

North Central
Muskegon County
Joint Planning
Commission

Comprehensive Development Plan

August 2007



WMSRDC
WEST MICHIGAN SHORELINE
REGIONAL DEVELOPMENT COMMISSION

**WEST MICHIGAN SHORELINE
REGIONAL DEVELOPMENT COMMISSION
(WMSRDC)**

The WMSRDC is a regional council of governments representing 127 local governments in the West Michigan counties of Lake, Mason, Muskegon, Newaygo, Oceana, and northern Ottawa.

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North Central Muskegon County
Comprehensive Development Plan

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Chapter I: Introduction

Purpose of the Plan

This plan is intended to be an advisory plan to guide future actions and decisions among the designated North Central Muskegon County Joint Planning Commission (JPC) area. This area consists of a portion of five townships located in north central Muskegon County: Blue Lake, Dalton, Fruitland, Laketon, and Muskegon. It is not intended to establish precise boundaries of land use areas or exact locations of future types of developments. Its function is to guide growth toward long-range, broad-based goals.

The goal of any future land use plan is to combine the needs and desires of the citizenry with the land's suitability and capability for sustaining those uses, according to the ability and desire of a unit of government to provide public services throughout its jurisdiction. Such planning will minimize the potential for land use conflicts and inappropriate uses of land, for the betterment of all residents.

Legal Basis

The JPC was established under Michigan's Public Act 226 of 2003 also known as the joint municipal planning act. The area, as stated above, encompasses a portion of five townships located in north central Muskegon County. The JPC is following the procedures established in the Rural Township Planning Act (Act 168 of 1959).

Although this plan is enabled by Michigan law, it does not have the force of statutory law or ordinance. Its foundation is rooted in the Rural Township Planning Act (Act 168 of the Public Acts of 1959), which states, in part, that:

Sec. 2. The purpose of plans prepared pursuant to this act shall be to promote public health, safety and general welfare; to encourage the use of resources in accordance with their character and adaptability; to avoid the overcrowding of land by buildings or people; to lessen congestion on public roads and streets; to facilitate provision for a system of transportation, sewage disposal, safe and adequate water supply, recreation and other public improvements; and to consider the character of each township and its suitability for particular uses judged in terms of such factors as the trend in land and population development.

Sec. 3. (1). The township board of any township may create, by resolution, a township planning commission with power to make, adopt, extend, add to or otherwise amend, and to carry out plans for the unincorporated portions of the township...

A plan comprehensive enough to meet the requirements of Sec. 2 must begin with an analysis of the area's existing conditions, facilities, natural resources, population characteristics, economy, and land uses. Where appropriate, historical trends should be analyzed to assist in making predictions of the future.

The Planning Process

In the fall of 2005, the JPC was officially established with assistance from the West Michigan Shoreline Regional Development Commission (WMSRDC). WMSRDC received a grant from the Michigan Department of Environmental Quality, Michigan Coastal Management Program, on behalf of the JPC, to develop the North Central Muskegon County Joint Planning Commission Comprehensive Development Plan. Development of the Plan began in January 2006.

Every effort has been made to present information that is both current and accurate. The JPC and WMSRDC shall not be held liable for any errors and/or omissions that are related to this plan. This plan is a general document; therefore, a thorough investigation with original research materials should be undertaken before proceeding with any specific implementation decisions. These materials might include site plans, legal reviews, etc. and would vary by situations.

An initial review of each township's Comprehensive Development Plans was conducted early in the process. The purpose of the review was to gain additional knowledge of the member township's goals, objectives, and future vision of the JPC area. The review also assisted in identifying similarities, as well as inconsistencies amongst the plans. In addition, it also provided an initial direction in the development of the JPC Comprehensive Development Plan.

Citizen input is vital in identifying and discerning the issues facing area residents as a whole. Therefore, all citizens from the JPC area, as well as the entire county, were invited and encouraged to take part in the planning process. The opportunity for input and comments was provided through a special meeting held by the JPC. Notice of this meeting was published in the White Lake Beacon and the Muskegon Chronicle. The meeting was also promoted by each of the five member townships through promotional flyers which were placed in the town hall and handed out to area residents.

The goals and objectives set forth in this plan for the JPC area should be reviewed on a regular basis. When appropriate, the Comprehensive Development Plan should be modified to reflect changes of a physical nature or those of general public sentiment. A comprehensive development plan should be consistent in maintaining the community's goals. The planning process strives to combine the needs and desires of the citizenry with the land's suitability and capability for sustaining those uses. It also balances the area's ability and desire to provide public services throughout its jurisdiction.

How to Use This Plan

The JPC Comprehensive Development Plan is intended to function as a guide for directing and managing development within the JPC boundaries. This plan is not a zoning ordinance, which is a legally enforceable document. This plan is a policy-planning document that provides a legal rationale for zoning. It presents a written analysis of the JPC area's physical and social characteristics, as well as visions and goals for future development. In addition, implementation strategies are identified and are intended to guide policy makers towards accomplishing the established visions and goals of the JPC Comprehensive Development Plan. Development decisions for the

JPC should be based on the data and information presented in this plan and should also be consistent with the established visions and goals.

The Comprehensive Development Plan's Relationship with Zoning

While most understand that there is a relationship between a comprehensive (i.e. land use) plan (with its future land use map) and a zoning ordinance (with its zoning map), it is often misinterpreted and used inappropriately. The relationship is a very important one, *because you can not utilize one without having the other*. A formal definition of a land use plan is simply that it is a policy document in which the zoning ordinance is a regulatory tool that is used to implement the goals and objectives of the land use plan. *In other words, the land use plan and map are designed to provide the community with a glimpse of where they desire their community to head, and a zoning ordinance and map provides the means to arrive at this point.*

The primary difference between a future land use plan and a zoning ordinance is a familiar one. Changes to a zoning ordinance or zoning map are the primary tools available to change the regulations affecting land or the types of use land may be used for. The land use plan and map are used to guide the process of changing land uses. In other words, the future land use plan and map will be utilized to regulate what zoning changes will occur and where they will occur. For example, rezoning requests are often required to be consistent with the future land use plan's designations as they identify the community's desires for their future.

The Role of the JPC

Leaders from the townships of Blue Lake, Dalton, Fruitland, Laketon, and Muskegon personally witnessed recent development pressures within their communities. They also realized the potential future development on the horizon and wanted to remain proactive in the management of that development. Therefore with assistance from the WMSRDC, the five townships formed the North Central Muskegon County Joint Planning Commission in the fall of 2005. The JPC was formed by resolution from each township, which can be found in Appendix A. The townships then appointed two members to represent their community on the JPC. The members included one elected official from the Township Board and one appointed official from the Township Planning Commission. An alternate member from each township was also identified.

State law allows for an array of authority to be given to a joint planning commission. The North Central Muskegon County Joint Planning Commission was established as an advisory committee to each of the five member townships. The member townships still retain their own planning commissions with land use and zoning authority.

The ten-member JPC has established by-laws which can be found in Appendix A. The committee regularly meets on the fourth Wednesday of each month at 3:00 PM in the offices of the West Michigan Shoreline Regional Development Commission.

Chapter II: Location and History

Regional Location

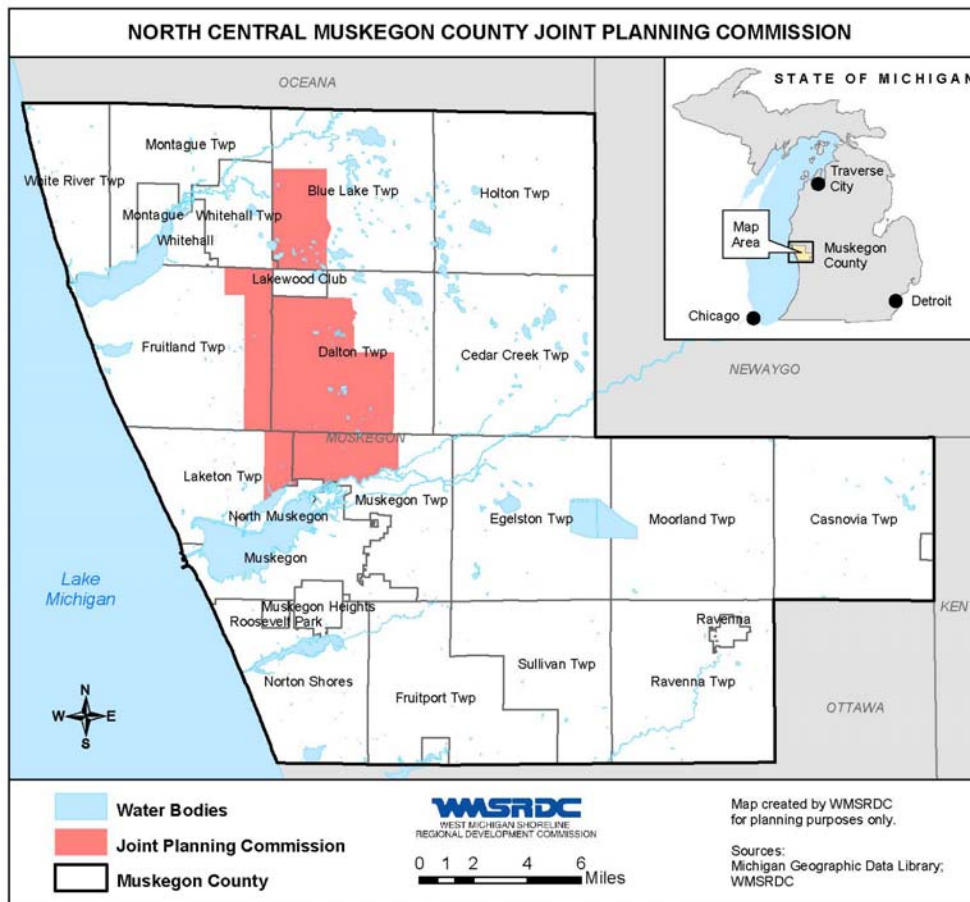
The townships of Blue Lake, Dalton, Fruitland, Laketon, and Muskegon are located in north-central Muskegon County. The county is situated along the eastern shore of Lake Michigan approximately halfway between Traverse City, Michigan and the Michigan/Indiana border. The total land area for the five townships is 150.4 square miles, with 4.5 square miles of water. The North Central Muskegon County Joint Planning Commission (JPC) planning area totals 43 square miles of land.

The JPC townships are bordered by Otto Township in Oceana County to the north; the City of North Muskegon and the Muskegon River to the south; Whitehall Township and Lake Michigan to the west; and Holton Township and Cedar Creek Township to the east. The county seat, the City of Muskegon, is located just south of the JPC area. Table 1 identifies distances from Muskegon County to other significant regional locations within the Midwest.

Table 1

Distance to Regional Locations from Muskegon County		
Chicago	180 mi	289 k
Cleveland	310 mi	498 k
Detroit	190 mi	305 k
Indianapolis	260 mi	418 k
Lansing	100 mi	160 k

MAP 1



Local Area History

The Muskegon area was originally inhabited by the Ottawa and Pottawatomi tribes. The name “Muskegon” is derived from the Ottawa Indian term “Masquigon” meaning “marshy river” or “swamp.” Settlement of the Muskegon area began around 1837 with most of the townships incorporating in the mid to late 1800’s.

The Muskegon area became well known during the lumbering era of the mid 1800’s with sawmills dotting the lakes and rivers throughout the county. Most of the early residents of the area worked in the timber industry as lumberjacks or in the mills. Muskegon became known as the “Lumber Queen of the World.” However, the Muskegon economy was hit hard with the end of the lumber boom in 1890. Local leaders then worked together to rebound the local economy. Soon, their efforts were beginning to pay off, and the Muskegon area was becoming a diversified industrial center. However, when the Great Depression hit in the 1930’s, much of the rebound diminished. The local economy did pickup again during post World War II. In the 1960’s and 70’s, consolidation and mergers with national corporations left few locally-owned businesses in the county. The local economy has been struggling to diversify since that time.

During the early 1900’s, portions of the Muskegon area became resort destinations for vacationers from the Chicago area. These areas included portions of the JPC area including Fruitland, Dalton, and Blue Lake Townships.

Below is a brief history of the five member townships included in the JPC. The summaries were extracted and synopsised from each of the townships’ Master/Land Use Plans or websites.

Blue Lake Township History

In the early years of Blue Lake Township history, the township was referred to as “Thousand Lakes” due to the vast number of local lakes. Austin P. Ware, who settled in the area in 1864, became the township’s first supervisor. The township currently borders Montague and Whitehall Townships to the west; Otto Township, Oceana County to the north; Holton Township to the east; and Dalton Township and the Village of Lakewood Club to the south.

Blue Lake Township experienced its most prosperous years during West Michigan’s lumber age. Consequently, in the 1890’s when the lumbering age came to a halt, many of the residents left Blue Lake Township. The exodus became so severe that the township nearly lost its status as an organized community.

After several years of stagnation the township witnessed a new development trend at the turn of the century. Blue Lake Township became the location for a grand vacation resort, which was developed by Harrison Parker, a former Chicago Tribune business manager, to provide Chicagoans with a relaxing atmosphere far from the heat and stress of the city. According to the Muskegon Chronicle (December 17, 1989; pg 6B), Parker’s original plan was to “entice Chicagoans to the area by offering free 25 x 100 foot lots to anyone attending land expositions at the Chicago Coliseum. All one needed to do was pay a \$3 recording fee and he or she would own a lot in Michigan”. By the 1930’s the resort closed and fell into disrepair.

An extraordinarily similar land development scheme was being contemplated in the southern area of the township, now known as the Village of Lakewood Club, shortly after Parker opened his resort. B.C. Mayo of the Chicago Evening Post bought the extremely inexpensive land surrounding Fox Lake in an effort to increase circulation of the newspaper. He offered the right to purchase a lot on monthly installments of \$2.90 for four months as long as the Post was subscribed to for four months at 30 cents a month. During the Great Depression, many of the lot owners became delinquent on their taxes and were forced to release their titles to the state in lieu of payment and nearly 1600 acres were transferred to the Chicago Boy Scout Council.

One final historical trend, which has survived the longest, also became apparent at the turn of the century. In 1910, Blue Lake Township became the home of Camp Hardy, a summer outpost for the Chicago-based Lawrence Hall Home for Boys. Soon after, the Owasippe Boy Scout Reservation was established in 1911. Since then seasonal camps have dominated the township's landscape. Current examples of the exceptional camps that have graced the township include: Blue Lake Fine Arts Camp, a national leader in fine arts education; Camp Pendaluan, a YFCA sponsored summer camp; Owasippe Scout Reservation, owned by the Chicago Area Council, Boy Scouts of America; Pioneer Trails, hosted by Pioneer Resources; and Gerber Scout Camp, run by the Gerald R. Ford Council, Boy Scouts of America in Grand Rapids.

Dalton Township History

Dalton Township was organized on April 18, 1859 at the home of Edwin Nichols. The township borders Fruitland Township to the west; Blue Lake Township and the Village of Lakewood Club to the north; Cedar Creek Township to the east; and Muskegon Township to the south. The area initially included Fruitland, Whitehall, Dalton, Cedar Creek, Blue Lake, and Holton. The first permanent settler to the area was a fruit farmer named B. F. Dow. Fox Lake School was the first known school in the area built in 1867. The first teacher was Miss Etta Odion (Mrs. James Hiscutt of New York). The school's name was later changed to Knapp School. Similar to the surrounding area, early settlers to Dalton Township were mainly farmers. During the lumber era, saw mills dotted the landscape of the township.

Fruitland Township History

Fruitland Township was organized in October 1869. It was given the name Fruitland, "Land of Fruit," because the soil was thought to be suitable for the growing of fruit. It is the largest township in Muskegon County and larger than the average Congressional Township, encompassing nearly 40 square miles. The Township borders Lake Michigan to the west; White Lake, the City of Whitehall, and Whitehall Township to the north; Dalton Township and the Village of Lakewood Club to the east; and Laketon Township to the south.

The old government channel between White Lake and Lake Michigan was located about one mile north of the present channel, which was constructed to accommodate larger ships. The White River Light Station was built in 1875 to complement the new channel. Captain William Robinson was appointed first Light Keeper, guiding ships to Whitehall and Montague for refuge with a coal oil lamp. He held the position for almost half a century, until his death in 1919. His grandson, William Bush, succeeded him and remained Light Keeper until the Coast Guard officially abandoned the lighthouse in 1941. For over thirty years the lighthouse was rented

out to families. In 1970, it was purchased from the U.S. Government. In 1971, its original lamp, which had been in storage at the Smithsonian Institute, was returned and the lighthouse was opened to the public as a museum.

Until 1900, when shoreland resorts became popular, land bordering White Lake, Duck Lake, and Lake Michigan was considered undesirable because it wasn't suitable for farming. Many resorts soon appeared throughout the township, including Belleview Resort, Murray's Inn, Sylvan Beach Hotel, Michillinda Pines, Fernwood, Fairview Resort, Bonne Vista, The Locusts, Hayward Park, Lakeside Inn, Duck Lake Inn, Lakeview Farm, Rubin's Resort, and Michillinda Tavern. A boat livery stood where Scenic Drive now dead-ends into White Lake. Owner Ed Wilson built, rented, and stored rowboats and sailboats, along side his bowling alley, billiard room, ice cream parlor, candy shop, and slot machines.

Every weekend, during the resort season, the Goodrich Boats (Great Lake Steamers) brought Chicago tourists (resorters) to White Lake and hauled freight from Chicago to Muskegon. They docked at Sylvan Beach, Michillinda, Whitehall, and Montague. Vacationers were transported to area resorts by horse and buggy. By 1923, the docks had deteriorated, the boats stopped coming and, today, most of the resorts are gone.

Laketon Township History

Laketon Township was organized on March 8, 1865 and was the 11th of 16 townships in Muskegon County. The township currently is bordered by Lake Michigan to the west; Fruitland Township to the north; Muskegon Township to the east; and Muskegon Lake, Bear Lake, and the City of North Muskegon to the south.

In the early days, Laketon Township was very rural in nature. Transportation consisted of boats in the summer and sleds or foot travel in the winter to get across the lakes. As more people arrived they began to create paths through the woods. Territorial legislation required all able bodied males, except clergymen, age 21 – 50 to help work on the roads for a minimum of two days and up to a maximum of 50 days per year. The dirt and gravel paths in 1900 led to over 100 miles of roadway covered with either concrete or macadam (a pavement of layers of compacted small stone usually bound with tar or asphalt). In the 1920's this was used to provide good roadways for the growing number of automobiles.

Also in those early days of Laketon Township, policing was at its most provincial, consisting of only one elected constable in 1883. There were four constables from 1885 until the 1950's. Today, the Township contracts with the Muskegon County Sheriff's Department for its policing.

Healthcare at the time was very primitive, as it was all over the young nation. People took care of their own injuries and illnesses. Delivering babies at home and folk remedies were the norm. In 1883, Dr. N.W. Andrews was paid \$200.00 per year for his service as a Health Officer of the township. He was the only doctor close to Laketon Township with his office in North Muskegon above the drug store.

Formal education was also beginning to emerge in the area. Schools were log buildings with few windows where students sat on benches or stools instead of desks. The school terms were only three months in the beginning and parents

helped pay teachers salaries and other needs. State funded education was slowly emerging. By 1869 free schools were all over the State of Michigan, however, state aid was added to the taxes collected by the townships. By 1895 children had to attend school four months a year and by 1905 school districts were able to set the “school year” for themselves and children had to attend a full “school year.” Laketon students attended the high school in North Muskegon from 1934 until they could attend high school at Reeths-Puffer High School in 1964.

Muskegon Township History

Muskegon Township was established as part of Ottawa County in 1837, embodying an enormous area. Muskegon Township has the distinction of being the oldest township in the State of Michigan. By 1865, Norton Township (including Fruitport), White River, Egelston and Laketon Townships were established, thereby diminishing Muskegon Township. By 1869, the City of Muskegon withdrew from the township. In early days, land in the township was primarily used for farms, orchards and lumber.

The township is currently bordered by the City of Muskegon, Muskegon Lake, and Laketon Township to the west; Dalton and Cedar Creek townships to the north; Egelston Township to the east; and the City of Muskegon Heights and Fruitport Township to the south.

In 1880, the township’s population was 924; by 1894, it reached 1,551. Due to annexations and establishment of other townships, however, the population of Muskegon fluctuated wildly. In 1930, 10,232 inhabitants were recorded, but only 6,067 in 1940, due to the loss of the land between Getty and Harvey Streets. Despite further annexations in the 1940’s, the population reached 12,757 in 1950.

The township was chartered in 1987. It encompasses approximately 23 square miles of the suburban periphery of the City of Muskegon. Over the past 75 years, the township has experienced successive waves of suburban growth beginning in the early decades of the 20th Century and reaching its apex in the post war period. The source of most of this growth was the expansion of the industrial economy of the City of Muskegon.

As the township grew and took on the trappings of “civilization,” greater obligations were assumed in response to growing demands for services and changing attitudes about the role and nature of government. Through a contract with Muskegon Heights, it voted to provide fire protection services. In 1944, a volunteer fire department was established, evolving to a staff of several paid professional fire fighters in addition to volunteers. The township has seen fit to create its own full time police department. It also has built and operates its own playfields and parks.

Chapter III: Community Facilities and Services

Local Government

Townships are a product of Michigan's early history. Michigan is one of 20 states that currently have some form of township government. There are two types of townships in Michigan including general law and charter townships. Among the five townships which comprise the North Central Muskegon County Joint Planning Commission (JPC), four are general law townships. These four townships include Blue Lake, Dalton, Fruitland, and Laketon. Muskegon Township is a charter township. In 1947, Michigan Legislature enacted the Michigan Charter Townships Act to provide additional powers and reorganize administration for governing growing communities. The organization and powers of charter townships and general law townships are fairly similar in most areas. There are however three main areas of difference. First of all, a charter township supervisor is given greater control over everyday operations of the township; secondly, the borders of a charter township are protected against contested annexations; and finally, charter townships have enhanced taxing powers. In 1987, Muskegon Township took on the status of a charter township.

Each of the townships function under the direction of the township board consisting of a supervisor, treasurer, clerk, and either two or four trustees. Each of the board members are elected as representatives of the citizenry. Below is a summary chart of the five township board structures and meeting schedules.

Table 2

Township Board Structure				
Township	# Board Members	Length of Term	Monthly Meeting Schedule	Meeting Times
Blue Lake	5	4 years	2 nd Monday	7:30 PM
Dalton	7	4 years	2 nd Monday	7:00 PM
Fruitland	7	4 years	3 rd Monday	7:00 PM
Laketon	5	4 years	3 rd Monday	6:00 PM
Muskegon	7	4 years	1 st & 3 rd Monday	7:00 PM

Source: WMSRDC

Each township also has a five-member planning commission. Blue Lake, Fruitland, Laketon, and Muskegon Township Planning Commissions are appointed by the Township Supervisor, with approval by the Township Board, for three year staggered terms on an at-large and non-partisan basis. The Dalton Township Planning Commission is appointed by the Township Board also for three-year terms. The townships also have varying other committees to assist with the function and responsibilities of the townships such as Zoning Boards of Appeals, Recreation Committees, and Fire Committees, to name a few.

The JPC structures as an advisory committee to each of the five Township Boards and Planning Commissions. The ten-member JPC committee is comprised of an elected official from each Township Board and an appointed official from each Planning Commission. The JPC meets regularly on the fourth Wednesday of every month at 3:00

PM in the offices of the West Michigan Shoreline Regional Development Commission located at 316 Morris Avenue, Suite 340, in downtown Muskegon. Listed below are the original members of the JPC committee and the community they represent.

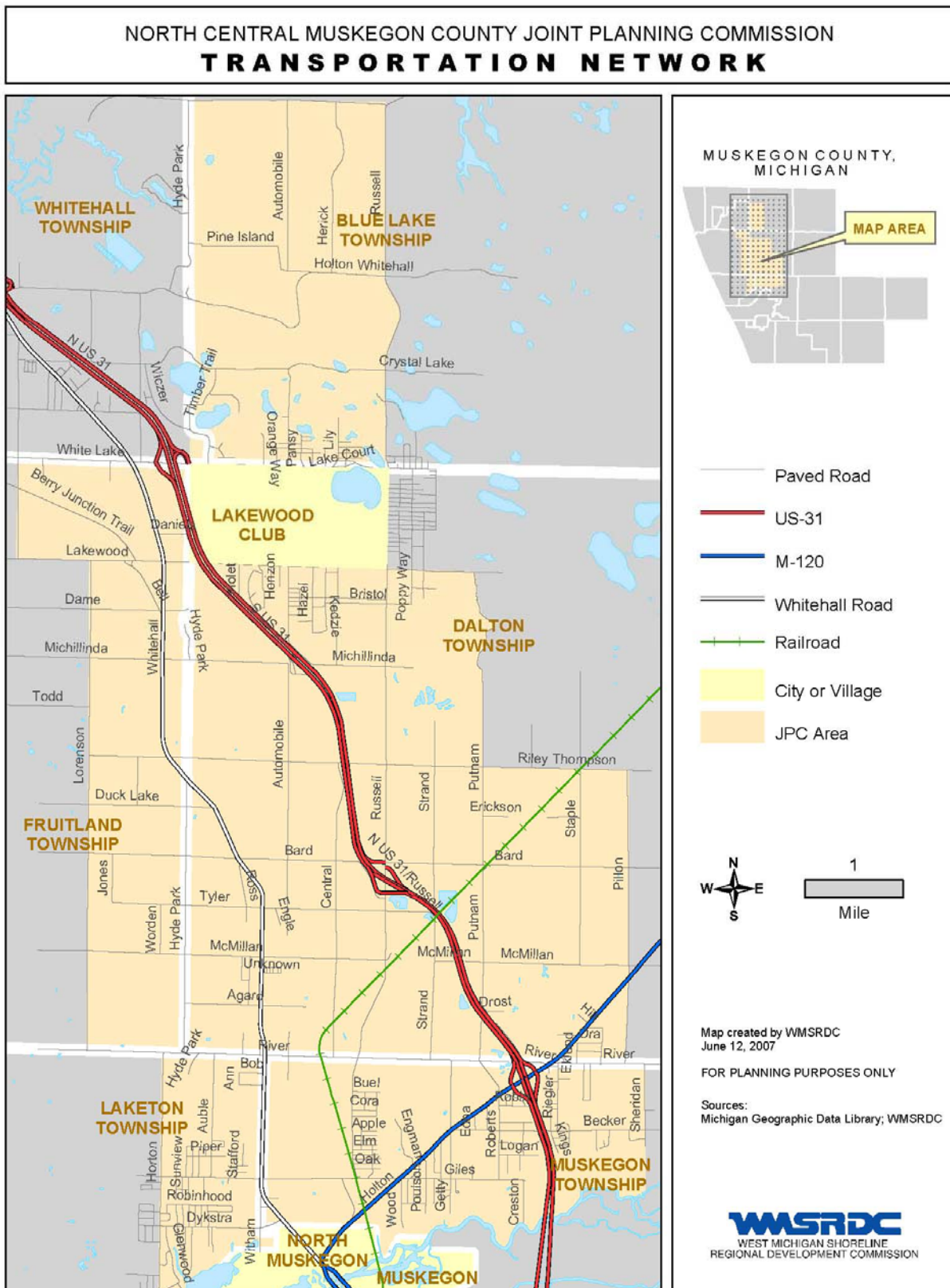
Table 3

JPC Committee Members			July 2007
Township	Planning Commission Delegate	Elected Official Delegate	
Blue Lake	Brian Skogler, Planning Commissioner	Lyle Monette, Trustee	
Dalton	Howard Trygstad, Planning Commissioner	Scott Hladki, Supervisor	
Fruitland	Mary Eley, Planning Commission Chair	Greg Boughton, Supervisor	
Laketon	Mary Marcil, Planning Commission Chair	Roland Crummel, Supervisor	
Muskegon	Carol Carter, Planning Commissioner	Scott Plummer, Trustee	

Transportation

The JPC designated planning area has a good transportation system. It is serviced by three major transportation routes including US-31, M-120, and Whitehall Road. US-31 transverses the area in a north/south direction and has three interchanges within the JPC area. These interchanges occur at M-120 in the southern portion of the area, at Russell Road in the central portion of the area, and at White Lake Drive to the north. The M-120 corridor runs in an east/west direction in the southern section of the JPC area. The Whitehall Road corridor is located west of and runs parallel to US-31. Both US-31 and Whitehall Road connect travelers between the Muskegon metropolitan area and the White Lake area. The remainder of the transportation network within the JPC area follows the quarter-mile street grid, such as many townships in Michigan. Many of these streets are classified as local county roads maintained by the Muskegon County Road Commission.

