



LAKES TO LAND REGIONAL INITIATIVE

Context



Regional Setting

Located a little over one hour southwest of Traverse City and two hours north of Muskegon, the Lakes to Land region sits nestled along the shores of Lake Michigan. Accessible from the north or south by M-22 and US-31, and from the east or west by M-55 and M-115, smaller county roads traversing its interior pass through fruit farms, small towns, and scenic vistas.

Although the regional setting of this collaborative master plan is diverse, the communities within it share similar topography, land uses, and economic bases along with a fierce sense of place. Many know the area as unique, peaceful, and possessing a tranquility unparalleled in Michigan. Bluffs beckon from the shores of Lake Michigan with an invitation to stop and watch the amber sunsets over turquoise water. Inland lakes dot the area, some providing safe harbor from Lake Michigan for small craft use. An urban feel can be found in the more heavily populated villages and cities which make up the northern and southern portions of the region. Fine restaurants, nightlife, culture, and entertainment are plentiful. Seasonal and permanent residents alike find hospitality and fellowship.

The region's diverse economic base is comprised of small mom and pop stores, larger retail outlets, and light manufacturing. Between the urban areas to the north and south lies the agricultural stretch of the regional

economy. Fruit farms growing apples, cherries, raspberries, blueberries, and plums are plentiful; other products include maple sugar, honey, corn, and general produce. Agricultural enterprises come in all types and sizes, from non-operative acreage to organic farms to large-scale production. A growing number of farms participate in Farm To Table endeavors such as Farmer's Markets, roadside stands, U-Pick and Community Supported Agriculture arrangements.

Healthcare institutions are found in both the northern and southern portion of the geographical range, and smaller urgent care facilities dispersed throughout the core of the region. Tourism and eco-tourism are important parts of the economy as the region's assets invite visitors to play and relax. Technology has allowed an increasing number of individuals to select the region as home and then define or continue their method of employment, making home occupations important to many.



LAKES TO LAND

Area of Influence

Data Sources: State of Michigan Geographic Data Library

- Area of Influence
- Participating Communities
- Master Plan Complete
- City or Village

- County Boundary
- Township Boundary
- Major Road
- Minor Road



Area of influence

At the inception of the collaboration, the initial communities agreed to focus on a general geographic area which possessed similar qualities and faced comparable issues regarding land use and policy.



2.2 The regional view from Google Earth
Platte Lake and Crystal Lake to the north,
US-31 running down the east, Portage
Lake to the south, and Lake Michigan in
the west.

As discussed in Tab 1, formation of the Lakes to Land collaboration did not happen all at once. Seeds of this capacity to work together were planted during the writing of the Onekama-based Portage Lake Forever Watershed Plan: the township and the village came together so well that they wrote an award-winning master plan covering the entire "Onekama Community." On a roll, they then formed a Community Development Committee and began to investigate the possibility of Scenic Heritage Route designation for route M-22. This brought them outside the township's borders and to the immediate discovery that the "M-22 communities" of Arcadia, Blaine, Gilmore, Crystal Lake, and Bear Lake were not only ready to collaborate but had plans of their own in mind.

Taking a "the more, the merrier" approach, the original communities knew that they would be inviting their neighbors to join them. How, then, to strike a balance between inclusivity and manageability? Taking a cue from collaborative successes already achieved, they decided to focus on the features that had already paved the way for working together: water and transportation. This meant concentrating on the Lake Michigan shoreline communities and those adjacent to them, through

which US-31 runs. Taken together, the leadership team referred to these as the collaboration's "Area of Influence."

As we have seen, that strategy was a success. All but four of the townships signed on, and one village (Honor) decided to come on board even without its surrounding township.

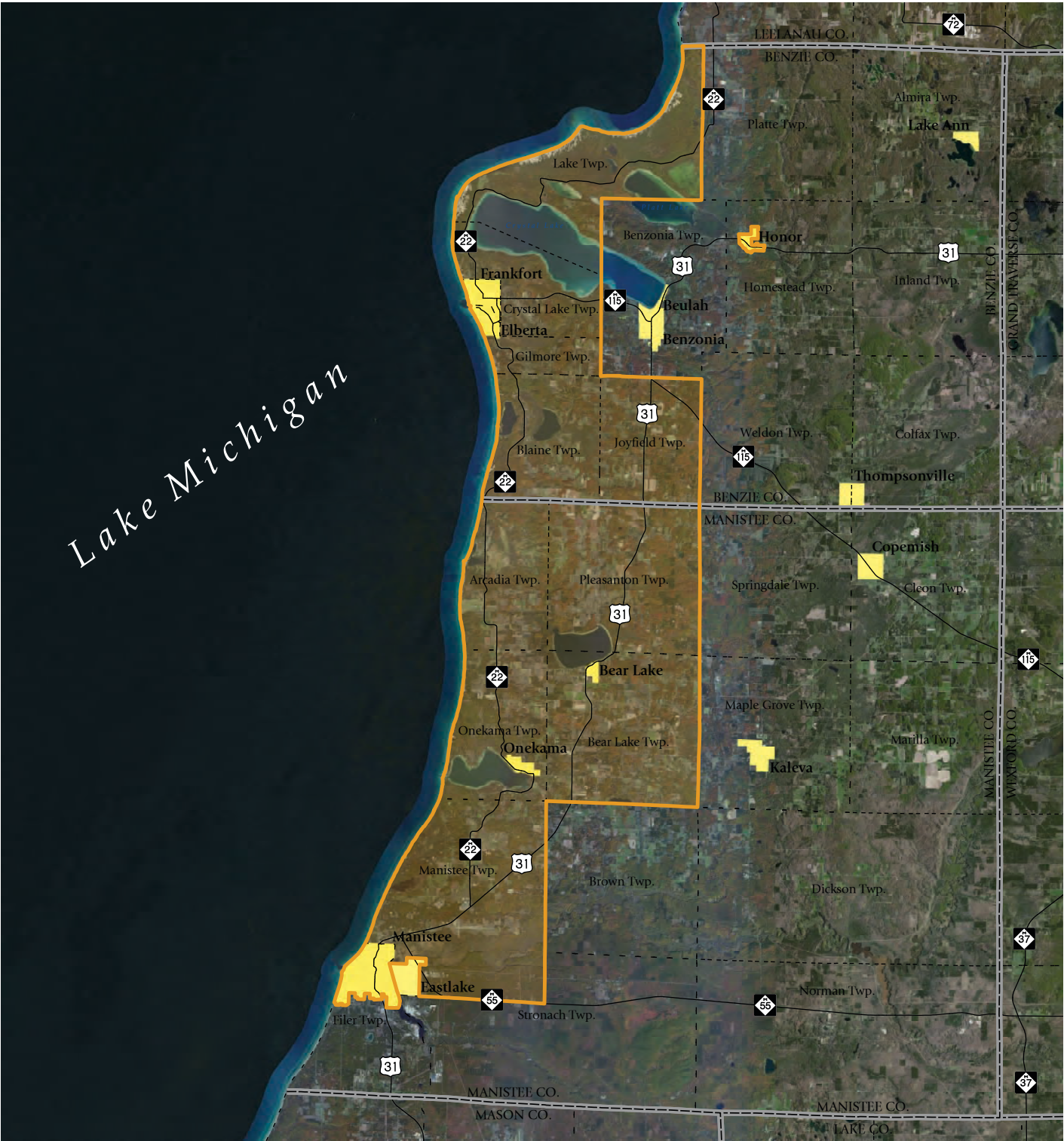
Regional location

Most of the communities within Benzie and Manistee Counties situated along the Lake Michigan shoreline are participating in the Initiative, along with several inland communities.

The initiative includes ten townships, four villages, and two cities. One of those villages – Honor – joined without the participation of surrounding Homestead Township. Manistee Township is participating without one of the two incorporated municipalities within it, the village of Eastlake. With those exceptions, every township is participating along with the incorporated municipalities within them. Crystal Lake Township is participating along with the city of Frankfort, Gilmore Township along with the village of Elberta, Bear Lake Township along with the village of Bear Lake, and the “Onekama community” of Onekama Township and the village of Onekama. The other participants are townships with no incorporated cities or villages within them: Lake, Blaine, and Joyfield Townships in Benzie County, and Arcadia and Pleasanton Townships in Manistee County. The narrative of this report consistently refers to these sixteen communities:

2.3 Table of community types




Township	Benzie County	Blaine Crystal Lake Gilmore Joyfield Lake
	Manistee County	Arcadia Bear Lake Manistee Onekama Pleasanton
City	Benzie County	City of Frankfort
	Manistee County	City of Manistee
Village	Benzie County	Elberta (Gilmore Twp) Honor (Homestead Twp)
	Manistee County	Bear Lake (Bear Lake Twp) Onekama (Onekama Twp)



LAKES TO LAND

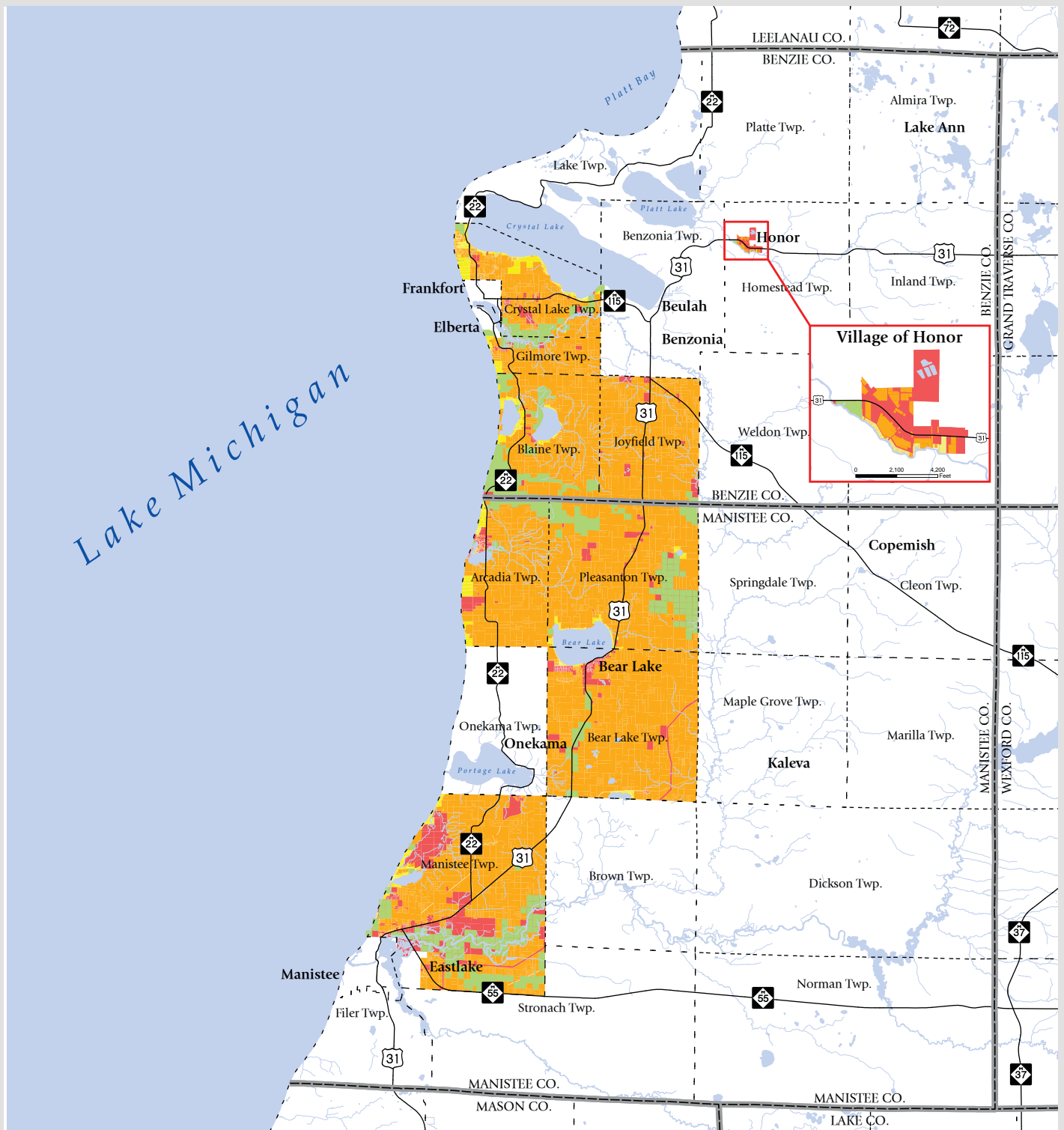
Regional Location

Data Sources: State of Michigan Geographic Data Library

-  Participating Communities
-  City or Village
-  County Boundary
-  Township Boundary
-  Major Road
-  Minor Road



2.4 Regional location map



LAKES TO LAND

Regional Transect

Data Sources: State of Michigan Geographic Data Library, MDNR, Benzie and Manistee County Equilization

- County Boundary
- - - Township Boundary
- Major Road

- T1 - Natural
- T2 - Rural / Farm

- T3 - Cottage and Country
- T4 - Settlement

0 2 4 8 Miles
2.5 Transect map



Regional Transect

Shortly after the preparation of the Lakes to Land master plans began, the State of Michigan added placemaking as a component of the State's economic development strategy. Placemaking capitalizes on a local community's assets, inspiration, and potential, with the intention of creating public spaces that promote people's health, happiness, and well being.

The focus of the State's placemaking strategy is to create vibrant and economically viable places that will retain and attract talent and jobs. National trends note that younger professionals who are our up-and-coming entrepreneurs and business owners migrate to places which provide economic, social, cultural and recreational amenities. In order to consolidate limited resources, the State will likely leverage discretionary funds into communities which have the density to support a creative workforce and serve as generators for growth and investment.

To assess where these investments are likely to occur, a "transect" characterizes an area based on its natural and development elements. According to Wikipedia, "the urban-to-rural transect is an urban planning model that defines a series of zones from sparse rural farmhouses to the dense urban core. Each zone is fractal in that it contains a similar transition from the edge to the center of the neighborhood. The importance of transect planning is particularly seen as a contrast to modern Euclidean zoning and suburban development. In these patterns, large areas are dedicated to a single purpose, such as housing, offices, shopping, and they can only be accessed via major roads. The transect, by contrast, decreases the necessity for long-distance travel by any means."

The rural-urban transect includes six (6) zones from natural (T1) to urban core (T6). In the Lakes to Land region, only four (4) of the zones exist, ranging from Natural (T1) to Settlement (T4). The table on the next page describes in more detail the general characteristics found in each of the four character zones. Similarly, the map illustrates the locale of each zone based on a grouping of the future land use categories found in the nine community master plans. The result paints a picture of the Lakes to Land region as primarily Rural / Farm (T2) and Cottage and Country (T3). Only in several areas where densities range from 4 to 6 dwellings per acre are there Settlements (T4), such as the unincorporated village of Arcadia, the villages of Bear Lake, Elberta, and Onkama, and the City of Frankfort. These locales have the underpinnings to accommodate the level of economic and social activity that is envisioned in the State's placemaking initiative.

2.6 Lakes to Land transect typology

Type	General Description	Element	Local Land Use Classifications
T1 Natural	Area characterized by its unique natural resource and ecological assets and therefore considered for future special land stewardship.	Land	Recreation / Open Space Forest
		Living	
		Commerce	
T2 Rural / Farm	Farming is the dominant land use activity with some large lot residential homes	Land	Agriculture Agriculture / Rural Residential - Rural Forest
		Living	
		Commerce	
T3 Cottage and Country	This area consists of low density collections of year-round homes or seasonal cottages some of them clusters around inland lakes or along the Lake Michigan shoreline. Home occupations and outbuildings are permitted. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions and topography.	Land	Residential - Resort
		Living	
		Commerce	
T4 Settlement	Traditional residential neighborhoods characterized by a grid street pattern, smaller lots with higher densities than found in other locations.	Land	Residential - Settlement Commercial Corridor Commercial Node Village Center
		Living	
		Commerce	

Element Description
Properties under the ownership or management of Federal and State Agencies and Land Conservancies with a variety of natural and sensitive landscapes.
None
None
<p>Agricultural includes parcels used partially or wholly for agricultural operations, with or without buildings, and include the following:</p> <ul style="list-style-type: none"> (i) Farming in all its branches, including cultivating soil. (ii) Growing and harvesting any agricultural, horticultural, or floricultural commodity. (iii) Dairying. (iv) Raising livestock, bees, fish, fur-bearing animals, or poultry. (v) Turf and tree farming. Performing any practices on a farm incident to, or in conjunction with, farming operations.
Farm and non-farm related residences are also found in this category and occupy sites on less than acre to large acreage parcels between 5 and 10 acres in size.
Sporadic stores or shops which serve local residents. These are located along County roads and are not concentrated in one location to be considered a commercial node or district.
A variety of northern Michigan landscapes including rolling hills, lakeshores, meadows, forests and sensitive areas such as critical dunes and wetlands.
Residential land use found along Lake Michigan, inland lakes such as Bear Lake, Lower and Upper Herring Lakes, Arcadia Lake and Platte River, and other streams characterized by small lots. This category will contain a combination of seasonal and year-round homes.
Stores and shops dotted along County Roads, US-31 and M-22. These establishments include canoe/kayak rentals, bait shops, small grocery outlets, gas stations, art galleries and boat sales and service outlets.
Primarily developed and settled as historic villages and centers of commerce.
<p>This land use category describes the neighborhoods of Arcadia, Elberta, Frankfort, Onkama, and Bear Lake. These neighborhoods are made up of single family homes located on lots with an average density of 4 - 6 units per acre. Homes are arranged close to the street with rear garages accessed by an alley when available. Arranged in a grid configuration, the streets are wide enough for on street parking but close enough to maintain an intimate neighborhood character. Trees and sidewalks line the streets, alleys provide rear entry to garages located in the backyard, and front porches beckon neighbors to sit and talk. A church may be found in the middle of the neighborhood along with neighborhood parks. Within walking distance to the Business district, civic, and recreational amenities, the Settlement area is the premier place to live for individuals looking for a more urban environment within view of Lake Michigan, inland lakes, and other natural resource amenities.</p>
A variety of small stores and shops, banks, restaurants, and professional services.



Natural Assets

As the name suggests, many of the Lakes to Land region's very best assets come with the territory.

A coastal region abutting the sixth largest freshwater lake in the world could consider itself well-positioned in any reckoning of benefits, but the water resources in the L2L area extend far beyond that. Every township except Gilmore and Joyfield also hosts an inland lake, from the enormous Crystal Lake on the north end to little Bar Lake in the south. The rivers that criss-cross the area include the Big Manistee, one of the most important rivers of Michigan's lumber boom, the Betsie, and the Platte. This abundance has rightly earned the area the nickname "Water Wonderland," driving a robust tourism and recreation industry. But it also requires attendant maintenance and careful diplomacy from each of the diverse types of users on these public waters, from industrial shippers to trout anglers to stone skippers.

With water come wetlands. Once called "swampland," these hydric areas provide benefits like flood control, water cleansing, and prevention of erosion. They are so important that they are managed at the state level, meaning

that development affecting them is subject to a permit process. Historically, Michigan's original forests built a respectable proportion of the midwest and then gave way to agriculture on the soils that would support it. The soils that wouldn't frequently reverted to government control through delinquent taxes, leading directly to the assemblage of large parcels under federal and state control which then became conservation areas. These forests and preserves attract tourists and contribute to the rural scenery of the region, impacts which must be balanced against the untaxable and undevelopable nature of these vast swaths of land.

The region's most famous and unique natural asset are the sand dunes that line Lake Michigan's eastern shoreline, especially the Sleeping Bear Dunes to the north. Remnants of the glacial age that shaped most of the midwest's geology, these windswept mountains of sand play host to a diversity of biology, climate, and geology that is found nowhere else on Earth.



LAKES TO LAND Land Cover

Data Sources: State of Michigan Geographic Data Library, NWMCOG

- County Boundary
- - - Township Boundary
- Major Road

Land Cover Type:

- | | |
|--|--|
| Urban | Wetlands |
| Agriculture | No Data |
| Forest | |



2.7 Land cover map

Land cover

“Land cover” refers to the physical material at the surface of the Earth: vegetation, water, pavement, ice, bare rock, wetlands, etc.

The vast majority of land within both Benzie and Manistee Counties is designated as Forest, with significant pockets designated Agriculture. Consistent with the Wetlands map in Figure 2.5, the Land Cover map shows wetlands mostly around the region’s lakes, rivers, and tributaries.

“Urban land cover” refers to the impermeable surfaces with which we line our developments, such as streets, sidewalks, buildings, and parking lots. Shown in pink on the map, the areas in and around incorporated cities and villages, as well as along major roads, are designated Urban. Additionally, nearly every lake in the region is accompanied by an area of urban development. The proximity of development to water bodies presents particular challenges to water quality. Precipitation runoff carries pollutants such as vehicle fluids and animal waste across impermeable surfaces and directly into the water, without any of the filtration that would be provided by a permeable surface such as soil. Improperly constructed or failing septic fields can leach human waste into the water. Chemical fertilizer, even when properly applied and at the residential scale, can have serious consequences for water quality due to its concentration of phosphorous. This essential element for plant life can reduce the dissolved oxygen in a water body and thus its ability to support animal habitats.



2.8 Agricultural land cover

Top: Vineyards north of Manistee.

Bottom: Onekama fields in fall

Topography

The configuration of a surface, including its relief and the relative positions of its natural and constructed features, defines its topography.

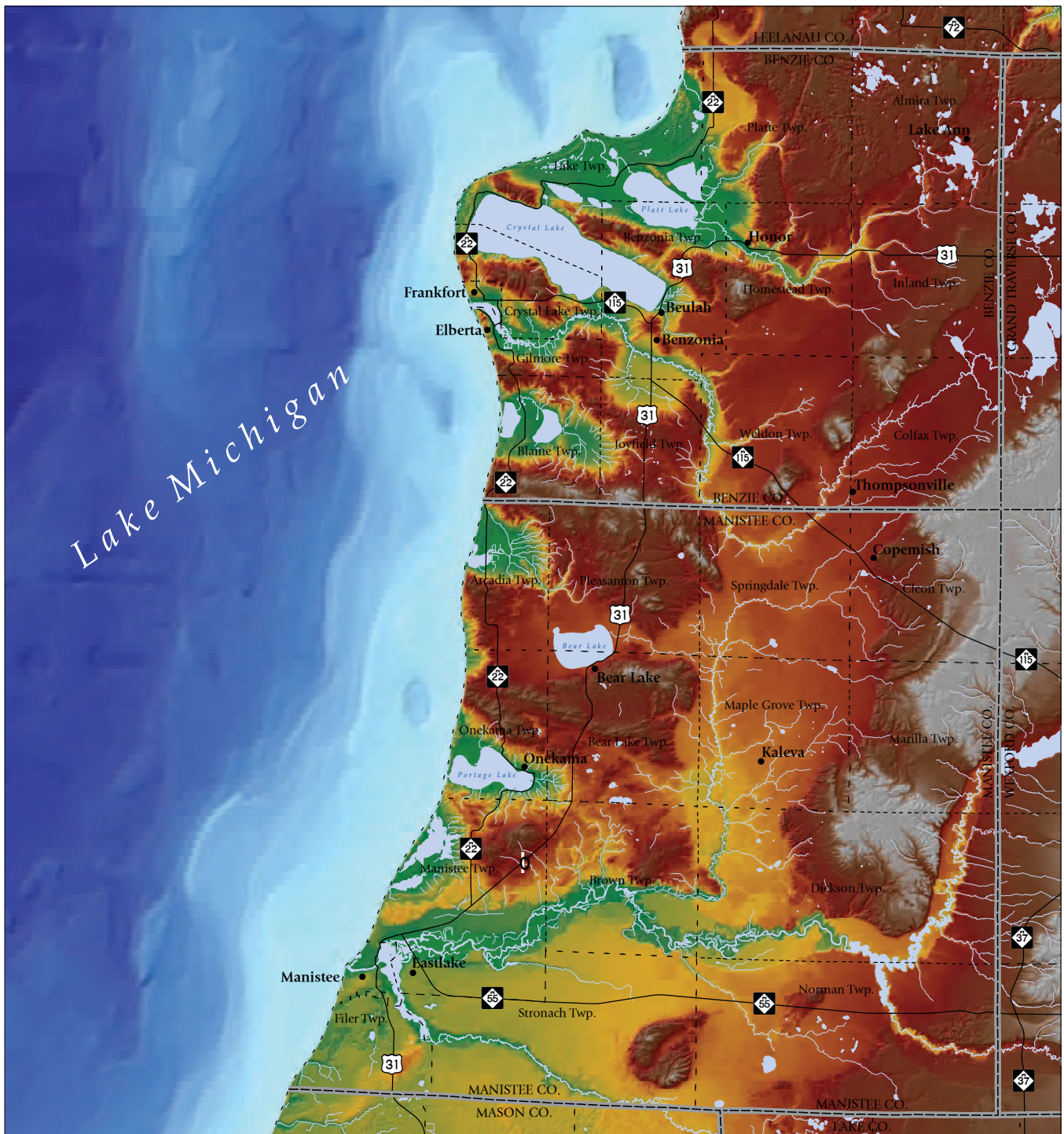
The map in Figure 2.8 demonstrates the highly varied terrain of the Lakes to Land region, which ranges from 450 feet above sea level in the river valleys to 1,350 feet at the ridge separating Benzie and Manistee Counties. Glaciers gouged the coast intermittently to form low-lying lakes, which have in turn been modified to suit human use over the past few hundred years. In many cases, the lakes remain surrounded by lands of higher elevation to form spectacular bluffs, as in the Arcadia and Frankfort areas. These topographic grooves also helped shape the valleys through which rivers such as the Platte, Betsie, and Manistee make their way to the Lake Michigan shore.

