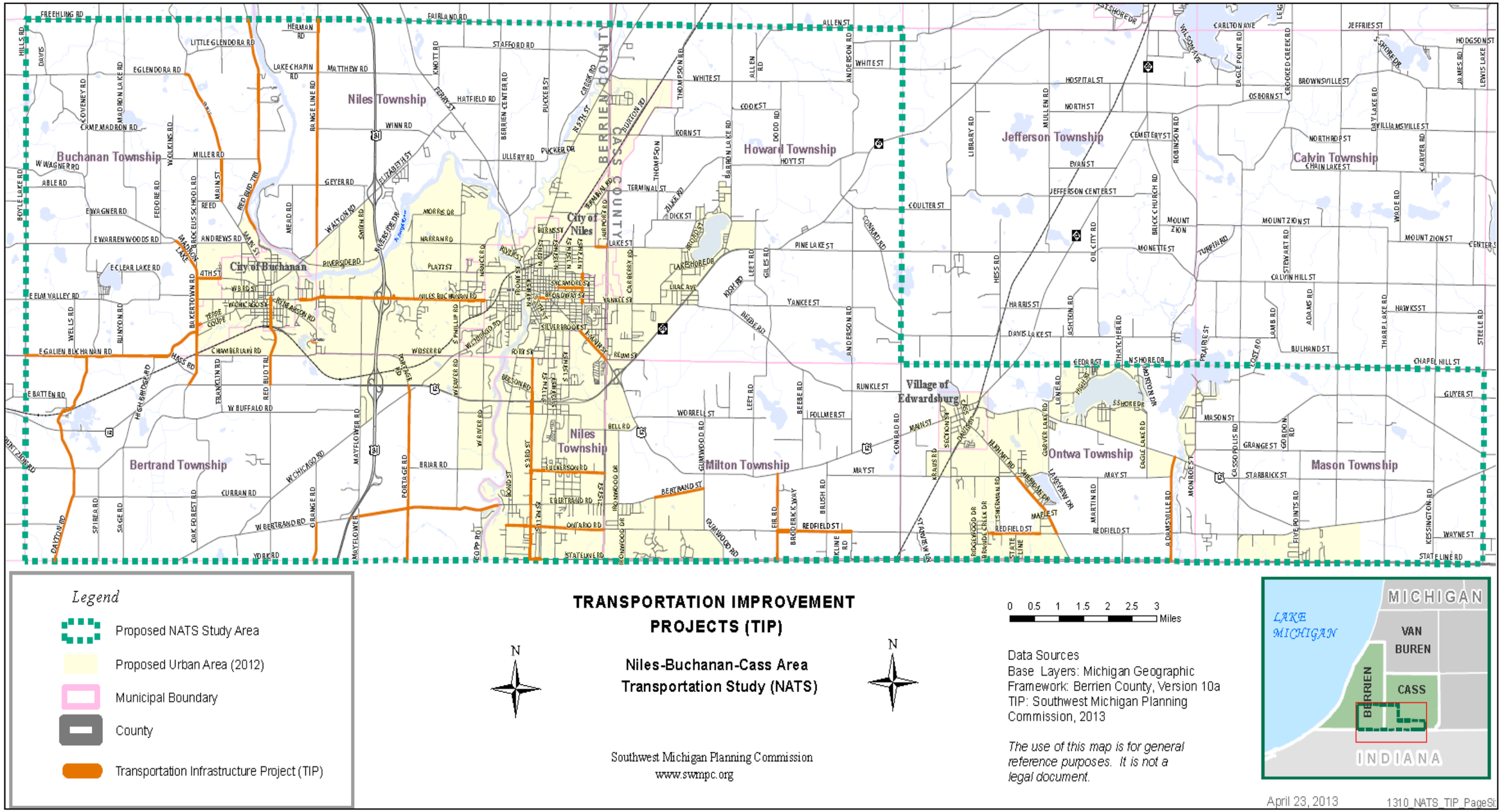
Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Project Cost
2016	CASS	Cass County	Adamsville Road	May Street to US 12	0.4	Restore & Rehabili	Crush and shape	CON		61	STU	0		13	CNTY	74	120696	N	74000
2016	Berrien	Niles Dial-A-Ride	Operating Assistance	Niles area		Transit operations	Public transit operations			$ 85,000	5307	$174,000	CTF	$167,350	TRAL	426350		$426,350	426350
2016	Berrien	Niles Dial-A-Ride	Preventive Maintenance	Niles area		Transit maintenance	Preventive maintenance			$101,000	5307	$ 16,413	CTF	$ 8,837	TRAL	126250		$126,250	126250
2016	Berrien	Niles Dial-A-Ride	Software Upgrades	Niles area		Transit operations	Purchase scheduling software upgrades			$ 2,000	5307	$ 325	CTF	$ 175	TRAL	2500		$ 2,500	2500
2016	Berrien	Niles Dial-A-Ride	Parking Lot	Niles area		Transit facility	Fill crakes, reseal, and restripe parking lot and driveway			$ 7,200	5307	$ 1,170	CTF	$ 630	TRAL	9000		$ 9,000	9000
2016	Berrien	Berrien Bus	Rural Operating Funds	Rural portion of NATS MPO area		Transit operations	Public transit operations			$ 23,746	5311	$ 23,746	M			47492			$ 47,492
2017	Berrien	Berrien County	Dayton, Orange, Third, Fulkerson and Ontario	Dayton from US 12 to State Line; Orange from Bertrand to State Line; 3rd from Bell to Fulkerson; Fulkerson from 3rd to S	5.9	Resurface	Hot mix patching and seal coat	CON		77	STU	0		17	CNTY	94	120683	N	94000
2017	Berrien	Niles	Sycamore St	13th to 17th	0.5	Resurface	resurface	CON		101	STU	0		22	CITY	123	120692	N	123000
2017	CASS	Cass County	Redfield St	Brande Creek to Oak	1.1	Restore & Rehabili	Mill and structural overlay with shoulders and striping	CON		307	STU	0		68	CNTY	375	120691	N	375000
2017	Berrien	Niles Dial-A-Ride	Operating Assistance	Niles area		Transit operations	Public transit operations			$ 85,000	5307	$174,000	CTF	$167,350	TRAL	426350		$426,350	426350
2017	Berrien	Niles Dial-A-Ride	Preventive Maintenance	Niles area		Transit maintenance	Preventive maintenance			$101,000	5307	$ 16,413	CTF	$ 8,837	TRAL	126250		$126,250	126250
2017	Berrien	Niles Dial-A-Ride	Replacement Bus	Niles area		Transit vehicle additio	Replace one cutaway bus			$ 56,000	5307	$ 9,100	CTF	$ 4,900	TRAL	70000		$ 70,000	70000
2017	Berrien	Berrien Bus	Rural Operating Funds	Rural portion of NATS MPO area		Transit operations	Public transit operations			$ 23,746	5311	$ 23,746	M			47492		47492	$ 47,492
2014*	CASS	Cass County	Bertrand Rd	Batchelor Rd to Gumwood Rd	1.04	Resurface	Resurface	CON		81	STU			18	CNTY	99320	112106		99
2015	Berrien	City of Niles Dial-A-Ride	Replacement Tires	Niles area		Transit maintenance	Purchase replacement tires and dispose of old tires			$ 3,840	5307	$ 624	CTF	$ 336	CITY	4800		$ 4,800	4800

Fiscal Year	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Advance Construct	Federal Cost ($1000s)	Federal Fund Source	State Cost ($1000s)	State Fund Source	Local Cost ($1000s)	Local Fund Source	Total Phase Cost ($1000s)	MDOT Job No.	Air Quality	Total Cost ($1000s)
2015	Berrien	City of Buchanan	Buchanan Dial-A-Ride	Buchanan area		Transit operations	Three-bus demand-response public transit system serving the City of Buchanan and its environs.			$ 25,821	5311	$ 79,979	CTF	$101,998	CITY	207798		$207,798	207798
2015	Berrien	MDOT	US-31 NB	at Niles Buchanan Road, northwest quadrant of interchange, Niles Township, Berrien County. Niles Facility. Lot No. 711008	0	Roadside facility	Expand existing lot to add capacity and mill and resurface existing portion of lot	PE		6	ST	1	M			7000	113735	62000	
2016	Berrien	City of Buchanan	Buchanan Dial-A-Ride	Buchanan area		Transit operations	Three-bus demand-response public transit system serving the City of Buchanan and its environs.			$ 25,821	5311	$ 79,979	CTF	$101,998	CITY	207798		$207,798	207798
2017	Berrien	City of Buchanan	Buchanan Dial-A-Ride	Buchanan area		Transit operations	Three-bus demand-response public transit system serving the City of Buchanan and its environs.			$ 25,821	5311	$ 79,979	CTF	$101,998	CITY	207798		$207,798	207798
2017	Berrien	Berrien County Road Commission	Niles-Buchanan and Red Bud	Niles-Buchanan Road from Buchanan to Niles and Red Bud from Buchanan to US -12	4.9	Resurface	hot mix asphalt and seal coat	CON		77	Surface Transportation Program (STP)	0		17	Local - County (BCRC)			93952	

Table 57 - Illustrative List of Projects

FY	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description Summary	Phase	Advance Construct	Federal Amount	Federal Fund Source	State Amount	Local Amount	Local Fund Source	Total Project Cost
2017	Cass	CCRC	Mason Street	Calvin Center Road to Porter Township Line	3.8	Restore & rehabilitate	HMA Overlay, partial Maintenance partial Structural	CON	No	353,290	STP - Urban Areas > 200,000 Population	0	78,340	Other Local Funds (CCRC)	$ 431,630
2015	Berrien	City of Buchanan	River Street	Enterprise drive to the bridge over the St. Joseph River.	0.2	Resurface	HMA base crushing and shaping and resurfacing of River Street a distance of 1,000', including miscellaneous curb and gutter replacement, and sub grade under drains. The roadway through this area is experiencing moderate transverse cracking and minor sub base failures.	CON	No	$ 135,200	Surface Transportation Program (STP) - Any Area	0	$ 33,800	Local - City (City of Buchanan)	$ 208,300
2015	Cass	CCRC	Bertrand Street	Batchelor Road to Gumwood Road	1	Resurface	HMA Overlay with Shoulders and Striping	CON	No	$ 81,293	STP - Urban Areas > 200,000 Population	0	$ 18,027	Other Local Funds (CCRC)	$ 99,320
2017	Cass	CCRC	Redfield Street	Batchelor Road to Gumwood Road	1	Resurface	HMA Overlay with Shoulders and Striping	CON	No	$ 85,975	STP - Urban Areas > 200,000 Population	0	$ 19,065	Other Local Funds (CCRC)	$ 105,040

Map 23 - 2014-2017 TIP Projects



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ENVIRONMENTAL MITIGATION

Transportation infrastructure and the people and vehicles that use it impact the natural and built environment. It is important to consider this interaction when planning, designing, constructing and maintaining the transportation system. The purpose of this chapter is to examine environmental and cultural characteristics of the study are in order to identify, mitigate and avoid significant impacts resulting from planned transportation projects. This chapter provides an overview of the natural and cultural resources in southwest Michigan and identifies when planned transportation projects may have an impact on these resources. Lastly, several environmental mitigation strategies are presented that could mitigate or limit the impacts. Mitigation strategies could include avoidance, minimizing impacts by limiting the scope of the proposed project, rehabilitating or restoring the affected environment or compensating for the impact by replacing or providing substitute resources. These strategies include both temporary and permanent measures to minimize impacts during and after project construction. It will be important for SWMPC to encourage road and transit agencies to consult early on with applicable Federal, State, Tribal and non-profit agencies to understand the potential environmental and cultural impacts and implement effective environmental mitigation strategies.

MAP-21

Moving Ahead for Progress in the 21st Century (MAP-21) is the current transportation legislation as of October 1, 2013, which replaces the extensions to SAFETEA-LU legislation that were in place during the previous long range plan update. MAP-21 reinforces SAFETEA-LU's provisions for environmental mitigation, and in some ways increases funding avenues for environmental mitigation activities on all types of projects. While streamlining the environmental review process, MAP-21 reiterates the need, for a discussion in the planning process that addresses:

> "Types of potential environmental mitigation activities and potential areas to carry out these activities include activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. This discussion shall be developed in consultation with federal, state, and tribal wildlife, land management, and regulatory agencies."

A three step process was used to help identify this requirement:

1. Define and inventory the environmentally sensitive resources in the region.
2. Identify the 2014-2017 transportation projects which are in close proximity and therefore may have an impact on the sensitive resources by mapping the resources and transportation project limits.
3. Consider ways to avoid any possible impacts on environmentally or culturally sensitive areas. However, it is not always possible to avoid impacts, so the goal should be to balance transportation needs with environmental protection by utilizing effective mitigation strategies.

This process is designed to identify possible impacts from planned projects and provide this information to implementing road and transit agencies for use in their transportation decision making. This analysis is

conducted at the regional level and is not effective for planning detailed design alternatives at the project level. There are other complementary processes already in place to do this. The data in this section should be useful in identifying the need for more project level analysis and mitigation activities.

ENVIRONMENTALLY SENSITIVE RESOURCES

SWMPC has included the environmentally sensitive resources listed below in the effort to mitigate impacts in the region. It should be noted that not all resources have been included in the analysis. In general, resources were included if data were readily available in digital format for mapping, data was available for the entire NATS region and data were reasonably up-to-date and expected to remain so in the near future. Just because an environmentally sensitive resource is not included in this analysis does not mean that is should not be considered at the project level.

Environmentally Sensitive Resources:

1. Agricultural lands – Map 25
2. Forested lands – Map 26
3. Potential Conservation Areas – Map 27
4. Endangered Species – Map 28
5. Culturally significant places (parks, trails, cemeteries, schools, boat launches and cultural, historical and archeologically significant sites) – Maps 29-30
6. Watersheds and water features - lakes, rivers, streams, county drains, trout lakes/streams, flood prone areas, wetlands, groundwater recharge areas, drinking wells and wellhead protection areas – Maps 31-38

The next step in the process was to identify the 2014-2017 transportation projects which are in close proximity and therefore may have an impact on the resources by mapping the resources and transportation project limits. The planned transportation projects for the NATS area are listed in Table 18. Each planned project has been assigned a number or "map label" to identify the projects on each resource map. Some of the projects listed in Table 58, that follows, have multiple road segments within map label. For example, Project 9 has three segments that will be mapped, Madron Lake will be displayed on the maps as 9-1, N Main will be displayed at 9-2, and Red Bud Trail will be displayed as 9-3.

The likelihood of possible impacts from the planned projects are represented on a series of resource maps in this section that show a buffer area around the planned projects. A buffer was applied to each transportation project as follows:

- 1,320 feet of road project
- 250 feet of a site project (such as the bridge replacement in Niles)
- 250 feet of projects for "Significant Places"

Potentially impacted resources are highlighted on each map. Following Table 58 is a narrative description of each environmentally sensitive resource.

Table 58 - 2014-2017 Road and Highway Projects

Map Label	Fiscal Year	Project Name	Miles	Work Type	Description
1	2014	M-139, ROW & CON phase	0.1	Bridge replacement	Bridge replacement
2	2014	M-139	0.14	Bridge replacement	Bridge replacement
3	2014	Red Bud Trl-1, Third St-2, Portage Rd-3	6.2	Resurface	Hot mix patching and single seal coat
4	2014	Redfield St	1.27	Restore & rehabilitate	Structural HMA overlay with shoulders and striping
5	2014	Seventeenth St	0.51	Resurface	Resurface
6	2014	Bertrand Rd	1.04	Resurface	Resurface
7	2014	Elkhart Rd	1.33	Resurface	Partial milling and total resurface
8	2015, 2016	US-31 NB	0	Roadside facility	Expand existing lot to add capacity and mill and resurface existing portion of lot
9	2015	Madron Lake-1, N Main-2, Red Bud Trl-3	5.7	Resurface	Hot mix patching and seal coat
10	2015	Range Line Rd-1, Lake St-2, Main St-3	5.1	Resurface	Hot mix patching and seal coat
11	2015	Broadway	0.3	Resurface	Cold Mill and resurface
12	2015	Adamsville	1.5	Restore & Rehabilitate	Restore and rehabilitate
13	2016	Galien-Buchanan-1, Bakertown-2, Fourth-3, Terre Coupe-4	5.5	Resurface	Hot mix patching and seal coat
14	2016	Bertrand-1, Third-2, State Line-3	5.1	Resurface	Hot mix patching and seal coat
15	2016	Adamsville St	0.4	Restore & rehabilitate	Crush and shape
16	2016	Red Bud Trail	0.5	Resurface	Cold milling and resurfacing of Red Bud Trail a distance of 2,700', including miscellaneous curb and gutter replacement, ADA sidewalk ramps, misc. sub grade under drains, sections of full depth pavement replacement and pavement markings. The roadway through this area is experiencing moderate transverse and edge cracking.
17	2016	Fir Rd	1	Resurface	HMA overlay with Shoulders and Striping
18	2016	Fir Rd	0.5	Resurface	HMA Overlay with shoulders and striping

Map Label	Fiscal Year	Project Name	Miles	Work Type	Description
20	2017	Niles-Buchanan-1, Red Bud 2	4.9	Resurface	Hot mix asphalt and seal coat
21	2017	Dayton-1, Orange-2, Third-3, Fulkerson-4, Ontario-5	5.9	Resurface	Hot mix patching and seal coat
22	2016	Sycamore St	0.5	Resurface	Thirteenth Street to Seventeenth Street. Cold mill and resurface
23	2017	Redfield St	1.1	Restore & rehabilitate	Mill and structural overlay with shoulders and striping

AGRICULTURAL LANDS

Farming is an important part of southwest Michigan's history, culture and economic structure. Michigan's microclimates and soil combination support over 200 commodities on a commercial basis, making Michigan the second most agriculturally diverse state in the nation. Southwest Michigan produces almost one-third of Michigan's total agriculture sales. According to the 2003 Berrien County Development Plan, in 1997 almost half of the land in Berrien County was farmland. The Berrien County Development Plan states, "now is the time to use sound planning principles to direct urban growth in a way that minimizes the negative impact on agriculture, before it is too late."

Map 25 displays the occurrence of agricultural lands in the planning area. Those lands are defined as being used for farming and agricultural purposes. Projects that would potentially impact agricultural areas are identified when the buffer area has at least ¼ of the acreage in agricultural use. All of the planned transportation projects outside the city/village limits have the potential to impact agricultural areas. Concern should be given to dust control and the ability of farmers to reach their fields (often with large equipment) during the growing season and harvest time.

FORESTED LANDS

Forested areas provide many benefits such as recreational and aesthetic opportunities, providing wildlife habitat, stabilizing stream banks and slopes, reducing erosion and sedimentation, acting as a barrier to reduce noise, filtering water and cleaning the air. Forested areas could be impacted if trees are removed, heavy equipment is utilized nears woodlands or polluted stormwater enters forested areas.

Forested areas in southwest Michigan are fragmented by agriculture and development. The remaining forested lands should be protected as much as possible. Map 26 indicates where planned transportation projects could impact forested areas. Seventeen of the 23 planned projects have at least ¼ of the acreage in the ¼ mile buffer area as forested land and the potential to impact forested areas.

POTENTIAL CONSERVATION AREAS

Natural areas are a fundamental component of a community's long-term environmental and economic health. Natural areas perform important natural functions such as water filtration and they provide recreational opportunities and wildlife habitat that enhance the overall vitality of a community. Abundant natural resources once surrounded population centers in the area. Now, much reduced in size, natural areas are becoming fragmented by agriculture and development. These remaining sites are the foundation of this area's natural heritage; they represent the last remaining remnants of the areas native ecosystems, natural plant communities and scenic qualities. Consequently, it is to a community's advantage that these sites be carefully integrated into the planning for future development.

Striking a balance between development and natural resource conservation and preservation is critical if southwest Michigan is to maintain its unique natural heritage. Map 27 indicates where the most significant Potential Conservation Areas (PCA's) are located. PCAs are defined as places on the landscape dominated by native vegetation that have various levels of potential for harboring high quality natural areas and unique natural features. Scoring criteria used to prioritize potential conservation area sites included: total size, size of core area, length of stream corridor, landscape connectivity, restorability of surrounding land, vegetation quality, and biological rarity score (for more information on this see section on endangered species). Twelve projects out of 23 have the potential to impact these important potential conservation areas.

ENDANGERED SPECIES

When Congress passed the Endangered Species Act (ESA) in 1973, it recognized that our rich natural heritage is of "esthetic, ecological, educational, recreational, and scientific value to our Nation and its people."[30] It further expressed concern that many of our nation's native plants and animals were in danger of becoming extinct. The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. The U.S. Fish and Wildlife Service has primary responsibility for terrestrial and freshwater organisms.

Berrien and Cass Counties are home to many species that are included in the candidate, endangered or threatened species categories (see Table 59). **Endangered Species** are likely to become extinct throughout all or a large portion of their range. **Threatened Species** are likely to become endangered in the near future. **Candidate species** are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened. Candidate species receive no legal protection; however, conservation is encouraged since they may warrant future protection under the Endangered Species Act.

[30] http://www.fws.gov/endangered/laws-policies/

Table 59 - Threatened, Endangered, and Candidate Species

County	Species	Status	Habitat
Berrien/Cass	Indiana Bat (Myotis sodalis)	Endangered	Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula
Berrien	Piping plover (Charadrius melodus)	Endangered	Beaches along shorelines of the Great Lakes
Berrien/Cass	Eastern massasauga (Sistrurus catenatus)	Candidate	Wet areas including wet prairies, marshes and low areas along rivers and lakes; also use adjacent uplands during part of the year
Berrien/Cass	Mitchell's satyr butterfly (Neonympha mitchellii)	Endangered	Fens; wetlands characterized by calcareous soils which are fed by carbonate - rich water from seeps and springs
Berrien	Pitcher's thistle (Cirsium pitcheri)	Threatened	Stabilized dunes and blowout areas
Berrien	Small whorled pogonia (Isotria medeoloides)	Threatened	Dry woodland; upland sites in mixed forests (second or third growth stage)
Cass	Copperbelly Water Snake (Nerodia erythrogaster neglecta)	Threatened	Wooded and permanently wet areas such as oxbows, sloughs, brushy ditches and floodplain woods

Sources: http://www.fws.gov/midwest/Endangered/lists/pdf/MichiganCtyListMarch2013.pdf and http://www.fws.gov/midwest/endangered/reptiles/eama/eama-fct-sht.html

Map 28 displays the probability of finding the species indicated in Table 59. The biological probability value is designed to highlight areas with known occurrences of rare species or high quality natural communities. This map can help protect biodiversity and minimize potential regulatory problems by directing development away from areas with a high likelihood of encountering a sensitive species. A high probability indicates that the area of interest contains the spatial extent of an occurrence, there is potential habitat within the area, and the occurrence has been observed in the recent past. A low probability indicates that the area contains the spatial extent of an historic species occurrence and there is potential habitat within the area. While the low probability indicates that the underlying occurrences are historic, there is still a possibility that the species persists in appropriate habitat. All of the planned transportation projects have a high or moderate probability of rare species or high quality natural communities present in the buffer area. The data in this map is coarse, but depending on the intensity of the transportation improvement project, care should be taken to identify species or high quality natural communities that could be impacted in the buffer areas.

CULTURALLY SIGNIFICANT PLACES

Map 29 shows where all of the community parks are located within the study area; these do not include golf courses or camps. SWMPC has identified public parks dedicated to open spaces and recreation areas in the region using county and statewide databases. Possible impacts on parks and recreation areas should be considered during the planning, design, construction, and maintenance of transportation projects. Parks and recreation areas are considered impacted if land is acquired for a project, if land is otherwise occupies in a manner that is adverse to the recreational purpose of the land, or if a project in the proximity of the land substantially impacts it purpose.

Map 30 indicates where those areas with non-motorized facilities, schools, cemeteries, and boat launches. Non-motorized facilities can range from off-road walking/biking trails, to on-road bicycle lanes, to paved shoulders, to sidewalks. Possible impacts on non-motorized facilities should be considered during the planning, design, construction, and maintenance of transportation projects. Non-motorized facilities are considered impacted if they are removed, if travel patterns are changes to the detriment of pedestrian/bicyclist safety, or if existing non-motorized pathways are bisected thereby reducing connectivity along the pathway or between destinations. The only on the ground non-motorized facilities in the region are the McCoy Creek Trail in Buchanan and portion of the IN-MI River Valley Trail in the City of Niles. The four mile extension into Niles Charter Township will not be built until 2014, and therefore special care will need to be taken after this section of trail is completed.

Table 60 identifies projects in the 2014-2017 TIP that are near parks, or water features. These public spaces have a special place in our communities. It is a way for people to come together experience the outdoors and socialize. As mentioned above, special care and consideration should be taken during the planning, design, construction, and maintenance of transportation projects.

Table 60 - Location of Parks Near Transportation Projects

Label	Project Name	Places Within 250 Ft of Buffer	Parks Within 250 Ft of Buffer	Water Features Within 1/4 Mile Buffer
1	M-139, ROW & CON phase Bridge		St. Joseph Riverfront Park	
2	M-139 Bridge		St. Joseph Riverfront Park	
3-1	Red Bud Trl, Third St, Portage Rd.	Boat Launch and School	McCoy Creek Trail	Redbud Park, Niles Township Community Park, Topinee Lake Preserve
4	Redfield St	Cemetery		
5	Seventeenth St			Eastside Park
6	Bertrand Rd			
7	Elkhart Rd			
8	US-31 NB	School		
9	Madron Lake Rd, N Main, Red Bud Trl		Vella Park	
10	Range Line Rd, Lake St, Main St		Fernwood Botanical Garden and Nature Preserve, Williams Field	Vella Park
11	Broadway			Saathoff Park, St Joseph Riverfront Park
12	Adamsville			
13	Galien-Buchanan, Bakertown, Fourth, Terre Coupe		Bakertown Fen	
14	Bertrand, Third, State Line		Madeline Bertrand Park	
15	Adamsville St	Cemetery	Old Mill Natural Area	
16	Red Bud Trl			McCoy Pond
17	Fir Rd			
18	Fir Rd			
20	Niles-Buchanan and Red Bud Trl			Sampson Park, Sampson Terrace Park
21	Dayton, Orange, Third, Fulkerson, Ontario	School	Fulkersons Park	South Fireman Park, Madeline Bertrand Park
22	Sycamore St	School		Eastside Park
23	Redfield St			

WATERSHEDS, WATER FEATURES, GROUNDWATER

Watersheds are a crucial environmental consideration and planning component within the MPO study area. A brief review of the three watersheds will be conducted here as to ensure that as projects in the LRP move forward these watersheds will be consulted. All of the three watersheds in the NATS planning area (St. Joseph, Galien, and Dowagiac) have some type of guidance documents or resources to ensure that pollutants stay out of the water and the watershed. Map 31 outlines the watersheds in the planning area.

A watershed is the area of land that catches rain and snow and drains or seeps into a marsh, stream, river, lake or groundwater. You are sitting in a watershed now. Homes, farms, ranches, forests, small towns, big cities and more can make up watersheds. Some watersheds cross county, state, and even international borders such as the Great Lakes Basin. Watersheds come in all shapes and sizes. Some are millions of square miles; others are just a few acres. Just as creeks drain into rivers, watersheds are nearly always part of a larger watershed or basin. For example the St. Joseph River Watershed is part of the Lake Michigan Watershed which is part of the Great Lakes Basin. Every stream, tributary or river has an associated watershed.

Most watersheds are comprised of a mixture of uplands, wetlands, riparian areas, streams and lakes. The most common component of almost all watersheds is the upland area, covering in many cases over 99 percent of the total watershed area. The rain and snow that falls onto a watershed, and that does not evaporate, is stored in the soil, and over a period of time is released down slope through groundwater, wetlands and streams. This water then moves through a network of drainage pathways, both underground and on the surface.

The St. Joseph and Dowagiac River Watersheds have a Watershed Management Plan. A Watershed Management Plan is a comprehensive plan to protect water quality and natural resources in the watershed. Each management plan can be accessed for the specific watershed. The SWMPC has a website that houses all watershed information and links to the management plans at www.swmpc.org/watersheds.asp.

ST. JOSEPH RIVER WATERSHED

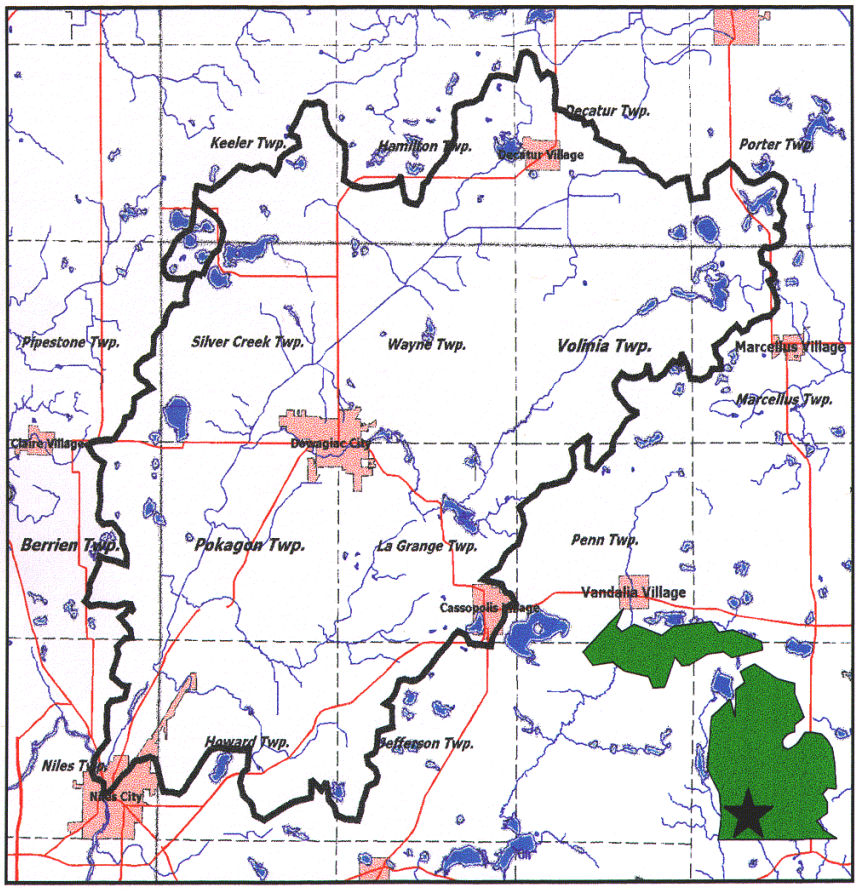
The St. Joseph River Watershed is located in the southwest portion of the Lower Peninsula of Michigan and northwestern portion of Indiana. It spans the Michigan-Indiana border and empties into Lake Michigan at St. Joseph, Michigan. The watershed drains 4,685 square miles from 15 counties (Berrien, Branch, Calhoun, Cass, Hillsdale, Kalamazoo, St. Joseph and Van Buren in Michigan and De Kalb, Elkhart, Kosciusko, Lagrange, Noble, St. Joseph and Steuben in Indiana). The watershed includes 3,742 river miles and flows through and near the Kalamazoo-Portage, the Elkhart-Goshen, the South Bend and the St. Joseph/Benton Harbor metropolitan areas. According to the 2000 U.S. Census, 1,524,941 people live in the 15 counties of the watershed, with 53.6 percent living in Michigan. The most populated county is St. Joseph, IN. The watershed is largely agricultural. More than 50 percent of the riparian habitat is agricultural/urban, while 25-50 percent remains forested. Learn more about this watershed and the management plan at http://www.stjoeriver.net/.

GALIEN RIVER WATERSHED

The Galien River Watershed is located in Southwest Michigan and is approximately 82,200 acres located in Berrien County and emptying into Lake Michigan in New Buffalo. In Michigan, this watershed contains 62 percent rural land, 23 percent forest land, and 5 percent urban land, with the remainder being streams and lakes. Within the MPO the eastern townships of Buchanan and Bertrand fall within this watershed. The Galien River Watershed encompasses areas of prime farmland, Warren Woods Preserve, and a portion of the City of New Buffalo where the Galien River flows into Lake Michigan. If you would like to learn more about this watershed please visit http://www.swmpc.org/grw.asp.

DOWAGIAC RIVER WATERSHED

Map 24 - Dowagiac River Watershed



The Dowagiac River Watershed is about 287 square miles in size with an estimated population of 38,600. The Dowagiac River Watershed includes all or part of 20 municipalities (16 townships, 2 cities and 2 villages). The headwaters of the Dowagiac River are located in southern Van Buren County. The Dowagiac River flows through Cass County and joins the St. Joseph River in Berrien County near Niles. The largest tributary is the Dowagiac Creek. Other significant tributaries include McKinzie Creek, Pokagon Creek, Peavine Creek, Silver Creek and Lake of the Woods Drain. Within the MPO the communities of Niles, Niles Charter Township, and Howard Township fall within the watershed. To learn more about this watershed please visit http://www.swmpc.org/drw.asp.

Culverts and Water Resources Protection

With any road or bridge project, it is critical to pay special attention to the impact of culverts and other potential barriers to species movement in streams and creeks, particularly native fish. The movement of

these species happens as part of their lifecycle and in response to varying environmental conditions of certain sections of the watershed. Impediments to movement can potentially reduce fish populations and impact the entire river ecosystem. A 2011 study by the Potawatomi Resource Conservation and Development Council conducted an inventory of culverts and dams in the St. Joseph River watershed to determine the extent of adverse impacts of infrastructure on native fish species in high priority water streams.

Christiana Creek was the only stream or stream section included in the study that is directly within the NATS area. However, fish species movement may be impacted by obstructions on creeks in Northern Indiana. In addition, culverts and dams downstream in Berrien Springs and St. Joseph may alter the composition of the fish and plant life in creeks within the NATS area by keeping species from migrating.

