



A CASE STUDY

THE CITY OF MANISTIQUE



Michigan Coastal Community Working Waterfronts

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This case study was compiled as part of a set of 11 working waterfront case studies in coastal communities. For more information on the series, please see the Introduction, Value and Context, Waterfront Land Use, Best Practices, and Recommendations and Next Steps sections.

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INTRODUCTION

Many coastal communities have areas known as working waterfronts — waterfront lands, waterfront infrastructure and waterways that are used for water-dependent uses and activities. These uses may include ports, small recreational boat and fishing docks and other types of places or businesses where people use and access the water. Coastal communities' working waterfronts offer economic and cultural value, contribute to a community's identity and are intrinsically tied to a region's natural resources.

A number of factors — such as population change, competing land uses and development pressure, fluctuations in water levels, changes in

fish stocks and regulations, aging and inadequate infrastructure, decline in waterfront industry and economic recession — threaten the viability of water-dependent businesses and access to the public trust waters. Left unchecked, these threats can result in the slow loss of working waterfronts and permanent conversion of waterfront property to non-water-dependent uses.

Active waterfront planning and the sharing and implementation of tools, resources and strategies for maintaining and protecting working waterfronts can ensure access for water-dependent uses and activities, as well as preserve options for future waterfront uses.

This case study:

- Characterizes one of many working waterfronts found throughout Michigan's diverse coastal communities.
- Identifies existing waterfront amenities, waterfront history, waterfront zoning and land area occupied by water-related uses.
- Highlights examples of waterfront challenges, threats and opportunities as well as tools and strategies for maintaining the working waterfront.

SUMMARY

Manistique, Michigan developed in the late 1800s as a lumber and fishing community at the mouth of the Manistique River on Lake Michigan. The community was accessible by steamship before there were roads into the city. Manistique has approximately 8 miles of frontage on the Manistique River and Lake Michigan.

The Manistique Harbor is a deep draft commercial and recreational harbor that supports commercial fishing, a tug barge company that provides fuel to Beaver Island, private and public marinas. The harbor is an important harbor of refuge that provides the only vessel launching facility within a 80 mile radius on the Upper Peninsula shoreline capable of supporting law enforcement and search and rescue vessels.

Manistique's location at the mouth of an extensive watershed in the forested Upper Peninsula made it a significant lumber port. In the 1920's a dam was constructed on the Manistique River to provide more water for the city's papermill, Manistique Papers Inc., a major employer from the 1920's-2011. After a brief closure, the mill reopened in 2012 under new ownership.

Land use adjacent to the Manistique River and Lake Michigan consists of a mix of residential (20%), commercial (19%), industrial (25%) and mixed uses (12%) as well as open space (24%). Land use within a 1000-foot buffer of the waterfront consists of residential (30%), commercial (28%), industrial (21%), mixed use (11%) and open space (10%).

The paper mill property comprises most of the industrial uses along the Manistique River near downtown Manistique. Most of the waterfront is city owned and the city continues to acquire rights of way along the Manistique River and to acquire available waterfront property. Much of the waterfront property along lake Michigan was given to the city by a private landowner. The city has utilized trust fund and foundation grants to purchase and improve additional waterfront land.

The city has an extensive non-motorized transportation network. Manistique's marina is connected to the city's downtown by a walking path. Numerous trails link the waterfront boardwalk with residential and commercial districts and lighthouses, parks and other waterfront amenities. Trails, waterfront parks and accessible

floating fishing docks provide access to Lake Michigan and the Manistique River within the city.

Manistique's two mile long boardwalk is a popular destination for residents and visitors. Surrounding natural resources attract tourists to the region.

Among the challenges the community faces with respect to its working waterfront include population change, economy and the physical constraints of the marina. The population of Manistique has declined by over 40 percent since its peak in the 1940s and 13 percent since 2000. The paper mill is a primary employer; changes in the paper industry or a decline in the viability of the mill and/or port would have serious implications for the community.

Best practices for maintaining access to the waterfront for the public and water-dependent uses include acquiring waterfront property, preserving open space along the waterfront and establishing connectivity and accessibility to the marina, downtown and Lake Michigan and Manistique River waterfront through a trail system and boardwalk.



