

Port Collaborative Study Northeast Michigan

Funded by:

US Department of Commerce - Economic Development Administration
Michigan Department of Natural Resources
Community Foundation of Northeast Michigan
National Oceanic and Atmospheric Administration



TABLE OF CONTENTS

Introduction	1
Purpose of Study.....	2
Summary of Plan Approach	3
Community Social and Economic Demographics.....	4
Existing Port Conditions	6
Cheboygan	7
Rogers City	9
Alpena.....	11
Port Comparisons	11
Existing Land Use and Zoning.....	15
Cheboygan	15
Rogers City	17
Alpena.....	19
Environmental Issues	21
Cultural/Recreational Resources	22
Commercial/Industrial Businesses.....	25
Transportation	26
Roads.....	26
Public Transportation.....	26
Ferry Service.....	27
Cruise	28
Airports.....	28
Railway	31
Intermodal Connectivity	35
Navigation.....	32
Port Communication	39
Depth	39
Great Lakes Shipping.....	42

Utilities	36
Public Water Supply	44
Municipal Wastewater System	44
Electricity	45
Internet	46
Gas.....	47
Regional Roles	48
Recommendation and Strategies.....	49
Summary	52

ACKNOWLEDGEMENTS

MSU Practicum Team

Andrew Baglini
Brad Beck
Marc Coburn
Tatsuya Fukushima
Shiraz Gillani
Evan Gross
Corey Jackson
Mark Jones
Priyamvada Kayal
Matt Lafferty
Graham Malott
Elizabeth Masserang
Eric Phillips
Rex LaMore

City of Alpena
City of Cheboygan
City of Rogers City
Port of Cheboygan Committee

LIST OF FIGURES AND TABLES

Figure 1 – NEMCOG Region	1
Figure 2 – Age Distribution 1980-2011	4
Figure 3 – Unemployment Rates 200-2010.....	5
Figure 4 – Port of Cheboygan	7
Figure 5 – Ports of Rogers City and Calcite.....	9
Figure 6 – Ports of Alpena.....	13
Figure 7 – Cheboygan Zoning Map.....	15
Figure 8 – Cheboygan Land Use Map.....	16
Figure 9 – Rogers City Land Use Map	17
Figure 10 – Rogers City Zoning Map	18
Figure 11 – Alpena Land Use Map	19
Figure 12 – Alpena Zoning Map of Waterfront Properties	20
Figure 13 – Northeast Michigan Trails Map	22
Figure 14 – Shipwrecks & Lighthouses in Northeast Michigan	23
Figure 15 – US 23 Heritage Route	26
Figure 16 – Bois Blanc Island Ferry.....	27
Figure 17 – Major Airports Near Cheboygan County	29
Figure 18 – Key Regional Links for Michigan Commodities via Rail.....	32
Figure 19 – Railroads Operating in Michigan	33
Figure 20 – Example of Port Intermodal Facility	36
Figure 21 – Port of Cheboygan	39
Figure 22 – Ports of Rogers City.....	40
Figure 23 – Shipping Channels of Alpena Harbor.....	41
Figure 24 – Port Depths Comparison	41
Figure 25 – Major Shipping Routes of the Great Lakes	42
Figure 26 – LaFarge Cargo Ship <i>Alpena</i>	43
Figure 27 – Gas Utility Service Areas.....	47

Table 1 – Population Comparisons 1980-2011	4
Table 2 – Port Comparisons.....	14
Table 3 – Ferry Service in Northern Michigan	28
Table 4 – Airport Usage Comparisons	30
Table 5 – Amount of Freight & Passengers through Alpena and Pellston.....	31
Table 6 – Major Intermodal Terminals in Michigan.....	37
Table 7 – Major Equipment Depots in Michigan	37
Table 8 – Operation of Vehicles Subject to ISTEALimits.....	38

INTRODUCTION

The Northeast Michigan Council of Governments (NEMCOG) was formed in 1968 under Public Act 281 of 1945 with the mission to provide comprehensive planning, community and economic development, and service coordination for their region, which includes Alcona, Alpena, Cheboygan, Crawford, Montmorency, Oscoda, Otsego and Presque Isle Counties. Over the last 42 years, NEMCOG has built a strong foundation of partnerships with local communities, organizations, and agencies. NEMCOG's services cover a wide array of planning and project activities,

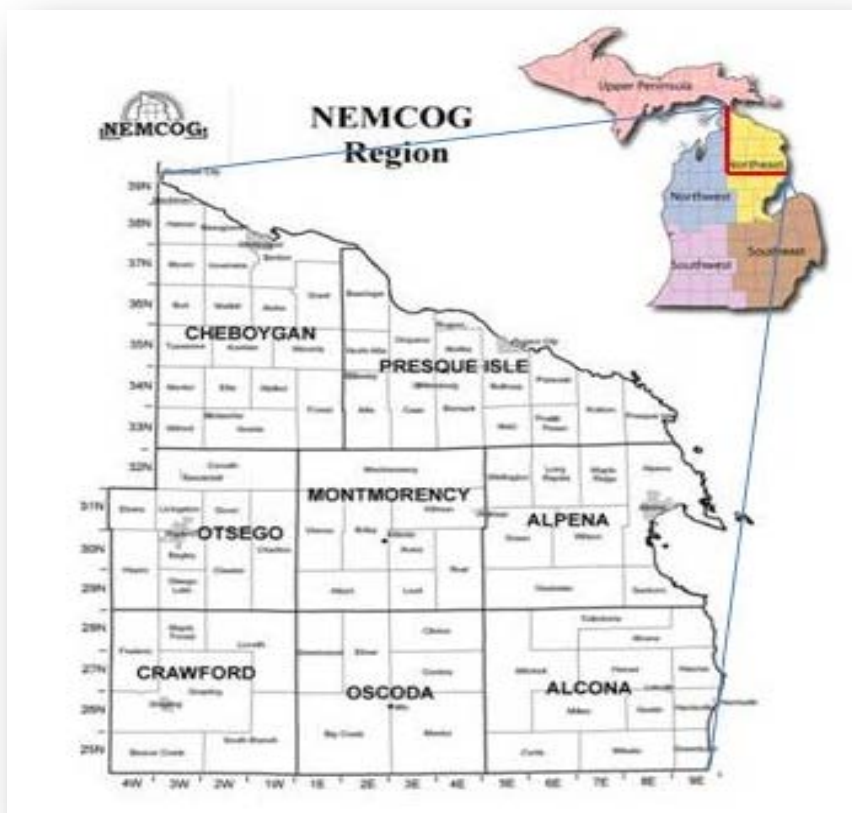


Figure 1 – NEMCOG Region

Source: NEMCOG

including community and economic development, water resource protection, transportation, recreation, tourism and community resource planning. As a result, NEMCOG has leveraged millions of dollars in federal and state monies to benefit its local communities and its residents. This is critical to this rural region, which encompasses nearly 4,995 square miles and historically has some of the highest unemployment rates in the State of Michigan.

PURPOSE OF STUDY

The Lake Huron coastal communities in northeastern Michigan have always relied upon the waters of the Great Lakes for commerce, recreation and quality of life. The cities were originally settled because of their strategic location on the water, in a time when the most convenient form of transportation was sailing. Ports were developed to transport people and goods and to transport products to outside markets.

In the fall of 2007, the Governor's Office; the Department of History, Arts, and Libraries; and the Department of Environmental Quality welcomed representatives from 23 Michigan coastal communities to the first working meeting of the Port Cities Collaborative. More than 80 participants met in Port Huron at the end of October to learn about successful programs in other ports, brainstorm on ways to establish Michigan's port cities maritime experience, identify cooperative projects, and plot out courses of action. State representatives facilitated visioning to identify mutual goals and objectives. As a result, eight action teams were established to implement goals. From this initial meeting, the Michigan Port Collaborative was formed to advocate for Michigan's port communities and coastal cities. In the fall of 2009, the Michigan Port Collaborative agreed to legally incorporate itself as a non-profit organization, an effort that is ongoing. Later that year, an Interim Steering Committee, comprised of local leaders from 19 Great Lakes port communities in Michigan, was formed to recommend a permanent organizational structure that will advance the Collaborative's goals. The cities in the Lake Huron Coastal Community Regional Port Study have been active in the Collaborative. Representatives from Alpena and Rogers City served on the interim steering committee.

The Port City Collaborative has identified the inventory of port assets as a priority task for port communities to accomplish. This study will complete a port city asset inventory and identify opportunities and constraints, as well as form strategies for future activities and regional collaboration. All of the communities are interested in expanding economic activities associated with their ports.

In 2011, NEMCOG received funding from the Michigan Coastal Management Program to develop a Regional Ports Study. The short term goal of the project to provide the foundation for further development of existing ports by completing an inventory of port and community assets; and identifying opportunities and constraints, strategies for future activities, and opportunities for regional collaboration. The long term goal is to expand opportunities for commerce and recreation at the ports of Cheboygan, Rogers City and Alpena, all of which support commerce and recreational activities.

SUMMARY OF PLANNING APPROACH

The Lake Huron Coastal Community Regional Ports Study has four elements:

1) Work With a Regional Ports Committee

A regional ports' planning committee was established and comprised of key stakeholders including communities, organizations, individuals, businesses and users to participate in the development of the study.

2) Inventory Port and Community Assets

The inventory includes both on-site and off-site assets. Where relevant, information was incorporated into GIS data sets for use in the study and in a format that can be shared with port communities. Transportation between ports and within port communities was considered. This was completed with the assistance of MSU graduate and undergraduate planning students.

3) Community and Port Background Information

Other information gathered as part of the study process included community demographics and economic activity. Port information concerning legal authority, current organizational and management structure, marketing and port history and development was collected. This information was used to help in the identification of opportunities and constraints.

4) Regional Role of Ports

Staff met with each community to assess the findings of the asset inventory. Each port community identified opportunities and constraints, and established goals and strategies. Industrial, commerce, recreational and cruise ship usage was considered. The results were incorporated in the study process.

COMMUNITY SOCIAL AND ECONOMIC DEMOGRAPHICS

Although northeast Michigan has experienced a population decline in the past decade, the population in the three counties of Alpena, Cheboygan and Presque Isle has remained relatively stagnant. Alpena and Presque Isle Counties experienced an overall decrease; however, the three counties combined have actually experienced a modest population increase of 1,893 persons, or 2.8%.

Table 1 – Population Comparisons 1980 - 2011

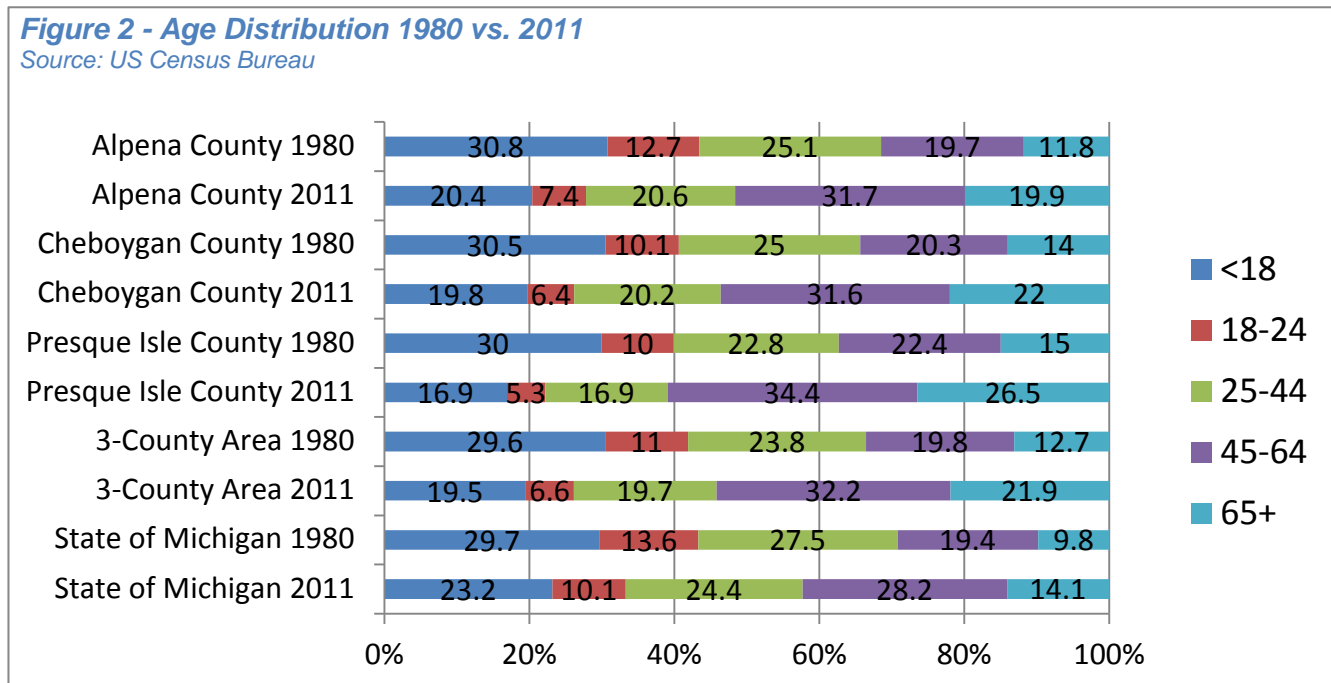
Alpena County			Cheboygan County		Presque Isle County		State of Michigan	
Year	Population	Pop. Change	Population	Pop. Change	Population	Pop. Change	Population	Pop. Change
2010	29,598	-5.5%	26,150	-1.1%	13,376	-7.2%	9,883,635	-0.6%
2000	31,314	2.3%	26,448	23.6%	14,411	4.9%	9,938,444	6.9%
1990	30,605	-5.3%	21,398	3.6%	13,743	-3.7%	9,295,287	0.4%
1980	32,315		20,649		14,267		9,262,044	
30 year change		-8.4%		26.6%		-6.2%		6.7%

Source: United States Census Bureau

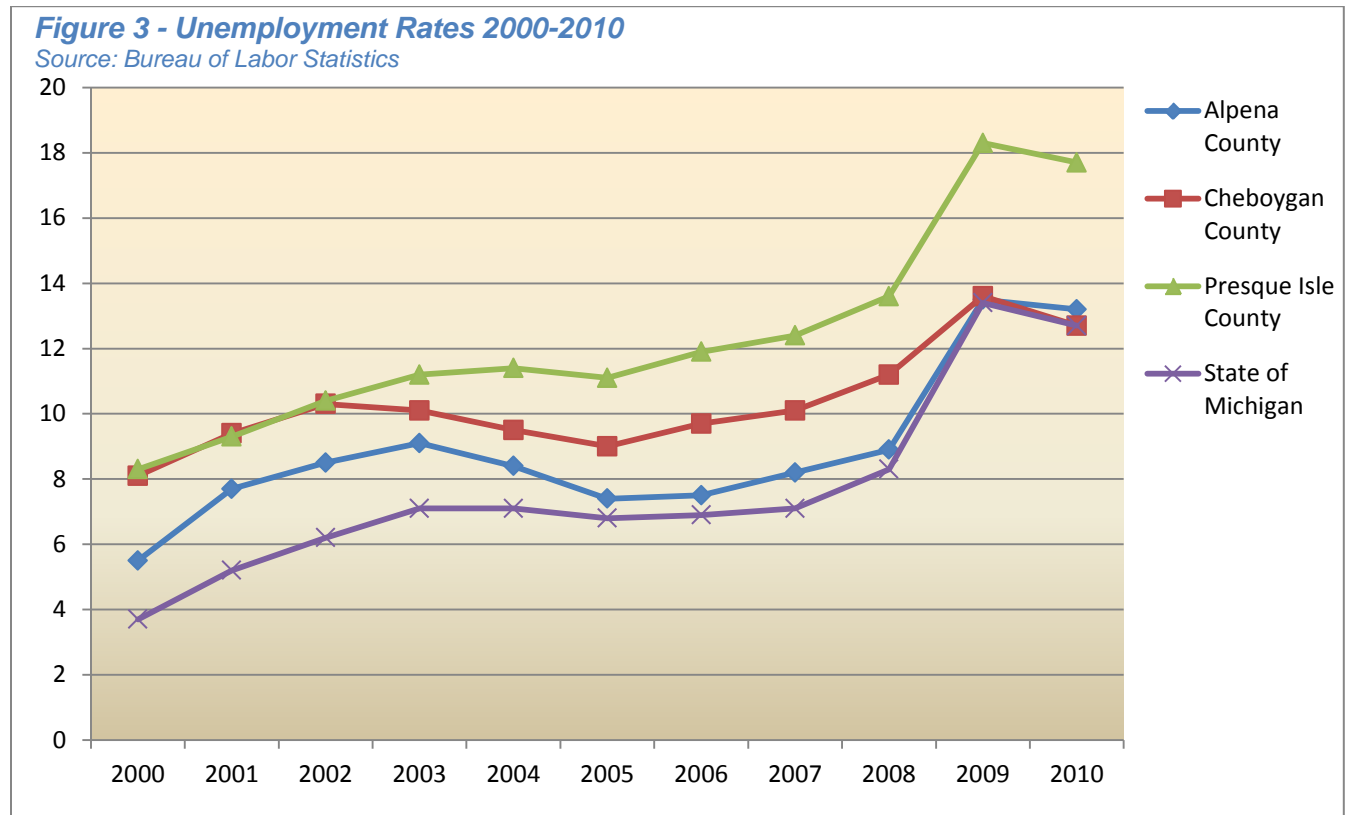
In the past 30 years, the population age of these three counties has increased significantly. Nearly 70 per cent of the population in these three counties was under the age of 45 in 1980, as compared to less than 50 per cent in 2011.

