



Planning and Zoning the Waterfront

Case Studies from Michigan

National Working Waterfronts & Waterways Symposium
March 26, 2013
Tacoma Washington

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Outline

- Great Lakes and Michigan Context
- Case Studies
 - Case Study Example: Charlevoix, MI
 - Summary of Coastal Zoning and Parcel GIS Analysis
 - Examples of Planning and Zoning BMPs
- General Findings
- Some next Steps for Michigan



Context | Great Lakes St. Lawrence Seaway

- Great Lakes Navigation System extends over 2,400 miles from Duluth, MN to the Gulf of the St. Lawrence River
- 136 harbors, 4 locks, 104 miles of breakwaters and jetties within U.S. side
- 180 million tons transported annually



● Great Lakes St. Lawrence Seaway



Context | Great Lakes

- Total coastline = 10,900 miles or roughly 44% of the circumference of the earth
- U.S. Great Lakes coast longer than East Coast
- Account for 95% of U.S. and 20% of world's fresh surface water supply



© Great Lakes



Context | Michigan

- Over 3,288 miles of coast on:
 - Lake Michigan
 - Lake Huron
 - Lake Superior
 - Lake Erie
 - Lake St. Clair
 - St. Marys River
 - St. Clair River
 - Detroit River

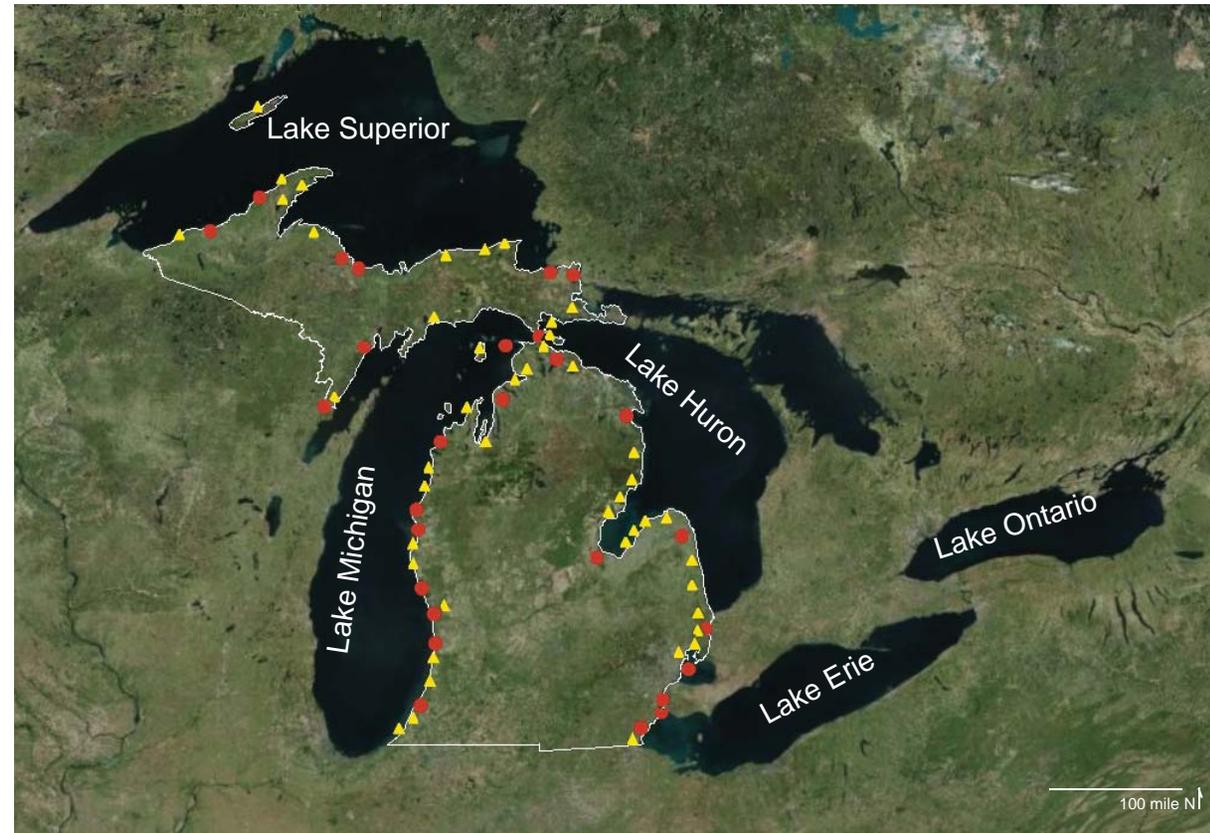


● Michigan



Context | Michigan's Great Lakes waterfront

- 70 Federally Authorized Harbors including 27 commercial deep draft harbors, and 80 Harbors of Refuge