Map 2



Listed below are proposed future transportation projects within the JPC area, which are eligible to receive federal transportation funding. These projects have been identified in either the WestPlan Long Range Transportation Plan or the WestPlan Transportation Improvement Program for the Muskegon metropolitan area.

Table 4

Long Range Transportation Plan: Improve and Expand Project List				
Project Name	Limits	Work	Years Worked	Total Cost
Whitehall Road	Giles to Riley-Thompson	Reconstruct from 2 to 4.5 lanes (dedicated turn lane) - 4 miles	FY 2007-2015	\$2,500,000
Russell Road	US 31 to Riley-Thompson	Reconstruct from 2 to 4 lanes - 1.25 miles	FY 2010-2015	\$2,000,000
Giles Road	Whitehall to 100 ft west of M-120	Reconstruct from 2 to 3 lanes, widen bridge (dedicated turn lane) - 1.5 lanes	FY 2015-2030	\$600,000
			Total	\$5,100,00

Source: WMSRDC

Table 5

Transportation Improvement Program: Preserve and Maintenance Projects					
Project Name	Limits	Work	Length	Years Worked	Total Cost
River Road	M-120 to Sheridan	Crush & Shape base, widen shoulders	5,280 ft	FY 2006	\$250,000
Whitehall Road	Giles to North Muskegon limits	Cold Milling, HMA Overlay	3,100 ft	FY 2007	\$180,000
Russell Road	Giles to River	Crush & Shape base, widen shoulders, HMA paving	6,550 ft	FY 2008	\$169,900
Giles Road	M-120 to Whitehall		7,600 ft	FY 2011	\$475,000
				Total	\$1,074,900

Source: WMSRDC

Identified below are traffic counts for some of the major roads within the JPC area.

Table 6

Traffic Counts for Selected JPC Roads					
Township	Road	Direction	Location	Avg Daily Traffic	Count Date
Dalton Twp	Russell	2-Way	4/10 mi S of White Lake Dr	3,459	6/2/2004
Dalton Twp	Russell	2-Way	2/10 mi S of Tyler	1,627	09/29/2004
Dalton Twp	Russell	2-Way	Just N of Tyler	3,672	09/29/2004
Dalton Twp	Russell	2-Way	4/10 mi N of River	1,638	09/29/2004
Dalton Twp	River	2-Way	Just E of Old Orchard	8,546	09/20/2004
Dalton Twp	River	2-Way	4/10 mi E of Dalson	1,848	06/07/2005
Dalton Twp	US-31	SB	Russell (B23) to White Lake Dr	12,915	06/23/2003
Dalton Twp	US-31	2-Way	Russell (B23) to White Lake Dr	22,800	00/00/2004
Dalton Twp	US-31	2-Way	M-120 (Holton Rd) to Russell (B23)	32,100	00/00/2004
Dalton Twp	Whitehall	2-Way	1/10 mi N of McMillan	9,576	06/01/2004
Fruitland Twp	Whitehall	2-Way	7/10 mi N of Riley-Thompson	6,309	06/01/2004
Fruitland Twp	Whitehall	2-Way	1/10 mi S of Lakewood	5,123	06/01/2004
Laketon Twp	Whitehall	2-Way	6/10 mi S of River	10,511	06/01/2004
Muskegon Twp	Giles	2-Way	2/10 mi W of Holton Rd (M-120)	7,064	09/29/2004
Muskegon Twp	M-120 Holton Rd	2-Way	1/10 mi west of US-31 interchange	18,864	10/07/2003
Muskegon Twp	M-120 Holton Rd	2-Way	Just east of US-31 interchange	29,755	10/07/2003
Muskegon Twp	US-31	2-Way	BUS 31 N to M-120 (Holton Rd)	45,100	00/00/2004
*ADT Colors =		Less than 5,000	Between 5,000 and 10,000	Greater than 10,000	

Source: WMSRDC

Public transit within the JPC area is provided by the Muskegon Area Transit System (MATS) GoBus. The GoBus is available to seniors and persons with disabilities who are unable to use the regular line haul service.



Muskegon County receives its local air service from the Muskegon County Airport. The airport is located just south of the JPC area in the City of Norton Shores. The Muskegon County Airport provides space for major commercial airlines, executive charter services, and private hangars. Northwest Airlines, and Midwest Airlines are the two major commercial airlines which provide daily service to major airline hubs.



Local rail service is provided by both CSX Transportation and the Michigan Shore Railroad. There is an abandoned railroad line which bisects the northeast corner of Dalton Township. This railroad is in the process of being converted to the Fred Meijer Berry Junction Trail.

The two major ports servicing the JPC area are White Lake to the north and Muskegon Lake to the south. The Lake Express Ferry provides water travel to area residents, tourists and business travelers across Lake Michigan. The ferry is a newly built, state-of-the-art, high-speed auto/passenger ferry. It has

offered the approximately 2½ hour trip across Lake Michigan between Muskegon, Michigan and Milwaukee, Wisconsin since 2005. The ferry runs several times per day between the months of April and October.

Two extensive transportation/corridor studies have recently been completed within the JPC area. The studies include the M-120 Corridor Study and the North Central Muskegon County Transportation and Land Use Study. These studies and their findings are summarized below.



M-120 Corridor Study

The West Michigan Shoreline Regional Development Commission (WMSRDC) led a cooperative planning effort to study the M-120 transportation corridor. The study was completed in March of 2000 and had several project partners, two of which included Muskegon and Dalton Township, among others. The purpose of the study was to focus on development and access management issues for the entire corridor. In the development of the study, the M-120 and US-31 interchange was identified as one of the most troublesome areas of the corridor. As a result of the M-120 Corridor

Study, as well as additional studies, the intersection was reconfigured to utilize a loop entrance ramp for southbound US-31 traffic. Although the study focused on the entire corridor, it provided specific recommendations for each of the local units of government, as well as general recommendations for the entire corridor. It is important to note that the study and its recommendations were accepted and adopted by both Dalton and Muskegon Townships. An executive summary of the M-120 Corridor Study can be found in Appendix C. Listed below are some of the recommendations of the M-120 Corridor Study.

- Improve coordination of land use and transportation decisions.
- Limiting the number of curb-cuts.
- Improving internal site circulation patterns.
- Enforce access regulations through the site plan review process and overlay zoning.
- Utilize Planned Unit Developments (PUDs) along the corridor.
- Preserve and, in some cases, even increase roadway capacity.
- Decrease traffic congestion, thereby, increasing travel efficiency and reducing air pollution.
- Reduce traffic conflicts, which in turn will reduce crashes or at least crash potential.
- Improve access to properties.

North Central Muskegon County Transportation and Land Use Study

The study took a comprehensive look at north-central Muskegon County in terms of existing and future transportation and land use. The key area of focus concentrates on the area surrounding Michigan's Adventure, expanding by approximately one mile in all directions of Whitehall Road, US-31, Holton-Whitehall/Colby Road, and M-120. Project partners for the study included all five member townships of the JPC, WMSRDC, among others.

Existing transportation and land use data were collected, resulting in a series of maps, which were then projected into the year 2030. Maps and a summary from the study can be found in Appendix C. The land use data was emulated after the Smart Growth Scenario, which was determined through the Muskegon Area-wide Plan (MAP) project. Overall, the North Central Muskegon County Transportation and Land Use Study provides guidelines for the future development of north-central Muskegon County and a mechanism to develop and promote the area in a positive way for the surrounding communities within the region.

Parks and Recreation

Muskegon County is blessed with abundant park and recreational facilities. Given the county's close proximity to Lake Michigan, and its numerous other natural areas, it's no surprise that recreation plays a significant role in Muskegon's culture and economy. There are several parks and attractions within the boundaries of the JPC area. These facilities include local township parks, privately owned facilities, as well as state and federally owned lands. Listed below are the recreational facilities located within the JPC area and a description of each.

Beegle Sports Park

Beegle Sports Park is a 19 acre community park located in Dalton Township on Tyler Road. The park offers a ball field, two soccer fields, a basketball court, playground equipment, and picnic area. The township also has plans for future expansion of the park.

Bent Pine Golf Club

Bent Pine Golf Club is an 18-hole public golf course located on Duck Lake Road in Fruitland Township. The course is regulation length and offers cart rentals, club rentals, a clubhouse, pro shop, putting green, and watered fairways.

Blue Lake Fine Arts Camp

Blue Lake Fine Arts Camp is a national leader in the instruction of fine arts to youth from around the world. Many of the students who attend the summer sessions come from as far as Europe, Asia, and South America, thanks to the International Exchange Program. The 1,300-acre camp opened in 1966 on the shores of Little



Blue Lake, at the same site as a previous camp, Camp Hardy. Hardy, the first camp located in Blue Lake Township, began operation in 1910. Its operator and owner was the Chicago-based Lawrence Hall Home for Boys.

In its first year, Blue Lake Fine Arts Camp hosted 50 students. The approximate annual enrollment is currently 5,000 students. The cost for a two-week session is approximately \$910. The concentrations taught at the

camp include: choir, band, visual art, theater, piano, and other fine arts. The camp accommodates elementary, middle school, and high school students. Financial aid is available for many of the students that meet certain criteria, such as audition or portfolio, arts instructor recommendations, and in some cases, financial need. The camp is an inclusive facility, providing housing, dining, and entertainment for its campers. Many popular entertainers have visited the camp, including the U.S. Army Field Band, U.S. Navy Band, Bill Cosby, Bob Hope, Count Basie, Dizzy Gillespie, and Victor Borge. Blue Lake has had over 250,000 campers in its first 40 years of operation, and continues to grow every year.

Website: <http://www.bluelake.org/>

Buel Park

Buel Park is located in Muskegon Township along Buel Road near Russell and River Roads. The neighborhood park offers basketball courts, ball fields, picnic and restroom facilities, and playground equipment.

Camp Lor-Ray

Camp Lor-Ray is a 165-acre privately owned campground for Evangelical Lutheran Synod and Wisconsin Evangelical Lutheran Synod churches and families. The

campground includes a family camp and a kids camp with a variety of amenities. It is located off of Russell Road in Dalton Township.

Website: <http://www.camplor-ray.org/>

Chase Hammond Golf Course

Chase Hammond Golf Course is well known for its heavily tree-lined fairways. It is an 18-hole public golf course offering an 18 hole course with a practice area complete with a driving range and putting green. The course is located in Dalton Township just off Putnam Road on Drost Road.

Website: <http://www.chasehammondgolfclub.com/>

Dog Star Ranch

The Dog Star Ranch is a 48-acre canine facility which offers wooded walking trails, two ponds, fenced dog parks, agility courses, canine excavation area, grooming, interactive daycare program, and a five star boarding facility. The Ranch is located in Dalton Township at the intersection of Whitehall Road and Duck Lake Road.

Website: <http://www.dogstarranch.com/>

Lake Sch-Nepp-A-Ho Family Campground

Lake Sch-Nepp-A-Ho Family Campground is located in Dalton Township along Tyler Road near U.S. 31. The campground has 100 wooded and lake sites offering restrooms facilities, recreational activities, recreation hall, water activities, and a store.

Website: <http://www.michigan-campgrounds.com/>

Lincoln Golf Course

The Lincoln Golf Club was established in 1927. It is a 182-acre semi-private club offering an 18-hole golf course, a club house, a pro shop, and restaurant. The facility is located in Fruitland Township along Whitehall Road and just across from Michigan's Adventure Amusement Park.



Website:
<http://www.lincolngolfclub.net/index.html>

Michigan's Adventure Amusement Park

Michigan's Adventure Amusement Park is the largest amusement park in the state of Michigan and is a major tourist attraction. It is located in both Dalton and Fruitland townships along Whitehall Road. The park opened in 1956 as Deer Park Petting Zoo. In 1968 the park changed ownership and was renamed Deer Park Funland, at which time it was redeveloped into an amusement and water park. In 1988 the park was once again renamed to Michigan's Adventure. Finally in 2001, the park was

purchased by Cedar Fair, a national amusement park entertainment company. Today, the park boasts two parks; an amusement and water park; for the price of one. This includes six roller coasters and 15 water rides. Attendance for Michigan's Adventure reached 550,000 for the 2005 season (an 18% increase from 2004), which runs from May through September.



Website: <http://www.miadventure.com/>

Mullally Memorial Park

This 70-acre park is operated and maintained by Laketon Township. It served as the township commons, festival grounds and sports complex. The park features numerous ball fields, playground equipment and basketball and tennis courts, and is the site for the township's annual "Summer Celebration" community fair. Mullally Park is located on Horton Road in Laketon Township.

Muskegon KOA

KOA of Muskegon is located in Dalton Township on Strand Road near U.S. 31. The facility offers tent and RV sites, one and two-room cabins, restroom facilities, recreational facilities, water activities and Saturday night hay rides.

Website: <http://www.muskegonkoa.com/>

Muskegon State Game Area

The Muskegon State Game Area is approximately 10,500 acres of state protected land along the Muskegon River watershed and located partially in Muskegon Township. The Game Area is owned and maintained by the Michigan Department of Natural Resources. It is a designated wildlife sanctuary which is primarily forested, with river floodplains and wetlands spread throughout the area. The Game Area attracts numerous varieties of waterfowl including Mallards, blue-winged teal, Canada geese, and occasionally bald eagles. The area can be experienced through hiking and canoeing as most of it is inaccessible by vehicles.



Website: <http://www.dnr.state.mi.us/>

Owasippe Scout Reservation

The oldest and largest operating camp in Blue Lake Township belongs to the Chicago Area Council Boy Scouts of America. Established in 1911, it boasts the title of the oldest continuous Scout Camp in the nation and is one of the five largest BSA-owned parcels in their "Central Region," which encompasses 16 states in the Midwest. Camp Owasippe encompasses about 4,766 acres of land in the middle of

Blue Lake Township, and is therefore very important to the township from several standpoints. With regard to land use, social activities, and economic and environmental concerns, the Boy Scouts of America have a significant influence in the township.

Scout camping is not the only recreational use of the Owasippe Scout Reservation property. Throughout the year, it is frequently used by the public for activities such as hiking, mountain biking, cross-country skiing, fishing, and hunting.

According to a 2002 Nature Conservancy report, the property is also home to 19 animal species which have been listed by the State of Michigan as being threatened, endangered, or having “special concern,” three of which are also listed at the federal level by the 1998 Federal Endangered Species Act. These three animals are the Karner Blue Butterfly (endangered), Bald Eagle (threatened), and the Eastern Massassauga Rattlesnake (candidate for federal status). In 2007, the Bald Eagle was removed from the federal endangered species list. Although it was determined to be no-longer endangered or threatened at the national level, the Bald Eagle retained its “threatened” status in the State of Michigan.



In addition to Boy Scout Camps Blackhawk, Carlen, Lope, Crown, and Wolverine, Owasippe offers the Reneker Family Camp, providing a place for spouses and families of Scout Leaders to enjoy Owasippe while they are in camp. Boy Scouts annually populate the Owasippe Scout Reservation during the summer months of June, July, and August. At its peak in the 1960's, Owasippe annually hosted about 13,000 Boy Scouts, and had a capacity of 16,000. Since then, however, the number of campers has reduced to approximately 1,300 Chicago-area Boy Scouts and approximately 1,300 Boy Scouts from other areas.

Because of this reduction in campership and its financial situation, and after years of consideration, the Chicago Area Council resolved in 2002 to sell the property. By 2004, the Boy Scouts had a prospective buyer and had asked the township for a rezoning request as a prerequisite to the sale of Owasippe. The request called for approximately 3,500 acres at Owasippe to be rezoned from forest/recreation to residential, allowing for the development of homes, condominiums, and camping lodges.

Website: <http://www.chicagobsa.org/Owasippe.htm>

Reeths-Puffer High School

Reeths-Puffer High School is located in Muskegon Township on Roberts Road. It is home to a variety of typical high school athletic facilities including the Rockets Arena (indoor gymnasium) and the Rockets Stadium (outdoor football & track facility).

Also located on the high school premises is the Rocket Centre for the Fine Arts. This is a 1,000-seat auditorium available for use by Reeths-Puffer Schools and the surrounding community.



Website: <http://www.reeths-puffer.k12.mi.us/>

Riverside Park

Riverside Park is a Muskegon Township park located near Giles Road east of Getty Street north of the Muskegon River. The park amenities include tennis and basketball courts, ball fields, a nature trail, picnic facilities, and playground equipment. The park is also located along the north channel of the Muskegon River.

Thunderbird Race Park

The Thunderbird Race Park is located in Dalton Township on Riley Thompson Road. It offers a 3/8 mile clay oval track, a drag strip, and a motocross track. Races typically run April through September.



Website: <http://www.thunderbirdracepark.com>

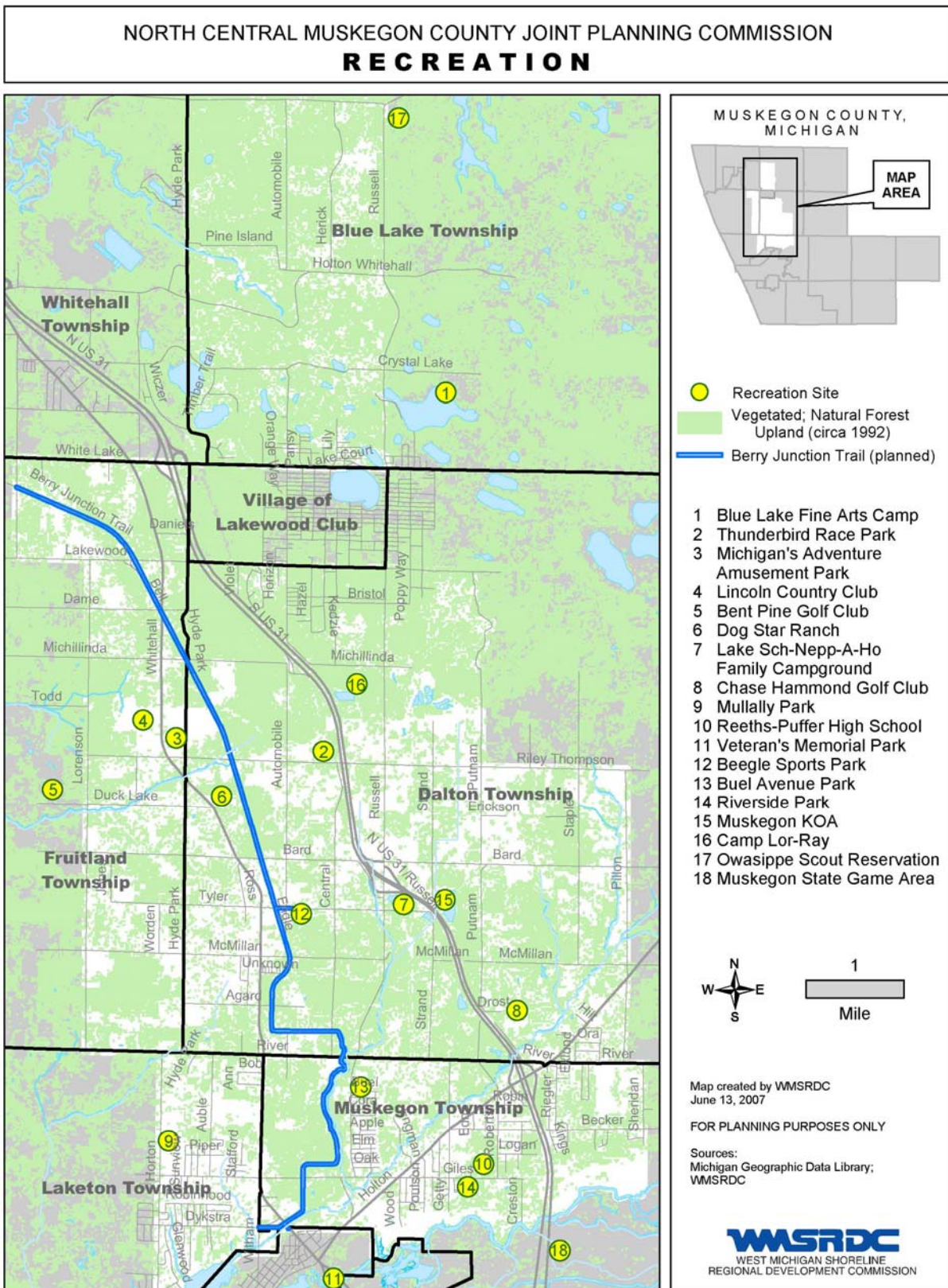
Veterans Memorial Park

Veterans Memorial Park is a 28-acre lowland park containing a lagoon and island with several war memorials. A large fountain anchors the south end of the park. The park is located along the Causeway just south of the JPC area. The Veteran's organization just completed a concrete walkway throughout the park. This property is owned by the county but maintained by the City of Muskegon.



Website: <http://www.muskegon-mi.gov/community/parks/park.asp?ParkID=27>

Map 3



Schools

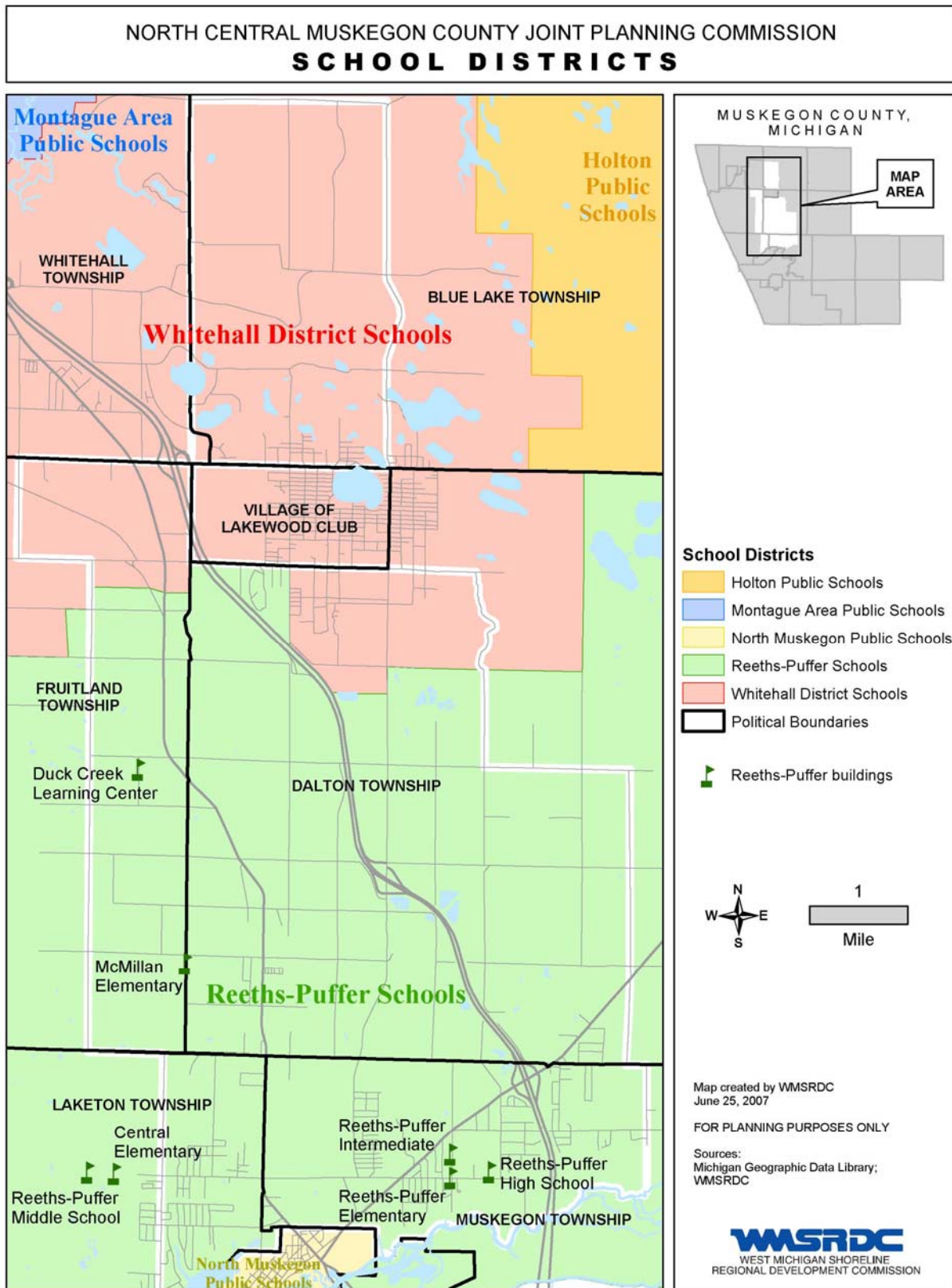
The North Central Muskegon County JPC is covered by two school districts including Reeths-Puffer School District to the south and Whitehall School District to the north. Table 7 contains key statistics for each of the school districts.

Table 7

School District Key Statistics		
	Reeths-Puffer	Whitehall
Grade Levels Offered	Pre K – 12	Pre K – 12
# Students	4,484	2,173
# Full-Time Teachers	257	125
Student/Teacher Ratio	17.4:1	17.4:1

Source: www.homes101.net

Map 4



Fire and Police

There are four fire departments servicing the JPC area including the Blue Lake Fire Department, Dalton Fire Department, Muskegon Township Fire Department, and the White Lake Fire Authority. However, only two fire stations are located within the JPC boundary as can be seen on Map 5. It is important to note that the White Lake Fire Authority services Fruitland Township and the Muskegon Township Fire Department services Laketon Township. All of the fire departments utilize automatic and mutual aid agreements with neighboring jurisdictions to deliver life-safety services to citizens in the most rapid and efficient manner possible, as well as to assist other areas/departments if necessary.

