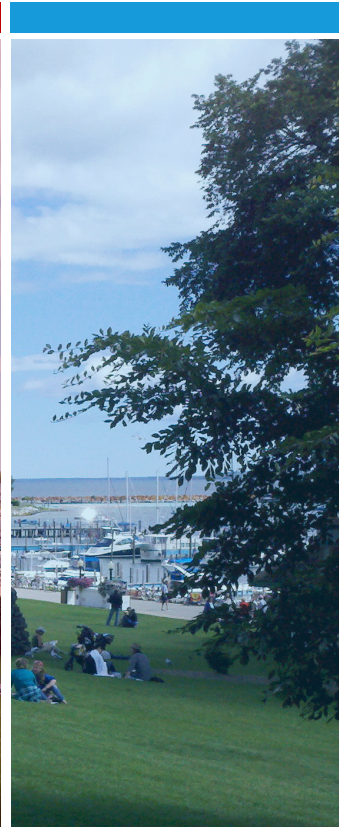

City of
Mackinac Island
Mackinac County, Michigan

Master Plan 2018

Adopted October 9, 2018



MACKINAC ISLAND

PLANNING COMMISSION ★ HISTORIC DISTRICT COMMISSION ★ BUILDING DEPARTMENT

RESOLUTION OF ADOPTION CITY OF MACKINAC ISLAND MASTER PLAN

The following Resolution was offered by Commissioner Myers and seconded by Commissioner Dufina:

WHEREAS, the City of Mackinac Island, Mackinac County, Michigan established a Planning Commission under State of Michigan Public Act 33 of 2008, as amended (Michigan Planning Enabling Act); and,

WHEREAS, the Planning Commission is required by Section 31 of the Act to make and adopt a basic plan as a guide for the development of the City; and,

WHEREAS, the Planning Commission has worked with the consultants at Wade Trim to oversee a planning process that included opportunities for public input as well as investigations and surveys of existing resources; and,

WHEREAS, a draft plan was prepared by the Planning Commission and presented to the City Council in accordance with Section 41, (1) of Public Act 33, and the City Council approved the distribution of the draft plan for review and comment pursuant to Section 41, (2) of said Act; and,

WHEREAS, after expiration of a 63-day review and comment period, the Planning Commission did give notice of a public hearing on the draft plan in accordance with Section 43, (1) of Public Act 33, with such public hearing being held on October 9, 2018;

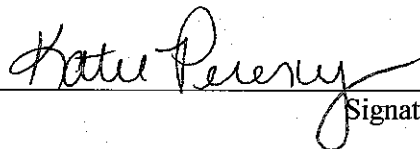
NOW THEREFORE BE IT RESOLVED THAT, the contents of the draft plan, dated June 19, 2018, with revisions as discussed during the October 9, 2018 Planning Commission meeting, is hereby adopted by the City of Mackinac Island Planning Commission in accordance with Section 43, (2) of Public Act 33 by not less than a majority of its membership.

AYES: 5

NAYS: 1

ABSENT: 1

I, Katie Pereny, Secretary of the Mackinac Island Planning Commission, do hereby certify the foregoing to be a true and correct copy of a resolution that was adopted by the Planning Commission at their regular meeting held on October 9, 2018.


Signature

City of Mackinac Island

City Hall, 7358 Market Street, P.O. Box 455, Mackinac Island, MI 49757-0455

RESOLUTION OF CONCURRENCE CITY OF MACKINAC ISLAND MASTER PLAN

The following Resolution was offered by Council Member Dennis Bradley and seconded by Council Member Annexa Myers:

WHEREAS, the City of Mackinac Island, Mackinac County, Michigan established a Planning Commission under State of Michigan Public Act 33 of 2008, as amended (Michigan Planning Enabling Act); and,

WHEREAS, the Planning Commission is required by Section 31 of the Act to make and adopt a basic plan as a guide for the development of the City; and,

WHEREAS, the Planning Commission has worked with the consultants at Wade Trim to oversee a planning process that included opportunities for public input as well as investigations and surveys of existing resources; and,

WHEREAS, a draft plan was prepared by the Planning Commission and presented to the City Council in accordance with Section 41, (1) of Public Act 33, and the City Council approved the distribution of the draft plan for review and comment pursuant to Section 41, (2) of said Act; and,

WHEREAS, after expiration of a 63-day review and comment period, the Planning Commission did give notice of a public hearing on the draft plan in accordance with Section 43, (1) of Public Act 33, with such public hearing being held on October 9, 2018; and,

WHEREAS, The Planning Commission did review the proposed plan, consider public comment, and adopt the City of Mackinac Island Master Plan 2018 by resolution on October 9, 2018; and,

WHEREAS, The City Council of Mackinac Island supports the recommendations and proposals contained in the adopted master plan pertinent to the future development of the City;

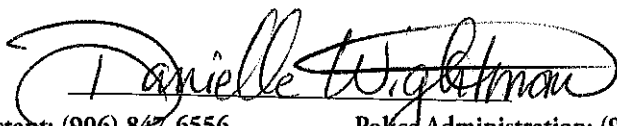
NOW THEREFORE BE IT RESOLVED THAT, The City Council of Mackinac Island does hereby concur with the action of the City Planning Commission by means of the passing of this resolution, hereby adopted this 10 day of October, 2018.

AYES: B. Bailey, D. Bradley, K. Hoppenrath, A. McGreevy, S. Moskwa,
& A. Myers

NAYS: None

ABSENT: None

I, Danielle Wightman City Clerk of Mackinac Island, do hereby certify the foregoing to be a true and correct copy of a resolution that was adopted by the Mackinac Island City Council at their regular meeting held on October 10, 2018.



City Clerk: (906) 847-3702

City Treasurer/Assessor: (906) 847-6002

Mayor's Assistant: (906) 847-6556

Building & Zoning: (906) 847-4035

Fax: (906) 847-6430

Police Administration: (906) 847-3345

Fire Administration: (906) 847-8159

Table of Contents

Chapter 1: Introduction	1
Purpose and Planning Process	2
Location and Regional Context.....	2
History and Significance.....	5
Government/Community Organization	9
Status of Planning and Zoning for the City of Mackinac Island.....	9
 Chapter 2: Demographic and Economic Profile.....	 10
Year-round Population Trends	10
Seasonal and Tourist Population	11
Age Distribution and Racial Composition	14
Households and Disability Status	15
Income, Education and Employment	17
Total Housing Stock and Housing Structure Types	19
Housing Occupancy Characteristics	20
Housing Values and Rent.....	21
Age of Housing Units	24
 Chapter 3: Natural Resources	 25
Climate.....	25
Geology	26
Topography.....	26
Soils.....	28
Water Resources.....	31
Wetlands.....	31
Woodlands and Flora	32
Wildlife and Fish	33
Sites of Environmental Contamination and Concerns.....	34
Surface Water Discharge Permits.....	35
Air Quality	36
 Chapter 4: Existing Land Use	 37
Patterns of Land Ownership.....	37
Existing Land Use Analysis.....	37
 Chapter 5: Community Services, Facilities, and Transportation	 49
Water Distribution and Sewage Collection.....	49
Water System	49
Wastewater	50
Stormwater	51
Solid Waste	51
Other Utilities.....	52
Police, Fire, and Emergency Medical Services	53

School.....	54
Recreation	54
Municipal, State, and Federal Facilities	56
Civic Organizations and Churches.....	57
Transportation	58
Road/Trail Maintenance	59
Airport	60

Chapter 6: Community Goals and Policies62

Public Input.....	62
Foundational Planning Principles.....	73
Goals and Policies Introduced	75
Planning and Community Development	75
History and Culture.....	76
Housing.....	77
Natural Environment, Public Lands and Recreation	78
Transportation	80
Infrastructure and Public Services	81

Chapter 7: Future Land Use83

Introduction.....	83
Future Land Use Classifications.....	83

Chapter 8: Zoning Plan, Implementation and Adoption88

Introduction.....	88
Zoning Plan.....	88
Grants and Capital Improvements Investments.....	93
Recreation Planning	94
5-Year Master Plan Review	94

Appendices

Appendix A:	Historic, Geologic and Scenic Sites
Appendix B:	Natural Resources (Mackinac Island State Parks Checklists)
Appendix C:	Mackinac Island Airport Layout Plan
Appendix D:	Stakeholder Interviews Results
Appendix E:	Student Survey Results
Appendix F:	Community Workshop Results

Chapter 1: Introduction

Mackinac Island is a community comfortable with its history and long time ban of the automobile. Reminders survive of the Island's heritage as a Native American gathering place, a French missionary settlement, military and fur trading post, fishing station, and a favorite and healthful destination for wealthy Victorian travelers. This unique heritage led to the designation of the entire Island as a National Historic Landmark.

One of the most unique aspects of Mackinac Island is the horse tradition. The horseless carriage was first banned in the village in 1898 and then in the State Park in 1901. The ban carries on to this day. Horses transport goods and people the year around. Horse-drawn drays pick up household items, mail, commercial goods, hay and construction material from the ferry docks in the season and the airport in the wintertime. Horse manure, rubbish, and construction debris is hauled by horsepower to the solid waste facility. Some residents keep horses for their own personal use and enjoyment. Horses are also available for rental by visitors. Horses are not only for work, but also for fun. Miles of wooded trails are available for riding. Horse culture is what makes Mackinac Island so special and different from other tourist towns.

The Island is a small town with close family relationships and a sense of shared history. It is one of the country's premier tourist destinations, and a highly desired location for vacation and retirement homes.

An alternative to horsepower is the bicycle. Residents use bikes daily for work, school, errands, and recreation. It is an essential mode of transportation unique to the Mackinac Island community. Bicycle rental businesses flourish during the Summer season. Visitors often bring their own personal bikes. Competition for the right of way and parking spaces is considerable. The interaction of horses, bikes and pedestrians requires unique planning tools for traffic control.

The City of Mackinac Island is a unique Michigan community with special land use circumstances and concerns. The Island is a small town with close family relationships and a sense of shared history. It is one of the country's premier tourist destinations, and a highly desired location for vacation and seasonal living. Businesses also compete for desirable housing for an always increasing number of employees.

Life on Mackinac Island is not completely unlike that of the mainland. Residents do things in a different way and within the confines of a small island without automobiles.

Mackinac Island Public School holds classes for preschool through high school. Students travel to and from school by foot, bicycle, horse-drawn taxi or snowmobile. School children regularly travel off Island to attend special programs, participate in sports and competitive events. On average, there are eighty students in school per year, with an average graduating class of six.

Employment on the Island consists mainly of hospitality related jobs, as well as important services such as construction, education, administration and medical services. Some residents own and

operate their own businesses. The busy tourist season runs from April until November. Wintertime on Mackinac Island is quiet and serene and attracts some tourists and visitors. A few local accommodations and restaurants are open for the entire year to serve residents and welcome visitors. Groomed trails welcome skiers and the many community events are open to all visitors. Island residents relax and enjoy the less hectic season spending time with family and friends and participating in community events.

Life on the Island does present special challenges. About 82 percent of the Island is a State Park under the direction of the Mackinac Island State Park Commission, enacted by legislation in 1895. The remaining 18 percent (less than one square mile) of the Island is privately owned and is in high demand for commercial and residential development. Because of this, affordable housing for the local year-round community is extremely scarce, and housing for seasonal employees is difficult to secure.

Purpose and Planning Process

The purpose of the City of Mackinac Island Master Plan is to preserve Island culture and history, protect natural resources, and support a thriving economy, while confronting challenges from development and limited infrastructure expansion capability. The Master Plan provides guidelines for future development and is the basis of the Mackinac Island Zoning Ordinance.

This Plan presents extensive background information for the City of Mackinac Island, including socioeconomic data, description and mapping of natural and historic resources, and an inventory of existing community facilities. Information is analyzed to identify important characteristics, changes and trends for Mackinac Island. Community concerns are identified based on citizen participation in meetings, workshops and stakeholder interviews. The results of recent surveys, previous planning studies, and input from City commissions and committees produced goals and policies to guide future land use based on the background studies, key land use trends, and community issues. These goals, along with a detailed map of existing land use, provided the basis for the Future Land Use Map. The map specifies the extent and location for the various types of future development. This Plan also provides suggestions for implementation of the identified goals and policies. The guidance provided by this Master Plan will be utilized in updating the Zoning Ordinance and developing a Capital Improvement Program.

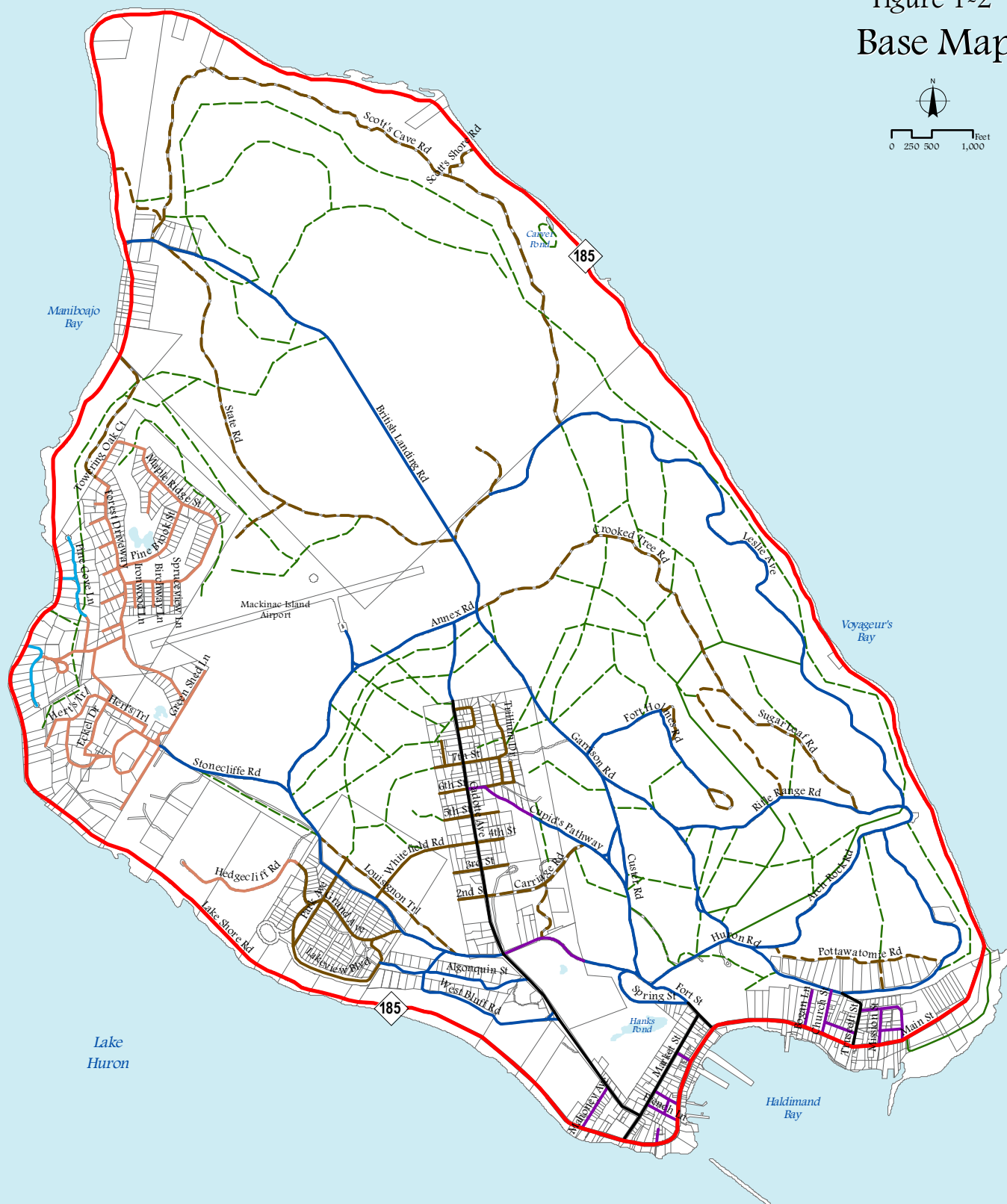
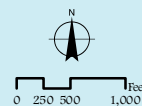
Location and Regional Context

The City of Mackinac Island is located in the Straits of Mackinac between Lake Huron and Lake Michigan, three miles east of the City of St. Ignace. According to the City charter, the City includes the land areas of Mackinac Island and Round Island and the navigable waters adjacent to the islands for a distance of one mile off shore. The total land area of Mackinac Island (not including Round Island) is approximately 2,221 acres (3.5 square miles) including about 8.5 miles of Lake Huron shoreline. Only 400 acres on Mackinac Island are under private ownership, and the remaining 1,821 acres (approximately 82 percent) are owned by the State of Michigan.

For reference, **Figure 1-1** shows the regional location and transportation facilities while **Figure 1-2** provides a parcel line and base map of Mackinac Island.



Figure 1-2
Base Map



City of
Mackinac Island
Mackinac County, Michigan

Master Plan

- State Highway
- City Major (Asphalt)
- City Local - Improved (Asphalt)
- State Park Improved (Asphalt)
- Private - Improved (Asphalt)
- City Local - Unimproved (Gravel)
- State Park Unimproved (Gravel)
- Private - Unimproved (Gravel)

- Paved Bike Trail
- Footpath/Trail
- Property Lines
- Water Bodies

Property Line Source: Mackinac County Equalization;
Road Source: City of Mackinac Island Master Plan (1999)
and Mackinac Island Tourism Bureau Map (2008), updated
by Wade Trim, 2010

September 2010

WADETRIM
271 West McCoy Rd
Gaylord, MI 49735
www.WadeTrim.com

Mackinac Island is not only a regional tourist destination, but draws visitors from all over the world. The Island has a tremendous appeal, as a community that has changed little since well before the automobile. Mackinac Island is a premier tourist destination and has a significant impact on tourism and economics throughout the region. The economies of the communities in the Straits area are interdependent with the tourist economy of Mackinac Island. Retail businesses, motels, and restaurants have been attracted to both St. Ignace and Mackinaw City to serve the tourists visiting the Island and surrounding areas. Two ferry companies that serve the Island operate out of Mackinaw City and St. Ignace from April until the end of October. One ferry service continues to the Island from St. Ignace, weather and ice permitting. When the boats quit, public access is then limited to air travel. Great Lakes Air, based at Mackinac County Airport, provides year round service to the Island from St. Ignace. Additionally, air service is frequently coordinated with commercial and charter flights arriving at the Pellston Regional Airport, as well as other points. Charter flights, instruction and sightseeing also part of the service. Mackinac Island State Park maintains the airport on the Island with private and commercial traffic. A number of people reach the Island by private boat, enjoying the updated facilities at the State of Michigan marina.

The economies of the communities in the Straits area are interdependent with the tourist economy of Mackinac Island.

The primary tourist season is the summer months of June, July, and August, with July being the peak. A series of activities and events occur throughout the summer months on the Island. The spring and fall seasons are also popular, but to a lesser extent. Many political, professional, and civic organizations hold working conferences on the Island. State and federal dignitaries are visitors, as well. There are coordinated promotional efforts to boost tourism during the spring and fall, offering packages including reduced hotel rates, ferry tickets, carriage tours, and shopping specials. Packages are also used to promote special events on the Island or in nearby Mackinaw City or St. Ignace. The winter season has its special charm, although accommodations, restaurants and retail services are limited. The beauty and serenity of the Island make for an unforgettable experience. Community events and those sponsored by the State Park are enjoyed by all. Outside activities pursued throughout the winter include cross country skiing, snowshoeing, ice skating and quiet hikes on snow covered trails.

History and Significance

Due to its strategic location in the center of the Great Lakes system and the Straits area, Mackinac Island is one of the oldest inhabited places in the State of Michigan and the Midwest. Before European occupation, the Straits area was home to Ojibwa (Chippewa), Odawa (Ottawa), and Potawatomi tribes. Collectively referred to as the Anishinabeg people, these tribal groups migrated from the Atlantic coast during the Woodland period (1000 B.C. to 1650 A.D.). The Island's name derives from the native word, Michilimackinac, meaning, "Land of the Great Turtle." The name alludes to the Island's humped profile, like a huge turtle rising out of the water. The Native American style of life in the Straits was semi-nomadic. Archaeological studies show evidence of summer fishing camps on Mackinac Island, where plentiful stocks of trout, pike, sturgeon, herring, and whitefish were harvested. The Straits also

functioned as a center of inter-tribal communication and trade. The Island is regarded by Native Americans as a place of great spiritual importance; the first land to appear after the Great Flood, and the place of origin for Native peoples.

European settlement in the Straits began in the late seventeenth century, with exploration parties, Jesuit missionary outposts, and French fur trading villages. In 1670, Father Claude Dablon established a mission on Mackinac Island to re-settle and protect his followers, a small band of displaced Hurons. The following year the group relocated to St. Ignace, to take advantage of better agricultural land. In the 1690, the first French fort was constructed in the Straits at St. Ignace to guard French commercial fur trading interests in the region. Throughout the late 1600s and early 1700s, the area grew in military and trade significance. The French built Fort Michilimackinac at what is now Mackinaw City in 1714. In 1761, the British took control of the fort, as a result of the Seven Years' War.

The Island is regarded by Native Americans as a place of great spiritual importance; the first land to appear after the Great Flood, and the place of origin for Native peoples.

By 1781, the British re-located the fort to the more defensible Mackinac Island, on land purchased from the Ojibwa. Ste. Anne's Church, along with other buildings, was hauled to the Island across the frozen Straits, to encourage re-settlement of the non-military mainland community to the Island. The new fort, Ft. Mackinac, was located on the bluffs overlooking the harbor. The civilian community settled below and west of the fort, along what today are Main and Market Streets. A wooden palisade wall was constructed around these streets for further protection.

At the end of the Revolutionary War, the Treaty of Paris, negotiated in 1783 between Great Britain and the new United States, technically ceded Mackinac Island to the Americans. Due to the remote location and lack of adequate troops, Americans did not actually take control of the fort until 1796. Meanwhile, by the 1790s, settlement began to occur beyond the palisade wall perimeter. Several farms were developed on the Island, including the 110 acre farm of Dr. David Mitchell (at what is now Harrisonville and the upper part of the Grand Hotel Jewel Golf Course), the George Schindler farm on the southwest bluff, the Ambrose Davenport farm in the present-day Hubbard's Annex area, and the Simon Champaign farm near the present-day Stonecliffe and Woods Golf Course.

The British captured the fort at the beginning of the War of 1812. The assault was launched by night from the unprotected north side of the Island (British Landing). British cannon were placed on high ground behind the fort. The overwhelming force and strategic location forced a quick American surrender. Several attempts were made by American forces to displace the British. In 1814, the British constructed "Fort George" on the hill north of Ft. Mackinac, to guard against another rear attack. A significant attempt on August 4, 1814, known as the Battle of Mackinac Island, ended in defeat for American forces.

In December 1814, the Treaty of Ghent gave control of the Fort back into American hands. In July 1815, the last British troops left the Island, and “Ft. George” was re-christened “Ft. Holmes.”

With military matters resolved, the fur trade at Mackinac Island flourished, under the leadership of John Jacob Astor and the American Fur Company. Astor’s warehouse on Market Street (now the Community Hall) functioned as industry headquarters. It is interesting to note that the permanent Island population in the 1820s was about 500 persons, including French Canadians, Native Americans, Metis (of French and Indian heritage), and Americans; very close to the permanent Island population at the time of the 2010 Census. During the summer trading season, the number increased to approximately 2,000. During the 1820s, a religious revival movement brought about the founding of the Mission School (1823) and Mission House (1825), in an effort to convert French Catholics, Native Americans, and Metis to Protestant Christianity.

In 1836, a U.S. treaty with Ojibwa and Odawa bands specified that payment for purchased Native American lands in Michigan be made over a twenty-year period in provisions as well as cash. Mackinac Island was designated as the payment distribution point, drawing 4,000 Native Americans to the Island each September. This increased the Island’s importance as a provisioning center and commercial hub, as well as a focal point for Native American culture and crafts. In turn, this sparked the interest of American and foreign tourists and travelers to the region. The “Indian Dormitory” was built under one clause of the 1836 treaty, intended to serve as temporary Native American housing during provisioning visits. In fact, the structure was largely used as the office for agent Henry Schoolcraft and as a payment distribution center.

By 1840, over trapping and changes in fashion brought the Island’s fur era to an end. Gradually, furs were replaced by fish as items of trade. Commercial fishing operations took over harbor dock space, and by 1845 more than 20,000 barrels of processed fish were shipped annually from the Island. The disposal of fish entrails became a major sanitary issue, and ordinances were passed against such disposal in the (then) Village limits. The “Borough Lot,” in front of the current Grand Hotel, was designated as the disposal area. Later, this area became a squatter’s haven, a so-called “Shanty Town.”