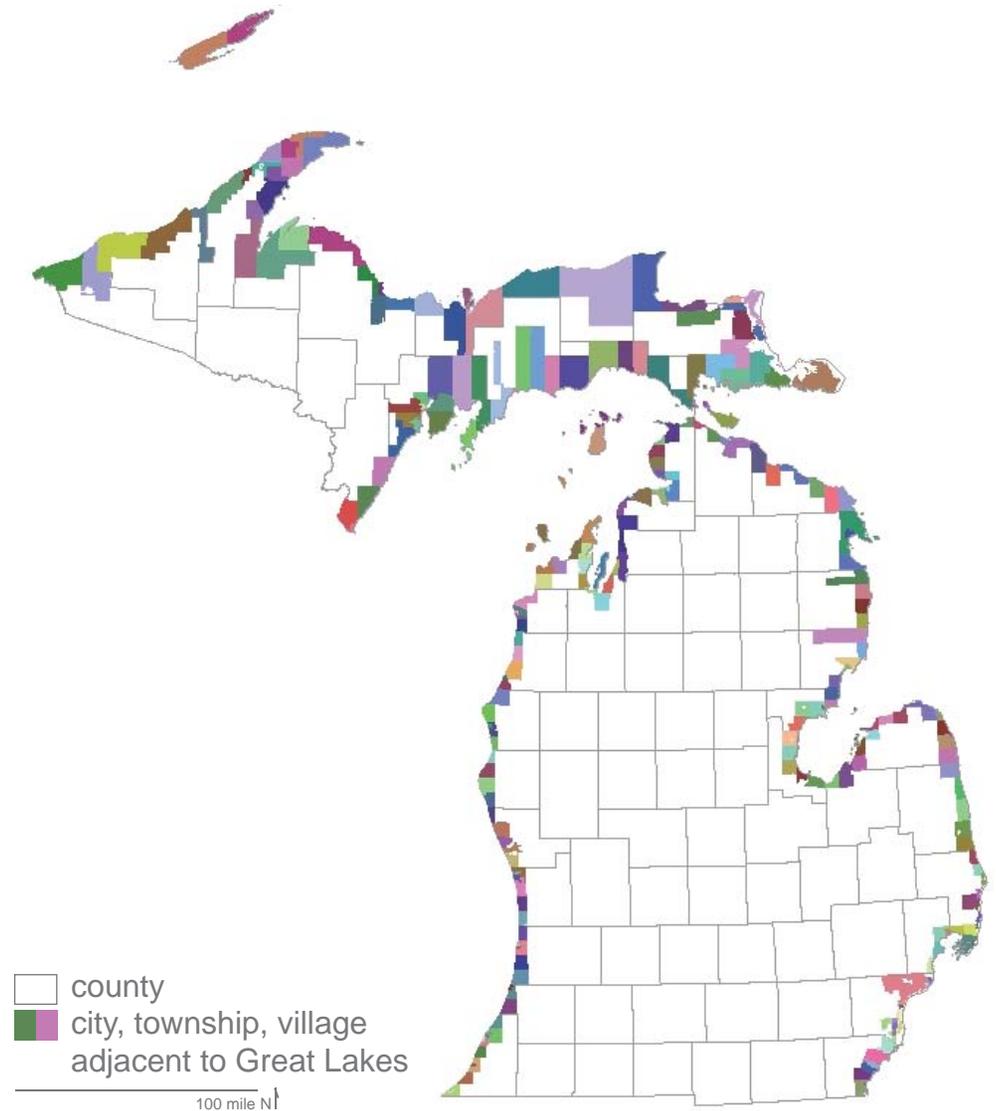


Federally Authorized Harbors in Michigan ● commercial ▲ recreational



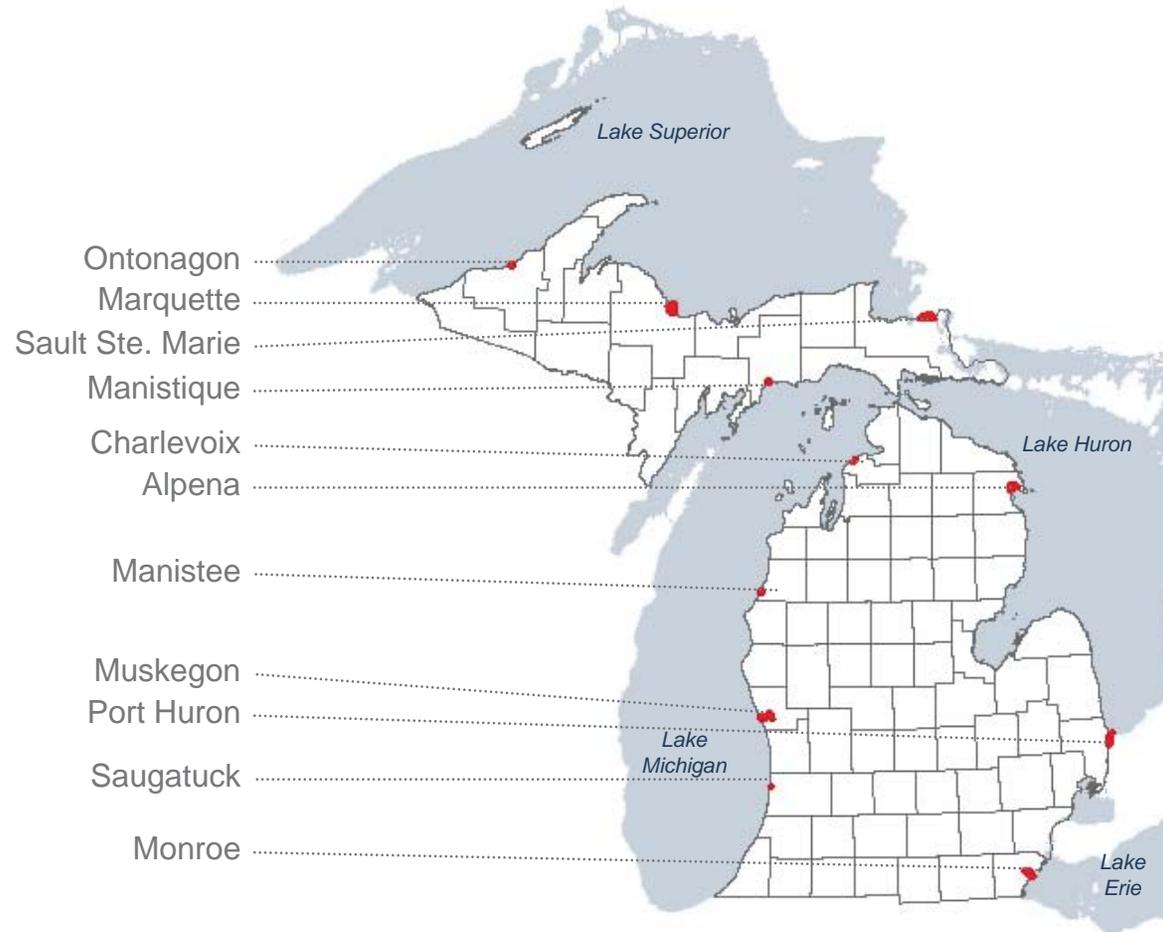
Context | coastal communities

- 41 of 83 counties are coastal
- 280 cities, townships, and villages adjacent to the Great Lakes
- 350 local governments within or partially within the CZM boundary, which extends 1000 ft from the mean high water mark and up river mouths
- Authority to prepare and adopt master plans and zoning ordinances