Figure 2 - Age Distribution 1980 vs. 2011

Source: US Census Bureau



This population shift is not surprising. The national recession has hit this region hard, and many of a working age have had to relocate to find employment. As the median household incomes went down, unemployment went up. Cheboygan County reported a median household income of \$43,472 in 2000, compared to \$36,508 in 2010, a 16% decrease. Presque Isle County and Alpena County followed that trend, as well, with 12% and 19% reductions, respectively. (Source: Bureau of Labor Statistics)



This region followed the State’s trend, with unemployment rates peaking in 2009 with the onslaught of the economic recession. As Figure 3 demonstrates, the unemployment rates are slowly falling, but are still nearly double the rates reported ten years ago.

EXISTING PORT CONDITIONS

All of these communities attribute much of their economic growth to their locations on Lake Huron. As with many, the first major industry was lumber; however, as in the case of Rogers City and Alpena, the shipment of limestone and subsequent manufacturing of cement products became the primary catalyst for economic growth in these communities. These ports are interconnected: through the Straits of Mackinac connecting Lakes Michigan and Huron; the Soo Locks connecting Lake Superior and Lake Huron; the St. Clair and Detroit Rivers connecting Lakes Huron and Erie, the Welland Canal connecting Lakes Erie and Ontario, and the St. Lawrence Seaway connecting Lake Ontario to the Atlantic Ocean. Great Lakes Ships that travel the St. Lawrence Seaway to and from the ocean are called “Salties” and cannot pass through the canal systems with a draft depth of greater than 30 feet. Most large ships are limited by the dredged depth of the ports to about 24 or 25 feet. Smaller recreational boats, ferries and cruise ships can travel between ports with little problem. Although the Great Lakes are famous for shipwrecks due to ice, inclement weather and a rocky shoreline, modern navigational technology and a vigilant Coast Guard have greatly reduced this threat. The greatest challenge to navigation is the maintenance of dredged channels which is overseen by the US Army Corps of Engineers and costs millions of dollars annually. Most ports rely on federal funding for maintenance dredging, but there is usually a backlog of projects.

CHEBOYGAN

The Port of Cheboygan

The Port of Cheboygan is located at the tip of Northern Michigan's Lower Peninsula at the north end of Lake Huron and 15 miles south of the Mackinac Bridge. The Port of Cheboygan is a deep water port that can accommodate domestic vessels and international salt water vessels. The Port of Cheboygan has all four Port Functions designated by the Michigan Port Collaborative. Those designations are: Cargo Port, Ferry Port, Commercial Port and Recreational Port.

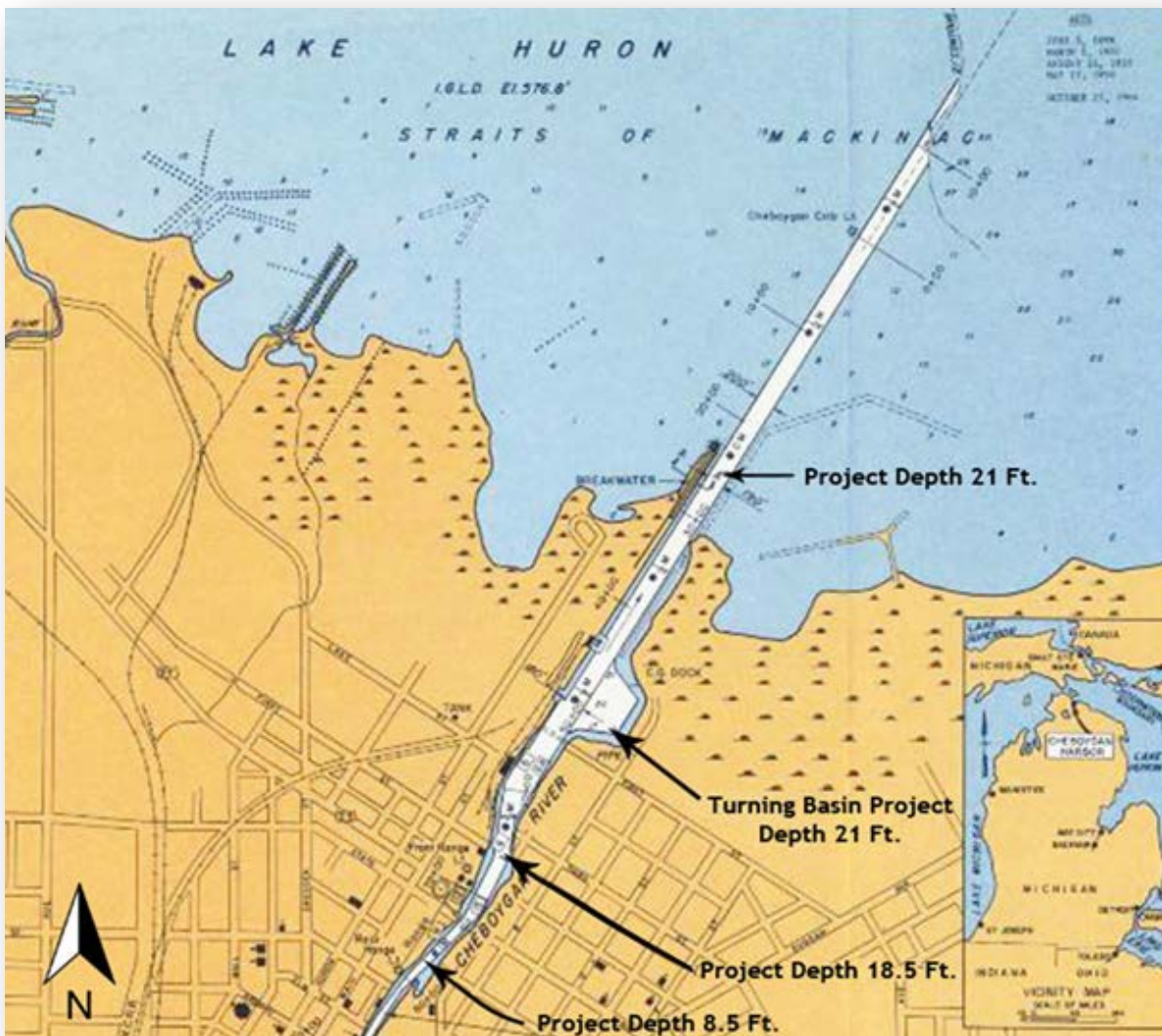


Figure 4 – Port of Cheboygan

Source: Army Corps of Engineers 2012

As with many other communities situated on the Great Lakes, the port was the economic engine for Cheboygan over a century ago. The lumber industry supported the community, but transportation became an important economic factor as well, in the movement of not only goods, but people. In the late 1800s, Cheboygan was not only a major port for the transport of lumber, but a port-of-call for many of the finest and largest passenger ferries on the Great Lakes. Dredging projects occurred between 1871 and 1939 to accommodate these larger vessels. Whereas many rivers have to be dredged yearly, the Cheboygan River rarely needs to be due to its swift current.

The Port's harbor is the Cheboygan River with an average depth of 23' in the channel and at the cargo piers. It includes a turning basin of 21 ft. deep, 400 ft. wide and 770 ft. long, at its longest point.

The Port of Cheboygan is home to the United States Coast Guard Cutter Mackinaw, two world class marine contractors: Durocher Marine a division of Kokosing Construction and Ryba Marine. The Port is also home to a US Oil gas terminal and Walstrom Marine, which provides multiple marine services. The port also provides ferry boat service to Bois Blanc Island by Plaunt Transportation. Public and private marinas are located in the community as are numerous parks and boating access sites along the shoreline and the river. The Port has access to all of the Great Lakes, the St. Lawrence Seaway and the rest of the world.

There are no loading/unloading dock facilities currently existing at the Port of Cheboygan.

There is no unified port authority in Cheboygan facilitating communication and navigation. This is handled by the individual docks under the enforcement of the Coast Guard.

ROGERS CITY

Rogers City Marina

Rogers City operates a municipal marina for recreational boating and hosts 92 seasonal slips and 34 transient slips with a draft depth of 7-8 feet, depending on the water level. Great Lakes Divers, LLC operates out of this location, and provides diving gear, lessons and charter trips to nearby diving locations and shipwrecks. The marina's location in downtown Rogers City provides access to the numerous parks located along the shoreline. There is no ferry or passenger boat service out of Rogers City. However, a US customs agent is on call for incoming boats from Canada and abroad.



Figure 5 – Rogers City Marina and Port of Calcite

Source: MSU Practicum Team

Port of Calcite

The Michigan Limestone and Chemical Company owns and operates the Port of Calcite and the world's largest open pit limestone quarry south of downtown Rogers City. The

company is a subsidiary of Carmeuse, a Belgium-based global mining operation. This quarry has been in operation since the 1910s, and still ships approximately 500 boatloads of limestone annually, each carrying approximately 30,000 tons of cargo. Moran Ironworks, based out of Onaway, Michigan, 20 miles west of Rogers City, also does limited exporting at this site through a private agreement with the port's owners.

The US Army Corps of Engineers does not recognize the Port of Calcite and has not undertaken dredging projects in Rogers City. It is assumed that all dredging operations are handled by the company privately. The shipping channel into the Port of Calcite has been measured by the National Oceanic and Atmospheric Administration (NOAA) to be 24.5 feet deep in 1999, and may be 21-25 feet deep today, depending upon the dock. This is generally considered a deep water port in the northern Great Lakes, and is still considered the busiest bulk cargo port in Michigan's lower peninsula.

There is no unified port authority in Rogers City facilitating communication and navigation. This is handled by the individual docks under the enforcement of the Coast Guard.

ALPENA

The Port of Alpena includes six ports. Two are public: the Alpena Marina and the NOAA Great Lakes Maritime Center. Four are private: LaFarge Dock, DPI Dock, Alpena Oil Dock and West Dock. There are three dredged channels: LaFarge Dock, West Dock and the Thunder Bay River.

City of Alpena Marina – Public

Alpena’s marina is owned by the City of Alpena and operated by Thunder Bay Shores Marine, Inc. and governed by the policies of the Michigan State Waterways Commission. This is a full-service marina, including a maintenance/ repair facility, winter storage, marina store, docks hands, refueling and a sewage pump-out station. The Marina boasts 143 season boat slips, with a depth of approximately 14 feet at the mouth of the Thunder Bay River.

National Oceanic and Atmospheric Administration (NOAA) – Great Lakes Maritime Center – Public

This facility’s dock is located west of the channel drawbridge and east of the Lake Besser Dam. The channel’s water depth becomes very shallow just past the NOAA dock, making large ship access difficult. Currently, there are several operations utilizing the NOAA dock at the Port of Alpena. Alpena Shipwreck Tours provide glass bottom boat tours of the Thunder Bay National Marine Sanctuary and its nearly 200 historic shipwrecks in and around the bay. The NOAA Great Lakes Maritime Heritage Center is a visitor center for the Thunder Bay National Marine Sanctuary and Underwater Preserve. It hosts over 60,000 visitors a year, and provides a variety of educational programs, immersive exhibits and scientific research facilities. Adjacent to the Center is the Alpena Fish and Wildlife Conservation Office, which provides a regional focus for the US Fish and Wildlife Service by providing assistance to the Great Lakes Fisheries Commission, States, and Native American tribes, and covers US waters of Lake Huron, western Lake Erie and the connecting waterways.

LaFarge Dock - Private

LaFarge is a French-owned company specializing in cement and cement-related products. This company has operated in Alpena for over 100 years as Huron Portland Cement and LaFarge, and is still one of the largest employers in the area. This privately-owned dock is the largest dock in Alpena, and is the only dock that imports and exports commodities in Alpena. The dock receives coal 2-3 times per year for

plant's generators and exports cement products continuously through shipping season. Its channel is dredged to a depth of 24 feet. As indicated earlier, LaFarge operates their own communication system between ships.

DPI Dock – Private

DPI-Alpena Hardboard is located in downtown Alpena just across the river from the City Marina. This plant opened in 1957 as Abitibi and, although it's been through different ownership over the years, it is still a key employer in the area. This dock's use is private access only, and is used on a limited basis to unload coal for the facility's generators 2-3 times per year. DPI does not export any shipments by cargo lake freighter.

Alpena Oil Dock – Private

This dock is located adjacent to the City Marina and is primarily used to store gravel and road salt unloaded from lake freighters, which is then distributed by truck to customers throughout northern Michigan. Two commercial fishing operations also operate from this location, independently from the Alpena Oil docks. The depth at this location is approximately 14 feet.

West Dock – Private

The West Dock was once an active dock for the Fletcher Paper Company, which closed in 2000. Currently, the dock, at a depth of approximately 16 feet, is not being utilized. The land abutting this parcel is owned by LaFarge and DPI. West Dock Properties currently owns a small piece of land near the LaFarge side of the dock with land access to Ford Avenue, which is the primary access road. All three companies have a say in the dock's development and use.

There is no unified port authority in Alpena to facilitate and manage port communication and navigation between ships and the various docks. As such, waterway communication is handled by the individual docks under the enforcement jurisdiction of the US Coast Guard. The Coast Guard operates a station in the City and handles basic maritime communication in the area. The City of Alpena Marina docks, as well as the LaFarge and DPI private docks, operate their own communication systems between ships.