The advent of railroads on the mainland increasingly replaced water-born transportation, decreasing the Island’s importance as a fishing and general shipping headquarters. Tourism had by then begun to supplement the Island economy. The American Fur Company buildings were converted into the Astor House Hotel as early as 1836; Mission House began accepting tourists by the 1840s; the Island House opened in 1852; and the Lake View House in 1858. But tourism and summer cottage construction really got underway after the Civil War. In 1875, America’s second National Park was established on Mackinac Island. That same year, two areas within the park were set aside to lease for cottages and summer homes. These lots on the East and West Bluff were not actually surveyed and available for construction until 1885. Meanwhile, Gurdon S. Hubbard had built “The Lilacs” cottage in 1870. He subdivided and sold adjacent lands as “Hubbard’s Annex to the National Park” beginning in 1882. By the late 1800s, Mackinac Island had become a nationally known summer retreat, outstanding for its clean air, beautiful scenery, and high society. As well-to-do families flocked to the island, modest carpenter-gothic cottages were frequently replaced by or remodeled into elaborate Queen Anne style mansions. The signature project of this era was construction of the Grand Hotel in 1887. The Grand

joined the Murray (1882), Chippewa (1902), and Iroquois (1902) hotels in hosting an ever-increasing array of summer residents and guests.

Tourism development stimulated a wide variety of support services, both on the Island and mainland. Rail lines and passenger ships increased in number and service frequency. Retail trade adapted quickly to tourism. The Murdick family began making fudge in the 1880s. The decision to ban automobiles from the Village in 1898, and from the Park in 1901, protected the horse-drawn carriage and bicycle businesses that continue to give the Island its special charm and niche in the region's tourism industry. The importance of horses for Island transportation is also discussed in Chapter 5, Community Services, Facilities and Transportation.

In 1894, the Federal government decided to close Fort Mackinac. Efforts by Michigan's congressional delegation averted an economic disaster by arranging to transfer the Fort and Park to the State of Michigan. In 1895, Mackinac Island State Park became Michigan's first state park, administered by the newly created Mackinac Island State Park Commission. Early on, the Commission became active in preserving and interpreting the Park's historic resources; its first project was renovating and adapting the Officers' Stone Quarters as a military museum. Marquette Park, an Island focal point, was designated by the Commission in 1898 and landscaped in 1905. The statue of Father Marquette was unveiled in 1909.

In 1895, Mackinac Island State Park became Michigan's first state park, administered by the newly created Mackinac Island State Park Commission.

Although many Island businesses had a difficult time surviving the Depression, post-war economic recovery and construction of the Mackinac Bridge brought new waves of visitors to the Island. The Mackinac Bridge opened to traffic on November 1, 1957, uniting the two peninsulas of Michigan. Increased regional growth in recreation and tourism pose new challenges for the Island. Mackinac Island's long and unique history has left a significant physical legacy. A detailed survey of buildings on Mackinac Island conducted by the State Park in 1970-71 estimated that there were at the time over 120 buildings dating from the latter half of the nineteenth century which had significant architectural and historic value. The walls of Ft. Mackinac are some of the oldest remaining man-made structures in the State of Michigan, and the Island is a location of important Native American archaeological sites. In 2010, Michigan Bureau of History records indicated that there were 32 Island buildings or sites on the State Historic Register. Ten of these sites are also on the National Register of Historic Places and the Island has enjoyed National Landmark status since 1951. (A location map and descriptions of these sites are provided in **Appendix A** of this Plan.) A Historic District Commission was formed in 2010; through its leadership, three historic districts have been formed. Historic resources are an extremely important factor to consider during the process of preparing the Master Plan.

Government/Community Organization

Mackinac Island's first form of governmental organization was that of a military garrison. Although later established as a Borough in 1817 and a Village in 1875, Mackinac Island was established by charter as a City in 1899. The City Council, headed by the mayor, serves as the legislative or governing body for the City. The day-to-day administration of the City is primarily handled by the Mayor, City Clerk, City Treasurer, and support staff.

Because the majority of Island land area is State owned and designated as State Park, the influence of State policy is great. The Mackinac Island State Park is administered by the seven-member Mackinac Island State Park Commission, with members appointed by the governor. The Park Commission is a key stakeholder on Mackinac Island and was consulted during the development of this Plan. Existing development on State land consists of the State Park Commission offices, residences and support facilities, the Mackinac Island airport, property leased to the City of Mackinac Island for public utilities and recreation (resource recovery center, waste water treatment plant, water reservoirs, Great Turtle Park), Wawashkamo Golf Course, Grand Hotel's Jewel Golf Course, Mackinac Community Equestrian Center and approximately forty-three acres of land leased for private residential purposes.

Status of Planning and Zoning for the City of Mackinac Island

The City Council established a Planning Commission in the early 1980s. The Planning Commission serves as the zoning commission and, as such, monitors the implementation of the Zoning Ordinance to ensure that proposed development is consistent with the City's Master Plan.

Mackinac Island is governed by local zoning. The Planning Commission is responsible for the preparation and adoption of the Master Plan to guide development of the City of Mackinac Island. A master plan developed in the mid-1980s was never adopted. The Island's first master plan, City of Mackinac Island Comprehensive Municipal Master Plan, was adopted August 4, 1999. A review and update was completed March 22, 2011. A zoning ordinance review and update was completed November 12, 2013. Michigan law requires that a zoning ordinance correspond with an adopted master plan. After the completion of this Master Plan, the Zoning Ordinance will need to be reviewed to correspond to land use policies established by the Plan.

Chapter 2: Demographic and Economic Profile

Population and household characteristics are essential components to consider in the development of any master plan. An analysis of a community's population and household characteristics provides a foundation upon which a major portion of a master plan is based. While an evaluation of a community's current characteristics provides insight to immediate needs and deficiencies, population projections provide a basis for determining future land use requirements, public facility needs, and essential services.

Due to the nature of Mackinac Island as a tourist destination, the community receives a significant number of seasonal residents as well as daily visitors. The year-round population and the summer population, consisting of tourist and non-tourist categories, must be considered in the planning process.

This section of the Plan examines several elements that are central to understanding a community's overall population and housing characteristics. These items include population growth patterns and population shifts, age/gender breakdowns, racial composition, household size, housing characteristics, income characteristics, and employment patterns.

The primary source of the data presented in this Chapter is the United States Census Bureau. The decennial census reports from the Census Bureau are 100% counts of every citizen in the country. The Census Bureau's American Community Survey (ACS) 5-year counts are estimates derived from a sample data survey of citizens. It should be noted that, although the ACS data offer valid insights into certain population characteristics, the ACS data contain a margin of error. For smaller sample sizes, such as for a small community like Mackinac Island, the ACS data produces larger sampling errors. For this reason, the Census Bureau's decennial census reports are used wherever possible in this Chapter. Where data is not available within the decennial census reports, the ACS data is used.

Year-round Population Trends

The City of Mackinac Island's year-round population has changed little over the past several decades. U.S. Census figures for 2010 indicate a population of 492 persons (260 male - 232 female). In discussing the Census data for the City, it is important to note that the Census tally, taken on April 1, does not count residents who reside elsewhere in the winter. The figures presented in the 2010 Census do not reflect the actual number of persons residing on the Island in the Summer months. Although this situation is common throughout northern Michigan recreational/resort areas, the influx of seasonal residents on Mackinac Island during the Summer months is tremendous. This is evident by the fact that more than 70 percent of the City's total housing units were classified as seasonal, recreational, or occasional use in the 2010 Census.

Table 2-1, below, highlights population trends for Mackinac Island from 1950 through 2010. The highest population level occurred at the 1960 Census count and dropped significantly in 1970. The high 1960 population can be explained by the temporary presence of Moral Re-Armament (MRA) on the Island at the time the 1960 Census was taken. Since 1970, the year-round population decreased

only slightly each decade, and then rebounded in 2000. Over the past decade (2000-2010), however, the population declined slightly (-5.92 percent).

Table 2-1 Population Trends City of Mackinac Island, 1950 – 2014							
Year	1950	1960	1970	1980	1990	2000	2010
Population	572	947	517	510	469	523	492
Change from previous census	--	65.4%	-45.4%	-1.4%	-8.0%	11.5%	-5.9%

Source: 1950 through 2010 U.S. Census Reports

It should be noted that the accuracy of the Census is only as complete as information provided by the residents. Some people are leery of answering all the Census questions, such as the number of people living in the house.

Voter registration lists are another broad gauge of the local population, although their usefulness to determine a specific population count is limited due to the fact that it does not include persons under the voting age and other factors. The April 2010 registration list for the City of Mackinac Island noted 678 registrants, which far exceeds the 2010 Census count of 492 residents.

Seasonal and Tourist Population

For most communities, a discussion of the year-round population would be sufficient when planning for community needs. The City of Mackinac Island is different from most communities in that respect. Because tourism is the City's major industry, the community experiences a tremendous influx of visitors during the summer months. Without an actual census count, it is difficult to calculate the City's seasonal population. Some factors to consider when determining the seasonal population are: tourist related employment, vacation homes, available hotel rooms, State Park attendance, and ferry service to Mackinac Island. Estimates suggest the Island experiences an average seasonal population of more than 16,500 persons, of which approximately 4,000 are seasonal employees. For planning purposes, an attempt has been made to estimate the Island's prime tourist season population without duplication.

Table 2-2 illustrates the calculations used for the estimate.

Seasonal Employees

Most Island businesses, including hotels, restaurants, and retail establishments operate only during the tourist season of May through October. According to the Mackinac Island Tourism Bureau, these seasonal operations employ approximately 4,000 during the prime tourist time (mid-June through August). Some of the major Island employers are the Mackinac Island State Park, Grand Hotel, Mission Point Resort, and Mackinac Island Carriage Tours.

Table 2-2 Estimated Daily Seasonal Population Mackinac Island	
Category	Number
Year-round residents (per 2010 Census)	492
Seasonal residents (708 housing units @ 2.05 persons per household, per 2010 Census)	1,451
Hotel and lodging @ full occupancy (1,503 rooms @ 2 persons per room, per 2016 survey)	3,006
Seasonal employees (living on Island, per Tourism Bureau - August 2010)	4,000
Daily transient visitors via ferries (750,000 annual visitors 2016 estimate, divided by 100 days)	7,500*
Boat slips at full occupancy (80 slips @ 2 persons per boat)	160
Airport traffic	80
Total estimated daily seasonal population	16,689

Data Sources: U.S. Census Bureau; Mackinac Island Tourism Bureau; ferry service operators.

Note: The estimates above represent a seasonal average, and the population is expected to be even higher on peak days, such as festival or holiday weekends.

Estimates compiled by Wade-Trim, Inc.

*The 7,500 figure represents an average of the total visitors spread evenly across the 100 days. In reality, certain days, such as holidays and weekends, will feature many more visitors than other days.

Although the two ferry lines employ a significant number of people, the Michigan Department of Labor and Economic Growth lists the number of employees where the main office is located. Consequently, many ferry employees are counted in Mackinaw City or St. Ignace. The employment numbers reported by the State are based on self-reported numbers employers provide on quarterly tax returns. The completeness of the information is reliable.

Seasonal Residents

For some visitors, the Island provides the perfect setting for seasonal or vacation homes. At the time of the 2010 Census, 708 of the 1,002 housing units (more than 70 percent) were listed as seasonal, recreational, or occasional use dwellings. Visitors in this category may stay for as long as the entire summer, while others may only stay for a few weeks. Using the Census Bureau's 2010 persons per household average yields a conservative estimate of 1,451 additional persons who may reside in these units during the summer months. Additionally, the Tourism Bureau estimates approximately 4,000 resident seasonal employees living on the Island during these summer months.

Seasonal Tourism – Lodging

The Tourism Bureau reports that approximately 1,500 hotel rooms are available on the Island. The Island guest room figure includes bed and breakfast facilities as well as hotels. According to the Tourism Bureau, occupancy rates of nearly 100 percent are recorded during the peak months of July and August. The slower months of May, June, September, and October generally experience occupancy rates of 80 to 95 percent.

Seasonal Tourism – Daily Transient Visitor Counts

Another determinant in estimating the summer population is to review attendance figures from the Mackinac Island State Park Commission. Fort Mackinac, one of the Island's major attractions, receives approximately 225,000 visitors during the season. While there has not been any tremendous increase in recent years, the figures show a steady and significant level of tourist attraction to the Island. The number of visitors to the Fort peaks from early July to mid-August.

It is important to look at the number of tourists who use the air and ferry services to visit Mackinac Island. Great Lakes Air, a charter service, generally flies 60 to 80 persons to the Island from St. Ignace and Pellston on a peak travel day during July and August. They also will arrange special charters from other locations. Private planes also fly to the Island.

The Island ferry boat services handled a combined total of approximately 600,000 passengers per year for the years 2008 and 2009, although none of the operators will provide exact passenger counts. This is a decrease from the peak years of 1998 and 1999 when approximately 850,000 persons per year were ferried to the Island. However, the years 2008 and 2009 followed a state and nation-wide economic downturn, which is certain to have had a negative impact on tourism and visitor counts. In the years since the nation-wide recession, with improving economic conditions, travel and tourism spending in Michigan has once again grown. Between 2010 and 2014, tourism visitor counts in Michigan increased from approximately 99 million to 113 million¹, representing a total growth of approximately 14 percent, or an annual growth of approximately 3.5 percent. It is not known whether this state-wide tourism visitor count growth percentage (3.5 percent annually) can be equally applied to visitor counts to Mackinac Island; however, it is a fair assumption for estimating visitor growth locally. Using this 3.5 percent annual growth rate, it is estimated that the 600,000 passengers coming to the Island in 2009 increased by 3.5 percent annually through 2016, which would result in approximately 750,000 visitors in 2016.

The City collects a "flat rate" franchise fee from each ferry company. This flat rate was established as part of a new agreement in 2012; previous to this agreement, franchise fees were based on ticket sales. The ferry operators indicate that the number of passengers varies year to year. Approximately 55 to 60 percent of the passengers travel from Mackinaw City; the remaining passengers travel from St. Ignace.

¹ *The Economic Impact of Travel in Michigan. Tourism Satellite Account Calendar Year 2014. Tourism Economics.*

While all of these factors still cannot accurately calculate the Island's exact seasonal population, it is important to remember that the figure increases many times over the year-round population. Because tourist and short-time visitors draw on municipal services, the City of Mackinac Island, therefore, needs to continue to provide these services and plan for an estimated daily seasonal population of approximately 16,500 persons.

Age Distribution and Racial Composition

Information on age distribution within a population can assist the community in matching public services to community characteristics and in determining what, if any, special needs specific resident groups might have.

Age distribution for the City of Mackinac Island's year-round residents is presented in **Table 2-3**, with comparisons to Mackinac County and the State of Michigan.

Table 2-3 Population by Age City of Mackinac Island, Mackinac County and State of Michigan – 2010						
Age Group	Mackinac Island		Mackinac County		State of Michigan	
	Number	%	Number	%	Number	%
Under 5	25	5.1%	472	4.2%	596,286	6.0%
5-9 years	23	4.7%	545	4.9%	637,784	6.5%
10-14 years	18	3.7%	603	5.4%	675,216	6.8%
15-19 years	28	5.7%	650	5.8%	739,599	7.5%
20-24 years	30	6.1%	433	3.9%	669,072	6.8%
25-34 years	65	13.2%	938	8.4%	1,164,149	11.8%
35-44 years	70	14.2%	1,210	10.9%	1,277,974	12.9%
45-54 years	87	17.7%	1,834	16.5%	1,510,033	15.2%
55-59 years	45	9.1%	1,054	17.5%	683,186	6.9%
60-64 years	35	7.1%	887	8.0%	568,811	5.8%
65-74 years	42	8.6%	1,422	12.8%	724,709	7.3%
75-84 years	17	3.4%	773	6.9%	444,940	4.5%
85 years and over	7	1.4 %	292	2.6%	191,881	1.9%
Totals	492	100.0%	11,113	100.0%	9,883,640	100.0%
Median Age	42.5 years		49.0 years		38.9 years	

Source: 2010 U.S. Census Reports

As **Table 2-3** demonstrates, permanent residents of Mackinac Island in the young adult (25-34), family-forming (35-44), and empty nester (45-54) categories make up a larger percentage of the total population than those of the County and the State. Conversely, youth populations (under 19 years) and senior populations (65 and older) generally make up a smaller percentage of the population on the Island than compared to the County and State.

At the time of the 2010 Census, median age for residents of the City of Mackinac Island was 42.5 years (up from 41 years in 2000). Mackinac County's median age was older at 49 (up from 42.8 years in 2000). The median age of the State, at 38.9 years (up from 35.5 years in 2000), is younger than both the Island and the County. It is difficult to get an accurate gauge of the age distribution of the tourists and seasonal residents. In the past, the seasonal employee population was primarily comprised of college age persons, averaging 19-20 years of age. However, in recent years, seasonal employees tend to be older, and more are foreign born.

Mackinac Island's year-round population is somewhat racially diversified. Of the 492 permanent residents in 2010, 363 (73.8 percent) were listed as White. Native Americans (classified by the Census as American Indian and Alaska Native) are an important resident minority group numbering 89 persons or 18.1 percent of the Island's population. A total of 29 residents (5.9 percent) were listed as

Of the 492 permanent residents in 2010, 363 (73.8 percent) were listed as White. Native Americans (classified by the Census as American Indian and Alaska Native) are an important resident minority group numbering 89 persons or 18.1 percent of the Island's population.

Two or More Races. The remainder of the population comprised of Black or African American (6 persons), Asian (3 persons), Native Hawaiian and Other Pacific Islander (1 person) and Some Other Race (1 person). As recorded by the 2010 Census, the racial composition of Mackinac County is similar to that of the Island, with 76.5 percent White, 17.3 percent American Indian and Alaska Native, and the remainder of the population classified as other races.

Households and Disability Status

U.S. Census data for 2010 shows a total of 240 households (down from 252 households in 2000) in the City of Mackinac Island. Of these households, 128, or 53.3 percent, were family households, which is down from 144 family households, or 57.1 percent, in 2000. Nonfamily households represent 112 or 46.7 percent of all households on the Island as of 2010. This is up from 108 nonfamily households, or 42.9 percent of all households, on the Island as of 2000. These trends between 2000 and 2010 show a decline in family households and an increase in nonfamily households on the Island; if trends continue, nonfamily households on the Island will soon outnumber family households.

These trends between 2000 and 2010 show a decline in family households and an increase in nonfamily households on the Island; if trends continue, nonfamily households on the Island will soon outnumber family households.

Of the 128 total family households on the Island as of the 2010 Census, most (94) were husband-wife families. The remainder were either female-headed family households (18) or male-headed family households (16). Of the 112 nonfamily households, 90 were comprised of a householder living alone, while the other 22 were other nonfamily households.

In 2010, the Census recorded an average household size of 2.05 persons for the City. This average was down slightly from 2.08 as of the 2000 Census and significantly from 2.25 as of the 1990 Census. This decline is not unique to the Island; the general decline in the number of persons per household has been felt throughout the country. The Census Bureau reported a national decline in the number of persons per household from 2.63 persons in 1990 to 2.59 persons in 2000 to 2.58 persons in 2010. A relatively recent phenomenon characteristic of today's population, it has not been uncommon for communities to register a net increase in the housing supply while simultaneously recording a decline in population. This trend has evolved due, to a large extent, to the declining family size and acceptance of one person households.

The City's 2010 average household size of 2.05 is somewhat lower than the County as a whole, at 2.19 persons per household.

Previously available within the 2000 Census, statistics on citizen disabilities are not available from the 2010 Census. According to the 2000 Census, the percentage of individuals in the 5 to 20 years category with mobility and self-care limitations on Mackinac Island is relatively low when compared to the County or the State (6.1 percent for the Island, 9.1 percent for the County, and 8.5 percent for the State.) In the 21 to 64 years category, 18.1 percent of Islanders are listed with a disability, as compared to 21.4 percent for the County and 18.1 percent for the State. It should be noted, however, that nearly 38 percent of the Island disabled population in this age group are employed. In the 65 years and over category, 42.9 percent of the Islanders have mobility and self-care limitations, while County and State statistics are listed as 43.6 and 42.3 percent, respectively. The City wishes to accommodate this special population, as well as the number of visitors from across the State and elsewhere that may have mobility limitations.

Statistics from the 2014 American Community Survey (ACS) 5-year estimates reveal that of the total City population, approximately 12.2 percent have some kind of disability. This is comparable to the disability percentage as of the 2000 Census, which was 14.3 percent.

Income, Education, and Employment

Income statistics for Mackinac Island, Mackinac County and the State of Michigan are presented in **Table 2-4** as taken from the 2000 Census, 2010 ACS 5-year estimates and 2014 ACS 5-year estimates. Generally, household income levels for the Northeast Lower Michigan Region and the Eastern Upper Peninsula, including Mackinac County, fall below those found in the State as a whole. However, per capita income levels for Mackinac Island are generally higher than the State as a whole, while Mackinac County levels are lower than the State.

As of 2014 (ACS data), only 4.5 percent of the families on the Island are considered to be below the poverty level, which was a decrease from 8.4 percent in 2010 (ACS data). Over the past 15 years (2000 to 2014), the poverty level on the Island has consistently been much lower than the poverty level for Mackinac County and the State of Michigan.

Table 2-4 Income Statistics City, County, and State – 2000, 2010, 2014									
Place	Household Income			Per Capita Income			% of Families Below Poverty Level		
	2000	2010	2014	2000	2010	2014	2000	2010	2014
Mackinac Island	\$36,964	\$48,594	\$50,750	\$27,965	\$27,451	\$29,429	1.4%	8.4%	4.5%
Mackinac County	\$39,929	\$39,339	\$38,690	\$17,777	\$22,170	\$23,453	7.2%	14.7%	10.4%
Michigan	\$44,667	\$48,432	\$49,087	\$22,168	\$25,135	\$26,143	7.4%	14.8%	12.1%

Source: 2000 U.S. Census Reports; 2010 ACS 5-Year Estimates; 2014 ACS 5-Year Estimates.

Education is an important factor in analyzing the capabilities of the local work force and in the economic vitality of a community. The U.S. Census Bureau tracks educational attainment by recording the percentage of citizens who have graduated from high school and who have gone further and obtained a bachelor's degree. Statistics from the 2000 Census, 2010 ACS and 2014 ACS all indicate that a higher proportion of Island residents (25 years of age or older) are high school graduates or higher, as compared to Mackinac County and the State as a whole. Additionally, a higher proportion of Island residents (25 years of age or older) have obtained a bachelor's degree or higher educational level, as compared to Mackinac County and the State as a whole (refer to **Table 2-5**). It should be noted that these numbers apply only to the Island's year-round population.

Table 2-5
Educational Attainment – Persons 25 Years and Older
City, County, and State – 2000, 2010, and 2014

Place	High School Graduate Or Higher %			Bachelor's Degree Or Higher %		
	2000	2010	2014	2000	2010	2014
Mackinac Island	84.1%	94.5%	94.7%	31.1%	29.6%	31.8%
Mackinac County	82.5%	89.1%	88.8%	14.9%	20.1%	17.9%
Michigan	83.4%	89.3%	89.3%	21.8%	28.6%	26.4%

Source: 2000 U.S. Census Reports; 2010 ACS 5-Year Estimates; 2014 ACS 5-Year Estimates.

The Michigan Department of Labor and Economic Growth, Office of Labor Market Information, regularly publishes employment data. Employment data on the civilian labor force is presented in **Table 2-6**, comparing Mackinac County and State at five year intervals from 1990 to 2000 and years 2010 and 2014 (this data is not available for the City). The unemployment rate for Mackinac County has traditionally been higher than that of the State as noted in the table. Labor Market Information indicates the unemployment picture is currently not good for Mackinac County as is the condition for much of the northern Lower Peninsula and the Upper Peninsula.

Table 2-6
Labor Market Statistics, Michigan and Mackinac County – 1990-2014

State of MI	1990	1995	2000	2005	2010	2014
Labor force	4,620,000	4,835,000	5,144,000	5,097,000	4,799,000	4,754,000
Employed	4,262,000	4,577,000	4,953,000	4,754,000	4,194,000	4,408,000
Unemployed	358,000	285,000	190,000	344,000	605,000	346,000
Jobless rate	7.7%	5.3%	3.7%	6.7%	12.6%	7.3%

Mackinac Co	1990	1995	2000	2005	2010	2014
Labor force	6,236	7,274	6,881	6,590	5,560	5,316
Employed	5,343	6,411	6,368	5,938	4,746	4,723
Unemployed	893	863	513	652	814	593
Jobless rate	14.3%	11.9%	7.5%	9.9%	14.6%	11.2%

Source: Michigan Department of Technology, Management and Budget Website, May 2016.

It is also important to remember that the unemployment rate for the Island and similar seasonal communities is higher during the winter months and lower during the summer months, reflecting the nature of tourism's seasonal work. Because of the area's tourism character, the majority of employment is in lower paying service producing industries rather than in goods producing industries. In 2014, based on ACS data, nearly 40 percent of Island residents were employed in the service industry (termed "arts, entertainment, and recreation, and accommodation, and food services" by the Census Bureau), which far exceeded any other industry category. For Mackinac County, the service industry employs nearly 20 percent of County residents (as recorded by the 2014 ACS), which is the second largest industry category. The purpose of reviewing these employment statistics is to stress the important role of the Island as a major employment center for Mackinac County and the region during the summer season.