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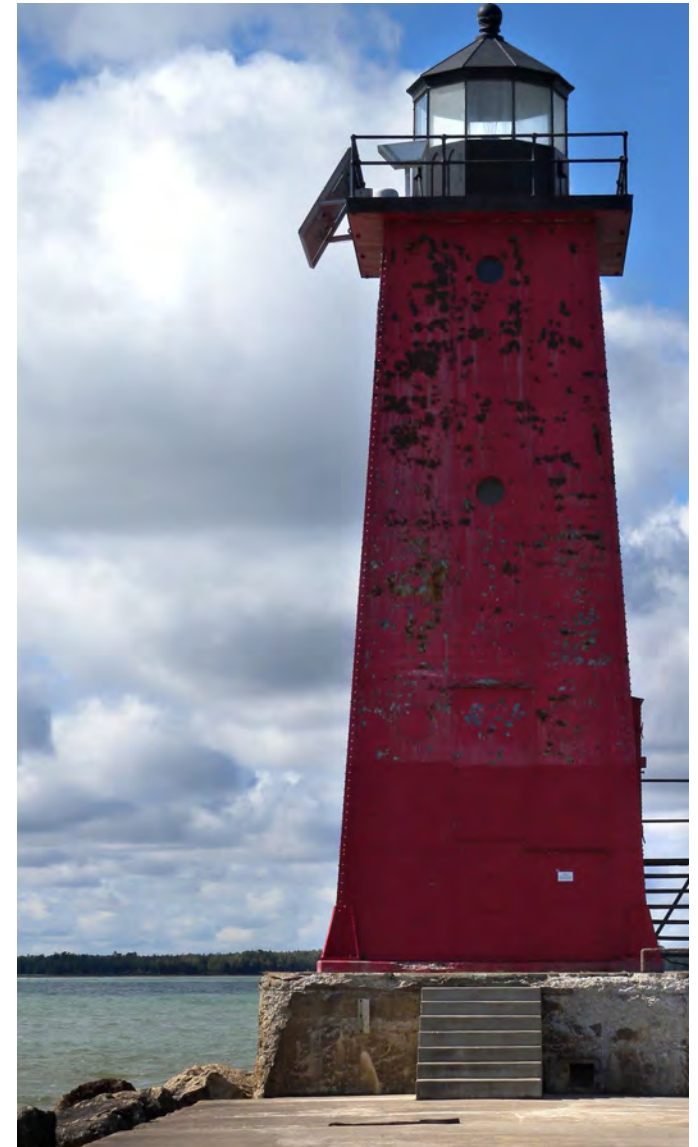
MANISTIQUE, MI



FIGURE 1. STATE OF MICHIGAN AND MANISTIQUE COUNTY (LEFT) AND AERIAL IMAGE OF THE CITY OF MANISTIQUE WITH LAKE MICHIGAN AND THE MANISTIQUE RIVER.

CONTEXT

Jurisdiction / Government	City
Region	Upper Peninsula
County	Schoolcraft
Land Area	2038 acres / 3.2 square miles
Watershed / Subwatershed	Lake Michigan Basin / Manistique River Watershed
Dominant Land Use of subwatershed	Forest
Adjacent Bodies of Water	Lake Michigan, Manistique River
Type of Water Body	Great Lake, River
Percent of Land Area within the CZM	29%
Population (2010)	3,097
Percent of County's Population	37%
Percent of County's Land Area	<1%
Urban / Suburban / Rural	Urban
Federally Authorized Harbors/Projects	Manistique Harbor
Type of Port	Commercial, Recreational



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COMMUNITY PROFILE

POPULATION

- The population of Manistique declined 14 percent from 2000 to 2010. In 2010, the city's population density was 927 persons/square mile.
- The population of Schoolcraft County decreased by 5 percent from 2000 to 2010.
- The median age in Manistique increased from 38 in 2000 to 43 in 2010.

EDUCATION

- Of the city's population age 25 and older (72% of the city's total population), 87 percent have a high school degree or higher and 13 percent have a bachelor's degree or higher.
- Of the county's population age 25 and older (75% of the county's total population), 87 percent have a high school degree or higher and 13 percent have a bachelors degree or higher.

INCOME

- The median household income between 2006 and 2010 in the City of Manistee was \$29,375, compared to the median household income in Schoolcraft County of \$36,925.

EMPLOYMENT

Of the city's population over age 16:

- 50 percent are in the labor force and employed and 8 percent are unemployed.
- 61 percent are employed in the top 4 (of 13 total) industries classified in the American Community Survey: educational services and health care and social assistance (25%); arts, entertainment and recreation and accommodation and food services (16%); finance and insurance, and real estate and rental and leasing (12%); and manufacturing (8%).
- 33 percent are employed in service occupations, 25 percent in management, business, science and arts occupations, 18 percent in sales and office occupations, 13 percent in production, transportation and material moving occupations and 11 percent in natural resources, construction and maintenance occupations.

SCHOOLCRAFT COUNTY GREAT LAKES JOBS SNAPSHOT (NOAA)

- In 2009, Great Lakes related jobs accounted for 5 percent of total jobs in Schoolcraft County, a decrease of 35 percent since 2005.
- Great Lakes related jobs provide employment for 140 people, provide \$1 million in wages and provide \$3 million in goods and services.

HOUSING

- From 2000 to 2010, the total number of housing units in Manistique increased by 0.4 percent and the percent occupancy of housing units increased by 5 percent.
- Owner occupied housing units decreased by 7 percent and renter occupied housing units remained constant from 2000 to 2010.
- Residential construction in Schoolcraft County decreased from 369 buildings in 1990 to 118 buildings in 2000 and then to 38 buildings in 2010.