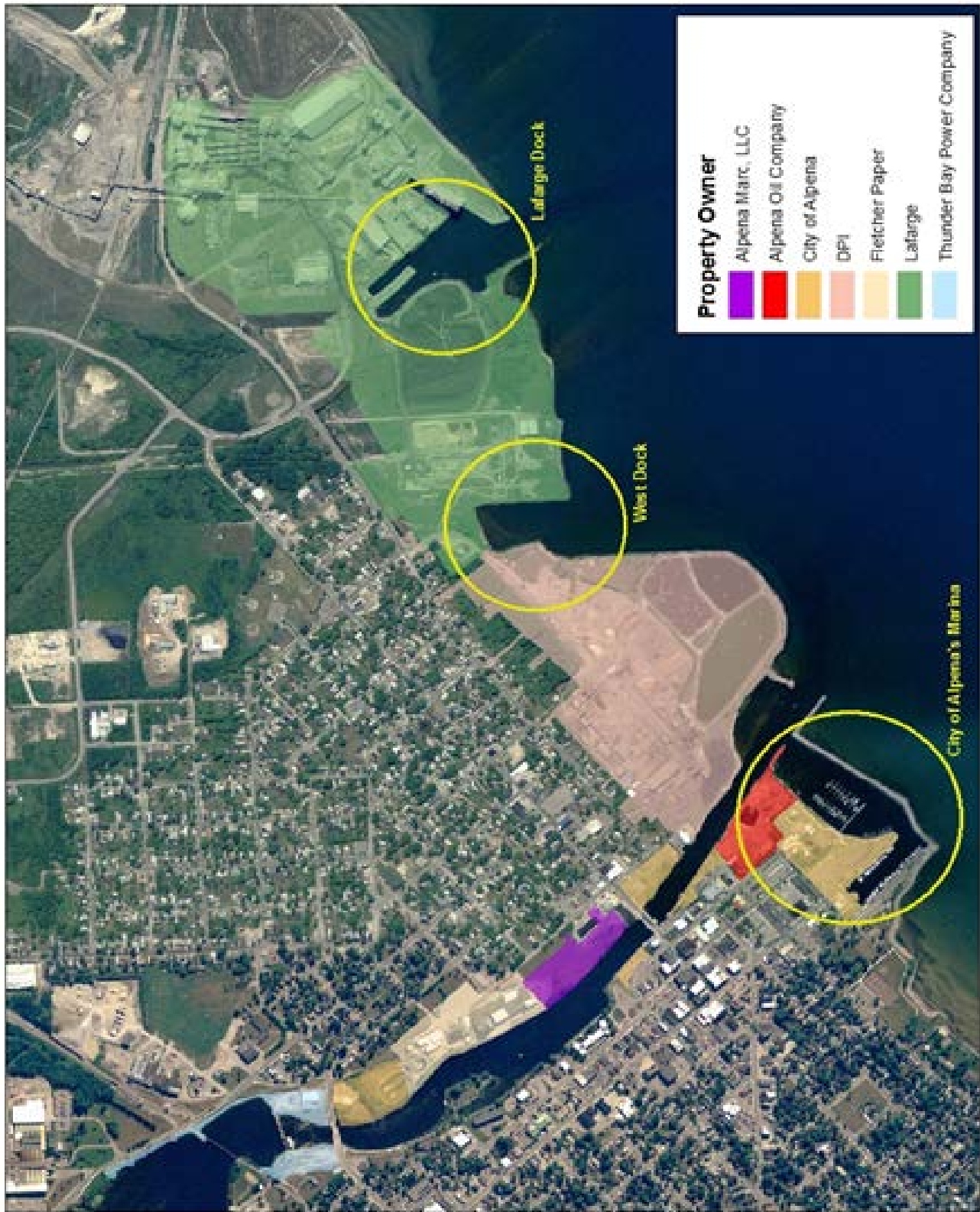


Figure 6 – Ports of Alpena

Source: NEMCOG

PORT COMPARISONS

Michigan State University students conducted a comparison of port characteristics to compare the Cheboygan, Rogers City and Alpena ports. Characteristics such as water depth, dock space, annual volume of cargo, recreational activities and transportation accessibility were considered.

Table 2 - Comparison between the Port Case Studies

Source: MSU Practicum Team 2012

	Cheboygan	Rogers City	Alpena
Water Depth (ft)	20-23	21-25 (Port of Calcite) 7-8(Rogers City Marina)	16-24
Dock Space (ft)	3,050	5,600	n/a
Cargo (in million tons /yr)	n/a	n/a	18.26
Transport Facilities	Hwy, Airport	Hwy, Airport	Rail, Hwy, Airport
Recreation	Municipal and private marinas with access, fishing	Municipal and private marinas with access, fishing, diving	Municipal and private marinas with access, Glass bottom boats, tall ships, fishing, diving
Ferry & Cruise Service	Yes	No	No
Import / Export	Import	Both	Both
International	No	n/a	Yes
Foreign Trade Zone	No	No	No
Port Authority	No	No	No

EXISTING LAND USE AND ZONING

It is important to know the zoning and land use planning of a community because this is a major factor in the attraction of investment.

Understanding the zoning ordinance can help a community encourage and control development in key areas. The land use plan shows the uses of parcels within the community. Reading and understanding this plan can paint a clearer picture of a community's current land uses. It also allows the development of a workable future land use plan.

CHEBOYGAN

The waterfront along the river and main docking facilities are primarily zoned as Waterfront Marine, designed to accommodate recreational boating and activities and services related to waterways. Additional properties along the waterfront are zoned as Central and General Business, providing for a wide array of commercial uses.

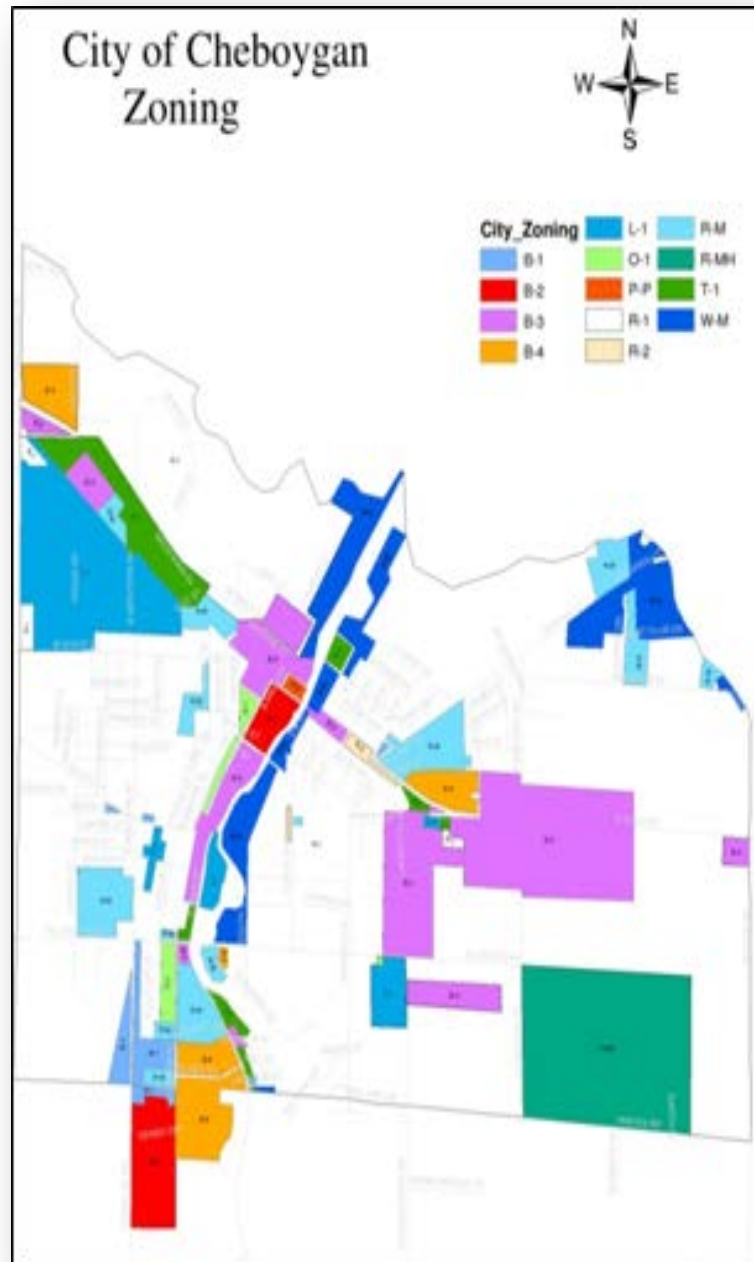


Figure 7 – City of Cheboygan Zoning Map

Source: City of Cheboygan

The existing land use plan shows a variety of uses along this waterway, including recreational, institutional, commercial, and central business. It also indicates some existing vacant properties near the turning basin. These areas are zoned as Waterfront Marine to encourage development that would best utilize and benefit the port.

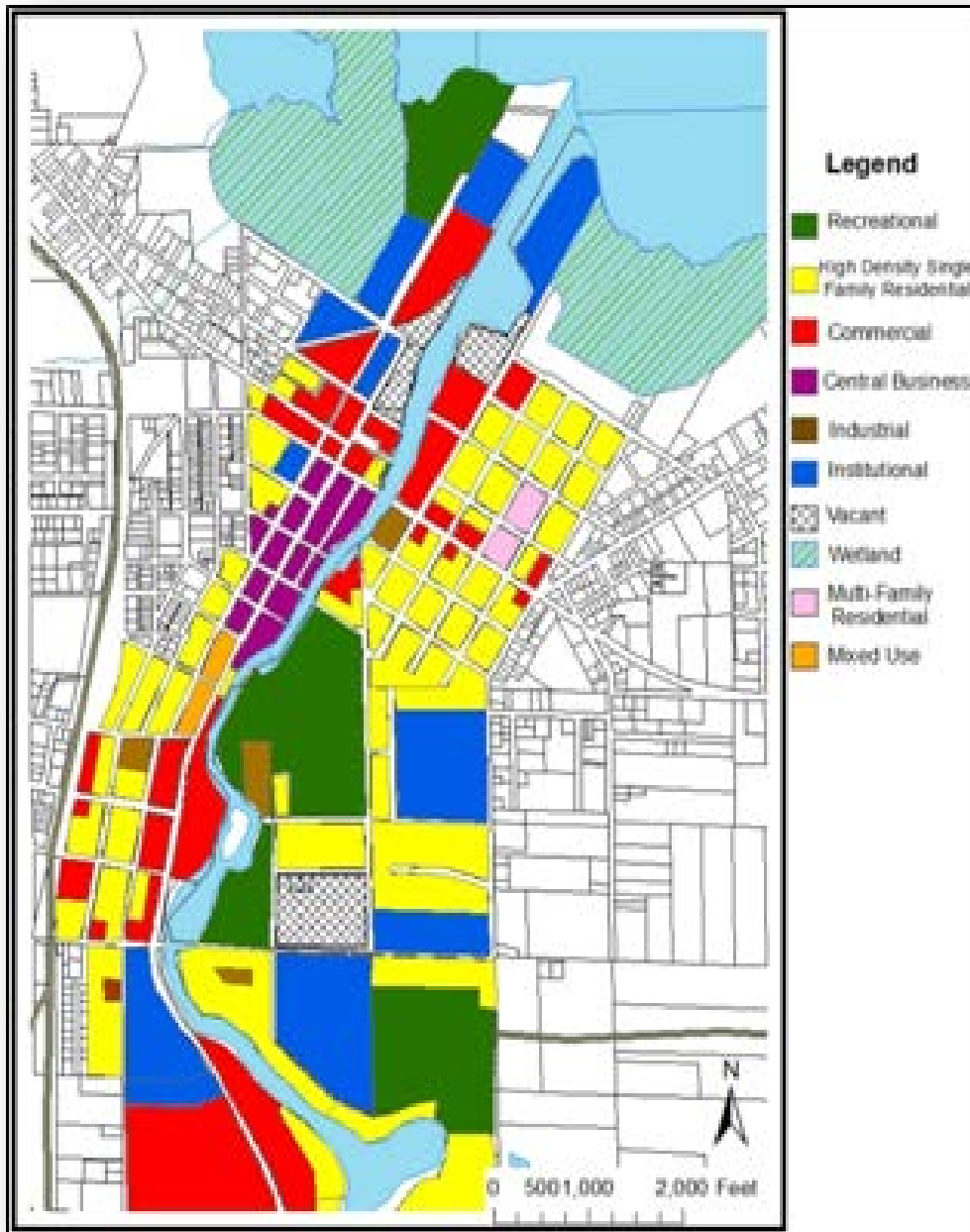


Figure 8 – City of Cheboygan Land Use Map

Source: City of Cheboygan

ROGERS CITY

Existing land use coordinates with the City of Rogers City's existing zoning ordinances. Property at and in proximity to the Rogers City Marina is zoned as Waterfront or Recreation Conservation.

The Waterfront zoning designation allows for redevelopment into a compatible mix of residential uses coexisting with parks, waterfront uses, and pedestrian-oriented commercial uses. Direct visual and pedestrian access both to the lakeshore and downtown area are encouraged. Small scale waterfront and tourist related commercial uses, such as pedestrian oriented shops and restaurants, seasonal businesses, private and public recreational uses are also encouraged.

Recreational Conservation Zoning is intended to protect and enhance areas of the

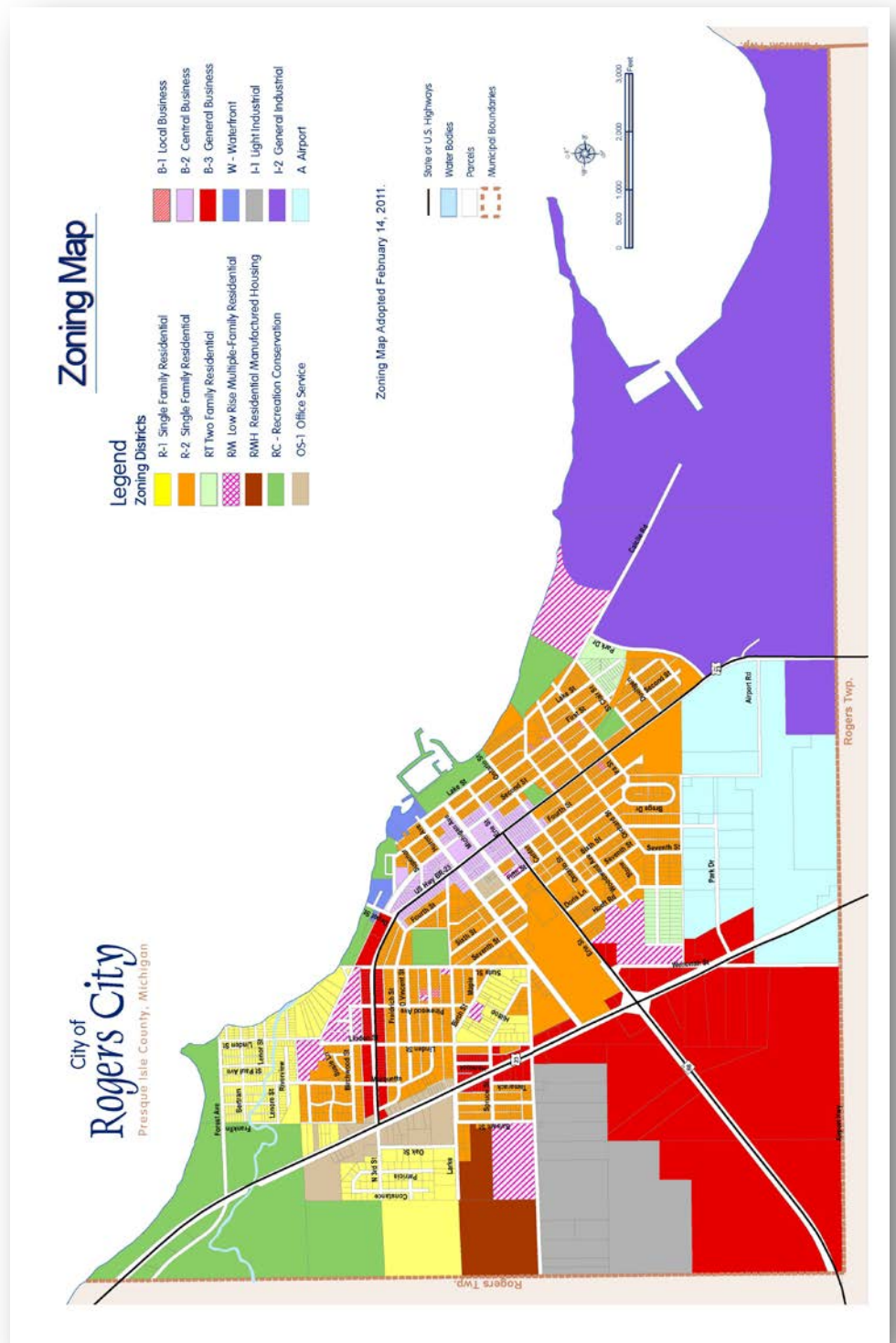


Figure 9 – City of Rogers City Zoning Map
Source: City of Rogers City

City designated as open space, woodlands, wetlands, recreation or resource conservation.