Total Housing Stock and Housing Structure Types

Discussion on housing stock in this section is derived from 2010 Census Bureau information. In 2000, the City of Mackinac Island was recorded by the 2000 Census to have 565 total housing units. By 2010, the total number of housing units increased to 1,002, as recorded by the 2010 Census. This equates to a 77 percent increase in total housing units between 2000 and 2010.

As **Table 2-7** shows, the distribution of housing structure types for the City of Mackinac Island is considerably different than the County as a whole. Much of this difference can be accounted for in provision of multiple-unit structures for summer employees. For Mackinac Island, there is a much more even distribution of housing unit types than compared to the County. The largest percentage of housing units in the City (as of the 2014 ACS) are 1 unit structures (detached or attached), at 36.2 percent; however, for the County as a whole, more than 80 percent of structures are 1 unit structures (detached or attached). Following closely behind 1 unit structures, the second highest percentage of housing units in the City (as of the 2014 ACS) were units in 10 or more unit structures at 31.3 percent of total City housing stock. Units within 2-4 unit structures comprise 26.8 percent of total City housing stock, while units in 5-9 unit structures comprise 5.1 percent of City housing stock.

Table 2-7 Type of Housing Structures City of Mackinac Island and Mackinac County – 2000,2010 and 2014												
Structure Type	Mackinac Island						Mackinac County					
	2000 #	2000 %	2010 #	2010 %	2014 #	2014 %	2000 #	2000 %	2010 #	2010 %	2014 #	2014 %
1 unit structures detached or attached	370	65.2	428	58.2	332	36.2	7,878	83.7	8,903	82.2	9,109	82.8
2-4 unit structures	134	23.6	138	18.8	246	26.8	364	3.9	437	4.1	523	4.7
5-9 unit structures	28	4.9	62	8.4	47	5.1	109	1.2	164	1.5	141	1.3
10 or more unit structures	26	4.6	95	12.9	287	31.3	170	1.8	235	2.2	571	5.2
Mobile home or trailer	9	1.6	12	1.6	5	0.5	892	9.5	1,080	10.0	648	5.9
Totals	567	99.9	735	99.9	917	99.9	9,413	100.1	10,819	99.9	10,992	99.9

Source: 2000 U.S. Census Reports; 2010 ACS 5-Year Estimates; 2014 ACS 5-Year Estimates.

Housing Occupancy Characteristics

Housing occupancy characteristics for the City and County are presented in **Table 2-8**. Of the 1,002 total housing units on the Island as of the 2010 Census, 240 or 24.0 percent were occupied (year-round) housing units. Of these occupied housing units, more than half (136) were owner-occupied, while 104 were renter-occupied. When compared to Mackinac County as a whole, the Island has a much smaller percentage of owner-occupied housing units and much larger percentage of renter-occupied housing units.

As mentioned in the discussion on population, housing characteristics for the City of Mackinac Island reflect an increased summer population. The lure of island living, along with the abundant recreational opportunities, have attracted people to Mackinac Island, many of whom reside here during the summer months. As **Table 2-8** illustrates, even though the County contains a significant percentage of seasonally vacant housing units (5,318 units or 48.3 percent of all units), the City's percentage of seasonal housing is even more substantial (708 units or 70.7 percent of all units).

Table 2-8
Housing Occupancy Characteristics
City of Mackinac Island and Mackinac County – 2000 and 2010

Category	Mackinac Island				Mackinac County			
	2000 #	2000 %	2010 #	2010 %	2000 #	2000 %	2010 #	2010 %
Occupied Housing	252	44.6	240	24.0	5,067	53.8	5,024	46.6
Owner - Occupied	150	26.5	136	13.6	4,013	42.6	3,937	35.8
Renter - Occupied	102	18.1	104	10.4	1,054	11.2	1,087	9.9
Vacant Units	313	55.4	762	76.0	4,346	46.2	5,986	54.4
Vacant – For seasonal, recreational, or occasional use	300	53.1	708	70.7	3,945	41.9	5,318	48.3
Vacant - Other	13	2.3	54	2.1	401	4.3	353	3.2
Total Housing	565	100.0	1,002	100.0	9,413	100.0	11,010	100.0

Source: 2000 and 2010 U.S. Census Reports.

Housing Values and Rent

One comparative measure of the local housing stock is housing value. In 2000, the median value of owner-occupied housing units on the Island was \$170,000. According to figures compiled by the 2014 American Community Survey, this median value has sharply increased to \$378,600. This sharp increase is reflective of numerous factors, which include the high desirability of living on the Island, historic significance of housing stock, high construction costs, waterfront land values, and limited availability of owner-occupied homes. The median value of owner-occupied housing units for the County and State, per the 2014 ACS, is much lower at \$119,100 and \$120,200, respectively (refer to **Table 2-9**).

Also shown in **Table 2-9**, median rental values on the Island (\$717) are notably higher than that of the County (\$582), but are more comparable to State values (\$780). Again, it should be noted that the 2014 ACS data is a sample count and contains margin of error. Further, confidence in the reported value of contract rent is greater than confidence in the reported values of owner-occupied homes. Renters are asked to state a fact -- how much is monthly rent. Homeowners are asked to state an opinion -- how much do they estimate the home would sell for.

Table 2-9
Comparative Distribution of Housing Values and Rent
City, County and State – 2014

Financial Characteristics	Mackinac Island		Mackinac Co.		State of Michigan	
	#	%	#	%	#	%
Value Specified Owner-Occupied Housing Units^a	105	100.1%	3,872	100%	2,738,012	100.0%
Less than \$50,000	0	0.0%	475	12.3%	431,825	15.8%
\$50,000 - \$99,999	17	16.2%	1,014	26.2%	681,444	24.9%
\$100,000 - \$149,000	7	6.7%	844	21.8%	551,567	20.1%
\$150,000- \$199,999	5	4.8%	579	15.0%	439,220	16.0%
\$200,000-\$299,999	18	17.1%	564	14.6%	371,874	13.6%
\$300,000-\$499,999	11	10.5%	235	6.0%	188,963	6.9%
\$500,000-\$999,999	17	16.2%	129	3.3%	57,303	2.1%
\$1,000,000 or more	30	28.6%	32	0.8%	15,846	0.6%
Median Housing Value	\$378,600		\$119,100		\$120,200	
Contact Rent: Specified Renter-Occupied Housing Units^b	105	100.0%	1,002	100.1%	1,028,835	100.1%
Less than \$200	12	11.4%	45	4.5%	19,182	1.9%
\$200-\$299	8	7.6%	53	5.3%	39,926	3.9%
\$300- \$499	25	23.8%	271	27.0%	95,876	9.3%
\$500- \$749	18	17.1%	340	33.9%	316,871	30.8%
\$750- \$999	23	21.9%	157	15.7%	288,644	28.1%
\$1000-\$1,499	19	18.1%	126	12.6%	207,491	20.2%
\$1,500 or more	0	0.0%	10	1.0%	60,845	5.9%
No Cash Rent	35	.5%	192	1%	61,033	.05%
Median Rent	\$717		\$582		\$780	

^a Specified housing units include only one-family houses on less than ten acres without a commercial establishment or medical office on the property.

^b Contract rent is the monthly rent agreed to, or contracted for, regardless of any furnishing, utilities, or services that may be included.

Source: 2014 ACS 5-year estimates.

Table 2-9 also shows the distribution of owner-occupied housing units by value. Of the 105 owner-occupied units recorded in the 2014 American Community survey, only 17 were valued at less than \$100,000, and an even smaller number (12) were valued between \$100,000 and \$200,000. A total of 18 units were valued between \$200,000 and \$300,000. The remainder, totaling 58 units, were valued at more than \$300,000, including 30 units which were valued at more than \$1,000,000 (28.6% of all owner-occupied units).

Housing Affordability

The housing stock in a community should be affordable to its residents. If housing costs are prohibitive, housing needs remain unmet in spite of housing unit availability. On the Island, housing affordability is an increasingly important issue for many year round residents and seasonal employees. Some long-time year round residents and descendants are finding it difficult to meet rising costs and, combined with other difficulties of Island living, are having to relocate to the mainland. As discussed earlier in this Chapter, the vast majority of the jobs are low paying seasonal service industry jobs, and yet housing costs are significantly above average and continuing to rise.

Total household income determines the price range of affordable housing for virtually all families. One method of determining housing affordability is to correlate housing values to household incomes. It can generally be determined that a household can afford to own a home that is no more than three times the household's yearly gross income. Thus, it is assumed that a household earning \$50,000 per year can afford a home that is \$150,000 or less in value. As noted in earlier in **Table 2-4**, the median household income on Mackinac Island, as recorded by the 2014 ACS, was \$50,750. As of the 2014 ACS, the median value of owner-occupied housing units was \$378,600. This median housing value is more than 7 times the median household income, suggesting a housing affordability concern on the Island.

According to the 2014 American Community Survey, the median value of owner-occupied housing units on the Island is more than 7 times the median household income on the Island, suggesting a housing affordability concern.

Another method for evaluating housing affordability is the percentage of income a household spends on housing costs. Typically, housing costs should not exceed 30 percent of a household's gross income. According to the 2014 American Community Survey, of the owner-occupied housing units on the Island with a mortgage, 32.2 percent were occupied by households who were paying more than 30 percent of their household income on monthly ownership costs. According to the 2014 ACS, of the occupied housing units on the Island occupied by renters, 27.6 percent were occupied by households who were paying more than 30 percent of their gross income in rental costs. Both of these figures further suggest a housing affordability concern on the Island.

According to the 2014 American Community Survey, 32.2 percent of owner-occupied housing units on the Island were occupied by households who were paying more than 30 percent of their household income on monthly owner costs. 27.6 percent of housing units on the Island occupied by renters were occupied by households who were paying more than 30 percent in rental costs. Both of these figures further suggest a housing affordability concern on the Island.

Age of Housing Units

Typically, the economically useful age of residential housing units is approximately 50 years. Due to the historic nature of Mackinac Island and the value of the housing units, it is not surprising that nearly forty percent of the total housing units are approaching or are over 50 years old (built earlier than 1970). **Table 2-10**, below, compares residential housing unit age for Mackinac Island, Mackinac County, and the State of Michigan based on data provided by the 2014 American Community Survey. As is shown, the largest percentage (32.7 percent) of housing units on the Island were built in 1939 or earlier. This is reflective of the historic character of the Island, and is a much higher percentage than found in both the County and State. However, due to the care and concern of Island residents, older homes in the community have been preserved in good repair.

Table 2-10 Comparative Age of Structures, Total Housing Units City, County, and State – 2014			
Year Structure Built	Mackinac Island	Mackinac County	Michigan
	%	%	%
2010 or later	0.0%	1.4%	0.4%
2000 to 2009	15.9%	11.6%	10.3%
1990 to 1999	17.2%	18.2%	12.9%
1980-1989	22.2%	13.7%	9.9%
1970-1979	7.5%	13.7%	15.5%
1960-1969	2.6%	8.1%	12.2%
1940-1959	1.7%	17.4%	23.5%
1939 or earlier	32.7%	15.9%	15.3%
Totals	99.8%	100.0%	100.0%

Source: 2014 ACS 5-year estimates.

Chapter 3: Natural Resources

Some of the significant attractions for the residents and visitors of Mackinac Island are the area's natural environment, fresh air, and island setting. The natural environment that attracts people to the area also imposes constraints on the use of the land. Often, the alteration of sensitive environments creates problems that cannot be easily corrected. An analysis of the City of Mackinac Island's physical environment can assist government officials in planning for future use. This Chapter includes resource discussions of climate, geology, topography, soils, water, wetlands, and wildlife.

Climate

The climate of the Island is similar to that of other parts of the Eastern Upper Peninsula, particularly those areas near the Straits of Mackinac. Generally, the summers are very pleasant and enjoyable, with the average May-September temperature in the 70s (F). The season of above freezing temperatures on the Island typically lasts about four and one-half months, from mid-May to early October. During the winter, the temperature typically hovers around freezing for December, January, and February with temperatures occasionally dropping to 15 to 20 degrees below zero. Snowfall averages about 75 inches annually, with seasonal variation ranging from 40 to 120 inches. Annual precipitation averages about 30 inches. The effects of Lakes Michigan and Huron are somewhat diminished due to the proximity of the Upper and Lower Peninsulas. Lake-effect snow is virtually non-existent and fall and spring temperatures are also influenced with temperatures staying warmer in the fall and cooler in the spring. Because of this, Mackinac has about 180 frost-free days per year, which is higher than many of the surrounding inland areas.

Climatic conditions significantly influence the environment of the area, affecting the operation of municipal services as well as the economic development. The climate is particularly important on Mackinac Island because of its direct bearing on tourism. Table 3-1 documents some important weather statistics recorded at two weather stations near Mackinac Island: Sault Ste Marie and Cheboygan.

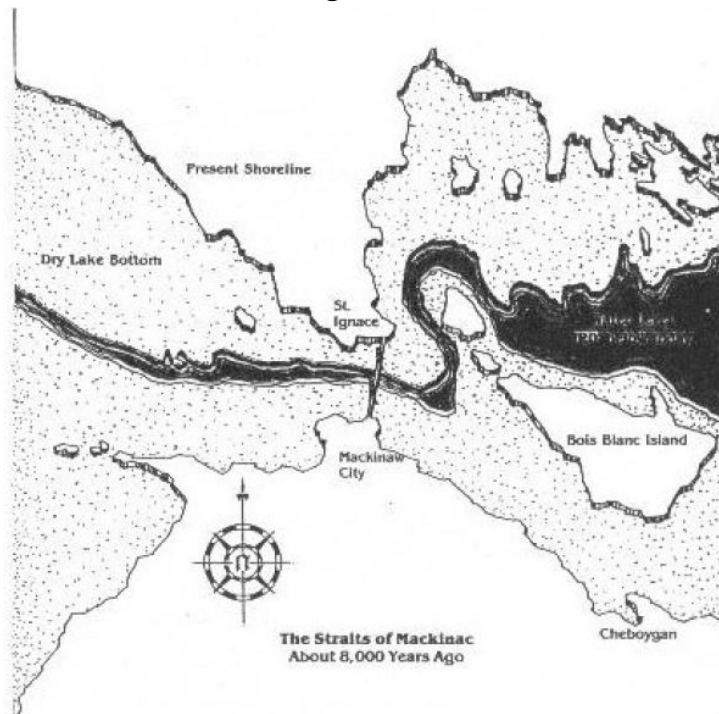
Table 3-1 Climate Summary Statistics Mackinac Island Area, 2016		
Category	Sault Ste Marie	Cheboygan
January average low temperature	8 deg. F	10 deg. F
January average high temperature	23 deg. F	27 deg. F
July average low temperature	54 deg. F	57 deg. F
July average high temperature	76 deg. F	78 deg. F
Average annual precipitation - rainfall	33.08 in.	30.82 in.
Average annual snowfall	124 in.	93 in.

Source: U.S. Climate Data, Accessed August 2016.

Geology

According to geologists, the bedrock underlying Mackinac Island was laid down during the Devonian age of the Paleozoic Era. Mackinac Island is part of a bowlshaped bedrock complex called the Michigan Basin. The bedrock on the Island is Garden Island Formation. The limestone features of the Island were formed approximately 350 million years ago. Mackinac Island first appeared as the last glacier retreated north of the straits about 15,000 years ago. About 9,000 years ago, (over a period of approximately 2,000 years), Lake Algonquin receded to reveal Mackinac Island. The “Island” during this epoch was the tip of the peninsula which extended through Round Island and Bois Blanc Island and connected to the mainland near Cheboygan (see **Figure 3-1**). During the Lake Nipissing period, approximately 4,000 years of relatively high precipitation caused the lake to gradually rise to a level about 50 feet higher than Lake Huron is today. The erosion sensitive nature of limestone, combined with the erosive power of the historic Great Lakes washed away softer materials, resulting in the magnificent limestone formations found on the Island, such as Skull Cave, Sugar Loaf, and Arch Rock.

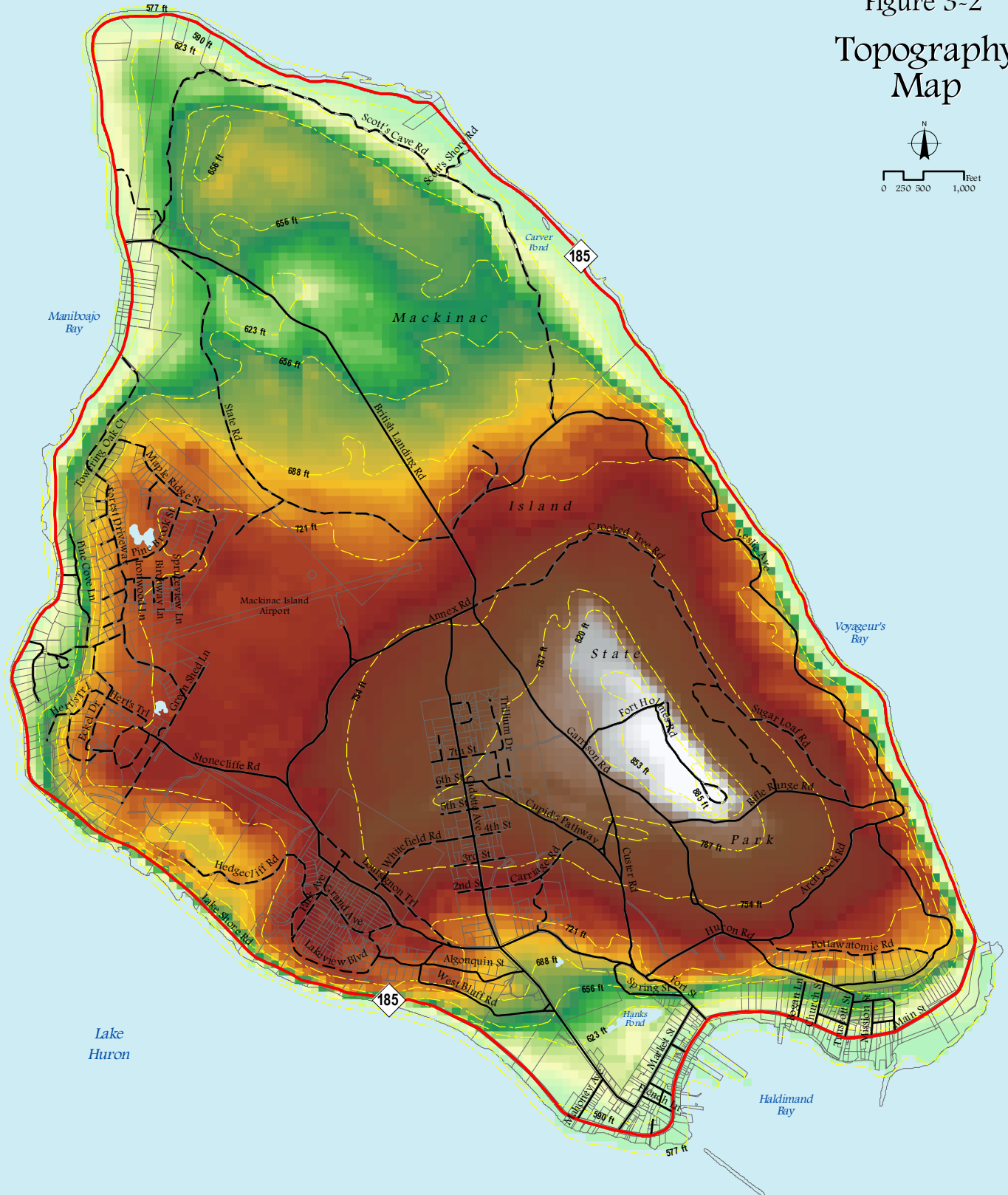
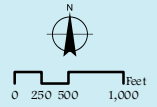
Figure 3-1



Topography

The topography of Mackinac Island is wedge shaped, with a high point of greater than 885 feet above sea level (see **Figure 3-2**). The low elevation, located along the shoreline, is about 590 feet, as compared to 577 feet for Lake Huron. The significant bluffs are primarily located on the southwest edge of the Island and along the eastern and southeastern edges of the Island. These bluff areas are comprised of the St. Ignace-Rock Outcrop Complex soil type, with slopes between 35 and 75 percent (see **Figure 3-3**). Round Island’s topography is similar to Mackinac Island, with steep slopes on the northeast side of the Island and a single high point with an elevation of approximately 680 feet.

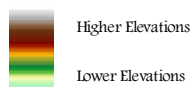
Figure 3-2
Topography
Map



City of
Mackinac Island
Mackinac County, Michigan

Master Plan

Digital Elevation Model



68 ft 10 Meter (33 Ft) Contour Lines

Property Line Source: Mackinac County Equalization;
Topography Source: Mackinac County Digital Elevation Model,
Michigan Geographic Data Library.

- State Highway
- Improved (Asphalt) Roads
- Unimproved (Gravel) Roads
- Property Lines
- Water Bodies

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Soils

One important determinant of land use is the soil's suitability for a variety of uses. The physical and engineering properties of a soil type should be considered before development occurs.

Figure 3-3 shows the distribution of soil types throughout Mackinac Island. St. Ignace silt loam (70B) and Alpena gravelly loam (124D) are the two most predominant soil types on the Island. While the soil association information presented in **Figure 3-3** and steep slope and hydric soils presented in **Figure 3-4** can be used as a general guide for management of large undeveloped tracts of land, it should not be used for development of specific sites. For specific sites, the Mackinac County Soil Survey should be consulted. The following is a brief description of the soil associations found on Mackinac Island. The soil survey for Mackinac County shows 14 different associations for Mackinac Island.

- 27B - Greylock Fine Sandy Loam: (1 to 6 percent slopes) - Nearly level and undulating areas on ground moraines, end moraines, and drumlins.
- 27D - Greylock Fine Sandy Loam: (6 to 15 percent slopes) - Gently rolling and rolling areas on ground moraines, end moraines, and drumlins.
- 33 - Pits, Sand and Gravel
- 35 - Histosols and Aquents, ponded: Depressions, beaver dam areas, and marshes.
- 36 - Markey and Carbondale Mucks: Depressions on ground moraines, lake plains, and outwash plains.
- 52A - Ingalls Fine Sand: (0 to 3 percent slopes) - Nearly level areas on lake plains and outwash plains.
- 61B - Paquin Sand: (0 to 6 percent slopes) - Nearly level and undulating areas on outwash plains and lake plains.
- 70B - St. Ignace Silt Loam: (0 to 6 percent slopes) - Nearly level and undulating areas on bedrock-controlled ground moraines and lake benches.
- 70D - St. Ignace Silt Loam: (6 to 15 percent slopes, rocky) - Gently rolling and rolling areas on bedrock-controlled ground moraines and lake benches.
- 70F - St. Ignace-Rock Outcrop Complex: (35 to 75 percent slopes) - Very steep areas on bedrock-controlled ground moraines and lake beaches.
- 116 - Udipsamments and Udorthents - (Nearly Level) - Flat areas that were excavated for borrow material, or cut and fill areas.
- 124D - Alpena Gravelly Loam: (0 to 15 percent) - Nearly level to rolling areas on glacial lake beach ridges.
- 163B - Esau-Zela Complex: (0 to 3 percent slopes) - Ridge-swale complex on beach ridges; Esau - on low ridges with slopes of 0 to 3 percent; Zela - in swales with slopes of 0 to 2 percent.
- 164A - Moltke Loam: (0 to 3 percent slopes) - Nearly level areas on lake plains and outwash plains.