COMMUNITY OVERVIEW

The city of Manistique is located on the south side of the Upper Peninsula on Lake Michigan. The city is approximately 90 miles west of the Mackinac Bridge and 45 miles south of Munising. Manistique is the county seat of and only incorporated city in Schoolcraft County. The city is characterized by a small downtown core, industrial development along the river and surrounding residential development.

The city has a 2-mile long boardwalk and trail system stretching along Lake Michigan on the east side of the Manistique River, as well as a number of other trails throughout the city. Most of the Lake Michigan frontage is owned by the city. Manistique's surrounding natural resources, lighthouses and antiques make it a popular destination and tourism center in the Upper Peninsula.

Nearby natural resources and attractions include 880,000 acre Hiawatha National Forest, which receives 1.5 million visitors a year and provides access to undeveloped shoreline along Lake Michigan, as well as Lake Superior and Lake Huron, the Rainey Wildlife area and the Seney National Wildlife Refuge. Big Spring "Kitch-iti-kipi", located 12 miles from Manistique at Palms Book State Park, is the largest spring in Michigan. The Thomson Fish Hatchery, located south of Indian Lake just west of Manistique, is the only state hatchery to produce Atlantic Salmon.

In 2011 the Manistique Paper Mill, a major employer that provided jobs for 150 people, closed after 90 years of business in the city. The mill was purchased by a Massachusetts based company and reopened later that year.

Historical uses of the Manistique River, including receiving waste from sawmills, a paper mill, small industries and the municipal waste water treatment plants, contaminated the river. The last 1.7 miles of the Manistique River from the dam to the mouth of the river is a designated Area of Concern that state, federal and local partner currently work to restore.

CAPACITY

The City of Manistique has a city manager/city council form of government. City council consists of the mayor and four council persons. There are five members of the city planning and zoning commission. The city has a Parks and Recreation Department and a five member recreation board. Manistique owns and operates 11 recreational facilities within city limits including the municipal marina, public access site and boat launch and a number of waterfront parks.



View of Lake Michigan and lighthouse from harbor. *Elizabeth Durfee*



Lake Michigan shoreline and boardwalk. *Elizabeth Durfee*



Fishermen in the Manistee Harbor. *Elizabeth Durfee*

WATERFRONT HISTORY

Manistique was incorporated as village in 1885 and as a city in 1901. The city's population peaked at around 5,400 people in the 1940s.

Manistique was accessible via steamship before roads to the city were constructed. In the early 1900s the Ann Arbor Car Ferry served the port via Frankfort. As a result of this service, numerous small fishing resorts were developed on nearby inland lakes to accommodate visitors traveling from Lower Michigan.

Manistique's harbor breakwater was constructed in 1913 and the East Breakwater Light was first lit in 1917. In addition to being a significant lumber port, Manistique was also a significant commercial fishing port. Manistique's ice-free harbor and proximity to markets made it an apt site for shipping. The Manistique River's extensive watershed made it an important logging river. The city originally served as a lumber transfer town where timber was sorted and shipped after floating down the Manistique River. In 1887 the Soo Line railroad that ran

between Minneapolis and Sault Ste. Marie, Ontario built a station in Manistique. Soon after the Chicago Lumber Company, which constructed housing and created a number of subsidiary industries, was formed in the city. Local sawmills produced 90 million board feet of white pine board annually. Manistique was the last port of call of the Rouse Simmons known as the "Christmas Tree Ship", which left Thompson Harbor in 1912 and sunk in a storm while delivering trees to Chicago.

Over the last century, the physical characteristics of the lower Manistique River near the mouth of the river have been altered. In the late 1800s, artificial islands were constructed in the river to serve as docks. In the 1920s, the dam and Manistique River Flume were constructed to provide more water for the city's paper mill, Manistique Papers Inc. (MPI), a major employer from the 1920s through 2011. The Siphon Bridge constructed over the Manistique River and Flume is now listed on the National Historic Registrar.



Commercial fishing boat. Elizabeth Durfee



Map of Manistique boardwalk. Elizabeth Durfee



Manistique boardwalk. Elizabeth Durfee

WATERFRONT SUMMARY

Land use along Lake Michigan to the west of the Manistique River consists of mixed-use, open space and single family residential uses. To the east of the Manistique River, waterfront land use is characterized by public open space. A mix of zoning districts borders the Manistique River. Most of the downtown riverfront, excluding the paper mill property, is owned by the city.

Manistique Harbor is a deep draft commercial and recreational harbor. Commercial operations include two commercial fishing operations, a tug barge company that provides fuels to Beaver Island and a private marina. The harbor also supports a municipal marina and boating access site. The Manistique Harbor is a Harbor of Refuge and is the only vessel launching facility within an 80 mile radius on the Upper Peninsula shoreline capable of supporting law enforcement and search and rescue vessels. Commercial fishing, commodity service to Beaver Island and recreational boating facilities would be affected if the harbor were not maintained.