Table 8

Fire Department General Information				
Department	# of Stations	# of Firefighters		# of Firefighting Emergency Vehicles
		Full-Time	Part-Time Volunteers	
Blue Lake	2	---	14	9
Dalton	1	1	23	9
Muskegon Township	2	12	21	14
White Lake Fire Authority	2	---	24	10

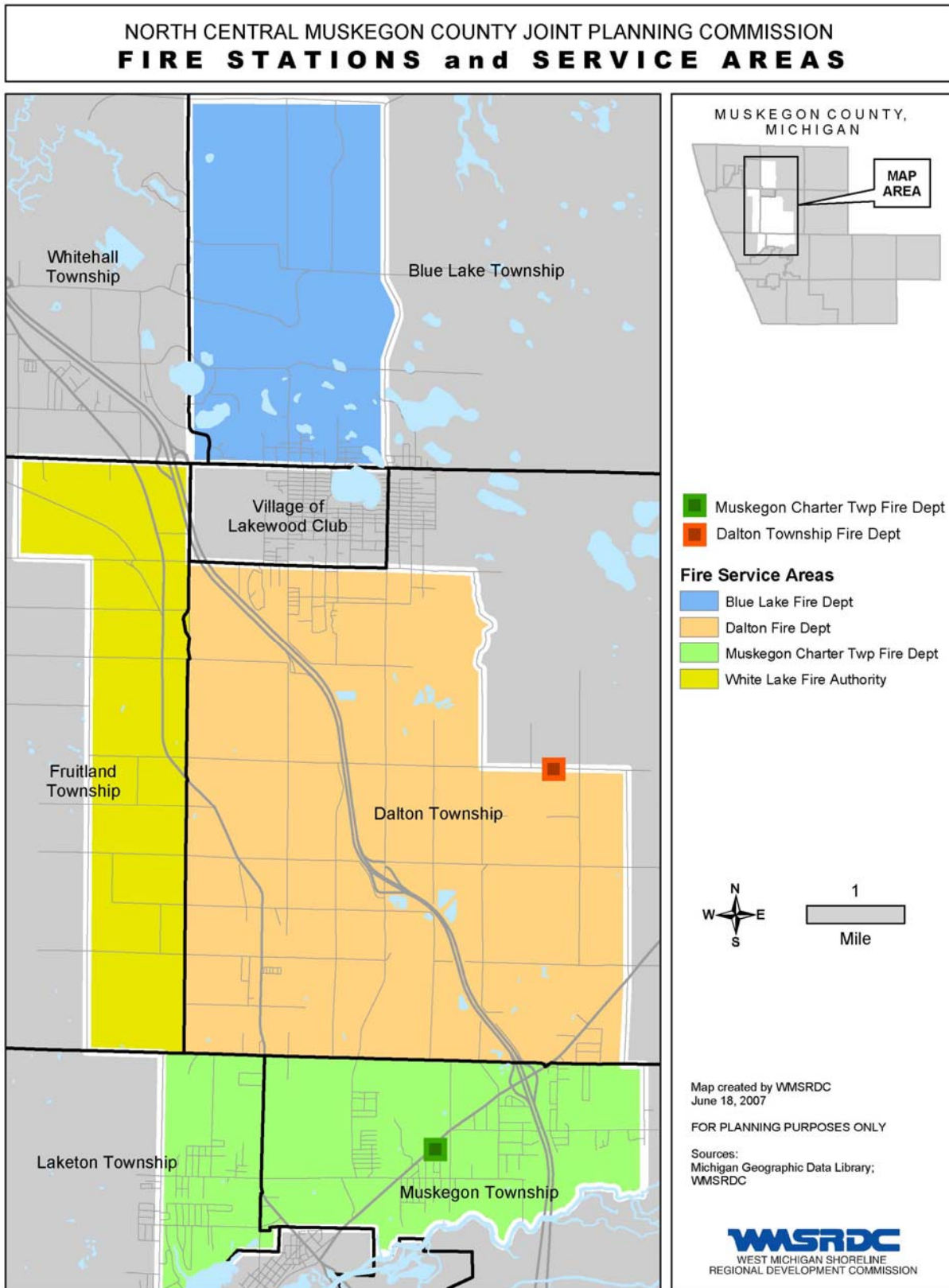
Table 9

Fire Department Average Response Time (min)	
Department	Time
Blue Lake	6 – 10
Dalton	7
Muskegon Township	3 – 5
White Lake Fire Authority	5.49 – 8.39

Source: Muskegon Area-wide Plan (MAP)

Of the five JPC member townships, Muskegon Township is the only township to operate its own police department. The remaining townships are policed by the Muskegon County Sheriff's Department and the Michigan State Police posts located in Grand Haven (Ottawa County) and Hart (Oceana County). The Muskegon Township Police Department is housed in the Township Hall located on Apple Avenue. The police force consists of 15 full-time officers and one part-time officer utilizing seven police vehicles.

Map 5

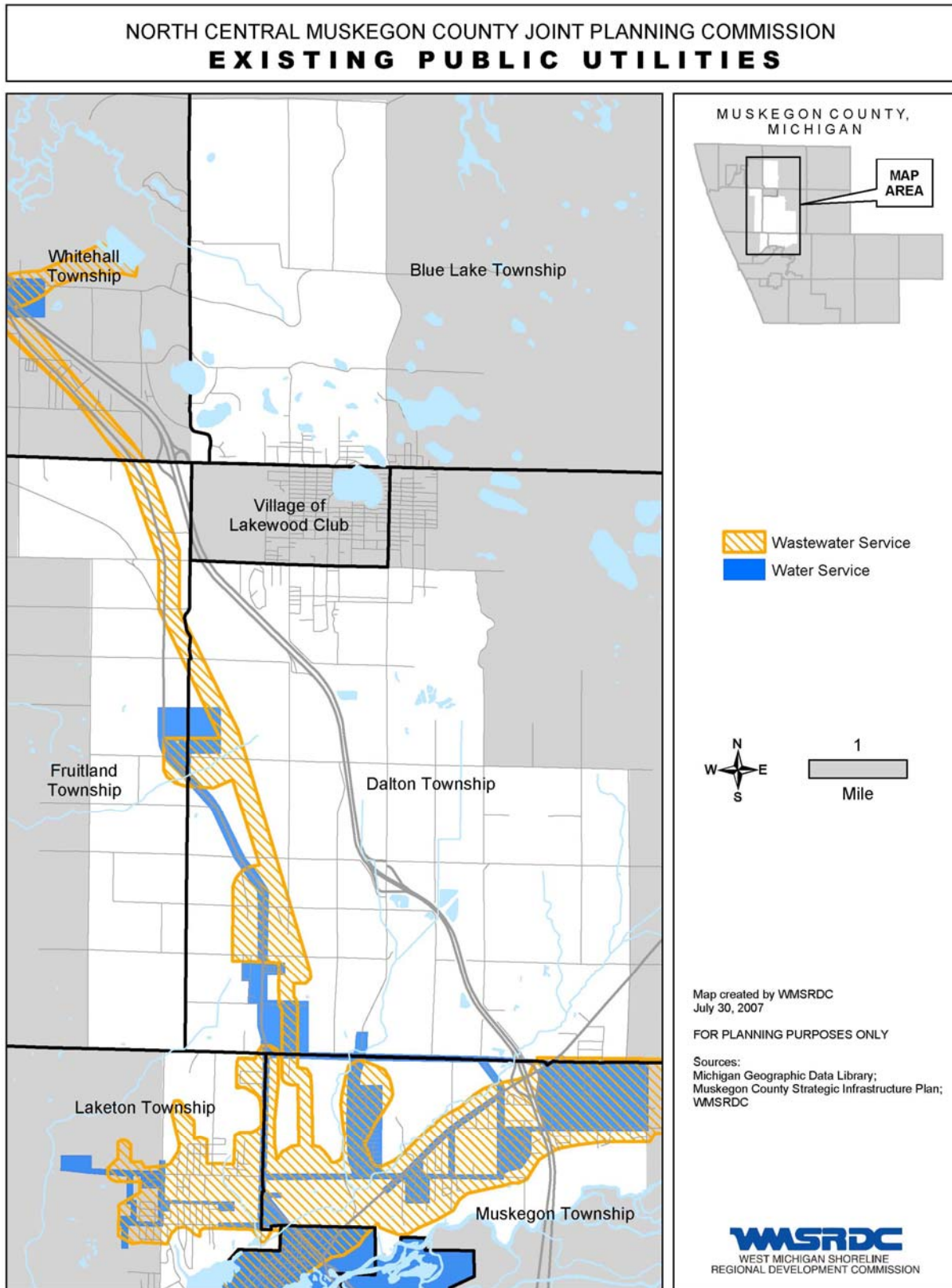


Public Utilities and Infrastructure

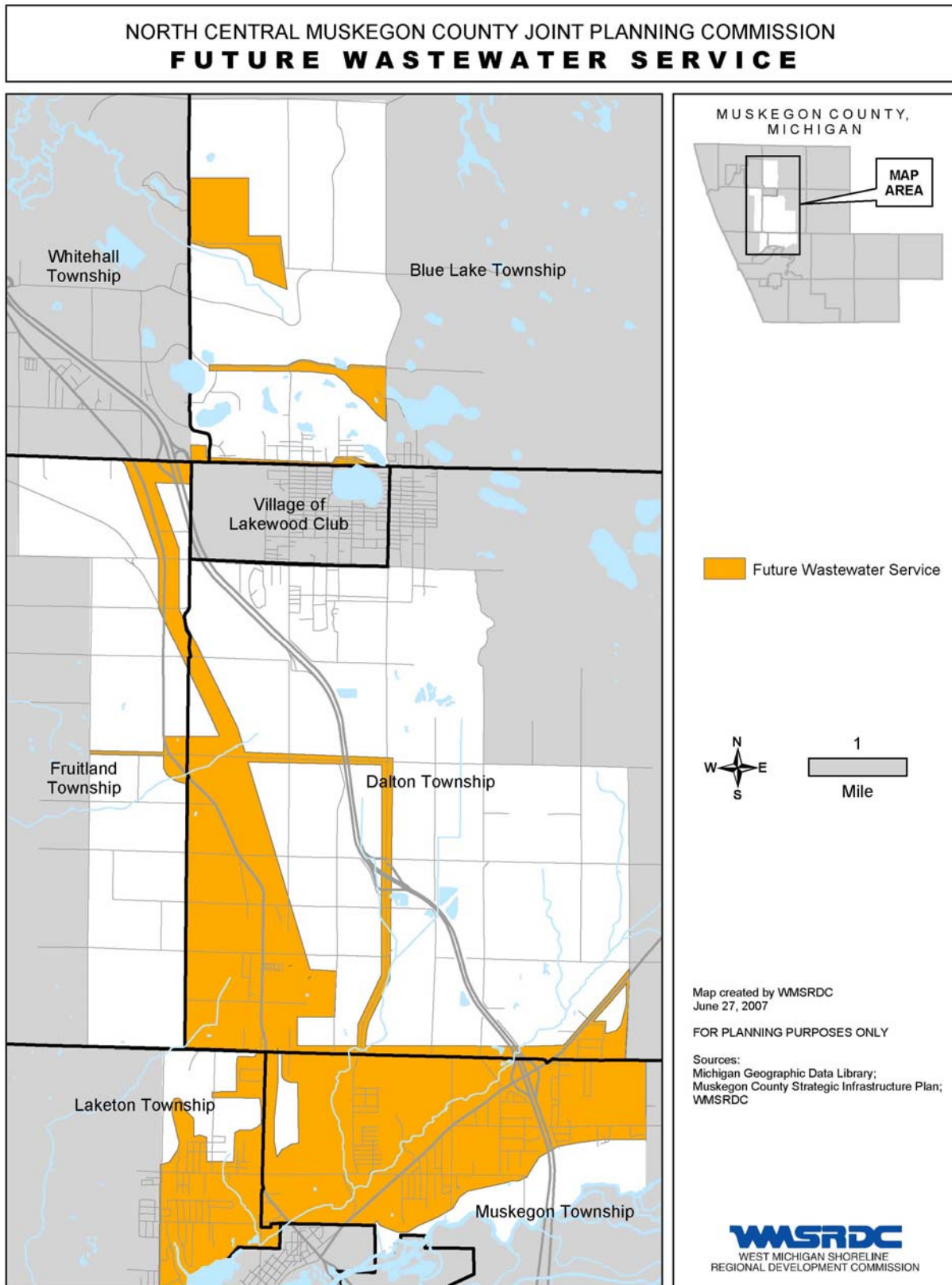
Public utilities including water and sewer infrastructure have been concentrated mainly within the southern portion of the JPC area. However, in recent years significant local investment and expansion of both water and sewer has occurred spreading the infrastructure northward into the area. The map on the following page identifies existing water and sewer service area within the JPC boundary.

During the fall of 2005, the West Michigan Shoreline Regional Development Commission was commissioned by the County of Muskegon to prepare the Muskegon County Strategic Infrastructure Plan. The plan was prepared under the direction of an oversight committee comprised of representatives from the County of Muskegon, local units of government, and other interested parties from the private and public sectors. The scope of the plan was to identify and map existing infrastructure within the County of Muskegon and identify future areas of expansion, including a Jurisdictional Vision, County-wide Community Vision, and Combined Vision. The study also identified infrastructure goals and objectives, as well as provided institutional infrastructure recommendations. Maps 7 and 8 on the following pages show the combined vision for the future water and sewer service areas within the JPC area.

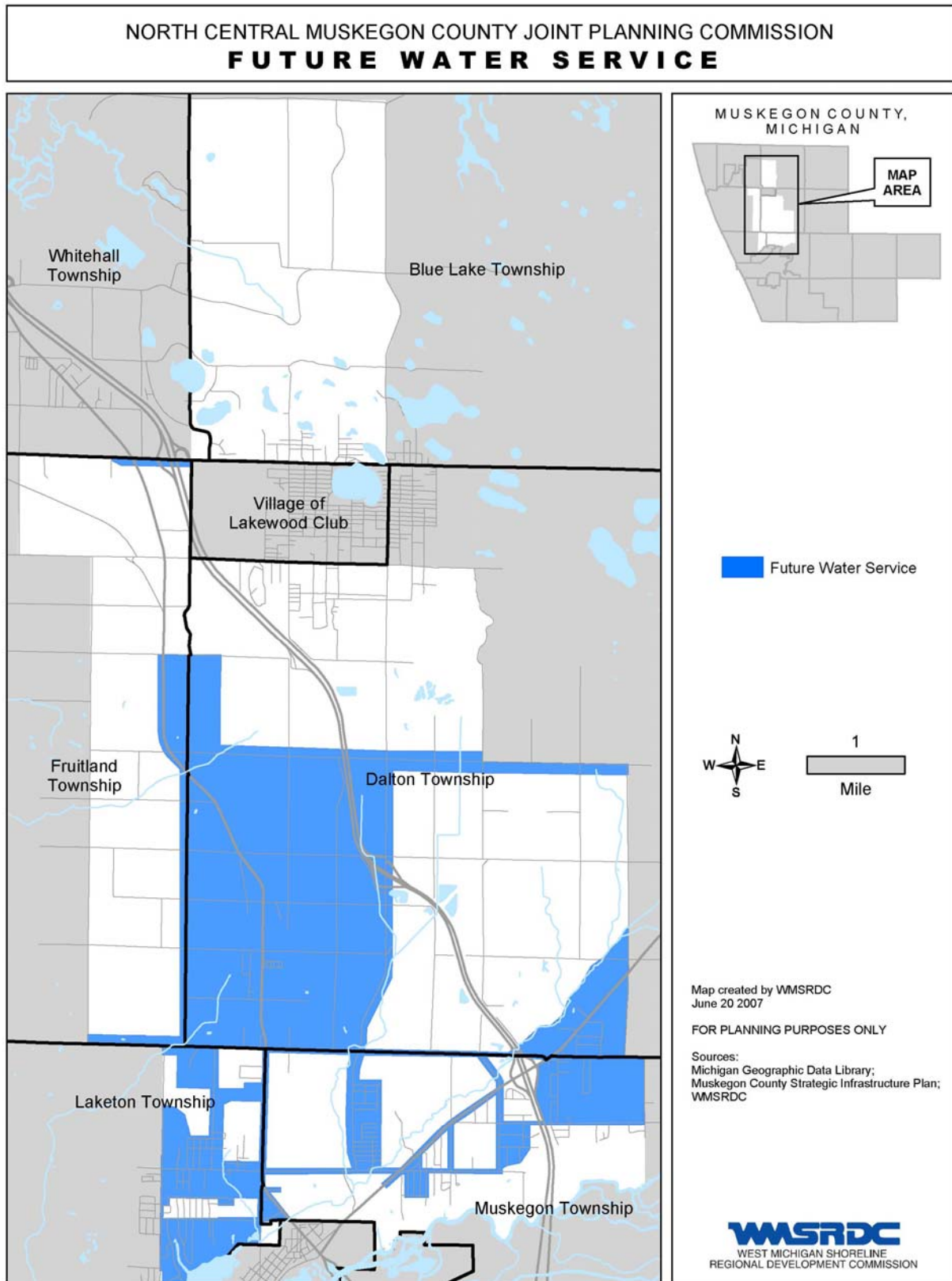
Map 6



Map 7



Map 8



Private Utilities

Services such as electric, natural gas, telephone, cable, and internet services are provided within the JPC area by a variety of private utility companies. These companies are identified below.

Table 10

Private Utilities	
Electric Energy	- Consumers Energy
Natural Gas	- MichCon
Telephone	- Verizon
Cable	- Comcast - Charter Communication
Internet Service	- Verizon - Comcast - Charter Communication

Chapter IV: Community Profile

Population characteristics; such as growth, age distribution, income, and educational level; and housing characteristics help planners make predictions based on historic patterns. A picture of the future can be painted by analyzing these factors. The following sections provide a community profile of the North Central Muskegon County Joint Planning Commission (JPC) area, utilizing figures from the 2000 U.S. Census of Population and Housing. However, it should be noted that the some figures (such as median household income) cannot be shown for the defined JPC area. In such instances, figures for the townships that comprise the JPC area are shown. The JPC geographic area, comprises the following U.S. Census defined geographic areas: Census Tract 17, Block Group 1; Census Tract 18, Block Groups 1 & 2; Census Tract 34, Block Groups 1,2, & 3; Census Tract 35, Block Group 2; Census Tract 36, Block Groups 1 & 4; and Census Tract 40, Block Group 1.

Population Trends

According to the 2000 Census, the JPC geographic area contained 10.9% of the Muskegon County population, with 18,514 of the county's 170,200 persons.

The JPC geographic area has experienced continual growth in the last several decades. The townships which comprise the JPC show the following growth rates: Blue Lake Township – 1.61, Dalton Township – 1.28, Fruitland Township – 1.19, Laketon Township – 1.12, and Muskegon Township – 1.16. Muskegon County grew from 158,983 to 170,200 persons at a growth rate of 1.07.

The JPC area's growth is expected to continue, although the rate of growth can only be estimated. Table 11 details the growth for the townships comprising the JPC since 1970 and projects growth in five year increments from 2005 to 2030. However, population projections are done on a county level (annual average growth for the previous ten years applied to current population) and then aggregated to the municipal level according to the municipality's most recent share of county population. They do not take into account variations in development trends between individual municipalities.

Table 11

JPC Population Trends and Projections										
	1970	1980	1990	2000	2004*	2010*	2015*	2020*	2025*	2030*
Blue Lake	715	1,101	1,235	1,990	2,331	2,424	2,504	2,586	2,672	2,760
Dalton	5,361	5,897	6,276	8,047	8,884	9,237	9,542	9,857	10,182	10,865
Fruitland	3,200	4,168	4,391	5,235	5,475	5,693	5,880	6,074	6,275	6,696
Laketon	5,440	6,327	6,538	7,363	7,712	8,018	8,283	8,556	8,839	9,130
Muskegon	13,754	14,557	15,302	17,737	18,500	19,235	19,870	20,525	21,203	21,903

Source: U.S Bureau of the Census

*Projections calculated by WMSRDC

Age and Gender

Table 12 illustrates the age distribution in the JPC area, as well as in Muskegon County. The largest combined age groups include the ages 25-54 (44.2% of the population) and children and teenagers (31.9%). While this demonstrates a healthy population

distribution, it should be noted that the JPC area's population is slightly younger than the county's as a whole. In contrast, 12.8% of the county's population is over 65 years of age while only 10.2% of the JPC area's population is 65 or over.

Table 12

Age Distribution				
Age	JPC Area		Muskegon County	
	number of persons	percent of persons	number of persons	percent of persons
0-4	1,176	6.4%	11,675	6.9%
5-9	1,490	8.0%	13,307	7.8%
10-14	1,628	8.8%	13,783	8.1%
15-19	1,603	8.7%	12,679	7.5%
20-24	881	4.8%	10,247	6.0%
25-34	2,201	11.9%	22,173	13.0%
35-44	3,144	17.0%	27,163	16.0%
45-54	2,839	15.3%	22,999	13.5%
55-59	953	5.1%	7,957	4.7%
60-64	712	3.8%	6,330	3.7%
65-74	1,121	6.1%	11,280	6.6%
75-84	634	3.4%	8,051	4.7%
85+	132	0.7%	2,556	1.5%
Total	18,514	100.0%	170,200	100%

Source: 2000 U.S Bureau of the Census

Table 13 shows that the JPC area's population is nearly evenly divided between male (49.9%) and female (50.1%) persons. Again, there is a slight variation between the JPC area and county populations, with the county having a slightly lower percentage of males (49.6%).

Table 13

Gender Distribution		
	JPC Area	Muskegon County
Male	9,231 (49.9%)	84,359 (49.6%)
Female	9,283 (50.1%)	85,841 (50.4%)

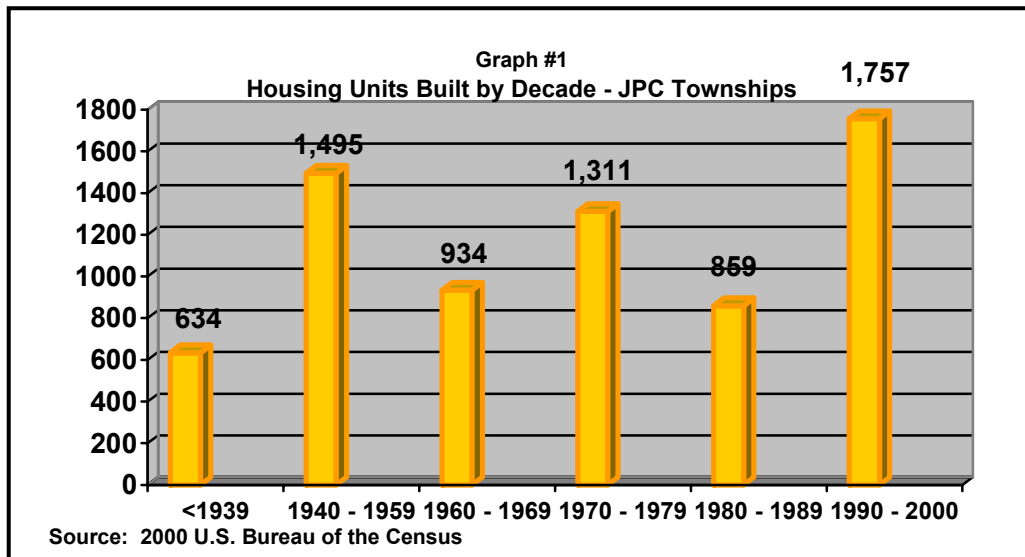
Source: U.S Bureau of the Census

Housing

Housing and any significant changes in an area's housing stock have a direct impact on planning decisions. It is important to note that changing trends related to housing stock are often the first indications that important changes are taking place with the population base and land use. It is also important to note that a vital aspect of housing stock is the presence of a variety of house choices (i.e. traditional single-family homes, duplexes, and manufactured homes). Various housing types allow for affordable housing opportunities for all segments of the population.

The housing characteristics presented herein for the JPC area are based on the 2000 U.S. Census of Population and Housing summary data and, therefore, do not reflect changes that have occurred since 2000. According to demographic information, there

were 6,990 housing units in the JPC area in 2000. Graph #1 illustrates the building pattern for these 6,990 housing units.



The decade from 1990-2000 saw the greatest increase in the number of housing units of any decade in the development of the JPC area. Of the 6,990 housing units in 2000, 56% (or 3,927 units) were built since 1970 and 25% (or 1,757 units) were built since 1990. The coming decades promise to expand the housing stock as well. With a projected increase in population, the JPC needs to remain proactive in addressing housing issues.

According to Table 14, housing units in the JPC area have a higher rate of occupancy (95.1%) than the entire county (92.4%) and, consequently, a lower rate of vacancy.

Table 14

Housing Occupancy			
	Total Units	Occupied	Vacant
JPC Area	6,990	6,650 (95.1%)	340 (4.9%)
Muskegon County	68,556	63,330 (92.4%)	5,226 (7.6%)

Source: 2000 U.S. Bureau of the Census

Racial Composition

Table 15 illustrates the racial distribution of the JPC area and Muskegon County. As noted in the table, the majority (92.6%) of the JPC area residents have a white ethnic background. This concentration is more than Muskegon County, which shows 81.3%.

Table 15

Ethnicity		
	JPC Area	Muskegon County
Total Population	18,514	170,200
White	17,144 (92.6%)	138,291 (81.3%)
Black or African American	673 (3.6%)	24,166 (14.2%)
American Indian or Alaska Native	161 (0.9%)	1,402 (0.8%)
Asian	76 (0.4%)	718 (0.4%)
Native Hawaiian or Other Pacific Islander	0 (0.0%)	21 (0.01%)
Other Race	130 (0.7%)	2,184 (1.3%)
Two or More Races	330 (1.8%)	3,418 (2.0%)
Hispanic or Latino (of any race)*	369 (2.0%)	6,001 (3.5%)

*Hispanic origin is included in all races, therefore, totals will not equal the Total Population section

Source: 2000 U.S. Bureau of the Census

Income and Poverty

Table 16 identifies the income levels in the townships that comprise the JPC. Table 17 shows the income distribution in the JPC area and also in Muskegon County. Both the per capita income and the median household income vary significantly.

It should be noted that the JPC area has a far lower percentage of households earning less than \$10,000 per year than the county (5.0% compared to 9.1%). The JPC area also has a greater percentage of residents earning more than \$50,000 (47.1% compared to 36.2%). Conversely, there is a much smaller percentage of JPC area residents than county residents in the income range of \$10,000 to \$50,000 (47.8% compared to 54.8%).

Table 16

Gross Annual Income (1999)		
	Per Capita Income	Median Household Income
Blue Lake Township	\$18,866	\$50,000
Dalton Township	\$18,036	\$47,127
Fruitland Township	\$23,216	\$53,977
Laketon Township	\$21,411	\$50,913
Muskegon Township	\$16,623	\$38,634

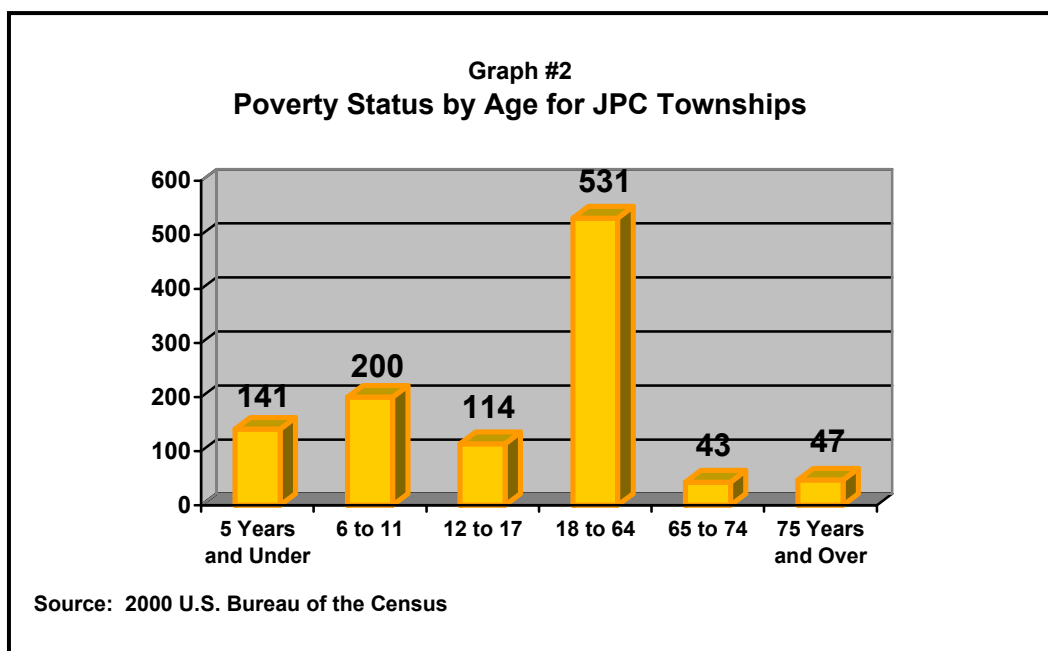
Source: 2000 U.S. Bureau of the Census

Table 17

Household Income Distribution		
	JPC Area	Muskegon County
Total	6,677	63,491
Less than \$10,000	337 (5.0%)	5,805 (9.1%)
\$10,000 to \$14,999	343 (5.1%)	5,114 (8.1%)
\$15,000 to \$24,999	641 (9.6%)	9,030 (14.2%)
\$25,000 to \$34,999	805 (12.1%)	9,189 (14.5%)
\$35,000 to \$49,999	1,401 (21.0%)	11,404 (18.0%)
\$50,000 to \$74,999	1,726 (25.8%)	13,246 (20.9%)
\$75,000 to \$99,999	905 (13.6%)	5,542 (8.7%)
\$100,000 to \$149,999	397 (5.9%)	2,911 (4.6%)
\$150,000 to \$199,999	56 (0.8%)	627 (1.0%)
\$200,000 or more	66 (1.0%)	623 (1.0%)

Source: 2000 U.S. Bureau of the Census

Graph #2 identifies poverty status by age, according to the U.S. Census. Of the 18,514 residents in the JPC area, 1,076 persons were listed as being below the poverty level. This is equal to 5.8% of the population and is much lower than the county's poverty percentage of 11.4%.