Topography plays an indispensable role in development. Engineering concerns presented by swift grade changes were a strong influence on the location of the region's railroad corridors. Construction in areas of low elevation can be subject to flooding, while a building on a severe slope risks an unstable foundation. Also pictured on this map is the configuration of the Lake Michigan floor—its bathymetry. This helps determine how a waterbody can be used. Shallower waters remain warmer and offer recreational opportunities like swimming and windsurfing, while only deeper waters can accommodate the larger vessels used by industry.



2.9 Topography and bathymetry of Frankfort

Note the surrounding bluffs and the dredged harbor. Photo: Google Earth



LAKES TO LAND

Regional Topography and Bathymetry

Data Sources: State of Michigan Geographic Data Library

- County Boundary
- Township Boundary
- Major Road

Elevation (ft):



Lake Depth (ft):



0 2 4 8 Miles



2.10 Topography and bathymetry map



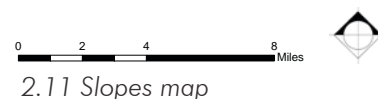
LAKES TO LAND

Representative Slopes

Data Sources: State of Michigan Geographic Data Library

- County Boundary
- Township Boundary
- Major Road

Slope Degree:



Slopes



2.12 View from Inspiration Point,
Blaine

Slope is a calculation of “rise over run,” or the change in elevation at two points divided by the distance between them.

When calculated this way, slope is expressed as a percentage or gradient. It can also be expressed in degrees, as the angle of the surface as compared to the horizontal. Figure 2.9 shows “strong” slopes, defined by an angle between 9.1 and 16 degrees (15-30% grade, or a 15- to 30-foot rise over 100 feet of distance), and “steep” slopes which have a rise of over 16 degrees (>30% grade). Awareness of the locations and extents of these slopes can impact decisions with respect to land use and transportation planning. The threat of erosion, sedimentation, and landslides all increase with the slope of a developed surface. Transportation requires more energy to cover the same distance, a situation that is drastically exacerbated as winter snow and ice reduce surface friction on the roads.

On the other hand, part of northwest Michigan’s magnetic appeal is provided by its beautiful vistas and the recreational opportunities offered by its varied terrain. Many areas of steep slopes and undulating grades are concentrated around the inland lakes near Lake Michigan. Crystal Lake in particular has some steep slopes along both its north and south banks, as do several portions of the Lake Michigan shoreline, and the unincorporated village of Arcadia is nestled in a valley surrounded by steep slope hills. M-22 owes its “Scenic Route” designation to the spectacular views offered by steep hills; the popular state lookout Inspiration Point, just north of Arcadia, is the highest elevation on the eastern shore of Lake Michigan.

Watersheds

A watershed is a geographic area of land that drains surface water to a common point in the landscape.

Watersheds catch precipitation and snow melt and channel that water into streams. Those streams flow downhill to feed into bigger streams and rivers, collectively creating a network of waterways that eventually drains into a large water body—in Michigan, all watersheds eventually flow into one of the Great Lakes. The Lakes to Land region is served by three of the watersheds designated by the United States Geological Survey: Manistee, Betsie-Platte, and Pere Marquette-White.

Watersheds connect settlements to each other in a way that is particularly dissociated from jurisdictional boundaries. First, they are usually larger than any standard municipal unit—several to dozens of municipalities can sometimes fit inside a single watershed. Second, and more importantly, water moves under its own power from jurisdiction to jurisdiction. This means that the impact of land use decisions on water quality are felt far beyond the authoritative reach of the decision-makers. Regional planning is therefore an especially valuable tool in watershed protection, as in the case of the Portage Lake Watershed Forever plan that brought the Village of Onekama and Onekama Township together, or the Crystal Lake and Watershed Association that is the most recent incarnation of a citizen-led group focused on that waterbody stretching back over 40 years.

For this reason, federal and state monies for water quality management are often disbursed on the basis of an approved watershed plan. Section 319 of the national Clean Water Act provides grants to address nonpoint source pollution (pollution from diffuse sources such as fertilizer, oil, road salt, and animal waste in runoff). The Clean Michigan Initiative is a \$675 million bond dedicated to the state's water resources, including a \$90 million clean water fund and \$70 million in pollution and remediation monies. Nearly all of the Lakes to Land region is covered by a plan tailored to one of these two programs, with the exception of the areas adjacent to the Platte Bay and those surrounding Bar and Arcadia Lakes.



2.13 Traveling water

The Platte River goes under the M-22 bridge to meet Lake Michigan at the Platte Bay. Photo: UpNorth Memories by Don Harrison.

***In Michigan, all watersheds
eventually flow into one of the Great
Lakes.***



LAKES TO LAND

Watershed Boundaries

Data Sources: State of Michigan Geographic Data Library

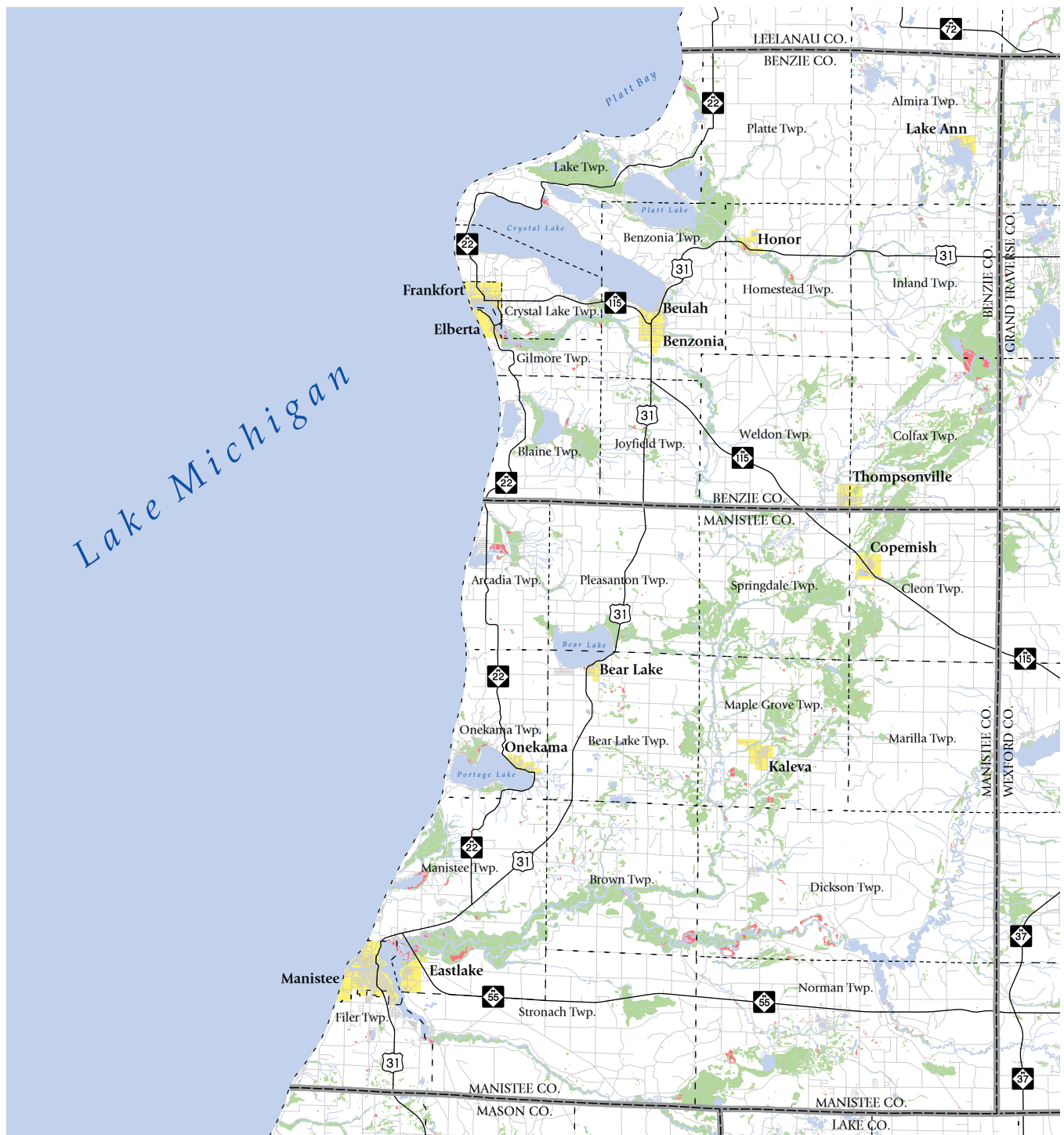
- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road

Watershed Name:

- Manistee
- Betsie-Platte
- Pere Marquette-White
- Subwatershed Boundary



2.14 Watersheds map



LAKES TO LAND

Wetlands

Data Sources: State of Michigan Geographic Data Library, National Wetlands Inventory

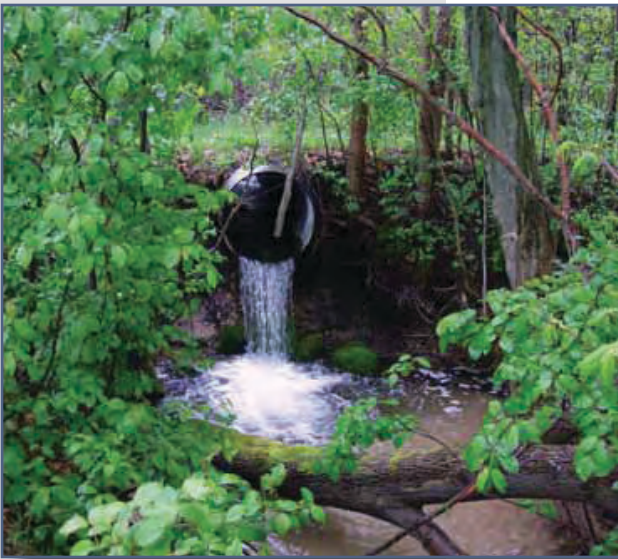
- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road

Wetland Type:

- Emergent
- Lowland, Shrub, or Wooded

Wetlands

Michigan statute defines a wetland as “land characterized by the presence of water at a frequency and duration to support, and that under normal circumstances does support, wetland vegetation or aquatic life...”



2.16 Arcadia Marsh restoration project

Photo: Ducks Unlimited

It goes on to note that these lands are commonly referred to as a bog, swamp, or marsh. By any name, wetlands are key to maintaining northwest Michigan’s natural amenities, and particularly its water bodies. They provide flood control, wildlife habitat, groundwater recharge and protection, pollution treatment, erosion mitigation, and replenishment of water nutrients.

They are so important that the Michigan Department of Environmental Quality delineates and regulates wetlands throughout the state, as shown in Figure 2.13. DEQ regulates wetlands that meet any of the following criteria:

- Connected to, or located within 1,000 feet of, one of the Great Lakes or Lake St. Clair
- Connected to, or located within 500 feet of, an inland lake, pond, river, or stream
- More than 5 acres in size
- Has been determined by the DEQ to be essential to the preservation of the state’s natural resources

Every one of the communities participating in the Lakes to Land Regional Initiative has some delineated wetlands, although the greatest concentration in the region runs northeasterly through the non-participating townships of Maple Grove, Springdale, Cleon, and Colfax. Regulated wetlands require a permit and possibly mitigation for any activity (construction, fill, dredging, etc.) that will impact them.

2.17 Table of wetlands acreage

	Benzie	Manistee	Total
Emergent (characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens)	1,079.27	2,324.67	3,403.95
Lowland, Shrub, Wooded (characterized by low elevation and woody vegetation)	22,762.91	40,787.43	63,550.33

Source: National Wetlands Inventory

Protected lands

As the nineteenth century drew to a close, the lumber barons had just about clear-cut the entire state of Michigan. Though agriculture was expected to take the place of logging in the local economy as it had done elsewhere, soils better suited to the slow, woody growth of trees ensured that it did not.

Collapsing farm prices and tax delinquency following the end of World War I placed hundreds of thousands of acres of land under government control. Faced with a population hemorrhage out of northern Michigan, the state's Conservation Department embarked on a program of rehabilitating the land for recreational purposes.

The Manistee National Forest was created in 1938. Administratively a portion of the Huron-Manistee National Forest, it comprises just over 148,000 acres of land within Manistee County, including 5,778 acres in Manistee Township. The Forest provides recreational opportunities, fish and wildlife habitat, and resources for local industry.

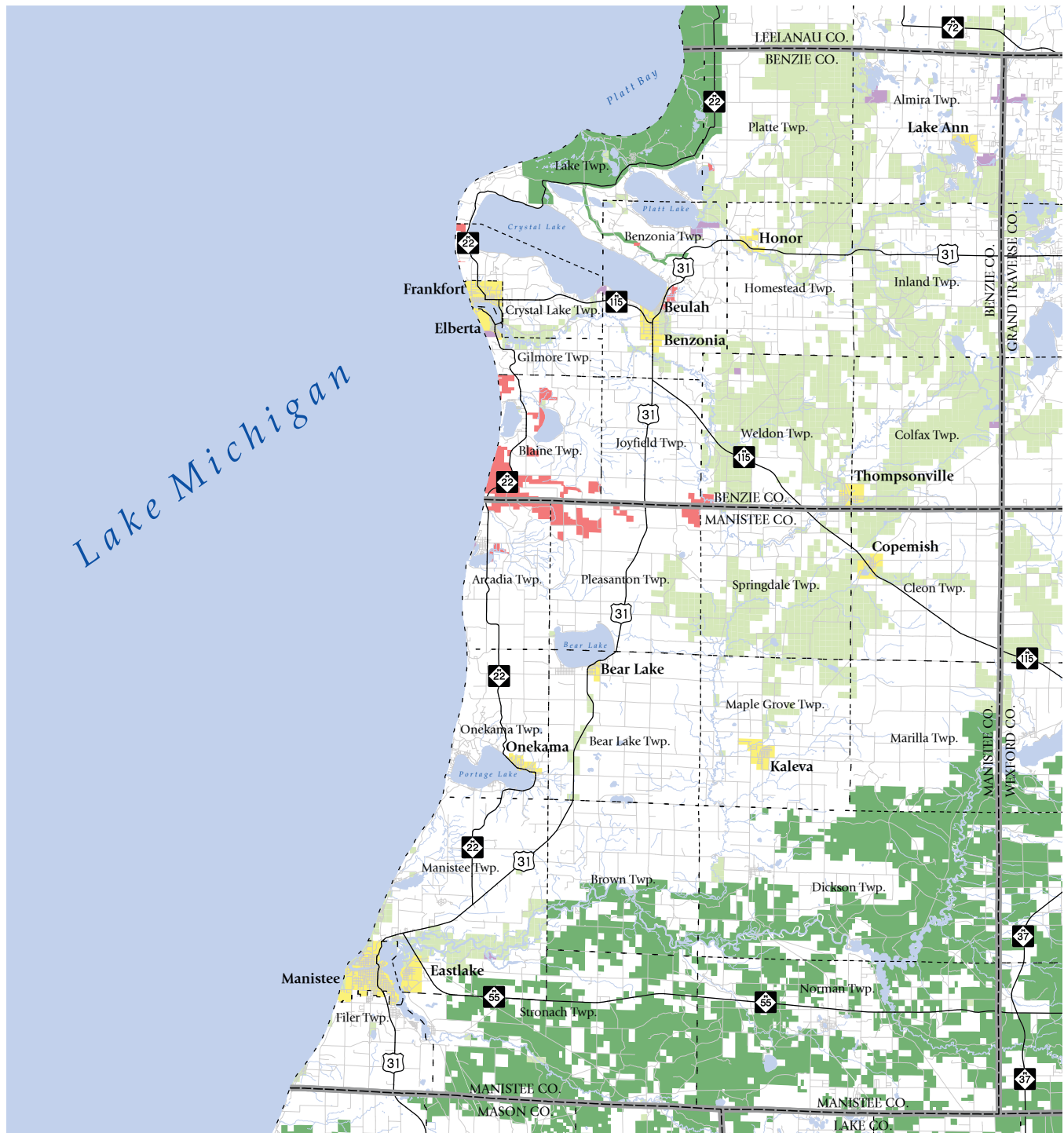
The Sleeping Bear Dunes National Lakeshore began as an unsuccessful 1941 recommendation to establish a state park on the Leelanau Peninsula. Finally authorized by the National Parks Service in 1970, it extends across approximately 35 miles of Lake Michigan Shoreline from Benzie to Leelanau Counties, and part of its 12,000 Benzie County acres comprise 45% of Lake Township. The Lakeshore is an international destination for outdoor and wildlife enthusiasts. In 2011, it was named by ABC's "Good Morning America" as the Most Beautiful Place in America.

In the 1990s, Rotary Charities commissioned a study showing a breakneck pace of development in northern Michigan and responded by incubating the Grand Traverse Regional Land Conservancy. The Conservancy has since partnered with individuals, foundations, and all levels of government to protect over 34,000 acres of land and 100 miles of shoreline.



2.18 Lookout at Sleeping Bear Dunes

Photo: National Parks Service



LAKES TO LAND

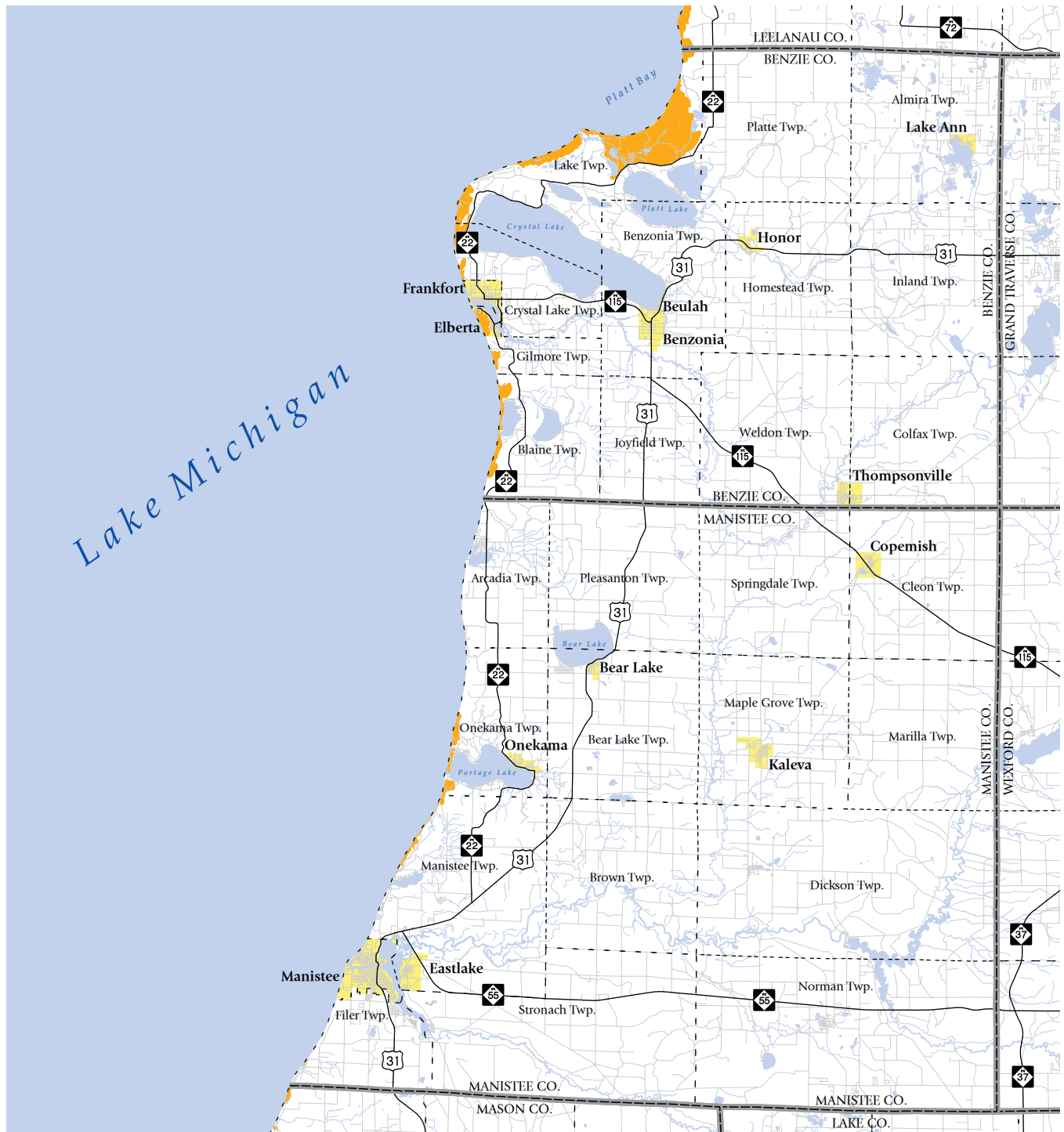
Federal, State, and Protected Lands

Data Sources: State of Michigan Geographic Data Library

- | | |
|---|--|
| City or Village | Federal Owned Land |
| County Boundary | State Owned Land |
| Township Boundary | GTRLC Nature Preserve |
| Major Road | GTRLC Protected Land |
| Minor Road | |



2.19 Protected lands map



LAKES TO LAND

Critical Dunes

Data Sources: State of Michigan Geographic Data Library

- Critical Dunes
- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road



2.20 Critical dunes map

***Arcadia
Township
is the only
participating
shoreline
community
in which
critical
dunes have
not been
inventoried
by the
MDEQ.***

Critical dunes

Michigan hosts the largest collection of freshwater sand dunes in the world, a unique ecosystem sheltering five threatened and endangered species.

Protecting the dunes lining the Lake Michigan shoreline along significant portions of Manistee and Benzie Counties is an essential aspect of land use planning in northwest Michigan. Sand mining has been regulated by the State since 1976, and activities related to development, recreation, and forestry have been regulated since 1989. Earthmoving, vegetation removal, and construction activities within a critical dune area are subjected to a permit process. Local governments may assume that permitting authority by passing zoning restrictions that are at least as protective as state regulations, an option that has not been exercised by any Lakes to Land community.

There are approximately 7,025 acres of critical dunes along the shores of Benzie and Manistee Counties, nearly all (91%) of which is in Benzie County. Arcadia Township is the only shoreline community participating in the Lakes to Land initiative in which critical dunes have not been inventoried by the MDEQ.



2.21 Sleeping Bear Dunes



Transportation

Of all the subjects addressed in a master plan, transportation is among those best suited to be considered on a regional scale. People travel for the purpose of getting somewhere—frequently, somewhere outside the municipal boundary in which they started.

Of course, the story is much fuller. The connection between transportation and land use is so deep that many communities owe their very existence to the routes along which they sprang up: the port city of Manistee, for example, or the fortuitous harbor shelter that led George Tifft to arrange for the development of Frankfort. As the land use intensifies, so too do transportation routes: the Guelph Patent Cask Company's lumber operation in Honor brought the Pere Marquette Railroad to town, and the settlements at Manistee, Bear Lake, and Benzonia attracted an "auto trail" that would grow into the cross-country thoroughfare US-31.