The main potential barriers to species movement within the NATS area appear to be culverts, which are drains that allow water to flow under a road or railroad. According to the 2011 study, the culverts observed in the NATS area on Christiana Creek do not completely stop fish movement. Still, numerous barriers further south in Elkhart, which stop most species of fish from moving, do affect species composition within the NATS region.

The study was designed to be an inventory that would serve as a starting point for federal, state, regional, local, and tribal governments to work in cooperation with one another and with environmental organizations in the area to identify problematic culverts and allow better fish movement throughout the creek. While many of the suggested actions focus on removal of dams, the study suggests that installing culverts in the proper position on a streambed, and making sure that they are the right size, will both promote better movement of species throughout the watershed.

Water Features

Map 32 shows the location of lakes, ponds, rivers, and county drains that can be vulnerable during transportation project developments.

Table 61 highlights those projects within the TIP years that are close to water features and should therefore take extra care when the project is being constructed.

Table 61 - Water Features Within 1/4 Mile Buffer

Label	Project Name (projects that have water features)	Water Features Within ¼ Mile Buffer
1	M-139, ROW & CON phase Bridge	St. Joseph River (over river)
2	M-139 Bridge	St. Joseph River (over river)
3-1	Red Bud Trl	St. Joseph River (over river)
3-2	Third St	Brandywine Creek
3-3	Portage Rd	unnamed stream
4	Redfield St	unnamed ponds
6	Bertrand Rd	unnamed ponds,
7	Elkhart Rd	Cobus Creek, Garver Lake
9	N Main and Red Bud Trail	Unnamed ponds & streams and St. Joseph River
10	Range Line Rd, Lake St. and Main St.	Unnamed
12	Adamsville	Christina Creek
13	Galien-Buchanan, Bakertown	Branch Creek, and Bakertown Drain, unnamed streams, McCoy Creek, Weaver Lake Creek
14-1	Bertrand	St. Joseph River
15	Adamsville St	Christina Creek
16	Red Bud Trl	Alexander Street, McCoy Creek,
17	Fir Rd	unnamed pond
18	Fir Rd	unnamed pond
20	Niles-Buchanan, Red Bud Trl	Unnamed ponds and streams
21	Dayton, Orange, Ontario	Dayton Lake, unnamed stream
23	Redfield St	Cobus Creek, Gast Ditch

Trout/Lake Stream

Map 33 outlines trout lakes and streams are those designated by the State of Michigan as containing a significant population of trout or salmon. Possible impacts on water resources should be considered during the planning, design, construction, and maintenance of transportation projects. Water resources are considered impacted if polluted stormwater runoff reaches rivers and lakes, area vegetation is removed, damage to the stream beds or banks is caused by heavy equipment, or accidental spills (e.g. paint, solvent, and fuel, salt) run directly into water bodies.

Floodplains

Map 34 highlights the areas in which you would encounter floodplains in the study area. They are defined as a nearly flat plain along the course of a stream or river that is naturally subject to flooding. ZONE A =Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies.

Wetlands

Map 35 indicates where areas of land that has a wet and spongy soil, as a marsh, swamp, or bog are located in the study area.

Ground Water

Ground water is important to ecosystems in the Great Lakes Region because it is, in effect, a large, subsurface reservoir from which water is released slowly to provide a reliable minimum level of water flow to streams, lakes, and wetlands. Ground-water discharge to streams generally provides good quality water that, in turn, promotes habitat for aquatic animals and sustains aquatic plants during periods of low precipitation. Because of the slow movement of ground water, the effects of surface activities on ground-water flow and quality can take years to manifest themselves. As a result, issues relative to ground water are often seemingly less dire than issues related to surface water alone. Recharge typically refers to the amount of precipitation, either rainfall or snowmelt, that infiltrates through the ground and reaches the water table aquifer. Deeper aquifers generally are recharged with water from shallower systems. Groundwater discharge is water that leaves an aquifer through boundaries including rivers, wetlands, and lakes.[31]

All of the communities in the NATS study area depend on groundwater for their drinking water source. Groundwater resources in southwest Michigan are very vulnerable to contamination because of the soils, high recharge rates and the close proximity of groundwater to the surface in most areas. Map 36 highlights those areas that aid in the recharging of our ground water supply. The areas that have high capacity for recharge also are very vulnerable to contamination. Map 37 indicates those areas where the local community receives their water from and the location of a TIP project near that area.

Wellhead Protection Areas

Michigan's WHPP was developed in response to 1986 amendments to the federal Safe Drinking Water Act (SDWA). Unlike many programs throughout the country, wellhead protection is a voluntary program which is implemented on a local level through the coordination of activities by local, county, regional, and state agencies. Guidelines for the program were developed by the Michigan Department of Environmental Quality (MDEQ). Although the program is voluntary, PWSSs who choose to participate in wellhead protection must develop a local WHPP consistent with the guidelines established by the state. Local WHPPs must specifically address seven elements which include the establishment of roles and duties, wellhead protection area (WHPA) delineation, identification of potential sources of contamination within the WHPA, development of

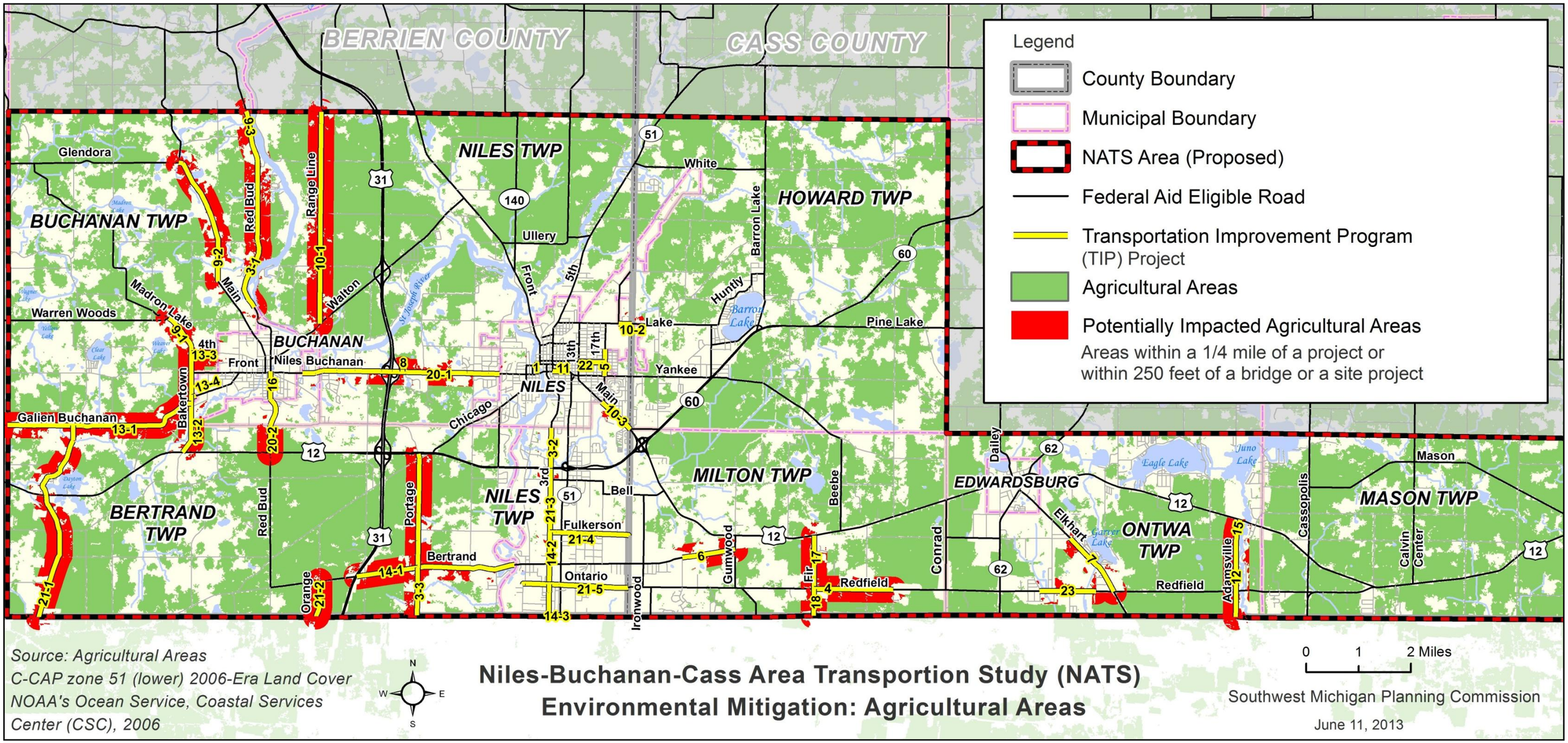
[31] The Importance of Ground Water in the Great Lakes Region By N.G. Grannemann, R.J. Hunt, J.R. Nicholas, T.E. Reilly, and T.C. Winter. U.S. GEOLOGICAL SURVEY Water-Resources Investigations Report 00–4008

strategies to manage potential sources and minimize threats to the PWSS, development of contingency plans for water supply emergencies, identification of procedures for the development of new well sites and incorporate them into the local WHPP, and provide opportunities for public participation.

Delineation - The federal SDWA defines a WHPA as "... the surface and subsurface area surrounding a water well or well field, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or well field." In simpler terms, it is that area which contributes ground water to a PWSS well. Michigan's WHPP requires a hydrogeologic study to identify the contributing area. The area contributing ground water to a well may extend for miles therefore, Michigan's WHPP is based upon a ground water time-of-travel (TOT) of 10 years. The 10 year TOT provides a reasonable length of time for responding to environmental problems within the WHPA while concurrently providing a smaller area which can be reasonably managed.[32] Map 38 indicates where the particularly sensitive wellhead protection areas are located.

[32] The Importance of Ground Water in the Great Lakes Region By N.G. Grannemann, R.J. Hunt, J.R. Nicholas, T.E. Reilly, and T.C. Winter. U.S. GEOLOGICAL SURVEY Water-Resources Investigations Report 00–4008

Map 25 - Environmental Mitigation: Agricultural Areas

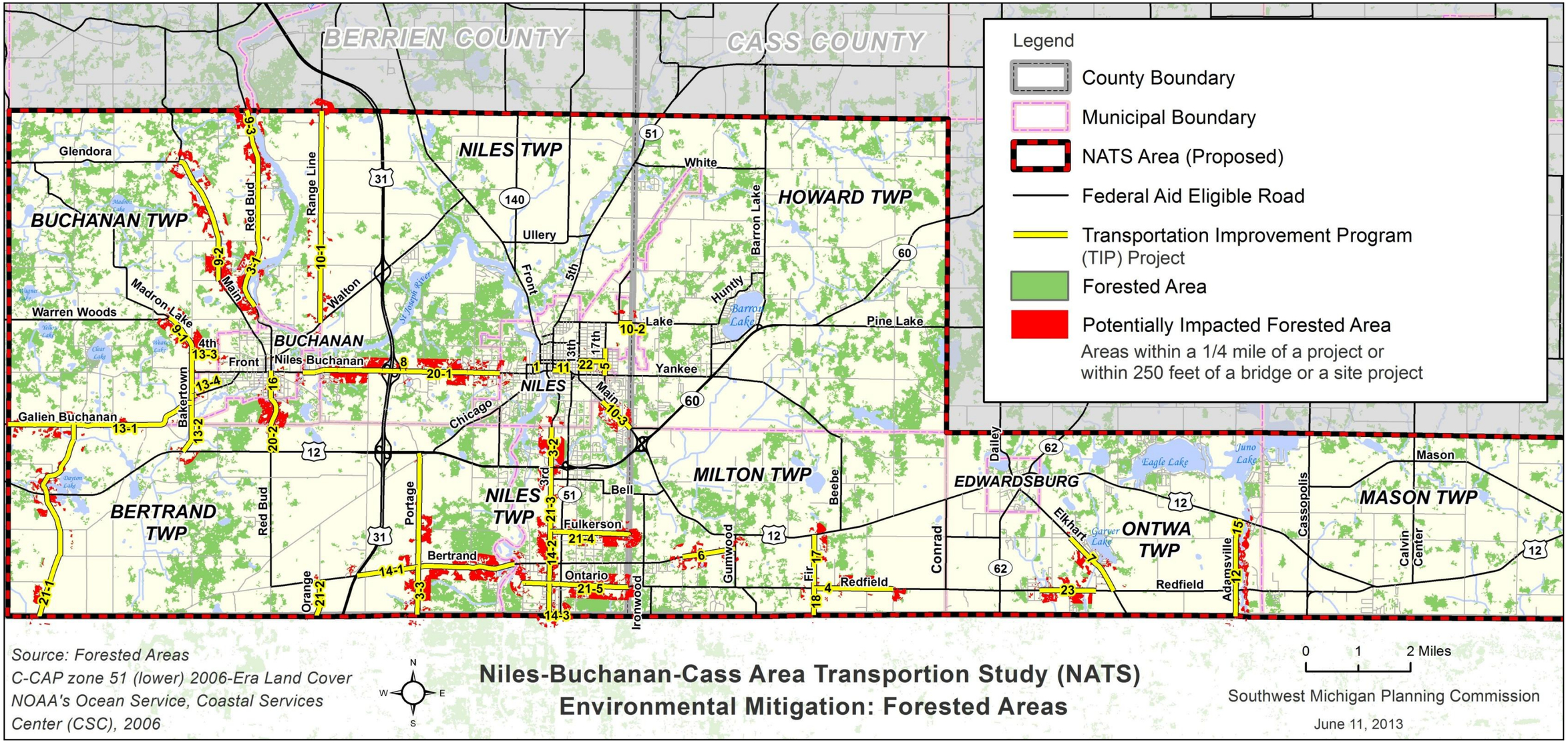


Source: Agricultural Areas
C-CAP zone 51 (lower) 2006-Era Land Cover
NOAA's Ocean Service, Coastal Services Center (CSC), 2006

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Agricultural Areas

Southwest Michigan Planning Commission
June 11, 2013

Map 26 - Environmental Mitigation: Forested Areas

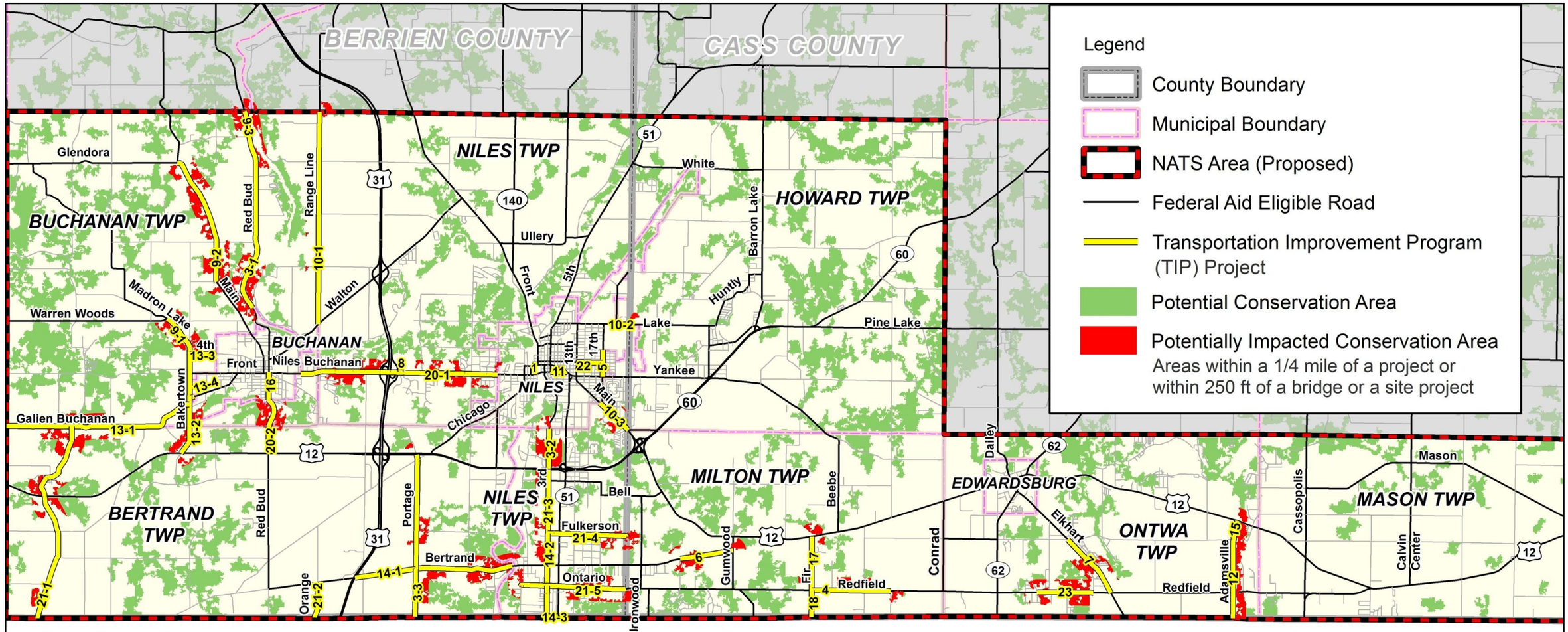


Source: Forested Areas
C-CAP zone 51 (lower) 2006-Era Land Cover
NOAA's Ocean Service, Coastal Services Center (CSC), 2006

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Forested Areas

Southwest Michigan Planning Commission
June 11, 2013

Map 27 - Environmental Mitigation: Potential Conservation Areas



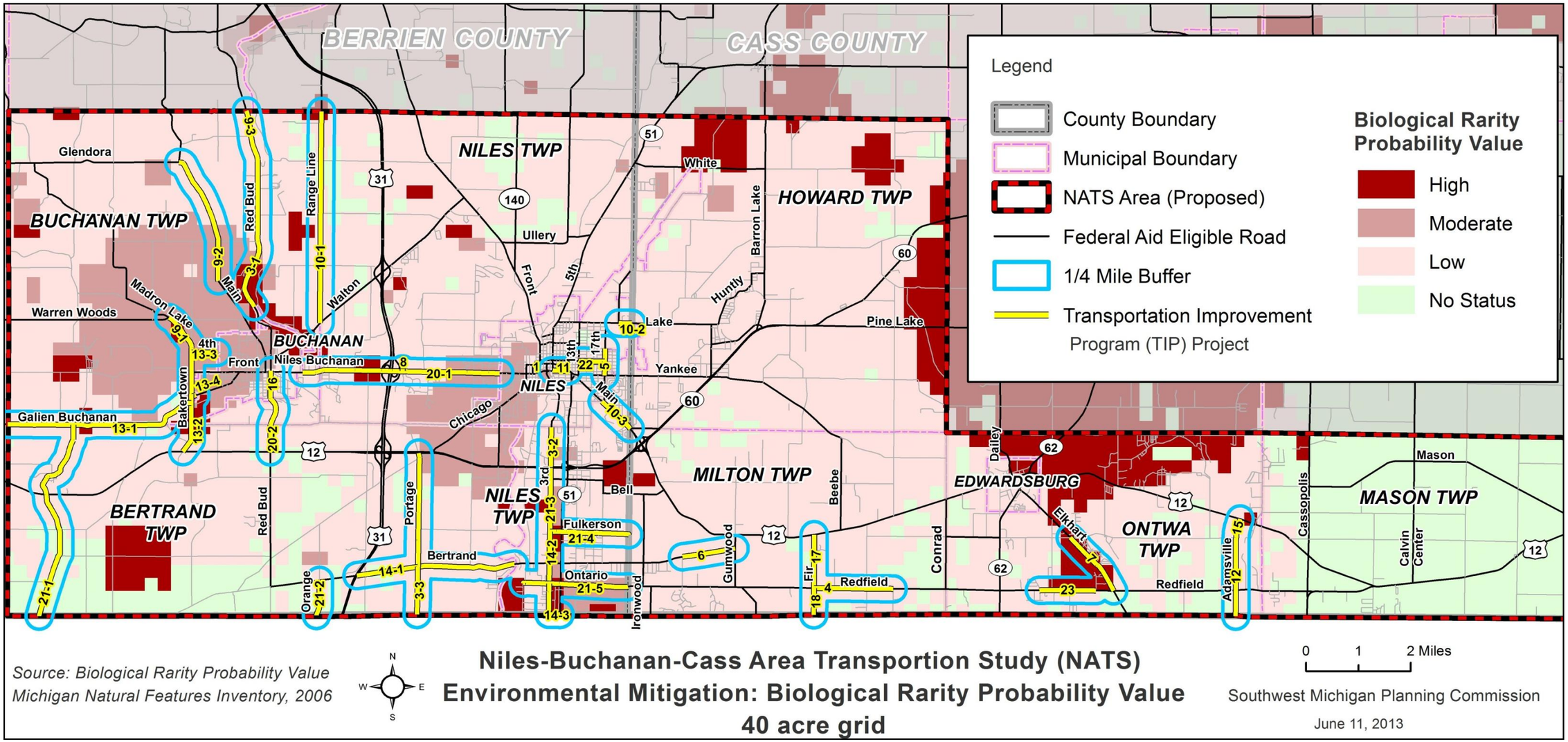
Source: Michigan Natural Features Inventory Potential Conservation Area Model for Southwest Michigan, 2007

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Potential Conservation Areas

Southwest Michigan Planning Commission

June 11, 2013

Map 28 - Environmental Mitigation: Biological Rarity Probability Value

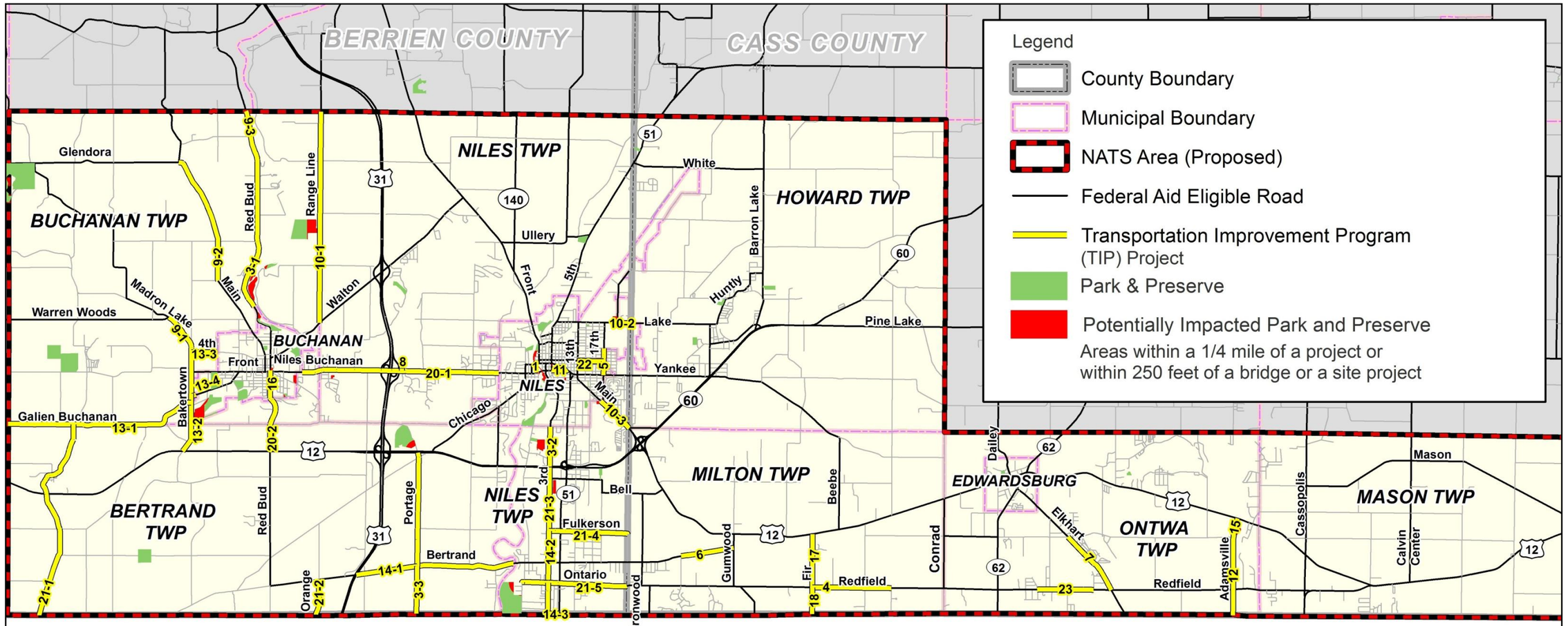


Source: Biological Rarity Probability Value
Michigan Natural Features Inventory, 2006

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Biological Rarity Probability Value
40 acre grid

Southwest Michigan Planning Commission
June 11, 2013

Map 29 - Environmental Mitigation: Parks and Preserves



Source: Parks and Preserves Southwest Michigan Planning Commission, 2013

N W E S

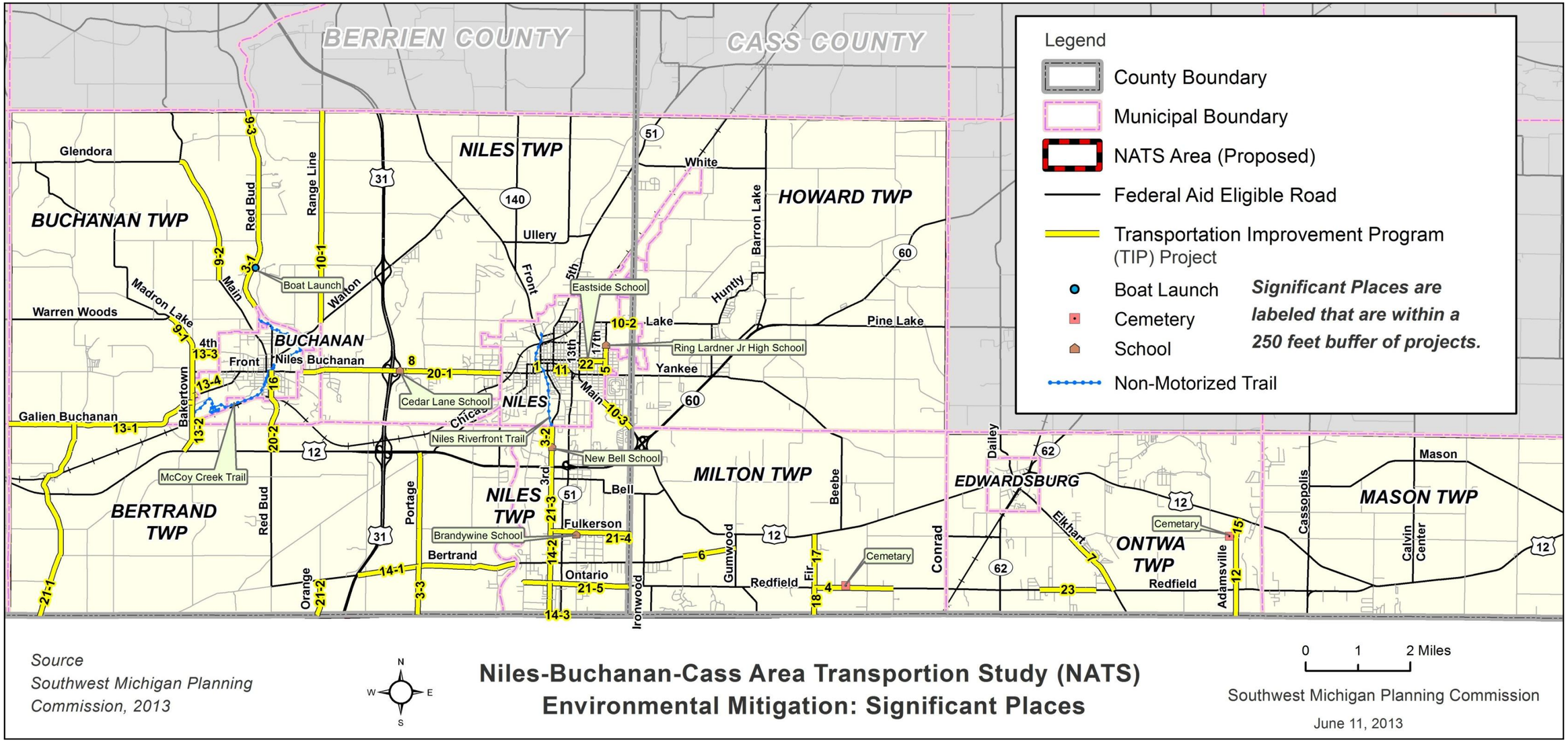
Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Parks and Preserves

0 1 2 Miles

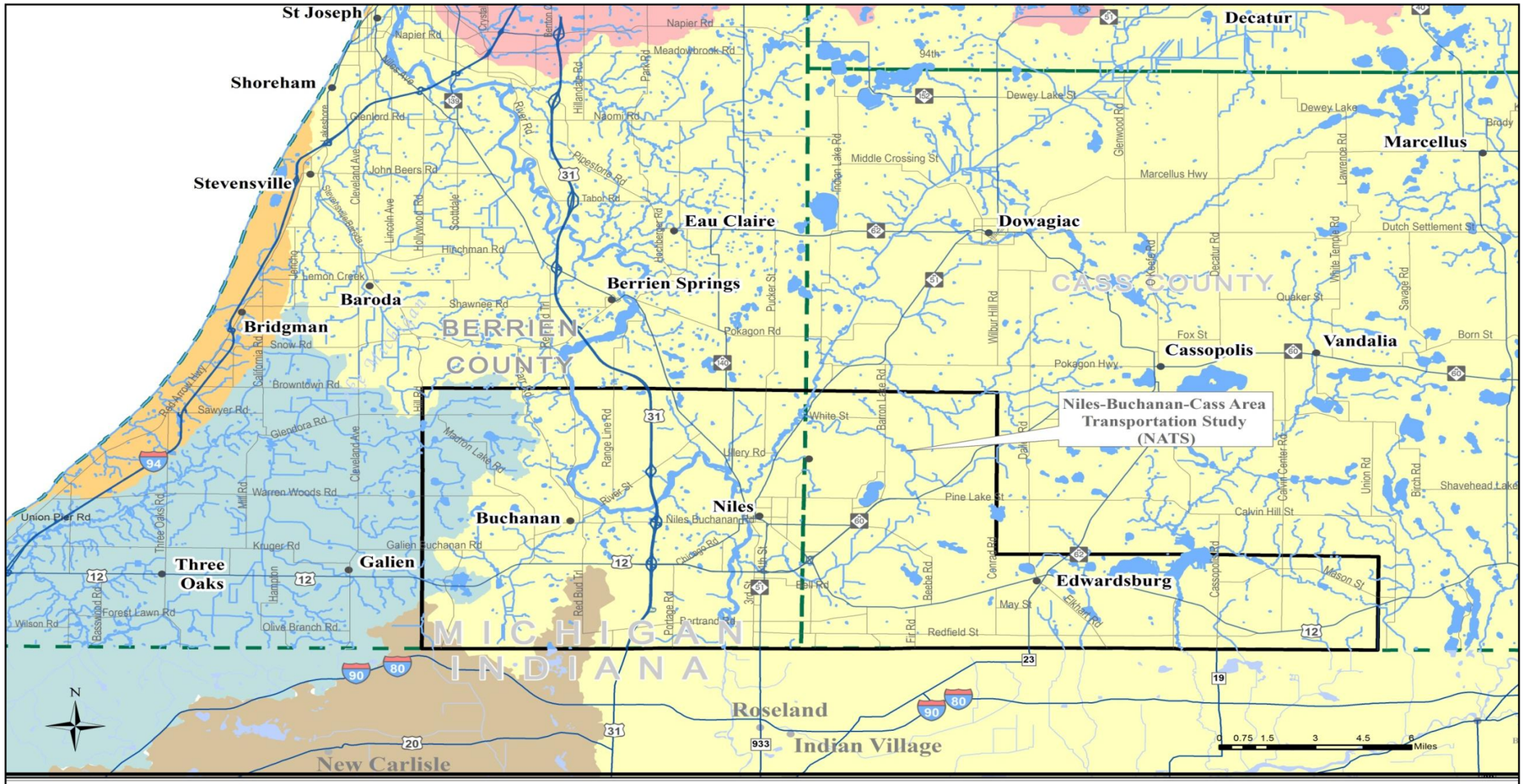
Southwest Michigan Planning Commission

June 11, 2013

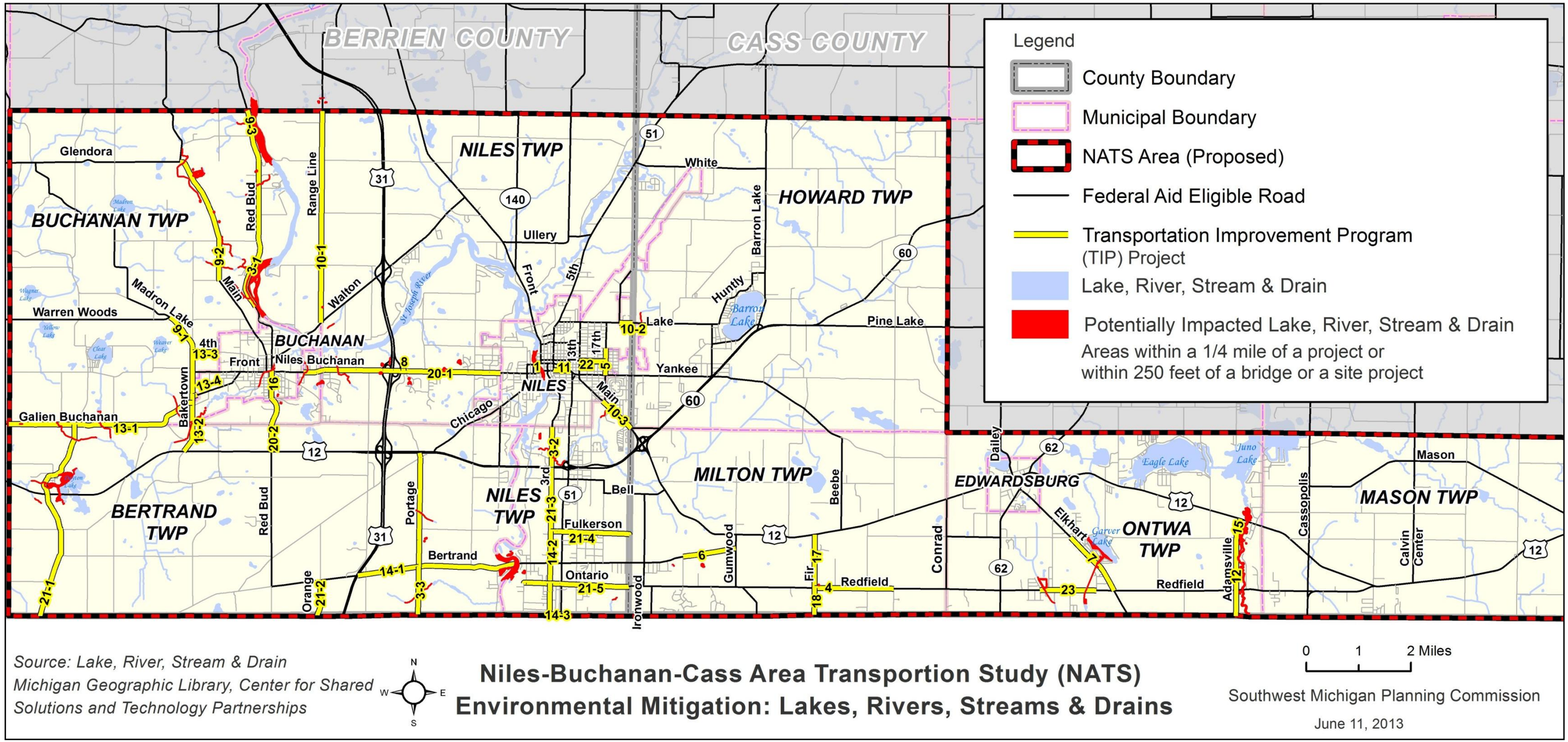
Map 30 - Environmental Mitigation: Significant Places