The Manistique Marina has 23 slips including transient slips, broadside dockage, seasonal slips and amenities including electrical and water hookups, park and picnic areas. The marina is the only port that remains open year round. The marina is connected to the nearby downtown via a walkway and is served by public transportation. There is one private marina located in Manistique, the Northern Lights Marina. A boat launch and fish cleaning station are located at the Manistique River Mouth Public Access Site along the west side of the Manistique River.

Manistique has a number of waterfront parks along Lake Michigan and the Manistique River including Lakeview Park and Boardwalk Beach, East Lake Front Park Pioneer Park and Intake Park. The waterfront park features a two-mile wood and cement boardwalk with bridges, benches, as well as observation and interpretation areas. The city has two lighthouses, the Manistique East Breakwater Light, which is accessible from the Lakeview Park boardwalk, and a navigational beacon called the Red Lighthouse.

The harbor supports charter and commercial fishing. In 2013, the Inland Seas Cruise ship is scheduled to make port in Manistique on its international cruise from Toronto to Duluth. Waterfront recreation consists of fishing, boating, walking and viewing wildlife. Canoe and kayak rentals are available at the city's Chamber of Commerce. Handicapped accessible floating fishing piers are available for fishing for people without boats.



Port of Manistique fish cleaning station. *Elizabeth Durfee*



Manistique marina. *Elizabeth Durfee*

CHALLENGES AND ACTIONS

Faced with increasing materials costs and a poor economy, Manistique Papers, Inc. (MPI) - a 90 year old industry and major employer in the community - filed for bankruptcy and sought a new buyer. MPI worked with mBank and the Michigan Economic Development Corporation who purchased the company's existing loans and allowed the business to remain operational while reorganizing. In 2012, Watermill Group of Lexington, Massachusetts became the new owner. Although the city has held on to its paper mill industry, Manistique continues to transition and adapt to changing economy and associated opportunities.



View of Lake Michigan from pier. *Elizabeth Durfee*



Manistique lighthouse. *Elizabeth Durfee*



Manistique marina. *Elizabeth Durfee*

ZONING ORDINANCE

ZONING DISTRICT	INTENT OF DISTRICT	PERMITTED USE*	SPECIAL USE*
Single Family Residential	Intended for the establishment and preservation of quiet neighborhoods	Day use parks and recreation facilities	Boat house
Multiple-Family Residential	Intended for the establishment and preservation of single-, two- and multiple-family dwellings	Day use parks and recreation facilities	Boat house
Restricted Business District	Intended to provide for commercial uses appropriate for high-density development	Day use parks and recreational facilities	
General Business	Intended to provide for a more diversified, lower density commercial district	Day use parks and recreational facilities	Overnight use parks and recreation facilities
Mixed Use	Intended to provide for the establishment and preservation of traditional neighborhoods containing a mix of residential and compatible commercial uses	Day use parks and recreational facilities	Boat house, overnight use parks and recreation facilities
Industrial	Intended for manufacturing, assembling, fabricating and processing businesses, storage, mineral extraction and other commercial activities	Day use parks and recreational facilities, Freight handling facilities	
Open Space/Public Area	Intended to encompass publicly-owned lands that are to be maintained as open space and/or recreational facilities and to provide residents and visitors views of and access to Lake Michigan shoreline	Accessory structures normally associated with parks and recreational facilities, such as restrooms, interpretive signs, boardwalks, fishing or viewing piers, pavilions, shelters, picnic tables	Overnight use parks and recreation facilities
Open Space/Services	Intended to provide for recreational areas and other public services on publicly-owned lands, with the opportunity for certain types of commercial use	Day use parks and recreational facilities	Accessory structures normally associated with parks and recreational facilities, such as restrooms, interpretive signs, boardwalks, fishing or viewing piers, pavilions, shelters, picnic tables, etc