For communities bordering a large body of water, limitations on growth are accompanied by challenges to land transportation. This describes the majority of Lakes to Land communities, where geography requires them to be the destination, not a waypoint, for westbound land travelers.

The inseparable nature of production and shipping means that industrial land uses are particularly entwined with transportation. Lumber encampments first sprang up along rivers so that harvested logs, too heavy to be pulled

efficiently by horses, could be floated to ships waiting at port. The emergence of the rail industry meant that operations were no longer confined to any water's edge—rather than bringing the industry to the transportation, the transportation could now be brought to the industry. The Ann Arbor Railroad illustrated the value of combining these approaches when it reached the end of its line in Elberta and began launching waterborne "car ferries" to transport cargo across Lake Michigan to Milwaukee and Chicago.

Sometimes, though, we travel just because we like it. As the 20th century got underway, the trains began to carry more tourists than cargo; some segments of the long-obsolete Ann Arbor Railroad bed have now been transformed into a pleasure trail for hikers and bikers. A group of gliding enthusiasts became so enamored of the offshore breeze at Frankfort that they made it into "the soaring capital of the world." The highway shield for M-22 dots the state, not as a route marker but as two kiteboarders' proclamation of "appreciation for natural wonders such as bays, beaches and bonfire, dunes and vineyards, cottages, friends and family everywhere."

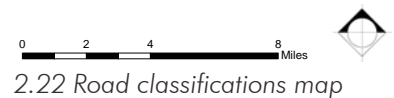


LAKES TO LAND

Road Classifications

Data Sources: State of Michigan Geographic Data Library, USDOT National Functional Classification

- | | |
|--|--|
| City or Village | Arterial Road |
| County Boundary | Collector Road |
| Township Boundary | Local Road |



Road classification

Modern roads have been part of the public domain almost since their inception, and for good reason: their usefulness depends heavily on the consistency of their condition and entirely on their continuity of existence across varied lands.

But the “almost” is an important part of that sentence. In the late ‘teens and early 1920s, Michigan was among many states that became criss-crossed with “auto trails,” routes named by private organizations and marked with colorful bands on electric and telephone poles. The two such trails that headed to Mackinaw City via the Lakes to Land region were the West Michigan Pike, which began in Michigan City, IN, and the Dixie Highway Northern Connector from Niles, IN. Both traveled through the city of Manistee and the villages of Bear Lake and Benzonia.

Following Wisconsin’s example, Michigan became the second state to replace this haphazard system with a numbered trunkline system in 1918-1919. (“Trunkline” now refers to all interstate, US, and Michigan highways.) The West Michigan Pike became M-11 until the United States Numbered Highway system was implemented nationally in 1926, when it was renamed again to US-31. It remains the main artery of Michigan’s west coast, and it was the first highway to cross the Straits via car ferry. In 1952, it was designated as Michigan’s only Blue Star Memorial Highway in a tribute to the Armed Forces.

Also among the Michigan’s first state highway designations was M-22. Just 116 miles long, it follows the Lake Michigan shoreline from Manistee through Onkama, Arcadia, Elberta, Frankfort, and the Sleeping Bear Dunes National Lakeshore before it rounds the tip of the Leelanau Peninsula and returns south to Traverse City. Its sign has been adopted by a private recreation company as an informal brand of the region, and M-22 stickers and clothing are now seen all over the state. The Leelanau County portion of the route was designated part of the Leelanau Scenic Heritage Route in 2002, and it’s an honor with a planning component: Scenic Heritage Routes cannot be adjacent to land zoned for commercial or industrial uses.

Finally, the road from Frankfort to Benzonia along the south shore of Crystal Lake was designated as M-115 in 1929. Traveling through the Manistee National Forest and the Pere Marquette State Forest, it now terminates in Clare at the intersection of business US-127 and business US-10.

These roads provide several options for travel north and south, but travelers to the east and west rely on county roads under the jurisdiction of the Benzie and Manistee County Road Commissions.



2.23 Auto trail signs

Top and middle: Signs marking the Dixie Highway and West Michigan Pike

Bottom: M-22 sign that has become an unofficial symbol of northwest Michigan.

Vehicle traffic volume

Annual average daily traffic—the total volume of vehicle traffic on a given road in a year, divided by 365—is a simple measurement of how busy a road is.

One of the most common uses of AADT data, and in many cases the reason it is collected at all, is to determine the distribution of road funding for improvements and maintenance. The United States Department of Transportation Federal Highway Administration requires each state to submit a Highway Performance Monitoring System report each June, and these reports form the basis for funding allocations. Three quarters of the 18.2 cent per gallon federal fuel tax is disbursed to the states, while the other 25% is distributed directly to county road commissions and city and village transportation authorities (all are required to provide matching funds). The Michigan Department of Transportation also collects a 19 cent per gallon gasoline tax in addition to vehicle registration fees and other transportation-related fees.

County roads make up 75% of the total Michigan road system, moving over \$800 billion of goods and services annually. While the most miles are driven on state roads, county roads are the site of the majority of intersections—and crashes. Only four of the 889 Michigan traffic fatalities in 2011 occurred in Benzie or Manistee County. The Benzie-Manistee area saw the greatest number of accidents in November (174), followed closely by October (173) and December (171); crashes with injuries to persons occurred most frequently in October (33), August (31), and July (30). In both counties, drivers aged 16-20 accounted for the greatest number of crashes: 1079 per 10,000 licensed drivers, as compared with 578 crashes per 10,000 licensed drivers among those aged 21-64 and 337 crashes per 10,000 licensed drivers for those aged 65 and up. These trends are consistent with statewide data indicating that crash rates decline as driver age increases.

Traffic volume data can also help prioritize snow removal. For the 2011-2012 year, the Michigan Department of Transportation categorized snow and ice control on US-31 as Priority Level I, meaning that the surface will be bare of ice and snow even if overtime must be paid to accomplish it, while the Priority Level II designation of lower-traffic M-22 means that overtime can be paid to clear a one-wheel track in each direction but the rest must wait for the next scheduled shift.



2.24 Historical snow plowing in Manistee

Photo: UpNorth Memories by Don Harrison



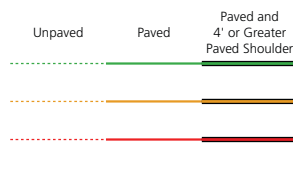
LAKES TO LAND

Vehicle Traffic Volume

Data Sources: State of Michigan Geographic Data Library, MDOT

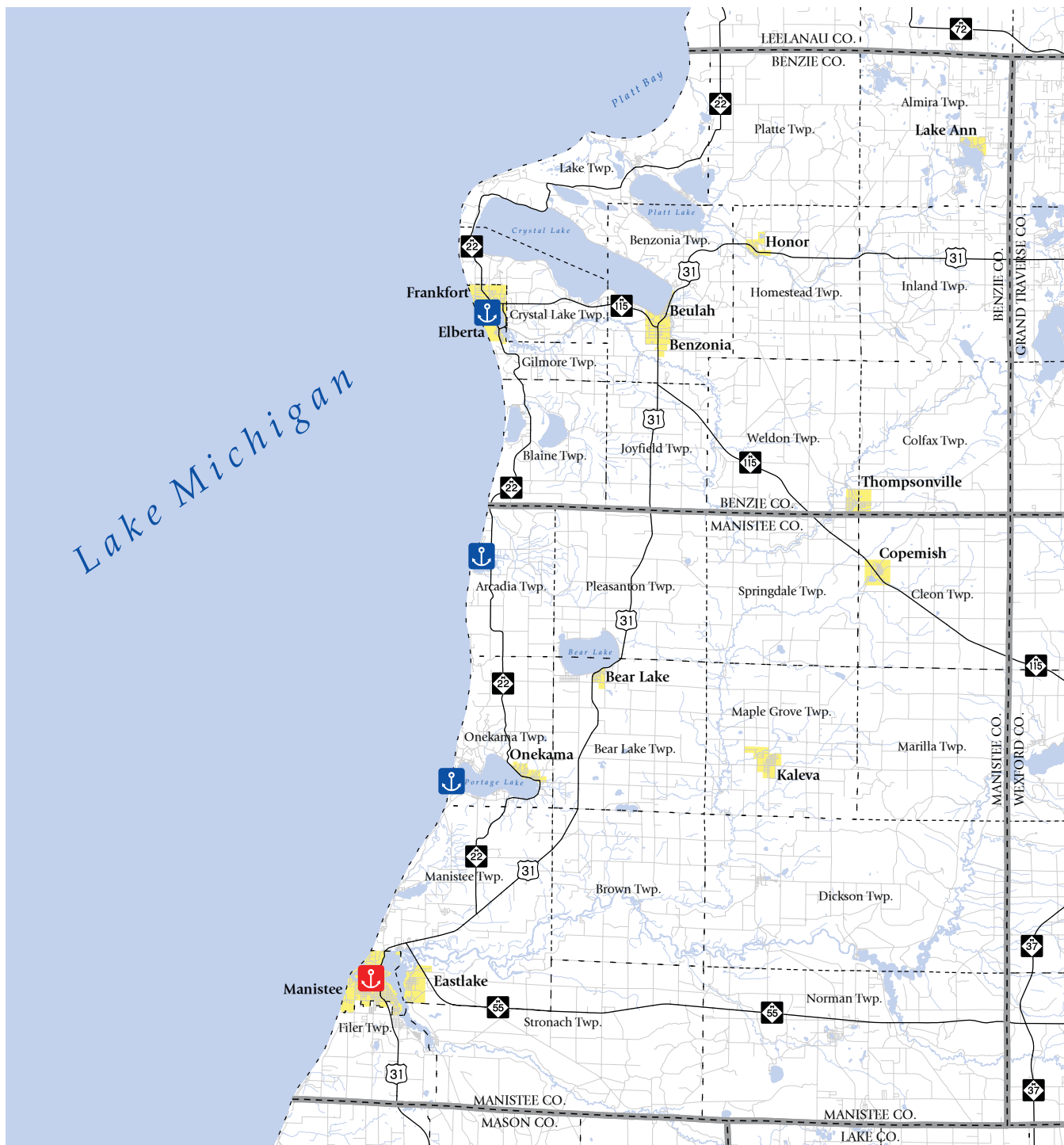
Vehicles per Day:

- Low (Under 2,500)
- Medium (2,500 - 10,000)
- Heavy (Above 10,000)
- Minor Roads (No Data)



- City or Village
- County Boundary
- Township Boundary





LAKES TO LAND

Marine Harbors

Data Sources: State of Michigan Geographic Data Library, MDNR

- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road

Harbor Type:

- ⚓ Cargo, Commercial, and Recreational
- ⚓ Commercial, and Recreational



2.26 Marine ports map

Marine ports

The front door of many Michigan coastal communities is its port.

Great Lakes navigation brought the first European settlers to the Lakes to Land region, first to trap fur and then to harvest timber from this western frontier. Commercial use of the waterways has continued ever since, and today one quarter of the nation's top harbors by tonnage are on the Great Lakes. Maritime transport is considerably cheaper and more environmentally friendly than either rail or truck. Its average of 607 miles to one gallon of fuel per ton of cargo is three times the efficiency of a freight train and over ten times as efficient as trucking; it

produces 90% less carbon dioxide than a semi and 70% less than a train. And then there are the infrastructure costs. While rails and roads require continual maintenance, the vast majority of Great Lakes shipping lanes were created by glaciers without any help from us at all.

Sandy barriers prevent some rivers from emptying into Lake Michigan at the close of their journey toward sea level, pooling instead into lakes that dot the western edge of the state. It took no time at all for early settlers to begin dredging these barriers, transforming the lakes into roomy and land-locked harbors. Manistee, with its broad lake at the confluence of two rivers, is the largest in the region. This deep draft commercial harbor serves five major industrial facilities, including the Filer City Generating Station. Frankfort, also a deep draft commercial harbor, was once reknown



2.27 Freighter departure

for the car ferries that launched rail shipments from the Ann Arbor Railroad onto the waterway system. Though those days are long gone, this Harbor of Refuge supports over 200 recreational boat slips. Citizens of Onkama have established infrastructure around their recreational harbor at Portage Lake that supports 230 recreational boat slips and generates tourist income; residents of Arcadia have done the same to support their 60 recreational boat slips and charter fishing enterprises. Both are also Harbors of Refuge, offering mooring to boaters stranded in inclement weather.

But harbors are not part of the maintenance-free portion of the Great Lakes navigational system. The US Army Corps of Engineers is responsible for them under the national River and Harbor Act of 1879, and the already-challenging task of reliably directing sand and water is complicated by persistent low water levels and deferred maintenance due to constrained budgets.

Rails

The sole railroad line now operating within the Lakes to Land region is the CSX line that loops around the north end of Manistee Lake and continues south to Grand Rapids—all that remains of a bustling network of railroads across and around the region, many of which were built to serve the timber industry.

The Manistee route was also the first rail foray into the Lakes to Land region in 1881. Three years later, the Arcadia and Betsey River Railroad began a short trip between Arcadia and its then-neighbor to the northeast, Saile Station, continuing on to the then-village of Springdale in 1887.

Over the next several years, railways exploded all over the region: a Manistee & Northeastern ran a line from Manistee to Nesson City in 1888, the company that would become the Ann Arbor Railroad connected Cadillac to Frankfort in 1889, and lines connecting Walhalla, Interlochen, Lake Ann and Traverse City all popped up in 1890. This completed the backbone of the regional system, and beginning in about 1895 much of the rail-building effort was devoted to spurs that connected established stations and reached ever-further into the Leelanau Peninsula.

The need for rail cars plummeted at the close of the lumber era, and those connecting spurs began to disappear beginning around 1917. The main lines through the region lasted mostly intact until the Depression. In 1934, a Pere Marquette loop that ran from Traverse City through Lake Ann, Interlochen, and Kaleva stopped running, and the Arcadia and Betsey River Railway followed in 1936. For the next 40 years, only the north-south Pere Marquette line and the Ann Arbor Railroad's Frankfort connection remained. The former was abandoned in 1982, and the latter is undergoing rebirth as the Betsie Valley Trail after landing under the control of the State of Michigan in 1980.



2.28 The John D. Dewar Approaches an Arcadia Dock






Photo and text from Arcadia Area Historical Society: "This is a view south along Lake Arcadia's northeast shore. The steamer DeWar is on the left. Logs are stacked along the shoreline, in a barge, and in the water waiting transport to the Starke Sawmill. Source: Postcard Photo from the collection of Bob McCall"



LAKES TO LAND

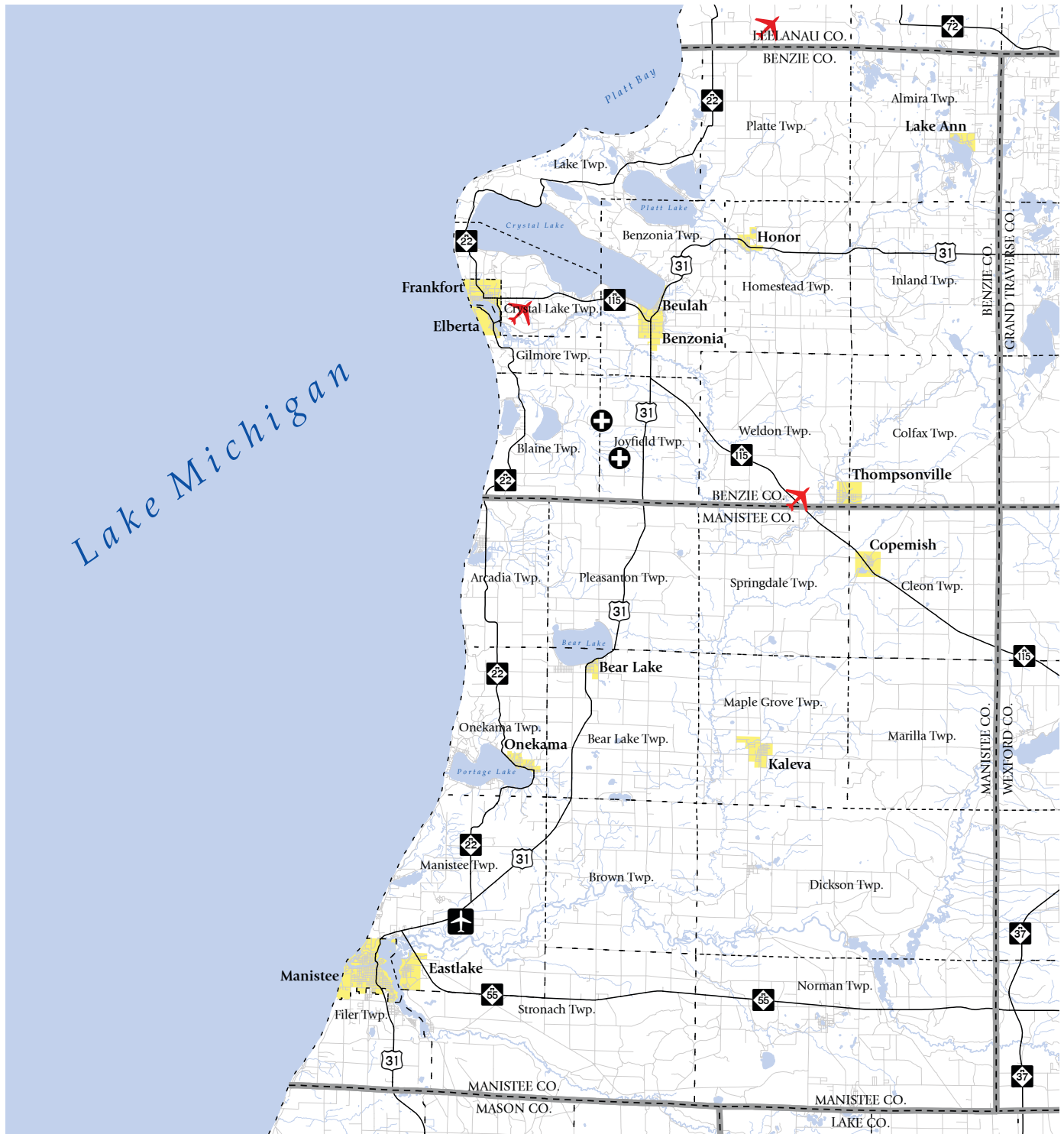
Operable Railroad Tracks

Data Sources: State of Michigan Geographic Data Library

-  City or Village
  Railroad Track
 County Boundary
  Major Road
 Township Boundary
 Minor Road



2.29 Operable railroad tracks map



LAKES TO LAND

Aviation

Data Sources: State of Michigan Geographic Data Library, MDNR

- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road

Type:

- + Helipad
- ✈ Commercial
- ✈ General Aviation

0 2 4 8 Miles
2.30 Aviation map



Air travel

Long before Blacker Airport became the fastest way to get from the Lakes to Land region to the rest of the world, sailplanes brought the rest of the world to the region.

Manistee County - Blacker Airport is the largest airport in the region with 3,413 commercial enplanements ("civil aviation operations other than scheduled air services and non scheduled air transport operations for remuneration or hire") in 2010. It is publicly owned by the Manistee County Blacker Airport Authority, and its first commercial flight went aloft in 1961. Seven single-engine and one multi-

engine aircraft are based in the field. Of the 132 weekly flight operations it averaged in 2010, 72% were split evenly between transient and local general operations; 18% were commercial flights; 9% were air taxis; and less than 1% were military. By contrast, the public-use Thompsonville Airport is the smallest. Owned by the Village of Thompsonville, it hosts four single-engine aircraft. Half of its 15 flight operations per week in 2011 were transient general aviation while the other half were local general aviation.



2.31 Frankfort Cinema TG 1-A

This sailplane was, used by the U.S. Army Air Corps as a training glider.

Frankfort Dow Memorial Field, a general aviation airport, saw three commercial enplanements in 2010. Publicly owned by Frankfort City-Co Airport Authority, its 77 weekly flight operations in 2011 were also split evenly between transient and local general aviation. Its aircraft base, however, was unique: the 13 engine-powered vehicles were accompanied by six gliders and one "ultralight," defined in the U.S. as a single-seat vehicle of less than five gallons fuel capacity with weight and speed restrictions of 254 pounds and 55 knots (64 mph) respectively. These are the crafts of the Northwest Soaring Club, which was based at the Frankfort Dow Memorial Field until summer of that year.

A 1939 article in *The Rotarian* credits six glider enthusiasts with transforming this city of "a few commercial fishermen, a few Summer visitors, and no fame at all" into "the soaring capital of America." It went on to cite the first-ever incorporated sailplane school in America, the Frankfort Sailplane Factory, and the startling statistic that a full 80% of Frankfort's population had taken to the skies. Although the factory moved to Illinois before it folded and the school has moved to Cadillac with the Northwest Soaring Club, the gliders' glory days had put Frankfort on the map for good.



Regional Recreation

The tourism that has become one of the region's strongest economic bases is largely fueled by an abundance of recreational opportunities.

In the winter, residents are found playing on the slopes of nearby alpine ski resorts, racing down snow mobile routes, participating in snow shoe stampedes, enjoying a vigorous day of Nordic skiing, or relaxing in an ice hut on an inland lake trying to secure that perfect catch. Some more adventurous souls are racing their ice sail boats. When warm weather is upon the region, residents are found mountain biking or walking on the non-motorized transportation trails, walking the tree-lined neighborhood streets of the villages and towns, and living life by enjoying family and community.

During the summer months, winter's empty and lonely orchards burst forth with energy. Small fruit stands dot M-22, and nurseries along US-31 are available for drivers to smell the fresh air and listen to the sway of the trees while tasting the bounty of the area. Boating, whether sailing or under power, occupies many lazy afternoon days. Sailboats of all sizes cluster in weekly regattas on the

lakes vying for one more knot. When the wind gets too fierce for the sailors, the sailboarding crew unravels its gear and speeds over the whitecaps, catching air and impressing the bystanders. Lake Michigan may not get waves big enough for surfing on a regular basis, but its substantial wind kicks up some pretty large breakers for an inland lake.

All types of fishing exist in plenty: enterprise or recreation, fly or bait and tackle.

Fishing is a huge industry in the region, whether it is winter or summer. All types exist in plenty: enterprise or recreation, fly or bait and tackle. The region's rivers, streams, and lakes are heavily scrutinized for their freshwater inhabitants, and they are home to some of the finest fly fishing the country has to offer. Golf is also a major recreational must for many who live and visit the region; opportunities range from opulent courses known throughout Michigan and beyond to propitious courses that host all levels of player.