Map 31 - Major Watersheds of Southwest Michigan



Map 32 - Environmental Mitigation: Lakes, Rivers, Streams & Drains



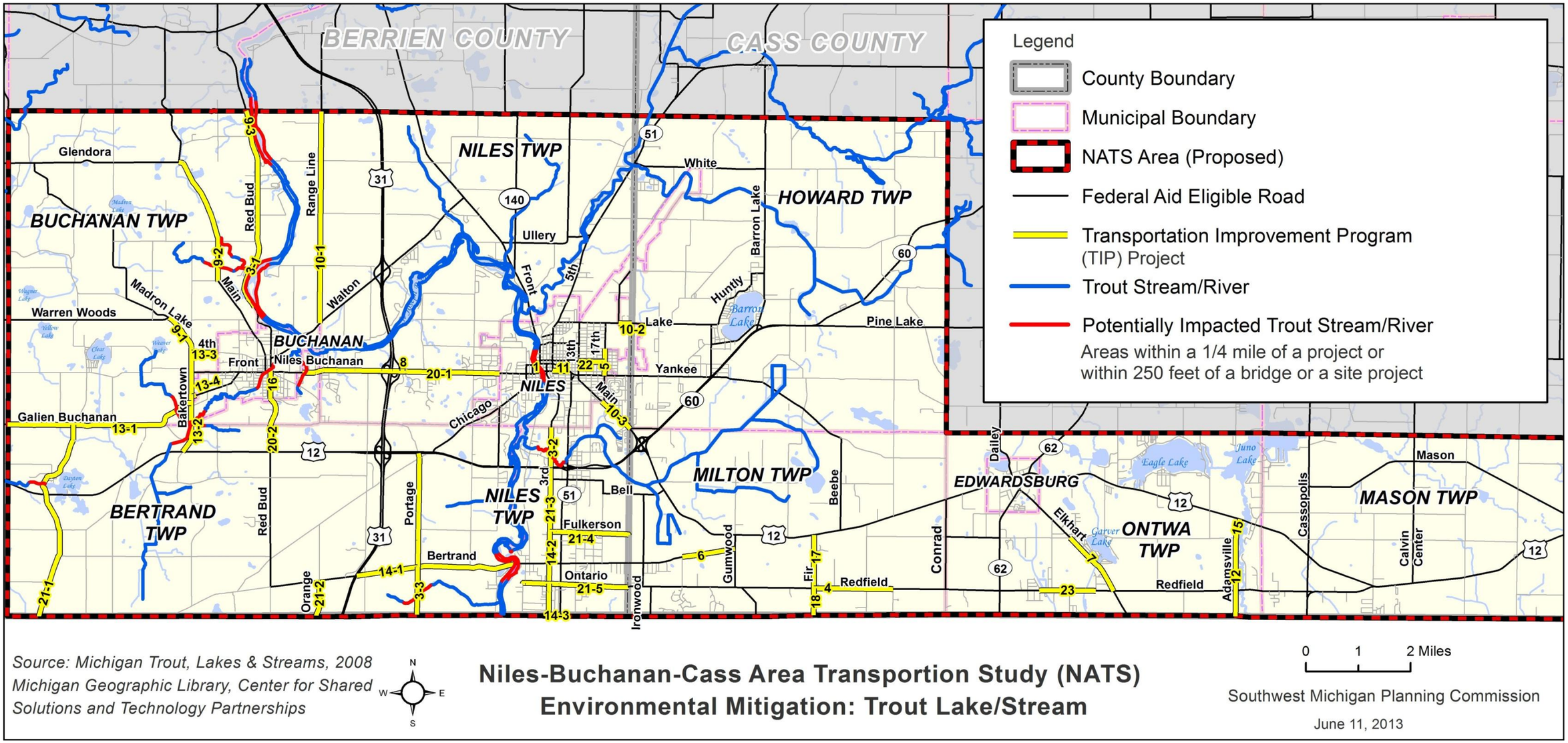
Source: Lake, River, Stream & Drain Michigan Geographic Library, Center for Shared Solutions and Technology Partnerships

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Lakes, Rivers, Streams & Drains

Southwest Michigan Planning Commission

June 11, 2013

Map 33 - Environmental Mitigation: Trout Lake/Stream



Source: Michigan Trout, Lakes & Streams, 2008
Michigan Geographic Library, Center for Shared Solutions and Technology Partnerships

N W E S

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Trout Lake/Stream

0 1 2 Miles

Southwest Michigan Planning Commission

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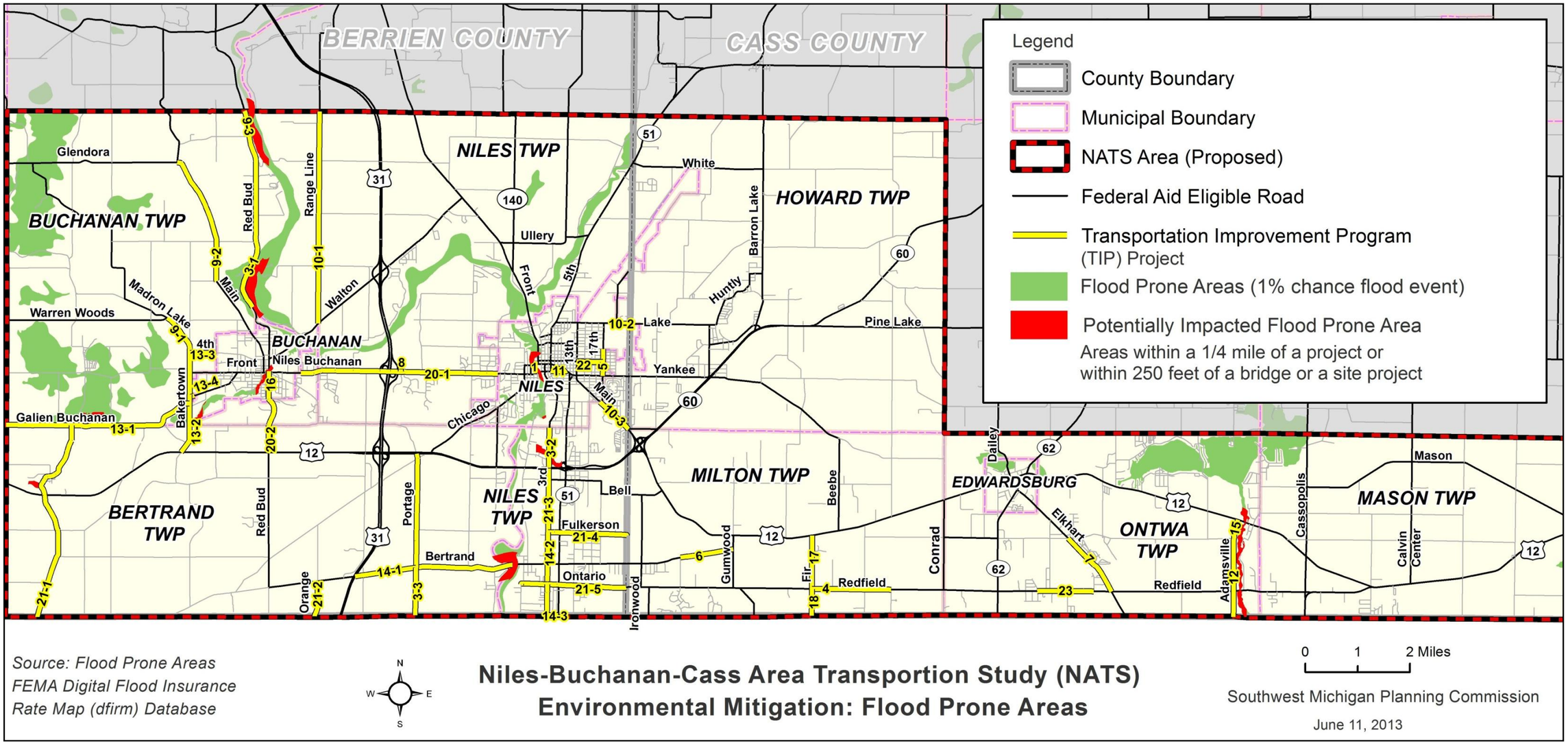
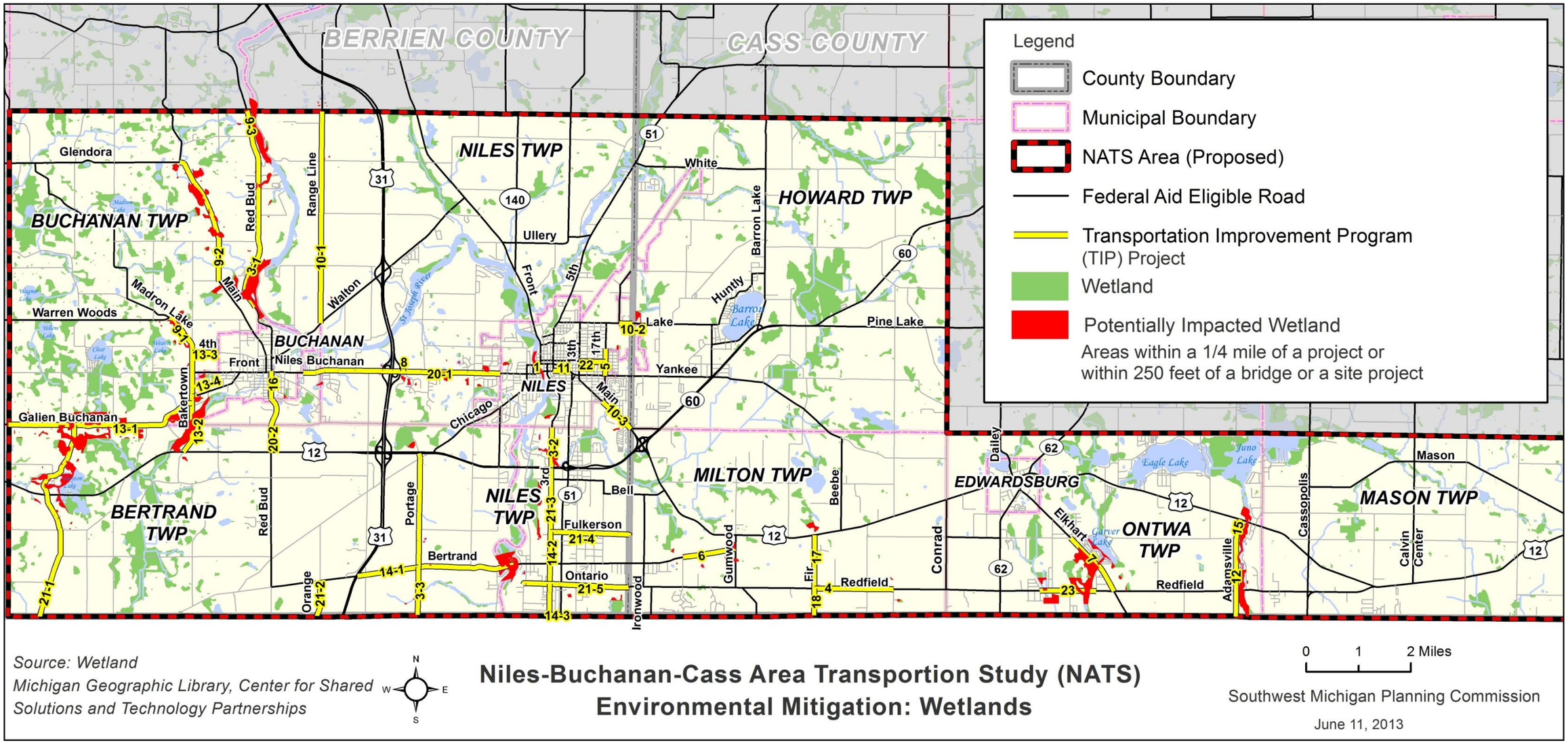
Map 34 - Environmental Mitigation: Flood Prone Areas



Map 35 - Environmental Mitigation: Wetlands



Source: Wetland
Michigan Geographic Library, Center for Shared Solutions and Technology Partnerships

N W E S

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Wetlands

0 1 2 Miles

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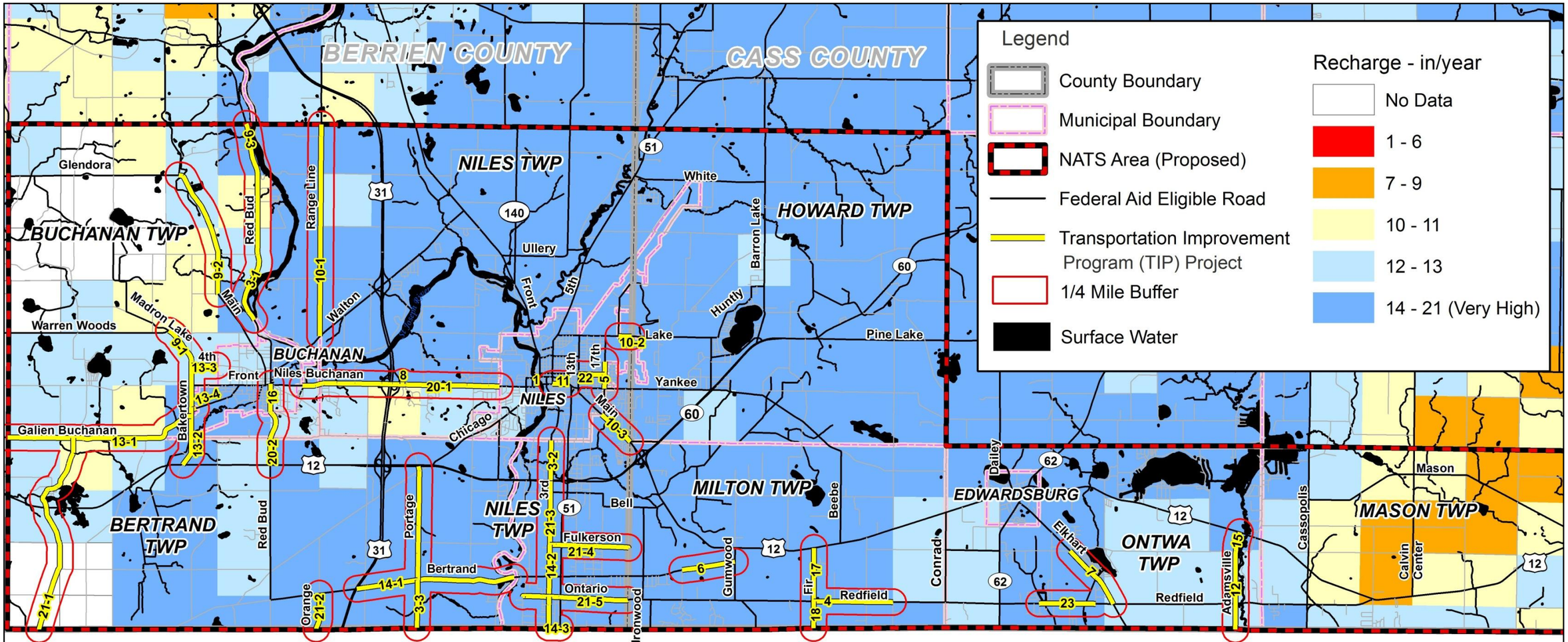
Map 36 - Environmental Mitigation: Groundwater Recharge



Source: Estimate of Annual Groundwater Recharge
U.S. Geological Survey Michigan Water Science Center, 2005

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Groundwater Recharge

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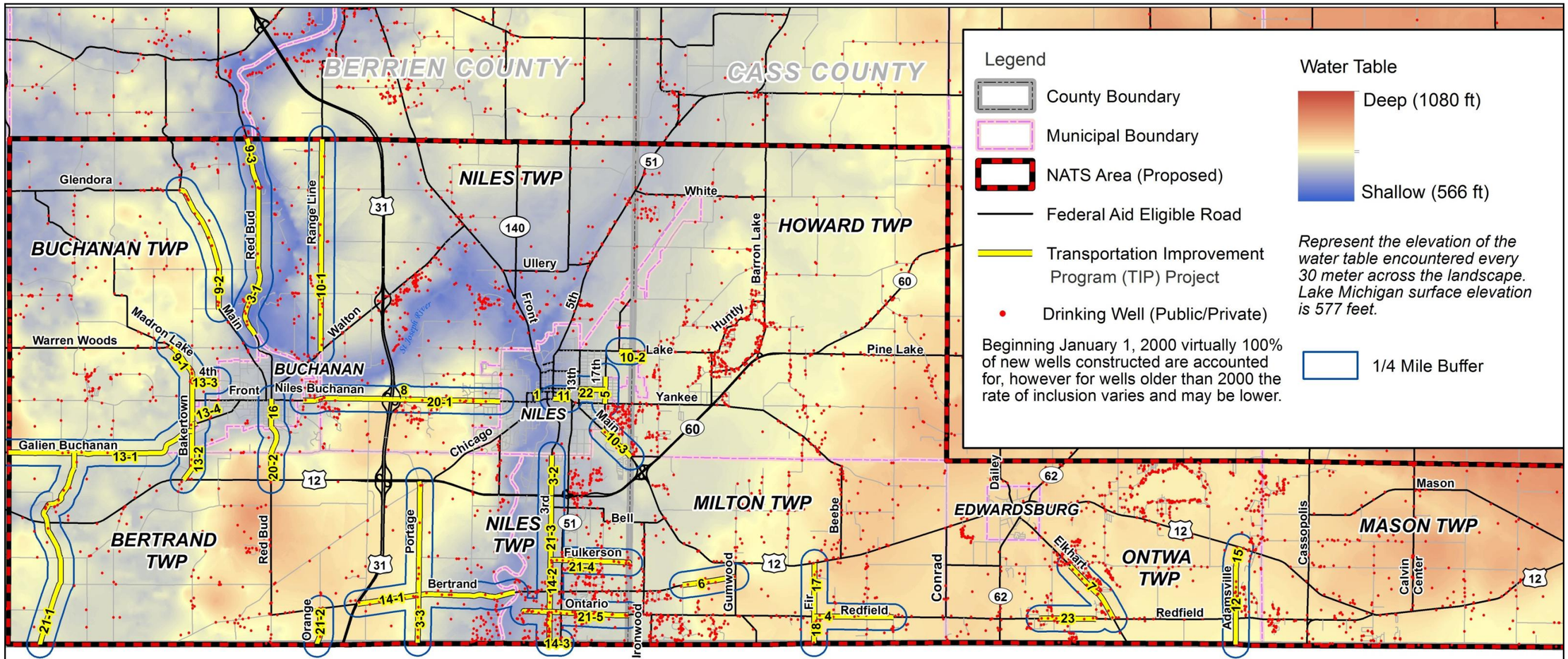
Map 37 - Environmental Mitigation: Groundwater



Sources: Wells, Michigan Department of Environmental Quality, 2013 Water Table Grid: Remote Sensing & GIS Research and Outreach Services, Michigan State University, 2005. Both datasets available from Michigan Geographic Library, Center for Shared Solutions and Technology Partnerships

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Groundwater

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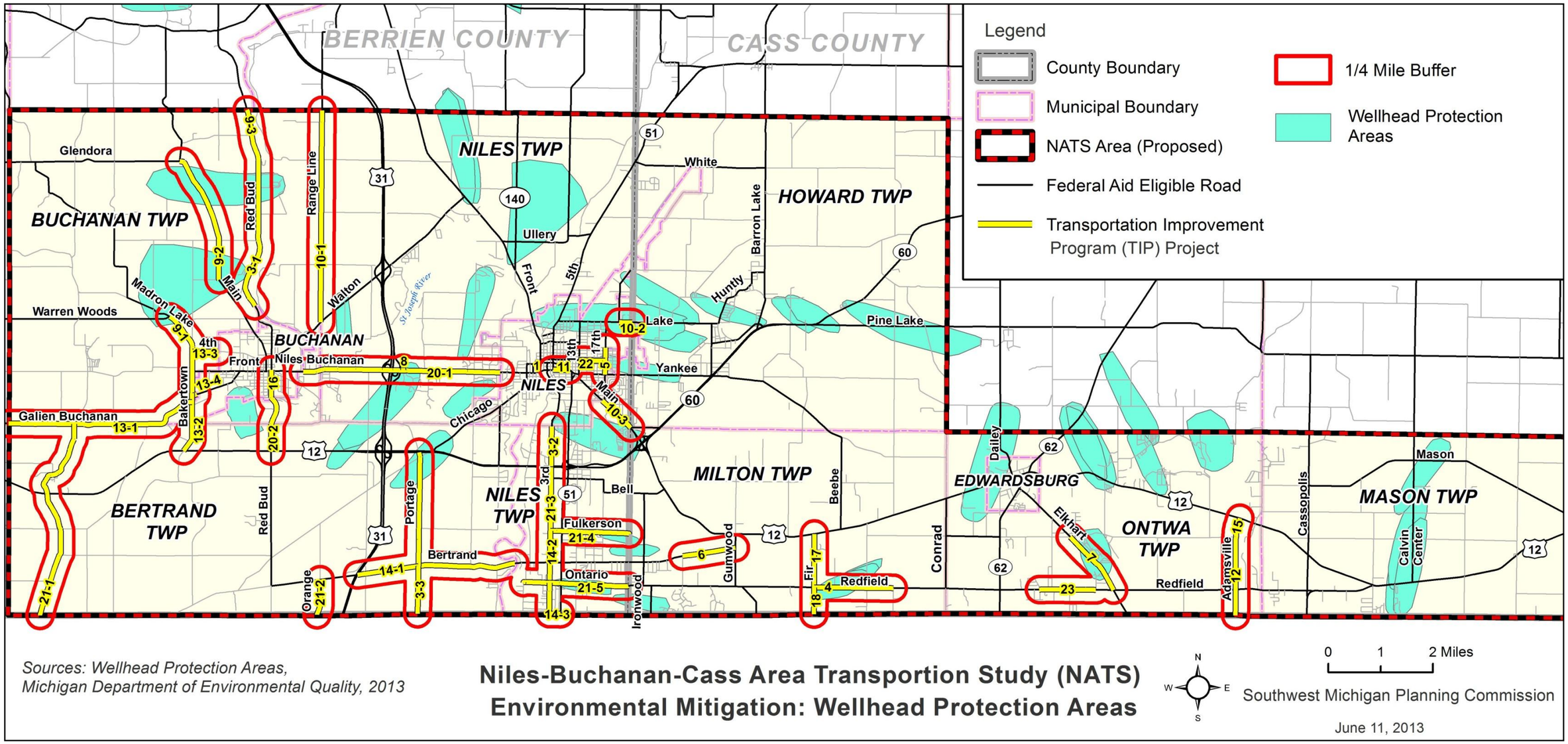
Map 38 - Environmental Mitigation: Wellhead Protection Areas



Sources: Wellhead Protection Areas, Michigan Department of Environmental Quality, 2013

Niles-Buchanan-Cass Area Transportion Study (NATS)
Environmental Mitigation: Wellhead Protection Areas

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SUMMARY OF IMPACTS ON ENVIRONMENTALLY SENSITIVE RESOURCSE

Below is a quick summary of the major resources that will potentially be impacted by planned transportation projects displayed in Table 62.

Table 62 - Environmental Mitigation Inventory Summary

Map Label	Project Name	PCA	Wetland	Trout Rivers/ Lakes	Water Features	Flood Zone	Forested *	Agriculture**	Parks	Non-Motorized Trail
1	M-139, ROW & CON phase Bridge		X	X	X	X		X	X	X
2	M-139 Bridge			X	X			X	X	X
3	Red Bud Trl, Third, Portage	X	X	X	X	X	X	X	X	X
4	Redfield St	X	X		X		X	X		
5	Seventeenth St								X	
6	Bertrand Rd	X	X		X		X	X		
7	Elkhart Rd	X	X		X		X	X		
8	US-31 NB						X	X		
9	Madron Lake Rd, N Main, Red Bud Trl	X	X	X	X	X	X	X		
10	Range Line Rd, Lake St, Main St	X	X		X		X	X	X	
11	Broadway		X						X	
12	Adamsville	X	X		X	X	X	X	X	
13	Galien-Buchanan, Bakertown, Fourth, Terre Coupe	X	X	X	X	X	X	X	X	X
14	Bertrand, Third St, State Line	X	X	X	X	X	X	X	X	
15	Adamsville St.	X	X		X	X	X	X	X	
16	Red Bud Trl		X	X	X	X	X		X	X
17	Fir Rd	X	X				X	X		
18	Fir Rd						X	X		
20	Niles-Buchanan and Red Bud Trl	X	X	X	X		X	X	X	

Map Label	Project Name	PCA	Wetland	Trout Rivers/ Lakes	Water Features	Flood Zone	Forested *	Agriculture**	Parks	Non-Motorized Trail
21-1	Dayton, Orange, Third, Fulkerson, Ontario	X	X	X	X	X	X	X		
22	Sycamore St		X						X	
23	Redfield St	X	X		X		X	X		

*Over ¼ of the acreage within the buffer are is forested lands

**Over ¼ of the acreage within the buffer is agricultural lands

Buffer area - areas within a 1/4 mile of a project or within 250ft of a bridge or a site project

GENERAL ENVIRONMENTAL MITIGATION CONSIDERATIONS

It is important to note that in order to develop this section of the plan, and assess potential environmental impacts of NATS LRP projects, the SWMPC used a consultation process to enlist the assistance of many partners and completed the following steps:

1. SWMPC consulted with submitting agencies and reviewed projects based on their location to sensitive areas and if they were adding capacity, building outside of the existing right of way, or dramatically changing the traffic pattern on the roadway.

2. SWMPC also worked to develop the environmental mitigation maps, agencies such as the Southwest Michigan Land Conservancy, The Nature Conservancy, and the Berrien County Planning Department, shared data files with SWMPC. SWMPC environmental planners assisted in identifying important environmental features, developing buffer sizes and reviewing the plan.

3. SWMPC staff utilized GIS software to map environmentally sensitive areas along with the identified LRP projects. Each project was mapped with a buffer to show the potential resources that could be affected.

This information will be given to each agency prior to the beginning of the construction process of their project to ensure that the agency is aware of the potential impacts of the project. It will be the responsibility of the agency to ensure that all appropriate mitigation guidelines are followed for the specifics of their project.

Table 63 details mitigation activities that could be employed throughout the region to reduce impacts to the natural features outlined throughout this section.

Table 63 - Potential Mitigation Activities

Resource	Potential Mitigation Activities
Wetland or water resources	Mitigation sequencing requirements involving avoidance, minimization, compensation (could include preservation, creation, restoration, in-lieu fees, riparian buffers); design exceptions and variances; environmental compliance monitoring.
Forested and other natural areas	Avoidance, minimization; replacement property for open space easements to be of equal fair market value and of equivalent usefulness; design exceptions and variances; environmental compliance monitoring.
Agricultural areas	Avoidance, minimization; design exceptions and variances; environmental compliance monitoring.
Endangered and threatened species	Avoidance, minimization; time-of-year restrictions; construction sequencing; design exceptions and variances; species research; species fact sheets, Memoranda of Agreements for species management; environmental compliance monitoring.
Cultural resources	Avoidance, minimization; landscaping for historic properties; preservation in place or excavation for archeological sites; Memoranda of Agreement with the Department of Historic Resources; design exceptions and variances; environmental compliance monitoring.
Parks and recreation area	Avoidance, minimization, mitigation; design exceptions and variances; environmental compliance monitoring.

Source: Memphis Urban Area MPO Long Range Transportation Plan, 2040, Environmental and Social Screening Section.

MITIGATION GUIDELINES

Each project, of any type, proposed in the LRP should be examined for potential environmental impacts prior to being programmed into the TIP. This is particularly critical in an area like the NATS region where natural features are abundant and important to residents. Because each NATS project was adjacent to at least one environmental feature, it will be necessary to implement planning and construction practices that will protect the natural environment and cultural resources. The following are general guidelines that will need to be implemented if projects are within the buffered areas. Transportation staff will work with local road agencies to ensure that best practices are utilized throughout the construction and maintenance of the projects.

PLANNING AND DESIGN GUIDELINES

1. Use Context Sensitive Solutions (CSS) throughout the planning and project development process, beginning as early as possible. CSS is a collaborative process that is designed to solicit public and stakeholder input when developing transportation projects.

2. Use Low Impact Development (see Michigan's Low Impact Development Manual) to minimize the negative impacts, and in some cases effect create positive impacts, of transportation projects on water quality. Low Impact Development preserves open space and minimizes land disturbance; protects natural systems and processes (drainage ways, vegetation, soils, and wetlands); reexamines the use and sizing of traditional infrastructure (lots, streets, curbs, gutters, and sidewalks) and customizes site design; and incorporates natural site elements (wetlands, stream corridors, mature forests) as design elements.

3. Identify the area of potential impact connected to each transportation project, including the immediate area as well as related project development areas.

4. Regularly update the environmental features inventory to determine if any environmentally sensitive resources could be impacted by the project.

5. Coordinate the LRP with the County Hazard Mitigation Plan.

6. Coordinate transportation projects with local plans, such as comprehensive plans, watershed management plans, recreation plans, etc.

7. Regularly collaborate and meet with local community officials and other relevant stakeholders to discuss environmental issues and goals.

8. Where impacts are unavoidable, mitigate them to the fullest extent possible.

9. Incorporate stormwater management into design using a "green streets concept" that takes into account landscaping needs and existing runoff issues.

10. Promote public education on protecting sensitive features in land use planning.

CONSTRUCTION AND MAINTENANCE GUIDELINES

1. Include all special requirements that address environmentally sensitive resources into plans and estimates used by contractors and subcontractors.

2. Distribute information regarding activities prohibited in environmentally sensitive areas.
3. Minimize construction and staging areas with clearly marked boundaries.

4. Utilize the least intrusive construction techniques and materials.

5. Avoid and protect wetlands; restore lost wetlands if possible.

6. Avoid disturbing the site as much as possible.
    a. Protect established vegetation (especially tree and drip zones, where tree roots are located) and habitat. If disruption is unavoidable, replace with native species as soon as possible.
    b. Implement sediment and erosion control techniques.

Road Crew Chip Sealing Roadway

    c. Do not stockpile materials in sensitive areas.
    d. Protect water quality by controlling runoff, regularly sweeping streets, protecting storm drains from construction debris, and implementing salt management techniques.
    e. Protect cultural and historic resources, including surrounding soils and materials.
    f. Minimize noise and vibrations.
    g. Provide for solid waste disposal
        i. Use the least hazardous substances possible, and ensure that such substances are properly handled, stored, and disposed.
7. Keep construction activities away from wildlife crossings and corridors.

8. Reduce land disturbances through efficient organization of construction activities

9. Avoid equipment maintenance, fueling, leaks, spraying, etc. near sensitive areas.

10. Incorporate Integrated Pest Management techniques if pesticides are used during maintenance.

11. Properly size and place culverts to ensure fish passage and reduce erosion.

12. Conduct on-site monitoring during and immediately following construction to ensure that environmental resources are protected as planned.

13. Utilize buffer strips to protect sensitive features, especially wetlands.

14. Where possible, realign/design routes or interchanges to protect sensitive features, especially wetlands. Look for opportunities to restore wetlands or improve natural areas/features.

15. Consider alternatives to capacity expansion.

16. Promote proactively restoring sites/building corridors and wildlife during road projects.

It is important to note that these guidelines are suggested as steps to mitigate potentially harmful effects of transportation projects on the natural environment. The SWMPC has no authority to require implementation of these guidelines. However, this information is intended to inform the construction process, from planning to implementation, and to ensure better coordination with general land use planning practices. [33]

FINDINGS

The environmental assessment included in this document is intended to serve as an initial screening of each transportation project's proximity to sensitive environmental features and is to be used to prevent potential negative impacts to the environment. The spreadsheet and maps found in this section demonstrate the results of the feature identification and draw attention to areas to be examined further at the project level. The spreadsheet and maps indicate which projects are adjacent to various environmental features, but do not identify the level of potential impacts. Project-level environmental impact assessments go into far greater depth when these impacts may be more pronounced.