Educational Attainment

Table 18 details levels of educational attainment for JPC area and county residents 25 years of age and over. It should be noted that over half (55.2%) of the JPC area's population has had some college or obtained higher education degrees which is greater than the county's level at 47.6%.

Table 18

Educational Attainment: Persons 25 Years and Over		
	JPC Area	Muskegon County
Less than 9 th grade	346 (3.0%)	5,193 (4.8 %)
9 th – 12 th Grade	1,000 (8.6 %)	13,210 (12.1 %)
High School Diploma	3,908 (33.5 %)	38,552 (35.5 %)
Some College	3,438 (29.5 %)	27,349 (25.2 %)
Associate Degree	1,263 (10.8 %)	9,297 (8.6 %)
Bachelor's Degree	1,141 (9.8 %)	10,215 (9.3 %)
Graduate or Professional Degree	594 (5.1 %)	4,875 (4.5 %)

Source: 2000 U.S. Bureau of the Census

Labor Force Composition

The labor force in the JPC area, consisting of residents 16 years of age and over, totaled 9,404 persons in 2000. The majority of laborers work in manufacturing, education or service, and retail jobs. Tables 19 and 20 give additional information regarding the local labor force composition and employment distribution.

Table 19

JPC Labor Force Composition: Ages 16 and Over	
Total	9,404
Private wage and salary workers	7,806 (83.0%)
Government workers	867 (9.2%)
Self-employed workers	715 (7.6%)
Unpaid family workers	16 (0.1%)

Source: 2000 U.S. Bureau of the Census

Table 20

Area Industry Employment: Ages 16 Years and Over	
Total	9,404
Agriculture, forestry, fishing, hunting, and mining	72 (0.7%)
Construction	650 (6.9%)
Manufacturing	2,822 (30.0%)
Wholesale trade	232 (2.5%)
Retail trade	1,429 (15.2%)
Transportation and warehousing, and utilities	269 (2.9%)
Information	117 (1.2%)
Finance, insurance, real estate, rental and leasing	334 (3.6%)
Professional, scientific, management, administrative, and waste management services	412 (4.4%)
Education, health and social services	1,891 (20.1%)
Arts, entertainment, recreation, accommodation and food services	608 (6.5%)
Other services (except public administration)	404 (4.3%)
Public administration	342 (3.6%)

Source: 2000 U.S. Bureau of the Census

Economic Outlook

Since most of the JPC area labor force works within Muskegon County, it may be useful to analyze the changes occurring in the makeup of county employment by sector. This will allow a view into the economic course the county is following. Table 21 shows that the major sectors

(manufacturing, retail, and services) all grew slightly from 2000 to 2002. It also reveals that the services and retail sectors each claimed a larger portion of Muskegon's work force than the manufacturing industry, in contrast to the historical view of Muskegon as an "industrial town."

Table 21

MUSKEGON COUNTY EMPLOYMENT BY SECTOR		
Sector	2000	2002
Construction	4,700 (5.6%)	4,561 (5.4%)
Manufacturing	16,194 (19.4%)	16,875 (20.1%)
Transportation	2,471 (3.0%)	2,409 (2.9%)
Wholesale	4,170 (5.0%)	4,443 (5.3%)
Retail	17,324 (20.8%)	17,507 (20.8%)
F.I.R.E.	4,285 (5.1%)	4,240 (5.0%)
Services	23,122 (27.8%)	23,406 (27.8%)
Government	10,118 (12.1%)	10,030 (11.9%)
Total Employment*	83,278	84,174

* total includes agriculture and mining sectors, for which specific data is not available

Source: Regional Economic Information System

Table 22 indicates that jobs in manufacturing decreased in the early 1990's and are expected to keep that trend from 2002 through 2007. Jobs in retail lessened in the early 1990's as well, but are expected to increase through 2007. As for the services sector, jobs have been steadily increasing since 1991 and are expected to continue doing so.

Table 22

WEST MICHIGAN SHORELINE REGIONAL DEVELOPMENT COMMISSION MUSKEGON COUNTY ECONOMIC PROJECTIONS EMPLOYMENT PROJECTIONS 2002-2007																		
MUSKEGON COUNTY	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	FORECASTED EMPLOYMENT					
	2002	2003	2004	2005	2006	2007												
Employment by Place of Work																		
Total employment*	69,960	70,760	68,868	68,744	68,204	70,260	72,742	74,711	76,221	77,147	81,985	83,278	84,174	85,401	86,645	87,908	89,189	90,489
By Type:																		
Wage and salary	61,110	61,441	59,534	59,022	59,121	60,803	62,940	64,530	65,758	66,684	69,581	70,860	71,280	72,155	73,039	73,931	74,832	75,742
Proprietors	8,850	9,319	9,334	9,722	9,083	9,457	9,802	10,181	10,463	10,463	12,404	12,868	12,895	13,246	13,607	13,977	14,357	14,746
- Farm	512	500	496	500	478	473	490	475	468	451	457	449	459	455	452	448	445	441
- Nonfarm	8,338	8,819	8,838	9,222	8,605	8,984	9,312	9,706	9,995	10,012	11,947	12,419	12,436	12,791	13,155	13,528	13,912	14,305
By Industry:																		
Farm	840	861	871	841	798	818	841	792	779	676	706	688	702	691	679	667	656	645
Nonfarm	69,120	69,899	67,997	67,903	67,406	69,442	71,901	73,919	75,442	76,471	81,279	83,040	83,472	84,711	85,967	87,241	88,533	89,844
- Private	59,754	60,325	58,384	58,119	57,892	59,824	62,378	64,298	65,831	66,876	71,404	72,922	73,442	74,643	75,862	77,099	78,354	79,628
- Ag. serv., forest., fish., and other**	314	322	304	(D)	(D)	(D)	(D)	460	478	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
- Mining	142	146	148	(D)	(D)	(D)	(D)	115	111	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
- Construction	3,446	3,519	3,198	3,340	3,275	3,429	3,524	3,538	3,845	3,895	4,378	4,700	4,561	4,652	4,744	4,836	4,929	5,023
- Manufacturing	17,504	16,877	16,234	15,721	14,832	14,857	15,264	15,221	15,818	16,532	16,551	16,194	16,875	16,842	16,806	16,767	16,724	16,678
- Transportation and public utilities	2,503	2,460	2,452	2,460	2,496	2,401	2,300	2,316	2,311	2,294	2,367	2,471	2,409	2,400	2,391	2,381	2,371	2,361
- Wholesale trade	2,300	2,362	2,351	2,434	2,588	2,738	2,940	3,389	3,564	4,063	4,134	4,170	4,443	4,674	4,916	5,170	5,435	5,714
- Retail trade	13,411	13,937	13,201	13,097	13,159	14,038	15,148	15,925	16,009	15,081	16,847	17,324	17,507	17,808	18,111	18,415	18,721	19,028
- Finance, insurance, & real estate	3,218	3,201	3,139	3,231	3,233	3,441	3,532	3,593	3,654	3,704	4,062	4,285	4,240	4,332	4,425	4,519	4,615	4,711
- Services	16,916	17,501	17,357	17,445	17,882	18,420	19,123	19,741	20,041	20,659	22,407	23,122	23,406	23,934	24,469	25,010	25,559	26,114
- Government and gov't enterprises	9,366	9,574	9,613	9,784	9,514	9,618	9,523	9,621	9,611	9,595	9,875	10,118	10,030	10,068	10,105	10,142	10,179	10,216
- Federal, civilian	421	440	407	403	389	390	410	402	393	392	416	481	419	417	415	413	411	409
- Military	540	536	519	497	465	416	392	375	358	333	333	334	323	309	296	284	272	260
- State and local	8,405	8,598	8,687	8,884	8,660	8,812	8,721	8,844	8,860	8,870	9,126	9,303	9,289	9,342	9,394	9,445	9,497	9,547

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce Michigan Department of Career Development/Employment Services Agency, Labor Market Analysis Section
Projections by: West Michigan Shoreline Regional Development Commission

* - Numbers may not add due to rounding

** - Figures in this category for 1991 and 1992 are estimated

(D) - According to REIS data source, data not shown to avoid disclosure of confidential information, therefore projections of private employment by sector indicate trends only.

Unemployment

Table 23 identifies the total labor force and gives information on employment and unemployment for the JPC area, Muskegon County, and the State of Michigan in 2000. The JPC area's unemployment rate (4.5% of the civilian labor force) is less than the county's (5.4%) and the state's (5.8%). It is also less than the national unemployment rate for 2004 (5.5%).

Table 23

CIVILIAN LABOR FORCE			
	JPC Area	Muskegon County	State of Michigan
Labor Force	9,850	81,184	4,922,453
Employed	9,404	76,788	4,637,461
Unemployed (rate)	446 (4.5%)	4,396 (5.4%)	284,992 (5.8%)

Source: 2000 U.S. Bureau of the Census

Chapter V: Natural Resources

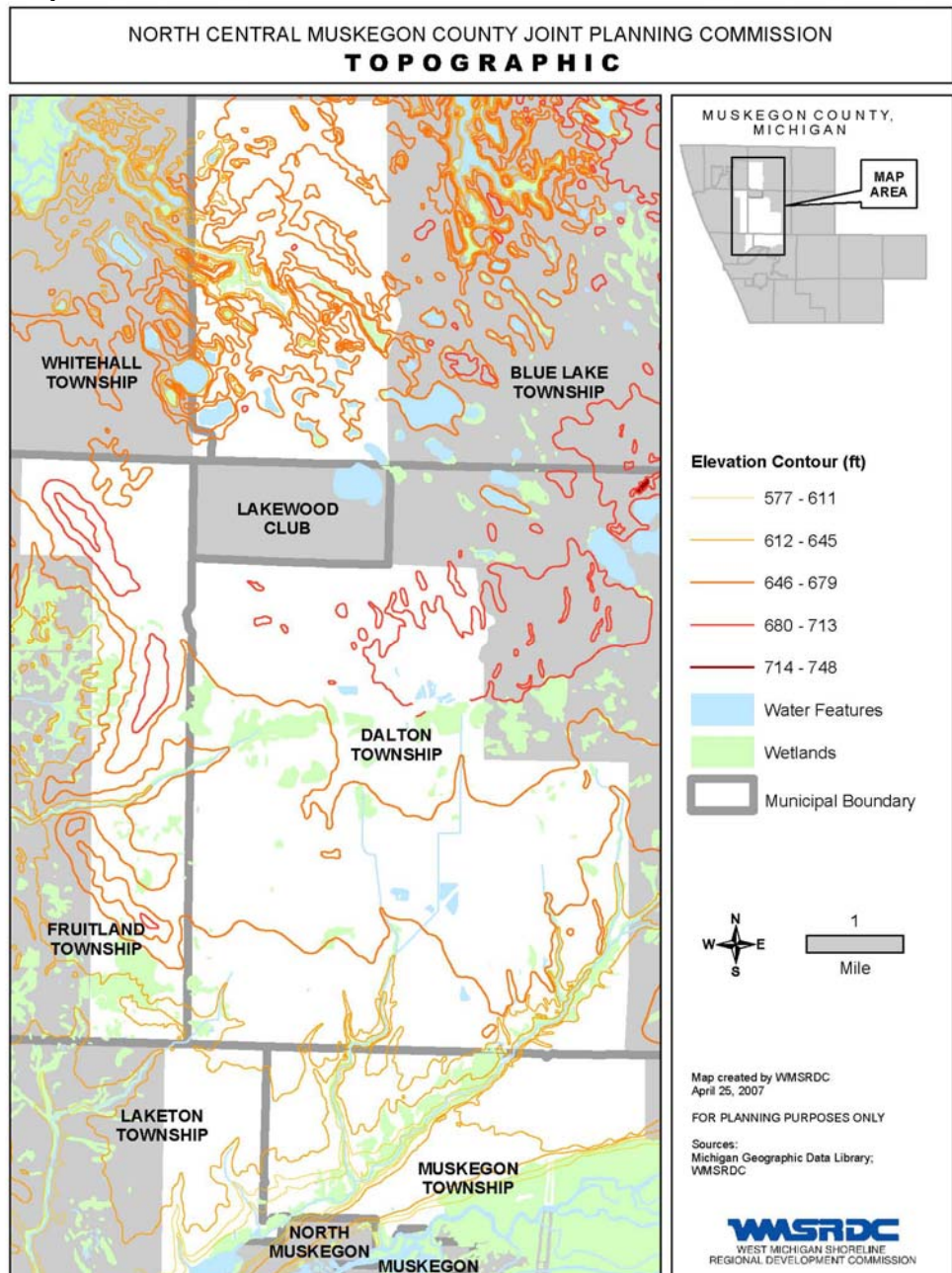
North-central Muskegon County contains an abundance of natural resources that help define its rural character. The following sections describe those resources and are followed with a brief discussion of “brownfield” properties within the JPC area.

Topography

The varied topographic features found across Michigan, including Muskegon County, owe their existence to the activity of glaciers. The formation, movement, and recession of glaciers shaped the landscape by moving soil, cutting rivers and depositing lakes.

The terrain of the joint planning area is generally level; varying from around 577 feet above sea level near the Muskegon River to just over 700 feet above sea level in northern Fruitland Township. The northern area slopes toward the White River, while the central is mostly level. Much of the western side slopes westward towards Duck Lake, while the southern portion of the joint planning area slopes into either Bear Creek or the Muskegon River.

Map 9



Soils

Soil, and the type of development it allows or restricts, is a primary factor in determining where future development will occur. It is especially important in areas where there are no public water and sewer services available. The suitability of soils for roads, foundations, wells, and septic systems is critical in determining the location and intensity of development.

Soil surveys assist in determining the extent of flood-prone areas, access to aquifers, erosion and sedimentation potential, ability to accommodate site septic tanks and absorption fields, and the limitations for construction. Soil maps are important to the planning process because they can geographically depict areas that have development limitations, based on the suitability of the soil(s) present. According to the Soil Survey of Muskegon County (USDA Soil Conservation Service, 1968) there are several different soil series located within the joint planning area. The most common is the Rubicon Series (found throughout the northern and southern portions of the area). Other prominent soil series include Au Gres, Croswell, Graying, and Roscommon.

According to the Soil Survey of Muskegon County, "the selection of areas for community development depends on the suitability of soils as sites for the structures and other facilities that are to be built. In Table 24, the limitations of soil groups that are used for specific purposes in community development are rated, and soil features that affect these uses are given.

THE RUBICON SOIL SERIES consists of well-drained, deep, sandy soils on the nearly level, dry outwash plain and the rolling sandhills of the county. The original vegetation of this series was white pine, red pine, black oak, and white oak. These soils are permeable, have a low supply of plant nutrients, and are low in available moisture capacity. Rubicon soils are well suited to plantations of Christmas trees and to other forest products and are well-suited to woodland wildlife (ruffed grouse, woodcock, thrushes, vireos, scarlet tanagers, gray, red, and fox squirrels, white-tailed deer, and raccoons).

The limitations of each group of soils are rated slight, moderate, severe, or very severe. A rating of *slight* means that the soil has few or no limitations for the use specified or that the limitations can be easily overcome. A rating of *moderate* indicates that some planning and engineering practices are needed to overcome the limitations. A rating of *severe* indicates that the soil is poorly suited to the use specified and that intensive engineering practices are needed to overcome the limitations. A rating of *very severe* indicates that the soil is very poorly suited to the use specified and that practices to overcome the limitations may not be economically feasible. These ratings apply to a depth of 5 feet or less.

The ratings in Table 24 are for residential developments with public sewers, filter fields for septic tanks, buildings for commerce and light industry, and trafficways. Some explanation is required.

Residential developments with public sewers. - The ratings in this column apply to residences of three stories or less that have basements and are served by a public sewage system. The major properties important in evaluating the soils for this use are wetness, hazard of flooding, slope, volume change on wetting and drying, hazard of erosion, suitability for growing lawns and shrubs, and bearing capacity. Engineers

and others should not apply specific values to the estimates for bearing capacity of soils.

Filter fields for septic tanks. - Important properties that affect the use of soils for filter fields for septic tanks are depth of the water table, hazard of flooding, slope, and permeability, or rate of percolation.

Buildings for commercial and light industry. - The ratings in this column apply to stores, offices, and small factories that are not more than three stories high and that have public or community facilities for sewage disposal. Important soil features are wetness, slope, hazard of erosion, volume change on wetting and drying, and bearing capacity. Specific values should not be applied to the estimates given for bearing capacity.

Trafficways. - The ratings in this column apply to streets and highways within or adjacent to residential and industrial developments. Features considered in rating the soils are frost heaving, ease of excavating and grading, seepage, and slope."

Map 10 and Table 24 feature community development groups; which are soils classified according to data gathered by the National Cooperative Soil Survey Program (NCSS). The map displays the locations of the three most common community development groups within the joint planning area, while the table reveals development limitations of the same soil groups. The NCSS is a partnership, led by the National Resources Conservation Service (NRCS), of federal land management agencies, state agricultural experiment stations and state and local units of government. The map was created by assigning NRCS-identified soil types to their corresponding Community Development Groups identified by the Soil Survey of Muskegon County (NRCS, 1968).

Map 10

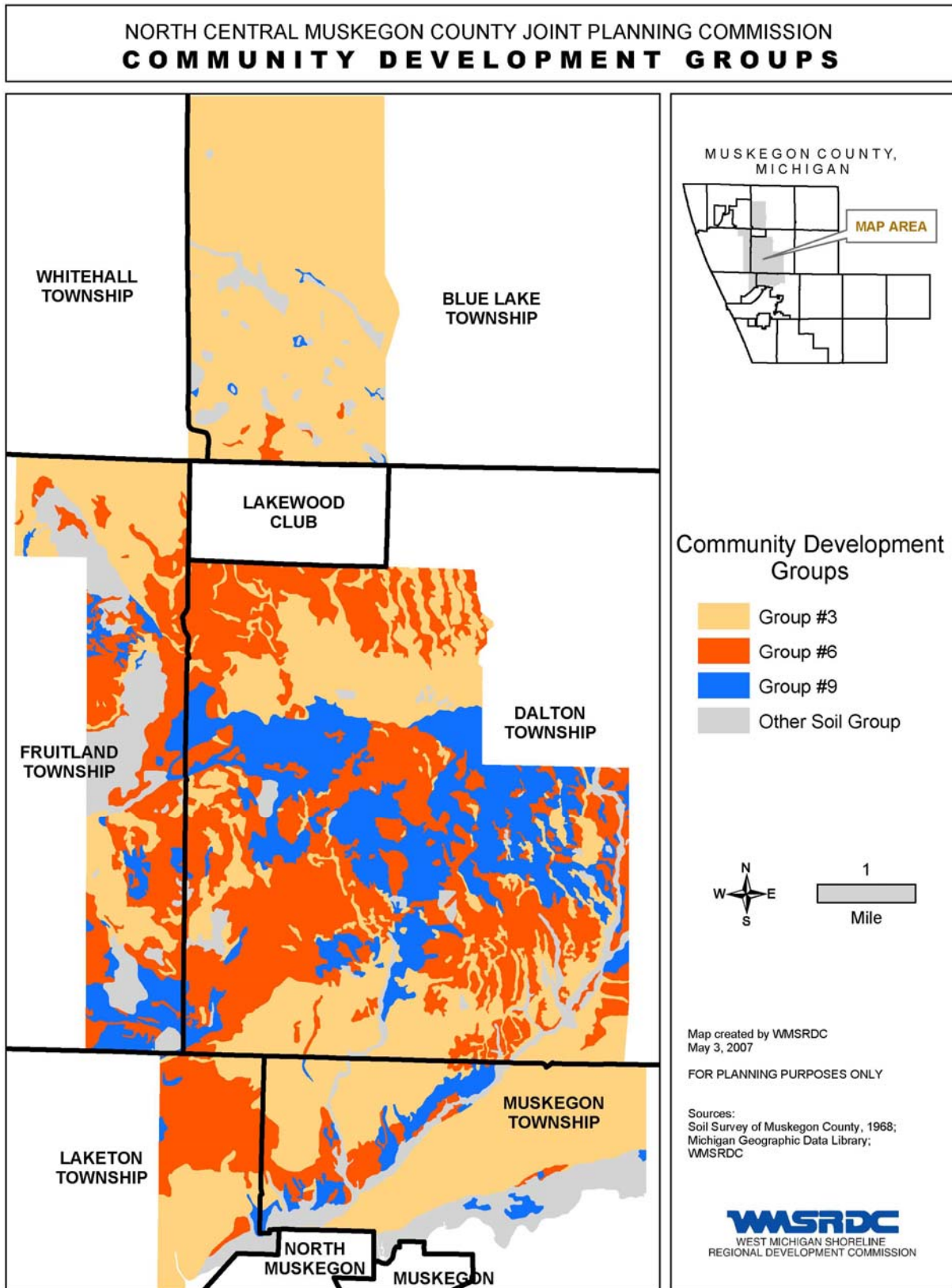


Table 24

LIMITATIONS OF SOILS FOR RESIDENTIAL AND INDUSTRIAL DEVELOPMENT AND RELATED NONFARM USES				
Community Development Groups	Degree of Limitation and Soil Features Affecting Use For:			
	Residential Developments with Public Sewers	Filter Fields for Septic Tanks	Buildings for Commerce and Light Industry	Trafficways
Group #3 (includes Grayling and Rubicon soil series)	Limitations: Slight on slopes of 0 to 6 percent; moderate on slopes of 6 to 12 percent; and severe on slopes of 12 to 45 percent. Features: Susceptibility to wind erosion; droughty; difficult to establish and maintain lawns; frequent watering required; stable material for roadbeds and foundations; steep slopes hinder layout and construction of utilities	Limitations: Slight on slopes of 0 to 6 percent; moderate on slopes of 6 to 12 percent; and severe on slopes of 12 to 45 percent. Features: Favorable percolation rate; possible contamination of nearby water supplies	Limitations: Slight on slopes of 0 to 6 percent; moderate on slopes of 6 to 12 percent; and severe on slopes of 12 to 45 percent. Features: Susceptibility to wind erosion; good foundation material; low volume change; good bearing capacity; grading and land shaping required in sloping and steep areas.	Limitations: Slight on slopes of 0 to 6 percent; moderate on slopes of 6 to 12 percent; and severe on slopes of 12 to 45 percent. Features: Good bearing capacity, good material for subbase and subgrade; cuts and fills needed in sloping to steep areas; severe erosion in steeper areas.
Group #6 (includes Au Gres and Croswell soil series)	Limitations: Moderate. Features: Seasonal high water table; difficult to obtain dry basements; areas subject to ponding are severely limited; good material for foundations; low volume change; fair to good bearing capacity.	Limitations: Severe. Features: High water table; subject to ponding.	Limitations: Moderate. Features: Seasonal high water table; good material for foundations; low volume change; fair to good bearing capacity; minimum of cuts and fills required.	Limitations: Moderate. Features: Seasonal high water table; fair to good bearing capacity; good material for subgrade; fill required in low areas to raise grade above water table; sandy material is unstable and flows when wet.
Group #9 (includes Roscommon soil series)	Limitations: Severe. Features: High water table; subject to ponding; slight limitations for foundations; but dry basements difficult to obtain.	Limitations: Severe. Features: High water table; inoperative during wet periods.	Limitations: Severe. Features: High water table; subject to ponding; slightly limited for foundations; low volume change; fair to good bearing capacity; fills required to obtain grade levels above the water table; material easily excavated.	Limitations: Severe. Features: High water table; subject to ponding; unstable material flows when wet; fill needed to raise grade above water table; construction and grading difficult during winter and wet periods.

Source: United States Department of Agriculture, Natural Resources Conservation Service, and Forest Service. *Soil Survey of Muskegon County, MI 1968*

Soil is not considered to be suitable for septic systems if it has excessively high or low permeability, if the slope is excessive, or if the water table is too close to the surface. The permeability and coarseness of soil has a direct impact on its ability to properly filter toxins (i.e. septic material) as they pass through the soil. In north-central Muskegon County, excessive percolation capability of the soil is a cause for concern, rather than not enough percolation, and the resulting potential for polluting groundwater resources. In addition, certain areas have variable septic limitations. For instance, septic tanks may operate safely and effectively during a dry summer but the very same tanks may malfunction or flood during an extraordinarily rainy spring.

Areas which have a high flood frequency are also not generally considered to be adequate locations for septic systems. As the ground becomes saturated and floods, the toxins may be removed from septic tanks and flow into groundwater or surface water supplies. Quite often the waste deposited in septic systems is much more hazardous than human waste alone. Such materials include household cleaners, bacteria, and other toxic nuisances.

In order to reduce the amount of pollution released from septic tanks, citizens should refrain from the disposal of medicines and household chemicals, such as ammonia, bleach or other hazardous substances, into the septic system. Septic tank maintenance should also be addressed on a regular schedule by adding necessary chemicals, cleaning, and using only to capacity. Additionally, a septic system should be emptied at a minimum of once every seven years but preferably every other year.

Access to municipal sewage systems is the principle alternative to septic usage. These systems have more efficient capabilities to treat wastewater before it is discharged into the environment. The treatment process often includes aeration, sedimentation, exposure to sunlight, which releases many types of contaminants, and chemical treatment. It should be noted that only portions of Laketon Township, Muskegon Township, and the Whitehall Road corridor are currently serviced by a public sewer system and that many of the area's residences rely on septic tanks and drain fields. Given this situation, the suitability of the soil for septic tanks to properly function is critically important in determining where and how much development can safely occur without the need for public utilities.

Although soil information presented earlier in this section has indicated the presence of sandy soils with high susceptibilities to erosion, the joint planning area currently enjoys a low erosion potential. The main explanation for this is that much of the natural cover remains intact. Natural cover acts as a barrier to erosion in that trees, grasses, forest litter and stones hold the soil in place even during torrential rainfall. The absence of agricultural activities in the area also reduces the potential for erosion.

However, removal of this cover could expose the soil to its erosion potential. In addition, changes in development patterns often create substantial changes in the ratio of permeable surfaces in an area. Even in a heavily forested area, addition of asphalt, pavement, and roofs can make a substantial difference. Table 25 highlights important considerations for development in light of corresponding erosion.

Table 25

SOIL EROSION CHARACTERISTICS	
1	The amount of runoff generated is dependent upon the type of soil and the kind of land use prevalent in any given area.
2	Natural areas, where vegetation remains intact, are almost always better-equipped to absorb and retain water than are areas in either agricultural or urban use.
3	Those areas best able to absorb and retain rainfall include forests and other areas of dense vegetation.
4	Those areas which have the greatest impact on the amount of runoff created typically include urban lands with high percentages of impervious surfaces, and agricultural lands typically in row crops.

Climate

The joint planning area is located in an area of the United States which experiences unique and diverse climatic conditions due to its proximity to the Lake Michigan shoreline. Muskegon County is classified as having "quasi-marine" (when westerly winds pass over Lake Michigan) and "continental" climates (when the winds become easterly or southeasterly and pass over a large expanse of land).

As a result of the predominately west winds and “quasi-marine” climate, Muskegon County often experiences moderated temperature extremes compared to communities farther away from the lake. This translates into slightly cooler maximum summer temperatures and slightly warmer winter minimum temperatures. Winds sometimes approach from easterly directions creating a “continental” climate and conditions that are more characteristic of the United States’ Midwest. Table 26 shows notable climatic data from the period 1951-1980, including temperature and precipitation averages and records for the City of Muskegon.