Parks and recreation

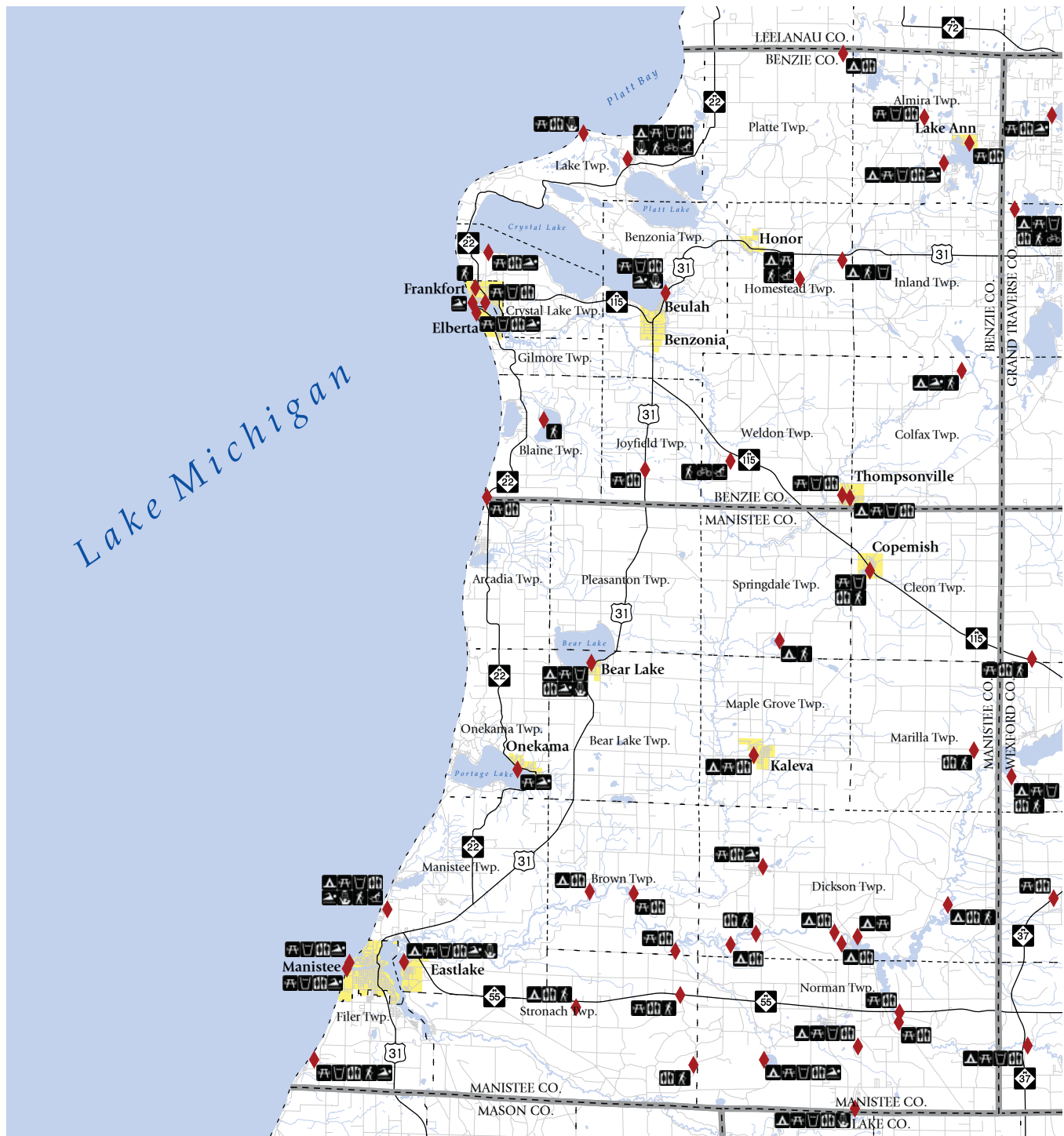
“Because to so many citizens, men and women alike, life is a grind, a round of labor and a season of care... Thus public recreation facilities are provided because of the demand for a free and popular antidote to task-driving conditions.”

Charles Mulford Robinson used these words in a 1910 article titled “Educational Value of Public Recreation Facilities” to assure his readers that his treatise was not going to sap all the fun out of public parks. “To furnish that antidote is their essential purpose,” he soothed. “Education is incidental to it.” Still, his next several pages do not waver from their purpose: “The song of a bird, the scent of a flower, the glory of a sunset sky are parts of our common heritage. ... If the park can cultivate these in large numbers of people, as an incident of its service as a public pleasure ground, it will bestow great benefit; it will vastly increase its usefulness to the community; it will not only heighten the enjoyment of its own attractions, but it will put into hearts and minds a faculty of enjoyment that will be of service in daily life. To such extent, the investment which has been made in the parks will be paying daily dividends on the common stock of human experience.”

That may sound a bit overblown, but it turns out that we needn’t rely on the common stock of human experience to get dividends out of parks. Nearly a century after Mr. Robinson’s article, a 2006 National Fish and Wildlife Foundation study found that “outdoor recreation sales (gear and trips combined) of \$289 billion per year are greater than annual returns from pharmaceutical and medicine manufacturing (\$162 billion), legal services (\$253 billion), and power generation and supply (\$283 billion).” Camping and hiking alone accounted for 55% of outdoor recreation’s total impact on the US economy, surpassing fishing, hunting, water sports, trail- and snow-based activities, and wildlife viewing.



Blaine Township Park



LAKES TO LAND

Recreational Facilities and Amenities

Data Sources: State of Michigan Geographic Data Library, MDOT

- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road

- Park / Public Recreation Area
- Camping
- Picnic Facilities
- Drinking Water
- Restrooms / Port-A-Johns

- Swimming
- Showers
- Hiking / Trailhead
- Biking
- Nordic Skiing

0 2 4 8 Miles

2.32 Parks and recreation map



LAKES TO LAND

Campgrounds

Data Sources: State of Michigan Geographic Data Library, MDNR, NPS

- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road
- National Park Campgrounds
- National Forest Campgrounds
- State Forest Campgrounds
- State Park Campgrounds
- Local Municipality Campgrounds



2.33 Campgrounds map

Camping

As leisure activities go, camping is about as democratic as it gets.

The Michigan Department of Natural Resources boasts that “you are never more than half an hour from a Michigan State Park, State Forest Campground, State Recreation Area, or State trail system,” so just about anyone in need of a getaway can pack up a few subsistence items and start communing with the great outdoors in short order. It’s affordable, kid- and pet-friendly, and so therapeutic that entire intervention programs have been built around it.

Lake Michigan’s varied shoreline and the region’s abundance of inland lakes, rivers, streams, woodlands, bluffs, and trails make it a year-round destination for outdoor enthusiasts of all types. And at the end of the river rafting or the bicycle riding, those enthusiasts need a place to rest their heads—and a bite to eat, and maybe a few supplies or souvenirs, making an attractive campground into a community economic driver.



A City of Tents, Orchard Beach State Park, Manistee, Mich.

2.34 Orchard Beach State Park in
Manistee Township

Photo: UpNorth Memories by Don
Harrison

State campgrounds within Benzie and Manistee Counties are maintained and managed by the MDNR. The Platte River campground, federally managed as part of the Sleeping Bear Dunes National Lakeshore, is at the junction of M-22 and the Platte River, where archaeological evidence suggests that humans may have been taking a summer holiday since 600 B.C. Numerous private and quasi-public campgrounds dot the area, but it is interesting to note that the region hosts no state campgrounds at all in the recreation-focused area west of US-31—a potentially overlooked income source.

Boat launches

The eight Great Lakes states registered 4.3 million boats in 2003—one third of all US recreational vessels—and Michigan’s 1,000,000 boats led the region. Forty-two percent of them belonged to residents of coastal counties.

To preserve public access to our 3,000 miles of coastline, Michigan’s state legislature began earmarking fishing license funds to purchase water frontage in 1939. Since then, marine fuel taxes and boat registration fees paid by recreational boaters have funded the construction of over 1,200 boat launching facilities. In the Lakes to Land region, the launches offer access to Lake Michigan, rivers, and inland lakes for watercraft ranging from kayaks to yachts. In addition to these State-designated launches, there are many additional inland lake road-end boat launch areas maintained by the Benzie and Manistee County Road Commissions.

Such maintenance is money well spent. A Great Lakes Recreational Boating study conducted by the US Army Corps of Engineers in 2003-2008 found that an average Great Lakes boat owner spends about \$3600 per year, including equipment, insurance, fees, gas, food, and lodging. Applying that figure to the statistic above, it is reasonable to estimate that recreational boating is a \$72 million enterprise in the Lakes to Land region. The same study appraises its contribution to Michigan personal income at \$1.3 billion, to the overall economy at \$1.9 billion, and to statewide employment at 51,000 jobs.



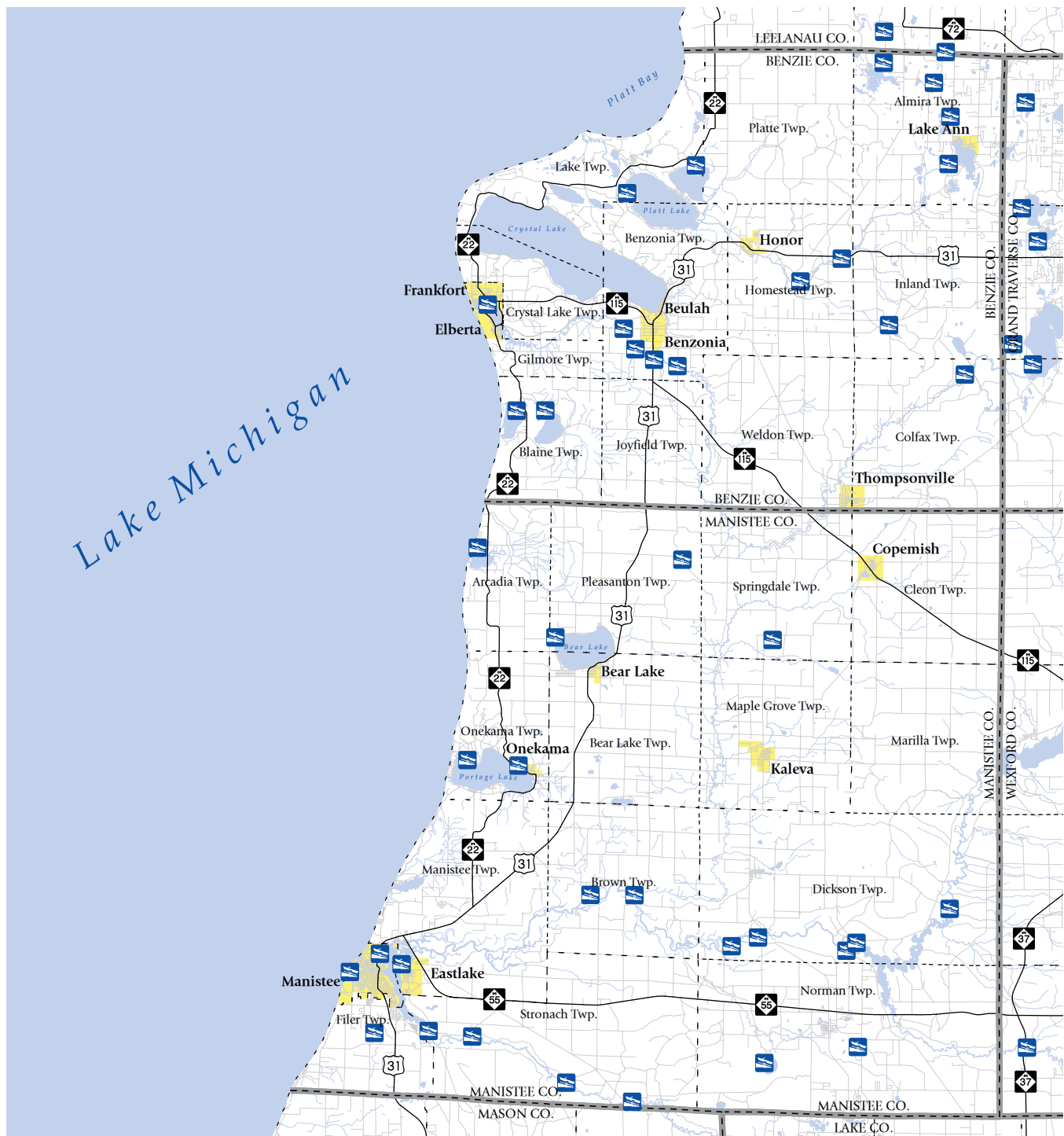
2.36 Bear Lake boat launch circa 1920s

Photo: UpNorth Memories

2.35 Table of boating economic impacts

	Lakes to Land Region*	State of Michigan	Great Lakes basin
Registered boats	19,071	953,554	4,282,507
Trip and craft sales	\$780 million	\$3.9 billion	\$19 billion
Personal income added	\$260 million	\$1.3 billion	\$6.5 billion
Economic value added	\$380 million	\$1.9 billion	\$9.2 billion
Jobs	1,027	51,329	246,117

* calculated by taking 42% of state number and dividing by 21 (2 of 42 total coastal counties)



LAKES TO LAND

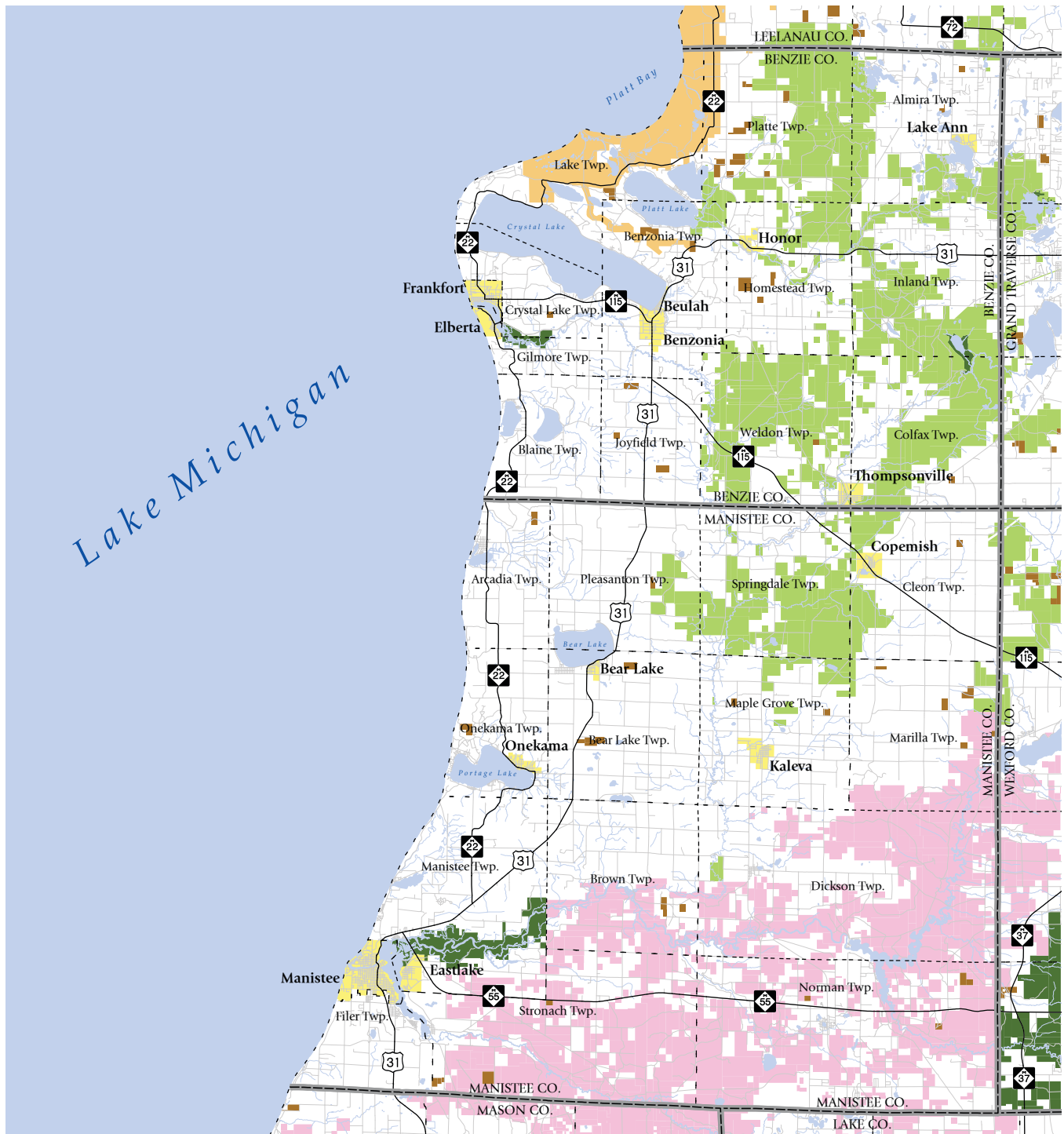
Boat Launch Ramps

Data Sources: State of Michigan Geographic Data Library, MDNR

-  State Designated Boat Access Site
-  City or Village
-  County Boundary
-  Township Boundary
-  Major Road
-  Minor Road



2.37 Boat launch ramps map



LAKES TO LAND

Lands Open to Public Hunting

Data Sources: State of Michigan Geographic Data Library, MDNR

- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road

Open to Public Hunting:

- US Forest Service
- National Park Service
- Commercial Forest Act Lands
- State Forest Land
- State Wildlife/Game Areas

0 2 4 8 Miles



2.38 Lands open to public hunting map

Hunting

Want to hunt deer, elk, rabbit, hare, squirrel, pheasant, grouse, woodcock, quail, crow, coyote, opossum, porcupine, weasel, skunk, woodchuck, turkey, or waterfowl? There's a license for that.



2.39 Jake turkeys in Onekama

Photo: Al Taylor

The Department of Natural Resources, responsible for fish and wildlife management, regulations, and habitat protection, is primarily funded through two mechanisms: the direct sale of hunting and fishing licenses, and the leveraging of those proceeds for use in the federal Wildlife and Sport Fish Restoration (WSFR) project. The WSFR program, which turned 75 in 2012, levies a tax of 10% to 11% on sporting arms, ammunition, bows, arrows, and crossbows and then returns that money to state conservation departments (in Michigan, the MDNR) through 3-to-1 matching grants. So, every \$1 spent on a hunting license yields \$4 in conservation funding.

It's a system that many like because it directly ties the cost of preserved land to its use. But it is also a system in which land conservation for all reasons is vulnerable to changes in hunting behavior. The chart below shows that sales for all licenses have declined steadily over the past five years, both numerically and as a share of the overall population. The magnified rate of return provided by the WSFR program also works in reverse: for every \$1 lost in hunting license sales, MDNR must make up a \$4 budget shortfall. This has led the department to urge all who are interested in conservation to buy a license—whether you plan to hunt or not.

2.40 Table of hunting licenses sold by year

		2006	2007	2008	2009	2010	2011	Change 2006- 2011	% change 2006- 2011
Hunting license type ^a	Bear ^b	9,457	9,516	10,180	8,953	8,975	9,020	-437	-4.6%
	Deer	734,089	724,198	733,993	725,186	697,454	691,181	-42,908	-5.8%
	Elk ^b	204	166	355	366	227	154	-50	-24.5%
	Fur harvester	24,024	24,387	24,148	23,331	24,411	25,813	1,789	7.4%
	Small game	295,349	293,659	273,262	266,549	261,032	256,175	-39,174	-13.3%
	Turkey ^c	132,764	127,772	124,570	127,120	125,093	114,139	-18,625	-14.0%
	Spring turkey	125,933	121,487	118,021	120,769	115,101	106,880	-19,053	-15.1%
	Fall turkey	21,951	20,877	20,561	20,758	27,310	20,905	-1,046	-4.8%
	Waterfowl	60,403	58,866	58,040	58,214	56,688	55,724	-4,679	-7.7%
	All types	814,003	800,921	805,299	798,256	772,114	763,059	-50,944	-6.3%
MI population		10,082,438	10,050,847	10,002,486	9,969,727	9,883,640	9,876,187	-206,251	-2.0%
Licenses per capita		0.0807	0.0797	0.0805	0.0801	0.0781	0.0773	-0.003	-4.3%

Source: Brian J. Frawley, MDNR.

^aWithin each license type, a person is counted only once regardless of the number of licenses purchased.

^bA restricted number of licenses were available, and these licenses were distributed using a random drawing.

^cSome but not all of turkey hunting licenses were distributed using a random drawing.

^dTotal for all types does not equal sum of all license types because people can purchase multiple license types.

Trout streams

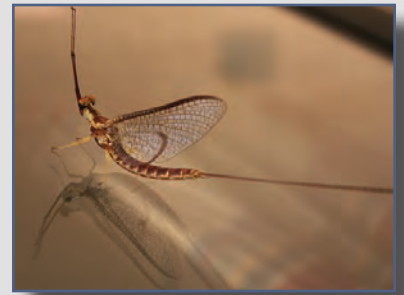
One of the region's major recreational draws is the wealth of opportunities for fishing, both in Lake Michigan and in its inland lakes, rivers, and streams.

The map displayed in Figure 2.41 identifies the designated trout streams in Benzie and Manistee counties. Viable trout streams are generally defined by three characteristics: coarse soils, limited development (including limited pavement and other impervious surfaces), and an abundance of groundwater. State-designated Blue Ribbon Trout Streams meet even stricter criteria: they support excellent stock of wild resident trout, permit fly casting while remaining shallow enough to wade in, produce diverse insect life, and have excellent water quality.

Trout are good indicators of water quality in general because of their reliance on benthic macroinvertebrate diversity—the bugs, larvae, and other organisms that live on the bottom of a body of water. These creatures thrive in streams with high levels of dissolved oxygen, and this means clean, cold water for two reasons: water's ability to hold dissolved oxygen decreases as temperature increases, and the bacteria in organic waste can quickly consume all available dissolved oxygen. When present, aquatic macroinvertebrates help maintain the water quality by eating bacteria and decayed plants, then become a source of food themselves for the resident fish population.

The Platte River from Maple City Road to Honor and Bear Creek upstream of Nine Mile Road both have Blue Ribbon designations. The Platte River stretch hosts the state's fish hatchery, which raises chinook and coho salmon and produces coho eggs for the entire upper Great Lakes. Despite Bear Creek's modest name, its flows are similar to the Little Manistee and Pine Rivers, and the tributary provides the Manistee River system with its wild runs of steelhead trout and salmon.

2.41 Benthic macroinvertebrates



Mayfly



Dragonfly

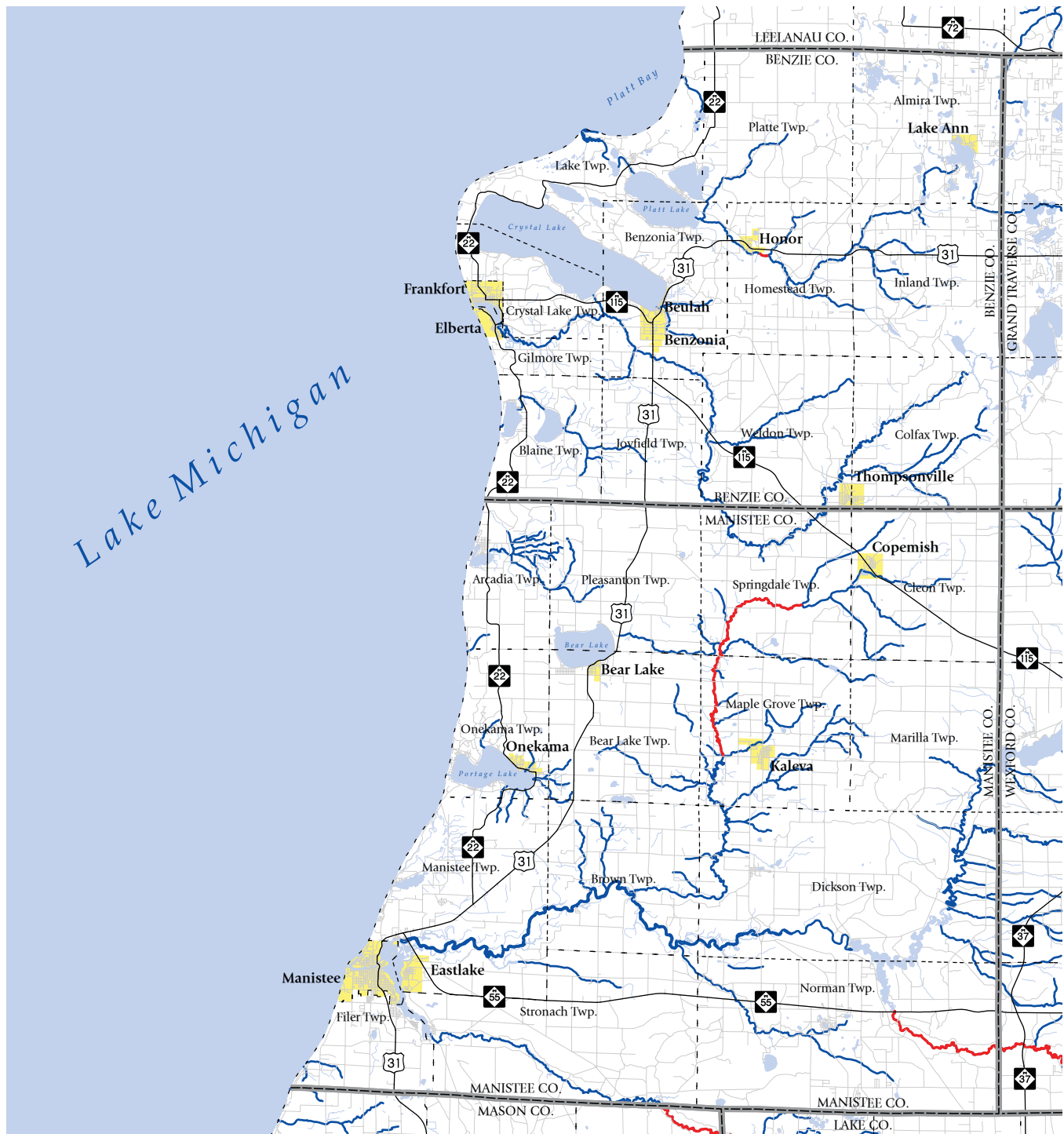


Caddisfly



2.42 Steelhead trout

Photo: Cheri and Tony Barnhart



LAKES TO LAND

Trout Locations

Data Sources: State of Michigan Geographic Data Library

- City or Village
- Trout Stream
- Blue Ribbon Trout Stream

- County Boundary
- Township Boundary

- Major Road
- Minor Road



2.43 Trout locations map



LAKES TO LAND

Regional Recreational Trails

Data Sources: State of Michigan Geographic Data Library, MDOT, NWMCOG, GTRLC

- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road

- GTRLC Trail
- Equestrian Trail
- Betsie Valley Trail

- Snowmobile Trail
- North Country Trail
- Non-Motorized Multi Use Trail
(use restrictions vary)



2.44 Recreational trails map

Recreational trails

However many worthy benefits a trail might provide, its raison d'être can often be boiled down to one word: fun.