*includes conditional uses

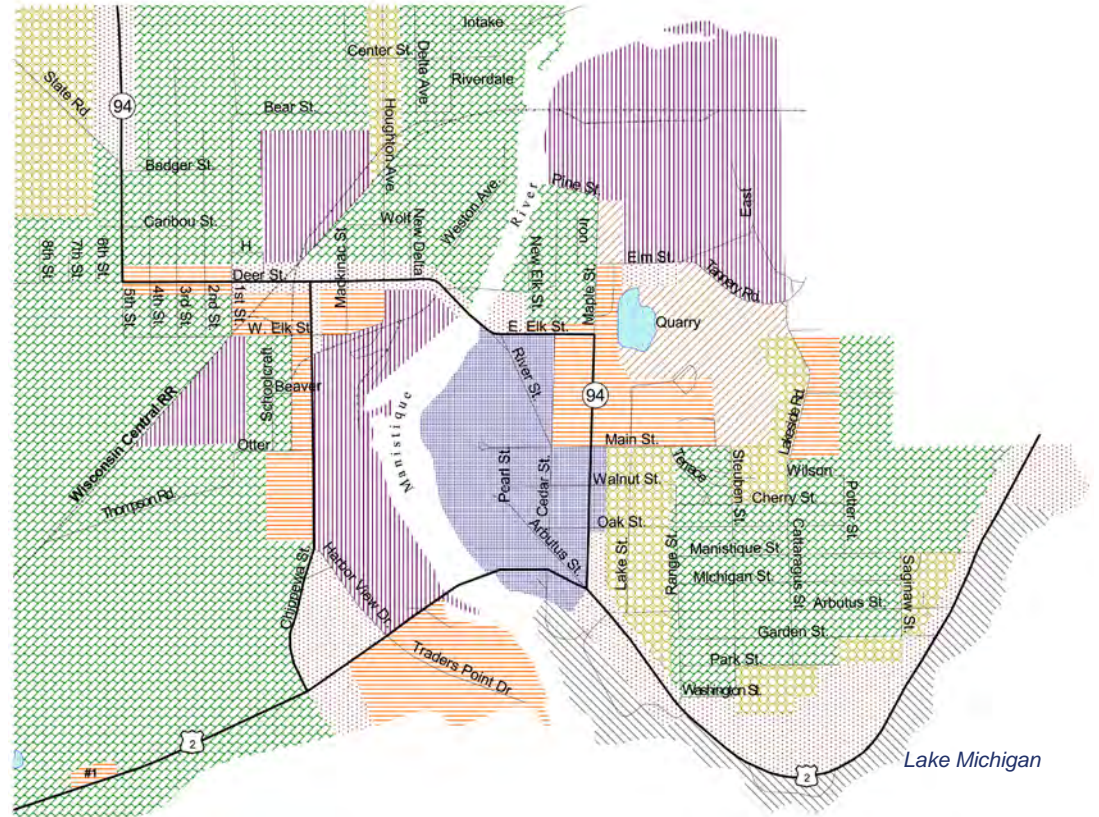
TABLE 1. INTENT, PERMITTED USES AND SPECIAL USES OF ZONING DISTRICTS THAT ACCOMMODATE WATER-DEPENDENT USES AND/OR PUBLIC ACCESS.

ZONING

The city of Manistique has eight zoning districts. Each zoning district falls within a 1000-foot buffer of Lake Michigan and the Manistique River. Figure 4 displays zoning within this 1000-foot buffer of Lake Michigan and the Manistique River. Six of the city's zoning districts about these bodies of water.

Many of the city's zoning districts permit uses such as piers, boathouses and parks. The Open Space Public Area and Open Space Services Area districts permit parks and recreational facilities and structures such as fishing piers and boardwalks. Both the mixed use and residential districts permit boathouses. The industrial district permits freight handling. Day use parks and recreational facilities are permitted in all zoning districts in the city (Table 1).

The city's marina is located on the east side of the Manistique River in the Open Space/Public Access zoning district. Boat launches and a fish cleaning station are located across the river in the mixed use zoning district.



City of Manistique

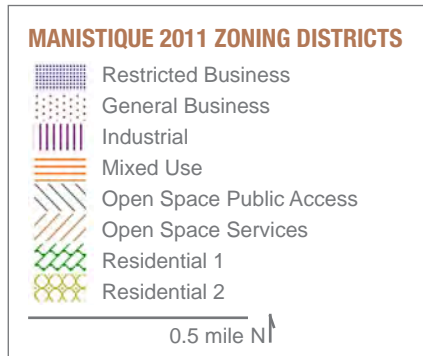


FIGURE 2. CITY OF MANISTIQUE 2011 ZONING DISTRICTS.

ZONING ADJACENT TO WATERFRONT

There is a balanced mix of uses along the city's waterfront. The bar graph below displays the percent of the approximately 8 mile shoreline by generalized zoning category. Land use with frontage along Lake Michigan and/or the Manistique River consists of 25 percent industrial, 24 percent open space, 19 percent commercial, 20 percent residential and 12 percent mixed use.