Figure 3-3
Mackinac Island Soils Map

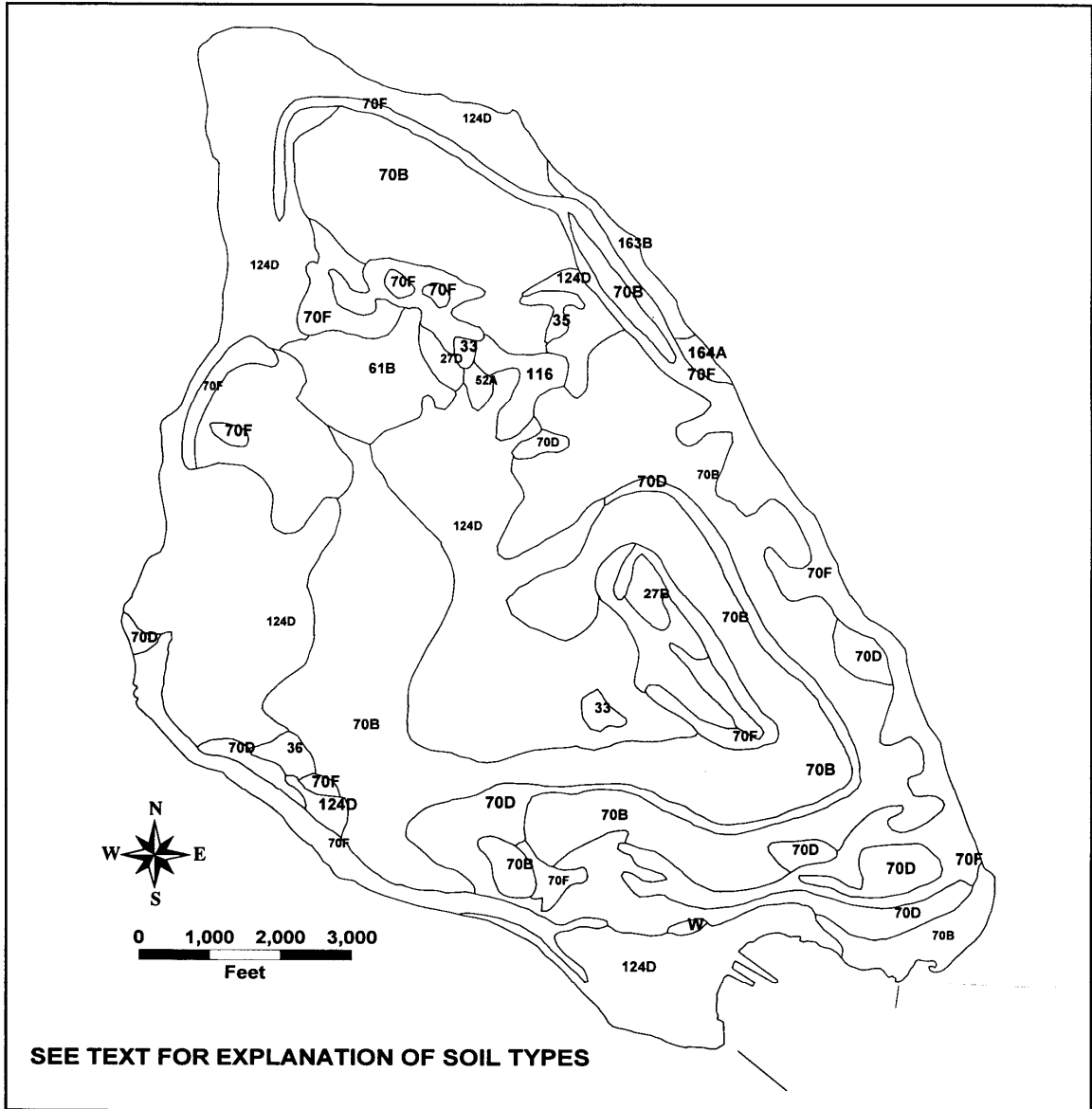
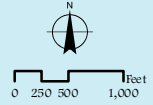


Figure 3-4
Hydric and Steep
Slope Soils Map



City of
Mackinac Island
Mackinac County, Michigan

Master Plan

- Non-Hydric Soils
- Hydric Soils
- Soils Not Classified
- Slopes Greater Than 10%

Property Line Source: Mackinac County Equalization;
Soils Source: SURGO Soil Data, USDA Natural Resource
Conservation Service; Slope Source: Derived from Digital
Elevation Model.

- State Highway
- Improved (Asphalt) Roads
- Unimproved (Gravel) Roads
- Property Lines
- Water Bodies

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Water Resources

Although the Island is located in the Lake Huron end of the Straits of Mackinac, there is very little surface water located on the Island. The only surface water visible on the United States Geological Survey topographical maps is a pond associated with Grand Hotel Golf Course. Additionally, a small creek on the west side of the Island, Brown's Brook, is fed by underground springs and flows year-round. There are a number of seeps with water trickling out of the limestone slopes cut on the east and west sides of the island. A small spring also feeds into Croghan Water on the Northwest side of the Island.

The water quality surrounding the Island is considered excellent. The lake water is the source for all drinking water which is filtered for use on the Island (see Chapter 5 – Community Facilities, Services and Transportation).

Wetlands

Wetlands are unique and diverse ecosystems where water is found, either on the surface or near the surface, at various times during the year. These areas often contain poorly drained soils which support water-loving vegetation. Wetlands are also referred to as marshes, swamps or fens. Residents of Michigan are becoming increasingly aware of the value of wetlands. Beyond aesthetic value, wetlands protect the water quality of lakes and streams by filtering polluting nutrients, organic chemicals, and toxic heavy metals. Wetlands are closely related to high groundwater tables and serve to discharge or recharge aquifers.

Residents of Michigan are becoming increasingly aware of the value of wetlands. Beyond aesthetic value, wetlands protect the water quality of lakes and streams by filtering polluting nutrients, organic chemicals, and toxic heavy metals.

Croghan Water is an important marsh, located at the north central portion of the Island, along British Landing Road. This area is a natural drainage area for rain and snow melt water. It is also fed by underground springs, which protect it from severe wet and dry cycles.

Additionally, two wetlands are shown on the Soils Map (**Figure 3-3**). An emergent wetland is located along the shore on the east side of the Island, approximately one third of a mile south of the Wildflower Trail. This wetland (Carver Pond), a calcareous fen, referred to locally as Lone Lake, is dominated by herbaceous hydrophytic plants. A shrub/scrub wetland is located on the west side of the Island, northwest of Devil's Kitchen, and is dominated by woody vegetation less than six meters tall. Another wetland area borders Brown's Brook, especially near the mouth. There are also some less conspicuous wetland areas on both the east and west sides of the island.

Part 303 (Wetlands Protection) of Michigan's Natural Resources and Environmental Protection Act (P.A. 451 of 1994) defines wetlands as "land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation

or aquatic life, and is commonly referred to as a bog, swamp, or marsh." The act further specifies State jurisdiction depends on proximity to lake, stream, pond, or Great Lake, and/or having a direct hydrological relationship with it. Wetlands that meet the statute criteria are considered regulated and require a permit before draining, filling, dredging, or construction in a wetland.

Woodlands and Flora

The Island provides a variety of habitats and supports a broad diversity of plant species. Island habitats include the northern mixed hardwood forests, upland conifers, lowland conifers, meadows, beaches and marshes. The forest types briefly discussed in this section are also included in Chapter 4 - Existing Land Use, and mapped on the Existing Land Use Map (**Figure 4-2**). Northern hardwoods are the predominant forest type on the Island, which includes sugar maple, beech, basswood, and red oak. The other forest types include upland conifers, such as white-cedar, white spruce, balsam fir, white pine, red pine, and hemlock. The lowland conifers include northern white-cedar, balsam fir, white spruce, eastern larch, and paper birch. A belt of predominantly northern white-cedar surrounds the Island, as is typical of islands in the Western Great Lakes.

Mackinac Island is located in a floral transition zone, between the boreal forests of the north, and the mixed hardwoods further south. The Island supports over 600 species of plants. A 1995 study of the Island flora found some previously resident native species missing, and many new introduced species.² The State of Michigan recognizes rare plants and classifies them according to the level of protection granted: endangered, threatened, or special concern. Some of the protected plants found on the Island include all the orchids, some ground pines (*Lycopodium* species), and Pitcher's Thistle. Additionally, the Dwarf Lake Iris (*Iris lacustris*), a State threatened species, is no longer found in the wild on the Island. One plant listed as rare is the Twisted Whitlow Grass (*Draba arabisans* Michaux), which grows on large boulders and outcrops of limestone. Mackinac is one of only four counties in Michigan to have this plant.

Approximately 28 percent of the plant species on the Island are introduced species. Case in point is Norway Maples, which have been brought to the Island over the years and planted as shade trees in yards and along streets. Now, this nonnative species has established itself throughout the Island and is out-competing many of the native trees. Left unchecked, the aggressive Norway Maple may someday replace the native Sugar Maple as the dominant hardwood tree on the Island. In the last few years, great strides have been made in removing them from State Park land, and individuals on private land are being encouraged to have them removed. Care should be taken to protect native flora and to eradicate exotic plants on the Island such as the following:

- Japanese Knotweed (*Polygonum cuspidata*)
- Phragmites (*Phragmites australis*)
- Common St. John's Wort (*Hypericum perforatum*)
- Wall Lettuce (*Lactuca muralis*)

² Martin, Patricia L., A Floristic Study of the Vascular Plants of Mackinac Island, Michigan, Masters Thesis, Central Michigan University, 1995.

- Golden Lungwort/Wall Hawkweed (*Hieracium murorum*)
- Purple Loosestrife (*Lythrum salicaria*)
- Black Spotted Star Thistle/Spotted Napweed (*Centaurea maculosa*)
- Periwinkle/Myrtle (*Vinca minor*)
- Garlic Mustard (*Alliaria petiolata*)
- Japanese Knotweed (*Fallopia japonica*)
- Wild Parsnip (*Pastinaca sativa*)
- Common Buckthorn (*Rhamnus cathartica*)
- Glossy Buckthorn (*Rhamnus frangula*)
- Crown Vetch (*Securigera varia*)

In addition to invasive species issues, our woodlands face threats from diseases. Beech Bark blight is killing the American Beeches on the Island and will probably claim 85 to 95 percent of these trees. Spruce bud worm is also damaging the White Spruce and Balsam Fir populations. Mackinac State Historic Parks has a checklist of wildflowers found on Mackinac Island, organized by family and specifies which species are introduced. A copy of this list is included in **Appendix B**.

Wildlife and Fish

The wildlife species found on the Island are typically smaller mammals, including squirrels, chipmunks, hares, raccoons, minks, river otters, beaver, coyote, fox and bats, our once most populous mammal. Unfortunately, the bat population has diminished lately due to the presence of White-nose syndrome first found in Mackinac County in the winter of 2013-2014. The disease is caused by the fungus *Pseudogymnoascus destructans*, which colonizes the bat's skin and usually results in death. It is estimated that 90 to 95 percent of the Little Brown Bat population has already been lost. During the winter, when the Straits of Mackinac is frozen, other larger mammals occasionally cross the ice from the mainland or neighboring islands. These can include wolf and white tail deer. Due to the significant influx of summer tourists and the limited amount of wilderness area, very few larger mammals remain on the Island year round. Like the non-native plants introduced to the Island, two non-native mammals were recently introduced to the Island and are now prolific. Gray squirrels were introduced in the 1970s at Fort Holmes, and eastern cottontails were introduced as recently as the 1990s.

A variety of bird species can be viewed on Mackinac Island, including species that reside on the Island year-round, summer breeding and nesting species, and those that stop briefly during migratory flights. The year-round permanent species include: Chickadees, Nuthatch, and Purple Finch. The summer breeding species include: American Robin, the Yellow Warbler, Black Throated Green Warbler, Indigo Bunting, Ovenbird, American Redstart, Chimney Swift, and many others. Mackinac Island provides the appropriate habitats to support five species of eastern swallows during the summer. Birds that are occasionally spotted on the Island include the Broadwing Hawk, Osprey, and Great Gray Owl. Mackinac is on the flyway for migrating hawks and eagles. Thousands pass over every spring and fall.

Mackinac Island State Historic Parks has a checklist of the bird species found on Mackinac Island. This checklist is included in **Appendix B**.

Fishing in the Straits area has been a significant part of the Island's history. Mackinac Island was one of the earliest fisheries in the upper Great Lakes. At the peak, in the middle part of the nineteenth century, the Island exported an estimated 25,000 barrels of fish annually. Within the Straits, there are perch, small mouth bass, pike, walleye, whitefish, lake trout, brown trout, and Chinook salmon.

Fishing in the Straits area has been a significant part of the Island's history. Mackinac Island was one of the earliest fisheries in the upper Great Lakes. At the peak, in the middle part of the nineteenth century, the Island exported an estimated 25,000 barrels of fish annually.

Although the Michigan Department of Natural Resources (MDNR) does not stock the Straits of Mackinac, there are some other stocking programs around the area that may influence the fishing around the Island. The local tribe of Native Americans is stocking one half million Chinook salmon at St. Martin's Bay annually. The MDNR also stocks Chinook salmon and brown trout at Detour. Today fishing from the Island is primarily recreational, with a few companies providing charter fishing excursions in the Straits area. The predominant fish caught is the King Salmon and the season is best during June, July, and early August.

Sites of Environmental Contamination and Concerns

Part 201 (Environmental Remediation) of the Natural Resources and Environmental Protection Act (PA 451 of 1994), as amended, provides for the identification, evaluation, and risk assessment of sites of environmental contamination in Michigan. The Remediation and Redevelopment Division (RRD) of the Michigan Department of Environmental Quality (DEQ) is charged with administering the law. A site of environmental contamination is identified by RRD as "a location at which contamination of soil, groundwater, surface water, air, other environmental resource is confirmed, or where there is potential for contamination of resources due to site conditions, site use, or management practices."

The RRD maintains a database on the agency's website of environmentally contaminated sites by county, showing the sites by name, pollutant(s), and site status. The current list (August 2016) identifies two sites on Mackinac Island which qualify as a contaminated site per Part 201. One is the Mackinac Island Sanitary Landfill (Facility ID# 49000008). The other is the Mackinac Hotel (Facility ID# 49000007), currently Mission Point Resort. The contamination at this site is due to a release of heating oil which occurred in the late 1970s as a result of overfilling the tank. Much of the oil was recovered shortly after the spill.

The current RRD list (August 2016) also includes one site of environmental contamination which qualified as a result of a Baseline Environmental Assessment (BEA) prepared by a new or prospective property owner and disclosed to the DEQ pursuant to Part 201. This one site is located at 6309-66 Main Street and 6550 Wendell Street (BEA# 201500585).

A second list for Leaking Underground Storage Tanks (LUST) is also maintained by the RRD and is governed by Part 213 of the Natural Resources and Environmental Protection Act (PA 451 of 1994), as amended. The purpose of the program is to provide remedies for sites posing a threat to the public health, safety, or welfare, or to the environment, regardless of whether the release or threat of release is of a regulated substance. LUSTs are those contaminated sites with leaking petroleum products from underground tanks.

- An Open LUST site means a location where a release has occurred from an underground storage tank system, and where corrective actions have not been completed to meet the appropriate land use criteria. An Open LUST site may have more than one confirmed release.
- A Closed LUST site means a location where a release has occurred from an underground storage tank system, and where corrective actions have been completed to meet the appropriate land use criteria. In accordance with Section 21315(1) of Part 213, the DEQ may audit a closure report, wherein the results of corrective actions are documented, up to six months after receipt of the closure report. This audit window may result in a confirmed release(s) being reopened during the six-month time frame following receipt of a closure report if deficiencies are noted.

No Open LUST sites are listed for Mackinac Island on the RRD web database as of April 2016. Four Closed LUST site are listed for Mackinac Island on the RRD web database as of April 2016. These facilities are listed below:

- Beaver Dock (Site ID# 00035783)
- Grand Hotel (Site ID# 00038991)
- Mackinac Island State Park (Site ID# 00014647)
- Union Terminal Pier Inc. (Site ID# 00003237)

Of particular environmental concern is the 63 year old Enbridge Line 5, a major oil pipeline in the Enbridge Lakehead System, which conveys petroleum from western Canada to eastern Canada via the Great Lakes states. Line 5 is particularly notable for passing under the Straits of Mackinac. Public concerns have focused on the risk of a spill under the Straits of Mackinac, the difficulty of controlling any spill that might occur, and the impact such a spill would have on Mackinac Island. According to Enbridge, the pipes under the straits have never leaked, are monitored 24 hours a day, and are regularly inspected by underwater autonomous vehicles. However, there have been numerous spills elsewhere in Michigan from Enbridge pipelines, including a major Line 5 spill at Crystal Falls in 1999, as well as the 2010 Kalamazoo River oil spill on Line 6.

Surface Water Discharge Permits

All point source discharges into surface waters are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit, which is issued by the Michigan Water Resources Commission upon recommendation by DEQ, Surface Water Quality Division. Permit requirements generally address discharge limitations, effluent characteristics, monitoring and reporting requirements, along with facility management requirements. The wastewater treatment plant and water filtration plant are the only operations on the Island that currently hold point source discharge permits.

Air Quality

Air Quality is monitored by the Air Quality Division of the DEQ. Standards have been established as acceptable levels of discharge for any of the following air pollutants: particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and trace metals. These pollutants are monitored on a continuing basis at selected locations around the state. Monitoring in recent years has shown the level of pollutants in the region to be within the established acceptable standards. Air discharge permits are required for businesses discharging more than the acceptable level of any of the regulated air pollutants. While there are discharge permits issued within Mackinac County, there are no permits issued to businesses located on Mackinac Island.

Chapter 4: Existing Land Use

Patterns of Land Ownership

The patterns of land ownership on Mackinac Island are complicated. At the most basic level, the Island is comprised of privately owned land, State owned land, and State owned land that is leased for private use. Round Island, which according to the City Charter is part of the City of Mackinac Island, is federally owned. On Mackinac Island, most State land is under the jurisdiction of the Mackinac Island State Park Commission, which has been making a concerted effort in recent years to clarify ownership issues resulting from decades of encroachment and lack of accurate survey information. The State Park has acquired some conservation and scenic easements on private property to limit development on those parcels and protect views, and has purchased additional properties. The State Park has also granted a number of specific easements for utility lines to traverse State property. The patterns of land ownership are depicted in **Figure 4-1**.

Existing Land Use Analysis

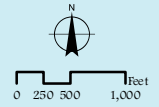
Categories and Methodology

The review of existing land use on the Island (as of the Fall/Winter of 2016-2017) was conducted by a small team of Mackinac Island citizens who were also part of the Master Plan Steering Committee. For each specific area of the Island, an initial identification of existing land use was checked by one or more residents of that particular area. A total of 10 existing land use categories were established for the analysis, as follows:

- Residential, Year-Round
- Residential, Seasonal
- Condominium Attached Structure
- Employee Housing
- Accommodations (For Rental to Guests)
- Commercial
- Institutional
- Museum
- Recreation
- Vacant Land/Rights-of-Way

Additionally, a study of the use of private barns was conducted; however, private barn is not considered an existing land use category. An Island-wide existing land use map (**Figure 4-2**) illustrates the distribution of existing land use for each individual property. Several existing land use maps have been prepared at a larger scale for specified areas of the Island (**Figures 4-3 through 4-6**), including Downtown, the East End, Harrisonville, and Stonecliffe.

Figure 4-1
Property
Ownership Map



City of
Mackinac Island
Mackinac County, Michigan

Master Plan

- Private Land
- State Land
- State Land Leased for Private Use

Property Line Source: Mackinac County Equalization;
Ownership Source: City of Mackinac Island Master Plan (1999)

- State Highway
- Improved (Asphalt) Roads
- Unimproved (Gravel) Roads
- Property Lines
- Water Bodies

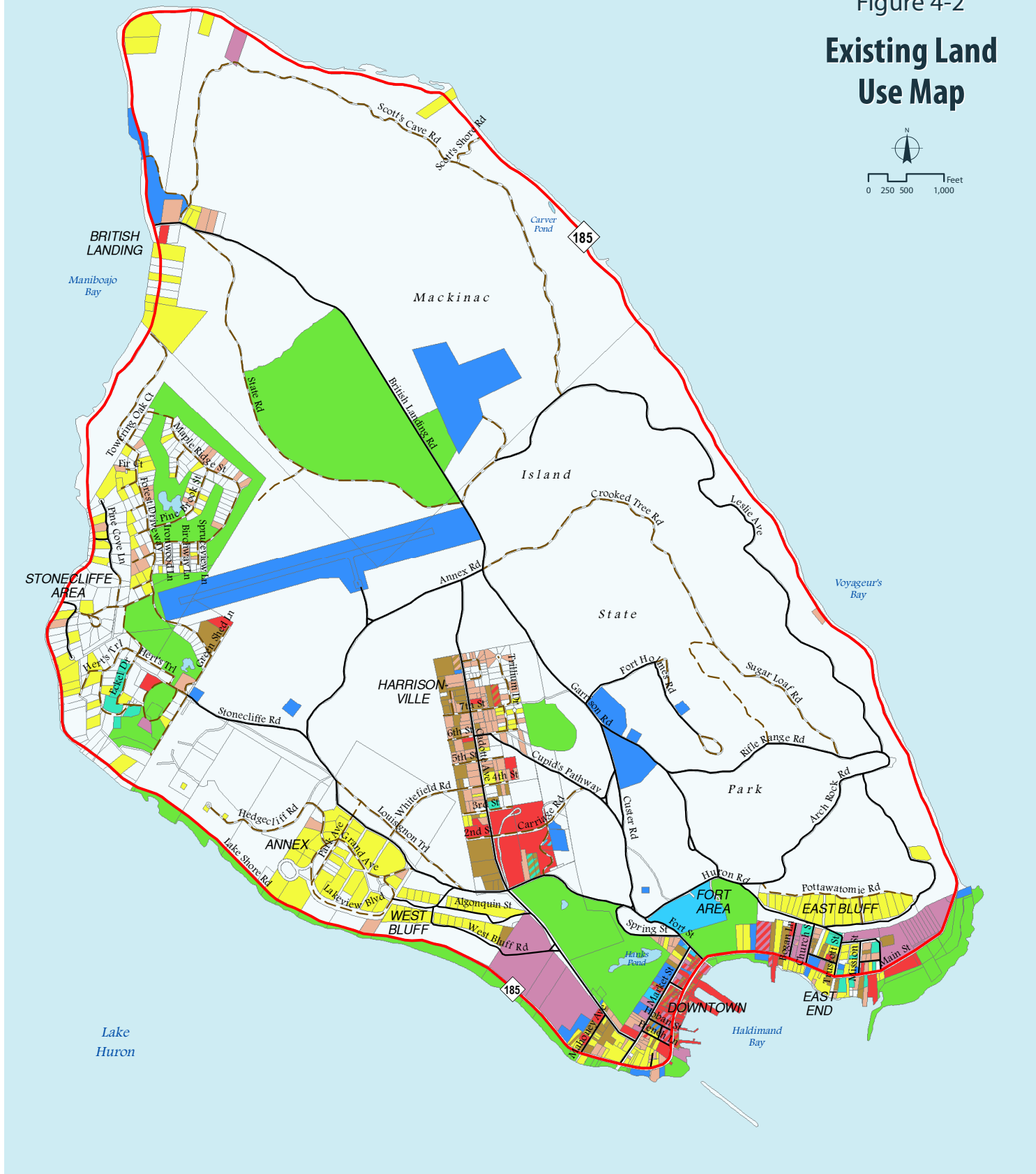
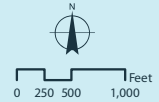
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Figure 4-2

Existing Land Use Map



City of
Mackinac Island
Mackinac County, Michigan

Master Plan

Existing Land Use Categories

- Residential, Year-Round
- Residential, Seasonal
- Condominium Attached Structure
- Employee Housing
- Accommodations (For Rental to Guests)
- Commercial

- Institutional
- Museum
- Recreation
- Vacant Land/Rights-of-Way

- State Highway
- Improved (Asphalt) Roads
- Unimproved (Gravel) Roads
- Property Lines
- Water Bodies

Existing Land Use Source: City of Mackinac Island, 2017;

May 25, 2018



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Figure 4-3 Existing Land Use Map: Downtown



Existing Land Use Categories

- Residential, Year-Round
- Residential, Seasonal
- Condominium Attached Structure
- Employee Housing
- Accommodations (For Rental to Guests)
- Commercial

- Institutional
- Museum
- Recreation
- Vacant Land/Rights-of-Way

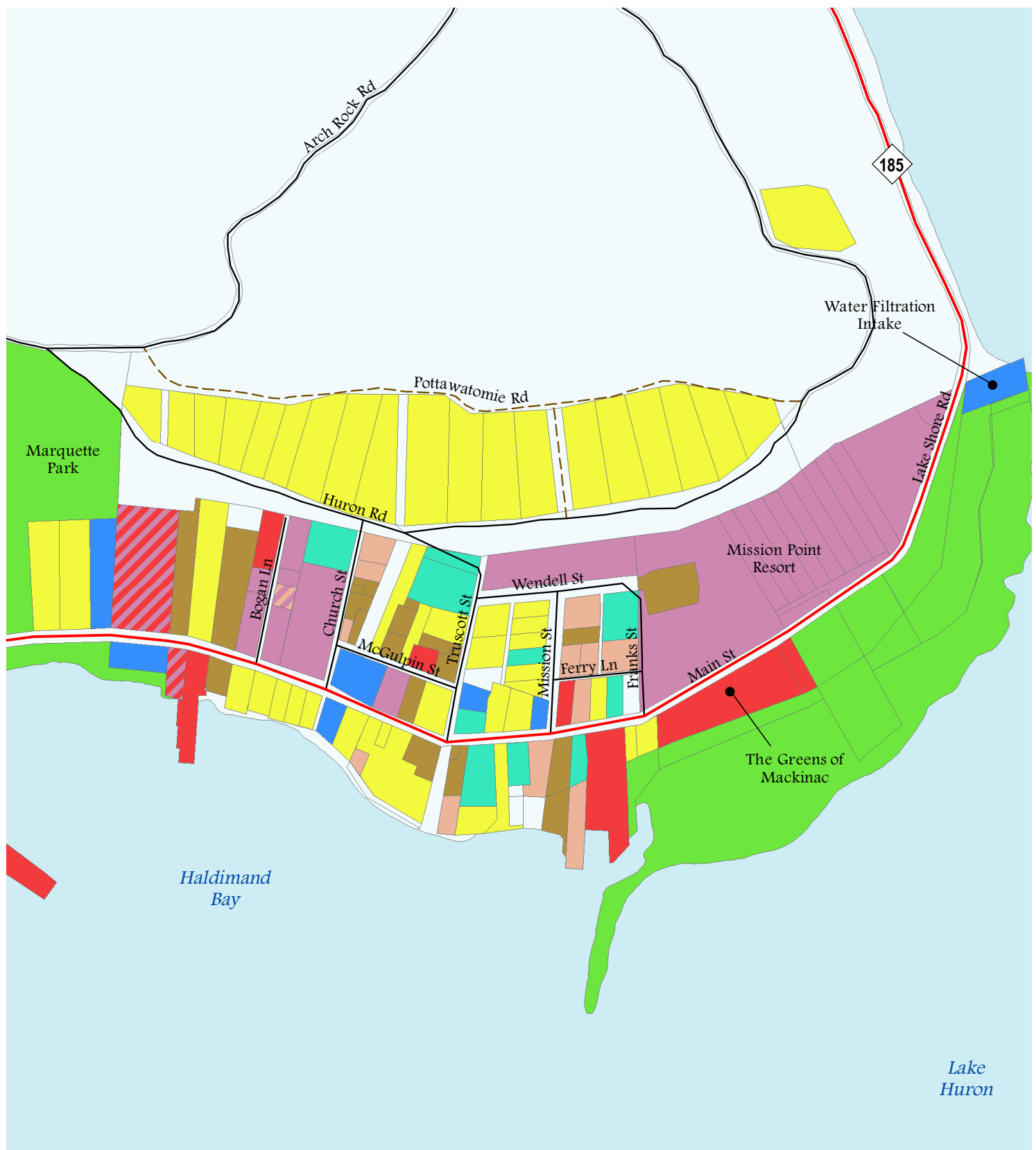
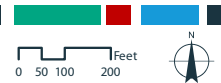
Existing Land Use Source: City of Mackinac Island, 2017;