Table 26

TEMPERATURE AND PRECIPITATION SUMMARY FOR MUSKEGON FOR THE 30-YEAR PERIOD BETWEEN 1951 AND 1980								
Month	Average Daily Temperatures (Fahrenheit)			Average Monthly Precipitation (Inches)				Snowfall <i>maximum month amount</i>
	<i>maximum</i>	<i>minimum</i>	<i>mean</i>	<i>mean</i>	Liquid Equivalent			
					<i>mean # of days with at least:</i>			
					.1"	.25"	.5"	
January	28.9	17.2	23.0	2.37	7	2	1	66.6 (1962)
February	30.9	17.3	24.1	1.65	5	2	>1/2	40.2 (1962)
March	40.4	25.2	32.8	2.53	7	3	1	35.7 (1965)
April	54.6	35.8	45.2	3.16	7	4	2	13.8 (1961)
May	66.6	45.4	56.0	2.54	6	3	2	0.4 (1954)
June	76.1	54.7	65.4	2.52	6	3	1	0.0
July	80.3	59.9	70.1	2.42	5	3	2	0.0
August	78.7	59.0	68.8	3.13	6	4	2	0.0
September	71.2	51.7	61.4	2.92	6	4	2	T (1962)
October	59.7	42.2	50.9	2.78	6	4	2	4.9 (1967)
November	45.6	32.7	39.1	2.87	7	4	1	21.5 (1951)
December	34.0	22.6	28.3	2.60	8	3	1	82.6 (1963)
Annual Averages	55.6	38.6	47.1	31.49	76	39	17	82.6 (1963)

Source: Michigan State Climatologist's Office. <http://climate.geo.msu.edu/stations/5712/>. 11-18-05.

The presence of Lake Michigan also causes a climatic phenomenon called lake effect snow. During the winter months, the relatively warm waters of the lake provide moisture for weather fronts as they cross over from Wisconsin. When these fronts reach the cooler land of Michigan, the moisture condenses and falls as snow. Lake effect snows can be serious and hazardous weather events; however, their actual duration and severity can vary greatly. Although the area has been dealing with winter for a very long time and has many resources at its disposal, winter weather will annually affect communities through treacherous driving conditions, cost of snow removal, and infrastructure failures. Rural areas often experience the worst road conditions during the winter because their roads are the last to be cleared and salted.

Prime Forest Lands

The joint planning area is abundant with natural growth and forested areas. Many of these areas are not contiguous, however, as scattered and unorganized development

has peppered the landscape. Additionally, federally-owned plots of the Manistee National Forest are scattered throughout the northernmost reaches of the joint planning area in Blue Lake Township. More sections of the Manistee National Forest can be found to the north and east of the area.

Given the vast amount of undeveloped and forested land, north-central Muskegon County faces an increased threat of wildfire. Most Michigan wildfires occur close to where people live and recreate, which puts people, property, and the environment at risk. Development in and around rural forested areas often increases the potential for loss of life and property from wildfires, since most are caused by human activities such as outdoor burning, and can also create fire-fighting challenges.

Residents should be encouraged to take actions to properly protect their property. For example, residents can create “defensible space” around their homes. This entails clearing a radius of about 30 feet of brush and any other fire fuel to prevent fire damage to structures and private property. Common development practices include setting structures back from slopes, which allow fires to spread faster than flat terrain, and assuring accessibility and adequate water supply for fire-fighters.

Water Resources

Groundwater and surface water features located within Muskegon County are essential to maintaining the area’s high standard of living and must be protected in order to help ensure its future prosperity. The joint planning area is surrounded by freshwater that is utilized for a variety of purposes such as transportation, recreation, and consumption. Map 11 reveals this wealth of water resources found within Muskegon County, which include the nationally significant Lake Michigan, and the regionally significant Muskegon and White rivers.

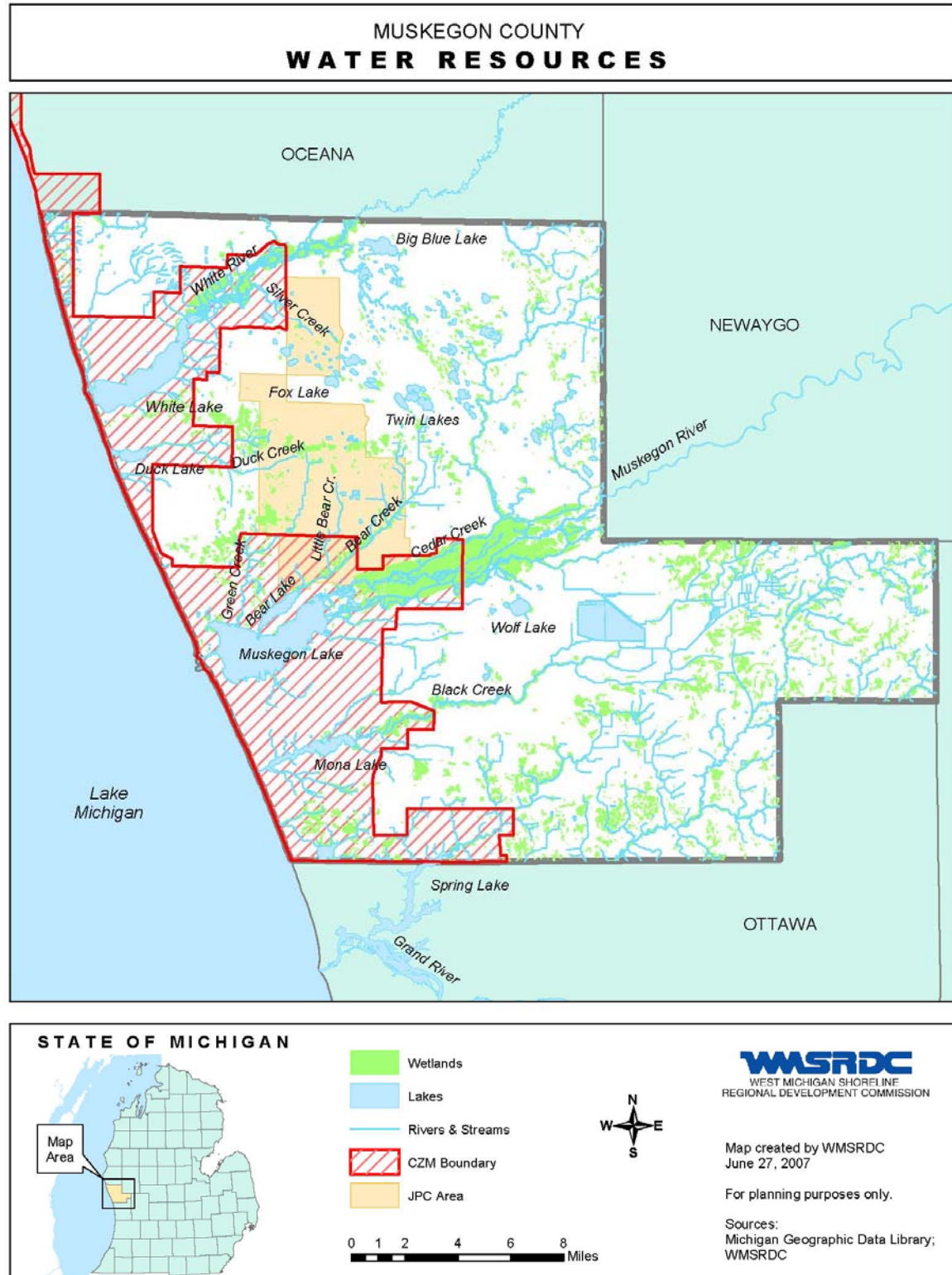
Notable water features within the joint planning area include portions of the Muskegon River, Crystal Lake, Bear Lake, Bear Creek, Cedar Creek, Duck Creek, and Green Creek. These assets must be used with care and monitored frequently to prevent detrimental environmental repercussions. Eutrophication, erosion, and polluted runoff are just a few examples of how water systems can be degraded. Some of the sources for polluted runoff include roads, homes (including lawn care measures, sewage, etc.), industrial processes and erosion. Increased siltation and eutrophication are examples of potential effects that could result from contaminated runoff or erosion. Precautionary measures must constantly be taken to protect surface water resources and ensure their preservation.

Another important surface water resource is wetland. Commonly known as marshes or swamps, wetlands are lands that are wet for most of the year. Wetlands are important in the ecology of relatively undisturbed and heavily forested areas. These water bodies provide needed habitat for many organisms and serve as a filter for water as it seeps into the ground and eventually into the groundwater supply. This filtering process includes removing many toxic elements from precipitation or surface water.

Due to a growing rural dependence on groundwater, the existence and protection of water features such as streams, lakes and wetlands should be a top priority. Due to a growing rural dependence on groundwater, the existence and protection of water features such as streams, lakes and wetlands should be a top priority. The largest area

of wetlands can be found along the Muskegon River in the southeast corner of the joint planning area. Other wetlands are located along Bear Creek and also across the center of the joint planning area near the headwaters of Duck Creek.

Map 11



Flood Frequency

Floods are caused when the ground becomes saturated beyond its capacity to absorb any more water or when precipitation is so intense that the ground cannot absorb it quickly enough. The less permeable the soil and the higher the water table, the more susceptible an area is to flooding. With the exception of low-lying locations along waterways and wetlands, flood frequency is relatively low throughout most of north-central Muskegon County because of the excessive percolation capability of the soils.

According to National Floodplain Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM) from Muskegon County, there is a 100-year floodplain located along the Muskegon River, Bear Creek, Cedar Creek and Bear Lake.

The 100-year floodplain is an area that has a one percent chance, on average, of being equaled or exceeded in any year. It does not mean that a flood of this size only happens every 100 years; such a flood could occur more than once in a 12-month period. The 100-year flood is also referred to as the base flood and is the standard adopted by the NFIP. It represents a compromise between minor floods and the greatest flood likely to occur.

Flooding often transmits contaminants from streets, parking lots, soils, etc., into surface water sources. In more developed parts of the area, the presence of large parking facilities, high traffic roads, and other impervious structures increase risk of surface water contamination. The potential for property damage (homes, crops, etc.) caused by flooding is relatively slight, with the exception of underground structures such as basements, which may be exposed in limited locations along the streams and lakes of the area.

The potential for any toxic substance to enter into the water supply through the process of surface flooding does exist in the joint planning area. However, it is not a major concern because development is limited within the area's flood-prone locations. Additionally, the potential for groundwater contamination from septic system failures or flooding is a possible threat because there is no public sewer service beyond the Whitehall Road and M-120 corridors.

What Are the Odds of Being Flooded?

The term "100-year flood" has caused much confusion for people not familiar with statistics. Another way to look at flood risk is to think of the odds that a 100-year flood will happen sometime during the life of a 30-year mortgage – a 26% change for a structure located in the Special Flood Hazard Area.

Chance of Flooding Over a Period of Years				
Time Period	10-year flood	25-year flood	50-year flood	100-year flood
1 year	10%	4%	2%	1%
10 years	65%	34%	18%	10%
20 years	88%	56%	33%	18%
30 years	96%	71%	45%	26%
50 years	99%	87%	64%	39%

Even these numbers do not convey the true flood risk because they focus on the larger, less frequent floods. If a house is low enough, it may be subject to the 10- or 25-year flood. During a 30-year mortgage, it may have a 26% chance of being hit by the 100-year flood, but the odds are 96% (nearly guaranteed) that it will be hit by a 10-year flood. Compare those odds to the 1-2% chance that the house will catch fire during the same 30-year mortgage.

Source: FEMA

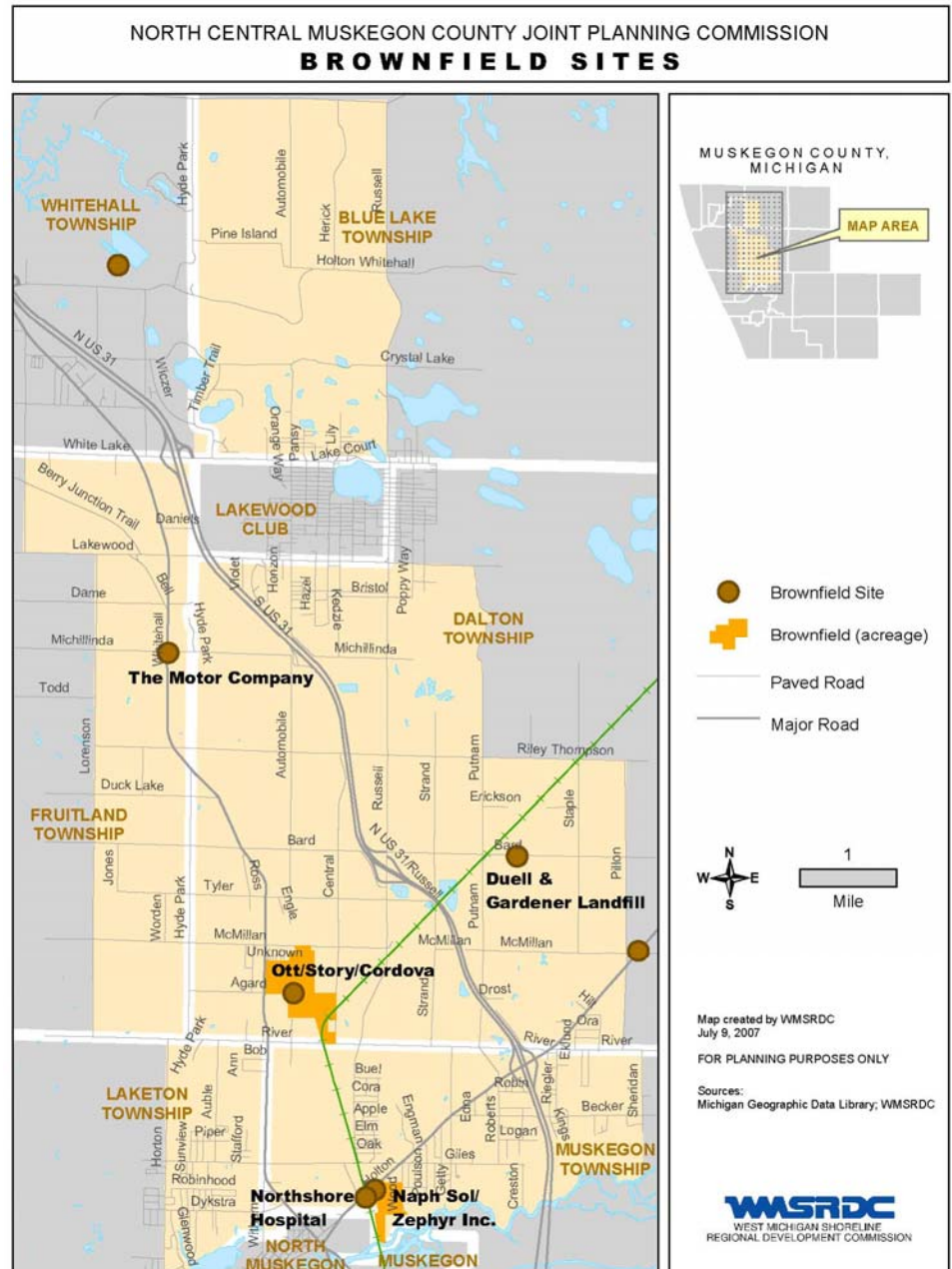
Brownfields

In contrast with Muskegon County's abundance of high-quality natural features, the JPC area also contains brownfields. According to the State of Michigan, brownfields are "abandoned, idle, or under-used industrial and commercial properties where expansion or redevelopment is complicated by real or perceived environmental conditions."

The West Michigan Shoreline Brownfields Inventory and Plan for Implementation, authored by WMSRDC in 2006, contains a vast compilation of brownfields information within the West Michigan Shoreline Region. It includes an inventory of brownfield properties, in-depth site feasibility analyses of selected sites, and a comprehensive list of

financial resources for brownfield redevelopment. The document identified five brownfield sites within the JPC area. Two sites were identified in both Muskegon and Dalton townships, and one site was identified in Fruitland Township. Site-specific information of these properties, such as land use, size, and environmental contamination, is included in Appendix D of this plan. In addition, the brownfield plan highlighted three properties within the JPC area for in-depth research and feasibility analysis. Please refer to the West Michigan Shoreline Brownfields Inventory and Plan for Implementation for more complete information. A copy of this document may be obtained through the WMSRDC.

Map 12



Chapter VI: Existing Land Uses and Cover

The land use and land cover of the North Central Muskegon County Joint Planning Commission (JPC) area illustrates the community's rural nature. Although additional development has occurred since 1992, the overall character of the area has remained similar. It is important to note that over the past several decades, all of the five member JPC townships had a growth rate higher than the county average of 1.07. These townships also experienced a 16.4% population increase between 1990 and 2000.

The majority of the developed land is in the southern portion mainly west of Whitehall Road and south of Bear Creek along the M-120 corridor. Much of the development in the area has been residential and commercial. Of the 6,990 homes in the JPC area in 2000, 25% (1,757) were built between 1990 and 2000. Much of this residential development has occurred in Muskegon Township, Laketon Township, as well as the southern portion of Dalton Township, and along the eastern edge of Fruitland Township. In addition, significant commercial development has occurred along the M-120 and Whitehall Road corridors. This development has resulted in a decrease of undeveloped land within the JPC area.

Much of the JPC area is considered open space or natural forest. These areas are predominantly located in the northern and eastern portions of Dalton Township and the majority of Blue Lake Township. Blue Lake Township is home to county parks, various youth camp facilities, and other recreational facilities which consume the land and maintain its valued natural state. Dalton Township owns several acres of land in the northern portion of the township just south of the Village of Lakewood Club. This land was deeded to the township from the State of Michigan, which conditions stipulate the land to remain undeveloped in perpetuity.

There are wetland areas sprinkled throughout the JPC area as well. These areas are typically contiguous with the rivers, creeks, and streams which transverse the community. Wetlands can also be found around the many lakes found in the JPC area. These wetland areas are sensitive and fragile, and have been identified as priority conservation areas by the JPC, as well as the community.

The townships of Blue Lake, Dalton, Fruitland, Laketon, and Muskegon recognize the significant development potential of their communities. Therefore, in forming the JPC, the townships desire to remain proactive in managing and directing future development of the area. Another priority of the JPC is to minimize inconsistent land uses along jurisdictional boundaries and to create uniform land uses that will protect the areas environmental integrity while maintaining the rural character of the community.

Map 12, Land Cover circa 1992, was derived from the National Land Cover Dataset (NLCD) published by the United States Geological Survey (USGS) in 1999. The data represents conditions in the early 1990's and is displayed on the map by 30-meter pixel detail. The USGS states that this data is most accurate when viewed at the state or multi-state level (rather than the township level shown below). Therefore, it is important to note that this map is very general and should not be consulted for site-specific land cover analysis. This map does, however, accurately reveal that much of the area is dominated by natural land cover, and that the more developed portions of the area are

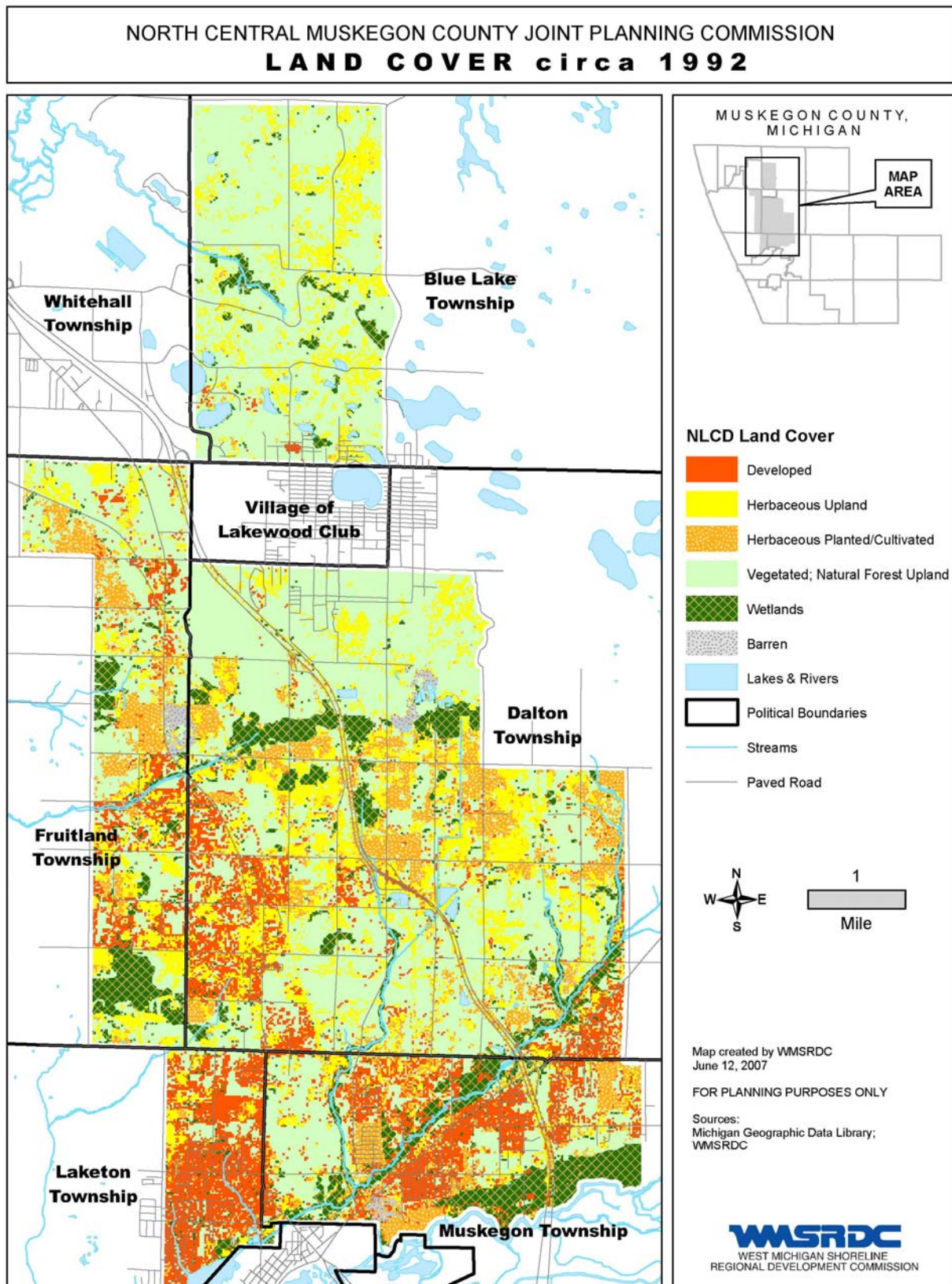
located primarily in the south and along the Whitehall Road and M-120 corridors. Definitions of the NLCD Land Cover Classifications are listed below.

Table 27

NLCD Land Cover Classification Definitions	
Developed	Areas characterized by high percentage (approximately 30% or greater) of constructed material (e.g. asphalt, concrete, buildings, etc.).
Herbaceous Upland	Upland areas characterized by natural or semi-natural herbaceous vegetation; herbaceous vegetation accounts for 75-100 percent of the cover.
Herbaceous Planted/Cultivated	Areas characterized by herbaceous vegetation that has been planted or is intensively managed for the production of food, feed, or fiber; or is maintained in developed settings for specific purposes. Herbaceous vegetation accounts for 75-100 percent of the cover.
Vegetated/ Natural Forest Upland	Areas characterized by tree cover (natural or semi-natural woody vegetation, generally greater than 6 meters tall); Tree canopy accounts for 25 to 100 percent of the cover.
Wetlands	Areas where the soil or substrate is periodically saturated with or covered with water.
Barren	Areas characterized by bare rock, gravel, sand, silt, clay, or other earthen material, with little or no green vegetation present regardless of its inherent ability to support life. Vegetation, if present, is more widely spaced and scrubby than that in the green vegetated categories; lichen cover may be extensive.

Source: Michigan Center for Geographic Information

Map 13



Chapter VII: Development Strategy

The North Central Muskegon County Joint Planning Commission (JPC) felt it necessary to involve the community in creating a development strategy for the area. In order to accomplish this, the JPC with assistance from the West Michigan Shoreline Regional Development Commission hosted a community forum where the public was invited and encouraged to participate in a visioning exercise. The forum was promoted by the five townships as well as through articles in local newspapers including the Muskegon Chronicle and the White Lake Beacon.

The forum was held on Thursday, February 22, 2007 at 7:00 PM in the banquet room at Russ' Restaurant located on M-120 in Muskegon Township. Approximately 40 people attended and participated in the forum. Attendees of the forum included representatives from each of the five townships, Muskegon County, local business, and interested citizens.

During the forum, attendees participated in two information gathering exercises. The first was considered an ice breaker exercise which asked everyone to answer the following question:

What three things will shape your community over the next ten years?

After identifying the three things, participants were asked to pass their paper to the person on their right. They were then asked to circle the thing that they felt was the most significant on the paper in front of them. They were then asked to repeat passing the paper and circling an item. The facilitator then asked for them to return the papers to their authors and allowed a few minutes for participants to discuss the ice breaker question and responses. A summary of the ice breaker exercise can be found in Appendix B.

After a brief presentation regarding the history and role of the JPC, attendees were facilitated through a visioning exercise. Once again, participants were asked to respond to questions. Three questions were presented:

What is it that you value most for yourself, your family, and your community?

What do you want the local landscape and natural resource base to be like in thirty years?

How do you envision the local economy fitting in to create the quality of life you desire and your vision for the landscape?

Participants were asked to write down their responses on small pieces of paper and were allowed to have as many responses per question as they desired. Once participants were finished, they were asked to share their responses with the people in their group. The groups were then asked to categorize similar responses on a large poster. Finally, each group was asked to share their categories with the larger group. A summary of the visioning exercise can be found in Appendix B.

The results of both the ice breaker and visioning exercises were then reviewed and analyzed by the JPC and Regional Commission staff. This valuable information was used to create the Visions, Goals, and Objectives which are identified below.

It is important to note that the vision areas of the JPC closely correspond with the vision areas of the Muskegon Area-wide Plan (MAP). The MAP is a unique partnership of local governments, citizens, business leaders, and policy-makers working together to create a vision and strategy to guide future growth and development in Muskegon County. The grassroots effort was initiated by local units of governments in Muskegon County to create a county-wide comprehensive development plan. The mission of the MAP is to involve citizens in the shared vision of the future of Muskegon County. The MAP plan was completed in 2005 and implementation efforts are ongoing. Through the process of developing the MAP, the ten smart growth principles and a smart growth development scenario were embraced and overwhelmingly supported by all involved in the process. A map of the smart growth development scenario can be found on the following page. It is the priority of the JPC to recognize the MAP as the Muskegon County Plan and to closely follow its direction.

Muskegon Area-wide Plan

Scenario III - Smart Growth

Legend

- County Boundary
- Current Developed Lands
- Lakes
- Public Land
- New Residential Development
- New Commercial Development
- New Industrial Development
- Interstate/Limited Access Highway
- Residential/County Road
- Jurisdiction Boundaries
- Rivers and Streams

Map labels include: Montague, Whitehall, Blue Lake, Muskegon, Muskegon Heights, Norton Shores, Fruitport, Ravenna, and others. Major roads shown are I-196, I-31, and I-46.

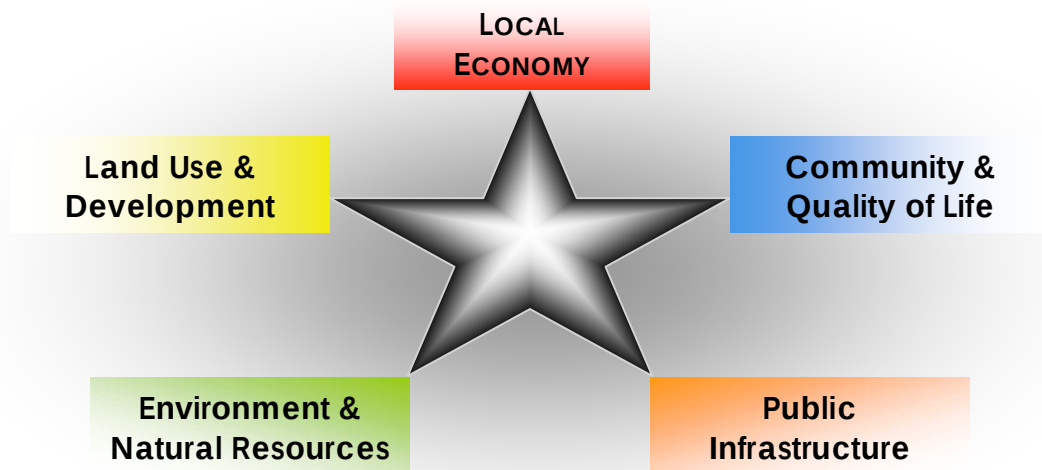
Scale: 0 1 2 4 Miles

July 2004

HNTB

Visions

After review and analysis of the responses from community forum exercises, five main themes or visions became apparent and are identified below.