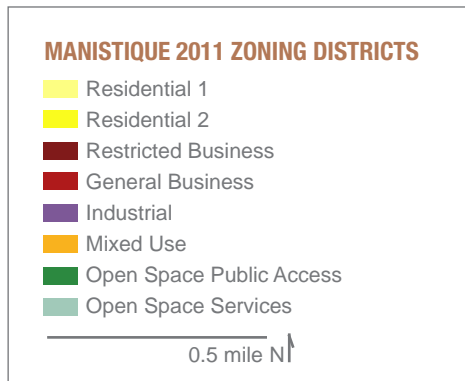
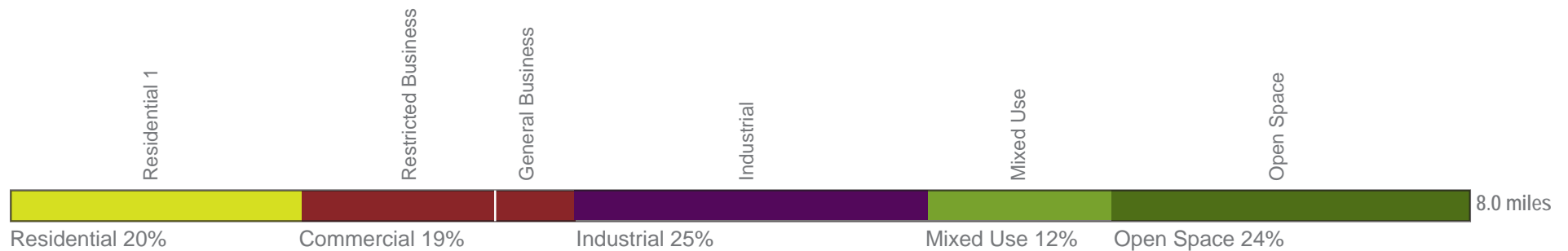
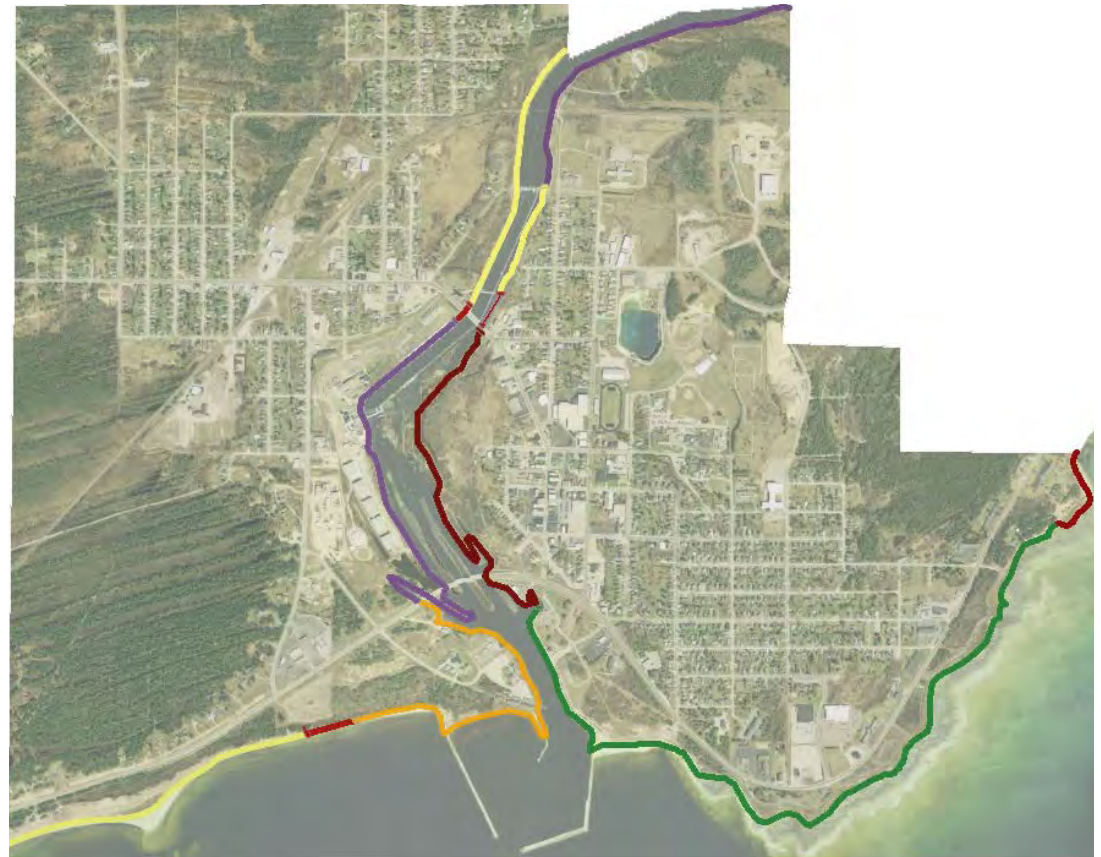


FIGURE 3. MAP OF ZONING ADJACENT TO WATERFRONT (RIGHT) AND FRONTAGE BY ZONING CATEGORY (BELOW).



ZONING WITHIN 1000 FEET OF WATERFRONT

Land use within a 1000-foot buffer of these bodies of water consists of 30 percent residential, 24 percent commercial, 21 percent industrial and 10 percent open space use (Figure 4).