- State Highway
- Improved (Asphalt) Roads
- Unimproved (Gravel) Roads
- Property Lines
- Water Bodies

May 25, 2018

Figure 4-4

Existing Land Use Map: East End



City of
Mackinac Island
Mackinac County, Michigan

Master Plan

Existing Land Use Categories

- Residential, Year-Round
- Residential, Seasonal
- Condominium Attached Structure
- Employee Housing
- Accommodations (For Rental to Guests)
- Commercial

- Institutional
- Museum
- Recreation
- Vacant Land/Rights-of-Way

Existing Land Use Source: City of Mackinac Island, 2017;

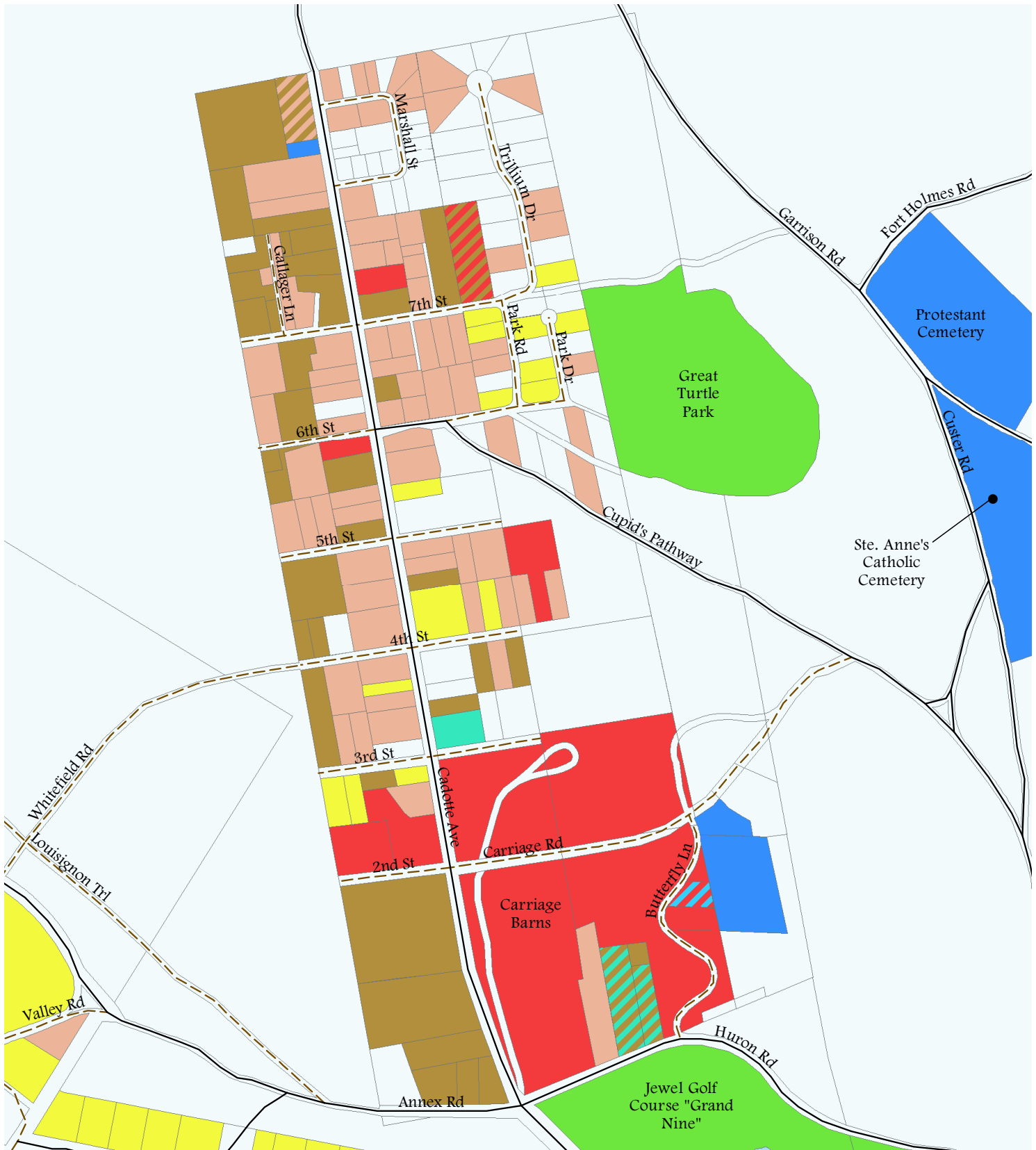
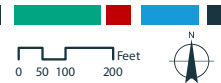
- State Highway
- Improved (Asphalt) Roads
- Unimproved (Gravel) Roads
- Property Lines
- Water Bodies

May 25, 2018

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Figure 4-5

Existing Land Use Map: Harrisonville



City of
Mackinac Island
Mackinac County, Michigan

Master Plan

Existing Land Use Categories

- Residential, Year-Round
- Residential, Seasonal
- Condominium Attached Structure
- Employee Housing
- Accommodations (For Rental to Guests)
- Commercial

- Institutional
- Museum
- Recreation
- Vacant Land/Rights-of-Way

- State Highway
- Improved (Asphalt) Roads
- Unimproved (Gravel) Roads
- Property Lines
- Water Bodies

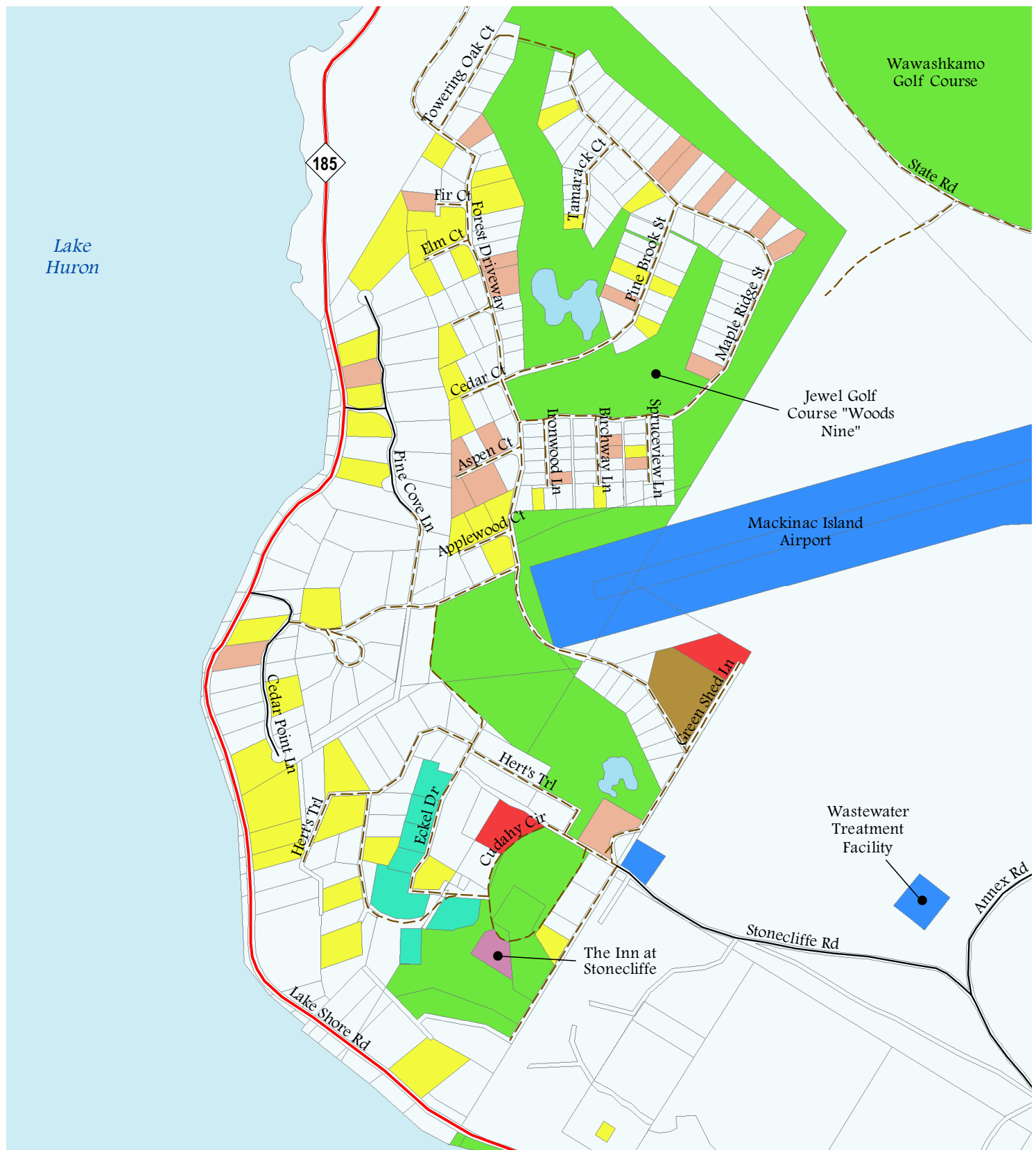
Existing Land Use Source: City of Mackinac Island, 2017;

May 25, 2018

WADE TRIM
271 West McCoy Rd
Gaylord, MI 49735
www.WadeTrim.com

Figure 4-6

Existing Land Use Map: Stonecliffe



City of
Mackinac Island
Mackinac County, Michigan

Master Plan

Existing Land Use Categories

- Residential, Year-Round
- Residential, Seasonal
- Condominium Attached Structure
- Employee Housing
- Accommodations (For Rental to Guests)
- Commercial

- Institutional
- Museum
- Recreation
- Vacant Land/Rights-of-Way

Existing Land Use Source: City of Mackinac Island, 2017;

- State Highway
- Improved (Asphalt) Roads
- Unimproved (Gravel) Roads
- Property Lines
- Water Bodies

May 25, 2018

WADE TRIM
271 West McCoy Rd
Gaylord, MI 49735
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A summary table (**Table 4-1**) lists the distribution and number of uses by land use type for each specified area and subsection of the Island. The following areas and subsections are included in the summary table:

- Downtown, with 4 subsections:
 - Mackinac Island School to Market Street
 - Market Street to Hoban Street
 - Hoban Street to Astor Street
 - Astor Street to Marquette Park
- East End, with 3 subsections:
 - Marquette Park to Church Street
 - Church Street to Truscott Street
 - Truscott Street to Mission Point Resort
- Harrisonville, with 5 subsections:
 - Four Corners (Annex/Huron Roads) to 3rd Street
 - 3rd Street to 5th Street
 - 5th Street to 7th Street
 - North of 7th Street
 - Trillium Heights (Trillium Drive)
- Bluffs, British Landing, and the Lakeshore, with 6 subsections:
 - East Bluff
 - Fort Area
 - West Bluff
 - Annex
 - British Landing
 - Beyond British Landing, along Lake Shore Road to Mission Point Resort
- Stonecliffe, with 8 subsections:
 - Stonecliffe Area & Condos
 - Stonecliffe Manor I
 - Stonecliffe Manor II
 - Stonecliffe Manor III
 - Stonecliffe Manor IV
 - Stonecliffe Manor V
 - Woodbluff
 - Stonebrook

The following methodology was utilized in the identification of existing land use:

- If a property/structure had two uses (for example, a property containing a structure with commercial on the ground floor and employee housing above), it was shown on the existing land use map with a hatch pattern to represent both existing land use categories. Within the summary table, the use was listed in both existing land use categories (note: this means that the total number of uses listed in the table for a particular area may exceed the actual number of properties in that area).
- A residential property/structure which could be used year-round but was not so used in the Fall/Winter of 2016-2017 was counted as seasonal.
- It is understood that some of the “condominium attached structures” have units which can be used, and in some cases are used, year-round. However, no effort was made to determine how many units in each such condominium structure were used year-round or seasonal.
- In the summary table, employee housing structures were subdivided into “small” (3 or fewer units) and “large” (more than 3 units). (Please note that the small or large distinction is based on the number of units, not the number of occupants.)
- A property/structure which was vacant but had plans submitted to and approved by the Planning Commission as of the Fall/Winter of 2016-2017 was counted as its approved use.
- In the summary table, buildings not in one of the identified areas of the island were included in the counts of the nearest counted area. As examples, the Wawashkamo area buildings are included in the British Landing area, and the airport and waste water plant’s buildings are in the Stonecliffe area.

Existing Land Use Analysis

The summary table of structures by existing land use, for each section and subsection of the Island, is presented as **Table 4-1**. A narrative describing existing land use on the Island is included below.

Residential, Year Round

In general, residential year-round homes are located in downtown, Harrisonville, and in the Stonecliffe areas, with a small number in the Annex and British Landing area.

Residential, Seasonal

Residential seasonal homes include houses that on Mackinac Island are called “cottages”, many of them over 100 years old. They are on both the East Bluff and West Bluff and in the Annex, with a few downtown. Some of them have converted a part of the cottage or barn into a winterized unit which can be used for occasional winter visits.

Table 4-1
Existing Land Use
Mackinac Island, Fall/Winter 2016-2017

Area of Town	Number of Uses by Existing Land Use Category										Vacant Land
	Residential, Year-Round	Residential, Seasonal	Condominium Attached Structure	Employee Housing		Accommodations (For Rental to Guests)	Commercial	Institutional	Museum	Totals Uses	
				(S - L)	Total						
DOWNTOWN											
Mackinac Island School to Market Street	5	18	0	(7 - 6)	13	1	3	2	0		0
Market Street to Hoban Street	10	15	0	(4 - 4)	8	4	5	3	0		1
Hoban Street to Astor Street	3	20	0	(18 - 2)	20	9	42	3	2		0
Astor Street to Marquette Park	4	5	0	(15 - 2)	17	6	21	6	2		1
Totals	22	58	0	n/a	58	20	71	14	4	247	2
EAST END											
Marquette Park to Church Street	2	5	1	(1 - 4)	5	8	6	2	0		0
Church Street to Truscott Street	4	19	1	(8 - 3)	11	1	1	2	0		1
Truscott Street to Mission Point Resort	10	13	7	(2 - 5)	7	2	4	2	1		2
Totals	16	37	9	n/a	23	11	11	6	1	114	3
HARRISONVILLE											
Four Corners to 3rd Street	2	2	1	(6 - 5)	11	0	16	2	1		0
3rd Street to 5th Street	17	3	1	(8 - 5)	13	0	2	0	0		5
5th Street to 7th Street	25	2	1	(10 - 3)	13	0	1	0	0		3
North of 7th Street	22	3	0	(13 - 11)	24	0	2	0	0		16
Subtotal	66	10	3	n/a	61	0	21	2	1	164	24
Trillium Heights	12	10	0	(3 - 0)	3	0	0	0	0		26
Total	78	20	3	n/a	64	0	21	2	1	189	50
BLUFFS, BRITISH LANDING AND THE LAKESHORE											
East Bluff	0	20	0	(0 - 0)	0	0	0	0	0		0
Fort Area	3	6	0	(0 - 0)	0	0	0	2	2		0
West Bluff	0	12	0	(1 - 0)	1	1	3	0	0		0
Annex	3	25	0	(0 - 0)	0	0	0	0	0		3
British Landing	4	14	0	(0 - 0)	0	0	1	11	0		6
Beyond British Landing, along Lake Shore Road to Mission Point Resort	2	5	0	(0 - 0)	0	1	0	1	0		0
Total	10	77	0	n/a	1	1	4	13	2	108	9
STONECLIFF											
Stonecliff Area & Condos	3	7	6	(0 - 2)	2	2	2	1	0		0
Stonecliff Manor I	4	3	0	(0 - 0)	0	0	0	0	0		33
Stonecliff Manor II	5	3	0	(0 - 0)	0	0	0	0	0		24
Stonecliff Manor III	2	3	0	(0 - 0)	0	0	0	0	0		27
Stonecliff Manor IV	3	1	0	(0 - 0)	0	0	0	0	0		17
Stonecliff Manor V	0	0	0	(0 - 0)	0	0	0	0	0		37
Woodbluff	7	9	0	(1 - 0)	1	0	0	0	0		18
Stonebrook	3	11	0	(0 - 0)	0	0	0	0	0		17
Totals	27	37	6	n/a	3	2	2	1	0	78	173
ISLAND TOTALS	152	230	18	n/a	149	34	109	36	8	736	237

In the seasonal residential category, there are also homes that have been built so they can be used year-round (some were so used in recent years) and the owners have chosen to leave the Island typically in the fall/winter seasons. This is true for some of the houses identified as “seasonal” in Harrisonville, especially Trillium Heights, or in the Stonecliffe area.

Condominium Attached Structure

Condominium attached structures have virtually all been built to be usable year-round, but the majority of the units are not so used, being in actual use during the extended season from May to the end of October, both by the owner and rented to others. These condominium attached structures are found in downtown, on the south side of Harrisonville, and in the Stonecliffe area.

Employee Housing

Employee housing is found downtown, in Harrisonville, and in the Stonecliffe area. The structures are converted from former family houses, from former hotels, or are structures purposely built to house employees in single rooms or in units for two or more individuals, owned by one of the Island’s employers. Some have kitchen and laundry facilities, and some do not. Their primary occupancy is during “the tourist season” from early May to the end of October.

Accommodations (For Rental to Guests)

Accommodations for rental to guests range from the two large hotels, the Grand and Mission Point, through mid-sized hotels, to smaller hotels, and include bed & breakfasts. They are located in the downtown area with one mid-sized hotel at Stonecliffe. They are all open by the end of May and closed during and by the end of October, while some of the bed & breakfasts are open for guests during the winter months. The Island has an estimated 1,544 beds available for the many tourists who come for one or more nights (this figure consists of about 1,500 beds as of the summer of 2017, to be augmented by 44 beds under construction in 2017-2018). On a number of nights in mid-summer, there is not a bed to be had on the Island.

Commercial

Commercial uses of land include restaurants, gift shops, snack shops, fudge stores, and offices for arranging carriage tours and rental of bikes and horses. There are two year-round banks, a post office and a grocery store. These uses are found on downtown’s Main Street, primarily between French Lane and Fort Street, with occasional isolated commercial uses on the east end of Main Street, in Harrisonville, at Stonecliffe, and at British Landing. While most horses leave at the end of the tourist season, several teams remain on the Island all winter, so that horse-drawn taxis and wagons for deliveries and trash removal can continue year-round.

Institutional

Institutional uses of structures on the Island include the City office, Mackinac Island Medical Center, Police and Fire Department offices and buildings, the Library, the School, a City museum, and several churches. These institutional uses are all in the downtown area. The State Park also operates offices and work buildings in the downtown area, with seven buildings downtown (five museums, one employee housing structure and a visitor’s center). The airport with its associated buildings, the water

intake/treatment plant, the solid waste and waste water processing areas and buildings, two reservoirs (the lower reservoir and upper reservoir), and three cemeteries, are all located on State Park owned land in the interior of the Island. Near the Fort is a second fire station, and a facility belonging to the electric cooperative that serves the Island (these facilities are also situated on State Park owned land). Other institutional uses on State Park owned land include the State of Michigan's dock at British Landing.

Recreation

A recreation land use category is included on the existing land use maps. This land use category encompasses public or private recreation-related lands on the Island, including three golf courses (Wawashkamo, Jewel "Woods Nine", and Jewel "Grand Nine"), Marquette Park, Great Turtle Park, and the Mackinac Island State Harbor. Some of these recreational lands are privately owned while some are owned by the State Park. As these lands generally do not contain principal structures, the recreation category is not included in **Table 4-1**.

Vacant Land/Rights-of-Way

Lands which are currently vacant or unoccupied, as well as road rights-of-way, are classified into this category. The majority of the State Park owned land on the Island is shown as this category on the existing land use map, reflective of the undeveloped nature of the land. Numerous vacant, privately-owned lots are interspersed within subdivisions amongst otherwise built-up areas, such as in Trillium Heights, British Landing, and the Stonecliffe area (including Woodbluff and Stonebrook).

Private Barns

An inventory of private barns was also conducted as part of the existing land use inventory. Because private barns are accessory to principal uses, such as dwellings, they are not listed in **Table 4-1**. However, it was important to conduct an inventory of them because of the Island's unique horse culture and traditions. A private barn is defined as a structure in which one or more horses were recently stabled. In addition, there are 23 barns that, with some restoration, including clearing out the inevitable "stuff" which accumulates in otherwise empty barns, could return to stabling a horse. In total, there are 44 actual or potential private barns on the Island, located in the following areas. (The first number is the current and recent use for one or more horses, the second number is the potential and plausible additional usable barns.)

- Harrisonville: 4 – 1
- East Bluff: 5 – 7
- Fort Area: 0 – 3
- West Bluff: 6 – 4
- Annex: 3 – 7
- British Landing: 1 – 0
- Beyond British Landing, on Lake Shore Road to Mission Point Resort: 2 – 1

Chapter 5: Community Services, Facilities, and Transportation

Water Distribution and Sewage Collection

Municipal water and sewer systems, maintained by the Department of Public Works (DPW), serve the majority of the water and sewer needs in the downtown area and other developed portions of the Island. While most of the State Park land is not served by water and sewer, many of the support facilities and service lines run through State Park property. The DPW has a 40-year franchise agreement (expires 2033) with the Mackinac Island State Park Commission to erect and maintain facilities and distribution systems for water supply and sewage treatment and disposal on Mackinac Island. DPW facilities on State Park property include the water reservoirs, Solid Waste Handling Facility, and Waste Water Treatment Plant.

Sewer service in Harrisonville is limited. The public sewer system does not currently serve the older single family dwellings and residential developments in Harrisonville, although the newer housing developments in the area such as Edgewood and Woodville Court and Iroquois employee housing have installed private sewer mains which connect to the municipal system. Likewise, many of the newer residential developments have been required to install sewer mains which meet the City's specifications and connect to the municipal system. A few scattered single family residences, located on the northern and eastern portions of the Island, either on leased State Park land or private parcels surrounded by State Park land, are not served by municipal water or sewer.

Water System

The improved and expanded Water Filtration Plant went on line in late May, 1998. The system takes its supply from Lake Huron through a submerged intake pipe on the east side of the Island. As of 2017, the rated capacity of the water treatment plant is 2.88 million gallons per day (MGD); however, the firm capacity (capacity with one unit out of service) is 2.16 MGD. In 2016, peak summer day demand was estimated by the City's consulting engineer, Fishbeck, Thompson, Carr & Huber (FTC&H), to be 1.68 MGD. In 2007, improved filters were installed and the system was retrofitted with a new low pressure filtration system (CMF-L). This increased water production capacity by approximately 30%. The system's filters were replaced in 2016. The addition of one treatment unit within the existing water plant building would increase the system's firm capacity to 2.88 MGD. FTC&H recommends this expansion to ensure adequate treatment capacity and allow for reduced operating time and a resulting extension in the life of the membrane filters. Membrane filters are on an approximately 8 year replacement cycle, with a 5 year lifespan guaranteed by the manufacturer.

The City's consulting engineer recommends the expansion of capacity of the water treatment plant to 3.0 MGD (in excess of the estimated demand) to allow for reduced operating time and a resulting extension in the life of the

The water distribution system was improved in the early to mid-1980s, with almost complete replacement of water lines to address many of the deficiencies of the system and most water loss issues. After the lake water is treated, the water is pumped to the Fort Holmes Water Reservoir, which consists of an in-ground concrete tank located at a high point on the Island. This reservoir has a capacity of 1,000,000 gallons. A 250,000 gallon concrete, partially in-ground tank, located in the Fort Mackinac service area, serves the downtown area water district. Three pressure reduction valves feed water from the upper water district to the downtown area. An additional pressure reduction valve serves the Stonebrook development on the west side of the Island.