All of the proposed transportation projects listed in the spreadsheet are adjacent to at least one environmental feature. Woodlands, wetlands, aquifer recharge areas, floodplains, and well locations were the most common features to fall within project buffers. The least common features within project buffers

[33] AASHTO Center for Environmental Excellence. Environmental Stewardship Practices Procedures, and Policies for Highway Construction and Maintenance.
http://environment.transportation.org/environmental_issues/construct_maint_prac/compendium/manual/

were cemeteries and areas of cultural significance. Depending on the project, environmental features may need to be studied further, in order to develop project-level mitigation strategies to minimize any possible negative effects on the environment. Environmental features also may influence transportation project timing and costs.

One should note that the features identified are not an all-inclusive list, nor is this environmental assessment considered completed. Mapped features included are those for which data were readily available. Environmental assessment will be an ongoing process, and future long range planning will reflect a continued effort to expand the scope of this effort. In the future other environmentally sensitive features should be incorporated into this section for consideration. Candidates for future inclusion are wetland restoration areas, heritage routes, historic bridges and places, coldwater streams, water bodies not meeting water quality standards and prime and unique farmlands.

CONSULTATION

Public Involvement

SWMPC staff employed several different strategies to engage the public throughout the development of this plan.

1. Monthly MPO Committee Meeting in which the public were invited to attend the monthly meetings to make comments.
2. Bi-weekly email messages that interested citizens have signed up for.
3. Bi-weekly email messages to the various media outlets covering the region. The list can be found at the end of this section in Table 21.
4. Legal notices announcing when additional comments were being sought.
5. Targeted mailings to schools in the planning region.
6. Community Open House Forums held from March-May at the Niles Public Library from 5-7.
7. One day engagement day at Edwardsburg High School.

PUBLIC COMMENTS RECEIVED DURING OUTREACH EFFORTS

What follows is a brief discussion of the Community Open House Forums.

- March 27, 2013 Community Open House Forums -5 attendees (2 SWMPC staff in attendance).
- April 24, 2013 Community Open House Forums-5 attendees (3 attendees-2 SWMPC staff in attendance). No comments were listed on the comment sheets
- May 24, 2013 Community Open House Forums-3 attendees (2 attendees-1 SWMPC staff in attendance). No comments were listed on the comment sheets, but several notes were taken.

Each of the three forums opened with a brief presentation regarding the MPO process and described the plan development process. The next piece was to open the discussion to attendees. Then attendees were asked to fill out survey sheets, the responses were collected and responded to by SWMPC staff, at least one week after the meeting.

Questions on Survey

1. Do you have any concerns or questions regarding transportation in general?

-We would like to see a non-motorized bike trail that would start at the Edwardsburg administration building go west past the sports complex and continue to pleasant lake and connect back to the school property. A total of approximately 4 miles. We need advice on what to apply for grants and TAP funds.

-Keeping the road in good shape, I feel we need to become consumer friendly with the trucking industry.

2. Are there transportation projects that you think need to be done?

-Continue to bring the county transit system into the next generation for the county.
-After hours dial a ride close at 5pm. Have set areas, when and people can be pick up and taken to other spots and then the same route to return.

3. What types of transportation do you think we should be focusing on?

-Transportation the more areas outside of city limit of Niles

4. Where are the transportation "hot spots" in your community?

Niles-Hardy's, Rite Aid, Wal-Mart, Martins, Save A Lot, Dollar Store

5. Additional comments, suggestions, or concerns?

-We need to have a traffic count on Elkhart and Adamsville Road. Two primary roads that are in need of serious repair.
-Look into funding and jobs in the county for roads and non-motorized transportation. (Response required-email jessscdc@gmail.com)

Notes Taken by Staff

- Importance of US 31 and the tie to the south, Evansville, IN and how that will also tie into Kentucky and other surrounding regional markets.
- High school trail concept in Edwardsburg and the tie to the sports complex.
- Aging community in Berrien and Cass counties and how family farms are being developed into sprawling residential developments
- Using the rail service for workers to live in Michigan and work in IN or IL.
- Internet infrastructure in the area to allow for working from home.
- Education the best roads for passenger vehicles versus truck traffic.
- Weight restrictions and frost laws are different in each county
- Bus coordination in the county and region
- How are students at LMC, SMC, and Andrews getting around, can they use the transit systems
- Long wait times connecting from Niles Dial A Ride to Berrien Bus going from the southern part of Berrien County to the north.
- Expense of using the multiple bus systems.
- Transit service ending at 5pm, and it stops people from shopping or from connecting to night jobs.
- M-62 and State Road 23 through Granger, IN and the non-motorized development
- Use Niles Dial A Ride service only to Taco Bell because it is only 3.00 and past that location it is 4.00.

Public Comment Session May 29, 2013 Niles Public Library 5-7 PM

Attendees: Jerry and Roseanne Marchetti (public) and Gautam Mani (SWMPC staff)

- J. and R. Marchetti reiterated the need for Adamsville Road to be done sooner than 2016. The road is in really bad condition, and ambulance drivers have to warn their passengers and medical personnel that major bumps are coming. J and R Marchetti said that they had been talking to the Cass County Road Commission and other decision-makers constantly about making Adamsville Road a priority, and that there was definitely public consensus to get the project done. They said that a similar consensus existed for Elkhart Road.

- J. and R. Marchetti asked for clarification as to how much money was programmed on the MPO and RTF segments, and how far each segment extended. Mani stated that he did not have the latest version of the RTF balance sheet, but that he would take a look.

- J. and R. Marchetti asked about traffic counts on Adamsville Road and Elkhart Road. Mani said he would take a look into these items to see if SWMPC had any counts for those roads. At the very least, SWMPC would have counts used in the application process.

- J. and R. Marchetti examined the Socioeconomic data section from the plan noted that the population in Ontwa Township has continued to grow since 2010, particularly immediately around the lakes. Mani said that is consistent with trends SWMPC staff and others were observing. Mani explained that while Berrien County continues to lose population, Cass County's population is still generally increasing as growth moves in from Elkhart. J. and R. Marchetti noted that people from Chicago and northern Indiana who had previously had summer cottages along the lakes are now tearing those cottages down and building permanent homes where they can spend their retirement.

- J. Marchetti said that a non-motorized trail from Edwardsburg High School connecting to the sports complex and the nearby lakes would be a great asset to the community. Mani explained that it is difficult to use federal transportation funds, other than Transportation Alternatives funds, for trails that will not serve a commuter purpose. Mani explained that a group known as Southwest Michigan Alliance for Recreational Trails (SMART), organized by SWMPC, existed to discuss ways to make progress on recreational trails in the 9 counties of Southwest Michigan. Mani noted that he would add J. and R. Marchetti to the general email list for that group, so that they could stay up to date and find resources to get the trail project funded.

Mani noted the outreach effort that SWMPC made to Edwardsburg High School was successful in bringing up issues that were not previously considered by the MPOs. J. and R. Marchetti concurred that US-12 and Conrad was a highly problematic intersection, and that the railroad tracks were particularly difficult to drive over. J. and R. Marchetti stated that in some areas bicyclists' ride three or four abreast on shoulders that are not wide enough to handle that capacity safely.

One Day Engagement Day at Edwardsburg High School

One of the most successful outreach strategies during the development of this plan was the one day engagement activity that transpired at Edwardsburg High School. SWMPC staff regularly reach out to high school teachers in the planning area and one teacher, Mr. Jeff Kozinski welcomed staff into his classroom for a mock TIP selection process. The students were put into small groups and given a total amount of money that could be spent; they were also given estimations of project costs such as traffic lights, resurfacing, and chip seal. All of the costs were based on project costs estimated from the 2014-2017 NATS TIP projects. The following information was collected from the students of Edwardsburg High School sophomore and junior classes and displayed in Table 64.

Table 64 - Edwardsburg High School Students Engagement Responses

Transit	Number of Times Mentioned	Bridge	Sidewalks	Number of Times Mentioned	Bicycle Facility (Trail, Path, Bike Lane)	Number of Times Mentioned	Rail Road	Number of Times Mentioned	Stop Signs/Stop Lights	Number of Times Mentioned	Roads	Number of Times Mentioned
Bus Stop on Pokagon rd.	1	No comments were received regarding bridges	Sidewalks on Grey rd	1	Non motorized Trail	4	Rail Road on US 12	2	Stop light at Conrad & Redfield	2	Adamsville Rd.	5
Transit Bus on Mason St.	1		Sidewalk from Gas Station to School	2	Add bike paths to Adamsville rd.	1	Conrad rd Rail Road Tracks	1	Stoplight at US 12 & Conrad	15	Redfield	11
Bus Shelter on US 12	1		Sidewalks nearby US 12 & M-62	1	Bike Lane U.S. 12	5	US 12 & M-62 Rail Road Tracks	1	M205 and US 12		Born St.	1
Bus Shelter on M60	1		Edwardsburg sidewalk improvements	2	Redfield	5	Fix intersection in town to make it more efficient with the train tracks.	1	Stop Lights US 12 & Gumwood	2	M-62	3
Bus Shelter in Niles	1		Sidewalks Elkhart rd.	1	Conrad Road	2			5 Points		M205	2
Bus shelter at Marathon Gas Station	2		New Sidewalks should be added to make walking more convenient for people. They will be added by Lunkers and the gas station so people can walk from place to place.	1	Bike lane on Beebe rd. because the street riders will have an easier time and enjoy the scenery.	1			Traffic Signals at intersection of M-62 & US 12		US 12	14
M-62 and Redfield	1		Redfield from Fir to Conrad	1	Non motorized Trail 5 miles Elk rd to Cass	1			Pine Lake and Daily		Elkhart road	18
Bus Stop at Lunkers	1		3 miles of sidewalks on May St.	1	Bike Trail 2 miles Elkhart rd.	1			US 12 and Adamsville		Decatur Road	2

Transit	Number of Times Mentioned	Bridge	Sidewalks	Number of Times Mentioned	Bicycle Facility (Trail, Path, Bike Lane)	Number of Times Mentioned	Rail Road	Number of Times Mentioned	Stop Signs/Stop Lights	Number of Times Mentioned	Roads	Number of Times Mentioned
Bus Shelter on US 12 Edwardsburg & Transit Bus Replacement			Sidewalk on US12 from Pre-School to the Gas Station		Bike Lane Conrad & US 12	1			Pine Lake & Dailey Stop Light		May Street	4
Bus shelters in Dowagiac, Cass, Edwardsburg, and other cities in Cass County need bus shelters	1		Sidewalks on May St. to go to the Golf Course	1	Bike Lane on May rd.	1			Traffic Light at Gumwood and US 12		Conrad	3
Bus Shelter on US 12 Eagle Lake	1		2 miles of sidewalk on Elkhart rd.	1	Bike Lane on May rd. for 1 mile starting at Conrad	1			Add stoplight on U.S. 12 at intersection with Section Street.		Dailey Road	4
Bus shelter by McDonalds and add a bus in Edwardsburg.	1				6 Miles of Bike trail along Saint Joseph River in Niles. This could benefit bikers and also have a scenic trail it would be good for the community. This might help people be more active.	1			Add stoplight at Pine Lake rd and Dailey Rd.		Ironwood	1
Bus Shelter by Edwardsburg School	1				Bike Lane on Bertrand St. Trail	1			Stop Light at the intersection of M-62 and Redfield.		Calvin Center Road	1
Purchase 2 transit buses and also 2 bus shelters. People will be able transport from place to place easier.	1				Bike Path on May St. for 1 mile	1			Daily and M60 add stoplight		M-60	2
Transit bus for the working class	1				Bike rout on Cass Road from Calvin Hill St. to Redfield	1			Signal on Corner of Old 205 & US 12		Gumwood Road	4
Build a bus shelter for transit bus	1				Bike trail around Diamond Lake	1					Pine Lake Street	3

Transit	Number of Times Mentioned	Bridge	Sidewalks	Number of Times Mentioned	Bicycle Facility (Trail, Path, Bike Lane)	Number of Times Mentioned	Rail Road	Number of Times Mentioned	Stop Signs/Stop Lights	Number of Times Mentioned	Roads	Number of Times Mentioned
Transit would stretch to Cass and Dowagiac	1				Bike Lane leading into Granger	1					Brownsville Road	2
Additional buses	6				Non-motorized trails for May St.	1					Bell Road	2
Bus stops in Niles, Edwardsburg, Cass, Dowagiac, Marcellus and Vandalia	1				Center of Edwardsburg to Eagle Lake	1					Fir Road	3
					Non-motorized bike trails around the lakes should be added.	1					Beebe Road	1
					from Eagle Lake to Lake Michigan	1						
					Union Rd. to Pike Lake Street bike Trails	1						

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Other Comments from Edwardsburg Students

- Improving transportation will help bring tourists to Edwardsburg and help make our community more efficient and involved.
- The schools will benefit with non-motorized trails because kids will be able to transport to and from school easier.
- Better road system is going to satisfy everyone. These roads are vastly used on a daily basis.

Comments Specifically Related to Safety

- Put a traffic sign on Conrad & May St because that area is prone to a lot of accidents.
- Elkhart road is heavily traveled, with a lot of travelers.
- Getting new sidewalks for Edwardsburg would be beneficial because it would make the town look nice. It would also be safer for students to get from place to place. More students could come to Edwardsburg schools.
- Repaving Redfield drive and Adamsville will provide locals with safer and more durable road conditions.
- Help make transportation more efficient and safer for locals.
- Making transportation easier and safer by adding stoplights and making roads easier to drive on by resurfacing them.
- Sidewalk on US12 from Pre-School to the Gas Station this will allow for safer travel for kids to walk.
- Sidewalks on Elkhart rd will keep people safer for people who live there.
- By improving the roads will make the community safer and it will be pleasant to travel.

CONSULTATION

Previous transportation legislation, SAFETEA-LU, required that MPOs use a consultation process, which is a separate and discrete process from the general public participation process, this process was continued with MAP-21 legislation. This process is meant as a way to better consider the needs of consulted agencies and to eliminate or minimize conflicts with other agencies' plans. By consulting with agencies in this manner during the development of this plan, these groups can compare potential project lists and maps with other natural and resource inventories. The MPO will be able to compare the Draft LRP to any documents received and make adjustments as necessary to achieve great compatibility.

Legislation suggests that contacts with State, local, Tribes, and private agencies responsible for the following areas be contacted:

- Economic growth and development
- Environmental protection
- Airport operators
- Freight movement
- Land use management
- Natural resources

- Conservation
- Historical preservation
- Human service transportation providers

Because the SWMPC is both a regional planning agency and a MPO, relationships with agencies responsible for cultural, land use, and environmental planning are already established. The SWMPC has a wide range of planning expertise which regularly cross-cuts with transportation planning. Expanding the scope of transportation planning to ensure the inclusion of the range of stakeholders and partners will only enhance the quality of the region's transportation plans and projects. A copy of these materials can be found in Appendix E. Table 65 outlines the contacts that were mailed items as part of the consultation portion of the planning process. Table 66 outlines the media contacts that were contacted as part of the process.

Agencies with which the SWMPC requested consultation were sent the following in the mail:

1. A letter explaining the transportation planning consultation process according to MAP-21 legislation.
2. The NATS role in this process.
3. A draft list of 2040 LRP proposed transportation projects.
4. A map displaying proposed projects.
5. Directions on how they might provide their input.

Table 65 - Consultation Contact List

Consultation Contact Name	Specific Department	Community	State
Abonmarche Consultants, Inc.		Benton Harbor	Michigan
Area Agency on Aging Region VI		St Joseph	Michigan
Berrien Bus		Berrien Springs	Michigan
Berrien Co. Community Development		St. Joseph	Michigan
Berrien County	Road Commission	Benton Harbor	Michigan
Berrien County	Parks & Recreation	St. Joseph	Michigan
Berrien County	Administration	St. Joseph	Michigan
Berrien County	Health Department	Benton Harbor	Michigan
Berrien County Board of Commissioners		St. Joseph	Michigan

Consultation Contact Name	Specific Department	Community	State
Berrien County Conservation District		Berrien Springs	Michigan
Berrien County Drain Commissioner		St. Joseph	Michigan
Berrien County Historical Association		Berrien Springs	Michigan
Berrien County Planning Commission		St. Joseph	Michigan
Berrien County Public Transit		Berrien Springs	Michigan
Berrien Regional Education Service Agency		Berrien Springs	Michigan
Bertrand Township		Buchanan	Michigan
Brandywine Public Schools		Niles	Michigan
Buchanan Community Schools		Buchanan	Michigan
Buchanan Dial a Ride		St. Joseph	Michigan
Buchanan Township		Buchanan	Michigan
CARE-A-VAN		Coloma	Michigan
Cass County	Public Works	Cassopolis	Michigan
Cass County	Road Commission	Cassopolis	Michigan
Cass County	Planning Commission	Cassopolis	Michigan
Cass County	Parks and Recreation	Cassopolis	Michigan
Cass County	Conservation District	Cassopolis	Michigan
Cass County	Board of Commissioners	Cassopolis	Michigan
Cass County	Water Resource Commission	Cassopolis	Michigan

Consultation Contact Name	Specific Department	Community	State
Cass County	Planning Commission	Cassopolis	Michigan
Cass County	Administration	Cassopolis	Michigan
Cass County Council on Aging		Cassopolis	Michigan
Cass County Historical Commission	c/o Cass District Library	Cassopolis	Michigan
Cass County Transportation Authority		Cassopolis	Michigan
Cassopolis/Vandalia Chamber of Commerce		Cassopolis	Michigan
City of Buchanan		Buchanan	Michigan
City of Niles		Niles	Michigan
City of Niles	Dept of Public Works	Niles	Michigan
Consumer's Energy Inc		Covert	Michigan
Consumers Power Company		Kalamazoo	Michigan
Cornerstone Alliance		Benton Harbor	Michigan
Department of Human Services	Berrien County	Benton Harbor	Michigan
Department of Human Services	Cass County	Cassopolis	Michigan
Disability Network of SW MI - Berrien/Cass		St Joseph	Michigan
Edwardsburg Chamber of Commerce		Edwardsburg	Michigan
Edwardsburg Public Schools		Edwardsburg	Michigan
Federal Highway Administration	Michigan Division	Lansing	Michigan
Fernwood Botanical Gardens		Niles	Michigan
Four Flags Area Chamber of Commerce		Niles	Michigan

Consultation Contact Name	Specific Department	Community	State
Friends of Harbor Country Trails			Michigan
Friends of the McCoy's Creek Trail		Buchanan	Michigan
Friends of the St Joseph River		Athens	Michigan
Greater Niles-Buchanan	Committee on Aging	Buchanan	Michigan
Howard Township		Niles	Michigan
Lake Michigan College	Bertrand Crossing	Niles	Michigan
Lewis Cass ISD		Cassopolis	Michigan
Mason Township		Edwardsburg	Michigan
MDEQ	Air Quality Division	Lansing	Michigan
MDEQ	Head Quarters	Lansing	Michigan
MDEQ	Surface Water Quality Division	Plainwell	Michigan
MDEQ Kalamazoo	Water Division	Kalamazoo	Michigan
MDOT	Coloma TSC	Benton Harbor	Michigan
MDOT	Southwest Region	Kalamazoo	Michigan
MDOT	Intermodal Section	Lansing	Michigan
MDOT	Urban/Public Transportation	Lansing	Michigan
MDOT	Statewide Planning	Lansing	Michigan
MDOT	Multi-Modal Transportation Services Bureau	Lansing	Michigan
MDOT	Bureau of Transportation Planning	Lansing	Michigan
MDOT	Non-Motorized Transportation	Lansing	Michigan
MDOT	Passenger Trans Division	Lansing	Michigan

Consultation Contact Name	Specific Department	Community	State
Merritt Engineering Inc		Stevensville	Michigan
MI Dept of Agriculture	Environmental Stewardship Division	Lansing	Michigan
MI Dept of Agriculture & Rural Development		Lansing	Michigan
MI Dept of Natural Resources	Lansing	Lansing	Michigan
MI Dept of Natural Resources	Plainwell	Plainwell	Michigan
Michiana Area Council of Governments		South Bend	Michigan
Michigan Association of Railroad Passengers		Livonia	Michigan
Michigan Economic Develop Corp		Lansing	Michigan
Michigan House 59th District		Lansing	Michigan
Michigan House 78th District		Lansing	Michigan
Michigan House 79th District		Lansing	Michigan
Michigan Senate 21st District	Lansing Office	Lansing	Michigan
Michigan Works	Benton Harbor	Benton Harbor	Michigan
Milton Township		Niles	Michigan
MSU Extension	Berrien County	Benton Harbor	Michigan
MSU Extension	Cass County	Cassopolis	Michigan
National Railroad Passenger Corp		Niles	Michigan
Natural Resources Conservation Service	Berrien County	Berrien Springs	Michigan
Natural Resources Conservation Service	Cass County	Cassopolis	Michigan
Niles Charter Township		Niles	Michigan
Niles Dial A Ride Transportation		Niles	Michigan
Niles Public Schools		Niles	Michigan

Consultation Contact Name	Specific Department	Community	State
Ontwa Township		Edwardsburg	Michigan
Pokagon Band of Potawatomi Indians		Dowagiac	Michigan
Preserve the Dunes		Riverside	Michigan
South Bend Regional Airport		South Bend	Michigan
Southwest MI Econ Growth Alliance		Niles	Michigan
Southwest Michigan Community Action Agency		Benton Harbor	Michigan
Southwest Michigan Land Conservancy		Portage	Michigan
Southwestern Michigan College		Dowagiac	Michigan
Southwestern Michigan College	Niles Area Campus	Niles	Michigan
State Historic Preservation Office	Preserve America	Lansing	Michigan
SW MI Home Builders Association		Berrien Springs	Michigan
The Nature Conservancy		Comstock Park	Michigan
Transpo		South Bend	Indiana
Van Buren/Cass District Health Dept.		Hartford	Michigan
Village of Edwardsburg		Edwardsburg	Michigan
Wightman & Associates, Inc		Benton Harbor	Michigan

Table 66 - Media Contacts

Last Name	First Name	Entity Name	City	State	Zip
Aiken	Scott	Herald Palladium	St Joseph	MI	49085
Albertson	Cyndi	Courier Leader	Paw Paw	MI	49079
Ast	Rick	Herald Palladium	St Joseph	MI	49085
Bayer	Karl	Tri-City Record	Watervliet	MI	49098
Bennett	Michael	Leader Publications	Niles	MI	49120
Boers	Dan	WOTV CHANNEL 8	Grand Rapids	MI	49503
BonFiglio	Jeremy	Herald Palladium	St Joseph	MI	49085
Borrelli	Robert	WSBT Radio NewsTalk 960	Mishawaka	IN	46545
Bourden	Dee	The Elkhart Truth	Elkhart	IN	46515
Breckenridge	Lejene	South Bend Tribune	South Bend	IN	466261001
Brent	Bill	Andrews University	Berrien Springs	MI	49103
Broderick	Melissa	WWMT-CHANNEL 3 NEWS	Kalamazoo	MI	49001
Brown	Dave	Herald Palladium	St Joseph	MI	49085
Brown	Sally	WSBT Radio NewsTalk 960	Mishawaka	IN	46545
Burdorf	Lee	WVPE-88.1 FM	Elkhart	IN	46514
Burkert	Becky	South Haven Tribune	South Haven	MI	49090
Callas	George	WNDV U93	South Bend	IN	46628

Last Name	First Name	Entity Name	City	State	Zip
Ciokajlo	Mickey	Kalamazoo Gazette	Kalamazoo	MI	49007
Cogswell	Dennis	Herald Palladium	St Joseph	MI	49085
Dalgleish	Jim	Herald Palladium	St Joseph	MI	49085
Director	News	WRHC - Radio Harbor Country	Three Oaks	MI	49128
Drzick	David	WWMT-CHANNEL 3 NEWS	Kalamazoo	MI	49001
Dudgeon	Sharon	Andrews University	Berrien Springs	MI	49103
Duhn	Dee Dee	New Buffalo Times	New Buffalo	MI	49117
Durk	Joe	New Buffalo Times	New Buffalo	MI	49117
Dusla	Rosaline	Decatur Republican	Decatur	MI	49045
East	Zack	WCXT 98.3 the Coast	St. Joseph	MI	49085
Eby	John	Dowagiac Daily News	Dowagiac	MI	49047
Ericksen	Beth	Kalamazoo Gazette	Kalamazoo	MI	49007
Flo	Freddie	WVBH 105.3	Benton Harbor	MI	49022
Frey	Marilyn	Herald Palladium	St Joseph	MI	49085
Garrod	Paul	Courier Leader	Paw Paw	MI	49079
Gehl	Pam	South Haven Tribune	South Haven	MI	49090
Giczi	Greg	WNIT-TV 34	South Bend	IN	466347034
Gifford	Jim	WSJM NEWS	St Joseph	MI	49085

Last Name	First Name	Entity Name	City	State	Zip
Goshert	Jerry	Farmer's Exchange	New Paris	IN	46533
Green	Andrew	WSJM NEWS	St Joseph	MI	49085
Greenberger	Ed	WSJV-TV CHANNEL 28 NEWS	Elkhart	IN	46517
Grillot	Jesus	New/Nueva Opinion	Battle Creek	MI	49016
Haight	Debbie	Herald Palladium	St Joseph	MI	49085
Halling	Gregory	The Elkhart Truth	Elkhart	IN	46515
Harmsen	Scott	Kalamazoo Gazette	Kalamazoo	MI	49007
Haroldson	Tom	Kalamazoo Gazette	Kalamazoo	MI	49007
Hartzell	Ted	Herald Palladium	St Joseph	MI	49085
Heibutzki	Ralph	Herald Palladium	St Joseph	MI	49085
Hughes	Andy	Farmer's Exchange	New Paris	IN	46533
Hunt	Anthony	WVPE-88.1 FM	Elkhart	IN	46514
Jackson	Paul	Business Direct Weekly	Kalamazoo	MI	49007
Jewell	Steve	Herald Palladium	St Joseph	MI	49085
Johnson	David	Harbor Country News	New Buffalo	MI	49117
Johnson	Katie	Niles Daily Star	Niles	MI	49120
Jones	Al	Kalamazoo Gazette	Kalamazoo	MI	49007
King	Marshall	The Elkhart Truth	Elkhart	IN	46515

Last Name	First Name	Entity Name	City	State	Zip
Kinnaman	Linda	South Haven Local Observer		MI	
Layendecker	Paul	WYTZ 97.5 Y Country	St. Joseph	MI	49085
Layne	Brenda	WSJM NEWS	St Joseph	MI	49085
Lehnert	Dick	Fruitgrowers News	Sparta	MI	49345
Leitz	Ron	Business Direct Weekly	Kalamazoo	MI	49007
Lersten	Andrew	Herald Palladium	St Joseph	MI	49085
Lorenz	Susan	Herald Palladium	St Joseph	MI	49085
Mann	John	WSBT-TV (Channel 22)	Mishawaka	IN	46545
McCallum	Matt	Fruitgrowers News	Sparta	MI	49345
McDonough	Jessie	ABC-57 News	South Bend	IN	46635
Moisenko	Angela	WNIT-TV 34	South Bend	IN	466347034
Montgomery	Bob	WHFB Radio Stations	Benton Harbor	MI	49022
Moody	Pat	WSJM NEWS	St Joseph	MI	49085
Moormann	David	Decatur Republican	Decatur	MI	49045
Moormann	Ramona	Marcellus News	Marcellus	MI	49067
Mumford	Lou	South Bend Tribune	South Bend	IN	466261001
Newsroom	BCR	Berrien County Record	Buchanan	MI	49107

Last Name	First Name	Entity Name	City	State	Zip
Olson	Gayle	WIRX Rock 107	St. Joseph	MI	49085
Parker	Rose	Kalamazoo Gazette	Kalamazoo	MI	49007
Patzer	Sue	WYTZ 97.5 Y Country	St. Joseph	MI	49085
Pease	Mike	WNDU-TV (Channel 16)	South Bend	IN	46634
Pienktka	Floyd	Western Michigan University	Kalamazoo	MI	49008
Pierce	Rebecca	Kalamazoo Gazette	Kalamazoo	MI	49007
Pines	Joyce	Kalamazoo Gazette	Kalamazoo	MI	49007
Pullano	Kathy	Journal Era	Berrien Springs	MI	49103
Pullano	Tim	Journal Era	Berrien Springs	MI	49103
RAGZ		WAOR 95.3	Mishawaka	IN	46545
Rietsma	Jef	Kalamazoo Gazette	Kalamazoo	MI	49007
Rite	Karen	WNDV U93	South Bend	IN	46628
Roberts	Jim	WHFB Radio Stations	Benton Harbor	MI	49022
Robins	Andy	WMUK-FM	Kalamazoo	MI	49008
Rohman	Katie	Leader Publications	Niles	MI	49120
Ryder	Jeff	WSMK 99.1	Niles	MI	49120
Sagar	Christine	WSJM NEWS	St Joseph	MI	49085
Sauer	Meg	WSBT-TV (Channel 22)	Mishawaka	IN	46545
Sheldon	Spencer	WSJM NEWS	St Joseph	MI	49085
Shields	Rick	WKZO AM 590	Kalamazoo	MI	49006

Last Name	First Name	Entity Name	City	State	Zip
Simko	Mary	WSBT Radio NewsTalk 960	Mishawaka	IN	46545
Singleton	Ron	WVBH 105.3	Benton Harbor	MI	49022
Smith	Jeff	Andrews University	Berrien Springs	MI	49103
Smith	Rod	Kalamazoo Gazette	Kalamazoo	MI	49007
Stanley	Bill	WHFB Radio Stations	Benton Harbor	MI	49022
Stewart	Heather	WSJV-TV CHANNEL 28 NEWS	Elkhart	IN	46517
Swidwa	Julie	Herald Palladium	St Joseph	MI	49085
Taylor	Marci	WSMK 99.1	Niles	MI	49120
Thomas	Howard	Kalamazoo Gazette	Kalamazoo	MI	49007
Tobias	Princella	Benton Spirit	Benton Harbor	MI	49023
Van Dyke	Robin	WCSY-103.7 COSY-FM	South Haven	MI	49090
Vitale	Phil	Cass County Neighbors	Cassopolis	MI	49031
WNDU	News Director	WNDU-TV (Channel 16)	South Bend	IN	46634
Woodworth	Klay	Western Michigan University	Kalamazoo	MI	49008

CONSULTATION COMMENTS RECEIVED

COMMENT #1 - *Thank you for your May 30, 2013, letter allowing the Department of Environmental Quality (Department) the opportunity to comment on your LRP. There were only a few comments made from the six divisions within our Department. If you are not familiar those divisions (offices) they are as follows: Air Quality Division (AQD), Resource and Redevelopment Division (RRD), Water Resources Division (WRD), Office*

of Drinking Water and Municipal Assistance (ODWMA) and the Office of Waste Management and Radiological Protection (OWMRP). As you might expect these five divisions handle a wide range of programs. Staff in the AQD made the general comment that when grinding or crushing concrete adequate dust control measures must be in place. If you have specific questions with regard to this, please contact Mary Douglas, Kalamazoo District Supervisor, and AQD at 269.567.3545. Staff in the RRD made not comment but did offer the following link to the Environmental Mapper, which can be checked at any time to determine if there are known sites of environmental contamination in a specific project area. That link is: http://www.mcgi.state.mi.us/environmentalmapper/ if you have additional questions with regard to RRD programs you can contact either Frank Ballo, Kalamazoo District Supervisor, RRD, at 269.567.3531 or David Heywood, Kalamazoo Assistant District Supervisor, RRD at 269.567.3522. Staff in the OWMRP remind you to please dispose of solid waste from these projects appropriately. If you have specific questions with regard to waste disposal please contact me at the number below. Additional contacts in our office are: Kameron Jordan, Kalamazoo District Supervisor, WRD, at 269.567.3565, or Jerrod Sanders, Kalamazoo Assistant District Supervisor, WRD at 269.567.3579. Amy Lachance, Kalamazoo and Grand Rapids District Supervisor, ODWMA at 616.490.9590. Lou Schineman, Lansing District Supervisor (Kalamazoo Field Office) OOGM at 517.241.1531.

I wish you the best of luck on the success of your projects.

Fred L. Sellers
District Supervisor
Kalamazoo & Grand Rapids DO
Office of Waste Management and Radiological Protection
Kalamazoo MWF
Grand Rapids T Th
For all Phone Contacts Please Call
Cell 269.569.1476

RESPONSE - Mr. Sellers,

Thank you for your comments regarding the NATS 2040 Long Range Transportation Plan. Our committees heard your comments and received a copy of those comments at their monthly meeting on June 25, 2013. Your comments have been included in our transportation documents and will be used to ensure that any work uses the proper control measures to minimize impacts to our sensitive resources which are abundant in the planning region. In addition, my members were not aware of the Environmental Mapper feature that your agency offers. We will be working with all of our constructing agencies to ensure that all mitigation efforts are taken to preserve and limit any impacts to our resources. We will also be updating our contact listing with the information that you have provided to us. Thank you again for your time and comment during this process.

COMMENT #2

Thank you for the opportunity to review the draft documents for your MPO regions. Both of the LRPs and project lists look current and accurate from the MDOT Office of Rail prospective. Please do not hesitate to contact me if you have any questions or concerns.