Goals & Objectives

Identified below are the goals and objectives for each of the five major vision areas.

LOCAL ECONOMY

Goal: Promote and foster the local economy while taking advantage of the area's existing assets to compete in today's global economy.

Objectives:

- Encourage and generate opportunities that will create and maintain **quality jobs**.
- Work with Muskegon Area First to support and promote **diversification** of the local economy.
- Utilize the area's abundant local resources to further promote **tourism** in the local economy.
- Keep the area's **environment first** when making economic development decisions.
- Promote and protect the area's **quality of life** when advancing the local economy.

Community & Quality of Life

Goal: Preserve and strengthen the area's sense of place, while promoting the region's high quality of life.

Objectives:

- Provide a variety of **housing** choices for area residents which are well planned and fosters a strong sense of community.
- Create and foster **safe** and secure neighborhoods and public spaces through community awareness, as well as the use of community services including schools, police, and fire departments.
- Promote the value of quality **education and training** among area residents through utilizing the community's schools and higher educational facilities.
- Encourage and promote government participation, local **leadership**, and community **involvement**.
- Continue to support and work with area healthcare providers, while promoting **accessible** and **quality healthcare** for area residents.
- Protect and preserve the area's abundant **natural resources** for **tourism** and **recreational activities**.

Public Infrastructure

Goal: Provide a scaleable and secure public infrastructure system which will meet the needs of the growing community.

Objectives:

- Work with the Muskegon County Road Commission to maintain a quality **transportation** system which will continually improve traffic flow and access management.
- Follow the Muskegon County Strategic Infrastructure Plan (2006) when making **water and sewer expansions and investments**.
- Maintain a working relationship with the Muskegon County Wastewater Users group and the Muskegon County Wastewater Management System in order to provide a quality **sewer** system.

- Maintain a working relationship with the Northside Water Policy Committee and water providers in order to provide quality **water**.
- Work with **private utility** companies to encourage accessibility to services (phone, cable, internet) for area residents where appropriate.

Environment & Natural Resources

Goal: Identify and preserve the area's abundant natural resources and treasures, while providing public access for future generations.

Objectives:

- Encourage and promote **land use** that preserves the area's environmental assets.
- Create and explore opportunities to **preserve** natural features and open spaces within the community.
- Where appropriate create **recreational** opportunities for **public use**, which will appeal to all ages, while maintaining and improving existing recreational facilities for area residents.
- Utilize local, state, federal, and private funding programs to **purchase** open and green spaces, as well as natural wooded areas.
- Work with local, state, and federal agencies to **remediate** existing polluted sites within the area.
- Work with local, state, and federal organizations and agencies to maintain and protect **water quality** throughout the area.
- Develop a regional stormwater management plan for the JPC area.

Land Use & Development

Goal: Promote land use and development decisions that encourage smart growth and sustainability patterns.

Objectives:

- Reference directions and findings of the Muskegon Area-wide Plan (2005) document when making **land use and development decisions**.
- Utilize and promote **low impact development** tools and techniques that will protect our natural resources and create a sense of community.
- Take advantage of **zoning** tools and techniques that will foster consistent and predictable land use decisions that will manage growth while protecting the area's natural features.
- Continue to promote intergovernmental cooperation among local units of government within the North Central Muskegon County Joint Planning Commission and the region.

Chapter VIII: Implementation

Future Land Use

A future land use plan requires a synthesis of all the information included in a comprehensive development plan and results in a map that generally depicts the various types of recommended land uses and their locations in the community. The map is accompanied by text explaining the “district” or “categories” used on the map. These “categories” describe the character of the land use.

A future land use plan and a zoning ordinance are related. The future land use plan and map are designed to provide the community with a glimpse of where they desire the community to head, and a zoning ordinance and map provide the means to arrive at this point. The future land use map should not be confused with the zoning map, which is a current mechanism for shaping development. The future land use map is intended to serve as a guide for land use decisions over a longer period of time.

A zoning ordinance is the legal arm of a future land use plan. It is the most frequently used and effective regulatory tool to implement a future land use plan, as it regulates land use. Changes to a zoning ordinance or zoning map are the primary tools available to change the regulations affecting land or the types of use land may be used for. The future land use plan and map can be utilized to regulate what zoning changes will occur and where they will occur. For example, rezoning requests are often required to be consistent with the future land use plan’s designations as they identify the community’s desires for the future.

The word “district” is often used in both kinds of documents; however, the term must be used carefully. On the one hand, using similar terms for the various land use designations is one way to demonstrate the relationship between the two documents, and it helps to avoid confusion and translation difficulties. On the other hand, it is important to realize that a future land use map and a zoning map are NOT necessarily the same thing.

The use of a term such as “high density residential” does not necessarily translate into specific numbers in terms of lot sizes and other elements of zoning. In some cases, a designated district on a future land use map might not “convert” into a particular zoning district at all, but rather should be utilized as a philosophical guide for the flexible interpretation of other zones. However, future land use plan categories may generally correspond to zoning districts with some overlap to allow for site conditions.

With assistance from the North Central Muskegon County Joint Planning Commission (JPC), ten general future land use categories have been identified for the JPC area. These districts were developed as a result of the analysis of current land uses, physical and environmental suitability, the existence of or ability to provide services, and compatibility with goals and objectives identified in the plan. These land uses include:

- | | | |
|----------------------------|------------------------------|---|
| → Commercial | → Medium Density Residential | → Special Recreation & Publicly Owned Lands |
| → Industrial | → Rural Residential | → Forest Recreation - Institutional |
| → Mixed Use | → Conservation | |
| → High Density Residential | → Parkway Preserve | |

Future Land Use Category Descriptions

Commercial

- The commercial category is intended to include retail, office, and service establishments.
- Commercial development should be compatible and harmonious with adjacent surroundings.
- Commercial development should be encouraged to resemble a town center or hamlet development style.
- The commercial category supports local and regional markets, as well as services local and regional residents.
- The preservation of environmentally sensitive areas, as well as important open space and scenic corridors shall be encouraged.
- Commercial development should be encouraged along major corridors including Whitehall Road and M-120, as well as near highway interchanges.

Industrial

- The industrial category is intended to expand and improve employment opportunities within the area.
- Both heavy and light process should be encouraged and developed in harmony with adjacent surroundings.
- Industrial development should be located in the Muskegon County Business Park – North (220 acres) located along Whitehall Road in Dalton Township.

Mixed Use

- A transitional area between commercial and residential areas.
- The mixed use category can include a combination of office, service, and residential development.
- Mixed use development should be compatible and harmonious with adjacent surroundings.
- Mixed use development should be encouraged to resemble a town center or hamlet development style.

High Density Residential

- Provides for a high density of single family, manufactured, and multi-family housing options.
- The high residential development areas should be serviced by public infrastructure including water and sewer, as well as convenient to regional transportation networks.
- The high density residential category may also include subdivisions and PUDs.
- Areas should be accessible to commercial centers.
- Density requirements shall be determined by each local township.

Medium Density Residential

- Medium density residential development predominately consisting of single family housing.

- May also include limited multi-family housing comparable to single family housing units.
- The medium density residential category should be serviced or adjacent to public infrastructure including water and sewer.
- Areas should be accessible to commercial centers.
- The preservation of environmentally sensitive areas, as well as important open space and scenic corridors shall be encouraged.
- Density requirements shall be determined by each local township.

Rural Residential

- Rural residential development consisting of primarily single family traditional housing.
- Soils should be suitable for septic systems.
- The rural residential category should preserve the rural character of the community.
- The preservation of environmentally sensitive areas, as well as important open space and scenic corridors shall be encouraged.
- Density requirements shall be determined by each local township.

Conservation

- Conservation areas are designated for the protection of sensitive and valued natural features.
- Conservation areas can include land that is dedicated for open space preservation or natural features conservation, as well as classifications that support environmental buffers for water courses, flood protection, water/headwater protection, water quality, and fish & wildlife habitat.
- Conservation areas can include cluster and residential Planned Unit Developments (PUDs).
- Conservation areas can also be linear in dimension and include areas bordering rivers, lakes, streams, creeks, and drains.

Parkway Preserve

- Parkway preserve areas should be linear in dimension and include areas along major transportation corridors such as Whitehall Road.
- The purpose of the parkway preserve areas is to minimize development along certain stretches of transportation corridors.
- Parkway preserve areas are designated for natural vegetative buffer to enhance scenic views, filter stormwater runoff, and provide green infrastructure benefits.

Special Recreation & Publicly Owned Lands

- Special recreation areas identify unique recreational destination areas.
- Special recreations areas may include private tourism based business and publicly owned parklands.

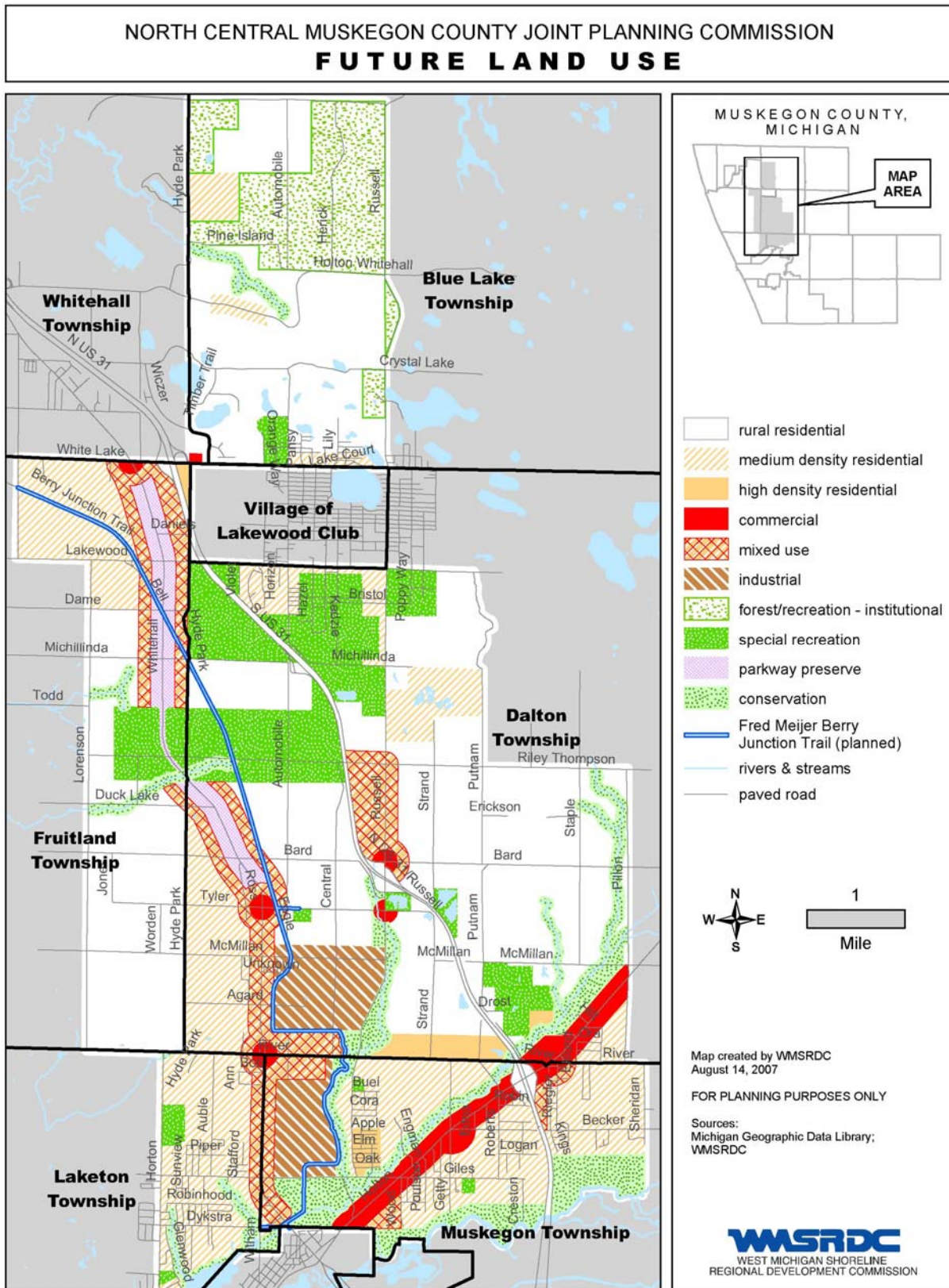
Forest Recreation – Institutional

- Forest/recreation – institutional areas are described as lands “used as present use and as normally developed and used for operation for camps.”

Fred Meijer Berry Junction Trail (planned)

- An approximately 10-mile bike trail that will connect to the Hart-Montague Trail State Park at White Lake Drive and to the Muskegon Lakeshore Trail system at the Veterans Memorial Causeway. The trail will include 50-100 ft natural buffers on each side.

Map 15



Planning Implementation Tools & Techniques

The ultimate goal of planning, of course, is implementation. Implementing the ideas generated through the planning process is the culmination of the analysis, goal setting, and interaction activities, which took place during the creation of the Comprehensive Development Plan. This portion of the Plan is designed to guide the community in taking the actions necessary to achieve its goals and objectives.

It is important to note that the North Central Muskegon County Joint Planning Commission (JPC) was established as an advisory group. Their role at this time is to conduct planning efforts within the JPC area, share information amongst the member communities, and to make recommendations to the five Township Boards and Planning Commissions. Therefore, implementation authority of the Plan will lie mostly within the powers of Blue Lake, Dalton, Fruitland, Laketon, and Muskegon Townships.

The Plan is intended to be a working document that provides the JPC decision makers with information on the goals desired by the community. The Plan should, therefore, be consulted whenever policy issues arise, especially those relating to land use.

Successful implementation requires a continuous effort on the part of the JPC, Township Planning Commissions, Township Boards, and the community at large. It is essential that each member of the JPC, Township Planning Commissions, and Township Boards understand the Plan, know their own role as it relates to the Plan, and promote implementation of the Plan by their JPC, Township Planning Commission, Township Board, appropriate agencies, community groups, and citizens.

The goals and objectives of the North Central Muskegon County Joint Planning Commission Comprehensive Development Plan can be implemented through the use of the following described tools and techniques that the JPC and townships can utilize. The following list of tools and techniques are certainly not an exhaustive list, however, some are more applicable to townships than others. Many of the tools and techniques can be used for multiple purposes by the JPC and townships to achieve its goals and objectives, even though they are listed under specific headings.

Zoning Ordinance

A zoning ordinance is the primary regulatory tool used to implement future land use plans. Following the adoption of the Plan, the JPC should complete an internal inventory and review its priorities. From these, they should then make recommendations to the townships of Blue Lake, Dalton, Fruitland, Laketon, and Muskegon regarding zoning ordinance amendments.

This will ensure that the zoning ordinance of each township will be consistent with the completed North Central Muskegon County Joint Planning Commission Comprehensive Development Plan. The zoning ordinances themselves will reflect the North Central Muskegon County Joint Planning Commission Comprehensive Development Plan; however, the zoning maps will not necessarily reflect the future land use map.

Land Division Act

Townships are authorized to regulate and control the subdivision of land within their jurisdictions pursuant to Public Act 591 of 1996, the Land Division Act (formerly known as P.A. 288 of 1967, the Subdivision Control Act). Amended in 1997, this act gave a township with a land division ordinance more control over how land could be divided and lessened state controls. The act governed the division of existing parcels, called “parent parcels,” as identified by the state.

A township can have an important voice in the design and layout of subdivisions and can set uniform standards for streets and roads, utilities, and other improvements with the utilization of a local land division control ordinance. The land division ordinance can reference all other township ordinances and require conformance with them. Conformance with the zoning ordinance and the insertion of land division design standards while updating the ordinance offers control over density.

Planned Unit Development (PUD)

The planned unit development concept is utilized by many communities to encourage innovative and imaginative project design. As a development type, it permits flexibility in site design and usage. It allows buildings to be clustered by mixing types, or by combining housing with ancillary uses such as neighborhood shopping. It allows for better design and arrangement of open space and the retention of such natural features as forests, slope, and floodplains. As a regulatory tool, it allows variation in many of the traditional controls related to density, setback, use and open space.

Open Space Preservation

A variation on the PUD theme is an Open Space Preservation district. In this type of district, or in a residential district with this feature, developers are encouraged to set aside open space in perpetuity in exchange for flexibility on the part of the township with respect to zoning requirements. Open space conservation is important because open space needs to be planned and provided for prior to complete development occurring.

Key characteristics of an Open Space Preservation District/Overlay, when combined with elements of the PUD concept or Site Condominium concept, include:

- Flexibility in the design of a development.
- Lot size restrictions in traditional zoning are converted to density limitations where the unit of measurement is the entire project, not the individual lot.
- Allowance for slightly greater density than normal zoning, in most cases, as *an incentive*.
- Buffering/open space in the development is *in exchange* for flexibility on the part of the township, so the alternative (i.e. traditional zoning) must be fairly rigid, more restrictive, and strictly enforced.
- The developer saves money through lower up-front costs for infrastructure, and tends to make more profit through higher initial sales price and greater sales volume.

Open Space Zoning allows the developer to have some additional units to market, in exchange for the promise to set aside a portion of the development as open space in perpetuity.

Growth Management

“Growth management refers to the systematic attempt, by a community, to guide the type, rate, location, timing, public cost of, and often the quality and character of land re-development” (Michigan Department of Natural Resources, Michigan Coastal Management Program). Growth management must be, first and foremost, well integrated into the planning and zoning process. As an overview, there are several possible avenues to explore when considering a growth management strategy. Among them are:

- **Purchase of Development Rights.** In this scenario, the township directly remunerates the land owner in return for exclusive rights to develop the property as the township sees fit or to preserve it. The rights may also be sold to yet another property owner who can (or will) develop the land as the township wishes. The land owner participates voluntarily, still owns the land, and can use or sell the land for specified purposes, such as farming or hunting.

Once a Purchase of Development Rights agreement is made, a usually permanent deed restriction is placed on the property which limits the type of development that may take place on the land. A legally binding guarantee is thus achieved to ensure that the parcel will remain as it is or be developed only as wished. The deed restriction can also be referred to as a conservation easement.

- **Transfer of Development Rights.** Although not authorized by statute for use between jurisdictions in Michigan, this technique has been used successfully elsewhere. It is a variation on the above, except a trade is made between two or more parcels. It essentially is a method for protecting land by transferring the “right to develop” from one area (sending) and giving it to another area (receiving). A consensus must be reached on where the public wishes to preserve low density or open space and where it will allow for increases in development densities.

“Receiving” areas generally have streets, public water and sewer, and other improvements or the improvements are such that they can be extended a short distance without extensive cost. The costs of purchasing the easements are recovered from the developers who receive building “bonuses” according to the values agreed upon. As with Purchase of Development Rights, the owner of the preserved site participates voluntarily and retains existing use rights while receiving compensation for the development value of the land.

- **Concurrency.** This is a situation in which the township ties development (i.e. density and type) to established bench marks regarding public service (i.e. water, sewer, roadway capacity, police, fire, educational and others) to control development. No development can occur in a given area until the benchmarks are met, either by the township or the developer. This method also requires a carefully laid out capital improvements plan to be fully effective.

- **Development Agreements.** This would operate much like a contract/site plan review process combined. It would cover a fixed period in time, and would identify specific elements of development covered. It would offer assurances for both sides that planning could take place and there would be no changing of the rules in the middle of the game.
- **Regional Impact Coordination.** In a larger sense, this concept amounts to a specific agreement to involve other jurisdictions in any development which has a “regional impact”. The establishment of the JPC is an effort to accomplish such coordination and will be used as a vehicle to foster future collaborative efforts.

In addition, the West Michigan Shoreline Regional Development Commission and the constituents of Muskegon County have taken steps to foster additional coordination by creating the Muskegon Area-wide Plan (MAP). The MAP has been approved/adopted by the majority of local governments within Muskegon County.

The State of Michigan has taken another step by making it mandatory that amendments to a community’s land use plan be submitted, for review and comment, to all bordering jurisdictions, the acting regional planning commission, and ultimately the County. While presently these comments have no regulatory implications, this legislation is the first step in working towards a collaborative effort amongst bordering municipalities encouraging similar land uses on adjacent parcels.

Capital Improvements Program

A Capital Improvements Program (CIP) is a fiscal plan outlining the means for the township to finance selected projects requiring capital, either on a short-term or long-range basis. The CIP thus sets priorities for future development. Projects typically included are public facilities such as township halls and parks, land improvements, roads, bridges, acquisitions, utilities, planning projects, etc.

Dedicated Millage

A dedicated millage can be used to generate revenues for a specific purpose and, in so doing, can implement recommendations of the Comprehensive Development Plan. For example, a dedicated millage could be used to establish a land acquisition fund, a bike path fund, or a conservation easement program. All of these would be useful tools for promoting open space preservation.

Although acquisition of land by a governmental unit provides the greatest level of land use control, it is also the most expensive. In addition to acquisition costs, purchase removes property from the tax rolls and decreases property tax revenues.

Conservation Easements

The Farmland and Open Space Preservation Act of 1974 provides for dedication of a conservation easement to a public entity while the Conservation and Historic Preservation Easement Act of 1980 gives a third party, such as a land trust, the right to receive and the resulting responsibility to enforce an easement. Conservation easements are voluntary legal agreements between landowners and a land

conservancy or government agency and are distinct property rights that may be sold or donated separately from other rights.

Conservation easements are effective for preserving sensitive lands, providing public access along rivers or greenways, and allowing property owners to consider land stewardship while they continue to live on their land. They permanently limit development of the property in order to protect the conservation values of the land. The landowner continues to bear all costs and liabilities related to ownership and maintenance of the property.

The relationship between Purchase of Development Rights and conservation easements is close and the terms are often used interchangeably. However, conservation easements can be both sold or donated. When a land owner sells the development rights for less than their full value, it is called a “bargain sale.” Bargain sales and donations can reduce income, inheritance, and property taxes while providing cash for needed purposes when meeting the necessary requirements.

Land Conservancy

While property owners can voluntarily donate or sell land or easements in the interest of conserving natural resources or natural features, and perhaps qualify for income, estate and property tax benefits, private land trusts can facilitate a resource protection program by use of a variety of land acquisition and conservation techniques.

For instance, The Land Conservancy of West Michigan (LCWM) “protects lands that contribute to the distinctive character and quality of life in West Michigan; lands that are important for their values as habitat for native plants and animals, as centers for study and quiet recreation, and as elements of scenic beauty and rural character. LCWM offers positive, non-regulatory solutions to disappearing open space that benefit landowners and local communities.”

LCWM acquires natural land through donation or “bargain sale” purchase of high priority land for the purpose of creating nature preserves that are open to the public. It also assists with conservation easements and works with developers to construct easements for open space design. Finally, LCWM assists local governments with identifying important natural areas, preserving lands, creating community parks, and writing grant applications for project funding.

Chapter IX: Recommendations

As stated earlier in the document, the creation of the North Central Muskegon County Joint Planning Commission (JPC) is a pioneering effort in not only west Michigan, but in the State of Michigan as well. To date, the JPC is one of only a few joint planning commissions that have been established across the state. It is the largest in geographical area, as well as in the number of units of government involved (five townships). The JPC is also the only joint planning commission in the state consisting of only townships. It is important that the JPC continue to meet regularly in order to implement the goals and objectives set forth in the North Central Muskegon County Joint Planning Commission Comprehensive Development Plan.

The boundaries of the JPC were determined based on the potential development of the area. Officials are anticipating the future expansion of Michigan's Adventure Amusement Park, the opening of the Muskegon County Business Park North, and other growth factors to have a tremendous impact on the development of the area. Therefore, it will be vital for the JPC to continually address future development in the area in order to assure its consistency with the vision of the Plan.

Throughout the development of the plan, it was evident that both community leaders and residents alike greatly value the rural character of the area and wish to maintain that attribute. Therefore, in order to properly manage the projected growth within the area, it is recommended that future development be encouraged and directed into designated areas. The JPC has embraced the town center and hamlet development style and therefore should encourage commercial and mixed use development to resemble that development style. It is important to note that it is not the wishes of the JPC to stop growth from happening, but rather manage and direct the growth to occur in designated areas in order to preserve the rural character of the community.

The West Michigan area has abundant natural resources which are cherished by area residents. These natural resources and their value to the community are described in detail throughout the Plan. In order to preserve, protect, and maintain these valued treasures, it is important to reference the Plan when making recommendations regarding development and land use decisions.

The member communities of the JPC should be commended for their participation in this pioneer project. In order to continue the success of the project, it is vital that the JPC and member communities continue to foster the communication and cooperation which has been established through the development of the Plan. It is also suggested that the JPC expand their efforts of intergovernmental cooperation and communication beyond its borders.

The JPC should continually visit the visions, goals, and objectives identified in this Plan and prioritize those of greatest and most timely importance. It is also recommended that the JPC regularly consult and support the Muskegon Area-wide Plan (MAP) as the county-wide vision and strive to remain consistent with its principles. Those principles are similar to the visions and goals identified in the North Central Muskegon County Joint Planning Commission Comprehensive Development Plan.

Chapter X: Conclusion

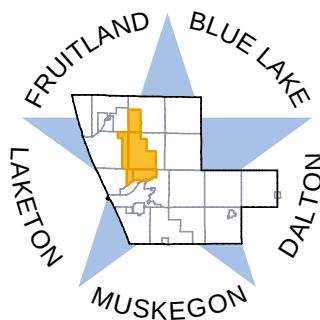
The changes envisioned in the comprehensive development plan will occur as a result of cumulative private and public decisions about such things as opening a business, locating a residential development, and installing a public park. The inner-workings of investments by private actors and individual entrepreneurs, as well as development decisions by public and quasi-public agencies, bring about physical changes to an area.

If properly used, the comprehensive development plan can guide government about where public development should go and why. It can give potential investors a general sense of where the community would prefer residential and commercial development to be located. In short, the purpose of a comprehensive development plan is to offer guidance to any and all actors whose decisions affect land. In more particular terms, this plan offers several professional suggestions for achieving commonly held aspirations for the community's future development.

The North Central Muskegon County Joint Planning Commission (JPC) Comprehensive Development Plan describes a vision for the area's future growth and development. The Plan provides guidance through the established goals and objectives, as well as the future land use map, all which were developed through the planning process.

The success of the Comprehensive Development Plan lies not only with the JPC, but also with the five member townships. **Each township will need to endorse/approve the Comprehensive Development Plan and continually support the ongoing efforts of the JPC.** The townships must also commit to dedicate the necessary resources to implement the Plan. This will entail regularly consulting the plan when making development decisions, in addition to striving for consistency between the JPC Comprehensive Development Plan and local jurisdictional plans. The Plan should also be reviewed at a minimum of every five years. This will enable the JPC to track progress of implementation, while taking the pulse of the community to determine whether the goals are still appropriate and if additional goals should be added. It should also be a priority to update the plan accordingly as the local situation warrants.

It is important to note that the purpose of the JPC and the Comprehensive Development Plan is not to prohibit development, but rather to manage and direct the future development to appropriate areas which will foster the goals and objectives set forth through the planning process and community input.



Appendix A

TOWNSHIP RESOLUTIONS AND JPC BY-LAWS

BLUE LAKE TOWNSHIP
RESOLUTION

NO. JPC 41006

WHEREAS, the People of the State of Michigan enacted the Joint Municipal Planning Act (Act 226 of 2003), which provides for joint land use planning by local units of government and to provide for the establishment, powers, and duties of joint planning commissions;

WHEREAS, the townships of Blue Lake, Dalton, Fruitland, Laketon, and Muskegon have determined, that due to commonality of interests and the need for multi-jurisdiction planning, to establish a Joint Planning Commission;

WHEREAS, the township of BLUE LAKE maintains and administers its own comprehensive land use plan and zoning ordinance to guide the future growth and development of the township;

WHEREAS, the Township of BLUE LAKE agrees to, through the Joint Planning Commission, prepare a regional comprehensive land use plan encompassing certain geographical areas (yet to be determined) of the respective townships;

WHEREAS, the NCMC Joint Planning Commission Advisory Committee, will prepare bylaws for the governance of the JPC and submit the same to the township boards for approval;

WHEREAS, the NCMC Joint Planning Commission shall consist of 10 representatives, one elected official from the township Board and one appointed official from the Township Planning Commission, as well as one alternate.