While the majority of the water distribution system is constructed of ductile iron pipe, a long section of cast iron piping runs from the Cadotte/ Annex Road intersection north through the Village to the airport terminal building, then west along the south side of the airport taxiway towards Stonecliffe Mansion. This pipeline is known to be improperly bedded, shallowly buried in places, and has been the source of multiple breaks. Plastic pipe has been used in lines running to British Landing and the Stonecliffe Condos. Improper fittings on the Stonecliffe Condo line has yielded, on average, one main break per year. Replacement of this line is currently scheduled to occur in 2018.

A total of about 140 fire hydrants throughout the system are maintained by the DPW. These are used in street washing, horse drawn street sweeping, as well as fire protection.

Leak surveys of the water system are conducted every other year by an outside firm in conjunction with the DPW.

A detailed assessment of DPW water assets can be found in the Water System Reliability Study released by FTC&H in January 2017.

Wastewater

The wastewater treatment facility, which is located near the center of the Island, has a rated capacity of 0.99 MGD. It was built in 1971, with expansions in 1984, 1992 and 2013. The main pumping station at Biddle Point has a firm capacity of 1,650 gallons per minute (GPM) and could prove to be a limiting factor in the future if demand increases significantly. There are four smaller pumping stations located at Mission Point, Park Avenue in the Annex, near the Airport, and near Stonebrook. All pump stations were recently evaluated and improvements are being planned. Additionally, newer developments have installed private sewer lines to DEQ specifications and the City has accepted responsibility for these lines.

In 2004, the City's consulting engineer, Fishbeck, Thompson, Carr & Huber (FTC&H), made recommendations for wastewater treatment plant capacity expansion based on the existing ratio of maximum day water usage to wastewater flow. FTC&H recommended converting the existing plant to Membrane Bioreactor technology by installing new membranes within the existing aeration tanks. FTC&H noted that this technology conversion would also eliminate processes that produce odor at the plant. Improvements were completed in 2013. FTC&H also recommended investigating a new and improved wastewater sludge handling process at the wastewater treatment plant that could reduce sludge solids requiring hauling by 70 percent. That project is currently being designed.

The present residential equivalency unit (REU) capacity in the wastewater system is approximately 30,000 gallons per day (GPD) or 90 REU's, assuming typical residential wastewater characteristics and flow patterns. The present value of a REU is 330 GPD, which is consistent with the 2011 Part 41 Permit Application for Wastewater System submitted to the Michigan Department of Environmental Quality (DEQ) prior to the recent improvements to the Wastewater Treatment Plant completed in 2013.

In 2017, a Wastewater Utilization Study was performed by the City's consulting engineer, which will give a more accurate determination of the remaining REU capacity.

Currently, there is a restricted build out plan in place for the wastewater system, limiting the number of new REU's issued per year on the Island to 10, on a "first come, first served" basis. These 10 REU's are allocated per year, as follows:

- 3 REU's reserved for residential
- 2 REU's reserved for change of use or small commercial
- 5 REU's open to residential or commercial

Unused residential REU's are to be reserved and tracked in a separate pool for residential use only. Additionally, there are reserves for the following:

- 9 REU's for future public use
- 175 REU's for already approved site condominiums

In 2017, a Wastewater Utilization Study was performed by Fishbeck, Thompson, Carr & Huber, which will give a more accurate determination of the remaining REU capacity. A final determination has not yet been made, however.

Stormwater

The stormwater collection system is in place in the downtown area and the Mission Area of the City of Mackinac Island. The downtown portion extends west to Mahoney Street. The nutrient load entering the system as debris and manure is minimized by the diligent street sweeping efforts conducted by both the City and the State Park. All portions of the stormwater collection system ultimately drain to Lake Huron.

Solid Waste

Solid waste is an especially important function for an island community, and as such, Mackinac Island has developed a state-of-the-art processing and handling operation. The composting program is considered a model program by other communities from around the State.

Residential and commercial pick-up is offered on the Island by Mackinac Island Service Company using horse drawn drays. The last landfill cell on the Island was closed and capped in 1993. The Island currently operates an aggressive recycling and composting program, which serves to minimize the amount of solid waste shipped off-island for landfill disposal. Three types of municipal solid waste (compostable, recyclable, and landfill) are collected and taken to the Solid Waste Handling Facility, where the different types of waste are processed and sorted. Approximately 85 percent of municipal solid waste collected annually is collected between June 1 and September 30 each year. Approximately 26 percent of this waste is recycled, roughly 24-25 percent is composted on the Island, and the remaining 49-50 percent ends up in an off-island landfill.

The City's composting program is considered a model program by other communities from around the State.

Construction debris, such as wood and drywall, is utilized in the composting process. The wood is separated for grinding once a year, and then the woodchips are mixed into the early stages of the compost process. Scrap metal, including discarded appliances, is now separated and periodically shipped off-island to a recycler. Much more metal than originally anticipated has been collected. The landfill solid waste collected on Mackinac Island is taken off-island and transported to a landfill in Dafer, Michigan. The recycling program is operated as source separated. Garbage and recyclable wastes are picked up daily from businesses during the summer season (May 1 – November 1) and curbside from residences weekly for garbage and every two weeks for recyclables. For the wintertime season (November 1 – May 1), pickup is twice weekly for commercial and weekly for residential. The City recycles three types of plastics, glass, magazines, tin, aluminum, styrofoam, and cardboard. The City collects newspaper, but due to the small volume and low market value, the City shreds the newspaper and uses it in the composting process.

The composting program takes yard waste, food and paper waste from restaurants, horse manure from street and stable cleaning. The process involves a number of mixing steps and moving the compost piles. The compost piles are aerated with the leachate collected for treatment. Finally, the material is screened, cured (aged), and ultimately tested by DEQ prior to being sold. This process allows for a considerable amount of the waste to be converted into usable material which is sold on the Island for lawn and garden areas as well as used on the landfill cells for additional cover. This material, once composted, is spread on top of the capped landfill cells. The current composting and recycling facility is meeting the existing needs and is adequate to meet the anticipated needs for the near future.

Other Utilities

Electric power is provided to Island residents, businesses, and the State Park by Cloverland Electric Cooperative of Dafer. The electricity is provided through lines from St Ignace located under Lake Huron. The electric service is provided throughout the developed portions of the Island via a combination of buried and overhead transmission lines. The reliability of the electric services has been improving, although the Island still experiences occasional short-term power outages. These occasional power outages support the need to have a sufficient number of full-time Island residents as

employees of the power company. In the winter of 2015-16, Cloverland Electric upgraded and buried lines in the downtown area.

The Island is provided with phone service by AT&T through copper and fiber optic cable. Cable television service is provided to Island businesses and residents by Lighthouse.net. Internet is provided mainly by Lighthouse.net and AT&T. Additionally, many on the Island utilize satellite systems for their television reception, which must meet certain Island and State Park regulations.

The Island does not have natural gas service. Rather, propane gas is delivered to the Island via barge in 100, 250 or 400 pound cylinders. Mackinac Island Service Company stores the cylinders at the coal dock awaiting end-user delivery. Roughly 50 commercial and residential customers use propane. For commercial customers, propane is typically used for cooking, while residential customers typically use propane for small gas heating units or for cooking alternative. The Service Company delivers propane cylinders by dolly or hand-pushed cart using certified installers for hazard prevention. Mission Point uses propane that is stored in two, 30,000 gallon propane tanks on their property, serviced by a propane delivery truck.

Most winter heating on the Island is served by electricity, while a few may heat or supplement with propane, fuel oil, wood pellets or wood.

Police, Fire, and Emergency Medical Services

The full time, year-round Island police force consists of a chief, two corporals, and two officers. During the summer, the staff is supplemented with six seasonal officers, and two traffic interns. The Michigan State Police assign two state troopers to the Island for 16 weeks in the summer. The Police Department operates a four-wheel drive police vehicle.

The Police Department offices are located downtown on the first floor of the old City Hall building on Market Street. A substation in Harrisonville is also utilized. This facility allows for an increased police presence and greater accessibility for the public in Harrisonville and is used for conducting interviews, writing reports, and has an outside phone that is a direct dial to emergency dispatch.

Since 2006, the Island has had a community-wide addressing system and is participating in the county-wide 911 emergency services.

The year-round Mackinac Island Fire Department currently has a roster of 22 certified volunteer paid firefighters. Fire equipment includes four fire trucks: Squad 1, Engine 1, and Ladder 1 and 2; as well as other rescue vehicles: Rescue 1 (4x4), Battalion Pickup Truck with Wildland Fire Pump, Water Rescue Raft, and Ice Rescue Catamaran. This equipment is stored at Fire Station #1 on Market and Fire Station #2 on Edison Road. The department is also equipped for ice and water rescue.

In 2015, the City of Mackinac Island was awarded a Federal Emergency Management Agency (FEMA) port security grant. This grant funded a \$500,000 custom 31 foot vessel constructed by SAFE Boats International in Bremerton, Washington, which created the Mackinac Marine Rescue Team (MMRT). The vessel arrived at the Straits of Mackinac in June of 2015. The MMRT is managed and operated by

members of the Mackinac Island community who are paid on call and trained to the United States Coast Guard small boat operators standards. MMRT assists all the Mackinac Island public safety agencies by providing a marine platform that works with the Mackinac Island Medical Center and Mackinac Island EMS to provide medical evacuations of critical patients requiring care off the Island. The vessel has firefighting capabilities to assist the Mackinac Island Fire Department and its mutual aid partners. Additionally, the team is trained to carry out hazardous materials screening and search and rescue missions in conjunction with the Mackinac County Sheriff Department, the United States Coast Guard, and other agencies. The vessel is operated from late April until early November each year based on the weather.

Emergency Medical Service (EMS) on the Island operates year-round and is provided under an agreement with Cheboygan Life Support Systems, a non-profit firm from Cheboygan. They are responsible for staffing, equipment, and vehicle maintenance and repair. Emergency medical technicians (EMT) are on call 24 hours per day.

The Mackinac Island Medical Center, affiliated with Mackinac Straits Health System in St. Ignace, provides year round emergency and primary care medicine to Island residents and visitors.

Staffing for both volunteer and paid emergency services personnel continues to be a concern in the community.

School

The Mackinac Island Public School serves grades pre-Kindergarten through twelfth grade, with enrollment for the 2015-2016 school year of approximately 75 students. The teacher to student ratio for the school is 1 to 8. The school passed a millage in 1998 to renovate a portion of the school and build an addition, including a new gymnasium, ADA compliant restrooms, one new classroom, existing heating system update, library enlargement and other minor projects. Additional (recent) upgrades are interactive white boards, 1 to 1 computers and LED lighting in classrooms. The school facility is used throughout the year for volleyball, basketball and community activities, and with the addition of the gymnasium, camps for summer events. There is updated playground and outdoor basketball court adjacent to the school. School students generally score above the state and national averages on standardized tests, with graduates continuing their education or entering the job market or armed services. Scholarships are offered to all high school graduates who qualify through Mackinac Island Community Foundation endowments and other school scholarship funds.

Recreation

The City of Mackinac Island has a Recreation Master Plan on-file with the Michigan Department of Natural Resources. The current plan was adopted in December 2017 and will be valid for a five year period. A hard copy of the City of Mackinac Island Recreation Master Plan can be found at the City Clerk's office and the office of the Recreation Department.

A recreation ordinance was adopted by the City on January 17, 1996. With the acceptance of this ordinance, the City established a recreation department, which is overseen by a five (5) member

recreation board, that are appointed by the Mayor. The Board of Recreation hired a full time Recreation Director.

Prior to the formation of a recreation department, any recreational facilities and program developments were carried out by Mackinac Island Recreational Development, Inc, (MIRD). MIRD, an all-volunteer group, was incorporated as a non-profit organization in 1979. With the cooperation of the Mackinac Island State Park Commission, the City of Mackinac Island, and Mackinac Island Public School, MIRD designed and implemented long range recreation plans and year round recreation programs. MIRD was a driving force behind the planning and building of Great Turtle Park.

*Recreation Mission Statement:
To provide the community of Mackinac Island year-round
recreational opportunities that encourage, support and
convey a healthy, active lifestyle for all.*

The recreation department is currently running over 50 programs throughout the year for all interests including physical activity, sports arts and crafts.

Currently, the school operates a Play Safe Playground, which includes slides, climbers and swings, all ADA compliant. The City also operates:

- East End Cove - open space along the water
- Veterans Memorial City Park - memorial display, and benches with ADA compliant restrooms
- Great Turtle Park - softball and soccer fields, basketball court, sand volleyball court, horseback riding arena, skate park, disc golf course, covered pavilion, concession stand, park benches, barbeque grills and an ADA compliant playground

Mackinac Island Recreation Department works closely with the Mackinac Island State Park, MIRD and the public school to utilize resources, both in personnel and facilities, in developing programs and activities for all residents of the Island. An example of this would be Great Turtle Park, which was built on property that is leased to the City by the State Park.

The current long range goals for the Recreation Department include:

- Continuation of present programs and activities, with the goal of expanding offerings to include a wider variety of activities
- Development of City owned land known as the East End Cove for future recreational needs
- Golf driving range
- Bathrooms by Borough Lot Playground
- Design and build a recreational facility with a pool

The short-term goals of the Recreation Department are as follows:

- Continuation of present recreation programs and activities, as well as developing new programs to fill the need of an ever changing population
- Completion of landscaping and trail ways at Great Turtle Park
- A covered area to accommodate a winter ice skating rink and summer protection from inclement weather or sun
- Playground improvements and updates both at Great Turtle Park and the Borough Lot
- Improve the horseback riding arena
- Finish landscaping of sledding hill
- Outdoor area lighting
- Update the scoreboard
- Softball field upgrades
- Develop a plan for pool access within the community
- Provide year round activity center for the Island youth

Municipal, State, and Federal Facilities

Many municipal, state, and federal facilities are located on Mackinac Island as follows:

- City Offices and Community Hall – 7358 Market Street
- Fire Station 1 – 7366 Market Street
- Fire Station 2 – 2290 Edison Road
- Police Station/Courthouse/Jail – 7374 Market Street
- Police Substation – 3013 Cadotte Avenue
- St. Martin's Place Police Housing- Market Street
- Wastewater Treatment Facility – 3134 Stonecliffe Road
- Water Treatment Plant – 6602 Main Street
- Solid Waste Facility – 3883 Dousman Street
- Mackinac Island Public Library – 7549 Main Street
- Mackinac Island Post Office – 7316 Market Street
- Mackinac Island Medical Center – 7474 Market Street
- State Park Offices - 7029 Huron Road
- State Park Visitors Center – 7165 Main Street
- Mackinac Island Airport – 7700 Annex Road

- State Park British Landing Dock - M185

Civic Organizations and Churches

Although private civic organizations on Mackinac Island are not affiliated with any governmental unit, they are listed in this Chapter because of the important services they provide to the community residents. Organizations currently active on Mackinac Island include:

- Condominium Associations
- Cottagers' Association
- Lions Club
- Mackinac Arts Council
- Mackinac Associates
- Mackinac Horsemen's Association
- Mackinac Island Community Foundation
- Mackinac Island Recreation Development, Inc.
- Mackinac Island Tourism Bureau
- Mackinac Island Yacht Club
- Mayor's Advisory Committee
- Wawashkamo Golf Club
- American Legion
- Mackinac Island Ski Club
- 4-H
- Boy Scouts

Churches currently active on Mackinac Island include:

- Mackinac Island Bible Church
- Ste. Anne's Roman Catholic Church
- Trinity Episcopal Church
- Union Congregational (Little Stone) Church

Transportation

The transportation system is a key element of the community's infrastructure. As an island, transportation issues are different from mainland communities, and can be discussed in terms of the transportation access to the Island and on-island transportation.

The City of Mackinac Island has, by Charter authority, a 20-year Ferry Boat Franchise agreement started in 2012, with two privately operated ferry lines to transport passengers to the Island from April 21st-October 31st of each year. For the winter months, November 1st- April 20th, one ferry line has an exclusive contract with the City of Mackinac Island to provide service. Ferry service is provided from both Mackinaw City and St. Ignace in the summer months and from St. Ignace in the winter weather permitting. Freight service is provided by three companies. The Island ferry docks for each of the ferry and freight operators are located in the downtown and are close to each other causing increased congestion in these areas at peak times. Heavy freight and trucks land at the Mackinac Island State Park British Landing Dock.

Air service is available to the Island year-round, using the State Park airport located near the center of the Island.

Motor vehicles have been banned on the Island since before the turn of the 20th century. Due to the lack of cars and trucks, the transportation issues facing the Island are very different from other communities. Horse-drawn carriages, horse-drawn taxis, horseback, foot, and bike are the only means for the movement of people and goods. An exception is made for emergency vehicles, handicap mobility vehicles, and vehicles granted a special permit during limited times of the year. Electric bicycles are used by some residents with disabilities; use of these bikes requires a signed doctor's prescription and permits from both the City and State Park. Additionally, during the winter, snowmobiles are allowed by permit in the City streets of the Island and only on some of the roads in the State Park.

Although the Island is without automobile traffic, there are still traffic-related issues and concerns. The combination of various transportation modes and the significant influx of tourists to the Island on a daily basis, who are not familiar with horses, gives rise to transportation related issues and conflicts. One of the most significant traffic issues is the congestion in the downtown during peak times.

Horses continue to be a significant part of the transportation history on Mackinac Island. According to Mackinac Island Carriage Tours, Inc. website, "Carriage men officially began providing tours of the Island in 1869 when the first city carriage license was issued. In 1948, the carriage men officially established the Mackinac Island Carriage Tours, Inc...Today, Mackinac Island Carriage Tours, Inc. is the world's largest, oldest, and continually operated horse and buggy livery, with approximately 100 freight and passenger carriages put in motion by over 400 horses."

During the summer, Mackinac Island is home to approximately 600 horses. Two-thirds of these are associated with the Mackinac Island Carriage Tours, providing sight-seeing tours, taxi service, deliveries, and shuttle services. The majority of the horses are taken off the Island in the fall to winter on the mainland, leaving a much smaller number of horses on the Island for winter use. However, winter horse use for taxis, tours, and freight is growing, along with the winter tourism business. The horses brought to the Island are specially trained for the unique situation of Island duty. Some residents also own horses for necessary transportation and riding enjoyment.

Although the Island is without automobile traffic, there are still traffic-related issues and concerns. The combination of various transportation modes and the significant influx of tourists to the Island on a daily basis, who are not familiar with horses, gives rise to transportation related issues and conflicts. One of the most significant traffic issues is the congestion in the downtown during peak times. Conflicts between foot, bike, and horse traffic are heightened in the commercial area when all three ferries arrive and bring up to 2,000 people into the downtown amidst carriages, bike rentals, and pedestrians. The lack of knowledge or understanding about Mackinac Island traffic contributes to the congestion and confusion in the downtown at peak times.

Road/Trail Maintenance

The local street system of any community is a vital part of the total transportation system. The transportation routes are comprised of a variety of roads and trails, as shown in **Figure 1-2**. The responsibility for road construction and maintenance is split between the City and the State Park, based on location. Roads which are located partially in the City and partially in the State Park are maintained accordingly. The perimeter road, Lake Shore Road (M-185) is a state trunkline maintained by the Michigan Department of Transportation (MDOT), and as such is eligible for state funding. The remainder of public roads and trails are maintained by the City and the State Park. **Figure 1-2** distinguishes the major and local City streets, as well as the improved and unimproved roads and trails within the State Park land.

Street maintenance issues are addressed by the entity with jurisdiction over that portion of the street. In summer, a crew of people continually making the rounds sweep and shovel manure off the streets in town, and in other areas of the island, a horse pulled mechanized street sweeper is used. Additionally, every night, selected major streets are washed. Sweeping and shoveling are sporadic on the rest of the Island. In winter, snow plowing of the streets is done by the State Park under an agreement with the City. The construction and repair of streets has a different meaning for this island community with very few motorized vehicles; the roads have an extended life expectancy due to the lower load level. However, the effects of horse shoes and narrow carriage wheels cause rutting and pitting not noted with motorized vehicle traffic. In addition, pavement markings do not last with repeated horse traffic.

Airport

The Mackinac Island Airport is owned and operated by the Mackinac Island State Park and features a paved and lighted 3,500' runway and terminal building. The airport is open year-round and serves as the Island's lifeline to the mainland, especially during the winter months when the ferries do not run.

The Michigan Zoning Enabling Act, Public Act 110 of 2006, includes language that requires the incorporation of an airport approach plan within a Master Plan when an airport is located in the community. This language was enacted, in part, to ensure that land use policies do not endanger the State's mission to preserve a system of essential public facilities that provide access for all regions of the State to the nation's air transportation system.

The following excerpts are taken from Section 203 of the Michigan Zoning Enabling Act:

If a local unit of government adopts or revises a plan... after an airport layout plan or airport approach plan has been filed with the local unit of government, the local unit of government shall incorporate the airport layout plan or airport approach plan into the plan...

A zoning ordinance adopted after March 28, 2001 shall be adopted after reasonable consideration of both of the following:

- *The environs of any airport within a district.*
- *Comments received at or before a public hearing under section 306 or transmitted under section 308 from the airport manager of any airport.*

A zoning ordinance amendment adopted or variance granted after March 28, 2001 shall not increase any inconsistency that may exist between the zoning ordinance or structures or uses and any airport zoning regulations, airport layout plan, or airport approach plan.

The Aeronautic Code of the State of Michigan provides that the Michigan Aeronautics Commission may adopt an approach plan for each licensed airport which describes the airport protection area. Approach protection plans are intended to provide airport sponsors with standards which are reasonable and enforceable under local zoning ordinances. These plans should also provide airport sponsors with sufficient airspace protection according to local needs and conditions. The Airport Layout Plan for the Mackinac Island Airport is included in **Appendix C**.

Local and emergency air service is provided by Great Lakes Air, based at the Mackinac County Airport in St. Ignace. This service is available year round, but is especially important to Island residents during the winter months and in case of emergency.

Regional air service is available at Pellston Regional Airport in Emmet County (20 miles from Mackinaw City to Pellston), Alpena County Regional Airport in Alpena (95 miles from Mackinaw City to Alpena), and at Chippewa County Airport, located at Kinross (25 miles from St. Ignace to Kinross). Commercial air service at these facilities is provided by Delta, offering transportation between northern Michigan and Detroit Metro Airport, with regularly scheduled daily flights. United Parcel Service and Federal Express provide air freight service at these airports.

The Cherry Capital Airport in Traverse City (100 miles from Mackinaw City to Traverse City) has commercial passenger service provided by Delta to Detroit Metro Airport, and United and American to Chicago O'Hare Airport. Air freight service at Traverse City includes Federal Express, Airborne Express, and United Parcel Service.

Chapter 6: Community Goals and Policies

Before a community can actively plan for its future growth and development, it must first set certain goals and policies that define the boundaries of its needs and desires. This establishes a basis for the future land use and zoning plan formulation. These goals and policies must reflect the type of community that is desired and the kind of lifestyle its citizens wish to follow, given realistic economic and social constraints. In developing goals and policies, the Master Plan Steering Committee analyzed existing community characteristics, such as social and economic conditions, environmental resources, available services and facilities, and existing land use. In addition, public input and opinions were solicited during the process of developing goals and policies.

Public Input

During the planning process for the 2018 Master Plan Update, several important engagement activities were employed to gain public input. These included:

- Stakeholder Interviews
- Citizen Survey
- Student Survey
- Public Information Meeting
- Community Workshop

The results of these public outreach activities helped shape community goals and policies and are summarized below.

Stakeholder Interviews

A series of stakeholder interviews were conducted to identify key issues, needs and opportunities related to land use and development on Mackinac Island. A total of 12 one-on-one interviews were conducted, with stakeholders chosen by the Master Plan Steering Committee who represent the varied interests of the Island. These stakeholders included full-time residents, seasonal residents, property owners, business owners, and community organization members. The detailed results of the stakeholder interviews are included in Appendix D.

A question of principal importance was this: “In your opinion, what are the most important planning and/or development issues facing Mackinac Island today or in the next 5 to 10 years?” Stakeholders were then asked follow-up questions, including their ideas for how Mackinac Island can best address the key issues that they identified. Although varied responses were received, several common themes emerged about the most important planning and development issues facing the Island, which are listed below:

- Preserving the historic character and environmental integrity of the Island
- Affordable housing concern and the need to maintain housing for the year-round community

- Supporting businesses and a healthy economic base
- Development pressure on the Island and the need for limited, controlled growth
- Sewer capacity and adequacy of infrastructure to support development
- Accommodate employee housing in appropriate locations
- Traffic safety and congestion concerns, particularly near the docks and within downtown

Citizen Survey

In the late Summer and early Fall of 2016, a citizen opinion survey was made available to interested citizens, visitors, business and property owners of the island. In total, 57 responses to the survey were received. The surveys were submitted anonymously (no names or personal information); however, based on a review of the responses received, it is the author's opinion that the majority of the surveys were completed by island residents, business owners and/or property owners, as opposed to visitors who may be less familiar with the island. Below is a summary of the survey responses received. A mention within the summary indicates that the sentiment was echoed by multiple respondents.