NATS ***Projects:*** *Office of Rail has no comments on the projects at this time. Please make sure necessary coordination with AMTRAK and MDOT is occurring for the projects involving railroad crossings.*

LRP: *The sections on rail look fine, no comment at this time.*

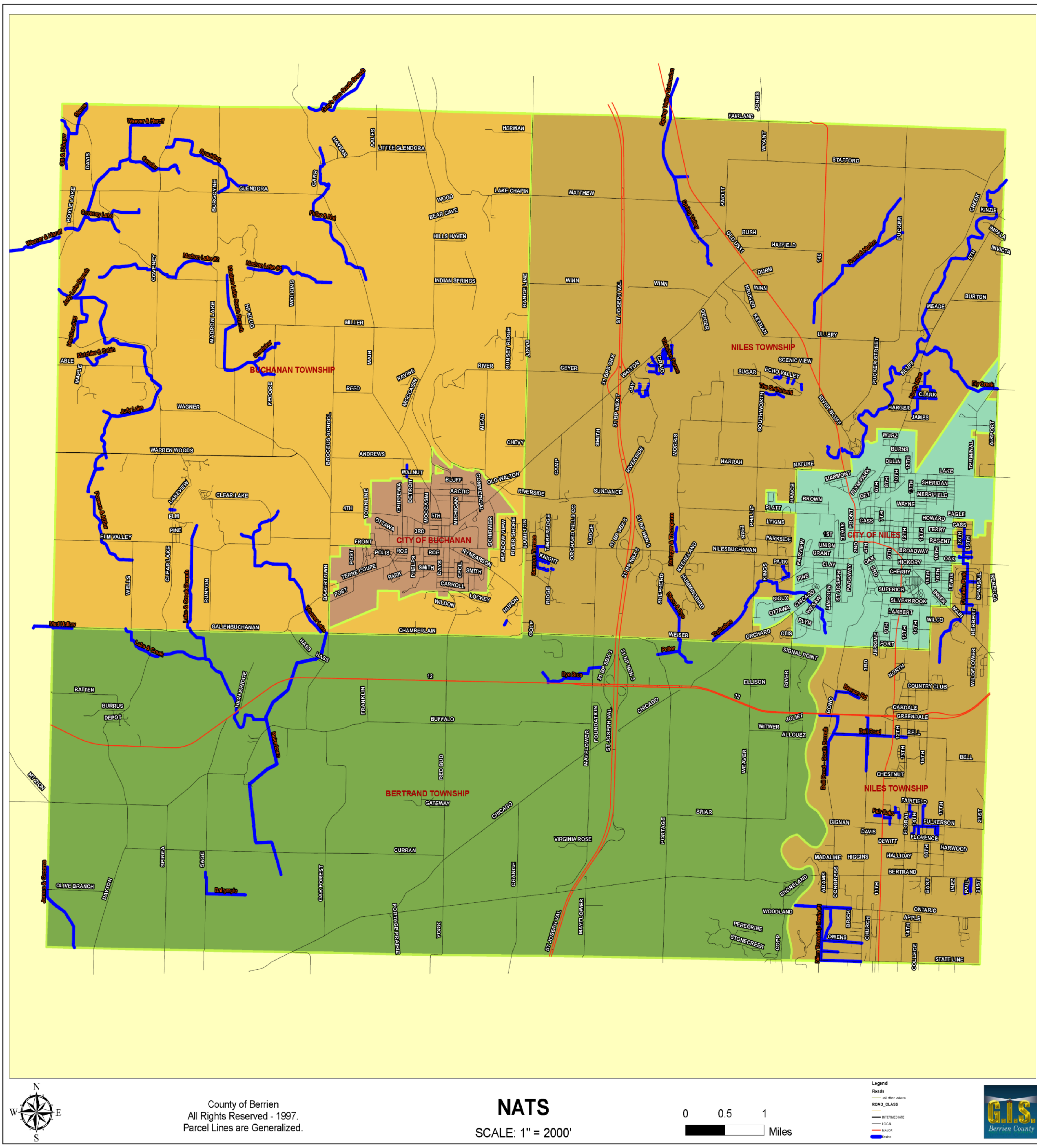
Daniel Harris SSO Manager Office of Rail
MDOT
425 West Ottawa P.O. Box 30050
Lansing, MI 48909
Office: 517-335-1005
Cell: 517-896-2799
Email: harrisd16@michigan.gov

RESPONSE - Mr. Harris,
Thank you for your comments regarding the NATS 2040 Long Range Transportation Plan. Our committees heard your comments and received a copy of those comments at their monthly meeting on June 25, 2013. Your comments have been included in our transportation documents and will be used to ensure that we continue to coordinate and collaborate with our many partners at the DOT including rail. Thank you again for your time and comment during this process

COMMENT #3

Hello Suzann,
Per our phone conversation this morning and a phone conversation with Lex Winans, Director of GIS/Land Description, Lex Winans will electronically email you on Friday, June 14th jpeg copies of the maps covering the northern and southern locations as indicated in your study. The maps will include a drain layer that will show all the locations of all the county drains under the jurisdiction of the Berrien County Drain Commissioner, Roger Zilke. Please be mindful of the location of the drains during your planning process for the future, proposed projects. There are drains that will be affected by your noted projects. Please contact the drain commissioner prior to the actual commencement of the work. It is my understanding you will forward the maps(once received from Mr. Winans) for the Twin Cities area to Mr. Gautam Mani.
If you have any questions after reviewing the maps and during your planning process, please contact our office at 269-983-7111 ext. 8261.
Thanks you
Anne Hendrix
Berrien County Drain Department

Map 39 - Berrien County Drain Map



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RESPONSE - Ms. Hendix,

Thank you for your comments regarding the NATS 2040 Long Range Transportation Plan. Our committees heard your comments and received a copy of those comments at their monthly meeting on June 25, 2013. Your comments have been included in our transportation documents and will be used to ensure that county drains are paid special attention to in the planning, designing, construction, and maintenance of transportation infrastructure throughout Berrien County. In addition, we thank you for sending along maps that note where these sensitive drains are located. Thank you again for your time and comment during this process.

COMMENT #4

Greetings:
The proposed projects look reasonable. There are many roads and infrastructures in those area in need of repair.

Sherman Reed
District Conservationist
3334 Edgewood Dr.
Berrien Springs, MI 49103-9553
Office Phone: (269) 471-9111 ext. 101
Office Fax: (269) 471-3773

RESPONSE - Mr. Reed,

Thank you for your comments regarding the NATS 2040 Long Range Transportation Plan. Our committees heard your comments and received a copy of those comments at their monthly meeting on June 25, 2013. Your comments have been included in our transportation documents and will be used to ensure that we continue to maintain and make improvements to our transportation infrastructure. Thank you again for your time and comment during this process.

COMMENT #5

Transportation is critical to living a full, engaged life in our communities. Roads, public transit systems, and non-motorized options are but a few of the essential pieces in a vital transportation network. Disability Network Southwest Michigan recognizes that each of these options is important to the mobility of all people in the NATS service area, including people with disabilities. People with disabilities often do not drive due to disability or economic status. It's been our experience that a community that heavily focuses on road improvement to the exclusion of other modes leaves many people with few ways to truly be a part of their communities. To be able to survive in a community, people must be able to get to the grocery store, the bank, and the doctor. To be able to thrive in a community, people must be able to connect and engage with other people and contribute meaningfully in their community. Every one of these essential activities requires meaningful motorized and non-motorized transportation networks.

While the NATS 2040 long range plan offers multiple improvements of the motorized network, only a few projects that appear to include non-motorized components. It is promising that non-motorized aspects are part of some projects, and including more non-motorized elements and features in other projects would offer even greater options for mobility in other areas. After all, people have need to travel to every part of our community or we would not have roads there! There are a variety of design options to ensure that all roads, including rural roads, can be used by drivers, pedestrians, and bicyclists. The State of Michigan strongly supports "Complete Streets" in our communities, and encourages communities to design, build, and improve streets so they can be used all. Disability Network Southwest Michigan advocates that non-motorized improvements are incorporated into existing project plans, and new projects that increase non-motorized options are prioritized in the planning process. In this way, the Niles Area Transportation Study Long Range Plan can enhance the mobility of all users and ensure that the 2040 Long Range Plan contributes to a truly inclusive, livable region.

Joanne Johnson, MSW
Community Education and Systems Advocate
Disability Network Southwest Michigan
2900 Lakeview Avenue
St. Joseph, MI 49085
269-982-7761
www.dnswm.org

RESPONSE - Ms. Johnson,

Thank you for your comments regarding the NATS 2040 Long Range Transportation Plan. Our committees heard your comments and received a copy of those comments at their monthly meeting on June 25, 2013. Your comments have been included in our transportation documents and will be used to ensure that non-motorized transportation among all other transportation elements are considered. Thank you again for your time and comment during this process.

ENVIRONMENTAL JUSTICE

Environmental Justice (EJ) is a federal directive (Executive Order 12898, enacted in 1994) requiring all federal programs to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects as the result of its programs, policies, and activities on minority populations and low-income populations. Populations that require special consideration include historically marginalized groups such as African Americans, Asian Americans, Hispanic or Latino Americans, Native Americans and low-income households.

In addition to the general EJ mandate, the US DOT published its own Order (5610.2) in the Federal Register on April 15, 1997. This Order requires the incorporation of EJ principles in all US DOT programs, policies and activities. The US DOT integrates the goals of the Executive Order through a process developed within the framework of existing requirements, primarily the National Environmental Policy Act of 1969 (NEPA), Title VI of the Civil Rights Act of 1964 (to ensure that no person is excluded from participation in, denied the benefits of, or is subjected to, discrimination).

Within the NATS area, efforts are undertaken to ensure that transportation system improvements that are implemented do not have disproportionately negative effects on minority and low-income populations. In addition, system investments must provide for an equitable distribution of benefits to areas that are traditionally underrepresented in the planning process. Transportation projects may bring new benefits in terms of greater connectivity to destinations and faster, safer travel. At the same time, these projects can also bring new concerns with increased noise, air pollution, or impediments during construction processes. In order to ensure that transportation investments in the NATS equitably benefit on all of the region's diverse populations, and that they do not have a disproportionately adverse impact on any of these populations, SWMPC undertook procedures listed in the methodology section below.

METHODOLOGY TO IDENTIFY ENVIRONMENTAL JUSTICE POPULATIONS

In June of 2007, SWMPC revisited its procedures for identifying NATS EJ Populations. Staff turned to representatives from MDOT to determine the procedures used at the state level for EJ analysis. The methodology described below outlines the procedures used for NATS EJ analysis and parallels what is being used by the State of Michigan.

Minority group population numbers were assembled from the following 2010 US Census sources:

1. Total Population (Summary File 1, Table 1);
2. Black or African American alone (Summary File 1, P3);
3. American Indian and Alaskan Native alone (Summary File 1, P3);
4. Asian alone (Summary File 1, P3); and
5. Hispanic or Latino (Summary File 1, P5).

All but Hispanic or Latino population numbers were drawn from populations of one race. Since the US Census does not consider Hispanic or Latino to be a race designation, there will be, by definition, individuals who identified themselves as two or more races within the Hispanic or Latino designation.

Low-income population numbers were drawn from the following 2011 American Community Survey (ACS) sources:

1. Population for whom poverty status is determined (ACS 2007-2011 5-Year Estimates, Table S1701) and,

2. Population for whom annual income was below poverty level (ACS 2007-2011 5-Year Estimates, Table S1701).

The 2010 US Census did not include a "long form", where questions about income had been had been asked in Census 2000 and prior decennial census datasets. Instead, the American Community Survey, which helps the Census Bureau collect data continuously, now measures income in its questionnaire. 5-Year Estimates were used because they provide a large enough sample for the Census Bureau to report data at the Census Block Group level in our region. Census Block Groups are also the smallest geographic summary area for which race and poverty data are available. At the block group level, individual concentrations of population can be more carefully identified.

To determine whether a census block group constituted an "EJ area", SWMPC calculated the percentage of the total population in each census block group that belonged to each of the designated EJ groups. The percentage of the population that belonged to each EJ group was then compared to the proportion of the overall population of Michigan that the group constitutes. SWMPC then created maps for each of the EJ groups, shading areas where the concentration of that particular EJ group was higher than the proportion that the group represents of the state of Michigan's overall population.

For example, people who identify as African American made up 14.6 percent of the total population of Michigan. The Environmental Justice analysis map of the African-American population would show shading for those block groups that had greater than 14.6 percent of their population who identified as African American.

The EJ maps were then overlayed with the 2014-2017 TIP and LRTP project location information to determine potential impacts to EJ populations. These maps can be found within this section, Maps 39-43.

Conclusion

After reviewing the EJ maps with the project locations, it has been determined that there will be no adverse effects on EJ targeted populations and that EJ populations have not been excluded from the benefits to be derived from projects in their area.

PROJECT-LEVEL ENVIRONMENTAL JUSTICE ANALYSIS

When a project is submitted, the applicant must fill out the TIP Project Application form (available from http://swmpc.org/nats_tipapp.asp). In the fall of 2009, the project application was revised and approved by the NATS committees. A new section was added for Environmental Justice. When the application is submitted, the SWMPC staff review the application for completeness and raise any concerns regarding the application to the submitting agency.

The questions asked on the application in the Environmental Justice section are:

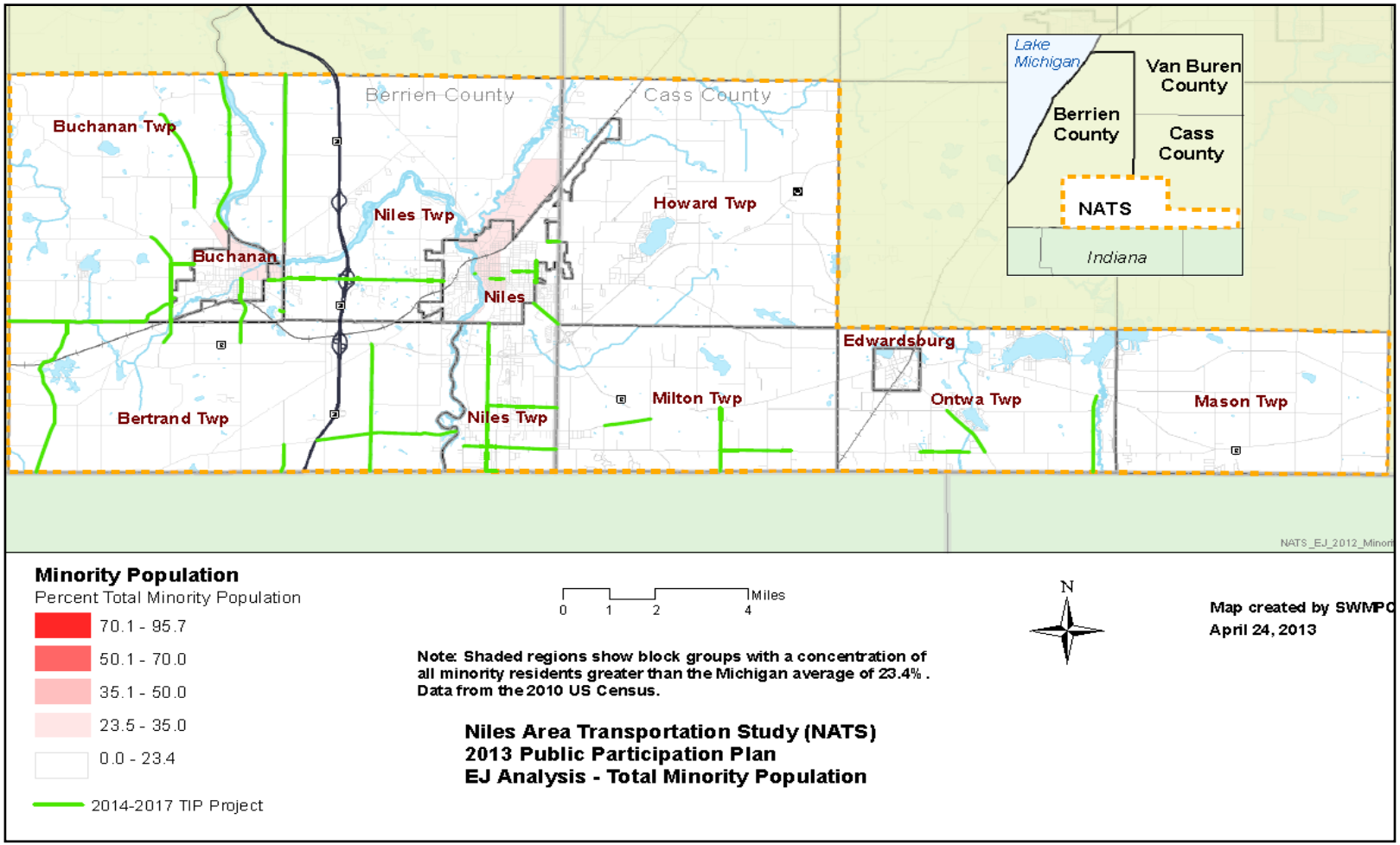
1. Will this project reduce travel time to jobs/training, medical and social services, and food for the population in census-designated EJ areas?
2. Is this project located in a census-designated EJ area?
3. Were outreach materials and public meetings made accessible to encourage participation from EJ populations?
4. Did EJ populations submit comments?

SWMPC staff relay their concerns and/or any public concerns raised about the environmental justice of a project to the NATS committees before the project is approved. TIP projects were plotted on the Environmental Justice maps displayed in Maps 40-44 and staff evaluated if there were any concerns regarding Environmental Justice populations and projects being proposed.

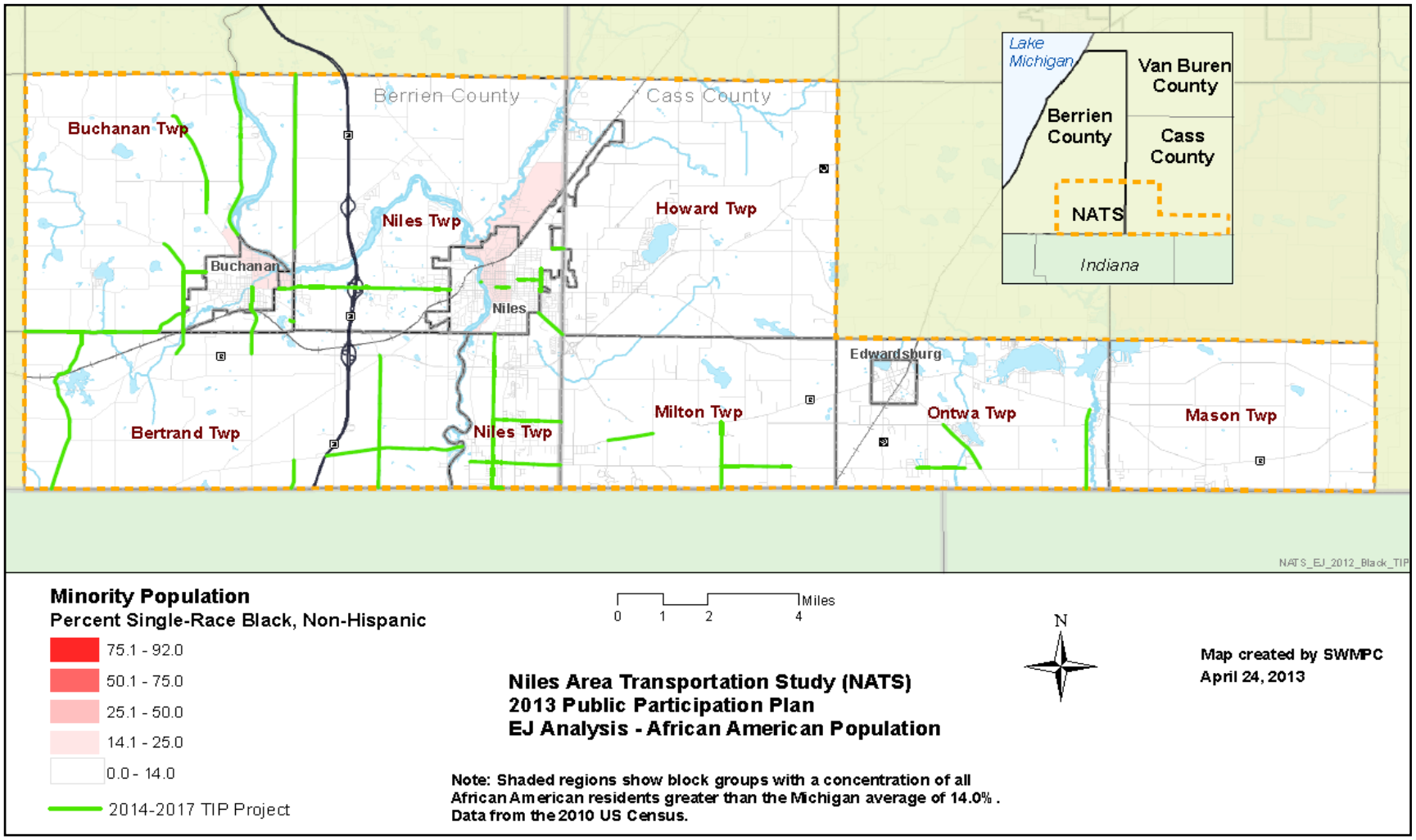
Conclusion

After reviewing the project applications and the EJ maps with the project locations, it has been determined that there will be no adverse effects on EJ targeted populations and that EJ populations have not been excluded from the benefits of receiving projects in their area.

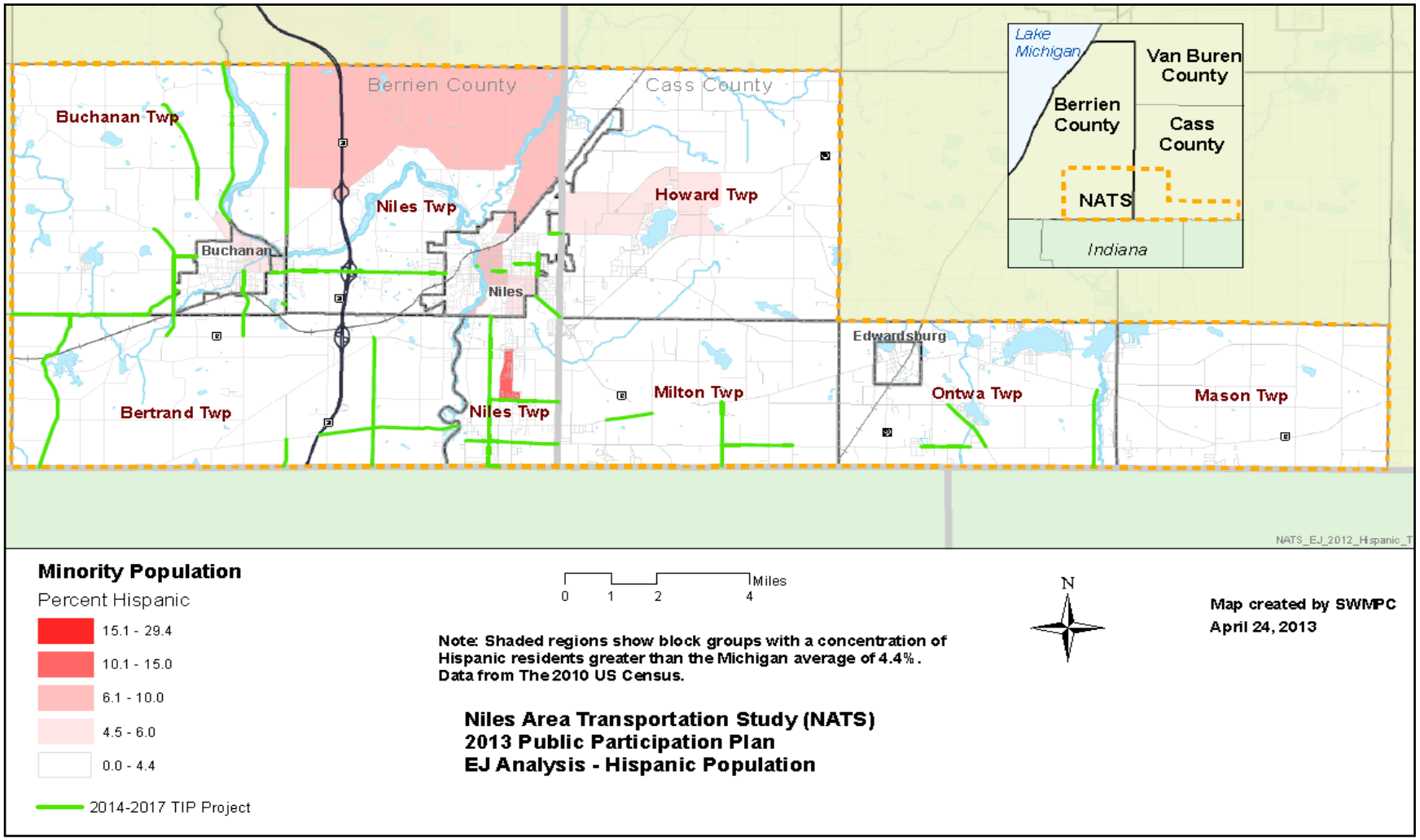
Map 40 - Total Minority Population



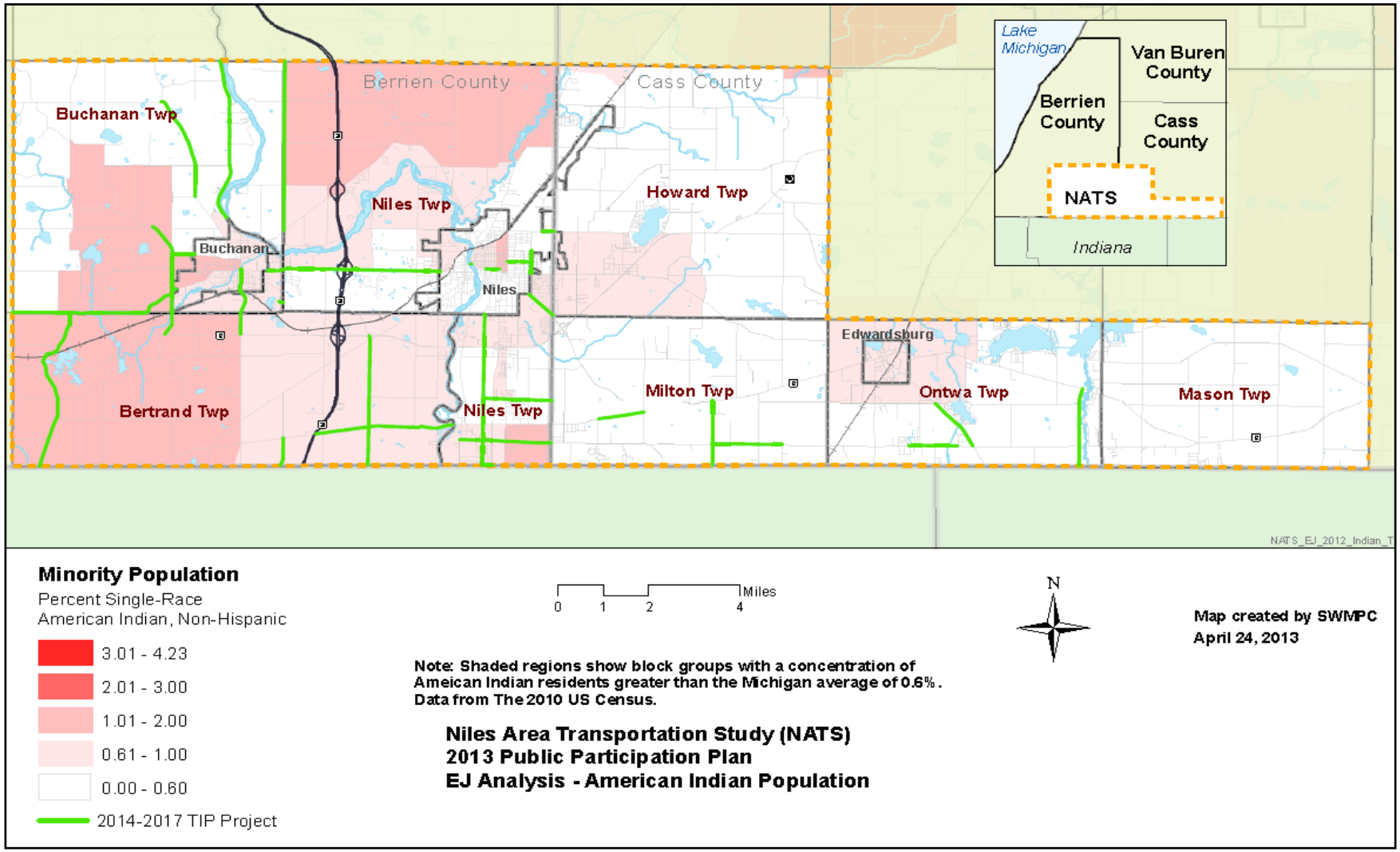
Map 41 - Minority Population-Black



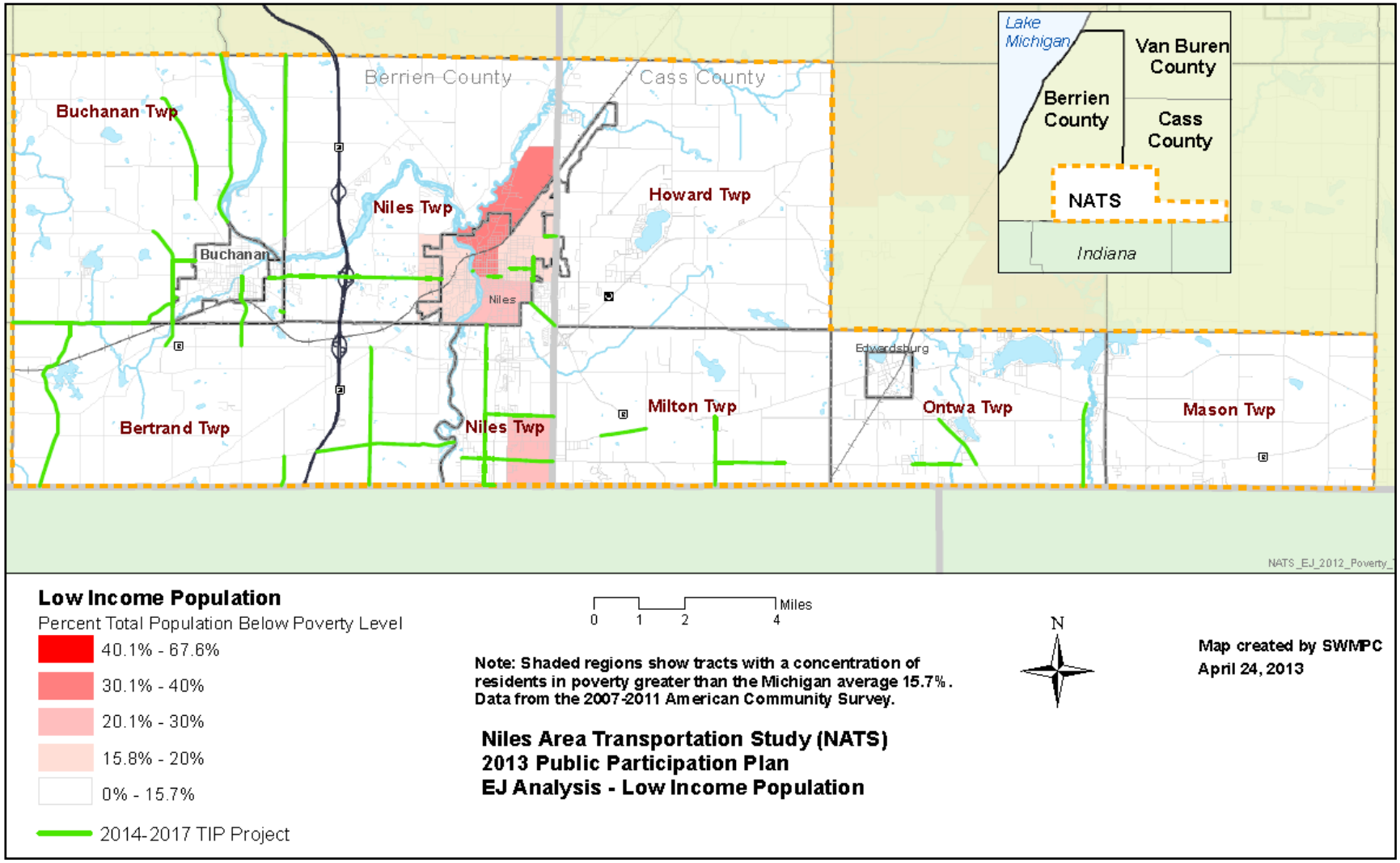
Map 42 - Minority Population-Hispanic



Map 43 - Minority Population-American Indian



Map 44 - Total Population Below the Poverty Line



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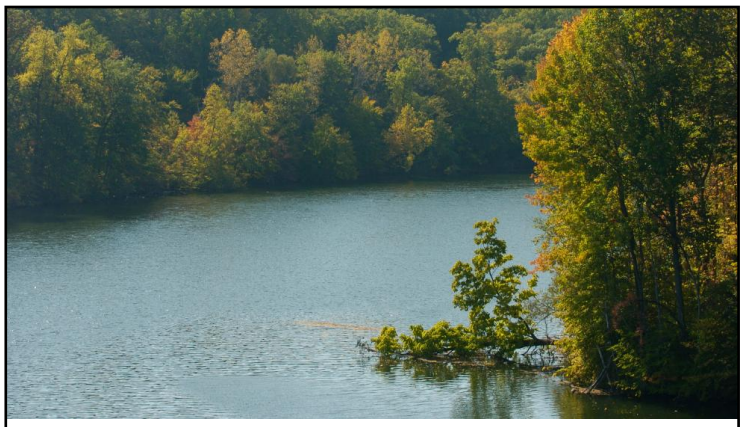
AIR QUALITY CONFORMITY

1990 Federal Clean Air Act Amendments

The 1990 Federal Clean Air Act Amendments (CAAA) identified six pollutants for which air quality standards were established: Ozone (O3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), "respirable" or breathable particulate matter (PM), and lead (Pb). Each one of these pollutants has benchmark levels that are considered allowable for public exposure. Beyond those benchmark levels, the air quality for that constituent pollutant is considered dangerous. The EPA has termed these national standards as "national ambient air quality standards," or NAAQS. Transportation contributes to four of the six criteria pollutants: O3, CO, PM, and NO_2. Ozone is formed when volatile organic compounds (VOC) and oxides of nitrogen (NOx) combine with sunlight and high temperatures. One way to reduce the amount of Ozone is to reduce the amount of VOC and NOx which are produced in the region. VOC and NOx emissions originate, in part, from highway motor vehicles and can be reduced by decreasing congestion such as ridesharing and/or providing for alternatives to the automobile, such as public transit.