NOW, THEREFORE, BE IT RESOLVED that the Township of BLUE LAKE hereby agrees to establish and participate in the North Central Muskegon County Joint Planning Commission.

MOVED TO ADOPT BY; MELONIE ARBOGAST
SUPPORTED BY; LYLE MONETTE

ROLL CALL VOTE; FIVE YES.

FRED E. ARBOGAST SR. CLERK.

Resolution 06-01

Resolution Establishing the North Central Muskegon County Joint Planning Commission

WHEREAS, the People of the State of Michigan enacted the Joint Municipal Planning Act (Act 226 of 2003), which provides for joint land use planning by local units of government and to provide for the establishment, powers and duties of joint planning commissions;

WHEREAS, the Townships of Blue Lake, Dalton, Fruitland, Laketon and Muskegon Charter have determined that, due to commonality of interests and the need for multi-jurisdictional planning, to establish a Joint Planning Commission;

WHEREAS, the Township of Dalton maintains and administers its own comprehensive land use plan and zoning ordinance to guide the future growth and development of the Township;

WHEREAS, the Township of Dalton further agrees to, through the Joint Planning Commission, prepare a regional comprehensive land use plan encompassing certain geographical areas (yet to be determined) of the respective Townships;

WHEREAS, the NCMC Joint Planning Commission Advisory Committee will prepare bylaws for the governance of the JPC and submit the same to the Township Boards for approval;

WHEREAS, the NCMC Joint Planning Commission shall consist of 10 representatives, one elected official from the Township Board and one appointed official from the Township Planning Commission, as well as one alternate.

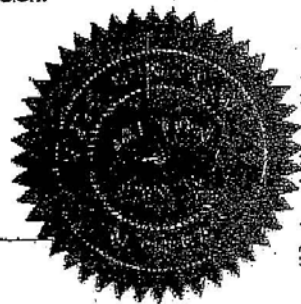
NOW, THEREFORE, BE IT RESOLVED that the Township of Dalton hereby agrees to establish and participate in the North Central Muskegon County Joint Planning Commission.

AYES: Sherwood, Mizze, Hiner, Riacello, Jenkins, Young, Hladki.

NAYS: None.

Adopted this date of May 8, 2006

Mary Ellen Sherwood
Mary Ellen Sherwood
Dalton Township Clerk



FRUITLAND TOWNSHIP

RESOLUTION 2006 – 02

Establish and Participate in the

North Central Muskegon County Joint Planning Commission

WHEREAS, the People of the State of Michigan enacted the Joint Municipal Planning Act (Act 226 of 2003), which provides for joint land use planning by local units of government and to provide for the establishment, powers, and duties of joint planning commissions; and

WHEREAS, the townships of Blue Lake, Dalton, Fruitland, Laketon, and Muskegon have determined that due to commonality of interests and the need for multi-jurisdictional planning, to establish a Joint Planning Commission; and

WHEREAS, the Township of Fruitland maintains and administers its own comprehensive land use plan and zoning ordinance to guide the future growth and development of the township; and

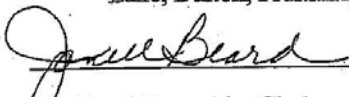
WHEREAS, the Township of Fruitland further agrees to, through the Joint Planning Commission, prepare a regional comprehensive land use plan encompassing certain geographical areas, yet to be determined, of the respective townships; and

WHEREAS, the North Central Muskegon County (NCMC) Joint Planning Commission Advisory Committee will prepare by-laws for the governance of the Joint Planning Commission (JPC) and submit the same to the township boards for approval; and

WHEREAS, the North Central Muskegon County Joint Planning Commission shall consist of ten (10) representatives, one elected official from the Township Board, and one appointed official from the Township Planning Commission, as well as one alternate.

NOW, THEREFORE, BE IT RESOLVED

that the Township of Fruitland hereby agrees to establish and participate in the North Central Muskegon County Joint Planning Commission consisting of the townships of Blue Lake, Dalton, Fruitland, Laketon, and Muskegon.


Fruitland Township, Clerk

January 23, 2006

Date

Resolution 2006 – 02 is moved by Trustee Bole, and seconded by Trustee Binns, and *hereby adopted* at a Regular Meeting of the Fruitland Township Board held on Monday, January 23, 2006 at 7:00 p.m. by Roll Call Vote:

Trustee Binns Aye

Trustee Bard Aye

Trustee Bole Aye

Trustee Hammond Aye

Clerk Beard Aye

Treasurer Boyer Aye

Supervisor Boughton Aye

LAKETON TOWNSHIP
Resolution No. 04170601
RESOLUTION OF PARTICIPATION

WHEREAS, the People of the State of Michigan enacted the Joint Municipal Planning Act (Act 226 of 2003), which provides for joint land use planning by local units of government and to provide for the establishment, powers, and duties of joint planning commissions; and

WHEREAS, the townships of Blue Lake, Dalton, Fruitland, Laketon and Muskegon have determined, that due to commonality of interests and the need for multi-jurisdiction planning, to establish a Joint Planning Commission; and

WHEREAS, the township of Laketon maintains and administers its own comprehensive land use plan and zoning ordinance to guide the future growth and development of the township; and

WHEREAS, the township of Laketon further agrees to, through the Joint Planning Commission, prepare a regional comprehensive land use plan encompassing certain geographical areas (yet to be determined) of the respective townships; and

WHEREAS, the NCMC Joint Planning Commission Advisory Committee, will prepare bylaws for the governance of the JPC and submit the same to township boards for approval; and

WHEREAS, the NCMC Joint Planning Commission shall consist of 10 representatives, one elected official from the township board and one appointed official from the Township Planning Commission, as well as one alternate.

NOW, THEREFORE, BE IT RESOLVED, that the township of Laketon hereby agrees to establish and participate in the North Central Muskegon County Joint Planning Commission.

A motion to adopt this Resolution was made by member Weessies, seconded by member Kane.

Ayes: Weessies, Kane, Zaagman, Crummel and Zeller

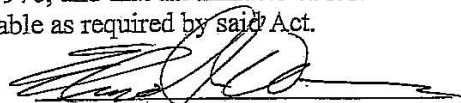
Nays: None

Resolution Declared Adopted.

April 17, 2006


Laketon Township Clerk

I hereby certify that the foregoing is a true and complete copy of a resolution duly adopted by the Township Board of the Township of Laketon, County of Muskegon, State of Michigan, at a regular meeting held on April 17, 2006, and that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be and have been made available as required by said Act.


Township Clerk

RESOLUTION

Number 02200601

WHEREAS, the People of the State of Michigan enacted the Joint Municipal Planning Act (Act 226 of 2003), which provides for joint land planning by local units of government and to provide for the establishment, powers and duties of joint planning commissions; and

WHEREAS, the townships of Blue Lake, Dalton, Fruitland, Laketon and Muskegon Charter have determined, that due to commonality of interests and the need for multi-jurisdiction planning, to establish a Joint Planning Commission; and

WHEREAS, the Township of Laketon further agrees to, through the Joint Planning Commission, prepare a regional comprehensive land use plan encompassing certain geographical area (yet to be determined) of the respective townships; and

WHEREAS, the NCMC Joint Planning Commission Advisory Committee, will prepare bylaws for the governance of the JPC and submit the same to the township boards for approval; and

WHEREAS, the NCMC Joint Planning Commission shall consist of 10 representatives, one elected official from each township board, one appointed official from the Township Planning Commission, as well as one alternate.

NOW, THEREFORE, BE IT RESOLVED, that the Township of Laketon hereby agrees to establish and participate in the North Central Muskegon County Joint Planning Commission.

IT IS FURTHER RESOLVED, that the following persons shall be appointed to the NCMC JPC:

Roland Crummel Supervisor

Mary Marcil Chairperson, Planning Commission

Rod Siegel Member, Planning Commission, Alternate



Edward J. Weessies, Clerk

February 20, 2006

Date

Resolution 06-01

Resolution Establishing the North Central Muskegon County Joint Planning Commission

WHEREAS, the People of the State of Michigan enacted the Joint Municipal Planning Act (Act 226 of 2003), which provides for joint land use planning by local units of government and to provide for the establishment, powers and duties of joint planning commissions;

WHEREAS, the Townships of Blue Lake, Dalton, Fruitland, Laketon and Muskegon Charter have determined that, due to commonality of interests and the need for multi-jurisdictional planning, to establish a Joint Planning Commission;

WHEREAS, the Charter Township of Muskegon maintains and administers its own comprehensive land use plan and zoning ordinance to guide the future growth and development of the Township;

WHEREAS, the Charter Township of Muskegon further agrees to, through the Joint Planning Commission, prepare a regional comprehensive land use plan encompassing certain geographical areas (yet to be determined) of the respective Townships;

WHEREAS, the NCMC Joint Planning Commission Advisory Committee will prepare bylaws for the governance of the JPC and submit the same to the Township Boards for approval;

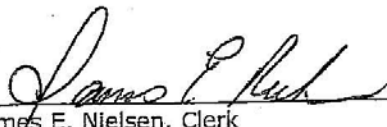
WHEREAS, the NCMC Joint Planning Commission shall consist of 10 representatives, one elected official from the Township Board and one appointed official from the Township Planning Commission, as well as one alternate.

NOW, THEREFORE, BE IT RESOLVED that the Charter Township of Muskegon hereby agrees to establish and participate in the North Central Muskegon County Joint Planning Commission.

AYES: Nielsen, Bird, Gilbert, Chaney, Plummer, Ream, and Jordan

NAYS: None

Adopted this 3rd day of January, 2006


James E. Nielsen, Clerk

BY-LAWS
North Central Muskegon County Joint Planning Commission

Pursuant to the provisions of the Joint Municipal Planning Act 226 of the Michigan Public Acts of 2003, the townships of Blue Lake, Dalton, Fruitland, Laketon and Muskegon have established the North Central Muskegon County Joint Planning Commission (hereinafter also known as the “Joint Planning Commission” or “JPC”).

The primary mission of the North Central Muskegon County Joint Planning Commission is to undertake multi-jurisdictional land use planning in a geographically defined area of the five townships.

Therefore, the JPC does hereby promulgate and adopt the following by-laws for governing of the Joint Planning Commission.

Article I: Purpose and Authority

North Central Muskegon County Joint Planning Commission herewith assumes the purposes and authority set forth in the Joint Municipal Planning Act 226 of the Michigan Public Acts of 2003.

Article II: Membership and Area of Jurisdiction

Section 1: Jurisdiction. The JPC’s jurisdiction is to include the geographic area in the five townships defined by the Joint Planning Commission.

Section 2: Admission to Membership. Admission of additional local governments to membership in the Joint Planning Commission is allowable upon petition of such local governments, and approval of that petition by the JPC and the member local governments.

Section 3: Withdrawal from Membership. Withdrawal from membership by any member local government is allowable upon a minimum of six (6) months notice to the Joint Planning Commission offices of a resolution to withdraw by the governing board of the member local government. Membership dues will not be returned to member local governments in the case of withdrawal, and are payable for the entire six (6) months from the date a written resolution of withdrawal is received by the Joint Planning Commission.

A member local government that withdraws its membership and/or fails to pay membership dues shall not be entitled to representation on the Joint Planning Commission. Readmission of such local governments to membership in the JPC is allowable upon petition of such local governments and approval of that petition by the Joint Planning Commission, and by the governing boards of the existing member local governments.

Article III: Representation

Section 1: Representation Structure.

Representation on the Joint Planning Commission shall be as follows:

(a) **Local government membership:** A local government shall have two (2) representatives, one (1) member from the governing board, and one (1) member from the local government planning commission.

(b) **Alternate Membership:** Each local government may appoint alternates for their regular representatives. Alternates shall be subject to the qualifications and terms of membership of regular members as specified in Article III, Section 2 and 3.

Section 2: Qualifications for Representatives. One (1) member shall be an elected official from the governing board of the local government, and one (1) member shall be an appointed official from the planning commission of the local government.

Section 3: Terms of Membership. The term of membership for each member of the Joint Planning Commission shall coincide with his/her term of office in the

capacity which was the basis for her/his appointment to the JPC (i.e., local government governing body, planning commission).

Section 4: Vacancies. When a position on the Joint Planning Commission becomes vacant, the vacancy shall be filled by appointment by the same member government that appointed the representative whose position has been vacated.

Article IV: Financial Affairs

Section 1: Dues. The Joint Planning Commission may set annual membership dues, on an agreed upon basis, to be paid by each member local government.

Section 2: Contracts and Grants. The Joint Planning Commission is hereby authorized by its member governments to enter into contracts and to receive and administer private, Federal, state, county, or other governmental funds, including grants, and fees in the performance of its duties.

Article V: Organization

Section 1: Voting. The appointed representatives shall constitute general and overall policy-making body of the Joint Planning Commission. Each representative to the JPC shall have one (1) vote. Fifty (50%) percent of the Joint Planning Commission's appointed membership shall constitute a quorum for transacting business.

Section 2: Officers. Each January, the Joint Planning Commission shall elect from among its members a chairperson and vice-chairperson. Vacancies in offices shall be filled by vote of the JPC representatives.

Section 3: Meetings. Regular meeting schedule of the Joint Planning Commission shall be established at the beginning of each fiscal year, and special meetings may be scheduled by the call of the chair or by one-third of the voting members.

Section 4: Rules of Order. The Joint Planning Commission shall conduct its business in accordance with Robert's Rules of Order.

Section 5: Amendments. These by-laws may be amended, revised, repealed, or expanded by a majority vote of the Joint Planning Commission representatives. Any representative may offer a proposed amendment, provided that written notice shall be sent to each representative at least ten (10) days before the meeting at which the vote will take place.

The amendment shall become effective immediately upon approval by vote of the Joint Planning Commission.

Section 6: Adoption. These by-laws are adopted on May 24, 2006.

Appendix B

COMMUNITY FORUM AND VISIONING RESULTS

Ice Breaker Exercise

JPC Community Forum

February 22, 2007

Question: What three things will shape your community over the next ten years?

All responses – identified in no particular order		
Economy	Housing trade/market	Job market
Health care	Jobs	Recreation /tourism
Schools/Education	Community involvement-across racial barriers, getting to know one another, awareness	Growth, housing, traffic, business
Job creation & retention-good jobs to support a family at a middle class life style	Housing	Housing Development – increased traffic & subsequent wear on roadways; demand for urban in country setting
County wide sewer-into congrigated areas	County water into areas of bad water	Better infrastructure for manufacturing and jobs
Business development- to include retail & corporate	Water park development-jobs availability	M-120 corridor development-jobs availability
Whitehall Road development-jobs availability	Growth	Clean water
Road work	Michigan Adventure and the developing around it	Land use development
Traffic and access to the area	Funding sources-(or the lack of them)	Safety for everyone in the area or that come to the area
Environmental protection	Residential development pressures	Infrastructure pressures- sewer,water
Government leadership or lack of	Local economics	Revitalize downtown Muskegon
Public utilities available in previously ignored areas	Development	How we prepare and react to number 1
Diversification of industry and tourism	Neighborhood/community involvement	High paying jobs
Local government unit participation (the lack of)	Managed growth without overburdening the tax payers-taxes are good if spent properly and not wasted	Economic growth-business and industry
Housing growth-individual dwellings and multi-dwellings	Better control over property owners but not over controlled	Economic change-globalization and competition in world market will force changes and shape how the American society & local areas develop
Water and sewer utility extensions and their respective locations	Business at I-31 & M120	Environmental changes
Developments-especially ones not well thought out and ones that compromise natural environment	Intergovernmental cooperation	Population growth
Business growth	Continued investment in infrastructure	Restrictions imposed by governmental units
Development/business, industrial, residential & commercial	People willing to invest in developing assets	New business coming into area
Familles moving out of community	Michigans Adventure	Infrastructure – roads, water, sewer
Traffic	Owassippi-what will happen?	Local control
People	Sprawl into now forest land	Leadership in the community
Road repair & construction money	Taxes-how much increase	Finances/taxation: state funding, tax base, & availability of grant moneys
Global warming's effects on the Great Lakes	Companies tapping Michigan's ground	Lake waters for sale
Natural resource preservation	Identification of industry present in the Township	Commitment to limited residential growth
Sand company and roads	Boy Scout camp for sale- 4800 acres?	Population- growth/shift of needs meeting the needs of constituents as population grows/changes
Developers coming in with plans	How "good" our zoning ordinance is	

* Bold indicates circled priority items

Visioning Exercise Results

JPC Community Forum

February 22, 2007

TABLE #1

General Category	Specific Notes
Economy	• The economy will restrict development of the area. • Local Economy is heavily development of Quality of Life. • I hope we can improve the overall economy in Michigan and especially our own country through guided planning of this area growth.
Development	• Encourage conservancy of private lands. • Private Rural Housing – narrow strip along Whitehall Road for Commercial. • Non-nuisance use.
Freedoms	• Life, liberty and the pursuit of happiness. • Rural Housing – freedom of choice for the use of my rural 38 acres as unimproved land-private housing-green space. • Peace and quiet of the woods.
Open Space	• Lots of opportunities for recreational activities – parks, lake access. • Encourage open space development so local neighborhoods can keep natural charm.
Recreation/Natural Resources	• Encourage a commitment to purchase "natural beauty" lands. • Natural resources – access to lakes – parks. • Recreational activities. • The same as it is but on a larger scale. • The same/preserve our lakes, rivers, streams and enough natural forests for recreational purposes and overall natural beauty. • About the same as it is now.
Quality of Life	• Safe neighborhoods • Quality resources – water and sewer • Access to services – doctors, grocery stores, restaurants, drug stores.

TABLE #2

General Category	Specific Notes
Community	• Family health, happiness, and success, community health. • Tranquility and involvement in local activities. • Well-defined structures of communities with many green-space areas. • Spread out residential areas. • Local landscape in 30 years – controlled growth that maintain the natural environment of the area's forests, lakes, etc. • Safety & services provided by local infrastructure (security-police, fire, ambulance). • Welfare issues – youth-higher levels of education, adults – job opportunities, seniors – health care and activities.
Economy	• Economic viability • Must have new job opportunities to replace manufacturing sector for local economy to succeed. • Must be successful to keep folks interested and involvement. • Economic engine of recreation and education. • A combination of rural, suburban areas, light industry and business areas within our community. • Real estate business to be based on resale not new development.
Education	• Sad.
Environment	• Stop the extraction of water from the land for bottlers. • Lakes on 2 sides. • An attraction to other from outside the area. • Natural resources need to be protected, preserved and (if possible) expanded. • Safe, pollution free living. • A healthy clean environment. • Woods (forest).

TABLE #3	
General Category	Specific Notes
Environment	• We are moving from a manufacturing base to service base, in doing this we have a lot of industry waste to clean up. • To remain unspoiled as is today – clean up as much pollution as possible – provide for more area recreation – fishing, golf, boating, snow sports. • Access to public lands. • Clean water ways.
Good Jobs	• Good paying jobs – jobs that will create enough revenue to have the quality of life needed to keep a safe environment. • Quality jobs create a better economy and will keep the landscape pollution free.
Safe	• Security, safe clean living, good health.

TABLE #4	
General Category	Specific Notes
Economy	• Employment, jobs we definitely need more jobs, job opportunities. • Would like more specific areas for industry. • Enough job opportunities and variety of business. • Shared wealth opportunities. • Good economy increases quality of life.
Education	• Quality education system. • School improvements. • Good schools.
Environment	• Activities for all ages of people, outdoor opportunities. • Available, undisturbed, open space, spacious. • As little environmental impact as possible. • Rural wooded appearance with quality of water. • Quality of life- regarding natural beauty (lakes, woods, etc). • Open space for all types of outdoor activities. • Would like to have many areas that are left natural.
Health & Safety	• Convenience to healthcare, safety
Infrastructure	• Variety of services available to all residents. • Utility expansions. • Water, sewer. • Road improvements. • Roads.
Sustainability	• Investment of new money opens doors to new options over time.
Quality of Life	• Friendship / community. • Freedom to move about. • Controlled growth.

TABLE #5	
General Category	Specific Notes
Employment & Housing Personal Goals	- Improved income opportunities. - Jobs locally. - Pollution free industry. - Sustainable development. - Need jobs, diverse, safe, clean. - Being able to do meaningful work in a clean environment job site. - I see a vibrant economy that allows the citizens to support a meaningful lifestyle. - The ability to improve ones lifestyle and housing. - Comfortable housing. - Safety- security in one's self, home, and community not reliant on police services.
Environment – Rural Preservation	- Managed zoning so that traveling through the area you see nature not wall to wall homes. - Improve and maintain resource base. Landscape to have tasteful development areas with plenty of green areas. - Clean, healthy and alive (trees, beaches, wildlife). - Rural environment- quiet, spacious, safe. - Clean and unspoiled. - Open space preservation. - A balance of undeveloped residential areas to preserve the wildlife. - Able to be accessed by everyone.
Infrastructure – Public Use	- Universal access to cable and cell phone. - Safety in public areas. - The public should be able to experience all types of natural resources and landscapes. - Close access to great schools. - Good water supply. - Provide parks and safe areas for children. - Educational advantages- believe higher education should be available to all- more government support beyond. - High School. - Improved transportation, buses, shuttle services, bike trails. - Support education and technical support for educational facilities in communities.

TABLE #6	
General Category	Specific Notes
Economy & Jobs	- Slow but steady economic opportunities creating expansion along with managed growth. - Outsourcing of jobs worldwide strains the state and local economy. - Expansion and growth forcing development away from central city. - Quality of life with full employment at living wages with racial equality. - Racial equality- quality of life. - Creating job opportunities. - Job and career opportunities. - Economy / jobs.
Education	Education
Health & Safety	- Affordable health care for all. - Positive people wanting to control and improve the environment. - Preserve and protect the Great Lakes. - Health & safety. - Clean water and Lakeshores with adequate transportation network- no snow. - Safe.
Quality of Life	- Outdoor adventures. - A major recreational destination station with quality of life. - Social activities. - Making Muskegon a desirable place to live. - Natural beauty. - Same look and feel as we have today. - Preserved planned green space. - Spiritual diversity. - Protected "Truly Natural" resources. - Local economy, balance of shopping, business and services with rural atmosphere with separation. - Clean, diverse. - Wanting people to move here because of quality of resources and life. - Local landscape and natural resource base in 30 years-abundant. - Affordable and uniform housing. - Flat screen TV's in every room and beer on tap.

TABLE #7	
General Category	Specific Notes
Community Character - Quality of Life	• Cleaning up areas, controlling what items can be visible from highways. • Yourself-integrity, honesty, loving other people. • Community-hard working, helping each other. • Quiet, safe community, walkable community. • Good schools. • Secure employment. • Family-togetherness, strong ties, bond of love. • Culture (activities). • Safety.
Environment, Natural Resources, Open Space	• Economy should follow clustered landscape and open space – tourism. • Protected natural resources, preserved, protected natural resources. • As is now by using clustering for development - stop urban sprawl. • Preserved green space, rural & open space protected. • Value-openness, freedom to be a part of nature.
Organized Planned Development	• Lots of street lights in the rural areas. • Keep economic base as far from residential or as separated as possible. • Flower's of beautification. • Committee's formed / area's of landscape structure. • Mass transportation. • Largely tourism based. • Planned development to create walkable communities.

TABLE #8	
General Category	Specific Notes
Clean Environment	• Clean, unpolluted water---both surface water and ground water. • Preserve as many natural resources and environmental features as possible. • Clean and safe environment and community. • Clean environment-good roads-organized neighborhoods and business areas. • Clean.
House	• Low density communities. • Integration-Senior housing-affordable housing-single family-traditional family. • Not over developed. • Senior housing.
Jobs	• Minimize heavy industry and factories (none in our township!). • Emphasize service businesses and "clean" businesses (nonpolluting). • With development comes job- hopefully. • Jobs. • Balance of natural resource and development jobs.
Recreation	• The areas need places for family activities at no cost or very low cost-bike trail, parks, picnic areas, etc. • Plenty of open space, green space, bike trails, hiking trails. • Green spaces among developments. • Green space.
Roads	• Wonderful roads.
Safety	• Growing strong community for families. • A decent and safe community in which we live. • A safe and secure place (area) for them to grow up and go to school. • Safety in living and travel. • Expansion of utilities. • Safety.
Vision	• Spiritual Health. • A community that is forward looking – growth – proactive.

Appendix C

TRANSPORTATION STUDY SUMMARIES AND MAPS

M-120/Holton Road Corridor Study Executive Summary

Provided for the M-120 Corridor Study Group by the
West Michigan Shoreline Regional Development Commission

January 14, 2000

STUDY BACKGROUND

A corridor study focuses on a single major roadway, adjacent roadways, and land uses in its proximity and seeks to find ways to solve existing traffic problems while preventing future ones. Corridor studies, such as the M-120 Corridor Study, are meant to be more holistic in nature addressing the entire stretch of a particular roadway rather than taking a piecemeal approach. Corridor studies are meant to be performed as part of a long-range transportation planning process and should address issues at a regional level.

One aspect of corridor development that is universally true is the impact of one community on another. Traffic and other effects of commercial development have little respect for community boundaries. Since all of the roadways involved in this study are major access routes to all points of the compass, development along any one will necessarily affect traffic and quality of life along the corridor in every community. Therefore, solutions to the potential problems of corridor development need to be viewed as regional issues and addressed with a unified approach, involving property owners, developers, the Michigan Department of Transportation, County Road Commissions, and local units of government. (Langworthy)

This study is a guide for future efforts to balance the role of M-120 as a roadway providing through movements, as well as one that facilitates access to land uses along the corridor. Additionally, it is anticipated that this study will provide a “toolbox” of land use planning techniques that can be utilized to improve the decision-making of local governments along the corridor. These improvements will lead to increased efficiency in traffic movement and more effective operation of the transportation system. The study will also provide guidance for determining the priorities for road funding under various state and federal programs.

STUDY AREA

The roadway known as M-120 begins at the Causeway in the City of North Muskegon in Muskegon County as its western most boundary. For the purposes of the study, however, the study area starts at the Whitehall Road intersection just north of the Causeway. The roadway meanders northeast through the county to Brunswick and turns northward there. The roadway continues north to the M-20 intersection in the Village of Hesperia which is located on the border of Oceana and Newaygo Counties.

Although the above details the total stretch of M-120, the portion of the corridor located in Muskegon County (excluding the Causeway) totaling 19.6 miles will be the primary focus of the study. The portion of roadway in Muskegon County passes through the City of North Muskegon, Muskegon Charter Township, Dalton Township, Cedar Creek Township, and Holton Township.

LAND USE TOOLS

While the M-120 Corridor is an important transportation facility, there are land use concepts that can be implemented to improve traffic flow and access. If used properly, the land use tools

explored in the study will allow communities to promote better land use planning along the corridor. The land use tools addressed in the study include: Overlay Zoning, Site Plan Standards for the M-120 Corridor, Future Right of Way Preservation, Encouragement of Mixed Use Development Options, Traffic Impact Studies, and Special Land Uses.

CRASH DATA

Safe travel on the corridor is a very important factor to those who utilize M-120. The Traffic and Safety Division of the Michigan Department of Transportation (MDOT) compiles and maintains the State Trunkline Accident Surveillance Program. The program is undertaken for each MDOT region and lists those roadway segments within each region that exceed established MDOT standards for crashes. The Department has established criteria for assessing when the number, frequency, and type of crash requires further study of a portion of a state trunkline, like M-120. The number of vehicles on a particular roadway segment also figures into the criteria as well. Based on the most recent data available, there is only one segment in the five studied which exceeds regional or state averages for roadways similar to M-120.