Q1 -- Which elements of Mackinac Island's heritage are most important to preserve?

Above all, respondents cited the island's historical character and culture as the top priority for preservation, being mutually cherished by residents, stakeholders and visitors. Through the various responses provided, various facets of that cherished historical character were revealed, including:

- Island heritage and deep rooted history (Native American and Early America)
- Ban on motor vehicles and prominence of horse & buggy culture
- Small town feel, with limited development and local amenities/institutions unique to the island
- The island lifestyle, featuring peace and quiet and a slower pace
- The welcoming family atmosphere and spirit of hospitality on the island
- Varied and historic architectural styles of buildings and cottages
- Cultural and natural attractions (Fort Mackinac, State Park, shoreline, scenic views)
- Valued natural amenities and ecological integrity of the island

64



Q2 -- What are the top 3 reasons you love living in, working in, or visiting Mackinac Island?

Respondents were allowed to vote for up to 3 characteristics from a total of 12 choices, with an option to write-in some other characteristic not included as a choice. The characteristics are listed below, in order of the highest votes:

- Island character 44 total votes
- Natural features 40 total votes
- Weather 22 total votes
- Friendly people 17 total votes
- Recreational activities 14 total votes
- Location 10 total votes
- Safety 9 total votes
- Parks facilities 8 total votes
- Neighborhoods 4 total votes
- Schools 3 total votes
- Restaurants 2 total votes
- Shopping 1 total votes

A total of 22 respondents wrote-in their own “other” choice, with several choices being noted by multiple respondents. These choices included the island’s history, lack of motor vehicles, small town living, close community relationships, and horse culture.

Q3 -- If there was one thing you could change about Mackinac Island, what would it be?

Although a variety of viewpoints were offered, more than half of the answers were related to overcrowding and congestion on the island. In terms of land use and development, the leading viewpoint was that there was too much development on the island generally, and too much commercial/hotel development within downtown particularly. This over-development was noted as having a variety of negative consequences, including traffic congestion, noise pollution, trash, the threat of losing local uniqueness, the need for more employee housing, and the loss of green space and lake views. A specific aspect of congestion that was noted as a concern was traffic safety involving horses, carriages, bicycles and pedestrians, particularly along Main Street during the peak season. Many respondents expressed the need for education, management, and/or enforcement of traffic safety rules and limiting and/or managing the bicycles rented/brought to the island.

Other ideas expressed as an answer to this question included the need for consistent off-season transportation on and off the island, and the desire for development decisions to be made by and for the good of the community as opposed to decisions being made by and for the benefit of the few.

Q4 -- In your opinion, what are the most important planning and/or development issues facing Mackinac Island today or in the next 5 to 10 years?

In reviewing the responses to this question, numerous common themes emerged, including: overcrowding/over-development; traffic safety; housing; and infrastructure capacity.

Overcrowding and over-development was seen as a chief threat to losing the island's history, culture and character which, specifically, has contributed to congestion, noise pollution, light pollution, loss of lake views, and environmental degradation (water quality, ecological integrity). Suggested steps to deal with overcrowding and over-development included the limiting of commercial/hotel development downtown (no density increases), regulation of maximum building heights, and management/limiting of bicycle rentals.

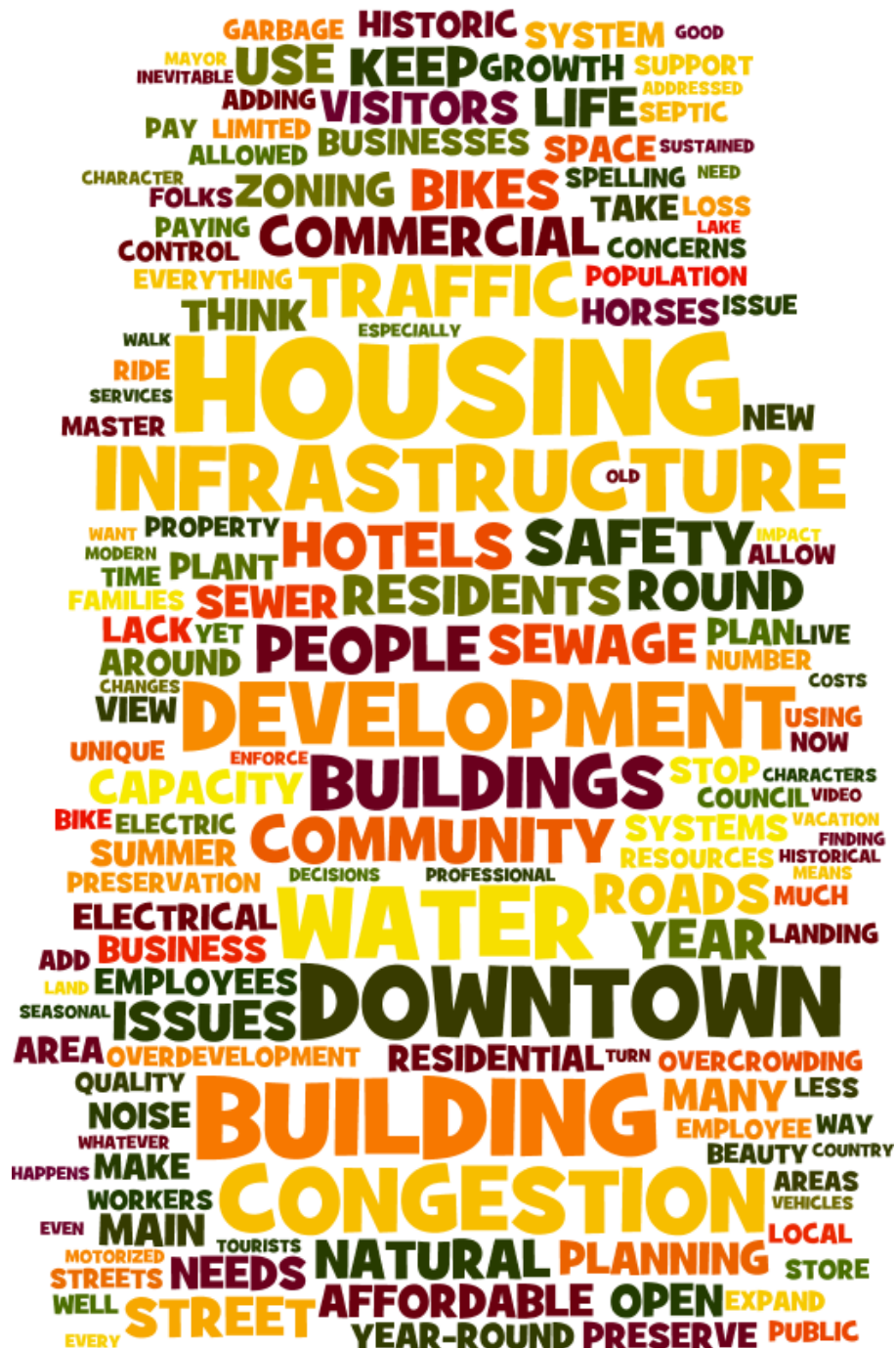
Traffic safety concerns involving the many horses, carriages, bicycles and pedestrians, particularly within the downtown area during peak seasons, was noted by many as an important issue to be addressed. Suggestions for addressing this concern included keeping the motorized vehicle ban in place, designating separate lanes for different modes of transportation, visitor education on traffic safety, enforcement of traffic laws, designated crosswalks, better management of freight/delivery traffic, and better management of tour carriages.

Housing was noted by many as an important issue facing the City, particularly the concern of housing affordability and employee housing. Housing affordability was seen by many as a threat to the sustainability of the year-round community on the island, as increased housing values are leaving fewer affordable options within the island's housing market. The need to find appropriate locations for employee housing was noted as important, but a concern was expressed that the conversion of year-round housing is not an appropriate solution to this issue as it would further threaten the year-round island community.

The effectiveness and integrity of the island's infrastructure systems and community services was noted by many as a concern. It was recognized that investments in the island's infrastructure systems were necessary to better support the current level of development and activity, including the water/sewer plants, electrical system, medical services, trash/recycling program, and police/fire services.

In a broad sense, many of the answers related to the idea of sustainability, and the concern that the long-term wellbeing of the island is being jeopardized by the above-mentioned issues (overcrowding, infrastructure capacity, housing affordability, etc.). Some respondents questioned whether the island has reached its capacity, as other respondents suggested that the City must utilize a long-term approach to policy/decision-making as opposed to a short-term focus. Training and education for City staff, maintaining an open and transparent decision-making process, and following City-adopted plans, zoning laws and historic district requirements were noted by respondents as important steps to ensure a sustainable community.

The word cloud below provides a visual summary of the words that appeared more frequently within the survey responses to Question #4. For the purposes of the word cloud graphic, the words “City”, “Mackinac” and “Island” were omitted.



Q5 -- How can Mackinac Island best address the key issues you identified in the previous question?

From a City administration standpoint, numerous suggestions were offered, including: decision-making based on the long-term welfare of the community; following/enforcing zoning laws; following historic district regulations; transparent and open decision-making; and the hiring of a professional City manager.

From a land use perspective, numerous respondents favored planning and zoning policies which control and/or limit commercial and hotel development on the island.

To address traffic congestion and safety, respondents offered a variety of suggestions for improvement, including the management of freight/deliveries, enforcement of traffic laws, educational measures aimed at informing visitors of traffic safety issues and laws, management/limitation of bicycle rentals, management/relocation of tour carriages along Main Street, more bicycle parking, and the construction of a boardwalk along the water.

Other suggestions included making investments/upgrades to the wastewater treatment facility, identifying outside funding for new affordable housing development, and considering limiting the number of tourists to the island.

Q6 -- Related to the future of Mackinac Island, do you have any ideas for City leaders to consider?

The responses to this question somewhat mirror the responses to the previous question (Q5). From a City administration standpoint, respondents expressed: the importance of making decisions based on the long-term sustainability of the island as opposed to short-term special interests; transparency and inclusiveness in the decision-making process; term limits for City leaders; adopting and following plans, zoning and historic district regulations; and, coordination with outside/neighborhood entities such as the State Park, Mackinaw City and St. Ignace.

Related to congestion and traffic safety, several common responses included: limiting bicycle rentals/licenses; management/enforcement of traffic laws; the need for public/tourist education on traffic laws; and, limiting the number of tourists to the island.

An idea related to land use and development which was shared by several respondents was the need to limit commercial/hotel/condominium development generally, but within the downtown area particularly.

Several respondents expressed the need to make upgrades to the wastewater treatment facility capacity, while several others suggested enhanced recycling/re-use efforts on the island.

Q7 -- How can we balance preservation and development within Mackinac Island?

The answers to this question were varied, with many responses being unique ideas not specifically indicated by someone else (please refer to the survey results document which provides a complete listing of every individual response). However, several themes emerged in the answers provided, as indicated below.

As was noted in the responses to other questions, many respondents felt that local development policy and decision-making should be based on the long-term welfare of the island as opposed to short-term special interests, in recognition that the characteristics which make the island such an exceptional place must be preserved to support continued viability. Related to this, many noted that the City's adopted planning, zoning, and historic preservation policies and laws must be followed and enforced.

Many respondents felt that there is currently an imbalance on the island favoring development over preservation. Many felt that new commercial development should either be stopped or should be strictly limited and confined to the downtown area. Bringing the island back into balance would require a renewed focus on the preservation of green space, open space and natural habitat throughout the island.

Q8 -- What elements should receive the most attention in the new Master Plan?

Respondents were allowed to vote for up to 3 elements from a total of 10 choices, with an option to write-in some other characteristic not included as a choice. The characteristics are listed below, in order of the highest votes:

- | | |
|-------------------------------------|----------------|
| • Historic Preservation | 37 total votes |
| • Environmental protection | 33 total votes |
| • Growth management | 33 total votes |
| • Zoning | 18 total votes |
| • Public services and facilities | 15 total votes |
| • Housing | 12 total votes |
| • Transportation networks | 6 total votes |
| • Business and economic development | 5 total votes |
| • Tourism | 4 total votes |
| • Recreation | 1 total votes |

A total of 18 respondents provided comments to this question, which mostly were clarifications on their votes from among the 10 answer choice options. Public safety was one element not included among the 10 answer choices which multiple respondents wrote-in.

Student Survey

In 2016, a survey was conducted of the students (4th grade through high school) at the Mackinac Island Public School. Seven questions were asked of the students, which are listed below, along with common themes that emerged from the student responses to each question.

1. What is Mackinac Island's greatest feature or asset? Common answers:
 - Historic character
 - Environmental character/beauty
 - Attractions – State Park, Grand Hotel, Arch Rock, etc.
 - Horse culture / ban on automobiles
2. What existing elements of the City are most important to preserve? Common answers:
 - Historic character and architectural appeal
 - Forests and natural environment
 - Attractions – State Park, Fort, Arch Rock, etc.
 - Existing businesses and shops
3. What are the top 3 reasons you love living here? Common answers:
 - Location
 - Natural features
 - Recreational activities
 - Safety
 - Island character
 - Schools
4. What would make our City more exciting for visitors?
 - A broad range of answers were given, which commonly related to additional entertainment and shopping opportunities. Refer to Appendix E for individual responses.
5. What would make our City more exciting for kids and teens?
 - Similar to question 4, a broad range of answers were given. Refer to the appendix for individual responses.

6. If there was one thing which you could change about the City, what would it be? Common answers:
 - Limiting congestion
 - Better traffic safety
 - More stores/shopping
7. Is there anything else you would like to share about the future of Mackinac Island? Common answers:
 - A broad range of answers were given. Refer to the appendix for individual responses.

Public Information Meeting

On August 23, 2016, a Public Informational Meeting was held at the Mackinac Island City Hall. Approximately 50 citizens attended the meeting. The meeting largely consisted of an introduction to the overall planning process, which included a presentation on master planning. The meeting included opportunities for questions from attendees and conversations about important issues facing the community. The meeting also featured a presentation and discussion of preliminary “foundational planning principles,” which are included later in this chapter.

Community Workshop

A Community Workshop was held on September 21, 2016 at the Mackinac Island City Hall. The purpose of the workshop was to engage community members in the identification of needs and concerns and the establishment of goals and policies for future land use and development. The workshop was well attended by approximately 50 citizens. The workshop began with a review and confirmation of the foundational planning principles, and then transitioned to group exercises. A summary of the workshop results is presented below; detailed workshop results are presented in Appendix F.

Aspirational Needs/Problems to be Solved

Attendees were divided into small groups (6 total) and were asked to work together to identify aspirational needs/problems to be solved in the community. Then, each group was asked to share their ideas with the large group to identify commonalities between the small groups. The following is a topical listing of aspirational needs/problems to be solved, as noted by the individual small groups, ranked based on the number of small groups that noted the same topic:

- Housing (affordable housing/employee housing) – (Noted by all 6 small groups)
- Congestion/traffic – (6)
- Maintaining safe/healthy community – (3)
- Maintaining historic community – (3)
- Preserve green space/air space – (2)

- Integrity of year round community (Harrisonville) – (2)
- Non-enforcement of traffic laws – (2)
- Harbor/entry view – (2)
- Need boardwalk – (2)
- City government transparency – (2)
- Winter visitors/transportation – (1)
- Small boats/kayak access – (1)
- Water quality/runoff – (1)
- Family recreation – (1)
- Infrastructure/trash – (1)
- Maintaining horse culture – (1)
- Maintaining ban on motor vehicles – (1)
- Integrity of tourist economy – (1)
- Alternatives to electric vehicles – (1)
- Attracting/keeping professional community service – (1)
- Lack of data harvesting (i.e., how many visitors to the Island) – (1)
- Evaluate community demographics – (1)
- Collaborate with State Park – (1)
- Environmental integrity/invasive species – (1)

Goals and Policies Exercise

A second activity asked each small group to review the adopted goals and policies from the City's 2011 Master Plan and provide comments as to their continued applicability and relevance to the City. The groups were also asked to add new goals and or policies that are needed to address important issues and/or opportunities. This information was used by the Steering Committee in the development of updated goals and policies for this 2017 Master Plan.

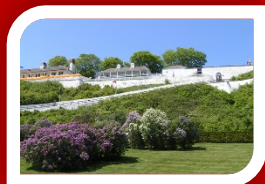
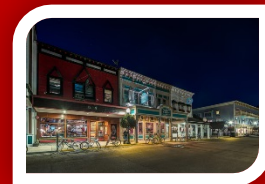
Foundational Planning Principles

During the August 23, 2016 Public Informational Meeting, a series of foundational planning principles were presented and reviewed. The initial planning principles were generally based on the 10 Principles of Smart Growth, as developed by the Smart Growth Network, and the 6 Livability Principles, as developed by the Partnership for Sustainable Communities. Based on public comment received, the principles were revised and presented again during the September 21, 2016 Community Workshop and agreed upon by attendees. Broad and aspirational, these planning principles serve as the foundation for the Goals and Policies presented in this chapter and the Future Land Use planning proposals presented later in this report. A total of 11 principles have been established, which are listed on the next page.

City of Mackinac Island Master Plan

Foundational Planning Principles

1. Foster a distinctive, attractive community with a strong sense of place. Embrace and uphold the Island's distinctive historical and cultural characteristics, such as its horse culture, which are cherished by citizens and visitors.
2. Promote equitable, affordable housing with a range of housing opportunities and choices.
3. Invest in healthy, safe, and walkable neighborhoods.
4. Allow for a planned mixture of land uses on the Island which are maintained in compatible relationships with each other.
5. Enhance and foster a strong economic base.
6. Provide a variety of transportation choices as part of a safe and reliable transportation network.
7. Take advantage of compact site design to preserve open spaces and natural features.
8. Protect open space, natural beauty and critical environmental areas.
9. Direct development toward areas where existing infrastructure is available.
10. Make development decisions predictable, fair and cost effective.
11. Encourage community and stakeholder collaboration in development decisions.



Photos courtesy of the Mackinac Island Tourism Bureau

Goals and Policies Introduced

By combining and discussing the outcomes and comparisons of public engagement opportunities, the various planning research efforts, and the foundational planning principles, the Master Plan Steering Committee has established a series of goals and policies to guide the future of Mackinac Island. Organized by category, and listed in no particular order, the specific goals and policies are intended to be more detailed and work to implement the foundational planning principles.

Planning and Community Development

GOAL:

Foster community cooperation to meet the needs of residents and tourists while maintaining Mackinac Island's exceptional character by: strengthening the historic downtown core, protecting the residential and historic character of the City's neighborhoods, and preserving the Island's natural beauty and environmentally sensitive areas.

POLICIES:

1. Promote an open Island decision-making process and encourage ongoing active citizen involvement.
2. Encourage and provide diverse opportunities for the solicitation of community feedback related to City administration.
3. Utilize a proactive planning process as a check and balance on decision making. Review and update this Master Plan, when necessary, as required by Michigan Planning Enabling Act.
4. Review the Zoning Ordinance upon adoption of the Master Plan and amend as appropriate.
5. Utilize innovative planning and zoning techniques, to allow for mixed land uses and increased employee housing and/or apartments in the downtown.
6. Encourage planned land uses in coordination with public utility, facility, and service improvement programs.

7. Establish, maintain, expand, and encourage discussions with State Park officials regarding proposed land acquisitions and/or easements and other aspects of the State Park operations.
8. Initiate and maintain proactive conversations with private property owners regarding preferred future land uses.
9. Research and utilize solid demographic data to inform local decision-making. Specifically, the City should establish a strategy to better track the number of seasonal residents and visitors to the Island.
10. Promote a healthy, balanced, year-round and seasonal economy for the benefit of Island residents and visitors, stressing support for local businesses and employees, in a manner that complements the historic character of Mackinac Island.
11. Relate the type, scale, orientation and density of development to the physical capabilities and characteristics of the land.

History and Culture

GOAL:

Preserve and protect the Island's historically diverse culture and historic integrity for present and future generations.

POLICIES:

1. Protect and preserve Island history, including historic sites, neighborhoods, buildings, structures, and scenic features.
2. Encourage creative historic design and planning techniques which produce visual harmony while preserving the significant natural and historic features of Mackinac Island.
3. Maintain the City's historic district designations and require adherence to historic preservation and design standards for development within the City's historic districts. Consider possible expansion of the City's historic district designations.
4. Develop a brochure and other material to educate the public on the historic district guidelines, their value in protecting the character of Mackinac Island, and the availability of programs that assist property owners in maintaining historic structures, including grants and tax deductions.
5. Adopt land use policies and regulations that foster the Island's horse tradition.

6. Support and encourage the expansion of the Island's fishing industry. Specifically, the City should consider actions which lead to additional opportunities or facilities for seasonal mooring for Island residents.
7. Work with the State Park, conservation agencies, and private groups to preserve historically significant structures and buildings.
8. Work with entities such as the State Park to coordinate the compatible design of improvements within the public right-of-way and on City-owned property. Such improvements may include sidewalks, boardwalk, street lighting, street trees, trash receptacles, benches and wayfinding signs.

Housing

GOALS:

Provide suitable housing opportunities for all income levels and age groups, including year-round residents, families, seasonal residents and employees.

Promote housing affordability to support a year-round, working community.

POLICIES:

1. Encourage the development of housing to meet the needs of all household types and income groups, with a specific focus and emphasis on providing affordable single-family housing and housing options for the elderly.

Affordable Housing Action Strategies:

- Provide incentives, especially in the downtown and Harrisonville districts, for the development of affordable/workforce housing for individuals and families.
 - Consider allowances for higher density for projects that provide affordable housing, if appropriate given the capacity of available infrastructure.
 - Develop public/private partnerships to create new housing opportunities for individuals and families committed to year-round residency, dispersed throughout the Island.
 - Evaluate the use of public land for new affordable housing.
 - Plan and oversee creation of year-round resident rentals of quality housing for low income residents.
2. Protect the neighborhood feeling of residential areas, seeking to maintain their viability to support year-round residents.

3. Encourage the maintenance of the existing housing stock and residential neighborhoods in good repair, appearance, usefulness, and safety.
4. Identify appropriate development standards, regulations, and locations for employee housing.

Employee Housing Action Strategies:

- Work with businesses to develop a strategy for businesses to adequately house employees.
 - Consider requiring new hotels to provide on-site housing for employees
 - View the mainland communities of St. Ignace and Mackinaw City as acceptable locations for employee housing
5. Match allowable residential densities to the characteristics and available services of proposed sites, considering infrastructure needs such as roads, public water, utilities, and especially the capacity of the Island's public wastewater system.
 6. Acknowledge and maintain the Island's unique summer cottage community.

Natural Environment, Public Lands, and Recreation

GOALS:

Preserve, protect, and maintain environmentally sensitive areas, open space, and public parks for the enjoyment of residents, tourists, and future generations.

Maintain and improve the recreational facilities and activities.

Establish and manage an Island-wide network of publicly and privately held open spaces, intended to protect critical land and water resources, habitats, and scenic vistas, while affording reasonable public access, consistent with a policy of wise stewardship.

POLICIES:

1. Preserve the unique beauty of Mackinac Island by protecting natural areas and landmarks, waterfront setting, and historic structures.
2. Identify, acquire, and protect desirable open space areas, scenic vistas, and environmentally sensitive lands.
3. Partner with State Park, conservation agencies, and private groups to preserve natural areas.

4. Encourage a land use pattern that is oriented to and respects the natural features and water resources of the area. Promote the protection of sensitive features including shoreline, wildlife habitat, wildlife corridors, wetlands, water quality, steep slopes, native plants, dark skies, and wooded areas.
5. Require an environmental impact review for proposed development during the site plan review or special use permit process.
6. Preserve, maintain, and create active recreation areas, while continuing efforts to provide and expand recreational opportunities for all ages.
7. Support cooperative recreational planning and development between the City, school, civic groups, and private entities.
8. Pursue outside funding sources, such as grants, for land acquisition and/or recreational development.
9. Maintain the Island's adopted Recreation Master Plan and update at five-year intervals.
10. Discourage the planting of invasive species.
11. Evaluate and consider plans to alleviate congestion and provide for waterfront access within downtown.
12. Work to establish and preserve private and public greenspace throughout the downtown.
13. Work to establish improved water access points to the Lake, such as a canoe/kayak launch, to encourage water recreation opportunities.
14. Review and adopt, as necessary, land development codes that:
 - Minimize the impacts of runoff from new development proposals
 - Require adherence to standards which ensure that erosion and sedimentation, and other forms of contamination, are minimized.
 - Preserve dark skies through appropriate site lighting restrictions
15. Continue to maintain and work to improve the City's historic boardwalk.
16. Support state, regional and local efforts to decommission the aging Enbridge Line 5 pipeline, which runs through the Straits of Mackinac.

Transportation

GOAL:

Provide a transportation system that will move people and goods to, from, and around the Island in a way that is safe, convenient, economical, and sensitive to the character of the various areas of the Island.