All property surrounding the Port of Calcite is zoned as general industrial which is designed primarily for manufacturing.

Existing land use demonstrates its coordination with the existing zoning. Existing land use surrounding the marina is “public”, while the existing land use surrounding the Port of Calcite is industrial.

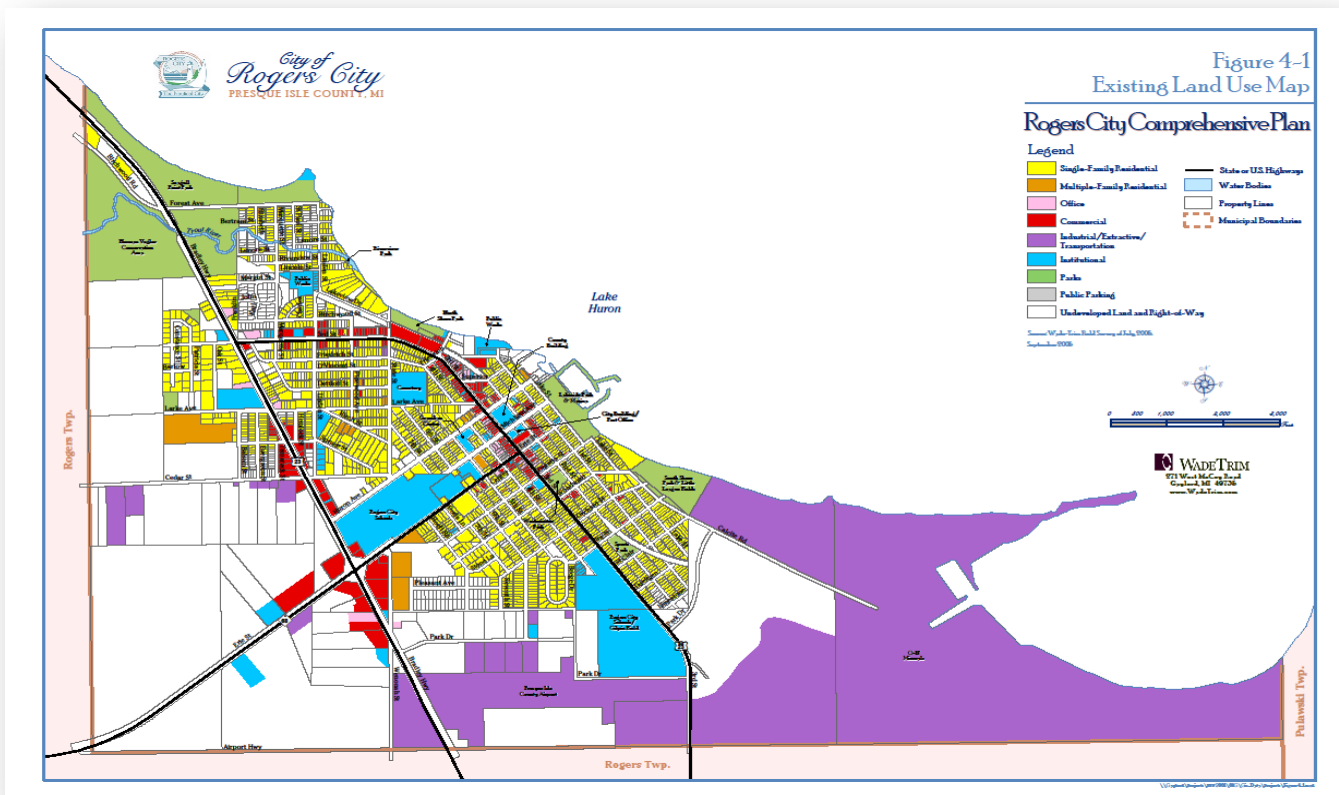


Figure 10 – City of Rogers Existing Land Use Map

Source: City of Rogers City

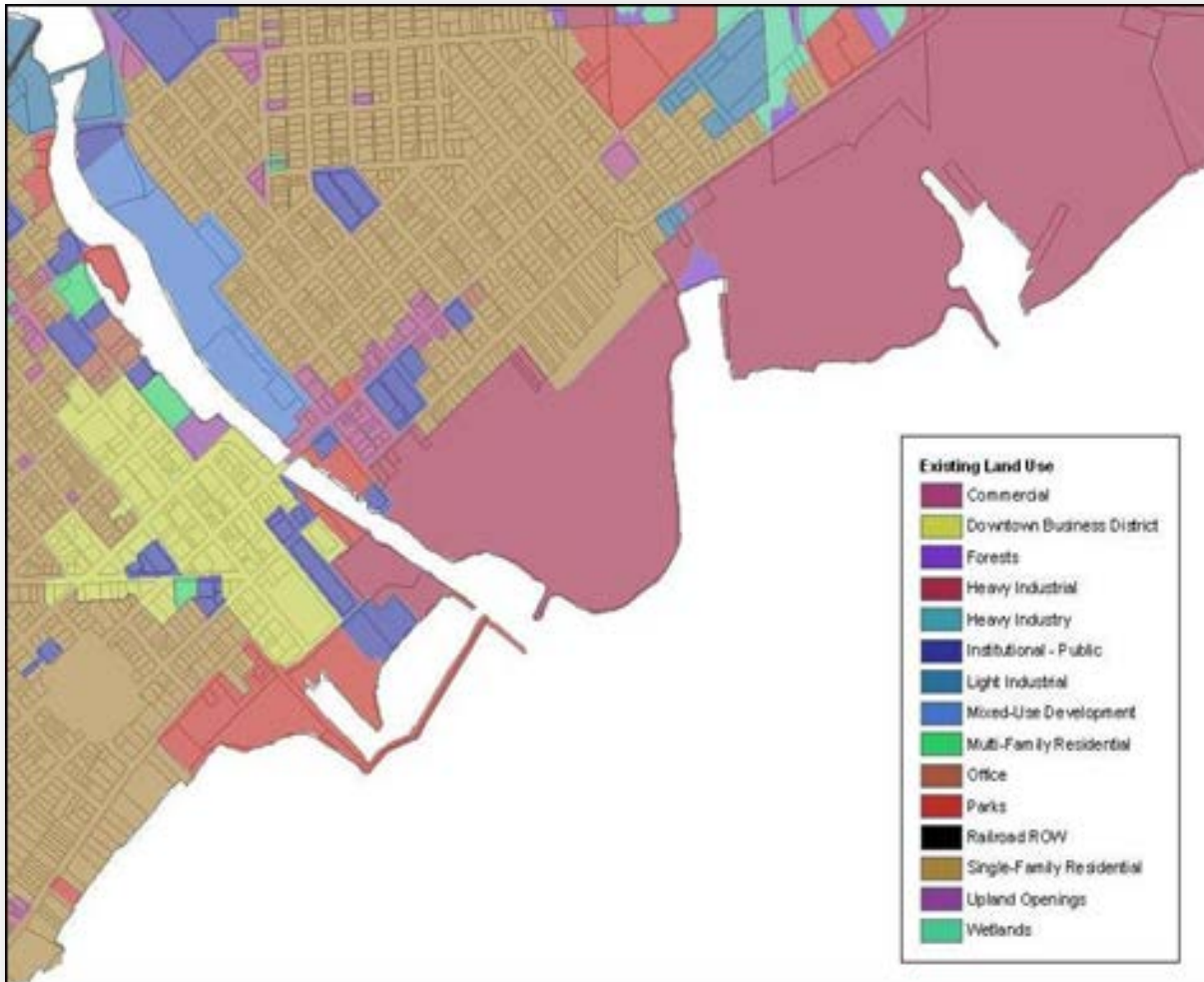


Figure 11 – City of Alpena Existing Land Use

Source: City of Alpena

ALPENA

The existing land use around the ports of Alpena is mostly industrial, along with institutional/public, parks, mixed use and a small amount of residential parcels. The largest current use located at the ports is industrial, which includes LaFarge, DPI, the Alpena Power Company and other smaller industrial companies. The institutional/public use along the port includes the NOAA Maritime Heritage Center, part of the Thunder Bay National Marine Sanctuary, as well as some waterfront parks.

According to Alpena’s current Comprehensive Plan, there are twenty zoning districts throughout the City of Alpena. The areas that encompass the ports are comprised of I-2

(general industry), WD (waterfront development), PR (parks and recreation), and some R-2 (one family residential).

As seen in the zoning map, Lafarge, the West Dock, and DPI (Decorative Panels International) are zoned as I-2. According to the Comprehensive Plan, this means the land can be utilized as light industrial processes, warehousing, etc. so long as the physical effects do not interfere with the surrounding areas.



Figure 12 – City of Alpena Zoning of Waterfront Properties

Source: City of Alpena

The Alpena Marina, across the river from DPI, is zoned as waterfront development (WD). Following the Thunder Bay River inland the waterfront land is also zoned as WD, including the NOAA (National Oceanic Atmospheric Administration) facility. The Waterfront Development Districts are meant to foster mixed-use development and institutional development.

The remaining coastline is zoned as a combination of PR (Parks and Recreation) and R-2 that, as it suggests, encourages public spaces and residential development.

ENVIRONMENTAL ISSUES

Under Public Act 381, the cities of Cheboygan, Rogers City and Alpena created their own Brownfield Redevelopment Authorities (BRA), as have Cheboygan County and Alpena Township. In overview, the authorities work to identify, assess, and approve projects on their communities' brownfield sites. Incentives are available through these Authorities; however, the BRA must approve of proposed brownfield projects before they occur. The State of Michigan must then approve any Michigan Business Tax Credits offered to facilitate redevelopment. In accordance with P.A 381 there is also eligibility for tax increment financing (TIFs) on certain environmental activities.

Because northeastern Michigan, like much of Michigan, has experienced a decline in industry, abandoned sites have the potential to be contaminated and are suspected so. In light of the need for redevelopment of this land, the City of Alpena and Cheboygan County both received \$200,000 grants from the EPA for Hazardous Waste cleanup. In addition, both the City of Alpena and Cheboygan County received \$200,000 grants to address sites specifically affected by petroleum products. In total, \$800,000 of federal monies were invested in this region to specifically address contaminated properties and their potential redevelopment.

It is important to note the location of current brownfields as well as sites that can or will eventually be brownfields. Awareness of such future land changes allows for adequate time to plan for the funding and redevelopment of such sites. In particular, it is important for these communities to keep in mind that the existing industrial land uses along the port have a strong potential for becoming brownfields should the land require clean up or be zoned differently in the future.

CULTURAL/RECREATIONAL RESOURCES

Cheboygan, Rogers City and Alpena are connected by the Lake Huron shoreline as well as by the US 23 Heritage Route, which connects all of the northeastern lower peninsula coastal counties from Arenac to Cheboygan. These northeastern Michigan communities enjoy an abundance of natural resources, utilized not only for business and industry, but for a wide variety of recreational opportunities, offering one of the greatest natural living environments with thousands of acres of public land available and providing recreation opportunities for every season. State and local parks offer camping and launch sites. Hunting, hiking, biking, bird watching, boating, swimming water skiing in the warmer months and snowshoeing, skiing, snowmobiling and ice fishing are just a few of the outdoor activities enjoyed in this region. River, stream and lake fishing is also very popular and accessible from public access sites located along hundreds of miles of shoreline and riverbanks. Public and private marinas are in abundance in these

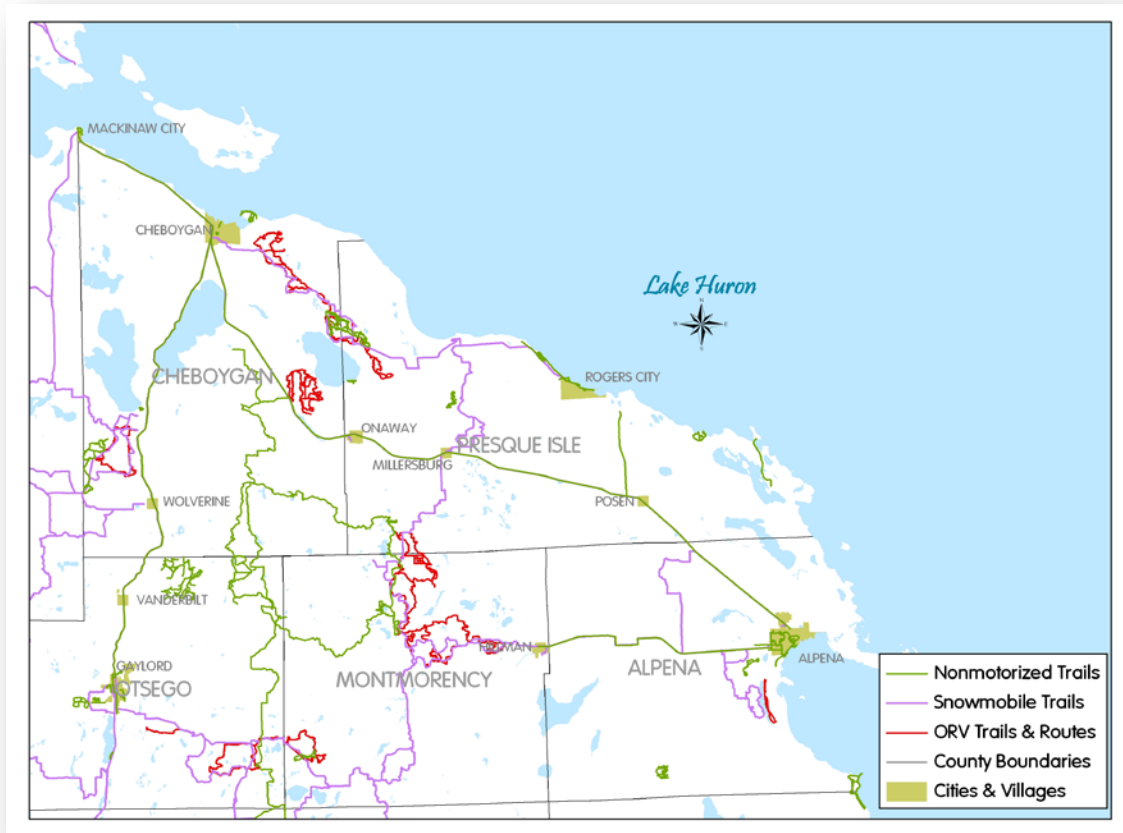


Figure 13 – Trails Map

Source: NEMCOG

communities, allowing for access and services for a variety of watercraft. In addition to

the proximity of Lake Huron, these communities enjoy the amenities offered by a number of inland lakes and rivers, including the Inland Waterway, a series of inland lakes and rivers which form a navigable route for small watercraft connecting Lake Huron in Cheboygan County to Crooked Lake in Emmet County.