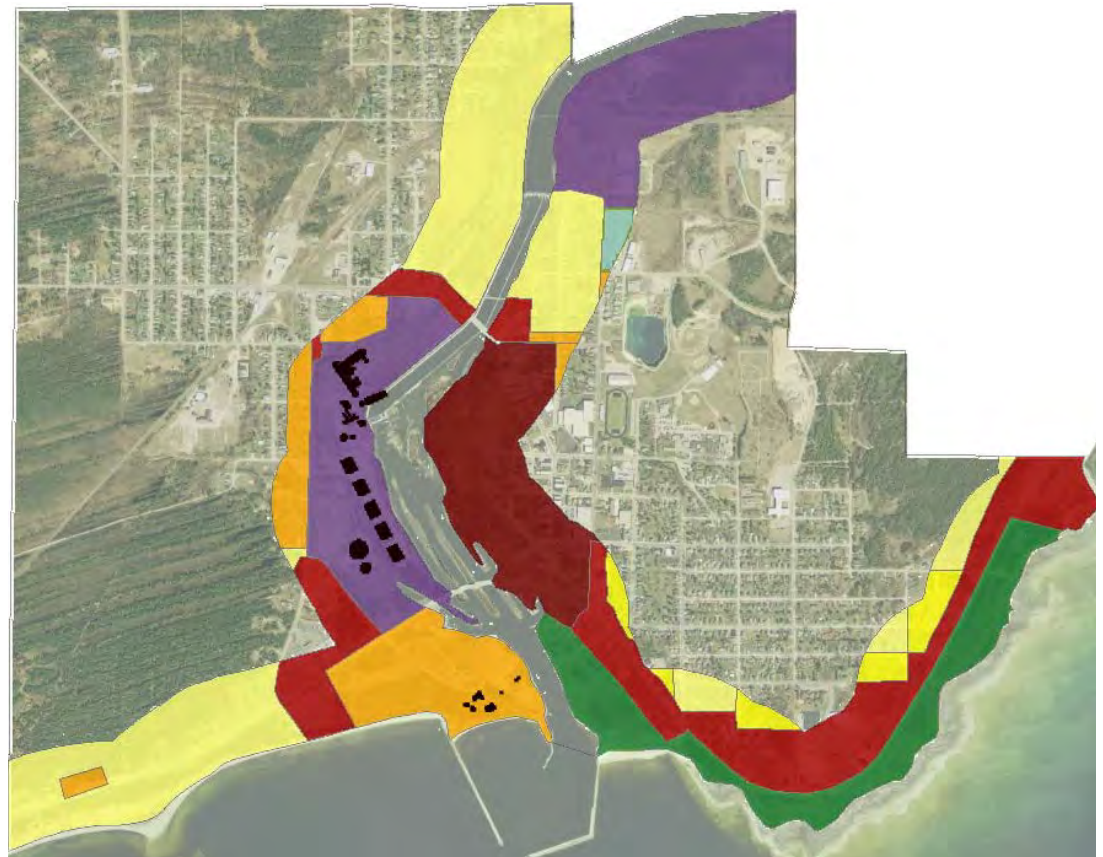
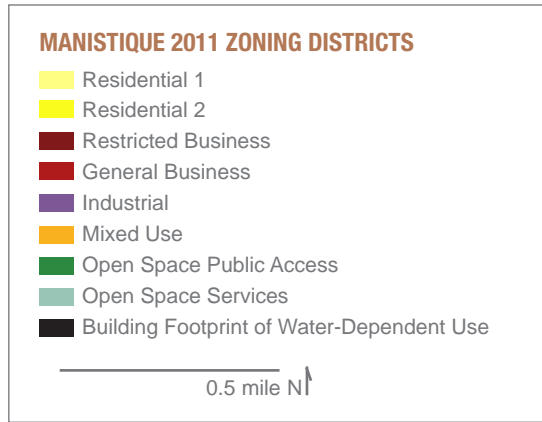
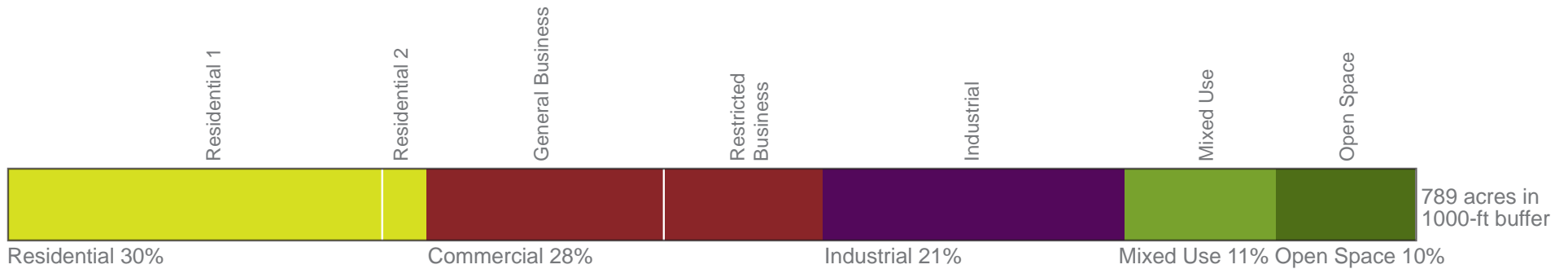


FIGURE 4. MAP OF ZONING AND LOCATION OF WATER-DEPENDENT USES WITHIN A 1000-FOOT BUFFER OF WATER BODIES (RIGHT) AND WATERFRONT LAND AREA BY ZONING CATEGORY (BELOW).