The Michigan Statewide Trails Initiative of 1992 defines a trailway as “a land corridor passing through the community or countryside...accommodating a variety of public recreation uses.”

Recent research casts trails in the role of community superhero, providing economic, environmental, recreational, health, and even safety benefits. They offer transportation alternatives to the car. They are exercise opportunities that lead directly to better medical outcomes. They're sites of chance meetings with neighbors and wildlife. They can provide a buffer between natural areas and inhabited ones. They draw in visitors from other communities. Their activity can enliven an area that would otherwise look desolate enough to invite crime.

But however many worthy benefits a trail might provide, its *raison d'être* can often be boiled down to one word: fun. Michigan's citizenry comes together in myriad ways to identify, create, and maintain an extensive and varied trail network. For example, our 6,200-mile web of snowmobile trails, 181 miles of which run through Benzie and Manistee counties, is one of only three such systems in the country. Half of the system is on private lands while the other half is distributed among federal, state, and other public lands; all utilize grant program grooming tractors for maintenance. The 22-mile-long Betsie Valley Trail that follows the abandoned Ann Arbor Railroad bed is another collaborative example: owned by the Michigan Department of Natural Resources, it is maintained by Benzie County and supported by the not-for-profit Friends of the Betsie Valley Trail corporation. The Shore to Shore Riding and Hiking Trail that cuts across the northeast corner of Benzie County was established in 1964 by the Michigan Trail Riders Association, and the only “riding” to be done on this journey between Oscoda on Lake Huron and Empire on Lake Michigan is on a horse—neither motors nor bicycles are welcome. The Grand Traverse Regional Land Conservancy has made trails an integral part of its land stewardship mission. And the federally-managed North Country Trail is a footpath that traverses seven states between New York and North Dakota; the Huron-Manistee is one of the 10 national forests it touches on in its 4,600 mile journey.

2.45 Table of trail miles

	Benzie	Manistee	Total
Snowmobile	63.13	118.68	181.81
Equestrian	15.36	0	15.36
Nonmotorized	60.01	64.91	124.96
North Country Trail	0	33.21	33.21
GTRLC	14.71	2.07	16.79



Cultural Resources

Though the land itself provides plenty of amusement for many, over the years the people of the region have built, preserved, and accrued a wealth of cultural endeavors with which to supplement their entertainment.

Those inclined toward the visual arts may like to visit the works at the Oliver Art Center and the Crystal Lake Art Center, or wait until the art fairs arrive in Frankfort and Bear Lake. For a little free anytime cultural pick-me-up, peek into the Frankfort post office at the car ferry mural funded by the Works Progress Administration in 1941.

Those who prefer the auditory delights can be serenaded by the Benzie Community Chorus and make the summer rounds of Concert in the Park venues. In the theatrical hub of Frankfort, you can attend the Lakeside Shakespeare Theatre, Benzie County Players, and Frankfort Garden Theatre.

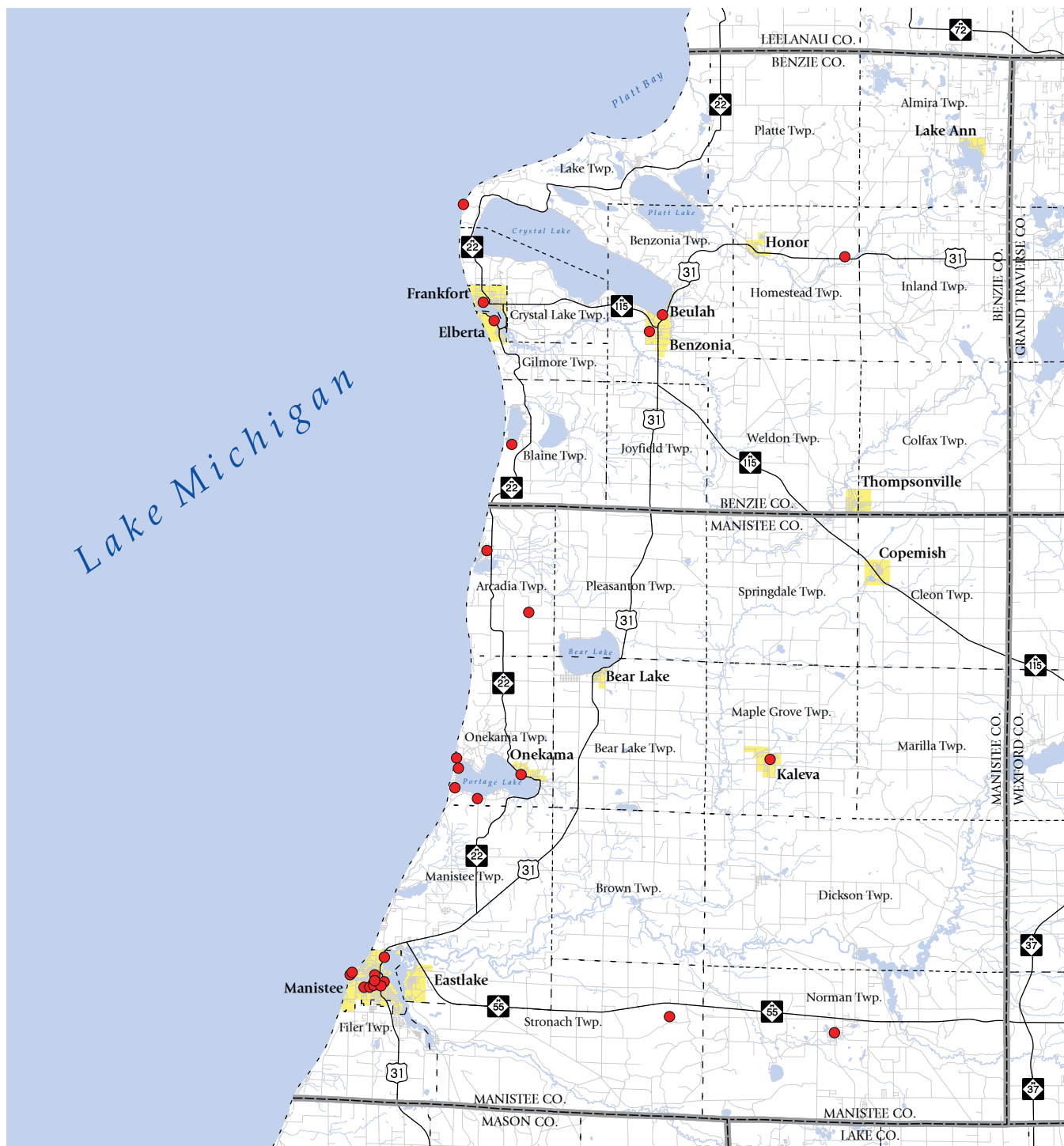
Your culture can come packaged with a little education at the Arcadia Historical Society, or it can come packaged in the 60,000 bottles used to build the house that now hosts the Kaleva Historical Society in Manistee County. Both Benzie

***Even a little hotel stay
can come with a side of
history.***

and Manistee counties offer public libraries and branches. Even a little hotel stay can come with a side of history at the lumber-town-turned-resort called Watervale Inn—or it can make history the main attraction as in the old-west-themed Rockin' R Ranch in Bear Lake. There you'll find horseback riding, hayrides, sledding, carriage rentals, and of course a saloon.

For fun that's a little less formal, hometown festivals Arcadia Daze and Bear Lake Days are celebrated in July while

Onkama hosts Onkama Days in August and the Manistee County Fair in September. You can get a head start on sampling the region's dining options at the Taste of Benzie festival in Elberta. Catch a movie in Honor at the Cherry Bowl Drive-In, open every summer since 1953, and if you're in the car anyway, defy a little gravity at the Putney Road Mystery Spot in Blaine.



LAKES TO LAND

Historic Sites

Data Sources: State of Michigan Geographic Data Library, MSHDA

- Registered Historic Site
- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road



Historic sites

“[T]he task is to breathe the breath of life into American history for those to whom it has been a dull recital of facts—to recreate for the average citizen something of the color, the pageantry, and the dignity of our national past.”

So spoke Verne Chatelan, chief historian for the National Parks Service at the 1935 passage of the Historic Sites Act. Since then, the 1966 National Historic Preservation Act has broadened both the definition and the scope of historic designation, giving official recognition and benefits access at all levels of government and in the private sector. Historic sites connect a geographic location to itself across time. They offer those who behold them an opportunity to broaden our definition of “community,” beyond those souls who happen to be living in a particular place right now to the sum all those who have passed through—an act which, when conceived in reverse, lets our own souls become part of a community which will outlive us many hundreds of times over.

The Frankfort Land Company House imagined itself in just such a way in 1867: the two-story Italianate was the first stylish house in Frankfort, built for the company officials tasked with developing the town. “No building in Frankfort is more closely connected to the establishment of the city,” says the building’s National Register entry, adding that the lavish structure also “advertised the company’s confidence in the town’s economic potential.”

The Manistee County Courthouse Fountain in Onekama Village Park has twice been solemnly dedicated to the community. In 1887, the ornate public sculpture was purchased to decorate the lawn of the new Victorian Gothic courthouse. After a 1950 fire destroyed the building, the Portage Lake Garden Club obtained the fountain and moved it to the Village Park to memorialize the deceased servicemen of Onekama Township.

The William and Ursula Quimby Homestead is neither lavish nor ornate, called an “ordinary farmhouse” even by its Register entry. But it sheltered a truly extraordinary Arcadia Township neighbor: their daughter Harriet Quimby, who became the first licensed female pilot in 1911 and successfully completed the first female solo flight over the English channel in 1912.



2.47 Historic site photos

Top: The Frankfort Land Company House, Frankfort (Benzie County)

Middle: The Manistee County Courthouse Fountain, Onekama Village (Manistee County)

Bottom: The William and Ursula Quimby Homestead, Arcadia Township (Manistee County)

Photos: Michigan State Housing Development Authority “Historic Sites Online”

Lighthouses

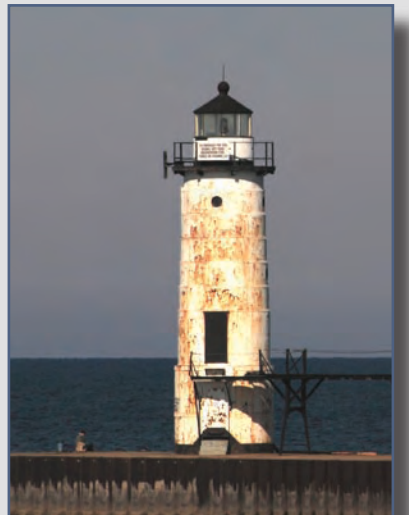
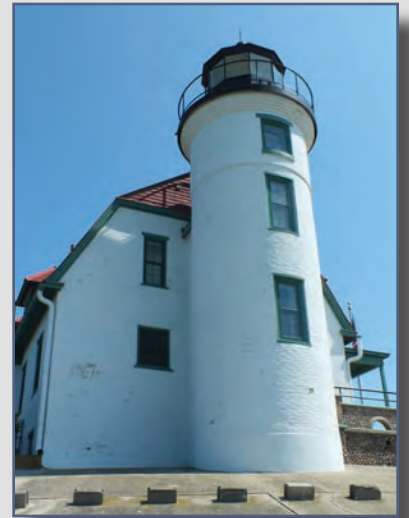
The outsize role of waterborne trade in the history of Michigan—and the Lakes to Land region in particular—afforded lighthouses the equally outsize role of trying to keep that trade from becoming deadly.

Colonial lighthouses came under federal control in 1789, when President George Washington created the U.S. Lighthouse Establishment. No lighthouses were constructed in Michigan until 1925, when the light at Fort Gratiot was lit. The first lights on Lake Michigan shone from Chicago Harbor and St. Joseph in 1832.

By 1838, the Manitou Passage had been established as the fastest and most protected route to the Straits from the south, but it was still so treacherous it furnished an entire underwater preserve with shipwrecks. The South Manitou Light was lit in 1838 to mark the west side of the passage's entry. By the time the Point Betsie Light Station joined it in 1858 to guide navigation into the passage from the east, the South Manitou Light was ready for reconstruction.

Just south of the passage was the Lake Betsie harbor at Frankfort, the most northern improved harbor on Michigan's west coast and an excellent refuge at which to wait for optimum passage conditions. Private funds had first improved the harbor, but by 1867 the traffic volume warranted the attentions of the Army Corps of Engineers. The next six years saw a new channel dug and dredged to accommodate the largest ships of the day, a pair of piers and revetments built, and the construction of the Frankfort Pierhead Light.

Meanwhile, lumberers on the south side of the Lakes to Land region had discovered the tremendous potential of the Manistee River for transporting their product out of the state's interior and began lobbying for improvements to the harbor. An Army Corps of Engineers study confirmed the need in 1861 and a lighthouse was built in 1870—and again in 1872, after the first one fell victim to Michigan's coast-to-coast Great Fire of the previous year.



2.48 Lighthouse photos

Top: Point Betsie lighthouse

Middle: Frankfort North Light

Bottom: Manistee North Pierhead Lighthouse



LAKES TO LAND

Lighthouses

Data Sources: State of Michigan Geographic Data Library

- City or Village
- County Boundary
- Township Boundary
- Major Road
- Minor Road

- 1 Point Betsie Lighthouse
- 2 Frankfort North Light
- 3 Manistee North Pierhead Lighthouse



2.49 Lighthouses map



Demographics

Demographics are the statistics of a population: gender, age, ethnicity, income, employment, housing, education, etc. Taken together, they try to paint a picture that gives a generalized answer the question, “Who lives here?”

The answer to that question is central to the planning process because it is impossible to create a plan that will serve a community well without knowing about the people who comprise that community. Planning strategies vary based upon a population’s current characteristics, and on the ways in which the population is projected to change. For example, a community experiencing an increase in new families

should be planned differently than one with an aging population. The former may place a priority on new single-family housing, new schools, extension of infrastructure, playgrounds and parks, etc., while the latter may be more concerned with issues of mobility and accessibility, emergency services, health care, and accommodating senior housing and assisted living.

***It is impossible to create a plan
that will serve a community
well without knowing about
the people who comprise it.***

Population and housing

In the “snapshot” of a community that demographic information presents, data about population and housing form the outline.

Population

The most basic piece of demographic information is the population count. This static number gives us a sense of scale which is necessary to understand and address the population’s needs. Many of the inputs and outputs of a municipal system are based on inputs and outputs of individual bodies (clean water, food, human waste, trash), so the size of the services needed are tied directly to the size of the community.

Taken over time, population statistics become trends. These provide a basis for limited future forecasting and also offer a more robust comparison among communities. For example, we see that although the population growth rate of all 16 communities combined was 2.13%, the growth rate among individual communities ranged from a 36% loss of population from the Village of Onekama to an almost 20% gain in Lake Township. Moreover, comparing the participating communities to the larger populations within which they reside, we see that the growth rate did not keep pace with the national rate of 9.71% or the combined Benzie/Manistee county rate of 4.28%, but it did avoid Michigan’s fate of population loss. The Lakes to Land citizens, then, made up a greater percentage of Michiganders in 2010 than they did in 2000 (0.143% versus 0.139%), but a smaller percentage of the combined Benzie/Manistee County areas (33.4% versus 34.1%).

Households

The second most basic piece of demographic data, the molecular

structure in which the atoms of population reside, is the household. The US Census Bureau defines a “Household” as follows:

A household consists of all the people who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live with any other persons in the structure and there is direct access from the outside or through a common hall.

A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters. There are two major categories of households, “family” and “nonfamily.”

Households function as discrete economic units because their basic inputs and outputs are intertwined. American households have been in flux over the past half-century or so as people have reacted to increased wealth, relaxed social mores, and heightened mobility by changing the basic relationships that construct their lives: people stay single longer, have fewer children, and no longer assume that

they will live with those children in their own old age.

This situation is represented by consistent ratcheting downward of household size. Between 2000 and 2010, the number of households in the participating communities grew 5.7% while the population grew only 2.13%, yielding a 3% decrease in household size from 2.55 persons per housing unit to 2.47 persons per housing unit. This percentage was consistent throughout the Benzie/Manistee county area and in Michigan overall, which gained over 86,000 households even as its population declined. Households size decreased nationally, too, although less dramatically at just -0.85%—from 2.67 persons per housing unit to 2.65 persons per housing unit.

In some states, however, the 2010 census marked the first increase in household size in many years. Conventional wisdom attributes this in a large part to the doubled-edged Great Recession. First, high unemployment



A seasonal resident of Pleasanton Township?

2.50 Table of population, households, and housing units

		Population			Households			Housing Units		
		2000	2010	Change	2000	2010	Change	2000	2010	Change
Benzie County	Lake Twp*	635	759	19.5%	318	387	21.7%	1,106	1,271	14.9%
	Crystal Lake Twp*	960	957	-0.3%	414	438	5.8%	1,051	1,240	18%
	Gilmore Twp*	850	821	-3.4%	341	360	5.6%	439	477	8.7%
	Village of Elberta**	457	372	-18.6%	190	173	-9%	237	229	-3.4%
	Blaine Twp*	491	551	12.2%	215	234	8.8%	431	504	16.9%
	Joyfield Twp*	777	799	2.8%	286	313	9.4%	338	404	19.5%
	Village of Honor	299	328	9.7%	129	135	4.7%	153	186	21.6%
	City of Frankfort	1,513	1,286	-15%	665	601	-9.6%	873	942	7.9%
Manistee County	Arcadia Twp*	621	639	2.9%	280	296	5.7%	545	574	5.3%
	Pleasanton Twp*	817	818	0.1%	344	365	6.1%	623	694	11.4%
	Bear Lake Twp*	1,587	1,751	10.3%	639	696	8.9%	916	1,031	12.6%
	Village of Bear Lake**	318	286	-10.1%	132	118	-10.6%	161	169	5%
	Manistee Twp*	3,764	4,084	8.5%	1,188	1,270	6.9%	1,391	1,598	14.9%
	Onkama Twp*	1,514	1,329	-12.2%	603	634	5.1%	1,117	1,289	15.4%
	Village of Onkama**	647	411	-36.5%	239	205	-14.2%	315	338	7.3%
	All Participating Communities			2.13%			5.7%			13.7%
Benzie and Manistee Counties				4.28%			7.6%			13.5%
Michigan				-0.55%			2.3%			7.0%
United States				9.71%			10.7%			13.6%

* Includes the totals of any villages (incorporated or unincorporated) within the township

** Village totals not included in overall total because they are already included in their township's total
Source: US Census Bureau, ESRI Business Analyst

rates which rest disproportionately on younger adults has given them less opportunity to leave "the nest." Second, the mass transfer of home ownership from individuals to lending institutions during the foreclosure crisis resulted in a smaller number of available housing units over which to spread the population, an effect which is particularly pronounced in some geographic areas.

Housing Units

The total number of housing units in the participating communities grew 13.7% between 2000 and 2010, despite the fact that the total population grew only 2.13% and the number of total households grew 5.7%. While the number of total housing units typically exceeds the number of total households due to vacant housing units, we see in Figure 2.48 that many of the Lakes to Land communities have two or even three times as many housing units as households. This is because the "vacant" classification used by the census does not distinguish between

units which are for sale or rent and those which are used as seasonal, vacation, or second homes. In 2010, the total vacancy rate for housing units in the United States was 11.4%, and 14.6% in Michigan. Vacant housing units for seasonal, recreational, or occasional use made up 3.5% of the national total of housing units in 2010, and 5.8% of the state total. Among the participating communities, however, 43.1% of housing units are vacant and 34.8% of all housing units are for seasonal/recreational/occasional use. Growth in housing units among the participating communities, then, has been driven primarily by construction of seasonal, recreational, and second homes rather than primary residences.

A look at individual Lakes to Land communities can provide even more striking examples as communities which saw their populations decrease experienced seemingly paradoxical growth in housing units. A third of the Village of Onkama's population, representing just under 1/6 of its households, departed between 2000

and 2010, yet there were 7.3% more houses at the end of the decade than at the beginning. The City of Frankfort and the Village of Bear Lake both also lost households while gaining housing units; Crystal Lake Township, Blaine Township, Joyfield Township, Manistee Township, Onkama Township, and the Village of Honor all saw the number of housing units grow at least twice as fast as the number of households. Only in Lake Township and Arcadia Township did housing units grow more slowly than households, and it is worth noting that resident households already accounted for a fairly small proportion of housing units in both communities (30% and 51% respectively).

It is only in these numbers that we find a representation of a fundamental aspect of the Lakes to Land region: seasonal residents. Because the guiding principle of the census is to count people at their "usual residence," this group is not reflected in the population count, and yet their presence affects and often drives many parts of the Lakes to Land economy

Age

There is a well-documented “aging” trend in the population of the United States that is more acute in Michigan and particularly in northern Michigan.