Case Studies | land use analysis objectives

- Characterize zoning districts and parcels along the waterfront and within a 1000 foot buffer of the waterfront
- Conduct a geographic inventory of working waterfront assets
- Identify water related uses that are permitted by right or special use permits in coastal zoning districts



Charlevoix | waterfront history



source: Lake Charlevoix Association



Charlevoix | background

- Located in Northwest Lower Michigan
- Land Area: 2 square miles
- Frontage on Lake Michigan, Round Lake, and Lake Charlevoix
- Population: 2,513 (2010 census), 16% decline since 2000
- High seasonal population
- Median age: 48.1
- Median household income (2006-2010 ACS): \$37,417
- Tourist and resort destination



Charlevoix | background

- Federally authorized harbor
- Commercial, recreational, cargo, and ferry port
- Beaver Island Ferry
- 67 slip downtown municipal marina
- 1 commercial fishery
- Access to Lake Michigan from inland lakes



Charlevoix | aerial view

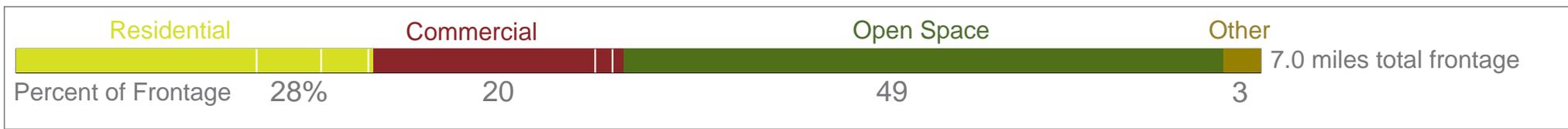


GIS Land Use Analysis:

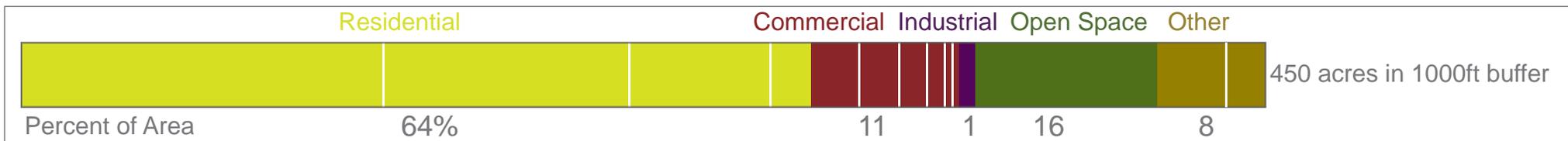
- (1) frontage or land use adjacent to water bodies
- (2) area within a 1000 ft buffer of water bodies