Cheboygan County is also a crossroads of Northern Michigan's trail system. The North Central State Recreation Trail runs along the old Michigan Central Railroad segment from Gaylord to Mackinaw City, following the Lake Huron shoreline from Cheboygan to Mackinaw City. This trail connects in Cheboygan to the Northeastern State Trail, which was substantially completed in October 2011. This trail is 71 miles long and runs from Cheboygan to Alpena. Communities along these routes have also constructed trails within their communities to provide additional access to their communities, trails and the numerous parks and amenities these communities offer.

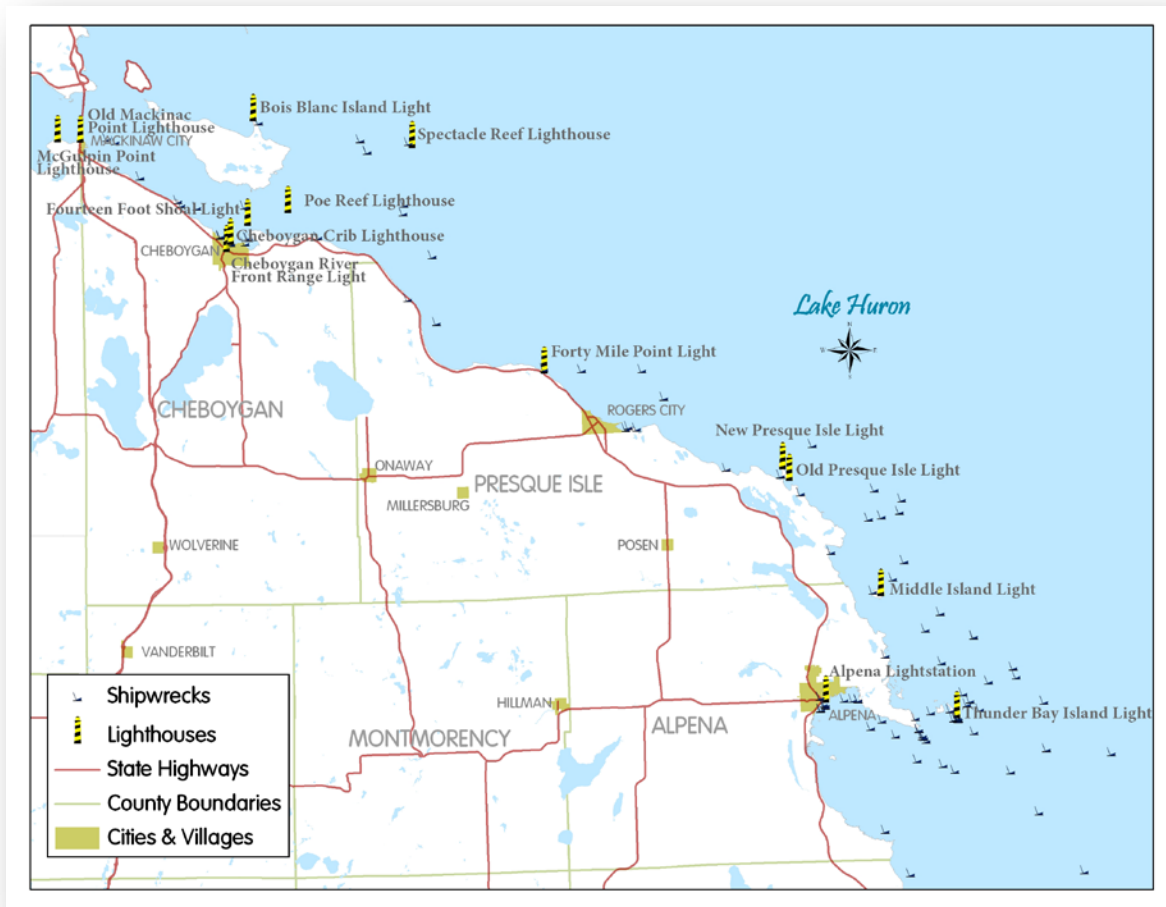


Figure 14 – Shipwrecks and Lighthouses in northeast Michigan

Source: NEMCOG

A significant draw to this area is the Thunder Bay National Marine Sanctuary. The Great Lakes Maritime Heritage Center, located in the City of Alpena, is Michigan's largest resource for information on Great Lakes shipwrecks, and hosts approximately 60,000 visitors annually. The shipwrecks of Thunder Bay provide a microcosm of the Great Lakes commercial shipping industry over the last 200 years. Numerous shipwrecks are located all throughout the Thunder Bay. Glass bottom boat tours based out of Alpena are popular, and diving instructions and tours are available from both Alpena and Rogers City locations.

The nautical history of this region draws thousands of visitors a year, including lighthouse enthusiasts. Cheboygan, Alpena and Presque Counties boast eight historical lighthouses, most of which are open seasonally for tours. A number of festivals are held in these communities celebrating their nautical heritage.

One of the rather unique recreational opportunities in the Cheboygan area is Bois Blanc Island, located six miles off the coast. Ferry service to Bois Blanc, (pronounced as Bob-lo by locals), is run by Plaunt Transportation Inc. Plaunt Transportation offers ferry service to and from the island May through November. The ferry has been operating since 1932 and is the only ferry service to and from the island. The main ferry boat, the Kristen D, can carry up to 17 vehicles and 149 passengers. Bois Blanc has only 71 year-round residents; however, the summer population swells to 1000, but still not enough to warrant a bigger ferry company. The island has a general store and a small airfield so there are other options for island residents. An ice road has also sometimes been established to access the island, depending on the ice pack in the winter.

The communities of Cheboygan, Rogers City and Alpena also offer other cultural opportunities such as theatre, music, and shopping. The Opera House in Cheboygan is a great community asset. In 1984, after being closed for 20 years, the restored Opera House was reopened to the public. The 582 seat Opera House is the premier performing arts and entertainment venue in the Straits of Mackinac region. Concerts and shows are held year-round in the acoustically superb Victorian-style theatre. Rogers City is home to a vibrant community theatre, and Alpena has both the Thunder Bay Theatre and the Alpena Civic Theatre providing live performances for the public. In addition, Alpena is also home to the only symphony orchestra in northeast Michigan.

COMMERCIAL/INDUSTRIAL BUSINESSES

CHEBOYGAN

The waterfront is home to the United States Coast Guard Cutter Mackinaw, which is the main Coast Guard station in the northern Lower Peninsula. It is also home to two world-class marine contractors. Durocher Marine, a division of Kokosing Construction, provides marine construction services and specializes in building commercial docks and piers, breakwaters and sea defense walls. Ryba Marine is a full-service marine construction company that specializes in barges and tugs up to 200 tons. They work in all phases of marine construction including breakwalls, dredging, pipelines, pile driving and dock construction.

The Port is also home to a US Oil gas terminal and Walstrom Marine, a full-service marina, primarily for recreational watercraft, which provides repairs and storage to its menu of services.

ROGERS CITY

The primary industry in Rogers City is Calcite. The Michigan Limestone and Chemical Company owns and operates the Port of Calcite and the world's largest open pit limestone quarry south of downtown Rogers City. The company is a subsidiary of Carmeuse, a Belgium-based global mining operation. This quarry has been in operation since the 1910s, and still ships approximately 500 boatloads of limestone annually, each carrying approximately 30,000 tons of cargo.

ALPENA

Port-specific companies in Alpena include LaFarge, a French-owned company specializing in cement and cement-related products, which has operated in Alpena for over 100 years as Huron Portland Cement and LaFarge, and is still one of the largest employers in the area. This privately-owned dock is the largest dock in Alpena, and is the only dock that imports and exports commodities in Alpena.

DPI-Alpena Hardboard is located in downtown Alpena just across the river from the City Marina. This plant opened in 1957 as Abitibi and, although it's been through different ownership over the years, it is still a key employer in the area. This dock's use is private access only, and is used on a limited basis to unload coal for the facility's generators 2-3 times per year.

TRANSPORTATION

ROADS

US Highway 23 is an interstate highway that runs from Mackinaw City and continues south all the way to Jacksonville, Florida. In northeastern Michigan, it follows the Lake Huron coastline and has been designated as the US 23 Heritage Route (www.us23heritageroute.org).

US 23 connects to two main east-west routes in this region: M-68 in Presque Isle County going west to Emmet County and Lake Michigan, and M-32 in Alpena County, which connects to I-75 in Gaylord, but continues on through to Charlevoix County. Additionally, many county roads service recreational and truck traffic for the movement of goods across the region.

US Highway 23 has several major junctions, most importantly with I-75 at its northern end and I-94, I-69, I-96 as well as two other intersections with I-75 in southern Michigan, over 250 miles away. US-23 provides a key connection for these northeastern Michigan ports' potential future industrial and commercial development and is a valuable transportation asset.

PUBLIC TRANSPORTATION

The Straits Regional Ride (SRR) is the current form of public and regional bus transit serving the City of Cheboygan as well as Cheboygan County. The SRR was established in 2000 under the Regional Transportation Program. In 2003, SRR completed a regional program and became eligible for state and federal funding. SRR currently supports the counties of Cheboygan, Emmet, and Presque Isle, and also assists the cities of Alanson, Cheboygan, Indian River, Mackinaw City, Onaway, Petoskey, and Rogers City with local service as well. The SRR is available Monday-Friday from 6am thru 5pm, with an operating fleet of 12 vehicles (MDOT 2010).



Figure 15 – US 23 Heritage Route

Source: NEMCOG

Dial-A-Ride is a service operated by the Thunder Bay Transportation Authority. This is a public authority formed under PA 196, provides transportation services for area elderly, handicapped and special needs passengers. The authority services Alpena, Alcona and Montmorency Counties as well as Presque Isle County south of M-68, including Rogers City, Onaway and Posen. It operates five days a week and by special contract other times and days and has a fleet of 16 small buses and six vans, of which 20 of the vehicles are equipped with lifts.

Private bus transportation to destinations outside the region is provided by Indian Trails, Inc. The Chicago-Flint-St. Ignace line connects Mackinaw City and points along the eastern side of Michigan's Lower Peninsula and connecting service to Greyhound buses in St. Ignace and Flint. The Chicago-Kalamazoo-St. Ignace line connects Mackinaw City and points along the western side of Michigan's Lower Peninsula (Cheboygan County Data Book: Land Use & Transportation).

FERRY SERVICE

One of the rather unique recreational opportunities in the Cheboygan area is Bois Blanc Island, located six miles off the coast. Ferry service to Bois Blanc, pronounced as Bob-lo by locals, is run by Plaunt Transportation Inc. Plaunt Transportation offers ferry service to and from the island May through November. The ferry has been operating since 1932 and is the only ferry service to and from the island. The ferry departs from Water Street just south of the State St. Bridge, one block east of Route 27. One negative aspect of the location of the ferry is the need to lift the drawbridge at State St. at every sailing, thus stopping traffic momentarily.



Figure 16 – Bois Blanc Island Ferry

Source: <http://sunsetpointebbi.com/life.html>

The main ferry boat, the Kristen D, can carry up to 17 vehicles and 149 passengers. The ferry company also offers several other services for their customers besides transportation. They offer pick-up and deliveries for people on the island, warehouse storage, freight forwarding from all shippers, dump trucks for site clean-up, trailers for hauling lumber, and appliance disposal. Bois Blanc has only 71 year-round residents (as of 2000). The summer population swells to 1000, but still not enough to warrant a bigger ferry company. The island has a general store and a small airfield so there are

other options for island residents. An ice road has also sometimes been established to access the island, depending on the ice pack in the winter.

The Alpena and Rogers City ports do not have any ferry service. There are four carriers operating ferries in Lake Huron. As shown below, three carries operate ferries on the same route form Mackinaw City, MI to Mackinac Island, to St. Ignace, MI and the other carrier provides service between Cheboygan, MI to Bois Blanc Island, as described above. All carriers accommodate people and bicycles. Plaunt Transportation Company can also accommodate trucks and cars.

Table 3 – Ferry Service in Northeast Michigan

Carrier	Routes
Arnold Transit Company	Mackinaw City, Michigan to Mackinac Island, St. Ignace, Michigan to Mackinac Island
Plaunt Transportation Company	Cheboygan, Michigan to Bois Blanc Island
Shepler’s Mackinac Island Ferry	Mackinaw City, Michigan to Mackinac Island, St. Ignace, Michigan to Mackinac Island
Star Line Mackinac Island Ferry	Mackinaw City, Michigan to Mackinac Island, St. Ignace, Michigan to Mackinac Island

Source: MDOT

CRUISE

There are not any cruise ship stops or operators at any of these three ports. However, in the Great Lakes, there are several cruise operators. Great Lakes Cruise Company provides many types of cruise services. One is between Quebec City and the Great Lakes, by Yorktown Ship. Other cruises also go around the Great Lakes and on to New York.

AIRPORTS

The **Cheboygan County Airport** is located west of the City of Cheboygan on Levering Road (County Road 64). This public airport provides the needs of private and charter aircraft throughout the region. The community of Indian River also maintains an airport for private and chartered aircraft. In 2006 the Cheboygan Airport acquired 10 acres at the southeast corner of Levering and Airport Roads to pave the approach clearance for one of the runways. In 2007 the airport constructed and paved a parallel taxiway “A” to runway number 1028 for safety improvements. In 2010 runway 1735 was paved and

lighted and a new parallel taxiway “C” was constructed and paved. It is expected that the airport will soon build an equipment storage building and make improvements to the terminal.

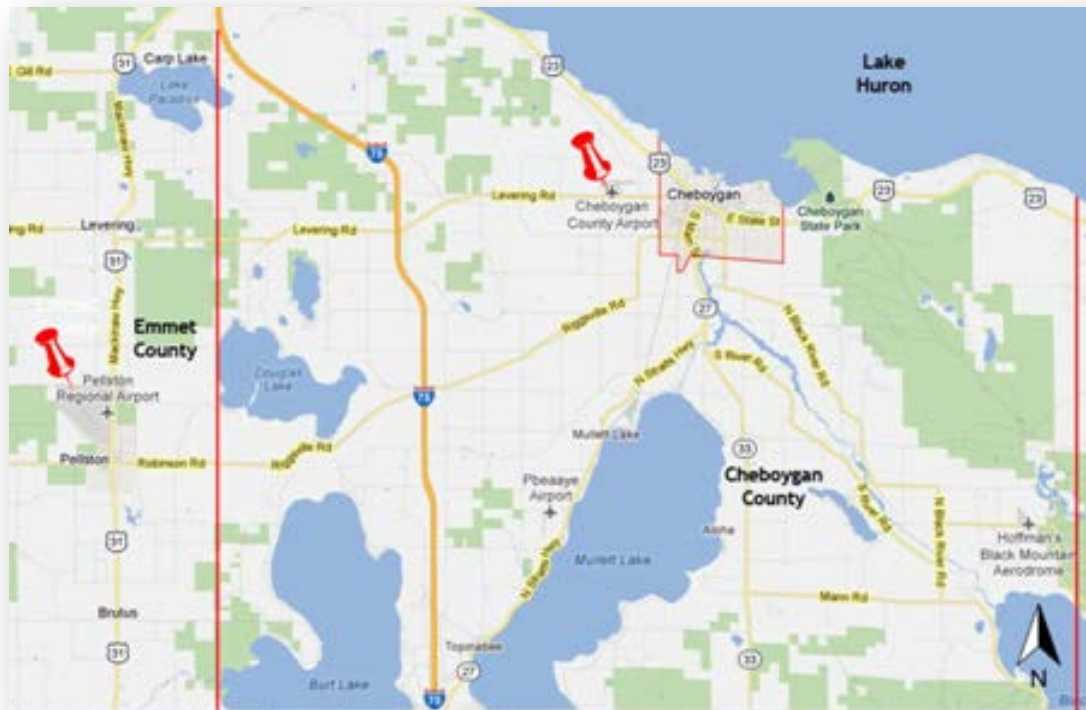


Figure 17 – Major Airports Near Cheboygan County

Source: MSU Practicum Team 2012

While there are no commercial flights available anywhere within Cheboygan County, **Pellston Regional Airport** lies within neighboring Emmet County and is about 20 miles west of the Cheboygan city limits.