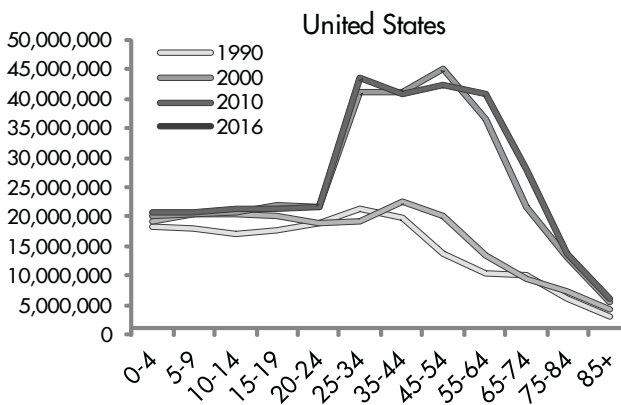
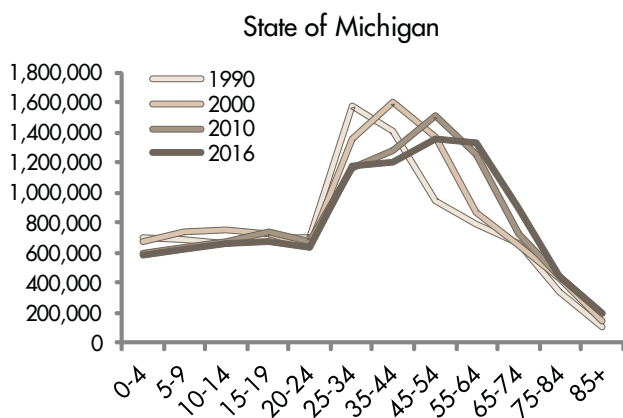
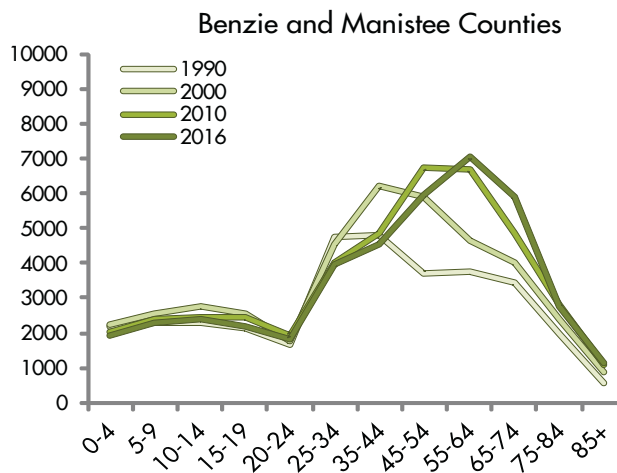
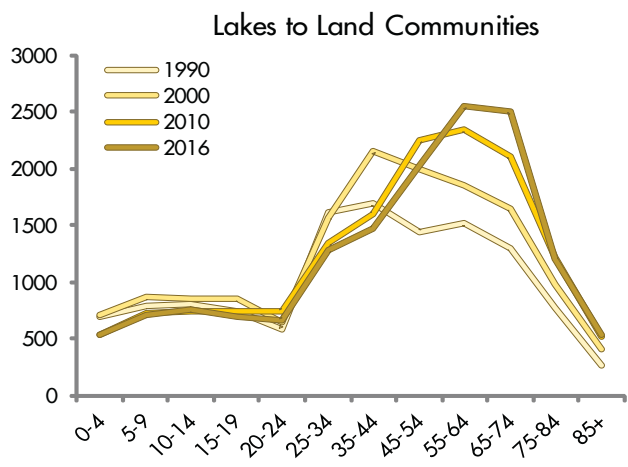
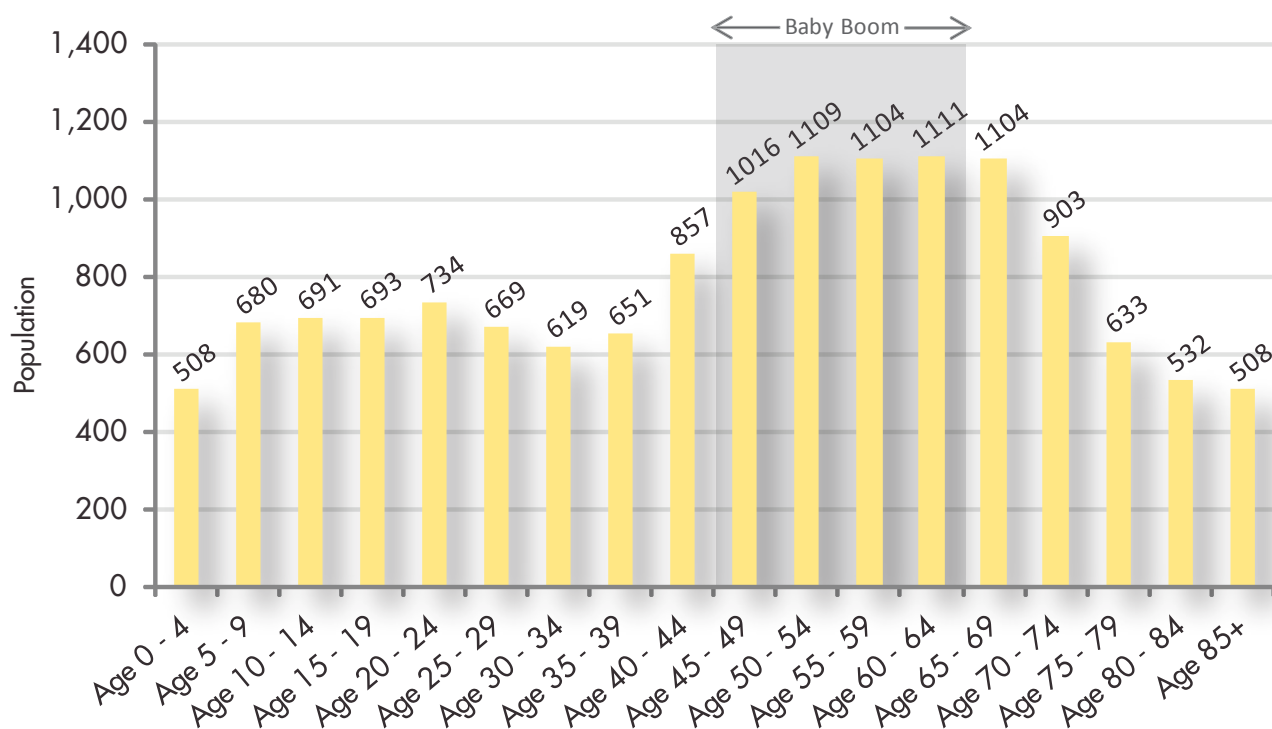
Those born during the Baby Boom of 1946 to 1964 have already entered or are approaching retirement age, raising the median age of the population. Nationally and statewide, the number hovers at just under 40 years of age, with Michigan’s median age about a year and a half older than America’s. When looking at Benzie and Manistee counties, however, that median jumps nearly a decade to 46.2 and 47.1 years respectively—and two-thirds of the Lakes to Land communities have median ages that are older still (Figure 2.49). Only in the Village of Honor is the median age younger than it is statewide and nationally.

In Figure 2.50, we see that the population “peak” is mostly contained within the Baby Boom age ranges of 45-64. Almost a third (30.7%) of the citizens of the Lakes to Land communities are within this age range, and another quarter (26.1%) are older. The bottom four graphs in Figure 2.50 reproduce the imaginary line that runs across the bar chart for the Lakes to Land communities, the Benzie/Manistee county area, the State of Michigan, and the United States, repeated at four different points in time. In each line, the “Baby Boom bump” is visible as it moves through the age ranges; we can see that this concentration becomes more pronounced as the population focus narrows from national to state, state to region, and region to participating communities.

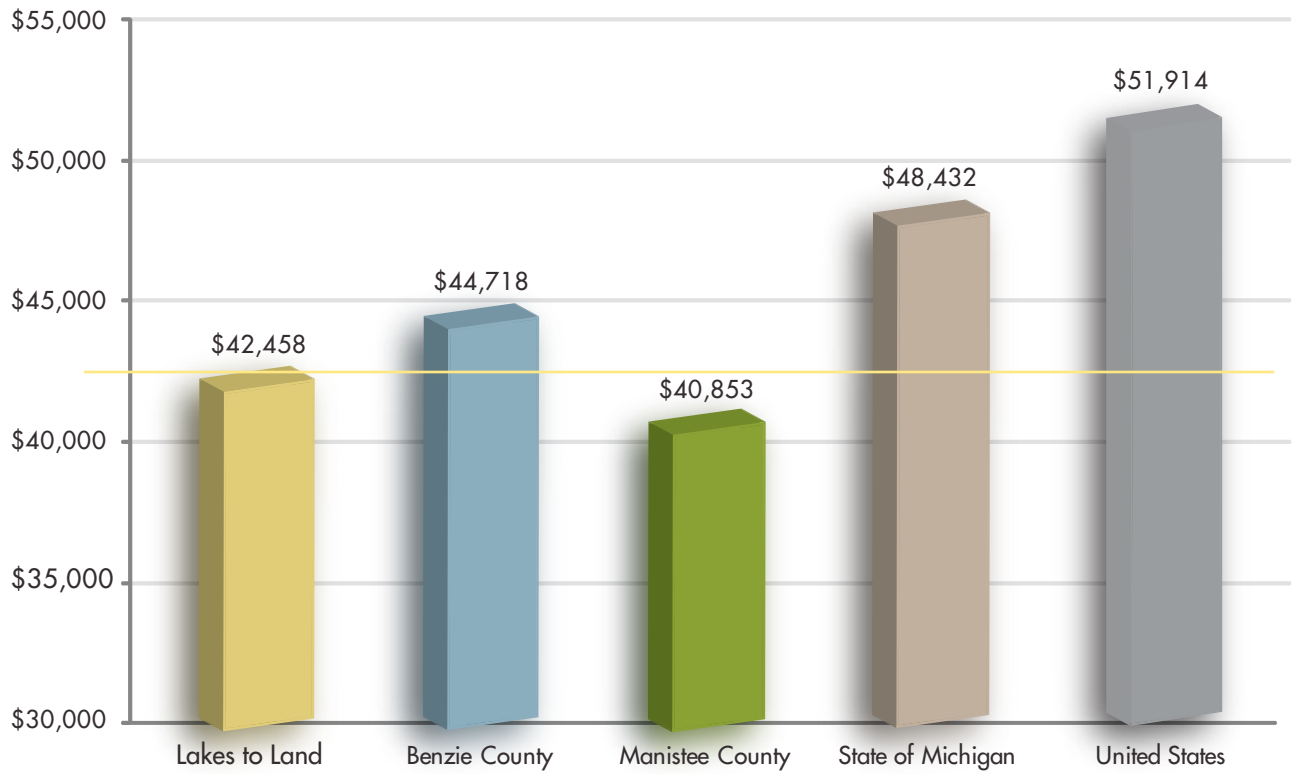
This is important to know in addressing the needs of each community. It signals a need for age-appropriate housing and greater attention to universal access in design. More advanced life support and paramedic services may be needed, while the demand for schools is likely to be low. Fewer jobs may be needed if a large percentage of the population subsists on retirement income.

2.51 Table of median ages and ages 65+

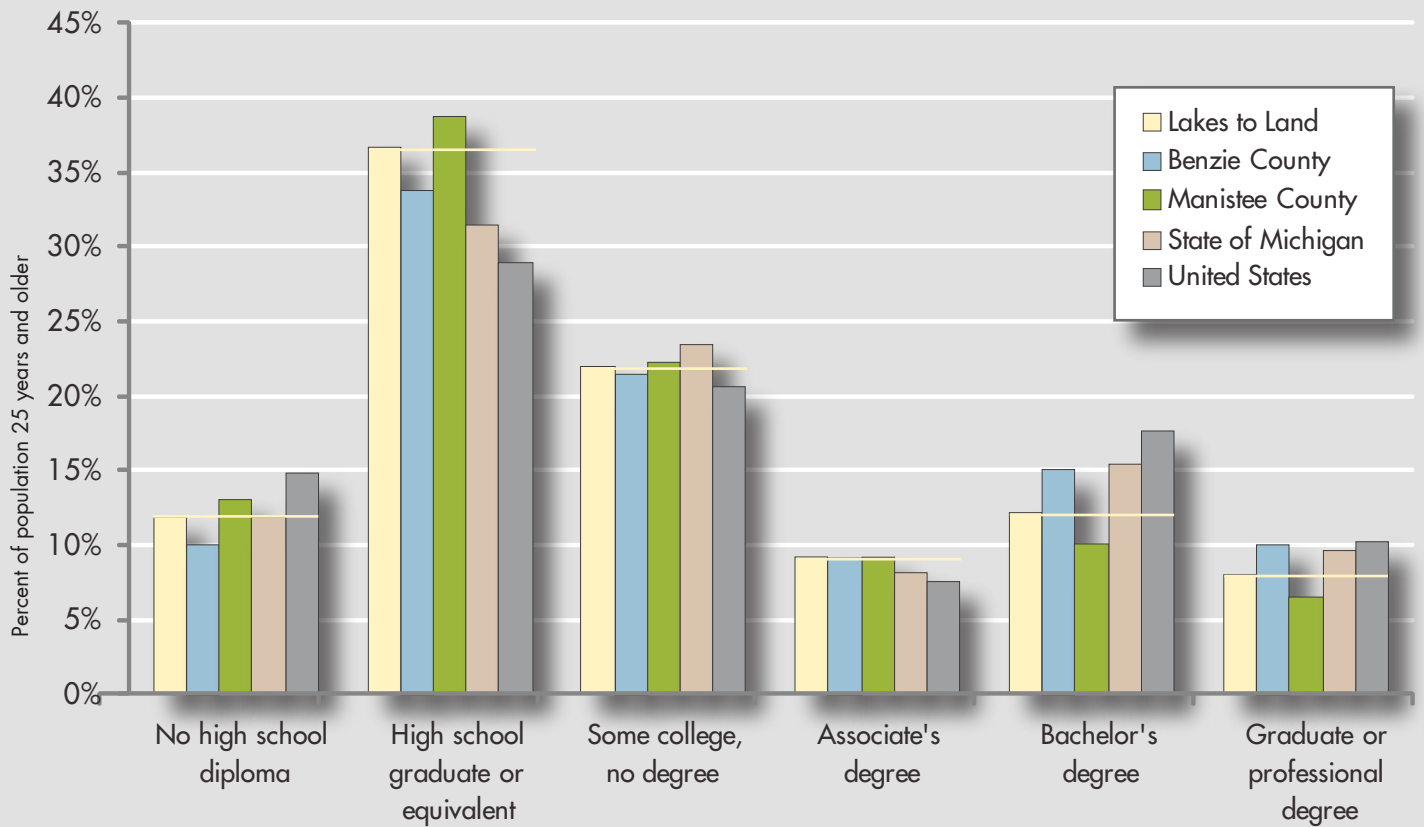
	Median Age	% Population Aged 65+
Lake Twp	64.4	48.5%
Arcadia Twp	56.1	31.9%
Crystal Lake Twp	55.4	31.2%
Onkama Twp	55.2	29.9%
City of Frankfort	54.6	36.1%
Village of Onkama	54.4	28.5%
Blaine Twp	53.3	31.4%
Pleasanton Twp	50.0	27.9%
Gilmore Twp	48.6	22.9%
Village of Elberta	47.8	21.5%
Manistee County	47.1	20.7%
Benzie County	46.2	20.6%
Joyfield Twp	45.0	18.4%
Bear Lake Twp	44.4	20.2%
Manistee Twp	44.0	19.4%
Village of Bear Lake	40.6	18.4%
Michigan	38.9	13.8%
United States	37.2	13.0%
Honor (village)	36.8	20.4%



2.53 Median income comparison



2.54 Educational attainment comparison



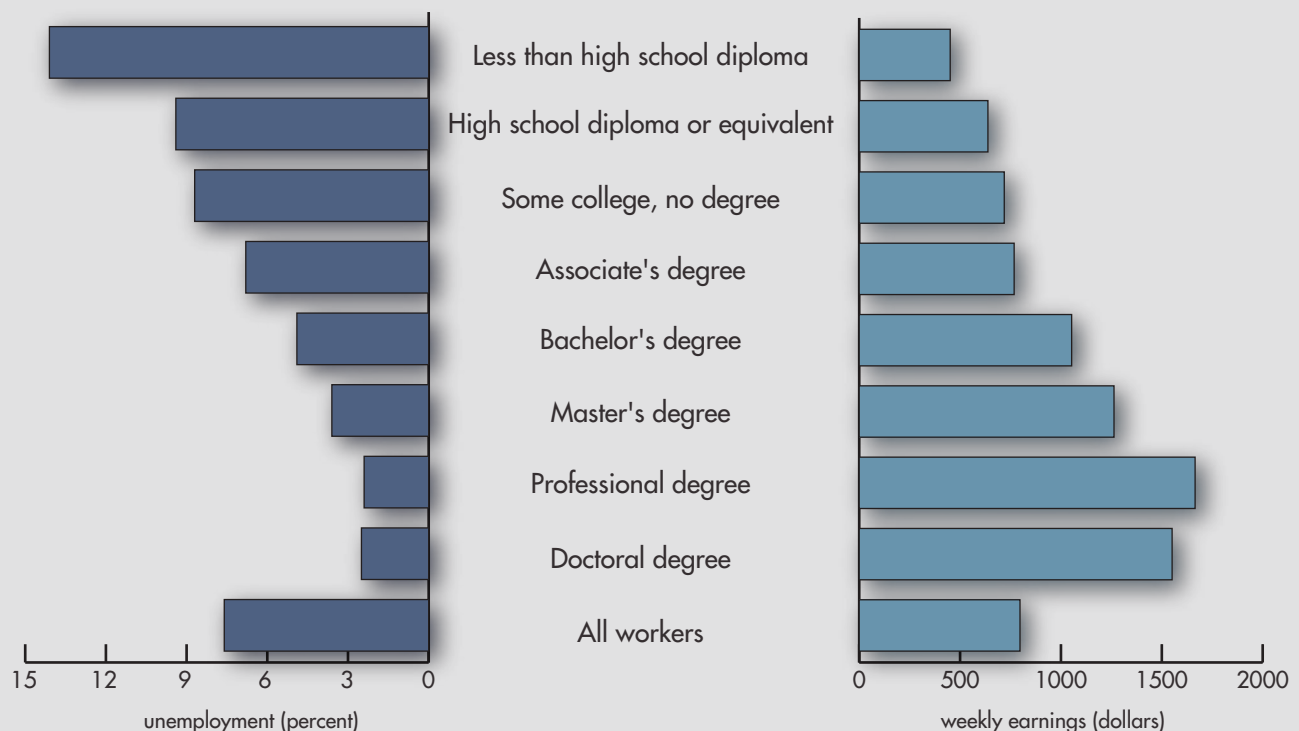
Education and income

There is a direct correlation between educational attainment and income.

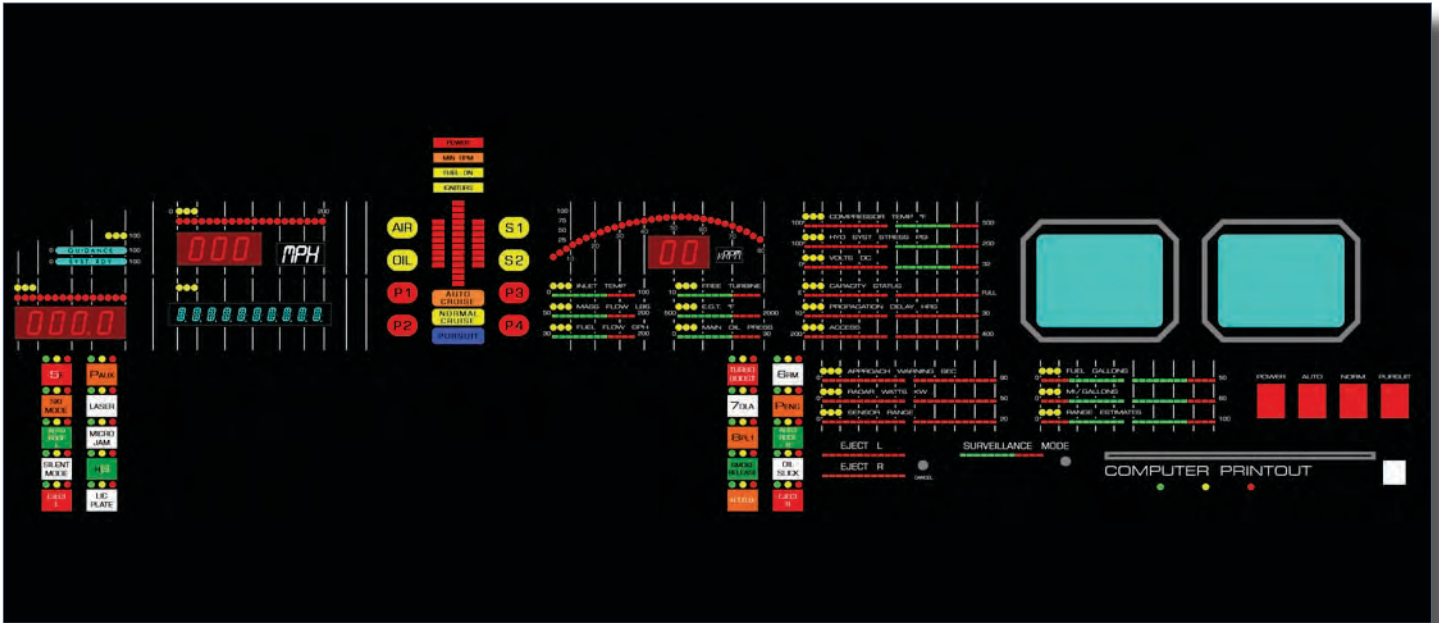
The chart in Figure 2.51 shows the median household income for the Lakes to Land region, Benzie County, Manistee County, the state of Michigan, and the United States, and the chart in Figure 2.52 displays the educational attainment for the population ages 25 and up for each of those groups. To see the relationship between education and income at each level, a line indicating the value of the Area of Influence relative to the other groups has been drawn. We can see that at the bachelor's degree level and above, the graphs for education and income are quite similar, indicating a positive correlation between earnings and income. On the other end of the scale, we see that the graphs depicting a high school education or less depict the converse: the groups with lower percentages of population educated at that level are the groups with higher median incomes.

This rather unscientific comparison is borne out in Figure 2.53, which shows the 2011 unemployment rate and median weekly earnings for each of eight levels of education and the overall workforce. Here it is clearly illustrated that education is not only correlated with earnings but also with having a job at all. For those with less than a high school diploma, the unemployment rate is 14.1%, nearly twice the rate of all workers, and getting a job only yields \$451 per week—just above the federal poverty threshold for a family of four.

2.55 Educational attainment, income, and unemployment in the L2L communities



Source: Bureau of Labor Statistics, Current Population Survey



Credit: Dave Metlesits

Dashboards

Data dashboards are tools designed to convey assessment metrics in a visual, quick-to-understand format.

Statistics provide a good way to compare one population to another. By selecting a measurement and comparing its value in different places, we can draw conclusions about those places in relation to one another: where the educational attainment levels are lagging, for example, or where median income levels indicate the presence of well-paid jobs. When trying to compare the overall snapshot of one community to another, however, the sheer volume of numbers can almost immediately become overwhelming to anyone who is not a professional statistician.

Enter the data dashboard, a graphic representation of the community's vital statistics. The following pages show the population, population growth, housing ownership, education levels, household income, and types of work in Benzie County, Manistee County, the State of Michigan, and the United States, as well as a quick-reference list of additional statistics related to each of those categories.

***The Prosperity Index
moves past description
to assessment.***

The Prosperity Index moves past description to assessment. By combining individual measurements, we can ask and answer questions such as,

"Are market forces creating most of the jobs?"

"What kind of jobs are they?"

"How plentiful are jobs?"