Charlevoix | waterfront zoning - frontage

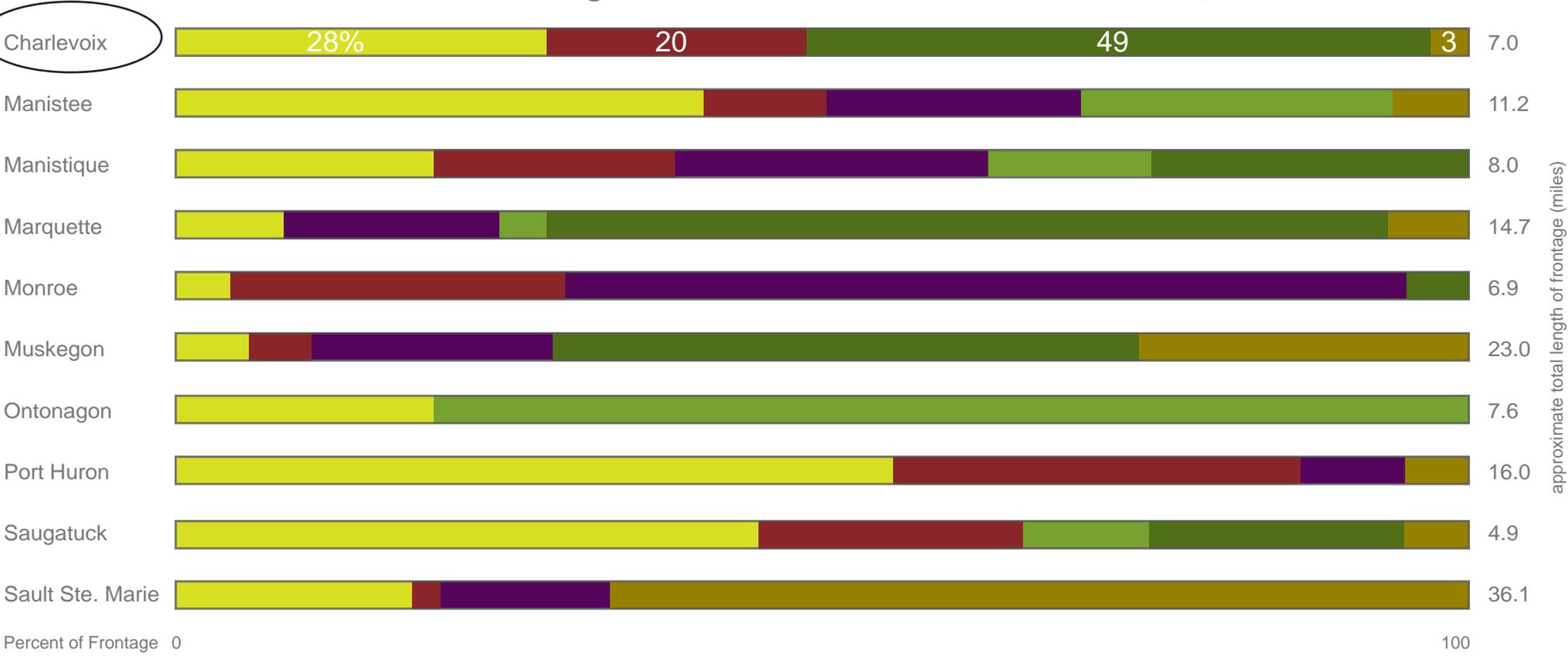


Charlevoix | waterfront zoning - 1000ft buffer



Case Studies | waterfront zoning - frontage

Land Use along the Waterfront (percent of total frontage)