Pellston provides daily inbound and outbound flights to Detroit-Wayne International Airport, as well as Friday and Sunday flights to Chicago’s Midway Airport. Pellston Regional Airport constructed a new terminal in 2003 allowing for daily commercial flights and boasts the atmosphere and aesthetics of a rustic lodge, catering to the “Up North” feel of the region.

Table 4 - Airport Usage Comparison 2011

City	Freight (Inbound)		Freight (outbound)		Passenger	
	lbs.	Share	lbs.	Share	lbs.	Share
Detroit	235423644	76.16%	156008028	63.72%	29892354	86.94%
Grand Rapids	40609373	13.14%	40096086	16.38%	2275332	6.62%
Lansing	22223322	7.19%	19256616	7.86%	358307	1.04%
Flint	12674684	4.10%	9283785	3.79%	938986	2.73%
Traverse City	1424837	0.46%	1608262	0.66%	352250	1.02%
Iron Mountain	450281	0.15%	418767	0.17%	23971	0.07%
Alpena	631246	0.20%	493640	0.20%	22747	0.07%
Pellston	520592	0.17%	246805	0.10%	45422	0.13%
Escanaba	847756	0.27%	379167	0.15%	26555	0.08%
Statewide	309120047	100.00%	244845717	100.00%	34382844	100.00%

Source: MDOT

Alpena County Regional Airport is located on M-32, about seven miles west of the city of Alpena in Northeast Michigan. The airport has four runways. Currently, the airport serves four purposes:

1. Passenger service
2. Designated as an emergency landing site for in-flight emergencies by the FAA
3. Home to the Combat Readiness Training Center (CRTC) of the Michigan National Guard
4. Other aviation related services (charter services, air freight, aircraft rental and flight training as well as emergency medivac services).

As for passenger use, the airport currently serves passengers flights to and from Detroit and Minneapolis twice a day, operated by SkyWest. The number of passengers has been decreasing since 2005, but appears to have leveled out in recent years. As for freight use, the amount of freight has dramatically decreased since 2005. In terms of freight movement by air, the inbound freight movement exceeds the outbound freight movement at all airports except for Traverse City.

There is not any public transportation service to the airport. However, there is short and long term vehicle parking provided for passengers for free.

Table 5 - The Amount of Freight and Passenger in Alpena and Pellston

Year	Alpena			Pellston		
	Freight (lbs.)		Passenger	Freight (lbs.)		Passenger
	Inbound	outbound		Inbound.	outbound	
2000	1119710	540194	20847	1175099	231711	64123
2001	923248	417363	21033	960352	207947	58928
2002	1048413	548625	19848	1100858	234415	66707
2003	1056620	570161	17865	1106546	253070	64279
2004	1201940	636108	15929	1046945	245381	75867
2005	1244849	806391	19666	994181	253617	74381
2006	1132541	794543	15625	979949	266598	64719
2007	963505	785840	15288	719975	290506	58902
2008	869140	583223	14608	590185	207846	50263
2009	518930	411489	14876	491583	201326	46219
2010	657722	447923	16818	454132	184549	46619
2011	631246	493640	22747	520592	246805	45422

Source: MDOT

RAILWAY

There is no rail service in Cheboygan or Rogers City.

No passenger rail service is offered in the City of Alpena nor anywhere else in northeast Michigan. MDOT considers railways as important modes, especially in terms of economic development and environmental sustainability. They state specifies five goals in the Michigan State Rail Plan.

1. Promote the efficient movement of passengers
2. Promote the efficient movement of freight
3. Encourage intermodal connectivity
4. Enhance state and local economic development
5. Promote environmental sustainability

Freight rail service is provided from Alpena to Bay City by Lake State Railway Company. The rail line is classified as Class III Local/Short-Line Rail. Railroads in the United States are grouped into classifications based on operating revenue. The

classifications are defined by the Surface Transportation Board as follows (Michigan State Rail Plan, 2010):

- A Class I railroad is a major rail company that has annual revenues in excess of \$401.4 million per year.
- A Class II railroad is a line-haul rail company with revenues of less than \$401.4 million but in excess of \$40 million.
- Class III railroads are defined as having annual operating revenues of less than \$40 million.
- Class III railroads include short-line railroads and switching and terminal railroads.



Figure 18 – Key Regional Links for Michigan Commodities via Railroad

Source: MDOT

Soo Line (CP/SOO). These four Class 1 railroads own 2,137 miles of track in Michigan (Michigan State Rail Plan, 2010).

Class II Regional Railroads

Michigan's Class II railroads are mid-sized freight-hauling railroads. The State of Michigan has two Class II railroads: Great Lakes Central Railroad and Indiana and Ohio

Class I Railroads

The Class I railroads are national companies that primarily offer services for national and inter-modal shippers and markets. Four of the seven Class 1 railroads in the United States own track in Michigan. The Class I railroads that operate in Michigan are: Canadian National (CN), Norfolk Southern (NS), CSX Transportation (CSX), and Canadian Pacific/

Railway. The Great Lakes Central Railroad (GLC) is headquartered in Owosso and operates on tracks extending through the central and northern portions of Lower Michigan. The GLC operates on 350 miles of state-owned tracks under a lease agreement, and another 50 les of track which it owns. Major commodities hauled by GLC include sand, grain, plastics, coke, fertilizers, sand, lumber and other chemicals. The other Class II railroad is the Indiana and Ohio Railway (IORY), headquartered in Cincinnati, and owned and operated by Rail America. The IORY owns and operates 570 miles of track, of which 44 miles are in southeastern Michigan. The main commodities hauled by IORY include automobiles, pig iron and other metal products, chemicals, plastics, lumber, paper, and grain products (*Michigan State Rail Plan, 2010*).

Class III Local / Short-Line Railroads

The Class III short-line railroads in the United States are primarily former branch lines of larger railroads that now serve a limited area on their own. These railroads operate on over 1,500 miles of track in Michigan and are engaged primarily in providing connections between local industries and the national rail network operated by the Class I railroads. Michigan has 15 Class III short-line railroads (including that which supplies Alpena), each operating over distances ranging from two miles to 365 miles. The percentage of the total rail mileage operated by short-line railroads has been increasing steadily in recent years as the Class I railroads have sold or leased the least productive segments of their rail networks. Short-line railroads generally can operate rail lines at a significantly lower cost than the large railroad companies, but often do not

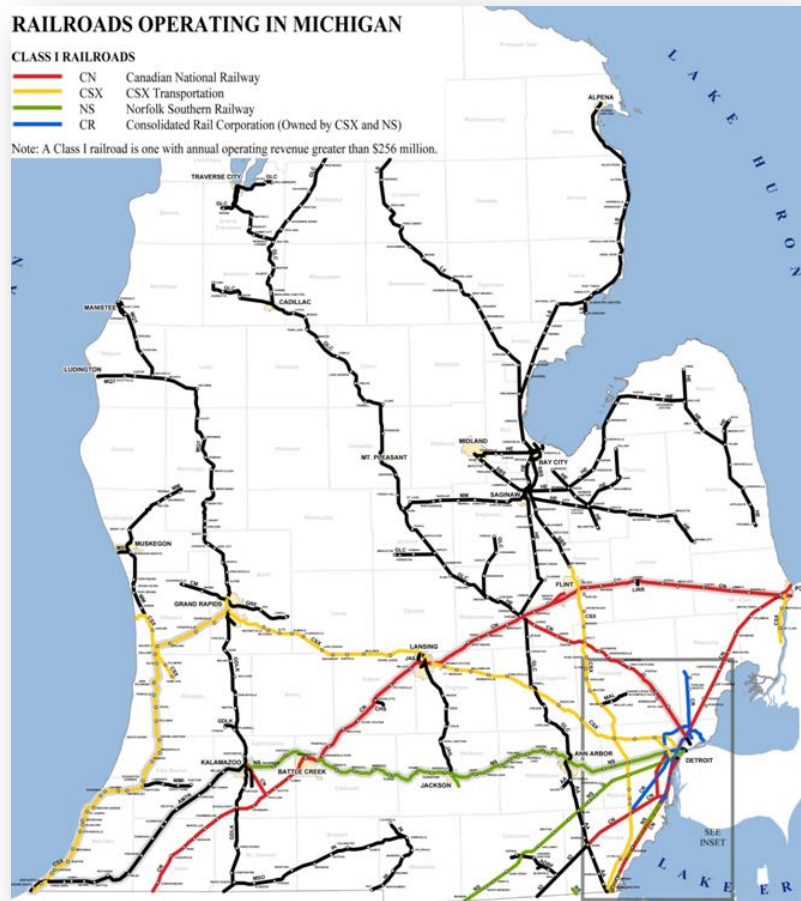


Figure 19 – Railroads Operating in Michigan

Source: MDOT

have the capital resources to maintain the physical plant to higher FRA track classifications (*Michigan State Rail Plan, 2010*).

Class III Switching and Terminal Railroads

A switching and terminal railroad is a Class III freight railroad company whose primary purpose is to perform local switching services or to own and operate a terminal facility. Michigan has eight switching and terminal railroads, ranging in length from two miles to 98 miles. These switching and terminal railroads operate just over 220 miles of track and play a key role in getting materials to and from their final destinations (*Michigan State Rail Plan, 2010*).

Alpena's rail service is used to deliver raw materials and products to and from the heavy industrial users in the area. Alpena is at the end of the rail line, and Lake State Railroad has only one inbound and one outbound train per day, Monday through Saturday. Figure 6-4 shows regional links for Michigan commodities moving by railroad in 2003. Most freight is carried through Canadian National Railway.

The Michigan State Rail Plan of 2010 established several goals to promote the efficient movement of freight.

- Encourage frequent, reliable and efficient freight rail service to un-served or under-served communities, businesses and shippers.
- Provide public investments for railroad projects where public benefits exceed public costs.
- Pursue public-private partnerships to improve service and reduce freight rail congestion.
- Identify corridors where 286,000-pound rail car load capacity is needed based on market demand.
- Identify corridors where 315,000-pound rail car load capacity is needed based on market demand.

While Alpena has rail connectivity, its distance to these depots is substantial. Alpena's cargo is mostly limited to coal and it is not connected directly to the Alpena port. Furthermore, even with expansion of the current rail to the Alpena port making intermodal transport feasible, major upgrades to the *rail line from Bay City to Alpena*.

INTERMODAL CONNECTIVITY

Intermodal freight transport involves the transportation of freight in an intermodal container or vehicle, using multiple modes of transportation (rail, ship, and truck), without any handling of the freight itself when changing modes. The method reduces cargo handling, and so improves security, reduces damages and losses, and allows freight to be transported faster. Reduced costs over road trucking are the key benefits for intercontinental use. This may be offset by reduced timings for road transport over shorter distances.

The intermodal concept draws from each mode of transportation, providing flexibility and nearly unlimited access to industrial and commercial locations. Rail intermodal shipments are most often used for consumer goods and subassembly components. In the early 2000s, railroad intermodal volume grew at approximately 32 percent (Michigan State Rail Plan, 2011). At that time, intermodal was the number one source of railroad freight revenue. Michigan does not have any intermodal rail movements that are completely internal within the state, but there are significant interstate and international intermodal movements. Michigan's intermodal terminals handle traffic that primarily originates or terminates in Ontario, Quebec, Nova Scotia, Maryland, Virginia, Mexico, California and British Columbia. The world's largest bilateral trade relationship exists between the United States and Canada, with Michigan positioned as a leader in international trade. Michigan is at the head of continuing strong trade growth between the United States and Canada.

The Michigan State Rail Plan has established several objectives to encourage and promote intermodal connectivity throughout the state of Michigan. The objectives are as follows:

- Support the development of intermodal freight facilities which will provide seamless connectivity between rail and truck and water modes. Focus on facilities which have the greatest potential to increase the efficiency and accessibility of the rail mode and provide lower transportation costs for shippers.
- Support the connectivity of Michigan passenger rail service to other corridors regionally, nationally, and internationally to maximize network benefits in terms of increased ridership, revenues and passenger mobility.
- Support intermodal connectivity between intercity passenger rail and other passenger modes including air, local transit, auto, intercity bus, and nonmotorized transportation. Focus on intermodal investments which have the most potential to increase the efficiency of the rail mode and provide greater accessibility to travelers including those with special needs and limited access to automobile transportation.

- Support enhanced freight and passenger rail service as a part of an overall state energy conservation policy and to protect Michigan travelers and shippers from the adverse mobility and economic impacts of expected increases in future transportation energy costs
- Promote state policies and programs to provide increased freight rail service to Michigan communities and businesses as a means of increasing their attractiveness for the expansion of existing businesses and the recruitment of new businesses.
- Promote freight rail service, infrastructure improvements, and intermodal connectivity to increase the efficiency of freight rail service and to lower transportation costs for Michigan businesses.

EXISTING MICHIGAN RAIL INTERMODAL CONDITIONS

Michigan has 36 active ports which accommodate bulk cargoes moving in the Great Lakes and the St. Lawrence Seaway. Nineteen of these active ports support outbound commodity movements. As of 2008, the ports that produce the most outbound tonnage are Stoneport, Marquette, Calcite, Port Inland, Escanaba, Alpena, Port Dolomite, Charlevoix, Port Drummond and Detroit (Michigan State Rail Plan, 2010).

With the exception of the iron ore ports at Escanaba and Marquette in the Upper Peninsula, no significant rail-to-water or water-to-rail intermodal cargo transfers exist at Michigan ports. The principal reason is that Michigan's marine cargo facilities are designed for local or regional distribution and do not lend themselves to rail transport. Michigan's businesses and industries generate a large volume of overseas trade, but the vast majority of these shipments are transported by truck or rail to Pacific, Atlantic or Gulf coast ports for ocean shipping.

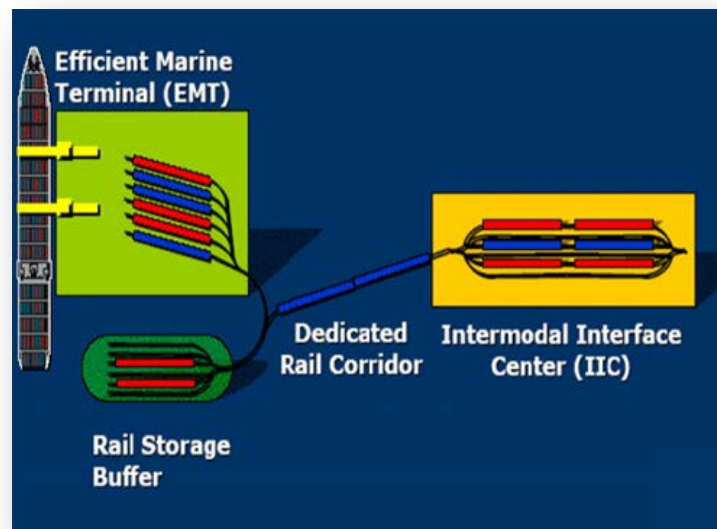


Figure 20 – Example of a Port Intermodal Facility with Rail-to-Water
 Source: The Center for the Commercial Deployment of Transportation Technologies

Intermodal connectivity has become a crucial linkage to port freight shipping across the country. As defined by MDOT's Economic Regions Corridor Summary, there are six major rail intermodal terminals located in the Southeast Michigan region. The purpose of the terminals is to connect larger carriers to other modes of transportation or other rail carriers. The major railroad intermodal terminals in Michigan are identified below.