PARCEL CLASSIFICATION AND INVENTORY

Figure 6 displays aerial imagery with waterfront infrastructure within a 1000-foot boundary of Lake Michigan and the Manistique River that have identified water related uses and highlights parks and beaches that provide public access.



FIGURE 5. WATER-DEPENDENT AND ENHANCED USES, DOCKS, WATERFRONT PARKS ALONG THE WATERFRONT AND WITHIN 1000 FEET OF WATER BODIES.

WORKING WATERFRONT SWOT ANALYSIS

There are a number of factors that influence a community's ability to maintain a robust working waterfront. The strengths, weaknesses, opportunities and threats (SWOT) analysis below (Table 2) provides examples of the challenges and opportunities associated with maintaining Manistique's waterfront as a place that provides public access and supports and is well integrated within the community from a planning and physical perspective. A SWAT analysis is a strategic planning tool with four elements: strengths, weaknesses, opportunities

and threats. The analysis identifies the positive, negative, internal and external factors that influence an individual, business, organization or place's ability to achieve an objective. For example, internal factors may include human, physical or financial resources and past activities or programs. External factors may include future trends, the economy, or the physical environment.

<p>STRENGTHS</p> <ul style="list-style-type: none"> ■ Deep draft, commercial harbor ■ Most of the waterfront is city owned ■ Natural areas along Lake Michigan ■ Boardwalk ■ Floating docks allow people without a boat to get out to the middle of the Manistique River to fish ■ Transportation plan with comprehensive trail system along Lake Michigan and throughout the city, plans to increase connectivity with additional trails ■ Commercial fisher ■ Harbor of Refuge ■ Municipal marina connected to downtown via a walking path ■ Public boat launches and fish cleaning station ■ Proximity to parks, wildlife refuge, preserved land 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> ■ Local economy lacks diversity ■ Manistique River lacks visual and physical public access above the Route 2 bridge ■ Marina has low capacity and cannot currently accommodate large vessels
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> ■ Expand marina to accommodate larger vessels, construction of a broadside dock ■ Opportunity to accommodate cruise ships ■ City plans to acquire additional waterfront property along Lake Michigan for campground and park as well as to acquire right-of-way along the Manistique River ■ Removing additional Beneficial Use Impairments ■ City plans to install a kayak ramp 	<p>THREATS</p> <ul style="list-style-type: none"> ■ Legacy contamination from paper mills, Manistique River is an Area of Concern ■ Declining population ■ Closure of paper mill would result in significant unemployment

TABLE 2. STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS RELATED TO MAINTAINING MANISTIQUE'S WORKING WATERFRONT.

TOOLS, STRATEGIES AND BEST PRACTICE FOR MAINTAINING WORKING WATERFRONTS

WATERFRONT PROPERTY ACQUISITION

Use land acquisition as a tool to utilize to maintain and expand visual and physical access to the waterfront, preserve open space and help ensure that options for future uses along the waterfront are preserved, well planned and meet future community needs. Funding sources for acquisition or the installation of amenities such as floating docks and trails along the waterfront may include the DNR Trust Fund, Great Lakes Fisheries Trust Fund, and the Robert Wood Johnson Foundation, for example. Private land donations are an additional way the community may acquire waterfront property.

CONNECTIVITY AND ACCESSIBILITY

Develop connections to boat launches, beaches, marinas, significant waterfront viewing areas and key features and open spaces through a multimodal transportation network that includes water trails, pedestrian paths, regional trails and public transit. A unified community-based open space system that provides scenic access throughout the city offers opportunities for recreation and personal interaction.



Lake Michigan. Elizabeth Durfee



Natural area and boardwalk. Elizabeth Durfee



Manistique fish cleaning station. Elizabeth Durfee

GUIDING PRINCIPLES

MANAGING WATERFRONTS AND WATER-DEPENDENT USES AS AN IMPORTANT ELEMENT OF A SUSTAINABLE COASTAL COMMUNITY

PROCESS-BASED

- Engage diverse stakeholders and local, regional and state partners in waterfront planning.
- Integrate waterfront planning with local and regional master and comprehensive planning.
- Incorporate adaptation planning into waterfront planning.
- Articulate the community's vision for future of the waterfront.

OUTCOME-BASED

- Protect the natural resources that working waterfronts uses are intrinsically tied to and dependent upon.
- Maximize the public benefit of working waterfronts through visual and physical access and amenities.
- Permit compatible mixed uses along the waterfront.
- Emphasize the economic and cultural value of local water-dependent uses.
- Preserve visual and physical access to water resources.
- Balance waterfront land uses to meet the needs of residents, visitors, water-dependent uses and ecological communities.
- Increase resiliency by promoting diverse and flexible water-dependent uses.

CITY OF MANISTIQUE

- ✓+ Integrate waterfront planning with comprehensive and multi-modal transportation plans.
- ✓+ Preserve visual and physical access to water resources.
- ✓+ Balance waterfront land uses meet the needs of residents, visitors and water-dependent uses.

How does your community stand up?

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