POLICIES:

1. Preserve and strengthen the ban on “horseless carriages” and promote the use of horses for recreation and transportation.
2. Encourage the efficient use and maintenance of existing roadways and infrastructure to support safe and convenient access for pedestrians, bicycles and horses/carriages.
3. Continue to work with ferry services and other tourist agencies to provide improved visitor orientation and education about traffic safety rules and considerations.
4. Seek ways to reduce conflicts between different modes of transportation (i.e. horses, bikes, and pedestrians) and continue policies to accommodate persons with disabilities.
5. Continue to coordinate with service companies to schedule deliveries, trash removal and similar activities during off-peak times to reduce congestion.
6. Continue to cooperate with ferry and air service providers to provide the most affordable and efficient service to and from the Island for residents and tourists alike.
7. Implement options for relieving traffic congestion during peak times.
8. Investigate bicycle usage and trends, and consider equitable solutions to reducing bicycle congestion on the Island.
9. Evaluate and consider plans to alleviate congestion and provide for waterfront access within downtown.
10. Explore the purchase and use of the coal dock for freight transportation as a means to limit congestion on the downtown docks and City streets.

Infrastructure and Public Services

GOALS:

Improve and maintain the transportation systems, community facilities, programs, and public utilities to accommodate the needs of residents and visitors.

Continuously monitor and ensure that the quantity of waste water generated does not exceed the capacity of the treatment plant and that the quality of effluent leaving the treatment plant meets all standards of the regulatory agencies.

POLICIES:

1. Continue to oversee an assessment, maintenance and improvement program for public water and sewer lines.
2. Encourage the placement of utilities underground and the improvement of utilities to coincide with development.
3. Provide additional public restrooms, bike parking areas, public seating, trash receptacles, and drinking fountains in the downtown area.
4. Maintain dedication to the advanced recycling and composting programs, water filtration, and wastewater treatment.
5. Continue public education programs regarding existing programs and facilities.
6. Recruit, train, and provide continuing support for Island volunteers who provide emergency services.
7. New development should be compatible with the capacity limitations of the water and wastewater treatment facilities and roads until these facilities are expanded.
8. Investigate county and state requirements applicable to private wastewater treatment systems and consider whether local measures should be undertaken for the protection of community health and the natural environment.
9. Provide high-quality educational facilities adequate to meet present and future growth needs.
10. Develop informational brochures and other media for property owners on the benefits of using pervious pavement for parking and driveways and redirecting storm water runoff into natural areas for infiltration into the ground.

11. Encourage builders and home owners to incorporate energy efficient building materials in new construction and remodels.
12. Review land development regulations to ensure appropriate placement and screening of satellite dishes, antennas, mechanical, HVAC and similar equipment.
13. Review land development regulations to ensure that service entrances, commercial dumpsters, and mechanical/service equipment, are screened from the public right-of-way and, in downtown, are screened from public view.
14. Explore and pursue alternative funding and revenue sources, such as state or federal grant programs, to support infrastructure and public service improvements on the Island.

Chapter 7: Future Land Use

Introduction

The City of Mackinac Island is a unique Michigan island community, with limited land available for private development. The future land use plan specifies appropriate land use categories for all land located within the Charter boundaries of the City of Mackinac Island. Through careful land use planning and zoning techniques, the City of Mackinac Island wishes to ensure the protection and preservation of the historic and scenic features and unique neighborhoods of the island, while allowing for some additional development in select areas.

Future Land Use Classifications

The Mackinac Island Master Plan Steering Committee developed the following future land use recommendations. The future land use categories and locations are based on an analysis of several factors, including the pattern of existing land use, local social and economic characteristics, environmental conditions, and available community services and facilities, along with the community's expressed foundational planning principles, goals and policies.

The future land use plan proposes locations for nine primary land use classifications, as listed here in no particular order of importance, and described more fully below.

- Conservation/Park
- Recreation/Open Space
- Shoreline Residential
- Cottage Residential
- Mixed Residential
- Single Family Residential
- Hotel/Resort
- Market Street
- Commercial

Figure 7-1 illustrates the location and extent of the proposed future land use areas on Mackinac Island. The uses anticipated within each of these categories are discussed below.

Conservation/Park

The Conservation/Park category is the most extensive future land use category proposed for the City of Mackinac Island. It includes all of Round Island (not shown on Figure 7-1) and much of the State Park land on Mackinac Island. It also includes publicly or privately owned properties that are dedicated as permanent conservation/park use, including several lots within the Stonecliffe and Annex areas.



Activities proposed to be allowed in the Conservation/Park category include the fostering of wildlife habitat and environmental protection, parks and recreation facilities, cemeteries, and open space. These uses are consistent with the current State Park and Federal Wilderness designation of the properties. The Conservation/Park area is intended to be protected for current and future enjoyment by residents and visitors alike. Only very limited and low intensity development should be allowed to occur, consistent with the recreation and conservation goals.

It is recognized that some property within State Park lands on Mackinac Island is leased for other uses, including scattered residential development and public utilities. The airport, cemeteries and DPW facilities are also shown in this category. It is intended that such existing uses will continue to be accommodated within this planning category. Future development of State Park land for purposes other than conservation or recreation should be carefully examined on a case by case basis. Decisions for any development on State Park property are solely under the jurisdiction of the State. However, this Master Plan urges consultation, cooperation, and interaction between the State and City on planning and development issues on State Park land.

Recreation/Open Space

The Recreation/Open Space category includes both publicly and privately owned properties that are primarily used for active recreational or open space purposes. It is intended that these areas continue to serve as recreational and open space for more active and intense recreational uses. As shown on the Future Land Use Map, this category includes the Mackinac Island School property, Grand Hotel golf courses, Wawashkamo Golf Course, Mackinac Community Equestrian Center, The Greens of Mackinac putting course, Marquette Park, Great Turtle Park, and Mackinac Island State Harbor.

Shoreline Residential

For historic, environmental, and scenic reasons, exceptional care is needed in the review of any development to be located at or near the shoreline of the Island. It is recommended that a separate planning area be designated for all shoreline property located outside of the downtown area, generally lakeward of Lakeshore Road (in some cases, on both sides of Lakeshore Road). Included in this category are the lakeshore open space areas at Windermere Point and in front of Mission Point Hotel. This designation also applies to the steep bluff slope below Stonecliffe, West Bluff and Hubbard's Annex.

Lands in this category may be privately or publicly owned. It is not the intent of this category to prohibit development – low density residential use may be allowed in a manner that protects and is compatible with the unique characteristics of the shoreline. In these designated shoreline areas, special setback, height, and landscape buffer standards are critical to retain scenic views, prevent erosion, and buffer any development from the road and shoreline.

Residential

Proposed residential land uses on Mackinac Island are presented in three sub-categories: Cottage Residential, Mixed Residential, and Single Family Residential. These planning areas are discussed in more detail below.

Cottage Residential

The Cottage Residential category is created to recognize and protect the distinct nature of the historic summer cottages located on the West Bluff, Hubbard's Annex extending to Stonecliffe, East Bluff, Marina District Downtown, and on a few privately held residential properties on the north side of the Island. Many of these cottages are eligible for the National Register of Historic Places and thus constitute an important architectural heritage. Any future development of the area is envisioned to be consistent with density levels and design standards of the existing Cottage Residential development. Low density is important to retaining the special character of the Cottage Residential area.

Mixed Residential

The Mixed Residential category is designed to accommodate both single family and multi-family residential uses, at higher densities than anticipated in the Single Family area. Neighborhoods included in the Mixed Residential future land use category include Harrisonville, the neighborhood around Ste. Anne's Catholic Church, and near the foot (south end) of Cadotte Avenue. Additionally, two small areas located inland from Windermere Point are designated for Mixed Residential use (see **Figure 7-1**).

The Mixed Residential area is anticipated to incorporate sites for employee housing and for multiple-family units. Ideally, such housing will be integrated in a non-conflicting manner with single family uses also included in this planning area. Reasonable restrictions or conditions may be needed to assure compatibility of single family, multi-family and employee housing uses, and the preservation of the character of the residential neighborhood. Depending on the situation, employee housing occurs in separate structures, or within units initially designed for single family use. The Mixed Residential area is where affordable, workforce housing can most appropriately be accommodated on the Island. It is also envisioned that churches and small-scale home occupations can be successfully integrated into the Mixed Residential neighborhoods.

Single Family Residential

The Single Family Residential use designation is intended to accommodate existing areas developed for residential use, at a relatively low density of approximately three units per acre. Due to the historic nature of Mackinac Island and the limited amount of private land available for development, some existing residential lots in the Single Family Residential planning areas may be platted at a higher density. These smaller existing lots are incorporated as compatible pre-existing uses. Areas designated for Single Family Residential uses are located in two small pockets near downtown on Mahoney Avenue, an area east of the marina on the lake side of Main Street, British Landing, and property within the more recent developments of Woodbluff, Stonecliffe, Stonecliffe Manors, Stonebrook and Forest Ridge (see **Figure 7-1**).

Hotel/Resort

The Hotel/Resort category recognizes the significance of Mackinac Island as a tourist resort destination. The area allows for a wide variety of different land use activities typically associated with and integrated into large resorts, including shops, restaurants, recreation facilities, and semi-public open space. This category is not intended to include all the neighborhood bed and breakfast facilities

or hotels located within the downtown, but rather it is intended to demark Hotel/Resort uses and facilities which occupy large parcels or contiguous areas. Hotel/Resort areas in this category include Grand Hotel, Stonecliffe, Mission Point Resort, and a number of smaller establishments located along Main Street.

Market Street

Designated as an official historic district in 2013, many of the Island's most historically significant structures are clustered along Market Street (see historic site list and map in Appendix C). However, the name "Market Street" itself suggests the street's beginnings as an historic commercial center. While the City wishes to preserve the historic value of structures and sites along Market Street, continuing commercial use there is seen as a vibrant part of the preservation effort. For this reason, small-scale commercial uses are anticipated to remain in the Market Street Historic planning area alongside traditional residential, civic and institutional uses. City Hall is located at the heart of this planning area, and is in itself an admirable example of adaptive re-use of a historic structure. Reasonable restrictions on all uses in the district are desired, to ensure preservation of the area's unique and important cultural and architectural legacy. Such restrictions could include limitations on demolition or structural alterations, standards for repairs or maintenance which are sensitive to historic values, and/or special development review processes focused on historic preservation. Density or height limitations may also be appropriate in certain circumstances, to retain the scenic and historic characteristics of the area.

Commercial

The core of the area designated for Commercial use is located along Main Street, between Windermere Point and Marquette Park. This area not only accommodates the commercial needs of year-round residents, but also serves as the center for most of the Island's tourism activity. The Commercial area includes a variety of retail commercial uses, gift shops, lodging facilities, and restaurants. Transportation-related services, such as carriage and bicycle tour facilities, are appropriate within the Commercial classification, as are civic, office, and institutional uses, such as public restrooms and the island information booth. The ferry docks, another key Island land use, are located in this area and add to the commercial activity level downtown.

A number of residential uses exist downtown in the Commercial area. It is intended that these downtown and above-the-store residential uses will remain. Further, above-the-store residential uses may be added in the future, consistent with the character of the downtown. This type of housing is preferred and encouraged for those employed in the downtown area.

Chapter 8: Zoning Plan, Implementation and Adoption

Introduction

The overall intent of this Master Plan is to identify and develop the most appropriate land use strategies for meeting City needs in a manner which supports the health, safety, and welfare of the current and future residents. These strategies are embodied within this Plan both graphically and in text. However, without the implementation of these strategies, this Master Plan becomes nothing more than a document upon a shelf. A Master Plan is a statement of policy and is ineffective unless acted upon. There are a number of avenues that the City of Mackinac Island can follow to implement this land use plan.

Before implementation can occur, it is critical that the appropriate City governmental bodies recognize and support this Master Plan. Once the Plan is adopted, it is considered official and should be used by the Planning Commission, Historic District Commission, City Council and other City bodies as a guide for future planning and resolving conflicts. Implementation of the Plan may be realized by actively:

- Regulating the use and manner of development of property through up to date reasonable zoning controls, subdivision regulations, and building and housing codes
- Assuring community wide knowledge, understanding, support, and approval of the Plan
- Providing a program of capital improvements and adequate, economical public services by using available governmental financing techniques to encourage desired land development or redevelopment
- Reviewing the plan periodically (at least every five years) to evaluate its consistency with changing trends and citizen desires

This Chapter discusses further the strategies for implementing the goals, objectives and land use recommendations of this Master Plan.

Zoning Plan

Zoning regulations are adopted under the local police power granted by the State for the purpose of promoting community health, safety, and general welfare. Such regulations have been strongly supported by the Michigan courts, as well as by the U.S. Supreme Court. Zoning consists of dividing the community into districts, for the purpose of establishing population density and regulating the use of land and buildings, their height and bulk, and the proportion of a lot that may be occupied by them. The regulations with each zoning district are unique; however, regulations within the same district must be consistently applied throughout the community for that particular district.

The intent of zoning is to assure the orderly development of the community. Zoning is also employed as a means of protecting property values and other public and private investments. Because of the

impact that zoning can have on the use of land and related services, it should be based on a comprehensive long-range community plan.

Zoning is an effective tool not only for the implementation of the Plan, but also benefits individual property owners. It protects homes and investments against the potential harmful intrusion of business and industry into residential neighborhoods; requires the spacing of buildings far enough apart to assure adequate light and air; prevents the overcrowding of land; facilitates the economical provision of essential public facilities; and aids in conservation of essential natural resources.

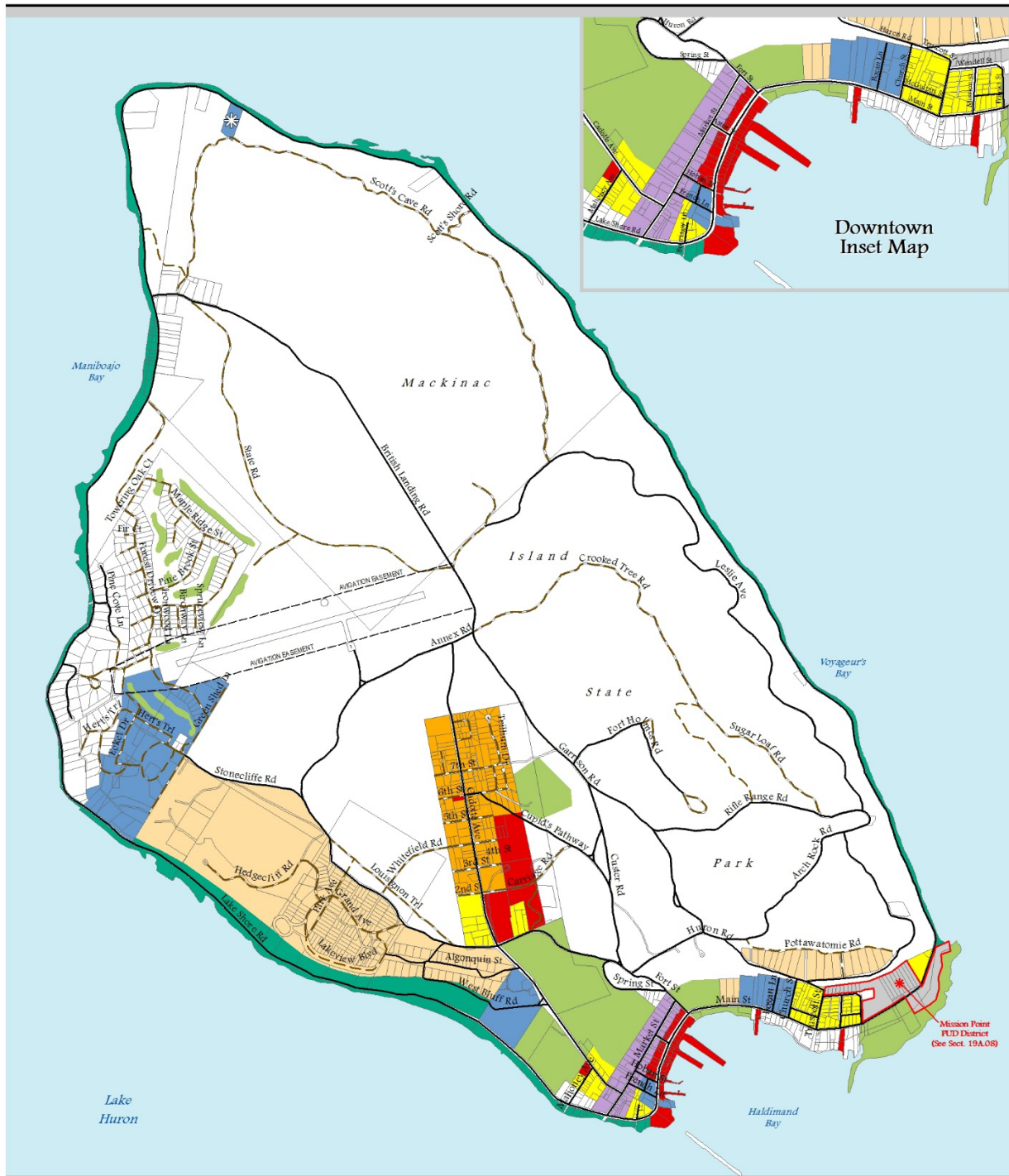
The City of Mackinac Island Zoning Ordinance, Ord. No. 479, as amended, is a regulatory tool that guides land use and development within the City. As stipulated by the Michigan Zoning Enabling Act, Public Act 110 of 2006, as amended, the Zoning Ordinance must be based upon a Master Plan. Therefore, this Master Plan, by setting forth the long-term vision of the City of Mackinac Island, provides the basis for the City Zoning Ordinance, which contains the rules that govern the path to that vision.

As required by the Michigan Planning Enabling Act, the following is an explanation of the relationship between the future land use classifications presented in this Master Plan and the zoning districts established in the City Zoning Ordinance. Potential revisions to the Zoning Ordinance and Zoning Map, based on the recommendations of this Master Plan, are also outlined.

Existing Zoning Districts

The City Zoning Ordinance and its official Zoning Map have established a total of 11 zoning districts, as follows. Taken from the Zoning Ordinance, the intent statement for each zoning district is also provided.

- **R-1, Low Density Residential.** To establish and preserve quiet, low density residential neighborhoods, safe and free from congestion by pedestrians, bicycles and horses, and free from other uses except those which are both compatible with and convenient to the residents of such a district.
- **R-3, High Density Residential.** To establish and preserve quiet neighborhoods of single- and multiple-family homes, free from other uses except those which are both compatible with and convenient to the residents of such a district, and to provide adequate housing opportunities for permanent and seasonal residents.
- **R-4, Harrisonville Residential.** To establish and preserve a quiet neighborhood of primarily single- and two-family homes within the area of the Island commonly known as Harrisonville, free from other uses except those which are both compatible with and convenient to the residents of Harrisonville, and to provide adequate housing opportunities for permanent and seasonal residents.
- **HB, Hotel Boardinghouse.** To establish areas for the housing of seasonal employees and visitors and for the provision of adequate overnight accommodations for tourists, free from other uses except those which are compatible with and convenient to the residents of such district.



- **C, Commercial.** To establish and preserve a cohesive business district suited to the needs of travelers, tourists, vacationers, and seasonal and permanent residents.
- **MD, Market.** To establish and preserve a district (formerly called the Historic District) containing several historically significant structures and other buildings primarily fronting Market Street, which together form a neighborhood with unique historic character.
- **CD, Cottage.** To establish and preserve areas of large residential estates characterized by unique Victorian or other style architecture, large landscaped yards, and quiet low density residential use.
- **ROS, Recreation/Open Space.** To establish and preserve public and private areas for outdoor recreation and open space purposes, to provide recreation opportunities for residents and visitors, and to preserve scenic views to Lake Huron which serve to enhance the historic and natural character of the island.
- **RS, Shoreline Residential.** To establish a district which allows for low density residential use in a manner which protects, and is compatible with, the unique characteristics of the Lake Huron shoreline.
- **M, Marine.** To establish a zoning district for the historic harbor area of Mackinac Island encompassing the entire area between the east and west breakwaters lakeward from the ordinary high-water mark. To regulate the necessary uses thereof with recognition of historical uses and further recognizing that this harbor provides the transportation link for most goods and passengers being transported to and from Mackinac Island.
- **L, Lake.** To establish a zoning district to regulate uses and structures in the water area surrounding Mackinac Island which are outside the historic harbor area ("Marine District"), said water area to be considered those areas lakeward from the ordinary high-water mark, recognizing the historical uses, the need for open viewing areas and scenic atmosphere of Mackinac Island.

Relationship between the Future Land Use Classifications and Zoning Districts

This Master Plan has established a total of nine future land use classifications, as listed below (each classification is described in detail in Chapter 7):

- Conservation/Park
- Recreation/Open Space
- Shoreline Residential
- Cottage Residential
- Mixed Residential
- Single Family Residential
- Hotel/Resort
- Market Street
- Commercial

Table 8-1 summarizes how the future land use classifications in this Master Plan relate to, or can generally be accomplished by, the various zoning districts from the City Zoning Ordinance.

Table 8-1 Future Land Use and Zoning District Relationship Summary		
Future Land Use Classification	Primary Zoning District(s) which accomplishes the recommendations of the Future Land Use Classification	Other Zoning District(s) which may accomplish the recommendations of the Future Land Use Classification
Conservation/Park	R-1, Low Density Residential	ROS, Recreation/Open Space
Recreation/Open Space	ROS, Recreation/Open Space	R-1, Low Density Residential
Shoreline Residential	RS, Shoreline Residential	L, Lake - for areas lakeward from the ordinary high-water mark
Cottage Residential	CD, Cottage	
Mixed Residential	R-3, High Density Residential R-4, Harrisonville Residential	
Single Family Residential	R-1, Low Density Residential	
Hotel/Resort	HB, Hotel/Boardinghouse	
Market Street	MD, Market	
Commercial	C, Commercial	M, Marine - for areas lakeward from the ordinary high-water mark

Potential Zoning Ordinance and Map Changes

To effectively implement the recommendations contained within this Master Plan, various changes to the City Zoning Ordinance and Zoning Map are likely necessary. Therefore, it is recommended that the City initiate a review of the zoning ordinance after the adoption of this Master Plan. Related to the currently adopted Zoning Map, the City should consider the following changes:

1. A reduction in the amount of land zoned HB, Hotel/Boardinghouse within the Stonecliffe area, consistent with the limits of the Hotel/Resort future land use classification.
2. An expansion of the RS, Shoreline Residential zoning district to encompass lands in the Windermere Point area and in front of Mission Point Hotel.

Numerous specific policies have been outlined in Chapter 6 of this Master Plan which are related to, or could be accomplished through changes to the City's Zoning Ordinance. A listing of these policies is provided below. The City should review the currently adopted Zoning Ordinance and consider whether changes are necessary and appropriate at this time to implement such policies.

1. Utilize innovative planning and zoning techniques, to allow for mixed land uses and increased employee housing and/or apartments in the downtown. (*Planning and Community Development Policy #5*)
2. Maintain the City's historic district designations and require adherence to historic preservation and design standards for development within the City's historic districts. Consider possible expansion of the City's historic district designations. (*History and Culture Policy #3*)
3. Consider allowances for higher density for projects that provide affordable/workforce housing, if appropriate given the capacity of available infrastructure. (*Housing Policy #1*)
4. Require an environmental impact review for proposed development during the site plan review or special use permit process. (*Natural Environment, Public Lands and Recreation Policy #5*)
5. Review and adopt, as necessary, land development codes that:
 - Minimize the impacts of runoff from new development proposals
 - Require adherence to standards which ensure that erosion and sedimentation, and other forms of contamination, are minimized.(*Natural Environment, Public Lands and Recreation Policy #14*)
6. Review land development regulations to ensure appropriate placement and screening of satellite dishes, antennas, mechanical, HVAC and similar equipment. (*Infrastructure and Public Services Policy #11*)
7. Review land development regulations to ensure that service entrances, commercial dumpsters, and mechanical/service equipment, are screened from the public right-of-way and, in downtown, are screened from public view. (*Infrastructure and Public Services Policy #12*)

Grants and Capital Improvements Investments

A master plan can also be used as a guide for future public investment and service decisions, such as the local budget, grant applications, and administration of utilities and services. Many communities find it beneficial to prioritize and budget for capital improvements projects (such as building expansions, infrastructure improvements, major equipment purchases, park improvements, etc.). A Capital Improvements Program (CIP) is one tool which is often used to establish a prioritized schedule for all anticipated capital improvement projects in the community. A CIP includes cost estimates and sources for financing for each project. Therefore, it can serve as both a budgetary and policy document to aid in the implementation of a community's goals defined in the master plan.

Recreation Planning

A recreation plan is one way to implement important recreation related goals defined in the master plan. By developing a recreation plan consistent with Michigan Department of Natural Resources requirements, a community is eligible for certain MDNR recreation grants. It is recommended the community maintain a recreation plan and keep it updated at five-year intervals, as required by the agency.

5-Year Master Plan Review

The Mackinac Island Master Plan is a flexible document that should be updated periodically to address major changes in the community, such as the addition/loss of a major employer or changing citizen attitudes relating to a controversial issue. At least every five years after the adoption of a Master Plan, the Planning Enabling Act requires that a Planning Commission “review the Master Plan and determine whether to commence the procedure to amend the Master Plan or adopt a new Master Plan.” The findings of the review must be recorded in the minutes of the relevant meeting or meetings of the Planning Commission.