Table 6 - Major Intermodal Terminals in Michigan

Highest Volume Railroad Intermodal Terminals in Michigan		
Terminal Name	Terminal Address	Terminal Owner
CN /Moterm	600 Fern Street, Ferndale	Canadian National
CP Expressway	12594 Westwood, Detroit, MI	Canadian Pacific
CSX Livernois Yard	2725 Livernois Avenue, Detroit, MI	CSX Corporation
NS Triple Crown	2500 Wabash Street, Melvindale, MI	Norfolk Southern
NS Delray	8501 West Fort Street, Detroit, MI	Norfolk Southern
NS Livernois Yard	2725 Livernois Avenue, Detroit, MI	Norfolk Southern

Source: Michigan State Rail Plan

Seven major equipment depots are located in Michigan and are listed below. These depots provide inland terminal and cargo transportation services to shipping lines, railroads, and shippers/receivers of containerized cargoes. The depots are strategically located to cover all major port locations and major rail sites. The primary services that are provided to Michigan include intermodal container drayage (the act of transporting something a short distance by truck or other vehicle), terminal and rail operations, warehousing logistics, container/trailer maintenance and repair.

Table 7 - Major Equipment Depots in Michigan

Major Equipment Depots in Michigan	
Depot Name	Address
Bridge Terminal Transport	27849 Wick Road, Romulus, MI
C&D	700 Leigh Street, Detroit, MI
Classic Transportation	4729 Division, Wayland, MI
ContainerPort Group Inc	312 South Westend St, Detroit, MI
Mason Dixon Intermodal	4440 Wyoming Ave, Dearborn, MI
Masserlink Brothers Inc.	901 Freeman Ave SW, Grand Rapids, MI
Reliable Transportation Specialists	7100 Dix Avenue, Detroit, MI

Source: Michigan State Rail Plan

Intermodal and highway restrictions and limitations create unequal competition between Michigan, Ohio, Indiana and Illinois ports and intermodal facilities. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) enforced a freeze limiting the use of longer, heavier double and triple trailer combinations to those states in which they were already operating in 1991. (fhwa.dot.gov) ISTEA is still enforced today. The size

and weight limits included in the 1991 grandfather provisions are summarized in the table below, for the corridor states. The table below shows the truck size and weight rules on the corridor's turnpikes and toll roads. This shows the disadvantage Michigan has in coaxing freight liners to dock at state ports, due to increased cost of transportation with more trucks needed to transport goods from port to destination.

Table 8 - Operation of Vehicles Subject to the ISTEA Freeze Max Size and Weight Limits

State	Truck, Tractor and Two Trailing Units	Truck, Tractor and Three Trailing Units	Other
Length in Feet ('), Weight in 1,000 pounds (K)			
Indiana	106', 127.4K	104.5', 127.4K	58'
Michigan	58', 164K	No	No
New York	102', 143K	No	No
Ohio	102', 127.4K	95', 115K	No

Source: USDOT

Public roads leading to major intermodal terminals are designated NHS connectors by the USDOT, in cooperation with State departments of transportation and metropolitan planning organizations. Several criteria are considered, including the level of activity of an intermodal terminal and its importance to a State's economy.

Furthermore, intermodal and highway restrictions and limitations create unequal competition between Michigan, Ohio, Indiana and Illinois ports and intermodal facilities. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) enforced a freeze limiting the use of longer, heavier double and triple trailer combinations to those states in which they were already operating in 1991. (fhwa.dot.gov) ISTEA is still enforced today. The size and weight limits included in the 1991 grandfather provisions are summarized in the table below, for the corridor States. The table below shows the truck size and weight rules on the corridor's turnpikes and toll roads. This shows the disadvantage Michigan has in coaxing freight liners to dock at state ports, due to increased cost of transportation with more trucks needed to transport goods from port to destination.

For Cheboygan, Alpena and Rogers City, the lack of a connection to a major limited access highway to transport goods to and from an intermodal facility is a critical element that would be evaluated by intermodal stakeholders.

NAVIGATION

PORT COMMUNICATION

There is no unified port authority in northeast Michigan to facilitate and manage port communication and navigation between ships and the various docks. As such, waterway communication is handled by the individual docks under the enforcement jurisdiction of the U.S. Coast Guard. The Coast Guard operates a station in the City of Alpena and handles basic maritime communication in the area. The City of Alpena Marina docks as well as the LaFarge and DPI private docks operate their own communication systems between ships. The same is true for dock operations in both Cheboygan and Rogers City.

DEPTH

In the **Port of Cheboygan**, dredging projects occurred between 1871 and 1939 to accommodate these larger vessels. Whereas many rivers have to be dredged yearly, the Cheboygan River rarely needs to be due to its swift current.

The Port's harbor is the Cheboygan River with an average depth of 23' in the channel and at the cargo piers. It includes a turning basin of 21 ft. deep, 400 ft. wide and 770 ft. long, at its longest point.

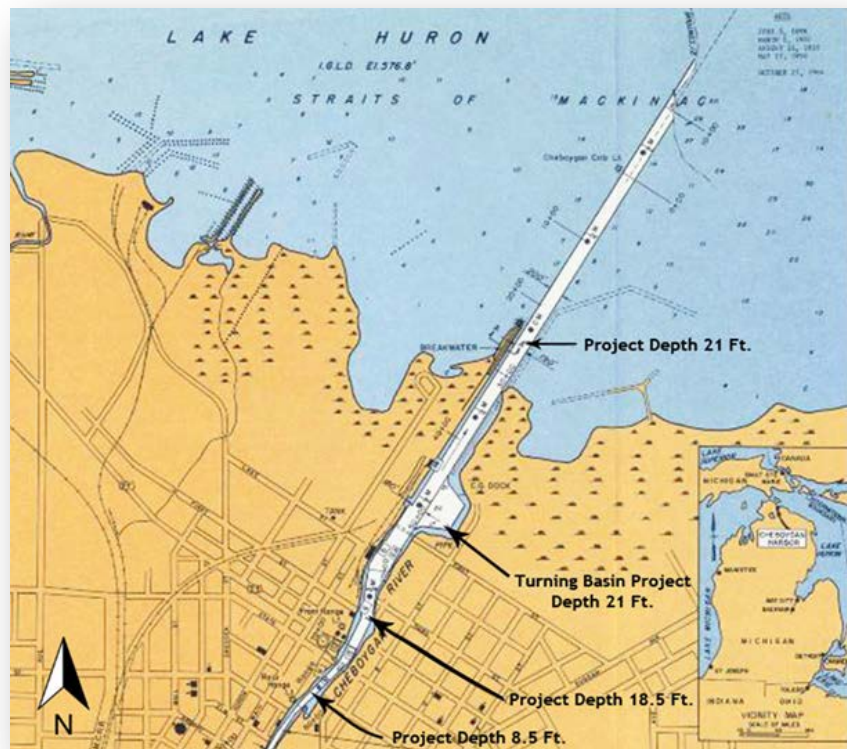


Figure 21 – Port of Cheboygan

Source: Army Corps of Engineers 2012

The US Army Corps of Engineers does not recognize the **Port of Calcite** and has not undertaken dredging projects in Rogers City. It is assumed that all dredging operations are handled by the company privately. The shipping channel into the Port of Calcite has been measured by the National Oceanic and Atmospheric Administration (NOAA) to be 24.5 feet deep in 1999, and may be 21-25 feet deep today, depending upon the dock. This is generally considered a deep water port in the northern Great Lakes, and is still considered the busiest bulk cargo port in Michigan's lower peninsula.

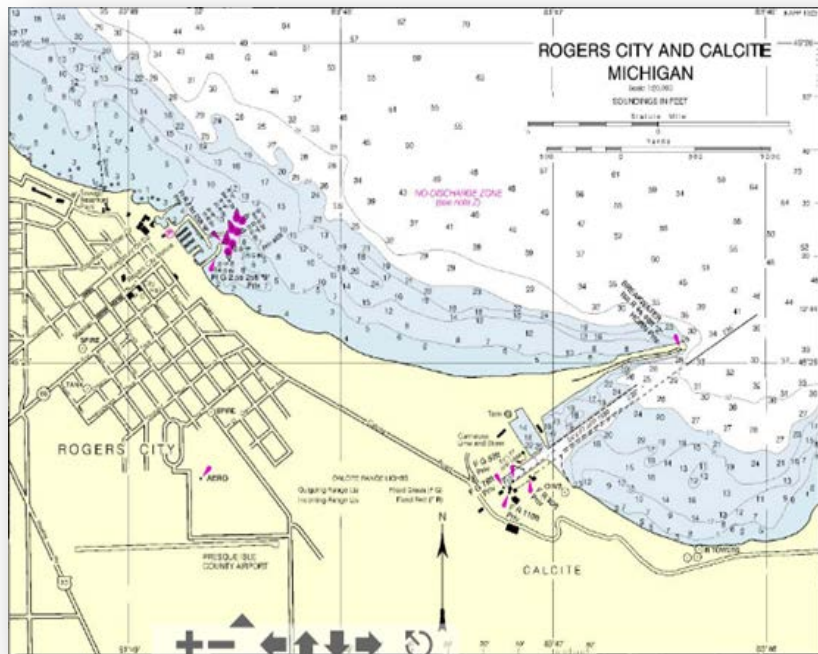


Figure 22 – Ports of Rogers City: City Marina and Port of Calcite
Source: NOAA

The **Port of Alpena** has three dredged channels, one for the LaFarge dock, one for West dock, and one for Thunder Bay River.

The LaFarge channel is dredged to a depth of 24 feet, the West dock channel is about 16 feet deep, although this dock is not currently in use, and the Thunder Bay River mouth is dredged to a minimum depth of 14 feet. By comparison, the minimum depth of the St. Lawrence Seaway is 30 feet, limiting the depth of all vessels traversing the Great Lakes to about 27 feet. Shipping channels do not need to be dredged to any depth greater than 30 feet in order to be able to accommodate all ships in the Great Lakes. Most ports west of Lake Erie have a maximum depth of 25 feet.

The Thunder Bay River deposits sediment in Alpena Harbor requiring regular maintenance dredging in order to keep shipping channels open in Alpena. Port dredging in the United States is managed under the U.S. Army Corps of Engineers and funded by a special harbor maintenance tax imposed on shippers based on the value of their

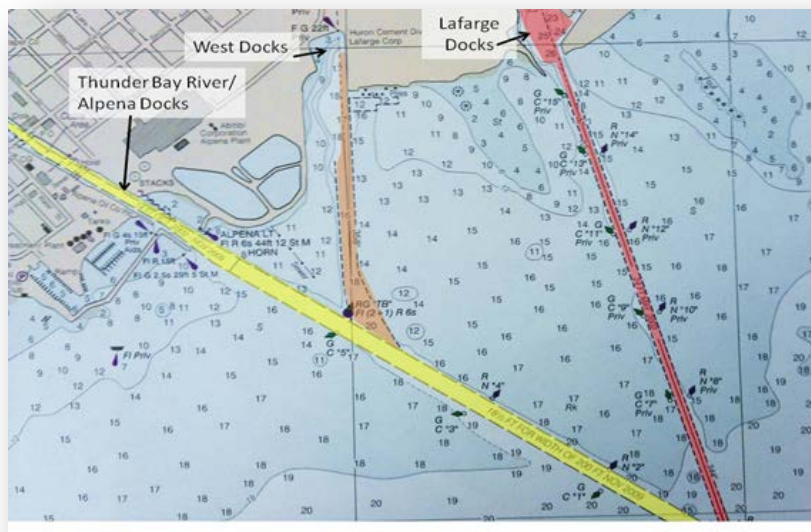


Figure 23 – Shipping Channels of Alpena Harbor

Source: NOAA

goods passing through a port. Alpena harbor was last dredged as part of an Army Corps of Engineers Project in 2007 and completed at a cost of \$586,166. (U.S. Army Corps of Engineers, 2011) Maintenance dredging is recommended to be done every 5-

10 years for Alpena but, because of lack of funding, is generally only undertaken every 15-20 years. This is due to prioritizing by the federal government. Some major ports on the Great Lakes have greater need and are dredged much more often than Alpena. Green Bay, for example, usually has to be dredged yearly due to the conditions of the

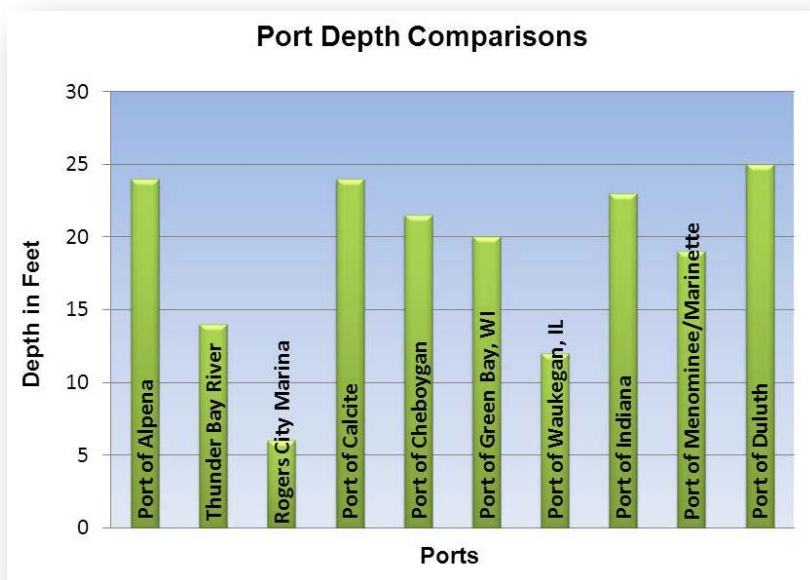


Figure 24 – Minimum Depth of Great Lakes Ports

Source: NOAA

Bay. Much larger dredging projects are prioritized on the national level such as the almost continual dredging needed to keep the mouth of the Mississippi River open in Louisiana. The cost of dredging usually makes it prohibitive for local or regional government entities to fund and is almost always supported at the federal level, with many ports across the country competing heavily for federal budget allocations for dredging. (Workboat Staff, 2011)

In 2011, fourteen waterways were dredged to keep shipping channels open in the Detroit District of the U.S. Army Corps of Engineers (which includes Lake Huron, Lake Superior, and Lake Michigan ports) ranging in costs from \$226,000 to \$2.8 million. With 94 harbors and several major waterways in the District, there is almost always a backlog for dredging projects.

GREAT LAKES SHIPPING

Figure 25 demonstrates the shipping routes in and out of various Great Lakes ports. Limestone is a common export of northern Michigan ports. Other ports in the Upper Peninsula and Lake Superior export iron ore. Coal is imported from points east to Chicago, Milwaukee and Duluth and, in turn, grain is exported out of these ports to the St. Lawrence Seaway and around the world.



Figure 25 – Major Shipping Routes of the Great Lakes
 Source: US Army Corps of Engineers



Figure 26 – LaFarge Cargo Ship Alpena

Source: www.Boatnerd.com

The depth that a shipping channel needs to be dredged will be determined by the capacity draft depth of ships that need to use the particular dock. Ship draft depth is the vertical distance from the waterline to the bottom of the boat, and depends on the type of ship and amount of cargo that a ship is hauling. Glass bottom and recreational boats typically do not have a draft of more than a

few feet. A large ferry holding 140 cars has a draft of around 13 feet. The ship *Alpena* is a typical cement cargo ship used by LaFarge. This ship can haul a maximum capacity of 19,150 tons of cement, but would have a draft of 25 feet 8 inches at full capacity. This is too deep for the LaFarge Shipping channel, and so the ship would not be able to be loaded to its maximum capacity in Alpena.