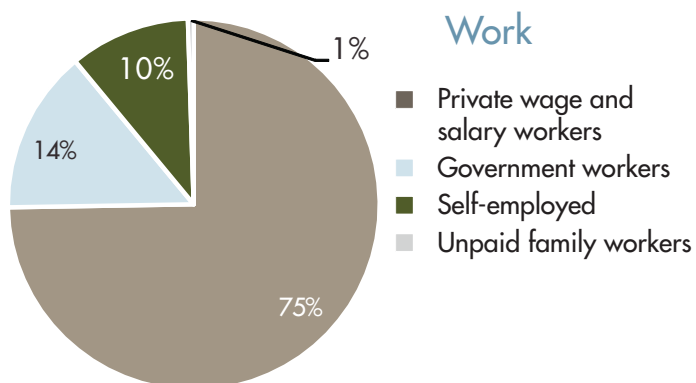
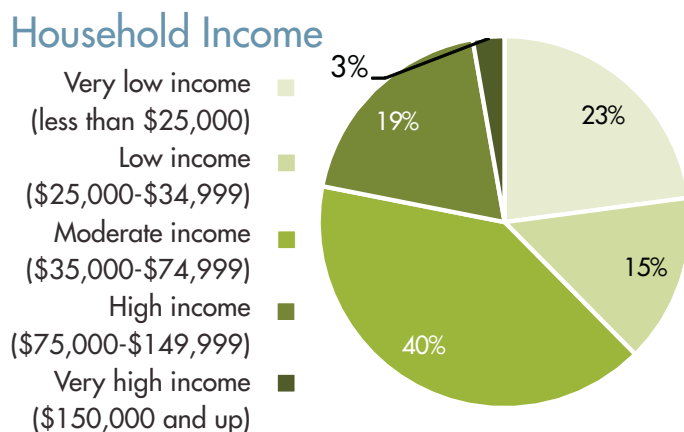
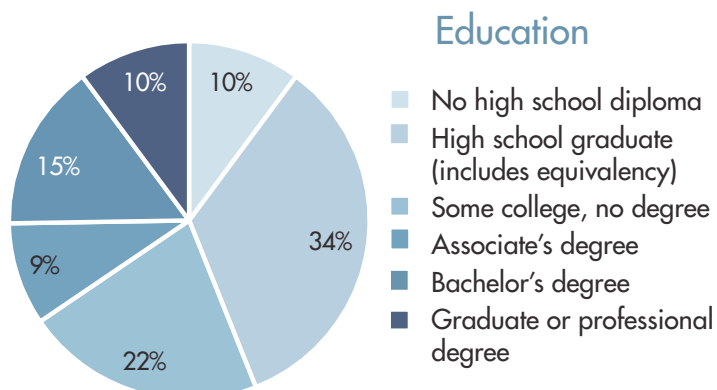
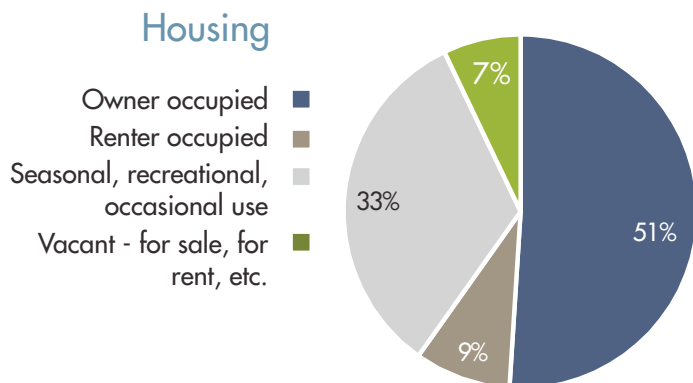
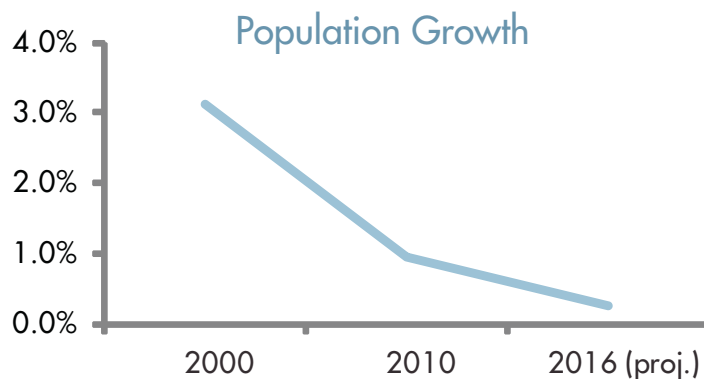
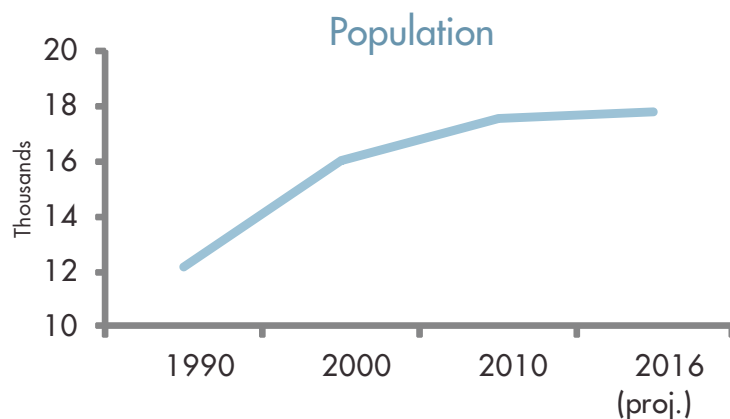
"What kind of jobs will the education level of our workforce support?"

"Are the jobs that we have keeping our residents out of poverty and providing for their children?"

"Is the government keeping our residents and children out of poverty?"

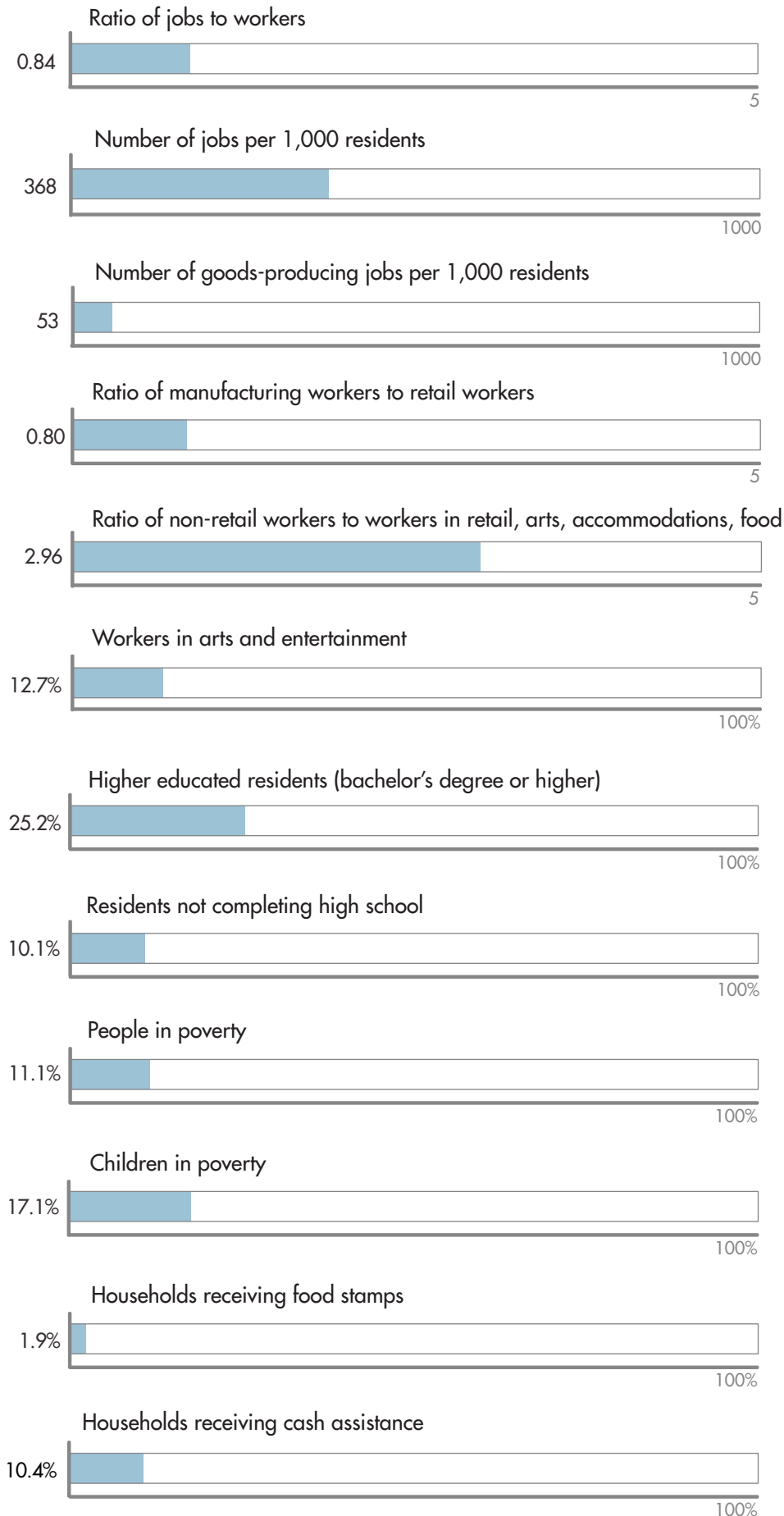
Of course, these answers arrive in the form of a single number. To contextualize that number, it is depicted on a bar graph and a colored band indicating its value is carried forward for comparison on the following bar graphs. (It's easier to look at than to explain, we promise.) The Community Dashboard presented in Tab 4 retains these contextual bands.

Benzie County Dashboard



Classifications modified from HUD guidelines, using the state median income of \$48,432.

Prosperity Index



Households

2.35

person average household size

\$160,200

owner-occupied median home value

\$737

median gross rent

Education

23%

population enrolled in school

90%

high school graduate or higher

25%

bachelor's degree or higher

Commuting

94%

workers who commute

85%

commuters who drive alone

23.1

minute average commute

Employment

6,452

jobs

7,722

workers

11.7%

unemployment rate

14.2%

civilian veterans

Income

\$44,718

median household income

\$22,160

median earnings for workers

\$37,704

male full-time, year-round earnings

\$31,272

female full-time, year-round earnings

11%

population in poverty

17%

children in poverty

Top Industrial Sectors

17%

accommodation and food services

14%

retail trade

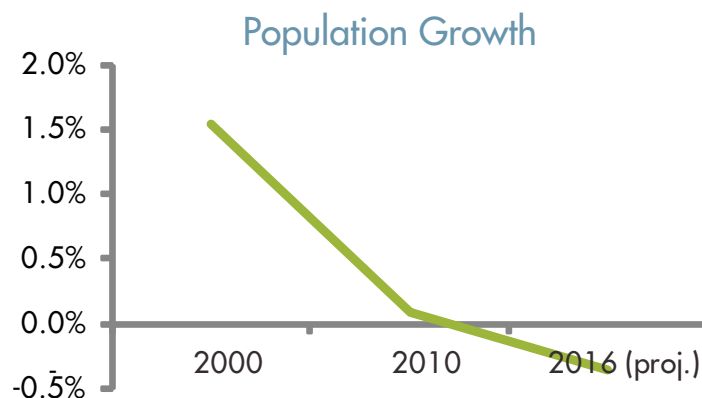
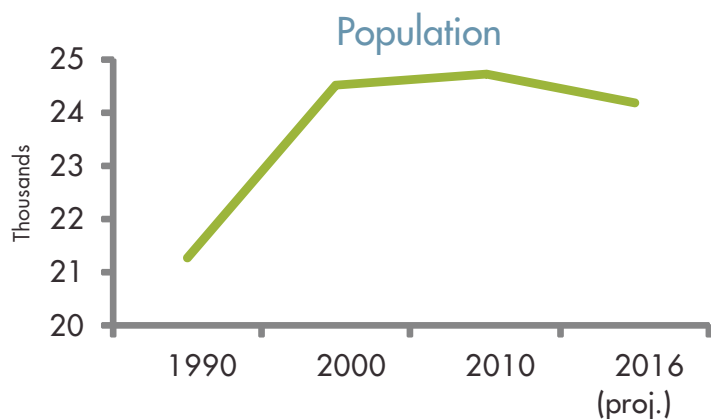
11%

health care and social assistance

Manistee County Dashboard

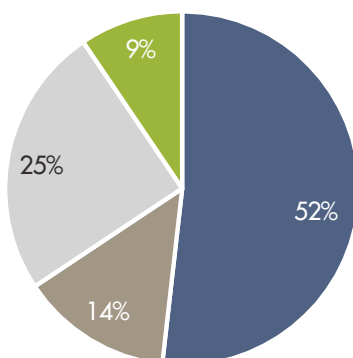
Key for prosperity index graphs:

Benzie County



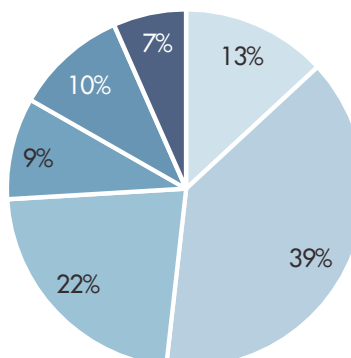
Housing

- Owner occupied
- Renter occupied
- Seasonal, recreational, occasional use
- Vacant - for sale, for rent, etc.



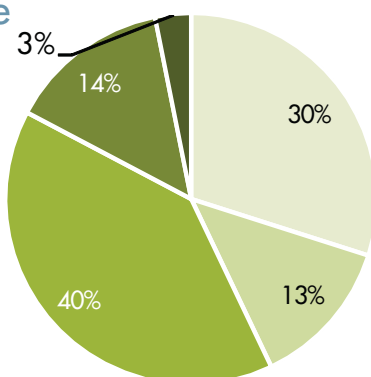
Education

- No high school diploma
- High school graduate (includes equivalency)
- Some college, no degree
- Associate's degree
- Bachelor's degree
- Graduate or professional degree



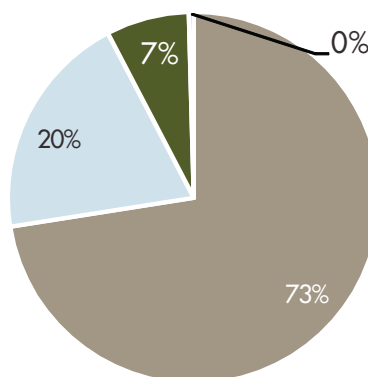
Household Income

- Very low income (less than \$25,000)
- Low income (\$25,000-\$34,999)
- Moderate income (\$35,000-\$74,999)
- High income (\$75,000-\$149,999)
- Very high income (\$150,000 and up)



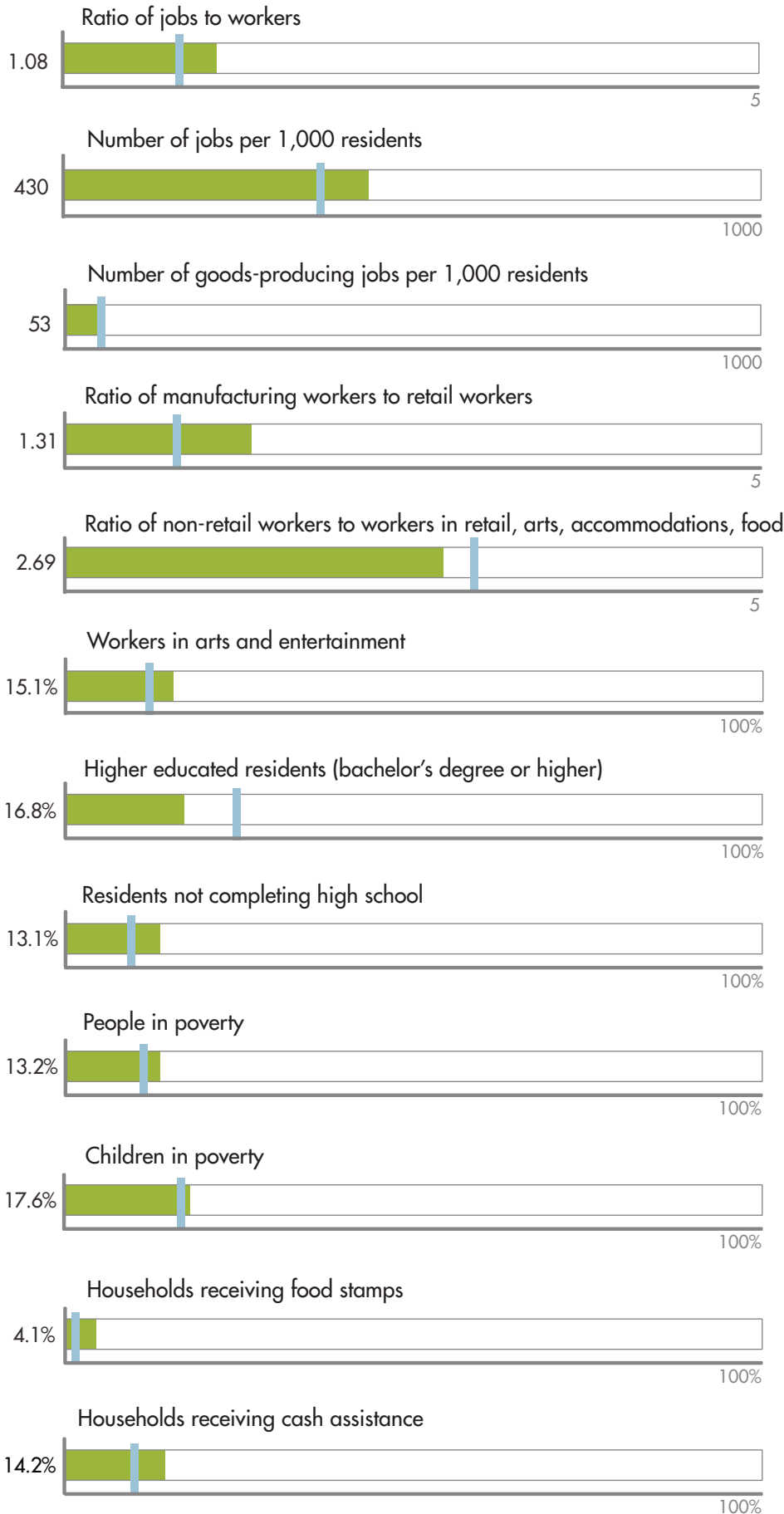
Work

- Private wage and salary workers
- Government workers
- Self-employed
- Unpaid family workers



Classifications modified from HUD guidelines, using the state median income of \$48,432.

Prosperity Index



Households

2.2

person average household size

\$124,000

owner-occupied median home value

\$627

median gross rent

Education

19%

population enrolled in school

87%

high school graduate or higher

17%

bachelor's degree or higher

Commuting

95%

workers who commute

83%

commuters who drive alone

21

minute average commute

Employment

10,646

jobs

9,846

workers

11.6%

unemployment rate

15%

civilian veterans

Income

\$40,853

median household income

\$21,443

median earnings for workers

\$41,134

male full-time, year-round earnings

\$27,479

female full-time, year-round earnings

13.2%

population in poverty

17.6%

children in poverty

Top Industrial Sectors

15%

retail trade

13%

health care and social assistance

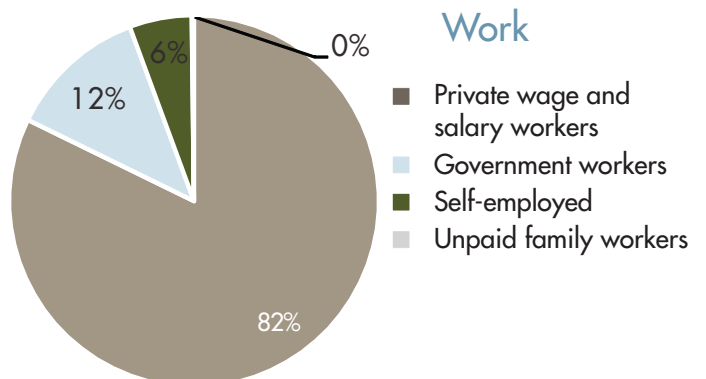
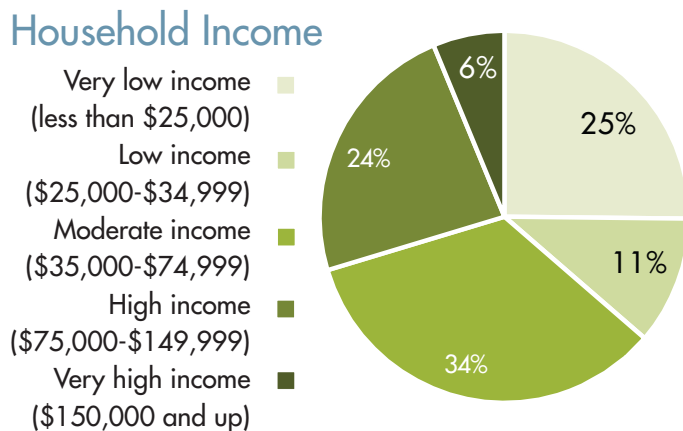
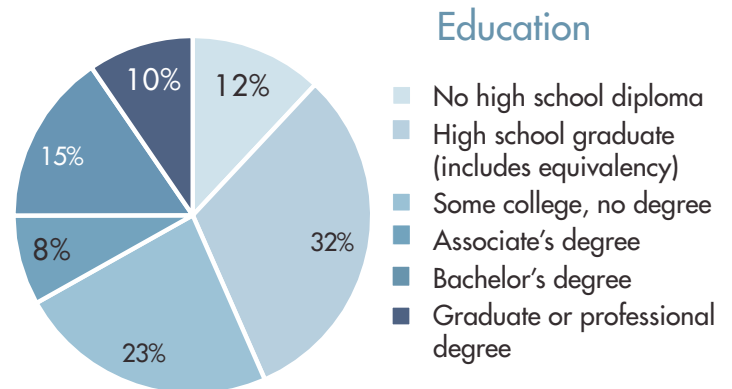
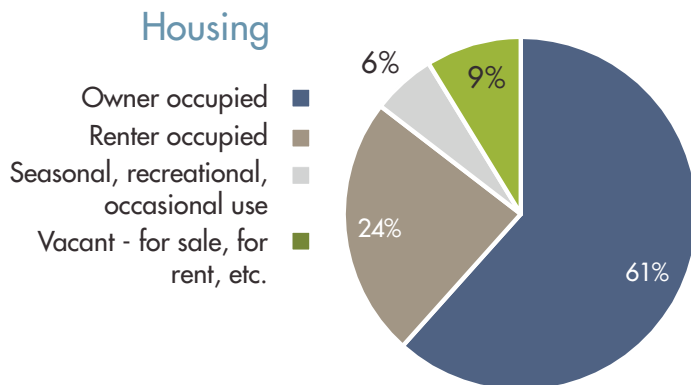
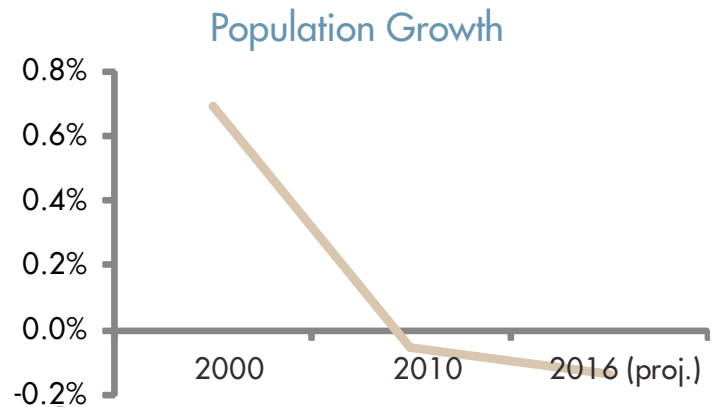
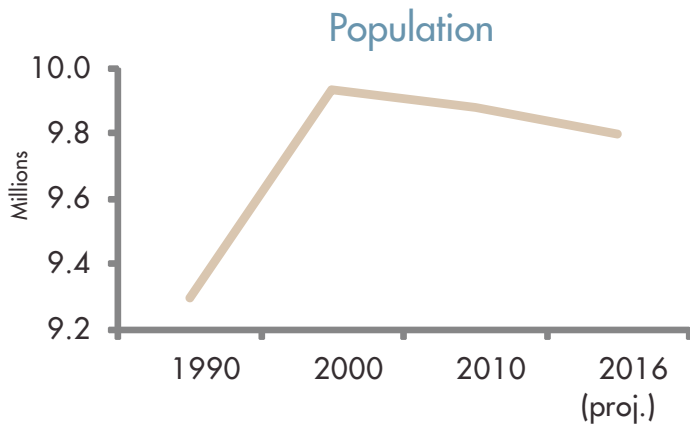
12%

public administration

State of Michigan Dashboard

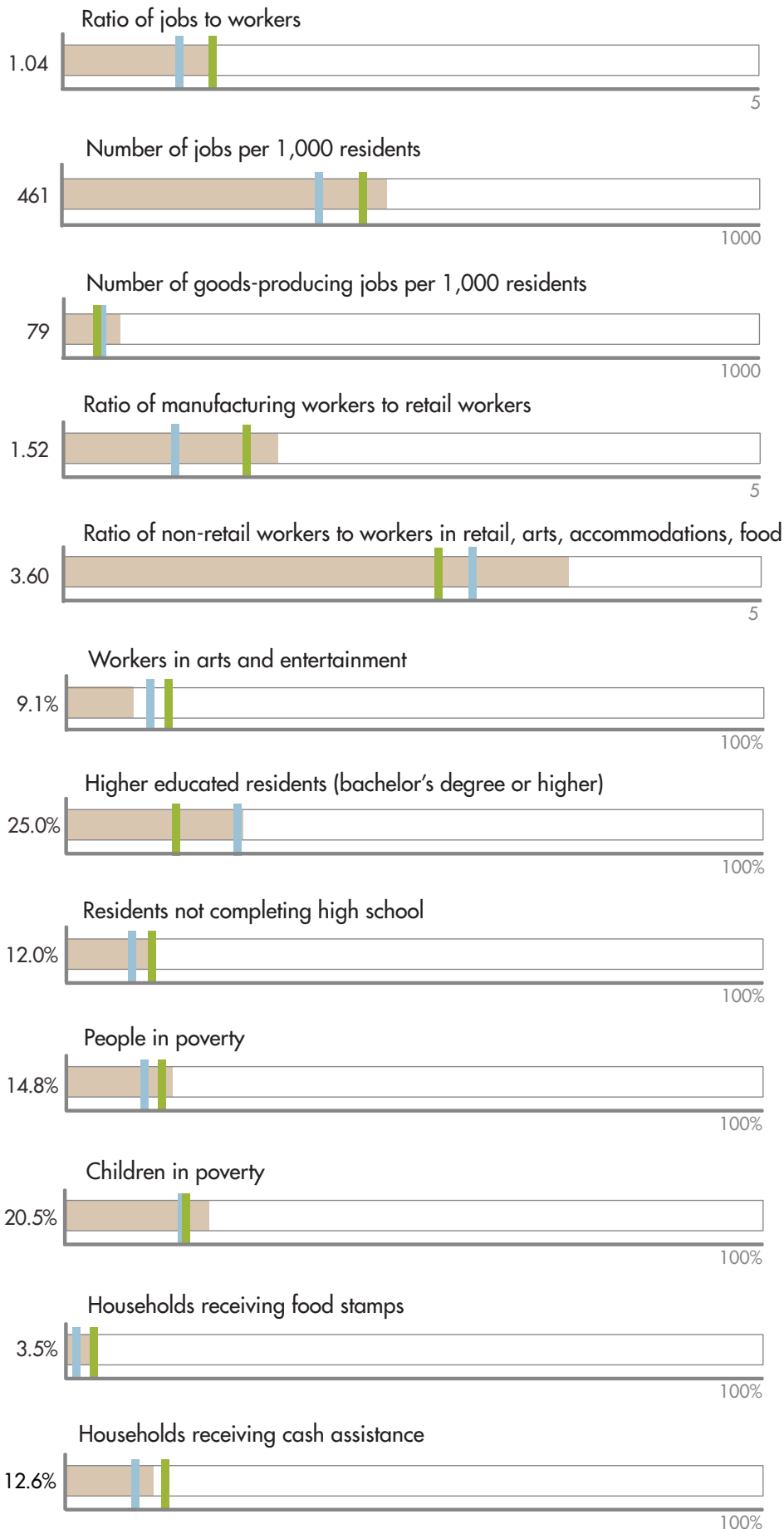
Key for prosperity index graphs:

Benzie County Manistee County



Classifications modified from HUD guidelines, using the state median income of \$48,432.