St. Joseph River, Niles Township

In addition to establishing benchmark levels of exposure to pollutants, the CAAA of 1990 required that transportation plans and TIPs in non-attainment areas demonstrate "conformity" to the State Implementation Plan (SIP), which is intended to ensure that the state meets the National Ambient Air Quality Standards (NAAQS). In other words, transportation projects, such as the construction of highways and transit rail lines cannot be federally funded or approved unless they are consistent with state air quality goals. In addition, transportation projects must not cause or contribute to new violations of the air quality standards, worsen existing violations, or delay attainment of air quality standards[34].

[34] http://www.gpo.gov/fdsys/pkg/FR-2012-05-21/html/2012-11605.htm

CHANGES TO THE FEDERAL CLEAN AIR ACT

- **1997**, the standard for fine breathable particulate matter (PM) was increased to 2.5 microns (PM2.5), and a more rigorous 8-hour ozone testing standard replaced the previous 1-hour ozone testing standard. In 2001, the U.S. Supreme Court upheld the constitutionality of the new EPA standards. Upon implementation of the new standards, Cass County (including parts of the NATS area) was found to be in "non-attainment" for 8-hour ozone, meaning that the benchmark level for ozone was exceeded by the average measurement within the 8-hour testing period.

- **May 16, 2007,** the EPA approved a request from the State of Michigan to redesignate Cass County, among others, to attainment of the 8-hour ozone NAAQS. While the redesignation changes Cass County's area non-attainment status to attainment-maintenance, air quality conformity procedures were followed in the 2035 LRP.

- **March 12, 2008,** the EPA announced a new primary 8-hour ozone standard of 0.075 parts per million (ppm), down from the previous .085 ppm.

- **May 12, 2012** the United States Environmental Protection Agency (EPA) revoked the 1997 8-hour 0.080 ppm Ozone standard for the purposes of regional transportation conformity. On May 21, 2012, the USEPA issued designations for the new 2008 8-hour 0.075 ppm Ozone standard. NATS MPO is designated attainment under the 2008 standard.

- **May 21, 2012**, Federal Register notice, (77FR 30160), revoked the 1997 ozone standard for transportation conformity purposes only.

Effective July 21, 2013, (as a result of both the partial revocation of the 0.080 Ozone standard, and the designation of NATS MPO as attainment for the 0.075 standard), the NATS MPO attainment/maintenance area is no longer required to demonstrate regional transportation conformity of Long Range Plans or Transportation Improvement Plans (TIPs) until EPA publishes a notice designating the area in nonattainment.

IMPACT TO STATE OF MICHIGAN AND NATS STUDY AREA

In a letter dated April 30, 2012 from Lisa P. Jackson of the U.S. Environmental Protection Agency to Governor Rick Snyder stated that "I am pleased to inform you that no areas in Michigan violate the 2008 standards or contribute to a violation of the ozone standards in a nearby area. As a result, the EPA is designation all of Michigan 'unclassifiable/attainment'." All air quality notices can be found in Appendix G.

According to an MDOT Office Memorandum from Pete Porciello dated June 14, 2012. "After July 2013, conformity analysis will no longer need to be demonstrated unless new designations of nonattainment occur. The next time standards will be revised will be in 2013 or early 2014. Conformity requirements for nonattainment areas would begin within 1 year after the standard is published for any areas that are in nonattainment (sometime before 2015). Michigan is in attainment for the following national ambient air quality standards,"

- Nitrogen Dioxide,
- Carbon Monoxide,
- Particulate Matter less than 10 microns (PM 10),
- Lead (Pb)
- Sulfur Dioxide (SO2)

Correspondence from Andy Pickard, FHWA Transportation Planning Team Leader, to Dave Wresinski, MDOT Director stated that the May 21, 2012 Federal Register notice only partially revoked the 1997 ozone standard, and that those areas in nonattainment or maintenance status for the 1997 standard have not changed. However, MPOs, such as NATS, that have long range transportation plans and transportation improvement programs due in 2013 that were previously classified nonattainment are exempt from demonstrating conformity if updated plans are due or approved after July 20, 2013. Therefore, NATS does not need to demonstrate air quality conformity or perform an air quality analysis for this 2013-2040 long range transportation plan update.

COORDINATION WITH STATE LONG RANGE TRANSPORTATION PLAN

MAP-21 requires each state develop a statewide long range transportation plan in coordination with local MPO's. Upon completion of the plan, any future transportation improvements must be consistent with the plan. As a result of the coordination, Michigan's state LRTP is a broad document and it is not financially constrained like the MPO must be. Any future transportation improvements have to coincide with the adopted plan, thus reiterating the importance of coordination with the state, MPO, Regional Planning Organization (RPO) and local units of government.

STATE LONG RANGE PLAN

Michigan's 2035 LRTP *MI Transportation Plan* is projected over a 25-year period that focuses on the important link between transportation and Michigan's economic vitality and quality of life.

It presents options to achieve Michigan's goals for the future by providing an efficient, integrated transportation system. To view the plan and its white papers please visit http://www.michigan.gov/mdot/1,1607,7-151-9621_14807_14809---,00.html.

The *2035 MI Transportation Plan (2035 MITP)* is an update and extension of the *2005-2030 MI Transportation Plan: Moving Michigan Forward (2030 MITP).* The *2035 MITP* consists of both of these documents which provide both an overview of the findings and a high-level summary of the current assessment of key trends, demographic changes, and key initiatives that will guide the selection of transportation projects between now and 2035.

In addition to these two documents, the MITP also includes a number of Technical and Strategic Reports published in conjunction with the *2030 MITP* and 18 newly published White Papers as part of this revision. The initial Technical and Strategic reports should be referred to for details on specific goals, objectives, strategies, and decision principles of the MI Transportation Plan, while the White Papers should be referred to for current assessments of key trends and demographic changes; status updates of key initiatives that were discussed in detail in the initial Technical and Strategic Reports; and descriptions of new initiatives that have been launched to fulfill the goals and objectives of the state long-range transportation plan.

SUMMARY OF THE 2035 MI TRANSPORTATION PLAN

The *2035 MITP* revision reaffirms the policy framework of the *2030 MITP,* as well as readopts the vision, goals, objectives, strategies, focus on Corridors of Highest Significance, and decision principles guiding program development. The most recent forecasts for population and employment were used to update the assumptions made in the *2030 MITP.*

> "In preparing the MI Transportation Plan 2035, the MDOT once again sought input from the traveling public. The public listed three top priorities and said transportation planners need to:
>
> - Maintain/preserve the existing transportation system.
> - Improve public transit.
> - Recognize the need for intercity rail passenger service."
>
> Governor Rick Snyder, September 2012

This revision was initiated as an interim step to keep the state's long-range transportation plan current and followed a more streamlined approach than a complete update. This revision extends the planning horizon year to 2035 to maintain consistency with regional and metropolitan planning processes. MDOT embarked on this revision in March 2012 to maintain the 20-year planning horizon required by federal transportation planning regulations found in 23 CFR 450 Subpart B. During the *2035 MITP* revision process, new federal legislation was passed that replaced the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)" under which the *2030 MITP* was created.

The new legislation; "Moving Ahead for Progress in the 21st Century Act" (MAP-21)," a 24-month transportation authorization bill, was signed into law on July 6, 2012. The impacts and implications of pending policy changes will not be fully known for some time and therefore cannot be considered and prepared for immediately.

MICHIGAN'S TRANSPORTATION GOALS

The goals in MDOT's current long-range plan were developed with the help of a Customers and Providers Committee, working with MDOT staff to review and reassess the goals of the current state long-range plan. Changes were developed in a cooperative manner and represented the consensus of the group around eight core goal areas:

1. **Preservation** – Within the constraints of state and federal law, direct investment in existing transportation systems to effectively provide safety, mobility, access, and intermodal connectivity or support economic activity and the viability of older communities and ensure that the facilities and services continue to fulfill their intended functions.

2. **Safety** – Promote the safety and security of the transportation system for users and passengers, pedestrians, and motorized and non-motorized vehicles.

3. **Basic Mobility** – Work with the general public, public agencies and private sector organizations to ensure basic mobility for all Michigan citizens by (at a minimum) providing safe, effective, efficient and economical access to employment, educational opportunities, and essential services.

4. **Strengthening the State's Economy** – Provide transportation infrastructure and services that strengthen the economy and competitive position of Michigan and its regions for the 21st Century.

5. **Transportation Services Coordination** – Create incentives for coordination between public officials, private interests, and transportation agencies to improve safety, enhance or consolidate services, strengthen intermodal connectivity, and maximize the effectiveness of investment for all modes by encouraging regional solutions to regional transportation problems.

6. **Intermodalism** – Improve intermodal connections to provide seamless transportation for both people and products to and throughout Michigan.

7. **Environment and Aesthetics** – Provide transportation systems that are environmentally responsible and aesthetically pleasing.

8. **Land Use Coordination** – Coordinate local land use planning, transportation planning, and development to maximize the use of the existing infrastructure, increase the effectiveness of investment, and retain or enhance the vitality of the local community.

Metropolitan Long Range Plan

Each MPO is required by federal legislation to prepare a long range transportation plan based on expected revenues over a twenty year time frame. MAP-21 also requires the articulation of the planning factors to provide a consensus based on priorities and needs of the transportation system. This plan has been reviewed to assure consistency with the statewide plan, projects and programs. Local goals and objectives are broadly and are consistent with statewide goals and objectives.

COORDINATION WITH STATE LONG RANGE PLAN

The MDOT is continually involved with NATS planning activities and processes ranging from attending committee meetings, to providing workshops and being a resource for transportation needs. NATS planning process is designed to promote consistency between transportation improvements and state and local planned growth and economic development patterns. Each are equally important and depend on each other for quality and consistency. There are many coordinated issues that both the state and NATS address in their plans. Table 67 how the NATS LRP goals coordinates with MDOTs LRP goals.

Table 67 - Coordination With State LRP Goals

MDOT LRP Goals **MDOT's goals are in no particular order*	NATS Goals
Safety – Promote the safety and security of the transportation system for users and passengers, pedestrians, and motorized and non-motorized vehicles.	**2, 5**
Land Use Coordination – Coordinate local land use planning, transportation planning, and development to maximize the use of the existing infrastructure, increase the effectiveness of investment, and retain or enhance the vitality of the local community.	**1, 3**
Environment and Aesthetics – Provide transportation systems that are environmentally responsible and aesthetically pleasing.	**3**
Intermodalism – Improve intermodal connections to provide seamless transportation for both people and products to and throughout Michigan.	**3, 6**
Transportation Services Coordination – Create incentives for coordination between public officials, private interests, and transportation agencies to improve safety, enhance or consolidate services, strengthen intermodal connectivity, and maximize the effectiveness of investment for all modes by encouraging regional solutions to regional transportation problems.	**1-6**
Preservation – Within the constraints of state and federal law, direct investment in existing transportation systems to effectively provide safety, mobility, access, and intermodal connectivity or support economic activity and the viability of older communities and ensure that the facilities and services continue to fulfill their intended functions	**4**

MDOT LRP Goals **MDOT's goals are in no particular order*	NATS Goals
Strengthening the State's Economy – Provide transportation infrastructure and services that strengthen the economy and competitive position of Michigan and its regions for the 21st Century.	**1, 4**
Basic Mobility – Work with the general public, public agencies and private sector organizations to ensure basic mobility for all Michigan citizens by (at a minimum) providing safe, effective, efficient and economical access to employment, educational opportunities, and essential services.	**2, 5, 6**

MDOT's LRTP goals coincide with the NATS 2040 LRTP goals. NATS LRTP goals address stewardship through preservation of the regional transportation systems, while promoting livable communities. System improvements include enhancing mobility accessibility and equitability within the transportation system. They also include improved efficiency and effectiveness in moving people, goods, and services through the transportation system. Safety and security is promoted through safety conscious planning and system security.

ANNOTATED BIBLIOGRAPHY

In an effort to provide for greater collaboration and consultation among statewide plan in Michigan and Indiana, regional plans, and community plans the SWMPC set forth to produce a section of the LRP that would house information on these different resources to allow for greater ease and access to the multiple plans that transportation planners and officials would come into contact with. This central location will allow for transportation planners and officials to have more continuous collaboration with the many partners involved in the complex development of a transportation network.

MICHIGAN

2035 Michigan Long Range Transportation Plan

MI Transportation Plan, also known as the State Long - Range Transportation Plan, is a 25-year plan for transforming Michigan's transportation system. MDOT is revising the current plan by evaluating its inputs, forecasts and strategies against current trends and is extending the horizon year to 2035.

http://www.michigan.gov/mdot/1,1607,7-151-9621_14807_14809---,00.html

Michigan's FY 2011-2014 State Transportation Improvement Program

The State Transportation Improvement Program (STIP) is a federally mandated planning document that lists surface transportation projects that the state intends to fund with federal-aid provided under the federal-aid transportation program. The primary purpose of this document is to provide information regarding the programs and projects to which state and local transportation agencies have committed over the next four years. It verifies that new transportation resources are available and sufficient to finance these improvements.

http://www.michigan.gov/mdot/0,4616,7-151-9621_14807_14808-241927--,00.html

Michigan State Rail Plan

The Michigan Department of Transportation (MDOT) has developed a State Rail Plan to guide the future development of Michigan's rail system for both passenger and freight rail over the next 20 years. The Plan identifies current and future system needs and makes recommendations to encourage ongoing rail investments. The plan meets the requirements established by the federal Passenger Rail Investment and Improvement Act of 2008, which positions the state to receive additional federal funding for rail projects.

http://www.michigan.gov/mdot/0,4616,7-151-9621_14807-242455--,00.html

Michigan Complete Streets

Complete Streets legislation (Public Acts 134 and 135), signed on Aug. 1, 2010, gives new project planning and coordination responsibilities to city, county and state transportation agencies across Michigan. The legislation defines Complete Streets as "roadways planned, designed, and constructed to provide appropriate access to all legal users...whether by car, truck, transit, assistive device, foot or bicycle." The law further requires Complete Streets policies be sensitive to the local context, and consider the functional class, cost, and mobility needs of all legal users. The primary purpose of these new laws is to encourage development of Complete Streets as appropriate to the context and cost of a project.

To further assist this purpose, Public Act 135 provides for the appointment of a Complete Streets Advisory Council, comprised of representatives from 18 statewide government and non-government stakeholder agencies. The Complete Streets Advisory Council will provide education and advice to the State Transportation Commission, county road commissions, municipalities, interest groups, and the public on the development, implementation, and coordination of Complete Streets policies.

http://www.michigan.gov/mdot/0,4616,7-151-9623_31969_57564---,00.html

http://mihealthtools.org/mihc/CompleteStreetsResources.asp

Michigan Low Impact Development Manual, 2008

Low Impact Development (LID) is the cornerstone of stormwater management with the goal of mimicking a site's presettlement hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. Because LID uses a variety of useful techniques for controlling runoff, designs can be customized according to local regulatory and resource protection requirements, as well as site constraints. The manual provides communities, agencies, builders, developers, and the public with guidance on how to apply LID to new, existing, and redevelopment sites. The manual provides information on integrating LID from the community level down to the site level. It outlines technical details of best management practices, and also provides a larger scope of managing stormwater through policy decision, including ordinances, master plans, and watershed plans.

http://www.swmpc.org/MI_LID_manual.asp

Connecting Michigan: A Statewide Trails Vision and Action Plan, 2006

This publication was developed with leadership from Michigan Trails and Greenways Alliance (MTGA), a non-profit organization that fosters and facilitates the creation of an interconnected statewide system of shared use paths and greenways for environmental/cultural preservation purposes. MTGA works at both the state and local levels by assisting public and private interests in shared use path and greenway planning, funding, development, and maintenance. MTGA builds

public support for trails and greenway development through events, membership, education, information, and advocacy activities.

http://www.michigantrails.org/connectingmichigan/connecting_michigan_plan.pdf

INDIANA

Michiana Area Council of Governments (MACOG) – The Michiana Area Council of Governments (MACOG) is a regional intergovernmental agency established to foster cooperative, coordinated and comprehensive planning activities. The MACOG region represents Elkhart, Kosciusko, Marshall and St. Joseph Counties in Indiana and serves several functions: an MPO, an RPO, staff of the SJRBC, transit operator, and conducts economic development planning among other tasks. http://www.macog.com/

MACOG Public Transit-Human Services Coordinated Transportation Plan 2013-14 Updates and Revisions (2012 update)

The Michiana Area Council of Governments (MACOG), a four-county regional planning organization, which includes Elkhart, St. Joseph, Marshall, and Kosciusko counties. The plan illustrated the initial gaps, needs strategies and activities to meet the transit planning process identified in SAFETEA-LU and MAP-21. Annual updates have occurred making minor revisions to the original Coordinated Plan, based on information obtained from the service providers in the region, along with staff knowledge.

MACOG staff held a round of Stakeholder meetings in the MACOG Region (one in each county) to develop a new Coordinated Plan with a scope for the next two years--2013-2014--based on MAP-21 funding. Several planning components were developed during this process for the following needs:

- Documentation of regional transit statistical data
- Identification of transit service providers: human services agencies, public transit, and private transit providers
- Identification of stakeholders in each county to participate in stakeholder meetings
- Administer and document an agency survey and a client survey
- Update of the regional fleet inventory

The Coordinated plan represents documentation of completed or ongoing strategies and activities since the original Coordinated Plan, along with new gaps and opportunities to meet current and future regional transit needs.

http://www.macog.com/PDFs/Transit/TransitCoordinatedPlan12.pdf

MACOG 2035 Transportation Plan, 2010

The Safe, Accountable, Flexible, Efficient, and Transportation Equity Act - A Legacy for Users (SAFETEA-LU) was passed by the United States Congress in 2005. The legislation provides funding for public transit and highway construction activities nationwide. In order for urban areas to receive

the benefits of federal aid for both roads and transit, they are required to have plans in place, which are comprehensive and coordinated through cooperation among jurisdictions.

The most extensive of these plans is the 20-year transportation plan. The MACOG 2035 Transportation Plan Update outlines the region's focus on planning for surface-transportation improvement projects in St. Joseph and Elkhart Counties through the year 2035. Projects include highway, transit, bicycle and pedestrian facilities, freight facilities, and illustrative project listings for Kosciusko and Marshall Counties.

http://www.macog.com/MACOGHOM/TransportationPlanning/LRTP.HTM

MACOG SFY2013-2016 Transportation Improvement Program (TIP), 2012

The State Fiscal Year (SFY) 2013-2016 TIP is a prioritized, multi-year program for the implementation of transportation improvement projects for the entire MACOG region. As such, it serves as a management tool to ensure the most effective use of funding for transportation improvements. It is also necessary for two other reasons. First, the TIP is a requirement of the transportation planning process as legislated by the Safe, Accountable, Flexible, Efficient, Transportation Equity Act - A Legacy for Users (SAFETEA-LU). Secondly, a transportation improvement is not eligible for federal funding unless it is listed in the TIP.

http://www.macog.com/MACOGHOM/TransportationPlanning/TIP.HTM

Northwestern Indiana Regional Planning Commission (NIRCP)

Northwest Indiana's 2040 Comprehensive Regional Plan (CRP), 2011

The 2040 CRP is different from previous Long Range Transportation Plans and other NIRPC planning programs. The 2040 CRP is a Vision Plan. The CRP was developed as a comprehensive citizen based regional vision that will guide the development of land use and transportation programming. As such, it is a policy program with strong coordination and implementation elements.

http://www.nirpc.org/2040-plan/plan-documents.aspx

http://www.nirpc.org/media/2934/ch.2_transportation.pdf

Northwestern Indiana Regional Planning Commission (NIRCP) Transportation Improvement Program (TIP)

The **(TIP)** is developed to document road, bridge, transit, and non-motorized projects that will be occurring in the near future within the MPO boundary.

http://www.nirpc.org/transportation/transportation-improvement-program.aspx

NIRPC Freight Study Final Report, 2010

The Northwestern Indiana Regional Planning Commission (NIRPC) is developing its first ever Comprehensive Regional Plan, the 2040 CRP, addressing opportunities and challenges in transportation, land use, economic development, the environment and social equity in Lake, Porter and LaPorte counties, Indiana. Recognizing that freight plays a major role in the economy of Northwest Indiana, NIRPC has commissioned this freight study to provide input into the 2040 CRP as well as to function as a stand-alone document. This Freight Study is the first study by NIRPC to focus exclusively on freight mobility within the region.

http://www.nirpc.org/media/5588/nirpc_freight__report_final_updated_8_30_2010.pdf

REGIONAL

Regional Non-Motorized Transportation Plan for MDOT's Southwest Region, 2011

SWMPC developed a comprehensive, regional Non-Motorized Transportation Plan for MDOT's Southwest Region (Allegan, Barry, Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph and Van Buren Counties). Provide a region-wide vision for a connected system of off-road shared use paths and on-road facilities (paved shoulders/bike lanes). Encourage dialogue and more coordinated planning among state, county, and local entities. Enhance partnerships and increase communication among state, county, and local agencies regarding the implementation and operation (construction, maintenance, marketing, etc.) of non-motorized facilities.

http://www.swmpc.org/smart_plan.asp

http://www.swmpc.org/downloads/final_plan_1.pdf

Harbor Country Hike & Bike Plan, 2010

The Harbor Country Hike & Bike Plan focuses on creating a network of sidewalks, shared use paths, bikeways and bike lanes that will link neighborhood communities, business districts, schools and parks. The main purpose of the plan is to provide a common vision and encourage coordination between agencies for future planning efforts.

http://harborcountrytrails.org/project-plan.html

http://harborcountrytrails.org/images/Harbor_Country-Hike-Bike-Plan.pdf

Pokagon Band of Potawatomi Indians Transit Feasibility Study, 2012

The purpose of the Study was to prepare Tribal transit a feasibility study and needs assessment for the Michigan counties of Cass, Berrien, Van Buren and St. Joseph County in Indiana. Currently these counties offer a mix of public transit services including demand response, fixed route and dial-a-ride

service. There is a perceived need to improve mobility for Tribal citizens who do not have access to personal vehicles, particularly elders, veterans, tribal and casino employees, and those who need to access tribal services. The unmet transportation needs of the Tribe extend to residents in the study area not associated with the Tribe. Thus, any improvements in transit services will not only benefit the Tribe, but also the general public. It will be important to work with the existing transit providers serving the counties to promote and develop a coordinated system of public transit.

The study identifies: the transportation needs of tribal citizens; the "gaps" in service where tribal citizens' needs are not currently being met; the ways in which current transit services can be utilized to meet those needs; and the potential need for dedicated tribal transit service. The Study also begins to outline what the tribal transit service could look like and identify potential funding sources for that transit service, as well as ways in which it could be coordinated with existing transit service.

WATERSHEDS

Galien River Watershed Management Plan Addendum, 2005

The watershed falls in the NATS MPO region. The Galien River Watershed (Watershed) encompasses areas of prime farmland, Warren Woods Preserve, and a portion of the City of New Buffalo, where the Galien River (River) flows into Lake Michigan. The Watershed is situated in the southwest corner of Berrien County, Michigan, and is included in the Little Calumet/Galien Tri-State Watershed Management Area, which spans coastal areas of Michigan, Indiana, and Illinois. Improvements for road and stream crossings - bioengineering, riprap, soil erosion and sedimentation control, pulling back banks, removing sediment, riprap culverts, riprap outlet protection, removing logs, replacing culvert and cleaning out culverts. (pg77)

http://www.swmpc.org/Downloads/galien_river_addendum_master_1.pdf

St. Joseph River Watershed Management Plan, 2005

The watershed falls in both NATS and TwinCATS MPO region. Located in the southwest portion of the Lower Peninsula of Michigan and the northern portion of Indiana, the St. Joseph River Watershed spans the Michigan-Indiana border and empties into Lake Michigan at St. Joseph/Benton Harbor, Michigan. Being a bi-state watershed, little coordinated effort concerning its management has been undertaken. The St. Joseph/Benton Harbor areas are critical urban areas in need of mitigation efforts centered on reduction and improved management of stormwater runoff. The displacement of cropland, open space, and forested areas by the impervious surfaces of driveways, streets, and buildings greatly intensifies the volume and velocity of stormwater runoff, exacerbates stream channel erosion, and diminishes groundwater recharge. Furthermore, the sediments, nutrients, toxins, and pathogens transported from impervious surfaces into surface water substantially degrade streams, rivers, wetlands, and lakes.

http://www.fotsjr.org/Resources/Documents/StJoeRiverWMP.pdf

Paw Paw River Watershed Management Plan, 2008

The Paw Paw River Watershed is a part of the TwinCATS MPO region. The Paw Paw River Watershed (PPRW) is all of the land that drains into the Paw Paw River. Wetlands, lakes, streams, other surface water bodies on this land and groundwater are also part of the watershed. Water is a critical resource for recreation, irrigation, and increasing the value of adjacent real estate. These uses depend on good water quality, but they can also be a threat to it. Roads are a land use that can have substantial impacts on water quality. Controlling roadway-related pollution during project planning, construction and ongoing maintenance is important.

http://www.tworiverscoalition.org/downloads/paw_paw_river_management_plan_august_2008.pdf

COUNTY PLANS

BERRIEN

Berrien Healthy Communities

Berrien County Health Department, with collaboration from the We Can! Healthy Berrien and the Healthy Berrien Consortium, has been chosen as one of ten recipients statewide of a Building Healthy Communities Planning Grant. The purpose of the Building Healthy Communities project is to implement evidence-based policy and sustainable environmental changes that support health, such as opening farmers markets and building walking and biking trails, through a strategic process. BCHD has been awarded money to begin planning these activities. The Health Department has chosen Benton Harbor/Benton Township as its target community for the Building Healthy Communities project.

http://www.wecanhealthyberrien.net/healthycommunities.html

Berrien County Hazard Mitigation Plan, 2005

The Berrien County Hazard Mitigation Plan is a comprehensive study of the hazards that have impacted Berrien County in the past, as well as those that have the potential to occur in the future. Some of these hazards are a greater threat to some communities than others, and some of the hazards could harm one sector of society more than others. This Plan covers Berrien County and all of the cities, villages and townships within Berrien County. The top 12 potential hazards for our county include severe winter weather, nuclear power plant accident, extreme temperature, tornado, infrastructure failures, severe winds, structural fires, terrorism/sabotage, dam failures, hazmat transportation accident, hazmat fixed site accident, and transportation accidents.

http://www.swmpc.org/downloads/berrien_haz_mit.pdf

Berrien County Master Plan, 2009

Master Plan is intended to guide land use decisions and provide direction to current and future Planning Commissions and Boards which will implement it. While population and employment figures are projected to remain somewhat stagnant, we predict that interest in Berrien County from the Chicago land area will continue. People will continue to seek second/vacation homes in the County, thus an increase in choice traveling and tourism. Models for the NATS and TwinCATS long range transportation plans indicate that the existing road networks should handle vehicle capacity through a 20-year horizon.

Other noteworthy trends: the Southwest Michigan Regional Airport projects an increase in private service with safety improvements and facility upgrades. Continuously plan for traffic produced by special generators such as tourist destinations, hospitals, regionally significant projects and new industrial, residential, and commercial centers. There is dramatic interest in pedestrian and bicycle route development. The proposed connection of US 31, east of business loop I-94 is proceeding through an Environmental Impact Statement, and will likely be the only significant capacity expansion in the County over the next couple of decades. Industrial and commercial use of the waterways and harbors has dwindled; the majority of future use is recreation in nature. The lack of needed capacity expansions suggests funding is primarily for capital preventative maintenance, safety improvements, and non-motorized investment. A 2005 windshield condition survey rated 25 percent of federal aid eligible roads good, 65percent fair, and 10 percent in poor condition. Non-Federal aid roads rated 12 percent of federal aid eligible roads good, 53 percent fair, and 35 percent in poor condition. Poor roads likely need major reconstruction while capital preventative maintenance prolongs the lifecycle of fair roads at a lower cost. (pg 40)

http://www.berriencounty.org/econdev/pdfs/Master%20Plan%20Draft.pdf?PHPSESSID=64e73e67c9a1441736e05f8e39b586d1

Berrien County Coordinated Transit-Human Services Transportation Plan, 2009

This document was compiled from various stakeholder meetings and interviews. The document outlines strategies to address transportation gaps and offers guidance for Berrien County's allocation of FTA 5310 (seniors and people with disabilities), 5316 (JARC) and 5317 (New Freedom) grant funds. The Coordinated Transportation Plan will also: assess the transportation needs of older adults, people with disabilities and low income workers, develop strategies for addressing identified gaps and improving efficiencies of services, and prioritize specific strategies for implementation.

http://www.swmpc.org/downloads/berrien_co_coordinated_transit_plan_final.pdf

Niles Dial A Ride Transportation Development Plan, 2012

The plan describes the comprehensive analysis of Niles Dial A Ride Transportation (DART) service and operations. The project focused on potential changes in service that will encourage increased

use and long-term sustainability of Niles DART services. The Plan includes an overview of the current Niles DART transportation services, a review of the internal and external factors affecting Niles DART service provision, and development of service strategies that can be implemented over the next five or more years.

http://www.rlsandassoc.com/userdata/project_pdf/project_5065bfbaf41e3.pdf

Cass

Cass County Master Plan for Land Use, 2002

This Plan will be the fundamental tool used by the Planning Commission as a guide to fulfilling the Commission's responsibilities over the next five years. This Master Plan is the first comprehensive update of the County's first plan, the Cass County General Development Plan, which was adopted in 1975. There is a transportation analysis that summarizes the existing traffic conditions and data, identifies current roadway improvement plans and outlines traffic related guidelines the County should consider that will help maintain an efficient and safe roadway system in the future.

The County Road Commission has instituted and continues a program of reconstructing or resurfacing County roadways each year. Current 2002 plans include the reconstruction of Dailey Road between Pokagon Highway and Beeson Road and Brownsville Road from M-60 to Crooked Creek Road, in addition to basic repaving and maintenance work on County roads within the fifteen townships. The road commission is completing a major project to connect Calvin Center Road to CR 17 in Indiana, linking Cass County to new business and residential developments. A new four lane highway will be constructed between Kessington Road and Union Road, and will extend to the I-80 toll road in Northern Indiana.

http://www.casscountymi.org/MasterPlan.aspx

COMMUNITY PLANNING DOCUMENTS

Master Plans **-** A community master plan provides a framework for decision-making resulting in a community's dreams becoming reality. Master plans include history, trends, projections, and goals - the community's story of where it came from and where it is going.

Parks and Recreation Plans **-** A community parks, recreation, open space, and greenway plan provides a five-year framework for decisions regarding the establishment, development, and maintenance of recreational programs and facilities. A well-designed comprehensive recreation plan will also include plans to preserve and protect natural resources (land, water, animal, and vegetation) as well as cultural, historic, and artistic resources. Factors to be considered include population growth, population demographics, planned transportation systems, and land uses.

The Municipal Plans are outlined in Table 68 for the planning region.

Table 68 - Municipal Plans

Municipalities	Master Plan	Development Plan	Recreation Plan	Plan Location
Bertrand Township		1993 Bertrand Crossing Project	1993 General Development Plan	SWMPC Library
Buchanan Township	2002 Master Land Use Plan		1991 Recreation Plan	SWMPC Library
City of Buchanan	2008 Community Master Plan	2003 Downtown Blueprint	2001 Parks and Recreation Plan	In the SWMPC Library & online
Howard Township	2001 Master Plan		1999 Park and Recreation Plan	SWMPC Library
Milton Township	1999 Master Plan			SWMPC Library
City of Niles	2004 Community Master Plan	1997 Niles-Buchanan Area Planning Study	2002 Parks and Recreation Plan	SWMPC Library
Niles Township	2011 Master Plan		2008 Community Parks, Recreation, Open Space, and Greenway Plan	SWMPC Library
Ontwa Township	2011 Master Plan			CD in SWMPC Library

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APPENDIX A – MOU BETWEEN SWMPC AND MACOG

Transportation Planning Cooperative
Memorandum of Agreement
By and Between
The Michiana Area Council of Governments
And the
Southwest Michigan Planning Commission

WHEREAS, this Agreement is made by and between the Michiana Area Council of Governments (hereafter referred to as MACOG) and the Southwest Michigan Planning Commission (hereafter referred to as SWMPC).

WHEREAS, the Michiana Area Council of Governments (MACOG) and the Southwest Michigan Planning Commission (SWMPC), as the designated Metropolitan Planning Organizations (MPO) for their respective areas, which border each other between the States of Indiana and Michigan, desire to provide a continuing, cooperative and comprehensive transportation planning process,

WHEREAS, MACOG has the sole responsibility for regional planning purposes within the Indiana Counties of Elkhart, Kosciusko, Marshall and St. Joseph, and is the designated MPO for the Transportation Management Area (TMA), which includes all of Elkhart and St. Joseph Counties in Indiana (See attachment A).

WHEREAS, the Southwest Michigan Planning Commission has the sole responsibility for regional planning purposes within the Michigan Counties of Berrien, Cass, and Van Buren, and is the designated MPO for the Benton Harbor-St. Joseph Urbanized Area and the Niles/Buchanan area. (See attachment B).

The MACOG and the SWMPC herein agree to cooperate and coordinate transportation planning and transportation project development along the border between the States of Indiana and Michigan in their respective jurisdictions; and

WHEREAS, the MACOG agrees to provide staff to participate in the NATS (Niles Area Transportation Study) monthly meetings and the SWMPC agrees to provide staff to participate in the TTAC monthly meetings.