UTILITIES

An inventory of a community's and port's available utilities is important because these services can be used as a tool to attract and encourage development in the port area. An assessment of utilities will indicate whether expansion or improvement is needed in order to increase activity. It will also indicate if these utilities can be used as leverage to encourage development from new investors or other parties. At this time the Ports of Cheboygan, Rogers City and Alpena have adequate utility service to support existing port operations and new developments. Electric and natural gas systems are interconnected to larger networks. Water and sewer systems are overseen by the cities and provide some service to surrounding townships. Cable internet service is currently available within the communities of Cheboygan, Rogers City and Alpena through Charter Communications, with DSL availability in some of the outlying areas through multiple service providers.

PUBLIC WATER SUPPLY

The **City of Cheboygan** water department maintains approximately 49 miles of distribution piping, four production wells and one 500,000 gallon water storage tower. The average daily production is about 910,000 gallons. There are roughly 2,000 residential and commercial billing accounts, including some accounts the department serves outside the City limits via established intergovernmental agreements. The City's water source is groundwater, which is disinfected before distribution.

The **City of Rogers City** supplies water from three groundwater wells with an elevated water tower for storage. The water is disinfected prior to distribution. The system serves all developed areas of the City. Operations and maintenance are completed by City staff.

The Alpena public water system serves the **City of Alpena** and the Township of Alpena. Thunder Bay is the water source, with a water treatment plant located on the lakeshore south of downtown. Operation of the facilities is contracted out to Earth Tech Operation Services, Inc. As of the last Comprehensive Plan for Alpena, there is a capacity of 6 million gallons per day and an average use of 2.1 million gallons per day.

MUNICIPAL WASTEWATER SYSTEM

The **City of Cheboygan** wastewater department maintains about 40 miles of piping, six lift stations, and the wastewater treatment facility. It provides service to about 2,000

residential and commercial accounts. The treatment facility treats an average of approximately 2 million gallons per day. The plant is rated for an average of 2.5 million gallons per day, and has a peak capacity of 5 million gallons per day during wet weather conditions. During heavy rain, a 1.3 million gallon flow equalization basin holds overflow until it can be treated when the flow returns to normal. The facility also treats sewage from a small portion of Inverness Township, and has a contract to maintain their collection system and four main lift stations.

The treatment facility was expanded in 1978 to provide secondary treatment using Rotating Biological Contractors. This discharges effluent, clean enough to meet the requirements of the National Pollution Discharge Elimination System (NPDES) permit. Additionally, the facility is equipped with a full laboratory and staff, which monitor the effluent quality. The water is discharged into the Cheboygan River, about half a mile from the mouth, where it flows into Lake Huron (Water & Wastewater Departments, 2012).

The **City of Rogers City** residents depend on their WWTP to treat raw sewage under stringent state and federal regulations to keep Lake Huron pristine.

The original WWTP and sewage collection system was placed in operation in 1948. It was designed to provide primary treatment, that is, the removal of suspended solids and disinfection of the liquid, to sewage collected from 6000 people living in a 320-acre service area.

As the results of governmental requirements for a higher quality standard for treated sewage, which could not be met by primary treatment, secondary treatment facilities were constructed and placed into operation in 1972. Included were facilities for the removal of phosphates and upgrading primary treatment to secondary treatment using the activated sludge process. These improvements were designed to serve 7000 people located in an 880-acre service area with an average daily flow of one million gallons per day.

The **City of Alpena's** wastewater treatment plant serves both the city and township and includes an industrial pretreatment program. Methane gas from the treatment process is used to power the plant. The plant has a capacity of 5.5 million gallons per day and an average use of 2.3 million gallons per day.

ELECTRICITY

Consumers Energy provides electricity to the City of Cheboygan for residential and commercial purposes. Consumers Energy is a private energy company that supplies

electricity as well as natural gas to many surrounding communities and across the state as well (Consumers Energy, 2012).

Rogers City receives electric service from Consumers Energy. On-site diesel generators are owned by Alpena Power Company and are for emergency use.

The Alpena Power Company provides the electric service for the City of Alpena and the port. Alpena Power Company is a private entity with service agreements with other utility providers in Michigan. Electricity generation is 62.1% coal, 20.9% nuclear, 11.4% gas, and 5.4% renewable (including hydro). Alpena Power Company provides service to 16,500 residential, commercial, and industrial customers. (Alpena Power Co.)

BROADBAND/HIGH SPEED INTERNET

High speed internet is an important economic tool for businesses because it allows buying and selling to occur over the internet, where customers can purchase from home instead of appearing in person for goods. In many rural areas across the country, broadband availability is becoming an increasing problem and a detriment to economic growth when unavailable. Typically there are three types of broadband high-speed internet service.

Satellite internet is one possibility, but it is usually limited in speed and high in price. Satellite based broadband will have speeds usually between 1-3 megabits, and is ideal for areas where cable or DSL broadband may not reach.

DSL broadband is typically the least expensive among high-speed internet alternatives. Speeds range from 1.5 megabits per second to as high as 6 mbps. Many people don't know what exactly DSL is--it is delivered to a business or home via telephone wire, as in the current network of telephone wires that already exists in the community.

Cable internet service comprises the vast majority of broadband service in the United States. Cable internet comes to your home or business through a standard coaxial cable, the same cable that provides you with television channels. Typical speeds are 6-20 mbps, at moderate prices, although cable can reach speeds of up to 105 mbps in some areas. Cable internet service is currently available within the communities of Cheboygan, Rogers City and Alpena through Charter Communications.

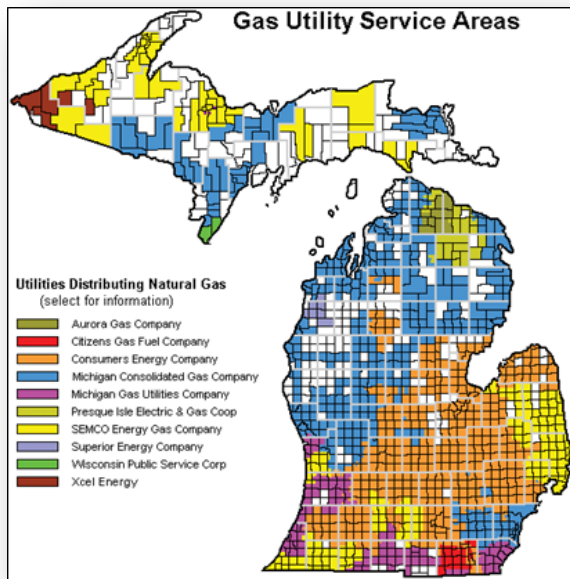


Figure 27 – Gas Utility Service Areas

Source: Michigan Public Service Commission

represents MichCon service to northeastern communities in Iosco, Alcona, Alpena, and Presque Isle counties.

GAS

DTE Energy provides natural gas services for Alpena and Port area through the Michigan Consolidated Gas Company as shown in the maps below. DTE is a private entity.

This Map shows natural gas pipelines in Northern Michigan operated by the Michigan Consolidated Gas Company (Michcon) which is owned by DTE and provides gas utility service to Alpena. These regional lines provide services to local communities through delivery points which transfer the natural gas to local services. The Light Blue line along the lakeshore of the Northeast Lower Peninsula

REGIONAL ROLES

Through the asset inventory process, the MSU Practicum Team completed a SWOT analysis and identified the following strengths, weaknesses, opportunities and threats in regards to the ports:

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none"> • Location – directly accessible to 3 of the 5 Great Lakes: Huron, Michigan, Superior • Location – safe harbors from storms • Recreation – access to trails, biking, snowmobiling and tourism • Year-round festivals and cultural opportunities • Shipwrecks and tourism of Thunder Bay • Public recreation facilities along waterfronts • Weather - multiple recreation opportunities for all seasons • Proximity to downtowns & unique shops • Natural environment and surroundings • Multiple ports and marinas • Public transportation • Infrastructure/Utility availability within Cities • Reasonable proximity to regional airports; multiple private airports available for public use • Small, tight-knit communities • Direct boating access to rivers – (<i>Cheboygan and Alpena</i>) • NOAA Maritime Center (<i>Alpena</i>) • Existing ferry service (<i>Cheboygan</i>) • Access to rail (<i>Alpena</i>) • High Wire Corridor (<i>Rogers City</i>) 	<ul style="list-style-type: none"> • Promote tourism, and recreation in the area – trails, fishing, boating, US 23 Heritage Route, cultural opportunities, etc. • Ferry and cruise ships services • Broadband service expansion • Establish a Port Authority – individually/ collectively • Sharing of resources within the region • Diversity of industry • Available land for development and expansion • Offshore wind power generation • Dredging • Expansion of the riverfront to increase appeal to visitors (<i>Alpena and Cheboygan</i>) • Expand/improve Port of Calcite on Lake Huron and improve pedestrian access to waterfront to increase appeal (<i>Rogers City</i>) • Widening the turning basin (<i>Cheboygan</i>)
WEAKNESSES	THREATS
<ul style="list-style-type: none"> • Water depth • Width of channel • Demographics – declining and aging population • Aesthetics of the waterfront • Lack of rail transportation (<i>Cheboygan and Rogers City</i>) • Rural location without direct freeway access • Lack of diversity in commercial/ industrial sector • No regular public transportation • Limited flights from regional airports • Lack of a unified port authority to oversee port activity • Lack of exports from major industry (<i>Cheboygan</i>) • Lack of identify for individual communities and the region • Lack of slips for large recreational yachts (<i>Cheboygan, Rogers City</i>) 	<ul style="list-style-type: none"> • Perception of unfair competition between communities • Surrounding states with less regulations than Michigan • Heavy competition from surrounding Great Lakes’ ports • Receding water depths • Limited federal funds available for dredging projects • Aging and declining population • Recession has hurt tourism and vacation real estate market • High unemployment rates and need for skilled labor for new industry • Weather – heavy snow, wind and storm conditions can cause power outages and interrupt port traffic • Limited life span (50-75 years) of LaFarge quarry (<i>Alpena, but will have regional impact</i>)

RECOMMENDATIONS & STRATEGIES

The following recommendations and strategies were developed through meetings with the Regional Port Collaborative Group. It is important to note that these recommendations and strategies are focused on regional opportunities and collaboration between these communities. It is understood that the individual communities will pursue initiatives specific to them; however, it is the purpose of this report to focus on the regional opportunities as determined by the Port Collaborative Group. Through these discussions, the representatives communicated that successes in their individual communities benefit the region as a whole and their willingness to collaborate will only have positive results for these northeastern Michigan communities.

Create a Regional Port Collaborative Group

Short-Term

Representatives from the three port communities of Cheboygan, Rogers City and Alpena determined that regular communication is essential. To that end, these representatives are scheduling a tour of each other's port facilities to familiarize themselves with the assets available and thus provide potential opportunities for each other. They have also suggested that representatives from the private sector be included in this group for their invaluable insight regarding potential business opportunities and needs.

Long-Term

In the long term, this group will continue to meet on a regularly-scheduled basis to share information, resources and regional opportunities. In addition, they will work on maintaining a common voice on public policy regarding ports as they recognize they are stronger collectively rather than individually. Individual members of the regional group are also representatives on the Michigan Port Collaborative and will promote the needs of the northeast Michigan region at that level. An increased participation at this state level is highly recommended.

Tourism and Marketing

Short-Term

Each community has several opportunities that could be expanded upon to attract more visitors. The whole region of northeast Michigan would benefit from making tourism a regional focus. By connecting to the already-existing US 23 Heritage Route website as a starting point, the ports have a readily available avenue for some immediate promotion of their tourism-focused amenities. For example, each port community has public and private marina access for recreational boaters and kayakers. Capitalizing on existing regional events, such as the Great Lakes Lighthouse Festival which runs from Tawas to Mackinaw City, will only benefit these communities by increasing traffic and marketing opportunities.

Long-Term

In the long term, the focus is to create a regional brand to promote northeast Michigan as a regional destination, which would benefit all of the communities. By fostering this collaboration, the communities can pool their resources to expand their marketing efforts throughout Michigan and the Midwest. This would include fostering efforts for coastal tourism along the northeastern Michigan shoreline and recruiting potential cruising opportunities with individual boaters as well as ferry and/or cruise companies, making these communities Great Lakes cruise ship destinations.

Thunder Bay National Marine Sanctuary and Underwater Preserve

Short-Term

Although the Maritime Education Center is located in Alpena, the existence of the 448 square mile marine sanctuary provides great opportunities for the ports of Cheboygan, Rogers City and Alpena. Tourism opportunities abound from glass-bottom boat tours to scuba diving. Expanding the availability of these opportunities into the neighboring ports would increase traffic throughout the region.

The sanctuary also provides an invaluable educational resource. It is recommended that a feasibility study, in partnership with Alpena Community College and NOAA, of a degree program in maritime archaeology be completed. There is not only a regional opportunity but a national one to expand on the unique situation of this region's proximity to a national marine sanctuary.

Long-Term

Expanding the sanctuary's boundaries would be of great benefit to these port communities. As discussed above, having a unified port collaborative group and, thus, a unified voice, is important to support the existing efforts in this expansion. This could lead to additional tourism opportunities through boat tours, scuba diving and additional educational opportunities as a possible maritime archaeological hub on a regional and national scale which impact not only Alpena, but the port communities of Rogers City and Cheboygan, as well.

Economic/Business Development

Short-Term and Long-Term

As discussed earlier, it is of great import to involve members of the business community and request their participation with the regional collaborative group. Economic development in any of these communities individually and regionally is only successful with a collaborative partnership between the public and private sector. Nurturing relationships with existing businesses and educating them on the assets of the ports has great potential to reach other markets associated with the region's existing employers. It also allows for a collaboration of resources for a regional marketing and effort focused on industrial and commercial opportunities.

Nurturing these relationships could result in the private sector's investment, in both time and financial means, in the regional port collaborative. These relationships are critical to the economic growth of the ports and future recruitment efforts for port development. The region's largest employers utilizing the ports do business all over the world. This is a prime recruitment opportunity to make connections with their suppliers and/or customers and increase awareness as to what the region's ports have to offer. Additionally, since two of the deep water ports are privately-owned, communication is essential to continue port operations and potential future access agreements.

It is understood that an available workforce is an integral component of the recruiting effort. The port collaborative group needs to communicate with workforce development agencies regarding initiatives specifically in relation to port activities. This is a key example of the critical partnerships required between the public and private sector in economic development.

These relationships should not be limited to the businesses currently utilizing the ports. By educating the regional business/industrial community, there is a potential opportunity

for increasing exporting of product from other manufacturers in the region. The availability of a high-wire corridor from Onaway to Rogers City allows for the shipment of oversized manufactured product that typically would not fit under traditional power lines. This product can then be loaded onto ships out of the Calcite Port. This availability presents an opportunity to increase exports for businesses not traditionally linked to the ports.

SUMMARY

The recommendations and strategies are simply suggestions and are intended to provoke thought and discussion amongst the community representatives. This process intended to provide a fresh dialogue on the roles of the ports in these three northeastern Michigan communities to encourage regional conversation and collaboration. The regional port group has already implemented an initial strategy by collaborating on a familiarity tour of each other's facilities. It is obvious each of these sites face some limitations; however, the opportunities and demonstrated desire for networking and collaboration are sure to result in some success.