Prosperity Index



Households

2.53

person average household size

\$144,200

owner-occupied median home value

\$723

median gross rent

Education

28%

population enrolled in school

88%

high school graduate or higher

25%

bachelor's degree or higher

Commuting

97%

workers who commute

86%

commuters who drive alone

23.7

minute average commute

Employment

4,561,169

jobs

4,369,785

workers

1.5%

unemployment rate

9.7%

civilian veterans

Income

\$48,432

median household income

\$27,432

median earnings for workers

\$50,208

male full-time, year-round earnings

\$36,157

female full-time, year-round earnings

14.8%

population in poverty

20.5%

children in poverty

Top Industrial Sectors

14%

health care and social assistance

13%

retail trade

12%

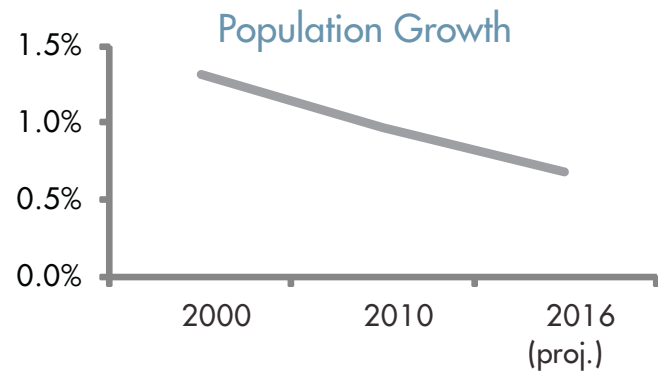
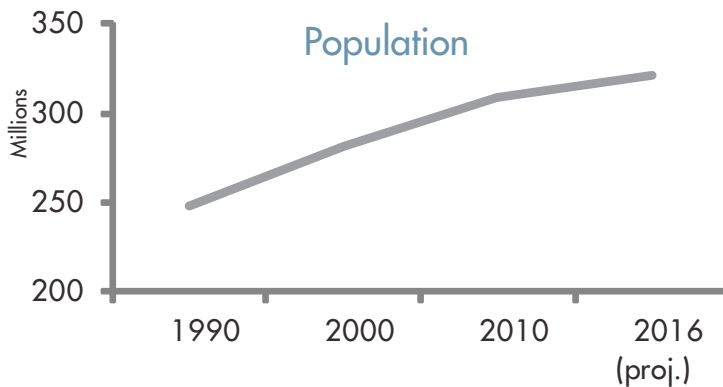
manufacturing

United States

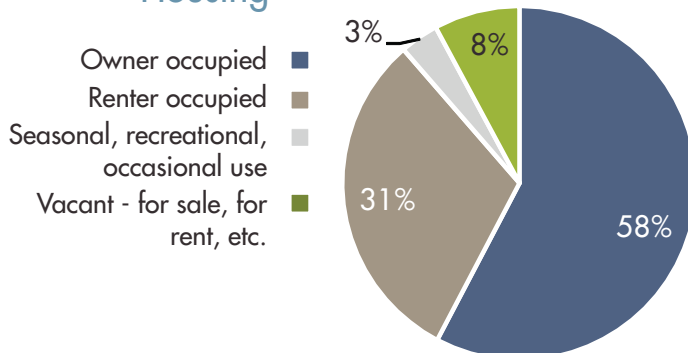
Dashboard

Key for prosperity index graphs:

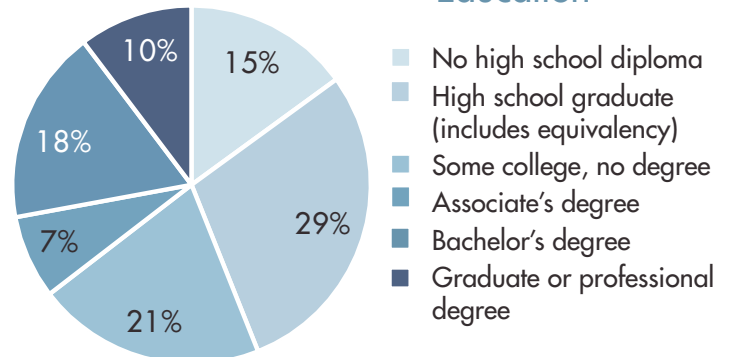
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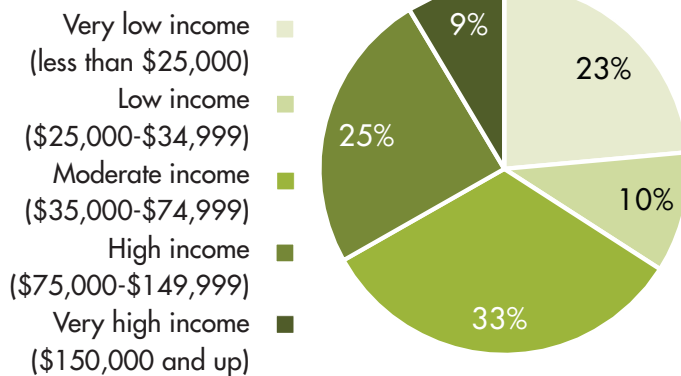
Housing



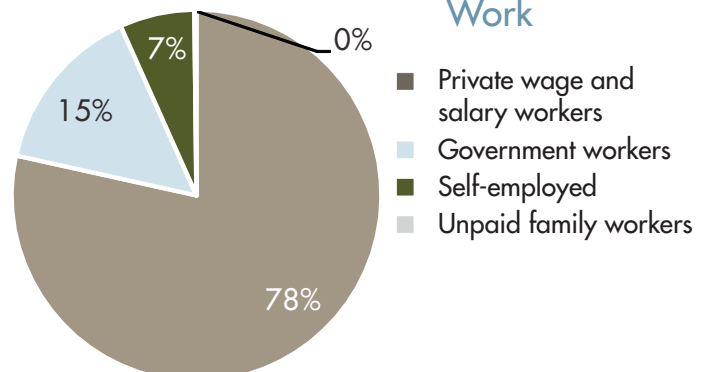
Education



Household Income

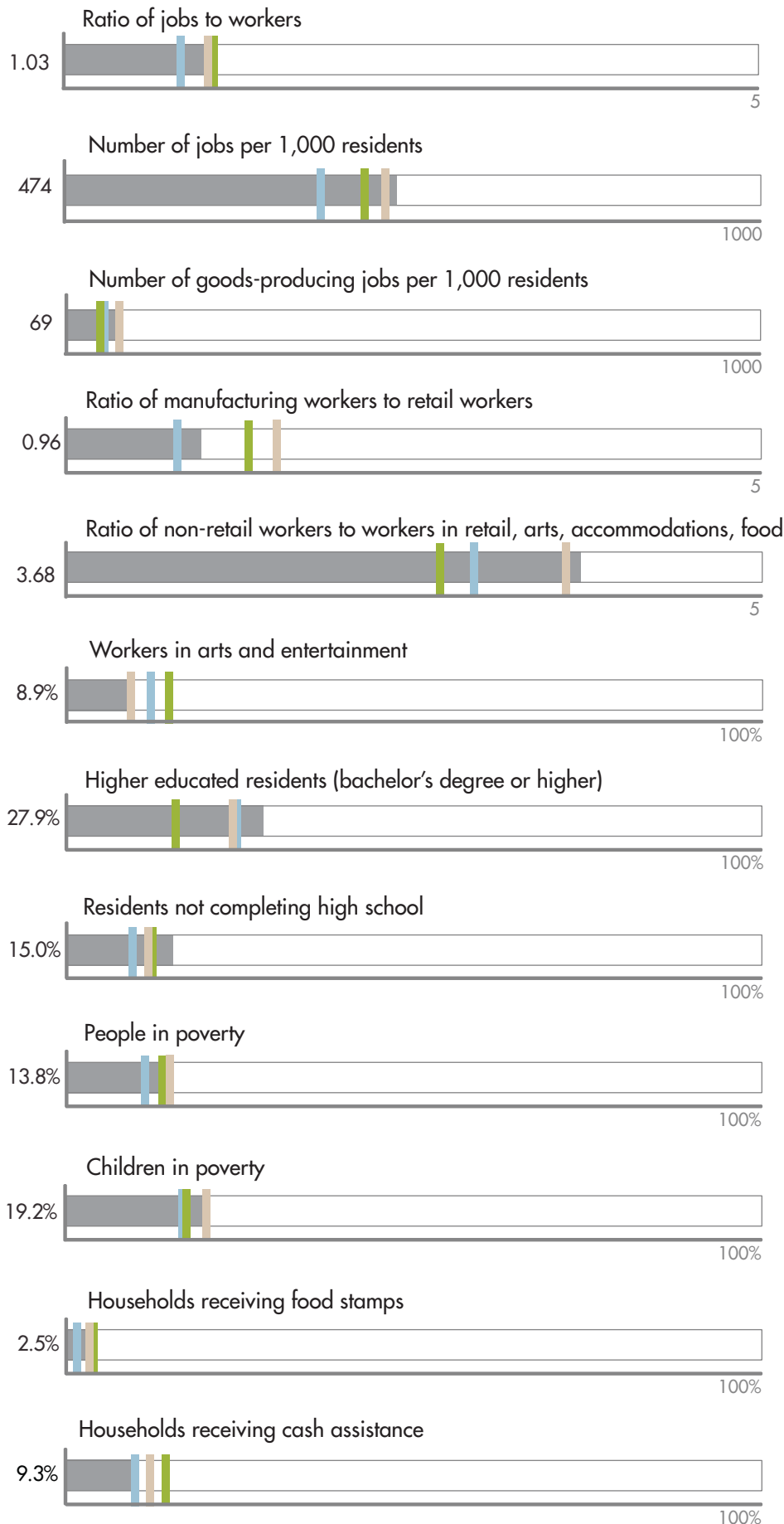


Work



Classifications modified from HUD guidelines,
using the national median income of \$51,914

Prosperity Index



Households

2.59

person average household size

\$188,400

owner-occupied median home value

\$841

median gross rent

Education

26%

population enrolled in school

85%

high school graduate or higher

28%

bachelor's degree or higher

Commuting

96%

workers who commute

79%

commuters who drive alone

25.2

minute average commute

Employment

146,234,698

jobs

141,833,331

workers

7.9%

unemployment rate

9.9%

civilian veterans

Income

\$51,914

median household income

\$29,701

median earnings for workers

\$46,478

male full-time, year-round earnings

\$36,040

female full-time, year-round earnings

13.8%

population in poverty

19.2%

children in poverty

Top Industrial Sectors

13%

retail trade

13%

health care and social assistance

9%

accommodation and food services



County Plans

Master plans are written at all levels of government—community-specific, regional, and statewide. A county master plan contains many of the same attributes found in a plan for a single community, and its preparation follows the same process.

One difference is that the focus sweeps over municipal boundaries to consider factors that affect the county as a whole. Both Benzie and Manistee Counties have written county master plans that take a regional view within their respective boundaries.

Benzie County's Master Plan was prepared in 2000, and Manistee County's Master Plan was prepared in 2009. No matter what level of government the master plan is being prepared for, it is influenced by the conditions within the community at the time the plan is drafted, public interests of the day, and the issues that extend beyond the municipal boundaries but have a significant impact locally. Despite the fact that the plans were written nearly ten years apart and the vastly different economic and societal conditions that existed at the time of their preparation, there are commonalities in planning strategies.

The commonalities between the Manistee and Benzie County Master Plans speak to a commitment to rural scenic character, a land use strategy that guides development towards existing population centers, and a desire for coordination of planning with neighbors. Two themes strongly articulated in both plans are the preservation of views, wetlands, rivers, streams, and the Lake Michigan shoreline, and an emphasis on retaining rural scenic character by preserving lands for

forestry, agricultural, and low density residential use. Natural resources and environmental protection are also strong key components of both plans. In addition, both plans call for coordination of planning between municipalities and neighboring regions in order to obtain efficiencies in services.

The largest difference between the Manistee County and Benzie County Master Plans lies in the type of plan: the Manistee County Master Plan is service-oriented, while the Benzie County Master Plan is a growth management tool. They also differ in how they deal with local government sovereignty in that Benzie County is focused on regionalism rather than Manistee's emphasis on the sovereign right of local governments to plan individually. Another difference is in how their strategies are articulated. The Manistee County Master Plan has a series of goals and objectives that are categorized by topic. Benzie County Master Plan also has goals and objectives found in associated "Background Reports," but they are summarized in eight "fundamental principles." The fundamental principles and associated policies of the Benzie County Plan are what most of the communities in the county use as their guiding basis for decisions as the "Background Reports" have been unavailable. Both plans lay out an articulated path for the future development of their respective county.



No matter what level of government the master plan is being prepared for, it is influenced by the conditions within the community at the time the plan is drafted, public interests of the day, and the issues that extend beyond the municipal boundaries but have a significant impact locally.

Benzie County Planning History

The history of the county plan involves active citizenry looking to plan for the county on a regional scale. Because regional planning and collaboration among communities are “best practices” in planning, the functions of planning and zoning were, until recently, housed at the county level. Rather than individual townships taking on those administrative duties, they were performed by a county planning commission, a county planner, and a county zoning administrator. This scale lends itself to a comprehensive approach: as planning and zoning issues are considered, their impact on the county as a whole was considered.

When the county decided to discontinue zoning on a regional scale, individual townships tried to take on that role by quickly adopting the county master plan and zoning ordinance. However, they soon found that the plan wasn’t suited to their individual needs and further realized that the data contained in it needed updating with the 2010 census data. Therefore, communities took the opportunity presented by the Lakes to Land collaboration to write updated, individual master plans tailored to their own unique needs.

Referencing the county plan is important in the sense that it provides the historical backbone to continued scenic rural preservation goals and other regional planning initiatives. Policies that the county established in the plan, such as concurrency in infrastructure development, open space and agricultural preservation, and economic development geared toward established urban cores, are still seen in individual master plans. The county plan provided the framework that is still being adhered to today; such consistency among planning efforts makes for good planning practice. It is hoped that as the individual communities offer more detailed visions of their preferred

futures, these visions will be reflected in subsequent county planning efforts.

Manistee County Planning History

In Manistee County, professional planning services have been provided by a professionally staffed planning department for decades. The planning department works with communities in developing master plans, administering zoning, and facilitating solutions to a myriad of problems. Also of key importance is their use of Geographic Information Systems (GIS), a specialized software program used to convey spatial data in map form, to aid communities and decision makers.

While planning in the County is decentralized, the use of the County Planning Commission and a professional planner provides local master plans and regulatory tools with review and coordination to help achieve some regional consistency. In fact, a number of Manistee County communities over the years have formed joint planning commissions and prepared joint master plans. As mentioned in Tab 1, these include Pleasanton Township, Bear Lake Township, and the Village of Bear Lake as well as Onekama Township and the Village of Onekama. Currently, a number of watershed planning efforts are also underway that cross municipal boundaries to focus on the single issue of ensuring the highest integrity of water quality possible within the County.

Manistee County understands that closely coordinated planning which seeks to ensure collaboration and coordination between municipal neighbors, while maintaining local autonomy, is essential to ensuring continued prosperity for County residents. In fact, the Lakes to Land Initiative was born from just a few Manistee County residents.

KEY STRATEGIES

Benzie County 2020 Comprehensive Plan

- The Benzie Co. Master Plan has a growth management focus. Policies are geared toward defining land use development patterns and practices guiding new development and services to specific areas of the County in order to manage development and maintain a rural scenic character.
- Benzie Co. Master Plan focuses on regional land use planning, emphasizing land use patterns and policy for the county as a whole while promoting integration of individual municipal boundary lines.
- Economic development, character, transportation, land use issues, natural resources, and environmental protection are topics that are encompassed within the scope of where and how to place development within the County, utilize the transportation system efficiently and install infrastructure improvements that builds on exiting systems. Efficiencies in land use patterns and services are key components to the success of the plan. Benzie County maintains a Recreation and Cultural Plan within the county.
- Urban Service Districts are mapped out to indicate where new public services may be extended to accommodate new development.
- Rural scenic character preservation is a key focus of the plan. Policies that call for the development of corridor plans, buffer screening, conservation easements, design guidelines, night sky policies, and additional design guidelines are aimed at aiding in this goal.
- Eight guiding fundamental principles are articulated followed by 4 strategies: balanced growth, environmental protection, protection of the visual character of the landscape, and protection of the visual character of small towns.

Manistee County Master Plan, 2008

- The Manistee County Master Plan is geared toward building the capacity of public services and investment—the development and enhancement of programs, plans, and facilities in order to actualize their vision.
- Public services that would be created or enhanced include recreation, housing, economic development, natural resources, infrastructure, and transportation. These topics collectively work to actualize the desired end result of the Master Plan. For example, the Manistee County Plan calls for the creation of a recreation plan and recreation department, alternative energy program, economic development programming, and solid waste management program. Capacity building of this type would aid in creating recreational opportunities and management of those programs, achieve greater alternative energy production, protection of the environmental and natural resources, and expand and grow the economic base.
- In Manistee County, community-specific land use planning is preferred, honoring local planning efforts. It does point to a few general regional land use goals, such as compact development forms and coordination of planning efforts among municipalities.
- The Plan calls for nine categories of goals with associated objectives to achieve the goals.

2.60 County Plan summary table

Manistee County Goals	
ECONOMY / BALANCED GROWTH	<ul style="list-style-type: none"> • Increase opportunities for business in the county. • Encourage the Alliance for Economic Success and the Greater Manistee Area Chamber of Commerce to diversify the industrial base to create more job opportunities and to create specialty groups. • Increase the ability of Manistee County to attract and retain technology-based businesses. • Link economic development goals and objectives with those of the Little River Band of Ottawa Indians to provide broader, unified economic development programs. • Coordinate a collaborative planning program among the county, local units of government within the county, and adjoining counties.
HOUSING	<ul style="list-style-type: none"> • Encourage the development of more assisted living facilities/senior housing options as the average age in the county rises, including development of support services to assist seniors to stay in their own homes. • Encourage housing options for a variety of income levels. • Discourage blight and nuisance housing areas.
PROTECTION OF NATURAL RESOURCES AND ENVIRONMENT	<ul style="list-style-type: none"> • Encourage the remediation of environmentally contaminated lands which have a potential for damaging rivers, streams and groundwater. • Advocate for the creation and long term maintenance of a county-wide solid waste management program • Advocate for the maintenance of Manistee County's natural resources and the beauty of its landscape. • Encourage local governments to develop guidelines and criteria which protect natural features and sensitive areas. • Advocate for county-wide alternative energy programs and projects.
RECREATION	<ul style="list-style-type: none"> • Continue to work on the development of the Manistee County Recreation Plan, including all areas of the county. • Encourage universal accessibility to all recreation sites. • Increase recreational opportunities for all ages. • Advocate for a Manistee County parks program including the preservation of open spaces for recreation purposes.
AGRICULTURE	<ul style="list-style-type: none"> • Advocate for agriculture and forest management activities which enhance Manistee County's economic base and quality of life. • Advocate that designated agricultural areas in the county remain primarily agricultural or low density residential.
TRANSPORTATION	<ul style="list-style-type: none"> • Advocate for the development of a coordinate county transportation plan. • Advocate for the awareness of the importance of our local airport for all travelers in the county. • Monitor projects and proposals to assess the maintenance of safe and efficient routes in and through the county while respecting the rural character. • Advocate for expansion of deep water port facilities linking to air, rail, highway connections, and warehousing and distribution facilities. • Advocate for the continued study of the railroad relocation project.
INFRASTRUCTURE	<ul style="list-style-type: none"> • Advocate for the development of a county infrastructure plan. • Advocate for the effective and efficient location of public facilities and delivery of public services.
LAND USE / VISUAL CHARACTER	<ul style="list-style-type: none"> • County master planning will respect the goals and land use plans of local government, including the Little River Band of Ottawa • Future growth will occur in existing and planned growth centers such as the City of Manistee and population centers as identified in each local government plan.

Benzie County Principles and Strategies

The principal land use issue in Benzie County is not whether to grow, it is where, when and in what manner can growth occur without undermining the integrity of the scenic natural character of the County and the economy built around it.

FUNDAMENTAL PRINCIPLES

1. Scenic character should be preserved or enhanced wherever feasible in the County
2. Natural resources in the County should be protected from inappropriate use or conversion.
3. 3. The pristine natural environment of the County should be protected from degradation.
4. An economy built on renewable natural resources is sustainable and should continue to be the principal economic base for the future.
5. Future development should primarily take place in a compact development pattern.
6. Future land use, zoning, land division and public infrastructure decisions should be made consistent with this Plan.
7. A strong effort should be made to achieve improved intergovernmental cooperation within Benzie County
8. The vision in this Plan must be achieved without violating protected property rights.

Balanced Growth Strategy

Preservation of scenic character in Benzie County is both dependent on and supports most of the economic base in the County. The scenic character is comprised of the natural environment, farms, and the built environment. Thus, protecting scenic character, the natural environment, and economic development must proceed together—or one or the other (or both) will suffer. The solution lies in pursuit of a balanced growth policy. Balanced growth will require housing not only for seasonal residents, retirees, or two income commuter families, but also for the elderly, young families, and other persons on low fixed incomes. New businesses will be needed to meet the needs of the growing seasonal and permanent populations.

Environmental Protection Strategy

The other side of the balanced growth strategy is the environmental protection strategy. This term embraces protection of renewable natural resources like agricultural and forest land, as well as the air, water, and other sensitive natural features in the County (like wetlands, floodplains and sand dunes) The greatest threat to these resources is from poorly planned or sited new development. Residential development poses the greatest threat because there is so much more of it over a much wider area.

STRATEGIES

Strategy to Protect the Visual Character of the Landscape

County citizens have strongly indicated that they do not want growth to spoil the scenic character of the landscape. They do not want it to take on a suburban or urban character. They want the forested, lake, and riverine landscapes to be preserved for the benefit of present and future generations. Almost everyone feels a right to see, enjoy, and help protect these resources. As a result, protection of the unique rural character of the County must be a fundamental part of all future planning and development decisions.

Strategy to Protect Visual Character of Small Towns

The physical features of the city of Frankfort and the villages in Benzie County are a critical component of the rural scenic character of the County. New development that is encouraged to take place in and adjacent to these small towns must both complement and fit with the existing character, or it will damage the scenic character of the community and the County.

Strategy to Address Issues of Greater than Local Concern

The fundamental principles presented in this Chapter recognize that intergovernmental cooperation is critical to implementation of the strategies in this Plan.

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