WHEREAS, the MACOG and the SWMPC will conduct an annual staff meeting to discuss, review and assist each other in a continuing, cooperative, and comprehensive transportation planning process that reflects the region(s) priorities.

WHEREAS, the MACOG is the designated MPO for the Indiana portion of the South Bend Urbanized Area and Elkhart-Goshen Urbanized Area and the SWMPC is the designated MPO for the Michigan portion of the South Bend Urbanized Area and the Benton Harbor-St. Joseph Michigan Urbanized Area, both MPO's mutually agree that each MPO remains separately and solely, responsible for metropolitan area transportation planning within its regional boundaries and metropolitan planning area (MPA) boundary (see attachment A/B), including all the responsibilities of an MPO;

WHEREAS, MACOG and the SWMPC are separately responsible for establishing their metropolitan planning area boundary which incorporates the area(s) likely to become urbanized within the 20 year forecast period, and for annually self certifying that each MPO's planning process is fully adequate to meet all of the Federal Planning requirements that may attach to the UZA.

WHEREAS, MACOG and the SWMPC further agree to cooperate and, where feasible, coordinate transportation plan and programs, to include developing additional agreements to share data where feasible and prudent,

WHEREAS, the MACOG and the SWMPC herein agree to provide agendas, meeting dates and minutes of each respective agency's technical and Policy Board meetings and events.

FURTHERMORE, any conflicts that may arise between the MPOs will be resolved by the executive directors of the two agencies; in the event that conflicts remain unresolved, a temporary, four-member bi-state commission made up of two officers appointed by each of the chairs of the boards from both MPOs will resolve the conflict.

This Memorandum of Agreement shall be reviewed every three years or when a signatory requests a written change.

IN WITNESS WHEREOF, the parties hereto have caused this accord to be executed by their proper officers and representatives.

_____ Date 7/13/11
Frank Lucchese, Chairman
Michiana Area Council of Governments

Attest:

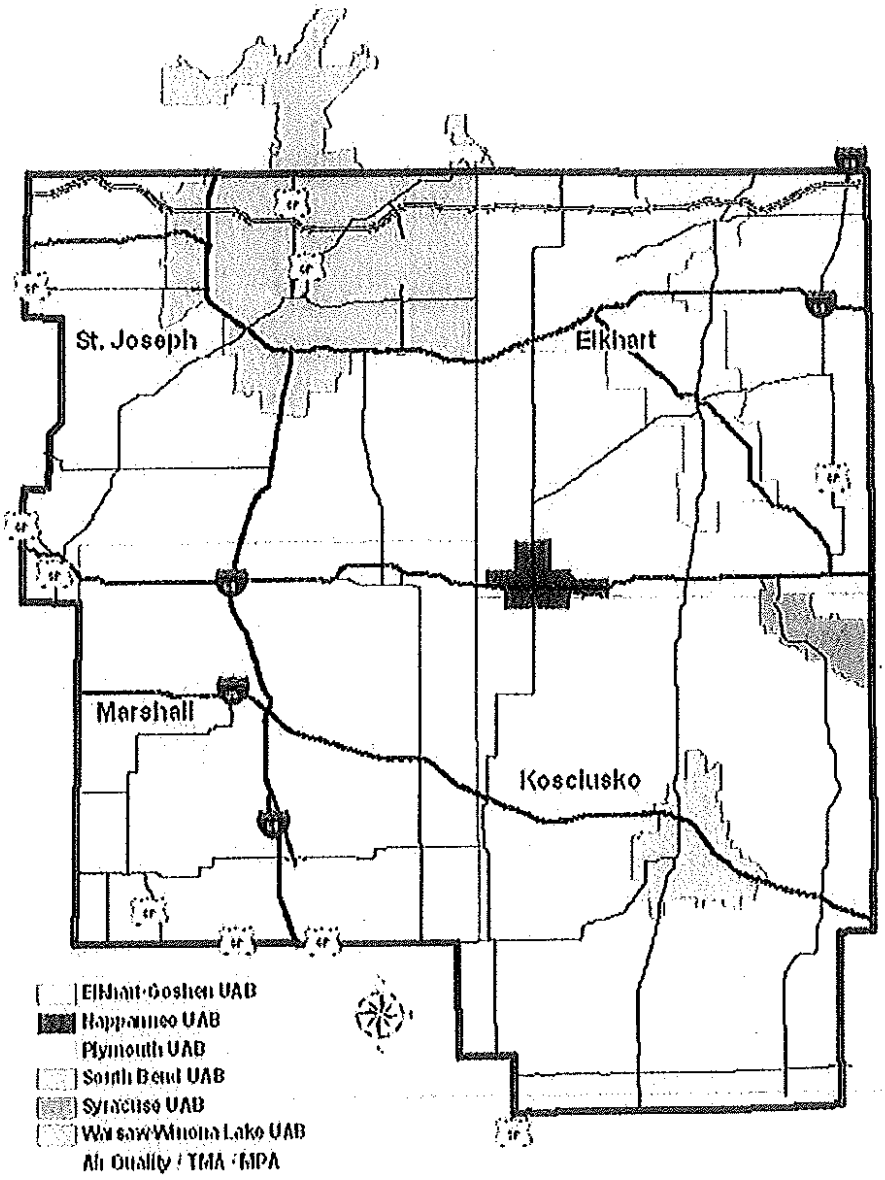
_____ Date 7/13/11
Sandra M. Seanor, Executive Director

_____ Date 3/15/2011
Linda Preston, Chairperson
Southwest Michigan Planning Commission

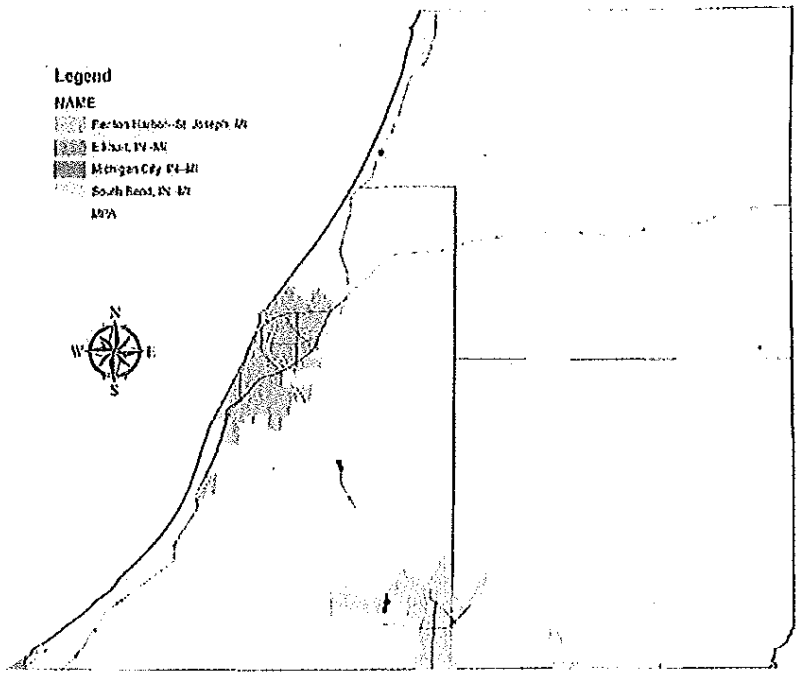
Attest:

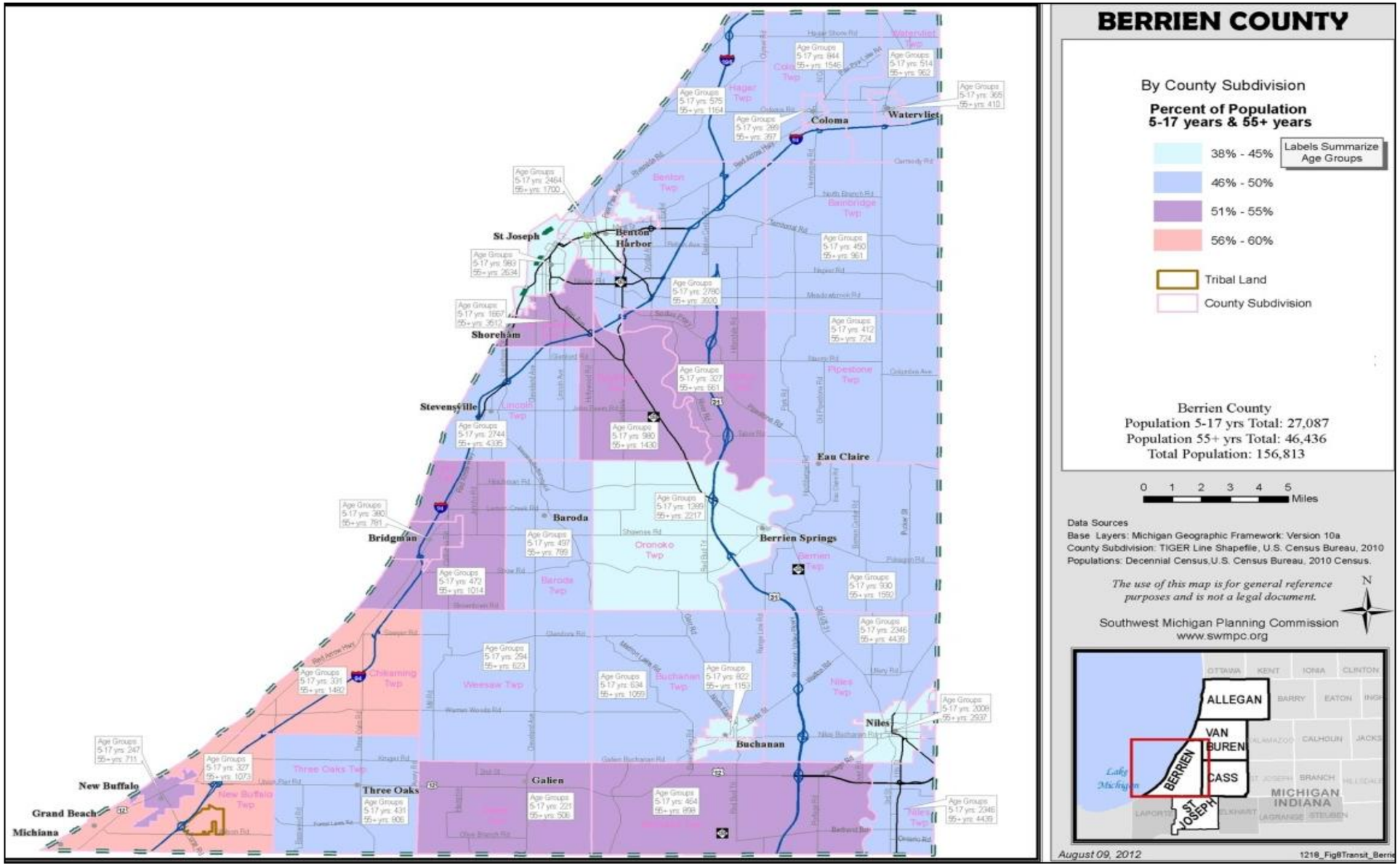
_____ Date 3/16/2011
K. John Egelhaaf, Executive Director
Southwest Michigan Planning Commission

Attachment A



Attachment B




St Joseph
Benton Harbor
Shoreham
Stevensville
Bridgman
New Buffalo
Grand Beach
Michiana
Three Oaks
Baroda
Coloma
Watervliet
Berrien Springs
Eau Claire
Galien
Buchanan
Niles
Benton Twp
Hagar Twp
Bainbridge Twp
Lincoln Twp
Oronoko Twp
Baroda Twp
Chikaming Twp
Weesaw Twp
Three Oaks Twp
New Buffalo Twp
Buchanan Twp
Niles Twp
Pipestone Twp
Berrien Twp
Watervliet Twp
Coloma Twp

BERRIEN COUNTY
By County Subdivision
Percent of Population
5-17 years & 55+ years
38% - 45%
46% - 50%
51% - 55%
56% - 60%
Labels Summarize Age Groups
Tribal Land
County Subdivision
Berrien County
Population 5-17 yrs Total: 27,087
Population 55+ yrs Total: 46,436
Total Population: 156,813
0 1 2 3 4 5
Miles
Data Sources
Base Layers: Michigan Geographic Framework: Version 10a
County Subdivision: TIGER Line Shapefile, U.S. Census Bureau, 2010
Populations: Decennial Census,U.S. Census Bureau, 2010 Census.
The use of this map is for general reference purposes and is not a legal document.
N
Southwest Michigan Planning Commission
www.swmpc.org
ALLEGAN
VAN BUREN
CASS
BERRIEN
ST JOSEPH
Lake Michigan
MICHIGAN
INDIANA
August 09, 2012

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APPENDIX C - NATS PUBLIC TRANSIT PROVIDER OVERVIEW

	Berrien Bus	Buchanan Dial A Ride	Niles Dial-A-Ride	Cass County Public Transit
Service Overview	Curb-to-curb, advance reservation general public transportation. Rides reserved on 1st called/1st served basis. Also provides transportation services under contract for human service agencies.	Same day curb-to-curb service. 24 hour advance scheduling is preferred, but rides can be scheduled up to 1 hour in advance.	Same day curb-to-curb service. 24 hour. Advance scheduling is preferred, but rides can be scheduled up to 1 hour in advance. Also provides 1 fixed route.	Curb to Curb, advance reservation general public transportation. Rides reserved on 1st called/1st served basis. Also, provide transportation services under contract for human service agencies.
Service Area	Census designated rural areas of Berrien County. Therefore, serves geographically the largest area in the County. Population: 79,300	Dial-a-Ride services in City of Buchanan Township. Curb-to-curb same-day shuttle service for Buchanan residents to Niles.	Dial-a-Ride service within the city limits of Niles, Niles Township, and Bertrand Township. Fixed-route operates between Niles and South Bend, Indiana.	Cass County. - 508 square miles – Population -39,700 48/Per Square Mile
Service Days/Hours	Monday-Friday 5:00 A.M. – 5:00 P.M.	Dial-A-Ride:	Dial-A-Ride:	Monday – Friday 5:00 A.M – 5:00 P.M.
		Monday-Friday 7:00 A.M.-5:30 P.M.	Monday-Friday 7:00 A.M.-5:00 P.M.	
		Saturday 10:00 A.M.-3:00 P.M.	Saturday 10:00 A.M.-3:00 P.M.	
		Shuttle to Niles:	Fixed-Route:	
		Monday-Friday: 4 Round Trips	Monday-Friday	
		Saturday: 3 Round Trips	10:00 A.M.-5:00 P.M.	
Eligibility	Open to the general public once all agency contract obligations are met.	Open to the general public.	Open to the general public.	Open to the general public once all agency contract obligations are met

	Berrien Bus	Buchanan Dial A Ride	Niles Dial-A-Ride	Cass County Public Transit
Annual Operating Expenses	$859,456	$195,355	$489,065	$622,885
Annual Passenger Trips	65,667	9,551	32,009	30,270
Governance	Berrien Bus is organized under Public Act 94 and is overseen by 12 members who are elected and serve on the Berrien County Board of Commissioners.	Buchanan Dial-A-Ride is organized under Public Act 279 and is overseen by five elected officials who serve on the Buchanan City Commission.	Niles Dial-A-Ride Transit (DART) is organized under Public Act 279 of 1909 and is overseen by eight members who are elected at large and serve on the Niles City Council.	Cass County Public Transit is organized under Public Act 196 and is governed by nine appointed officials. All of the members are appointed by the Cass County Commissioners.
	Berrien County contracts with Transportation Management Inc. (TMI) for operation of Berrien Bus services. The TMI Operations Manager supervises services from the Berrien Bus facility in Berrien Springs. The facility also houses the maintenance shop and vehicles.	As of January 1, 2012 Buchanan Dial-A-Ride has consolidated an agreement with Berrien County to contract services through TMI	Previously services were contracted out to a private transportation firm, but in 2011 the decision was made by City Council to have city staff operate the system.	Cass County contracts with Transportation Management Inc. (TMI) for operation of Cass County Transit services. The TMI Operations Manager supervises services from the Cass County Transit facility in Cassopolis. The facility also houses the maintenance shop and vehicles.
Primary Funding/Revenue Sources	-Federal Section 5311 -State Operating Assistance -Contracts with human service agencies -Passenger Fares	-Federal Section 5311 -State Operating Assistance -City of Buchanan Millage -Passenger Fares	-Federal Sections 5307	- Federal Section 5311 - State operating assistance - Contracts with human service agencies - Passenger fares

APPENDIX D - JERRY TYLER MEMORIAL AIRPORT CAPITAL IMPROVEMENT PROGRAM

Fiscal Year	County	Responsible Agency	Project Name	Primary Work Type	Project Description	Phase	Federal Cost ($1000s)	State Cost ($1000s)	Local Cost ($1000s)	Total Cost ($1000s)	Comments
2014	Berrien	City of Niles	Snow Removal Equipment	Aviation	Replace aging snow removal equipment		90	5	5	100	
2015	Berrien	City of Niles	Runway 15/33	Aviation	Paint and Crack Seal Rwy 15/33	CON	39	2	2	43	
2017	Berrien	City of Niles	Rehabilitate Runway 15/33	Aviation	Design the rehabilitation of runway 15/33	Design	68	3750	4	75	
2018	Berrien	City of Niles	Rehabilitate Runway 15/33	Aviation	Full rehab of runway 15/33	CON	642	59	59	1,175	Federal apportionment in the amount of 416,000
2020	Berrien	City of Niles	Rehabilitate Airport Apron and Parking Lot	Aviation	Rehad east aircraft apron and automobile parking lot	CON	207	12	12	230	
2023	Berrien	City of Niles	Fence Installation	Aviation	Construct animal control fence	CON	328	18	18	364	

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APPENDIX E – CONSULTATION ITEMS MAILED

May 30, 2013

Dear Southwest Michigan Stakeholder:

The Southwest Michigan Planning Commission is seeking your agency's feedback on the Niles-Buchanan-Cass Area Transportation Study (NATS) 2040 Long Range Transportation Plan (LRP) and proposed list of projects.

The purpose of this letter is to promote cooperation and coordination with other agencies' plans that impact transportation. Federal transportation legislation Moving Ahead for the Progress in the 21st Century (MAP-21) requires that the NATS metropolitan planning organization consult with federal, state, and local entities that are responsible for economic growth and development, environmental protection, airport operations, freight movement, land use management, natural resources, conservation, and historic preservation. This process is known as the federal Consultation process and your agency has been identified as a critical consultation contact.

We would like you to review:

1. NATS 2040 LRP project list enclosed and available at http://www.swmpc.org/nats_2040.asp.
2. Map available and enclosed at http://www.swmpc.org/nats_2040.asp.
3. Long Range Transportation Plan document available only at http://www.swmpc.org/nats_2040.asp.

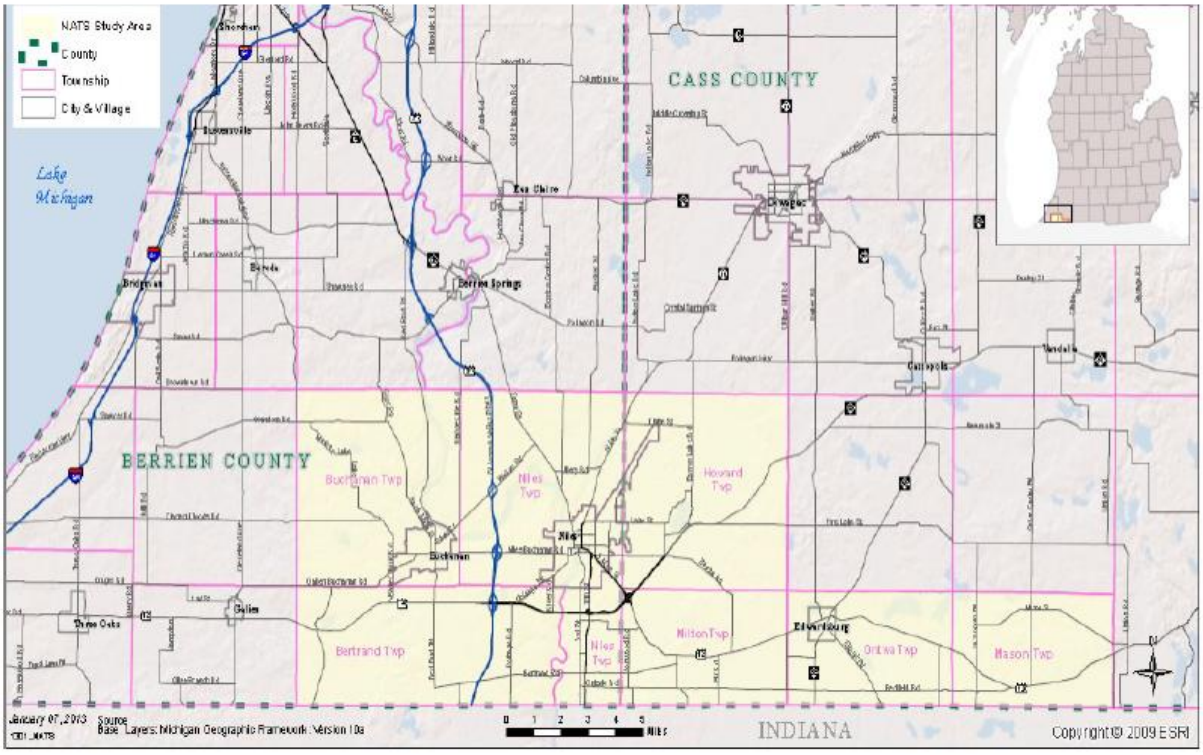
Comments will be accepted until June 14, 2013 and can be submitted Suzann Flowers, Transportation Planner by the following means:

- Email **flowerss@swmpc.org.**
- Mail comments to 185 E. Main Street, Suite 701 Benton Harbor, MI 49022.
- Call (269) 925-1137 x 17.
- Fax (269) 925-0288.
- Share your comments with the NATS Committee members at the MPO meetings. The dates of those meetings can be found at **www.swmpc.org/fy_2013_nats.asp.**
- Post your comment on the SWMPC Facebook page **http://www.facebook.com/swmpc.**

Sincerely,

Suzann Flowers Transportation Planner

The Niles-Buchanan-Cass Area Transportation Study (NATS)



What is the Niles-Buchanan-Cass Area Transportation Study?

- NATS is a Metropolitan Planning Organization (MPO). An MPO is an urbanized area that is designated by the U.S. Census.
- The NATS MPO is part of the South Bend, IN and Elkhart, IN urban area that has spilled over the state line into Michigan. The NATS urbanized area can consist of multiple municipalities.
- Within the MPO, there are two committees responsible for making transportation related decisions: the Technical Advisory Committee and the Policy Committee. Each municipality has at least one representative on each of these two committees. MPO transportation planners supply information to the Technical Advisory and Policy Committees and serve as liaisons between local, state, and federal entities.
- Explore more at www.swmpc.org/nats.asp

What is the Southwest Michigan Planning Commission (SWMPC) and what does that have to do with the MPO?
The SWMPC is the designated MPO for the NATS MPO. The SWMPC is one of fourteen regional planning agencies in Michigan serving Berrien, Cass, and Van Buren Counties. The SWMPC assists communities with Transportation Planning, Community Planning, Environmental Planning, Economic Development, and Mapping services.
www.swmpc.org.

Why did I receive this handout?

Transportation legislation, specifically MAP-21, requires that MPOs consider the needs of regional agencies' plan by means of eliminating or minimizing potential conflicts, through the process known as Consultation. By consulting with agencies, we can compare potential project lists and maps with other plans from the region and the MPO will be able to make adjustments as necessary to achieve greater coordination in the region.

How do I share my comments or concerns about the Projects and the Plan?

You can share your comments with Transportation Staff until June 14, 2013. Send your comments directly to Suzann Flowers, Transportation Planning staff for the NATS MPO:

1. Email Suzann at **flowerss@swmpc.org**
2. Mail comments to Suzann at 185 E. Main Street, Suite 701 Benton Harbor, MI 49022
3. Call Suzann at (269) 925-1137 x 17
4. Fax Suzann at (269) 925-0288
5. Share your comments with the NATS Committee members at the MPO meetings. A copy of the meeting dates are found at **www.swmpc.org/fy_2013_nats.asp**
6. Post your comment on the SWMPC Facebook page **http://www.facebook.com/swmpc**

Your comments will be taken to the MPO Committees, the Policy Committee will instruct staff on how to respond, and those comments and responses will be listed in the Consultation section of the LRP.

Where can I find an online version of the plan, project listing and maps?

You can find a copy of these materials at http://www.swmpc.org/nats_2040.asp

~TRANSPORTATION IMPACTS EVERYONE~

When are the NATS MPO meetings?

Meetings are the 4th Tuesday of every month at the Niles City Council Chambers located at **1345 E. Main St., Niles, MI 49120.** The Technical Advisory Committee meets at 1:30 PM and the Policy Committee meets at 2:30 PM. The public is welcome to any and all meetings. Our yearly meeting schedule is posted at **www.swmpc.org/fy_2013_nats.asp.**

APPENDIX F – PUBLIC NOTICES

Ad Number: 4394080, Publication: TRIB, Magnification: 1X

NATS MEETINGS

The Niles-Buchanan-Cass Area Transportation Study (NATS) would like to announce the following meetings and meeting changes:

April 5, 2013 at 10:00 a.m. 2014-2017 Transportation Improvement Project Selection Subcommittee meeting will be held at the Niles City Hall, 333 N. 2nd Street, Niles, MI 49120. This meeting will help decide which how federal funds should be spent in the area.

April 19, 2013 at 9:30 a.m. A joint TAC and Policy Committee will be held at the Niles City Council Chambers (Fire Station) located at 1345 E. Main St., Niles, MI, 49120 to review transportation projects selected for the 2014-2017 TIP. This will be the only topic on the agenda.

April 30, 2013 at 1:30 p.m. A joint TAC and Policy Committee will be held at the Niles City Council Chambers (Fire Station) located at 1345 E. Main St., Niles, MI, 49120 to conduct normal business for the NATS metropolitan planning organization. The April 23, 2013 meeting is hereby cancelled.

All meeting materials for the NATS meeting can be found at http://www.swmpc.org/fy_2013_nats.asp Any questions or comments should be directed to Suzann Flowers, Transportation Planner; 185 E Main St Suite 701, Benton Harbor, MI 49022; manig@swmpc.org; 269-925-1137 x17.

1t: 3: 30

State of Indiana
St. Joseph County ss:

Personally appeared before me, a notary public in and for said county and state, the undersigned ***Kim Wilson*** who, being duly sworn says that she is of competent age and is President & Publisher of the South Bend Tribune, a daily newspaper which for at least five (5) consecutive years has been published in the City of South Bend, county of St. Joseph, State of Indiana, and which during the time, has been a newspaper of general circulation, having a bona fide paid circulation, printed in the English Language and entered, authorized and accepted by the post office department of the United States of America as mailable matter of the second-class as defined by the act of Congress of the United States of March 3, 1879, and that the printed matter attached hereto is a true copy, which was duly published in said newpaper.

1 time(s), the dates of publication being as follows:

February 17, 2013

Subscribed and sworn to before me this 17th day

of February 2013

Leslie Ann Winey

Leslie Ann Winey
Notary Public
Resident of St. Joseph County

AFFP
LRP & TIP Public HearingsPUBLI

Affidavit of Publication

STATE OF MICHIGAN } SS
COUNTY OF BERRIEN }

Jennifer Flewellen, being duly sworn, says:

That she is Classified Manager of the Herald Palladium, a Daily newspaper of general circulation, printed and published in St Joseph, Berrien County, Michigan; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

March 17, 2013

LRP & TIP Public Hearings
PUBLIC COMMENTS SOUGHT FOR TRANSPORTATION PLANNING WORK THROUGHOUT BERRIEN AND CASS COUNTY
The public is encouraged to attend a series of three public meetings held by the Twin Cities Area Transportation Study (TwinCATS) http://www.swmpc.org/twincats.asp and the Niles-Buchanan-Cass Area Transportation Study (NATS) http://www.swmpc.org/nats.asp metropolitan planning organizations to discuss the status of the Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRP) that cover the Benton Harbor and St. Joseph area (TwinCATS) and the Niles, Buchanan, and southern Cass County region (NATS).
TwinCATS meetings will be held from 5-7 pm at Michigan Works 499 W Main St., Benton Harbor, MI 49022 on March 20, April 17, and May 22, 2013.
NATS meetings will be held from 5-7 pm at the Niles Public Library 620 E Main St., Niles, MI 49120 on March 27, April 24, and May 29, 2013.
If you cannot attend the public meetings your comments may be sent to Suzann Flowers, Transportation Planner at the Southwest Michigan Planning Commission flowerss@swmpc.org; phone (269) 925-1137 x 17; fax (269) 925-0288; mail 185 E. Main St. Suite 701 Benton Harbor, MI 49022.

Publisher's Fee: $ 102.72
That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Subscribed to and sworn to me this 17th day of March 2013.

Karin Crawford, Notary Public Berrien Co, Michigan

AFFP
LRP & TIP PUBLIC HEARINGSPUBLI

Affidavit of Publication

STATE OF MICHIGAN } SS
COUNTY OF BERRIEN }

Donna Knight, being duly sworn, says:

That she is Classified Manager of the Niles Daily Star, a daily newspaper of general circulation, printed and published in , Berrien County, Michigan; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

March 18, 2013

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Donna Knight

Classified Manager

Subscribed to and sworn to me this 18th day of March 2013.

Rhonda Rauen

Rhonda Rauen, Notary Public, Berrien County, MI

My commission expires: September 20, 2014

LRP & TIP PUBLIC HEARINGS

PUBLIC COMMENTS SOUGHT FOR TRANSPORTATION PLANNING WORK THROUGHOUT BERRIEN AND CASS COUNTY
The public is encouraged to attend a series of three public meetings held by the Twin Cities Area Transportation Study (TwinCATS) http://www.swmpc.org/twincats.asp and the Niles-Buchanan-Cass Area Transportation Study (NATS) http://www.swmpc.org/nats.asp metropolitan planning organizations to discuss the status of the Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRP) that cover the Benton Harbor and St. Joseph area (TwinCATS) and the Niles, Buchanan, and southern Cass County region (NATS).

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flowerss@swmpc.org
phone (269) 925-1137 x 17
fax (269) 925-0288
mail: 185 E. Main St.
Suite 701
Benton Harbor, MI 49022.

AFFP
LRP & TIP PUBLIC HEARINGSPUBLI

Affidavit of Publication

STATE OF MICHIGAN } SS
COUNTY OF CASS }

Donna Knight, being duly sworn, says:

That she is Classified Manager of the Edwardsburg Argus/Cassopolis Vigilant, a daily newspaper of general circulation, printed and published in , Cass County, Michigan; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:
March 21, 2013

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Donna Knight
Classified Manager

Subscribed to and sworn to me this 21st day of March 2013.

Rhonda Rauen, Notary Public, Berrien County, MI

My commission expires: September 20, 2014

LRP & TIP PUBLIC HEARINGS

PUBLIC COMMENTS SOUGHT FOR TRANSPORTATION PLANNING WORK THROUGHOUT BERRIEN AND CASS COUNTY
The public is encouraged to attend a series of three public meetings held by the Twin Cities Area Transportation Study (TwinCATS) http://www.swmpc.org/twincats.asp and the Niles-Buchanan-Cass Area Transportation Study (NATS) http://www.swmpc.org/nats.asp metropolitan planning organizations to discuss the status of the Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRP) that cover the Benton Harbor and St. Joseph area (TwinCATS) and the Niles, Buchanan, and southern Cass County region (NATS).

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mail: 185 E. Main St.
Suite 701
Benton Harbor, MI 49022.

AFFP
LRP & TIP PUBLIC HEARINGSPUBLI

Affidavit of Publication

STATE OF MICHIGAN } SS
COUNTY OF CASS }

Donna Knight, being duly sworn, says:

That she is Classified Manager of the Cass County Leader, a daily newspaper of general circulation, printed and published in , Cass County, Michigan; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

March 25, 2013

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Donna Knight
Classified Manager

Subscribed to and sworn to me this 25th day of March 2013.

Rhonda Rauen
Rhonda Rauen, Notary Public, Berrien County, MI

My commission expires: September 20, 2014

LRP & TIP PUBLIC HEARINGS

PUBLIC COMMENTS SOUGHT FOR TRANSPORTATION PLANNING WORK THROUGHOUT BERRIEN AND CASS COUNTY
The public is encouraged to attend a series of three public meetings held by the Twin Cities Area Transportation Study (TwinCATS) http://www.swmpc.org/twincats.asp and the Niles-Buchanan-Cass Area Transportation Study (NATS) http://www.swmpc.org/nats.asp metropolitan planning organizations to discuss the status of the Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRP) that cover the Benton Harbor and St. Joseph area (TwinCATS) and the Niles, Buchanan, and southern Cass County region (NATS).

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Suite 701
Benton Harbor, MI 49022.

Ad Number: 4391494, Publication: TRIB, Magi

LRP & TIP Public Hearings
PUBLIC COMMENTS SOUGHT
FOR TRANSPORTATION
PLANNING WORK
THROUGHOUT BERRIEN AND
CASS COUNTY

The public is encouraged to attend a series of three public meetings held by the Twin Cities Area Transportation Study (TwinCATS) http://www.swmpc.org/twincats.asp and the Niles-Buchanan-Cass Area Transportation Study (NATS) http://www.swmpc.org/nats.asp metropolitan planning organizations to discuss the status of the Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRP) that cover the Benton Harbor and St. Joseph area (TwinCATS) and the Niles, Buchanan, and southern Cass County region (NATS).

TwinCATS meetings will be held from 5-7 pm at Michigan Works 499 W Main St., Benton Harbor, MI 49022 on March 20, April 17, and May 22, 2013.