Through study of accident data, the segment of the M-120 roadway which includes the US-31 interchanges registered as the segment with the highest crash index. Changes made to that area by MDOT recently have had a positive impact reducing the number of crashes in that area. Pavement conditions were improved and lanes were added from the US-31/M-120 junction to the M-120/Old Orchard Lane intersection. The changes were made during the Summer of 1997, exactly at the midpoint of the time frame that was utilized for the crash analysis provided in the study. As a result of these improvements, MDOT and Muskegon County Road Commission staff reviewed crash data for the six months before the improvements (January-May 1997) and the same six month period after the improvements (January-May 1998). The results of the changes were significant. There was a 44 percent reduction in crashes during the 1998 time frame (after the improvements) as there was during the 1997 time frame (before the improvements).

The M-120 roadway segments detailed in the Crash Data section of the Study do not necessarily lineup with political/jurisdictional boundaries. More information about the exact boundaries of the segments for this section are contained in the full study.

PAVEMENT CONDITION

While most of the pavement in the corridor study area was rated "fair" to "good" in a pavement survey conducted in 1995 by MDOT, there are substantial improvements slated for the near future by MDOT on M-120. The following projects are currently in MDOT's *Five Year Road & Bridge Program*. The delivery of these projects is contingent upon funding levels as anticipated in January 2000.

2001

M-120 from Marvin Road northeasterly to M-20 in Hesperia.

This project, which affects the very northeast portion of the Study Area and beyond, will include

roadway resurfacing and widening to three lanes in the Village of Hesperia. The project cost will be approximately \$7 million.

2002

M-120 from Getty Street to Roberts Road.

The project will be a center turn lane of approximately 6/10 of a mile and cost approximately \$500,000. This project will provide air quality benefits as well as reducing traffic congestion.

2003

M-120 from Lake Avenue northeasterly to the US-31 interchange.

This project will include just under three miles of roadway resurfacing in the City of North Muskegon and Muskegon Township. Total project cost will be approximately \$1.5 million.

2004

M-120 from Old Orchard Lane northeasterly to Marvin Road.

This project will complete a major portion of the Study Area of the Corridor. The roadway in Dalton Township, Cedar Creek Township and a portion of Holton Township will be resurfaced. The project will cover just under 11 miles at an approximate cost of \$4.7 million.

The entire section of M-120 within the Study Area will be resurfaced in the next five years with the exception of a short segment near US-31 which was resurfaced in the Summer of 1997 (see Safety Section of this Summary for more detail). These proposed improvements should improve future ride quality significantly.

TRANSPORTATION SYSTEM IMPROVEMENTS

The study also characterizes transportation improvements that can be explored to increase the opportunity of vehicles accessing the area of the corridor while reducing the number of vehicles actually using M-120. Concepts such as shared access (one driveway for two or more developments), frontage roads, and service drives promote internal circulation between establishments while reducing the need for vehicles to travel on the main road. These concepts have been utilized in other areas to reduce traffic congestion and improve traffic flow.

LOCAL RECOMMENDATIONS

For ease of reference, local recommendations were broken down into governmental units. Excerpts from those local recommendations, which are detailed in the full study, are included below.

City of North Muskegon

Recommendations along the North Muskegon section of M-120 include future improvements to Celery Lane, which would incorporate a 90 degree angle intersection and better spacing/alignment with other existing driveways. There has been some discussion locally regarding improvements to the M-120/Celery Lane intersection. The project has been submitted to the Metropolitan Planning

Organization for consideration by MDOT for possible Safety Program funding.

Muskegon Charter Township

Perhaps the most important subarea on the Corridor is the area which composes Riegler Road, River Road, Old Orchard Lane, M-120, US-31 and Becker Road mostly in Muskegon Township but also in Dalton Township. The US-31 Interchanges at M-120 pose the biggest bottleneck which seems to be exacerbated during peak times. Because of backups that occur (especially with those vehicles that turn left off of M-120 to southbound US-31), those vehicles attempting to turn left from businesses on M-120 to travel southwest cannot get out onto the corridor. The lined up vehicles waiting to enter southbound US-31 block off the entrance to the corridor. Study Group members are working closely with MDOT to consider changes to the US-31/M-120 interchange in the form of a loop ramp for entrance onto US-31 southbound. This improvement would move vehicles out of the left turn area, as the current queuing of vehicles goes back a considerable distance, sometimes interfering with access to businesses to the northeast of the M-120/US-31 interchange. A free flowing ramp would also end queuing at that area because there would be no left turns allowed. In an effort to further facilitate reduction of congestion in the interchange area, additional improvements should be explored where traffic counts and vehicular movements warrant.

Other options for providing reasonable access while reducing the number of curb cuts on M-120 are provided in the full study.

Dalton Township

From a recommendations standpoint, Dalton Township will be in a much stronger position if a master plan was put in place advocating a more organized approach to access management. The lack of a plan hinders the Township's effectiveness in advocating access recommendations, because little or no basis for zoning or plan reviewing can be proven. As stated earlier, the master plan is the vehicle to provide the justification for zoning.

Operationally, Dalton will need to continue to work closely with Muskegon Township on the issues they share at the border of the two municipalities. The issues that are being addressed at the US-31/M-120 interchange and the River/Riegler/Old Orchard area will affect Dalton Township as well. Recommendations made in the Muskegon Township section in regards to the shared border are applicable to Dalton Township as well.

Cedar Creek Township

It is recommended that when the vacant area of the M-120 Corridor in Cedar Creek Township develops, access should be provided off of Crocker Road with current access on M-120 being closed or shared with adjacent land uses. Other recommendations include narrowing wide open access points to reduce traffic conflicts, and exploring a westbound left turn bypass lane for more efficient turning conditions near the development at the border of Dalton Township.

Holton Township

Recommendations for the Holton area are centered around the unincorporated place of Holton.

Those recommendations include numerous realignments of side streets or driveways to improve existing approaches to M-120. There are a number of awkward intersections in this area with five and in one case, seven angled approaches. The unorthodox nature of the M-120 Corridor alignment coupled with these approach issues make for less than ideal operational conditions. Some driveway realignments and more defined access points are also proposed to promote more efficient traffic flow to and through the area.

TRAFFIC COUNTS

Based on information gathered through the development of this study, traffic counts on the corridor have, for the most part, increased in recent years. The increase can be attributed to more people living in the area. While there has been an increase in the number of households, the more telling statistic is the number of vehicles per household. Based on the Michigan Society of Planning Officials publication, *Transportation Trends in Michigan*, there has been a substantial increase in the number of passenger vehicles per household. In 1980, there were 1.6 vehicles per household in Michigan, while that number has climbed to 2.2 per household in 1992. That is a 73 percent increase over twelve years. In that same twelve years, the State of Michigan's population rose by less than one percent. Obviously, there are more cars on the road than ever before and it appears from current and future trends that the number will continue to climb.

The actual counts and roadway segments counted are detailed in the full study.

FINANCING ROADWAY IMPROVEMENTS

Local communities have options available to them for securing funding for roadway improvements. The West Michigan Shoreline Regional Development Commission serves as the Metropolitan Planning Organization (MPO) for the Muskegon area. All federal transportation funds come through the MPO as part of federal regulations. There are a number of federal and state funding categories available that can be accessed through the MPO.

Local communities may also take advantage of Tax Increment Financing (TIF) to fund transportation improvements as well. TIF funding requires planning for areas that will be included in a district as well as a plan about how such funds will be used. Communities may also use Local Development Finance Authorities and special assessment districts to fund roadway improvements.

GENERAL RECOMMENDATIONS

General recommendations that can be addressed along the corridor from a multi-jurisdictional or administrative standpoint are addressed below.

It is recommended that as a result of the development activity and the increase of traffic to the area, the US-31/M-120 interchange be closely monitored by MDOT and local communities. The feasibility of future improvements should be explored based on the recommendations of this study.

It is recommended that local communities along the corridor should solicit input from the agency which has roadway jurisdiction (MDOT or the Muskegon County Road Commission) before the approval of a Site Plan is granted. As a way of ensuring this activity takes place on a consistent basis, it is recommended that local communities provide for contact with the agency that has roadway jurisdiction as part of the formal site plan review process.

It is recommended that MDOT continue to work closely with local communities on the corridor in assessing the feasibility and need for future improvements. Continued communication among agencies will only serve to enhance optimal decision making benefitting all who use the M-120 Corridor.

It is recommended that the Study Group that has been established as a result of this study continue to meet regularly to discuss issues on the corridor. This group can function informally or can take a more formal role. One suggestion has been to establish a Corridor Zoning Committee that would meet and make recommendations about site plans and land use issues along the M-120 Corridor. It would be helpful to look at how other Corridor groups have used this approach before determining a course for future action.

It is recommended that local communities continue to explore ways that partnerships with other agencies can result in funding options for making improvements to M-120. The M-120 Corridor serves as an entrance or gateway to the Muskegon area from the northeast. As such, enhancements to the corridor should be explored as a way to promote entrance into this economically viable area.

CONCLUSION

The goal of this study is to provide options to the local communities and road agencies for improving the efficiency and operations of the M-120 Corridor and adjacent roadways. Great care needs to be taken when recommendations are made when access to private property can be impacted.

Landowners and developers have become accustomed to virtually unlimited access. There are examples on the M-120 Corridor and on other roadways around the state where uncontrolled access has contributed to traffic accidents, congestion, and air pollution. The increasing traffic congestion may lead to a decline in business vitality as the facility designed for supporting commercial development becomes a "victim of its own success" as more traffic is generated than can be reasonably accommodated.

This study should be used to generate further discussion, collaboration, and study for making substantive changes along the M-120 Corridor regarding transportation network efficiency, land use planning, and intergovernmental cooperation. It will also be necessary to explore prudent means of financing those improvements that have been provided here for consideration and discussion.

While it is important to work closely with the Michigan Department of Transportation to address roadway concerns, it should be noted that the affected agencies on the corridor need to take the initiative in improving roadway conditions. MDOT will likely take more interest in the consideration of roadway improvements if a commitment exists locally to address issues that local communities can have some control over, such as land use planning. For the aforementioned reasons, this study incorporates much more attention to land use issues and tools than traditional corridor studies have previously.

The most important result that comes out of this process may not be the plan itself, rather it may be the recognition that through cooperation and communication, local governments and road agencies can work together for the betterment of the people they all serve.

North-Central Muskegon County Transportation and Land-Use Study

The *North-Central Muskegon County Transportation and Land-Use Study* takes a comprehensive look at north-central Muskegon County in terms of existing and future transportation and land-use. The key area of focus concentrates on the area surrounding Michigan's Adventure, expanding by approximately one mile in all directions of Whitehall Road, US-31, Holton-Whitehall/Colby Road, and M-120.

Existing transportation and land-use data was collected, resulting in a series of maps. Both of these data sets were then projected into the year 2030. The land-use data was emulated after the Smart Growth Scenario, which was determined through the Muskegon Area-Wide Plan (MAP) project. To focus in more closely on the study area, emerging high growth areas were determined and studied. The transportation network build-out was based on the land-use patterns of the emerging high growth area and an annual appropriate traffic growth rate for the area.

The future traffic conditions were then analyzed producing another set of maps, in which recommendations were based on for the existing and future conditions. Along with indicating potential road segments that would be deficient, recommendations were also made on access management, right-of-way, and lane additions, among others. Finally, the plan made implementation recommendations for the study area. Overall, the *North-Central Muskegon County Transportation and Land-Use Study* provides guidelines for the future development of north-central Muskegon County and a mechanism to develop and promote the area in a positive way for the surrounding communities within the area.

The study was completed in February of 2005 by Progressive AE and WMSRDC.

The following people were involved with the study:

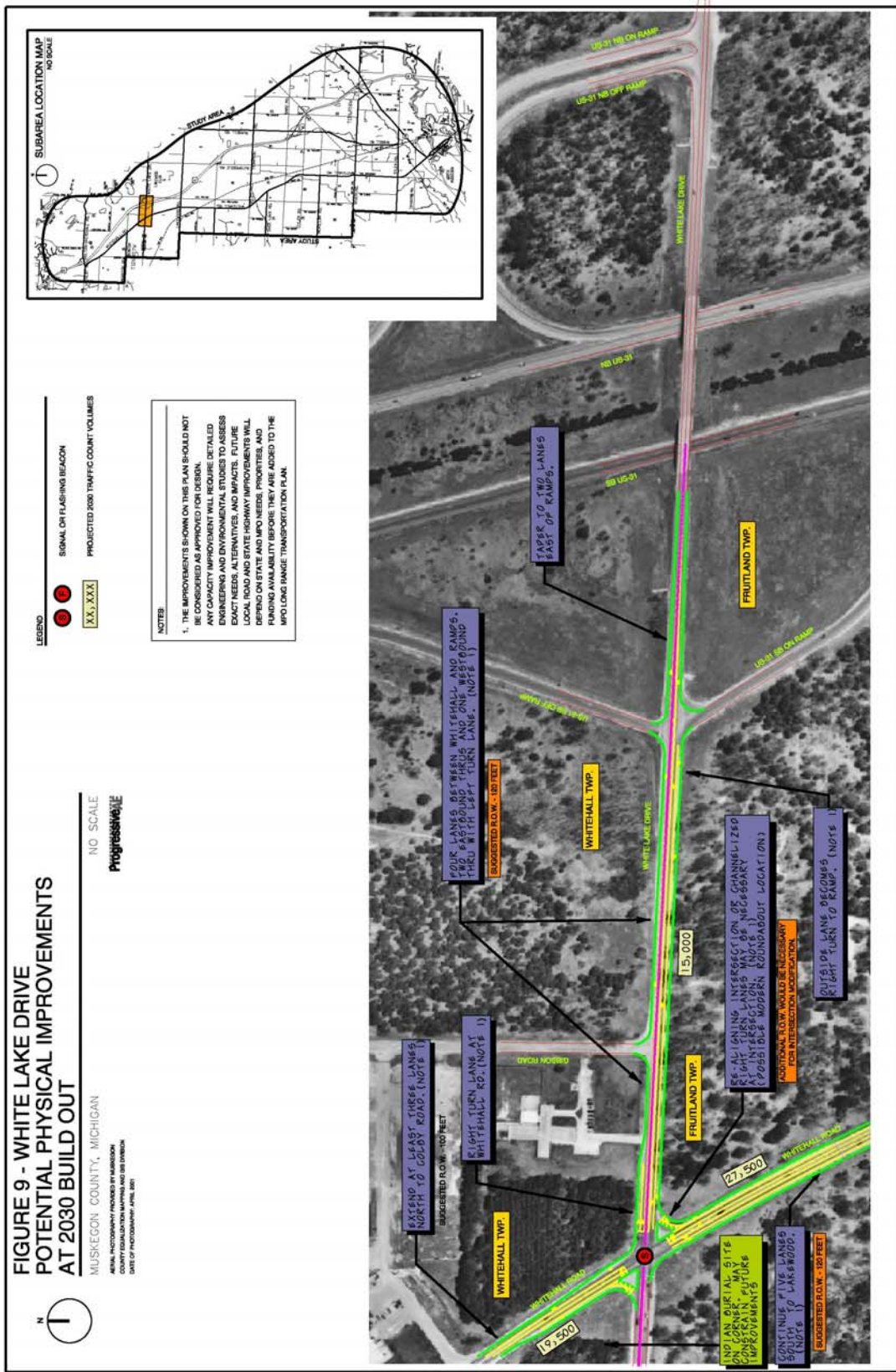
Jeff Hillagonds, PE, Progressive AE

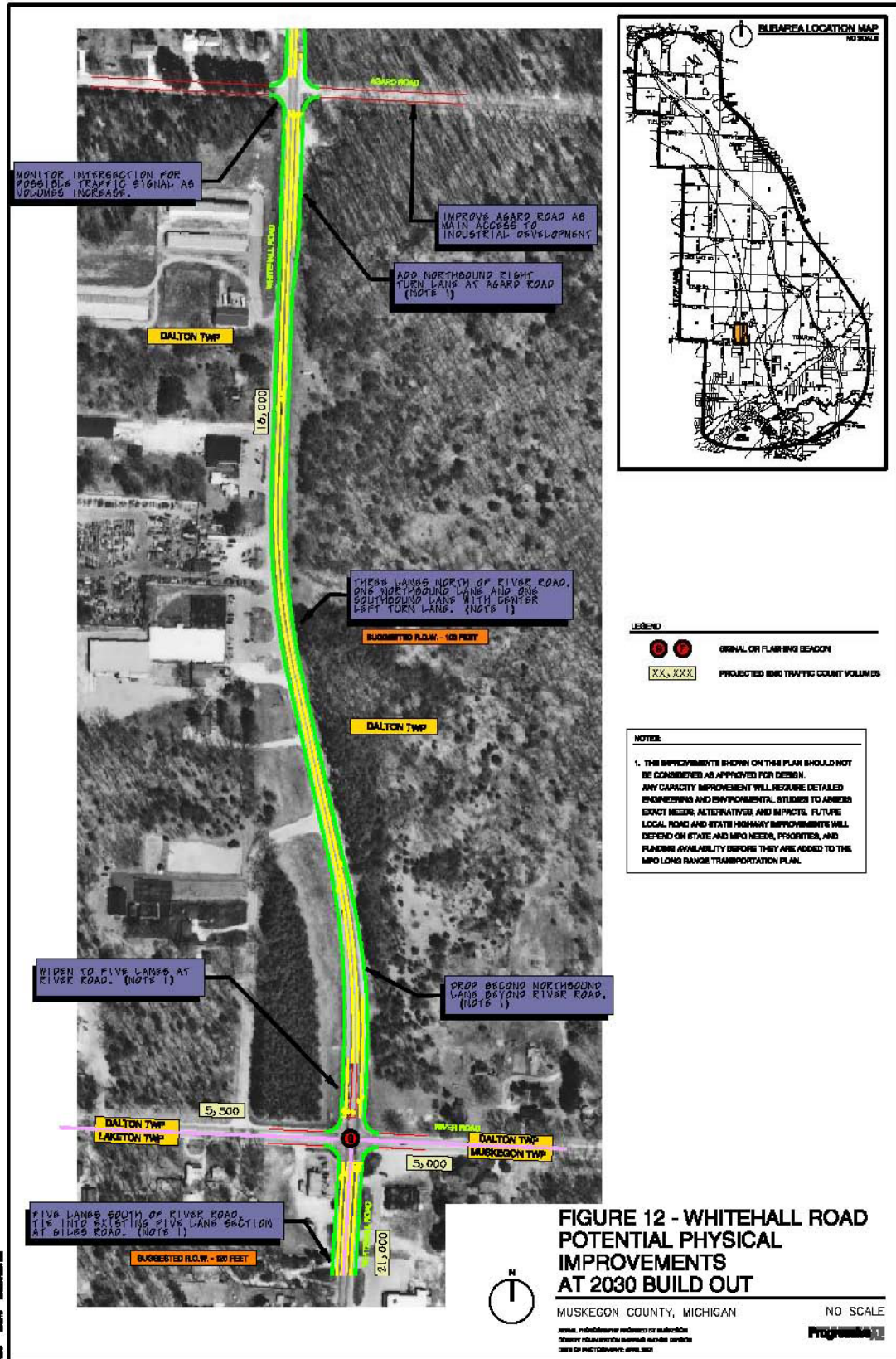
Pete LaMourie, PE, Progressive AE

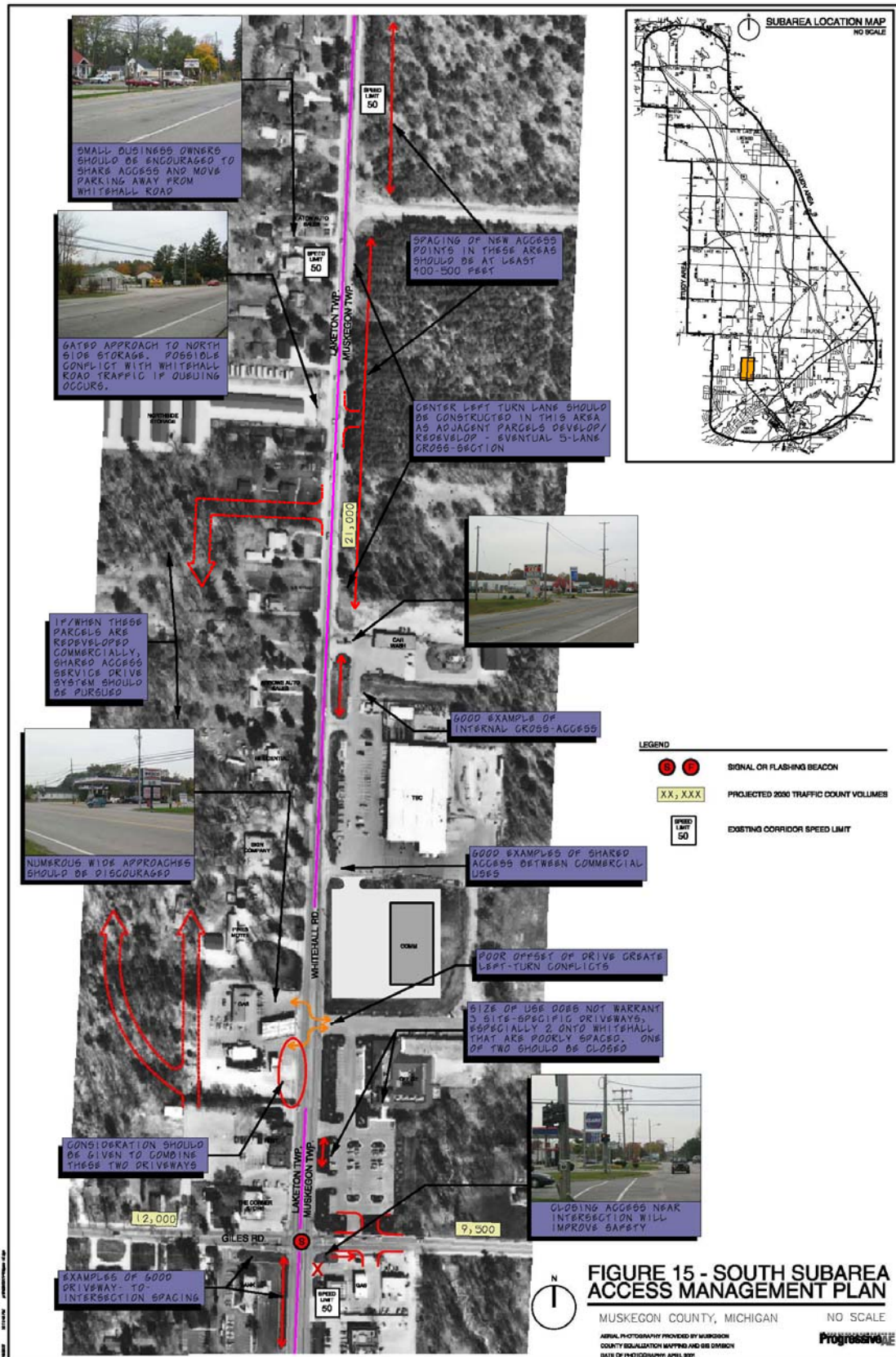
Brian Mulnix, Senior Planner, WMSRDC

Todd Cottrell, Associate Planner, WMSRDC

North-Central Study Steering Committee, which includes all governmental agencies listed on the study cover page







Appendix D

BROWNFIELD PROFILES

DUELL & GARDNER LANDFILL	
Alias	
Address	1285 E. Bard Rd.
Municipality	Dalton Township
County	Muskegon County
SITE INFORMATION	
Size	Superfund: 40 acres
Past Use	Municipal landfill (1940's-1975). 201: Refuse systems.
Current Use	Vacant land
Proposed Use	
Contamination	201: 33 of 48 (9/24/90); 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Benzo(a)anthracene, Benzo(k)fluoranthene, Carbon Tet, Chrysene, Indeno(1,2,3-cd)pyrene, DMA, PCP, PBB's, PCB's, PCE, BEHP, Phthalates. Superfund: Debris, groundwater, soil, solid waste contamination; Base neutral acids, organics, PAH, PCBs, Pesticides, VOC.
Remediation	201: Interim response in progress. Superfund: EPA/MDEQ remedial action completed in 2001; 7 cubic acres of solid-based media have been treated, stabilized, or removed; Last 5-year review in 2005 deemed remedy to be "protective in the short term".
BRA	Dalton Township Brownfield Redevelopment Authority
Comments	
Source	MDEQ Part 201, EPA Superfund – Final NPL (9/83)

OTT/ STORY/ CORDOVA CHEMICAL	
Alias	Cordova Site; Cordova Chemical Company of Michigan; Ott Story & Corn Products Chemical Company
Address	500 Agard Rd.
Municipality	Dalton Township
County	Muskegon County
SITE INFORMATION	
Size	211 acres, 20 of which is composed of the former production area
Past Use	Organic chemical production facility (1957-1986). 201: Chemicals and allied products.
Current Use	Unoccupied with water filtration facility and 11 extraction wells
Proposed Use	Muskegon County Business Park North; Zoned for industrial; Land use restricted to commercial/industrial uses with no habitable structures below grade.
Contamination	Soil and groundwater contamination. 201: 43 of 48 (10/17/01); 1,2 DCA, Benzene, PCB's, Toluene, VC.
Remediation	201: Interim response in progress. Superfund: Groundwater treatment by extraction wells and a groundwater treatment facility. Soil and sediment treatment by "low temperature thermal desorption" and excavation and offsite disposal.
BRA	Dalton Township Brownfield Redevelopment Authority
Comments	Potential for a TIFA; Renaissance Zone; Single Business Tax abated through 2014; Municipal water scheduled to be connected; Sewer available
Source	WMSRDC CEDS, WMSRDC Survey, MDEQ Part 201, MEDC Urban Opportunity Site, EPA Superfund – Final NPL (9/83)

THE MOTOR COMPANY	
Alias	Speedway Sub
Address	5706 Whitehall Rd.
Municipality	Fruitland Township
County	Muskegon County
SITE INFORMATION	
Size	
Past Use	Gasoline service station
Current Use	Vacant building
Proposed Use	
Contamination	201: 17 of 48 (8/19/04); Caustics, waste oil.
Remediation	201: Inactive – no actions taken to address contamination.
BRA	None
Comments	
Source	MDEQ Part 201

NAPH-SOL/ ZEPHYR INC.	
Alias	Zephyr Refinery Site; Naph-Sol Refining
Address	1222 Holton Rd.
Municipality	Muskegon Township
County	Muskegon County
SITE INFORMATION	
Size	70 acres; 33 acres used for refinery
Past Use	Refinery; Petroleum stations and bulk terminal
Current Use	Vacant land
Proposed Use	
Contamination	201: 42 of 48 (6/23/04); 1,2,4 TMB, 1,3,5 TMB, 2-Methylnaphthalene, As, Ba, Benzene, Cd, Cl, Cr+6, Dibenzofuran, Diethyl ether, Ethylbenzene, Fluorene, Pb, MTBE, Naphthalene, Phenanthrene, Se, PCE, Toluene, TCE, VC, Xylenes, BEHP, cis-1,2 DCE, n-Butylbenz. 213: Unknown substance released.
Remediation	BF-UST: In progress. 201: Interim response in progress.
BRA	Muskegon Township Brownfield Redevelopment Authority
Comments	
Source	WMSRDC Survey, MDEQ Part 201, MDEQ Part 213 Open (1/99), MDEQ Brownfields-USTfields, EPA Superfund – Not NPL (8/02)

NORTHSHORE HOSPITAL	
Alias	
Address	1092 Holton Rd.
Municipality	Muskegon Township and North Muskegon City
County	Muskegon County
SITE INFORMATION	
Size	14 acres
Past Use	Tuberculosis sanitarium and state hospital
Current Use	Vacant land
Proposed Use	Muskegon Township: Industrial/Business PUD North Muskegon: High Density Residential
Contamination	
Remediation	MDEQ ABP: Over \$230,278 in CMI funds used for building demolition, removal and disposal of demolition debris, abandon several underground vaults on the property, and ready the property for redevelopment. BF-UST: Closed.
BRA	Muskegon Township Brownfield Redevelopment Authority
Comments	Municipal water/sewer available; Site sold by city and township to Ridgemont Development
Source	WMSRDC Survey, MDEQ Available Brownfield Properties, MDEQ Brownfields-USTfields

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