NATS meetings will be held from 5-7 pm at the Niles Public Library 620 E Main St., Niles, MI 49120 on March 27, April 24, and May 29, 2013.

If you cannot attend the public meetings your comments may be sent to Suzann Flowers, Transportation Planner at the Southwest Michigan Planning Commission flowerss@swmpc.org; phone (269) 925-1137 x 17; fax (269) 925-0288; mail 185 E. Main St. Suite 701 Benton Harbor, MI 49022.

1t: 3: 17

State of Indiana
St. Joseph County ss:

Personally appeared before me, a notary public in and for said county and state, the undersigned ***Kim Wilson*** who, being duly sworn says that she is of competent age and is President & Publisher of the South Bend Tribune, a daily newspaper which for at least five (5) consecutive years has been published in the City of South Bend, county of St. Joseph, State of Indiana, and which during the time, has been a newspaper of general circulation, having a bona fide paid circulation, printed in the English Language and entered, authorized and accepted by the post office department of the United States of America as mailable matter of the second-class as defined by the act of Congress of the United States of March 3, 1879, and that the printed matter attached hereto is a true copy, which was duly published in said newpaper.

1 time(s), the dates of publication being as follows:

March 30, 2013

Subscribed and sworn to before me this 30th day

of March 2013

Leslie Ann Winey
Notary Public
Resident of St. Joseph County

AFFP
NATS & TwinCATSThe Niles-Bucha

Affidavit of Publication

STATE OF MICHIGAN } SS
COUNTY OF BERRIEN }

Jennifer Flewellen, being duly sworn, says:

That she is Classified Manager of the Herald Palladium, a Daily newspaper of general circulation, printed and published in St Joseph, Berrien County, Michigan; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

May 30, 2013

Publisher's Fee: $ 86.88

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

Subscribed to and sworn to me this 30th day of May 2013.

Karin Crawford, Notary Public Berrien Co, Michigan

NATS & TwinCATS
The Niles-Buchanan-Cass Area Transportation Study (NATS) and Twin Cities Area Transportation Study (TwinCATS) would like to announce the official release of their Long Range Transportation Plans and Transportation Improvement Programs for public comment to begin on May 30, 2013 and end on June 8, 2013. All of the documents can be viewed electronically as indicated below. If you would like to receive a hard copy of the plan, please contact the SWMPC at 185 E. Main St., Suite 701 Benton Harbor, MI 49022; Phone: (269) 925-1137; Fax: (269) 925-0288 or email at manig@swmpc.org.

TwinCATS
· Long Range Transportation Plan can be viewed at http://www.swmpc.org/twincats2040.asp
· Transportation Improvement Program can be viewed at http://www.swmpc.org/twincats1417tip.asp
NATS
· Long Range Transportation Plan can be viewed at http://www.swmpc.org/nats_2040.asp
· Transportation Improvement Program can be viewed at http://www.swmpc.org/nats_1417_tip.asp.

Affidavit of Publication

STATE OF MICHIGAN } SS
COUNTY OF BERRIEN }

Donna Knight, being duly sworn, says:

That she is Classified Manager of the Niles Daily Star, a daily newspaper of general circulation, printed and published in , Berrien County, Michigan; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

May 31, 2013

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Donna Knight

Classified Manager

Subscribed to and sworn to me this 31st day of May 2013.

Rhonda Rauen

Rhonda Rauen, Notary Public, Berrien County, MI

My commission expires: September 20, 2014

NATS & TwinCATS
The Niles-Buchanan-Cass Area Transportation Study (NATS) and Twin Cities Area Transportation Study (TwinCATS) would like to announce the official release of their Long Range Transportation Plans and Transportation Improvement Programs for public comment to begin on May 30, 2013 and end on June 8, 2013. All of the documents can be viewed electronically as indicated below. If you would like to receive a hard copy of the plan, please contact the SWMPC at 185 E. Main St., Suite 701 Benton Harbor, MI 49022; Phone: (269) 925-1137; Fax: (269) 925-0288 or email at manig@swmpc.org.

TwinCATS
· Long Range Transportation Plan can be viewed at http://www.swmpc.org/twincats2040.asp
· Transportation Improvement Program can be viewed at http://www.swmpc.org/twincats1417tip.asp
NATS
· Long Range Transportation Plan can be viewed at http://www.swmpc.org/nats_2040.asp
· Transportation Improvement Program can be viewed at http://www.swmpc.org/nats_1417_tip.asp.

RECEIVED
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BY: .....

APPENDIX G – AIR QUALITY CORRESPONDENCE

MDOT Michigan Department of Transportation

OFFICE MEMORANDUM

DATE: June 14, 2012

TO: Dal McBurrows, Pamela Boyd

FROM: Pete Porciello

SUBJECT: Briefing from MDOT's air quality meeting with DEQ on 6/11/12

MDOT Statewide Planning Section Staff met with DEQ counterparts to discuss general Air Quality topics on June 11, 2012.Present were:

MDOT
Dalrois McBurrows, Pamela Boyd, Pete Porciello, Mark Kloha

DEQ
Barb Rosenbaum, Bob Irvine, Tom Shanley, Dave Mason, Mary Maupin, Bob Rusch

Complete Michigan NAAQS Attainment Status

Ozone:
EPA's designations for Ozone under the recently published 2008 standard (.075ppb) put Michigan in attainment/unclassifiable status for Ozone statewide. The standard takes effect on 7/20/2012.

Only the transportation conformity requirements of the existing 08ppb standard are revoked effective 1 year from the implementation date of the new standard (July 20, 2013). Conformity requirements could begin under those standards sometime in 2014-2015 depending on the date the standard is published. *Requirements for CMAQ are in effect until later guidance or funding reauthorization bill language changes them.*

After July 2013, conformity will no longer need to be demonstrated unless new designations of nonattainment occur. The next time standards will be revised will be in 2013 or early 2014. Actual designations may not occur until 2014 with SIP revisions not needed until about 2018. Conformity requirements for nonattainment areas would begin within 1 year after the standard is published for any areas that are in nonattainment (sometime before 2015).

Annual and 24-hour PM 2.5
The 7 county SEMCOG area is designated out of attainment for the Annual and 24-hour PM2.5 standard. Although DEQ has requested redesignation of the area to attainment, that request has not yet been approved by USEPA pending resolution of a lawsuit related to the PM 2.5 standard.

Nitrogen Dioxide (NO2)
Michigan is in attainment for Nitrogen Dioxide

Carbon Monoxide (CO)
Michigan is in attainment for CO. An area consisting of part of Wayne, Oakland and Macomb Counties is in attainment/maintenance.

Particulate Matter less than 10 Microns (PM10)
Michigan is in attainment of the PM10 standard.

Lead (Pb)
Michigan is in attainment for lead except for a small area of less than 1 square mile in Ionia County in Belding.

Sulfur Dioxide (SO2)
Michigan is currently in attainment for SO2, but will have an area in Wayne County designated nonattainment sometime this year. It is not likely that there will be a regional transportation conformity requirement for this pollutant.

How does the Ozone monitoring data look so far for this season?

DEQ reported that the monitoring data so far could show violations in Allegan County, part of Detroit and Muskegon for Ozone. However, with designations not coming again until sometime around 2014, Michigan would not have to engage in the inventory and rate of progress plan process unless such designations are published for the new 2008 (.075) ozone standards or the revised standards that are coming in 2013-2014.

There will be an area of Detroit designated nonattainment for Sulfur Dioxide sometime this year, but transportation conformity should not be required as part of the regulatory actions for attaining the SO2 standard.

How will DEQ proceed in the event of a new nonattainment area?

The process of creating an emissions inventory and using interagency consultation to develop an attainment plan will be the same as previously followed from the Michigan SIP. Regarding transportation conformity, the Conformity SIP will still be a valid guideline for creating baselines and inventories for the purposes of any new transportation conformity requirements that occur.

Interagency Workgroup Activity

Review of projects for air quality analysis should continue for the next year, or until nonattainment designations are made. If the .08ppb standard is revoked on 7/20/13 and no new nonattainment areas are named under the new .075 standard, Ozone conformity requirements will cease until such time as Michigan has a designated nonattainment area for Ozone under the new standard.

MDOT Update on MOVES implementation

MDOT updated DEQ on the MOVES 2010b model implementation and invited staff to visit MDOT to learn how to use and set up the model. DEQ is interested in learning how the model was packaged and pushed by DIT to MDOT machines so that they can look at a similar way to load the model at DEQ. MDOT announced that there should be a refresher training to reacquaint staff with the use of MOVES in August, along with the distribution of revised vehicle population data that is the most up to date available. MDOT also described a change to the air quality chapters in the TIPS. These will be replaced by a universal air quality document which details methods of calculating and reporting conformity. Technical documentation will be electronic for all future conformity demonstrations.

MOVES uses for climate change activities were discussed, and a brief mention of the next version of MOVES (MOVES2013) which should handle climate change issues. There will be more database records needed for that and it will involve a change to MDOTs master spreadsheet files in order to accommodate the revisions. The off road modules are not working yet, so in the meantime, DEQ will continue to use the NMIM modeling for off road emissions. Consultations and continued discussions on this will be needed in order to be sure that procedures are established to validate the information obtained and to make the proper transition to the use of the MOVES model for off road emissions.

CMAQ issues

Because it is not known what the transportation reauthorization funding bill will contain for CMAQ language, and whether or not the core provisions of the program will change, a discussion of what if's occurred and MDOT shared a handout with DEQ describing the known impacts to date on the program.

Other issues from DEQ

LADCO, regional emissions inventories will be due in December. These will need to be created with MOVES for every Michigan County which will require transportation model information and MOVES data bases for each county in Michigan. DEQ will be forwarding information about the inventory call to staff for action.

Continued Dialogue Needed

MDOT and DEQ discussed meeting quarterly or perhaps more often to discuss upcoming issues and to keep in touch with events and air quality needs. Staff from both departments will also be attending meetings to assure that partners have access to updates and information related to transportation and air quality. DEQ will also play a role in information on point and area pollution needs as well as stationary source emissions issues that are relevant to the attainment of the NAAQS.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 0 9 2011

REPLY TO THE ATTENTION OF:

The Honorable Rick Snyder
Governor of Michigan
P.O. Box 30013
Lansing, Michigan 48909

Dear Governor Snyder:

This letter is to notify you of the U.S. Environmental Protection Agency's preliminary response to Michigan's air quality designation recommendations for the revised 2008 ozone National Ambient Air Quality Standards (NAAQS).

On March 12, 2008, EPA revised its NAAQS for ground-level ozone to provide increased protection of public health and the environment. EPA lowered the primary 8-hour ozone standard from 0.08 parts per million (ppm) to 0.075 ppm to protect against health effects associated with ozone exposure, including a range of serious respiratory illnesses and increased premature death from heart or lung disease. EPA revised the secondary 8-hour ozone standard, making it identical to the primary standard, to protect against adverse welfare effects, including impacts on sensitive vegetation and forested ecosystems.

History shows us that better health and cleaner air go hand-in-hand with economic growth. Working closely with the states and tribes, EPA is implementing the standards using a common sense approach that improves air quality and minimizes the burden on state and local governments. As part of this routine process, EPA is working with the states to identify areas in the country that meet the standards and those that need to take steps to reduce ozone pollution. Within one year after a new or revised air quality standard is established, the Clean Air Act requires the Governor of each state to submit to EPA a list of all areas in the state, with recommendations for whether each area meets the standard. As a first step in implementing the 2008 ozone standards, EPA asked states to submit their designation recommendations, including appropriate area boundaries, by March 12, 2009. In September 2009, EPA announced it was reconsidering the 2008 ozone standards. EPA later took steps to delay the designation process for the 2008 ozone standards pending outcome of the reconsideration. In September 2011, the Office of Management and Budget returned to EPA the draft final rule addressing the reconsideration of the 2008 ozone standards. On September 22, 2011, EPA restarted the implementation effort by issuing a memorandum to clarify for state and local agencies the status of the 2008 ozone standards and to outline plans for moving forward to implement them. EPA indicated that it would proceed with initial area designations for the 2008 standards, and planned to use the recommendations states made in 2009 as updated by the most current, certified air quality data from 2008-2010. While EPA did not request that states submit updated designation recommendations, EPA provided the opportunity for states to do so.

After considering Michigan's March 12, 2009 ozone designation recommendations and other relevant technical information, including 2008-2010 air quality data, EPA intends to designate the entire state of Michigan as unclassifiable/attainment for the 2008 ozone NAAQS.

EPA is committed to working with the states and tribes to share the responsibility of reducing ozone air pollution. Current and upcoming federal standards and safeguards, including pollution reduction rules for power plants, vehicles and fuels, will assure steady progress to reduce ozone-forming pollution and will protect public health in communities across the country. We look forward to a continued dialogue with you and your staff as we work together to implement the 2008 ozone standards. Should you have any questions, please do not hesitate to contact me at 312-886-3000, or Cheryl L. Newton, Director, Air and Radiation Division, at 312-353-6730.

Sincerely,

Susan Hedman,
Regional Administrator

cc: Dan Wyant, Director, and G. Vinson Hellwig, Chief
Michigan Department of Environmental Quality

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 30 2012

THE ADMINISTRATOR

The Honorable Rick Snyder
Governor of Michigan
P.O. Box 30013
Lansing, Michigan 00004-8909

Dear Governor Snyder:

The U.S. Environmental Protection Agency today is taking the next step to address ozone air quality by issuing final area designations for the 2008 National Ambient Air Quality Standards for ozone. This action, required under the Clean Air Act, lets communities know if their outdoor air is meeting the national standards for ground-level ozone and which areas are violating, or contributing to violations of, the national standards.

The EPA strengthened the ozone standards on March 12, 2008, to increase protection of public health and the environment. Breathing air containing high levels of ozone, a key ingredient in smog, can reduce lung function, trigger respiratory symptoms, and worsen asthma or other respiratory conditions. Ozone exposure also can contribute to premature death, especially in people with heart and lung disease. The new standards, which also protect against damage to sensitive vegetation and forested ecosystems, are a key part of the EPA's commitment to a clean, healthy environment. As we have done for more than 40 years, the EPA will work with you to improve air quality and continue to protect the health of our citizens.

As part of the designations process, the EPA worked closely with states, tribes and local governments to identify areas in the nation that meet the standards and those that need to take steps to reduce ozone pollution. After reviewing the most recent certified ozone air quality data for your state and evaluating factors to assess contribution to nearby levels of ozone, I am pleased to inform you that no areas in Michigan violate the 2008 standards or contribute to a violation of the ozone standards in a nearby area. As a result, the EPA is designating all of Michigan "unclassifiable/attainment." I appreciate the information that Michigan shared with the EPA throughout this process to assess ozone air quality.

History shows that cleaner air, better health and economic growth go hand-in-hand. For areas designated "unclassifiable/attainment," the challenge is to maintain clean air. Working closely with the states and tribes, the EPA is implementing the 2008 ozone standards using a common sense approach that protects air quality, maximizes flexibility and minimizes burden on state, tribal and local governments.

I recognize that the EPA shares the responsibility with the states and tribes for managing ozone air pollution. I also recognize that air pollution crossing state boundaries can contribute to downwind violations of the standards. Current and upcoming federal standards and safeguards, including pollution reduction rules for power plants, industrial facilities, vehicles and fuels, will ensure steady progress to reduce smog-forming pollution and will protect public health in communities across America.

The EPA will be assisting state, tribal and local air agencies by identifying currently available emission reduction measures as well as relevant information concerning their efficiency and cost-effectiveness. State, local and tribal agencies will be able to use this information in developing emission reduction strategies, plans and programs to attain and maintain cleaner air.

I look forward to continuing to work with you and your staff as we strive to advance our shared goal of clean air. Additional technical information on the ozone designations can be found at www.epa.gov/ozonedesignations. If you have questions, please contact me, or your staff may call Sarah Hospodor-Pallone, Deputy Associate Administrator for Intergovernmental Relations, at 202-564-7178.

Sincerely,

Lisa P. Jackson

U.S. Department of Transportation
Federal Highway Administration

Michigan Division

January 14, 2013

315 W. Allegan Street, Room 201
Lansing, MI 48933
517-377-1844 (office)
517-377-1804 (fax)
Michigan.FHWA@dot.gov

In Reply Refer To:
HDA-MI

Mr. Dave Wresinski, Director
Bureau of Transportation Planning (B340)
Michigan Department of Transportation
Lansing, Michigan

Dear Mr. Wresinski:

This letter is in response to your letter to our office dated November 7, 2012. In the letter, you had four specific statements relating to both air quality and metropolitan transportation plan schedules. Below are your statements in italics with our comments following. These questions were answered with advisement from air quality staff in our headquarters.

The May 21, 2012 Federal register notice (77 FR 30160) pertains to revocation of the 1997 ozone standard. Note that the notice did not address other pollutants (eg, PM-2.5 or CO) or change their associated regulations.

1. *MPOs that have LRTP updates due in 2013 that were previously classified non-attainment are exempt from demonstrating conformity if updated plans are due or approved after the July 20, 2013 date.*

   Correct. After July 20, 2013, areas that are in attainment for the 2008 ozone standard will not have to demonstrate transportation conformity for ozone. It is important to note that MPOs that are nonattainment or maintenance for other air quality standards will need to demonstrate conformity for those pollutants.

2. *MPOs now have the option of updating their LRP's on a five-year cycle versus a four-year cycle as a result of attainment designation for ozone.*

   Not yet. The May 21, 2012 Federal Register notice, as cited above, revoked the 1997 ozone standard for transportation conformity purposes only. It did not completely revoke the standard; therefore an area's nonattainment or maintenance status for the 1997 ozone standard has not changed. Per the planning regulations found in 23 CFR 450.322(c), plans need to be updated at least every four years for nonattainment and maintenance areas. Therefore, until the 1997 ozone standard is revoked completely, MPOs that are nonattainment or maintenance for the 1997 standard will need to update their long range plans at least every four years.

We have also spoken with the Environmental Protection Agency (EPA) staff to determine progress towards complete revocation of the 1997 ozone standard. We do not have a date of when this may occur but will keep you informed as we learn of progress. It is important to note that MPOs that are nonattainment or maintenance for other air quality standards will continue the four year transportation plan update cycle when the 1997 ozone standard is completely revoked.

3. *MPO LRTP update schedules are based on the date the last LRTP conformity finding was approved by FHWA and the Federal Transit Administration for non-attainment areas and the date the MPO Executive Committee approves LRTP updates in attainment areas.*

   Correct. Per 23 CFR 450.322 (a), the effective date of metropolitan plans in non-attainment and maintenance areas is "...the date of a conformity determination issued by FHWA and FTA...", and "...its date of adoption by the MPO..." for attainment areas.

   As mentioned previously, when EPA completely revokes the 1997 ozone standard and an area is no longer in non-attainment or maintenance, the five-year plan update cycle will apply and is based on the MPO approval date.

4. *MPOs are required to develop and update LRTPs with at least a 20-year planning horizon, as stated in 23 CFR 450.322, and maintain a 20-year horizon during the life of the plan.*

   Correct. Per 23 CFR 450.322 (a), the 20-year horizon is as of the "effective date" of the Plan (as described in Question 3 above). However, MPO's are encouraged to select a horizon year which would maintain at least a 20-year horizon until the next plan update is completed.

We have previously met with MDOT Planning staff to address these issues and assist in outlining a schedule for development of long-range plans for each MPO. I will set-up an additional meeting on this topic, to be sure both MDOT and FHWA have the same understanding of the issues and that your questions have been answered.

Please feel free to contact me at (517) 702-1827 or Andy.Pickard@dot.gov if you should need further assistance.

Sincerely,

Andy Pickard PE, AICP
Transportation Planning Team Leader

For: Russell L. Jorgenson, P.E.
Division Administrator

06/20/13	2014				2015				2016				2017			
Highway Program	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments
MDOT AC & M Program		$5,664,000	$5,664,000	$5,664,000		$0	$0	$0		$0	$0	$0		$0	$0	$0
MDOT FA Program	$0	$0	$0	$0	$5,730	$1,270	$7,000	$7,000	$45,018	$9,982	$55,000	$55,000	$0	$0	$0	$0
Sub-Total MDOT	$0	$5,664,000	$5,664,000	$5,664,000	$5,730	$1,270	$7,000	$7,000	$45,018	$9,982	$55,000	$55,000	$0	$0	$0	$0
Local STP	$590,705	$130,532	$721,237	$721,237	$498,887	$111,754	$610,641	$610,641	$525,834	$142,265	$668,099	$668,099	$561,004	$124,400	$685,404	$685,404
Local Bridge	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Local CMAQ	$14,000	$500	$14,500	$14,500	$105,280	$26,320	$131,600	$131,600	$0	$0	$0	$0	$0	$0	$0	$0
Local Safety	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Local Equity Bonus (TEDF)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Local Other FHWA	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Local AC Starts		$0	$0	$0		$0	$0	$0		$0	$0	$0		$0	$0	$0
Local Non-Federal		$0	$0	$0		$0	$0	$0		$0	$0	$0		$0	$0	$0
Sub-Total Local	**$604,705**	**$131,032**	**$735,737**	**$735,737**	**$604,167**	**$138,074**	**$742,241**	**$742,241**	**$525,834**	**$142,265**	**$668,099**	**$668,099**	**$561,004**	**$124,400**	**$685,404**	**$685,404**
Total Highway	**$604,705**	**$5,795,032**	**$6,399,737**	**$6,399,737**	**$609,897**	**$139,344**	**$749,241**	**$749,241**	**$570,852**	**$152,247**	**$723,099**	**$723,099**	**$561,004**	**$124,400**	**$685,404**	**$685,404**
Transit Fund Source	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments
CTF - Comprehensive Transit Fund		$0	$0	$0		$0	$0	$0		$0	$0	$0		$0	$0	$0
Section 3038 - Over the Road Bus Program	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 3045 - National Fuel Cell Technology Development Program	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5303 - Metropolitan Transportation Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Transit Fund Source	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments
Section 5304 - Statewide Transportation Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5305 - Metropolitan and Statewide Planning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5307 - UZA Formula	$265,270	$302,003	$567,273	$567,273	$245,840	$381,560	$627,400	$627,400	$195,200	$368,900	$564,100	$564,100	$242,000	$380,600	$622,600	$622,600
Section 5308 - Clean Fuels Program	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5309 - Fixed Guideway Capital Investment Grant	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5310 - Enhanced Mobility of Seniors and Individuals with Disabilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5311 - Non-UZA	$0	$0	$0	$0	$49,567	$205,723	$255,290	$255,290	$49,567	$205,723	$255,290	$255,290	$49,567	$205,723	$255,290	$255,290
Section 5312 - Research, Development, Demonstration, and Deployment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5313 - Transit Cooperative Research Program	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5314 - Technical Assistance and Standards	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5316 - Transit - Section 5316 - Job Access/Reverse Commute	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Transit Fund Source	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments	Estimated Federal Revenue	Estimated Non-Federal Revenue	Estimated Total Revenue	Total Proposed Commitments
Section 5317 - Transit - Section 5317 - New Freedom Initiative	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5320 - Alternative Transportation in Parks and Public Lands	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5322 - Human Resources and Training	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5324 - Emergency Relief	$0	$0	$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Section 5326 - Asset Management Provisions	$0	$0	$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Section 5329 - Safety	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5337 - State of Good Repair Grants	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5339 - Bus and Bus Facilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Section 5505 - University Transportation Centers Program	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Transit	**$265,270**	**$302,003**	**$567,273**	**$567,273**	**$295,407**	**$587,283**	**$882,690**	**$882,690**	**$244,767**	**$574,623**	**$819,390**	**$819,390**	**$291,567**	**$586,323**	**$877,890**	**$877,890**
Grand Total	**$869,975**	**$6,097,035**	**$6,967,010**	**$6,967,010**	**$905,304**	**$726,627**	**$1,631,931**	**$1,631,931**	**$815,619**	**$726,870**	**$1,542,489**	**$1,542,489**	**$852,571**	**$710,723**	**$1,563,294**	**$1,563,294**

APPENDIX I – RESOLUTIONS OF APPROVAL

SOUTHWEST MICHIGAN PLANNING COMMISSION
185 East Main Street, Suite 701, Benton Harbor, MI 49022
Phone: 269-925-1137 • Website: www.swmicomm.org

RESOLUTION APPROVING THE NILES-BUCHANAN-CASS AREA TRANSPORTATION STUDY (NATS) 2013-2040 LONG RANGE TRANSPORTATION PLAN

Whereas, the Southwest Michigan Planning Commission is the designated Metropolitan Planning Organization for the Niles-Buchanan-Cass Federal Aid Urban Area; and

Whereas, the SWMPC has designated the Niles-Buchanan-Cass Area Transportation Study (NATS) Technical Advisory and Policy Committees as the committees responsible for developing the Long Range Transportation Plan, the Transportation Improvement Program and all other transportation-related planning activities for the designated metropolitan planning area; and

Whereas, the NATS Long Range Transportation Plan has been developed pursuant to provisions of the Moving Ahead for Progress in the 21st Century (MAP-21); and

Whereas, the NATS Long Range Transportation Plan identifies transportation facilities and activities that should function as an integrated metropolitan transportation system in conformity with the Michigan Department of Transportation and the Federal Highway Administration, and

Whereas, the NATS Long Range Transportation Plan was analyzed for fiscal constraint of proposed projects and activities over the 25-year planning horizon, was developed through a process that included input from citizens, public agencies and other interested parties; and

Whereas, the NATS Long Range Transportation Plan has identified goals, objectives, policies, recommendations, strategies and activities consistent with the goals and objectives of the Michigan Department of Transportation.

Be it Resolved, the NATS Policy Committee approves the 2013-2040 Niles-Buchanan-Cass Area Transportation Study Long Range Plan and has determined that the Plan conforms with the State Implementation Plan.

This action is taken pursuant to rules and regulations of the Federal Highway Administration and the Michigan Department of Transportation by vote of the NATS Policy Committee, this the 25th day of June 2013.

ATTEST: _____
Dale Lowe, NATS Policy Committee Chairman

ATTEST: _____
John Egelhaaf, Executive Director
Southwest Michigan Planning Commission

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RESOLUTION APPROVING THE NILES-BUCHANAN-CASS AREA TRANSPORTATION STUDY (NATS) 2013-2040 LONG RANGE TRANSPORTATION PLAN

Whereas, the Southwest Michigan Planning Commission is the designated Metropolitan Planning Organization for the Niles-Buchanan-Cass Federal Aid Urban Area; and

Whereas, the SWMPC has designated the Niles-Buchanan-Cass Area Transportation Study (NATS) Technical Advisory and Policy Committees as the committees responsible for developing the Long Range Transportation Plan, the Transportation Improvement Program and all other transportation-related planning activities for the designated metropolitan planning area; and

Whereas, the NATS Long Range Transportation Plan has been developed pursuant to provisions of the Moving Ahead for Progress in the 21st Century (MAP-21); and

Whereas, the NATS Long Range Transportation Plan identifies transportation facilities and activities that should function as an integrated metropolitan transportation system in conformity with the Michigan Department of Transportation and the Federal Highway Administration; and

Whereas, the NATS Long Range Transportation Plan was analyzed for fiscal constraint of proposed projects and activities over the 25-year planning horizon, was developed through a process that included input from citizens, public agencies and other interested parties; and

Whereas, the NATS Long Range Transportation Plan has identified goals, objectives, policies, recommendations, strategies and activities consistent with the goals and objectives of the Michigan Department of Transportation.

Be it Resolved, the Southwest Michigan Planning Commission Board approves the 2013-2040 Niles-Buchanan-Cass Area Transportation Study Long Range Plan and has determined that the Plan conforms with the State Implementation Plan.

This action is taken pursuant to rules and regulations of the Federal Highway Administration and the Michigan Department of Transportation by vote of the Southwest Michigan Planning Commission, this the 16th day of July 2013.

ATTEST: _____
Jeff Radtke, Chairman
Southwest Michigan Planning Commission

ATTEST: _____
John Egelhaaf, Executive Director
Southwest Michigan Planning Commission

APPENDIX J – NILES DIAL A RIDE ROUTE SCHEDULE

Deviated Fixed Route "Route 2" Schedule
Rev. 8/12

Destination	Time						
DART OFFICE	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
Hi Rise	10:01 AM	11:01 AM	12:01 PM	1:01 PM	2:01 PM	3:01 PM	4:01 PM
Harding's	10:04 AM	11:04 AM	12:04 PM	1:04 PM	2:04 PM	3:04 PM	4:04 PM
Four Flags Plaza	10:06 AM	11:06 AM	12:06 PM	1:06 PM	2:06 PM	3:06 PM	4:06 PM
Martin's	10:12 AM	11:12 AM	12:12 PM	1:12 PM	2:12 PM	3:12 PM	4:12 PM
Big Lots	10:17 AM	11:17 AM	12:17 PM	1:17 PM	2:17 PM	3:17 PM	4:17 PM
Senior Center	10:18 AM	11:18 AM	12:18 PM	1:18 PM	2:18 PM	3:18 PM	4:18 PM
Belle Plaza	10:21 AM	11:21 AM	12:21 PM	1:21 PM	2:21 PM	3:21 PM	4:21 PM
Niles Plaza	10:22 AM	11:22 AM	12:22 PM	1:22 PM	2:22 PM	3:22 PM	4:22 PM
State Line	10:26 AM				2:26 PM		4:26 PM
Auten & SR 933	10:31 AM				2:31 PM		4:31 PM
Rural King	10:34 AM				2:34 PM		4:34 PM
Wal-Mart	10:37 AM	11:27 AM	12:27 PM	1:27 PM	2:37 PM	3:27 PM	4:37 PM
Big Lots	10:40 AM	11:29 AM	12:29 PM	1:29 PM	2:40 PM	3:29 PM	4:40 PM
Senior Center	10:41 AM	11:30 AM	12:30 PM	1:30 PM	2:41 PM	3:30 PM	4:41 PM
Martin's	10:47 AM	11:35 AM	12:35 PM	1:35 PM	2:47 PM	3:35 PM	4:47 PM
3rd & Huron	10:49 AM	11:36 AM	12:36 PM	1:36 PM	2:49 PM	3:36 PM	4:49 PM
3rd & Hickory	10:50 AM	11:36 AM	12:36 PM	1:36 PM	2:50 PM	3:36 PM	4:50 PM
3rd & Broadway	10:50 AM	11:37 AM	12:37 PM	1:37 PM	2:50 PM	3:37 PM	4:50 PM
Harding's	10:52 AM	11:38 AM	12:38 PM	1:38 PM	2:52 PM	3:38 PM	4:52 PM
Four Flags Plaza	10:54 AM	11:40 AM	12:40 PM	1:40 PM	2:54 PM	3:40 PM	4:54 PM
Library	10:55 AM	11:40 AM	12:40 PM	1:40 PM	2:55 PM	3:40 PM	4:55 PM
City Hall	10:55 AM	11:41 AM	12:41 PM	1:41 PM	2:55 PM	3:41 PM	4:55 PM
Hi Rise	10:57 AM	11:43 AM	12:43 PM	1:43 PM	2:57 PM	3:43 PM	4:57 PM
DART OFFICE	10:58 AM	11:45 AM	12:45 PM	1:45 PM	2:58 PM	3:45 PM	4:58 PM

APPENDIX K – NILES DIAL A RIDE TRANSIT BROCHURE

Niles Dial-A-Ride Transportation (DART)

FARE OPTIONS

Exact change is required. Drivers and office staff **cannot** make change or make unscheduled stops.

Demand Response

Within City Limits:
$3.00/$1.50 reduced fare*

To, From, Within Township:
$4.00/$2.00 reduced fare*

Deviated Fixed Route

$2.00/$1.00 reduced fare*
$0.50 for route deviations

*Reduced fare applies to persons receiving supplemental Social Security income or Medicare (ID or Medicare card required) and/or persons age 60 or older. A reduced fare card is required. Applications are available at the DART office.

Ticket/Token Sales

DART $10 punch cards may be purchased from drivers or at the DART office at 623 N. Second Street. Tokens are also available at the office for agencies/groups. Cash or checks only.

HOW TO RIDE DEMAND RESPONSE

1. Call (269) 684-5150 to schedule a ride.
2. Be sure to call at least a day in advance to get your preferred pick-up time.
3. Use the fixed route whenever possible - it is cheaper!
4. The use of seatbelts is recommended for all passengers. Wheelchairs must be secured.
5. Transfer tickets are available upon request to transfer from the fixed route to demand response and vice versa. Dispatcher approval of the transfer is required.
6. Please remember that Niles DART is a shared ride service, not a taxi. You may be riding with several other passengers. We strive to make our scheduling as efficient as possible, but riders should expect to be flexible in their pick up and drop off times and schedule accordingly.

SERVICE CALENDAR

DART is closed on the following holidays:

New Year's Day	Labor Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

IMPORTANT INFORMATION

Ride Priority

It is the policy of Niles DART to make sure that the needs of Priority 1 and 2 (recurring/subscription trips and 24 hour calls) are fully administered before addressing the needs of the Priority 3 or 4 passenger calls.

Service Priority	Description
Priority 1 - Recurring/ Subscription Trips	Rides reserved for the same passenger, same time, and same origin
Priority 2 - 24-Hour Calls	Rides reserved 24 hours in advance
Priority 3 - 1-Hour Calls	Rides reserved at least one hour in advance
Priority 4 - On-Demand Calls	Rides reserved less than one hour in advance

DEVIATED FIXED ROUTE (ROUTE 2) INFORMATION

Beginning at 10:00 am, Route 2 starts at the DART office at the top of the hour, heads south to Auten Rd/SR 933, and then returns to the office. Riders may board the bus at any scheduled stop or request a pick-up or drop-off at locations up to 1/2 mile away from the route. Reservations for a route deviation can be made by calling (269) 684-5150 at least one hour in advance. All riders will pay an additional $0.50 for a deviation from the route.

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