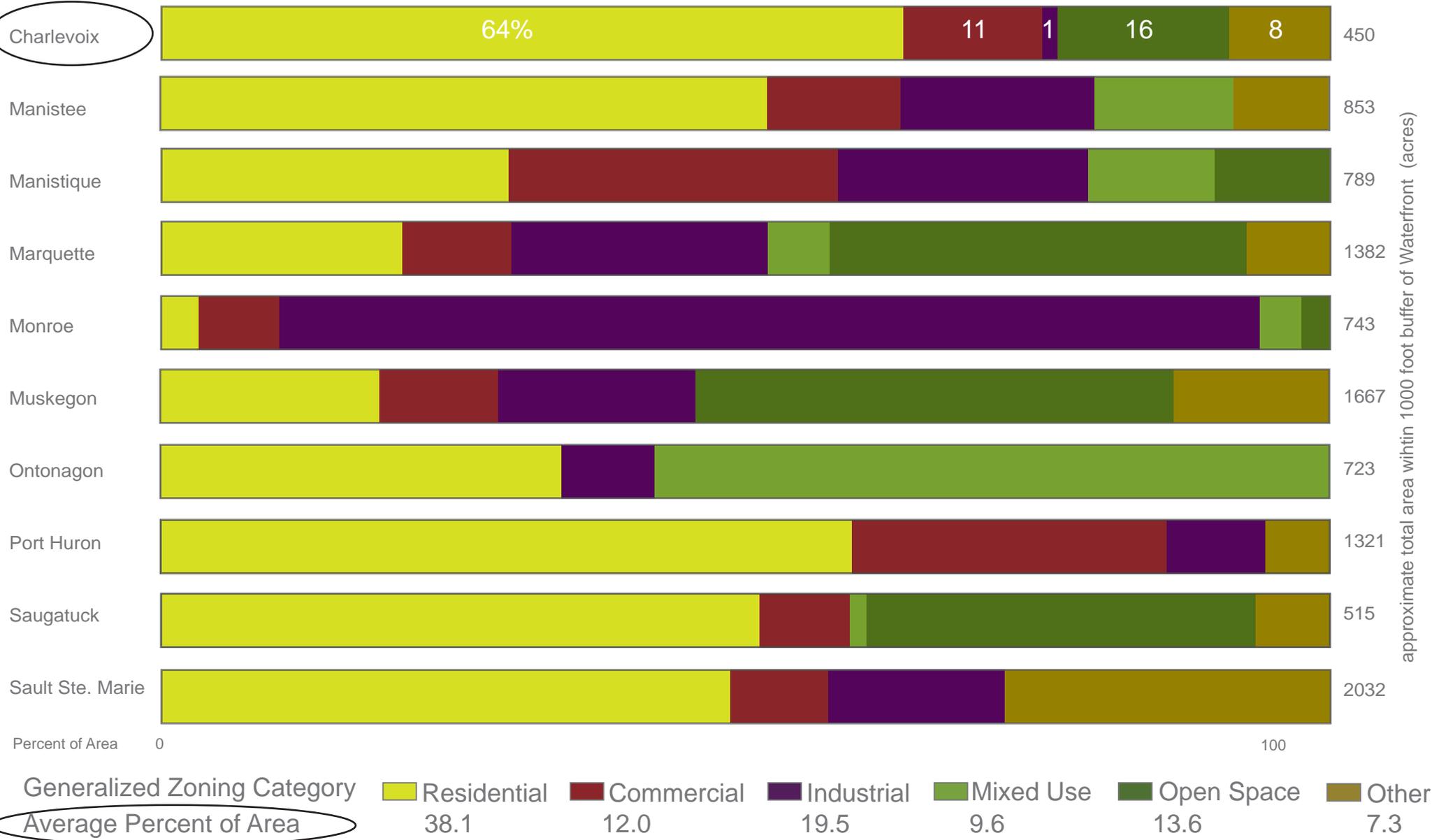
Generalized Zoning Category Residential Commercial Industrial Mixed Use Open Space Other

Average Percent of Frontage 24.6 13.3 16.5 13.0 20.8 11.8

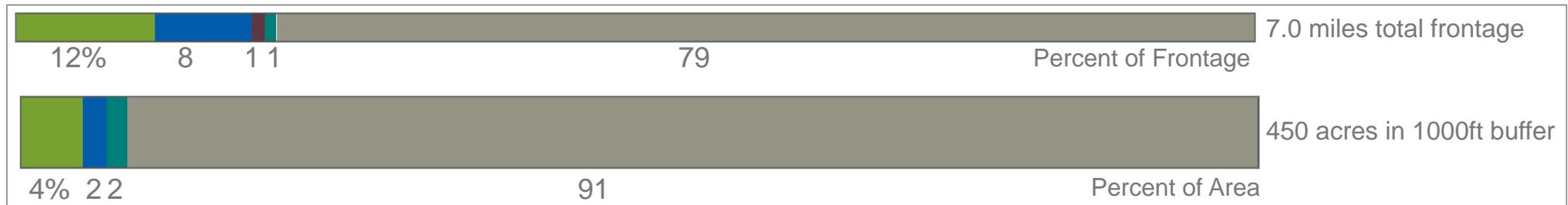
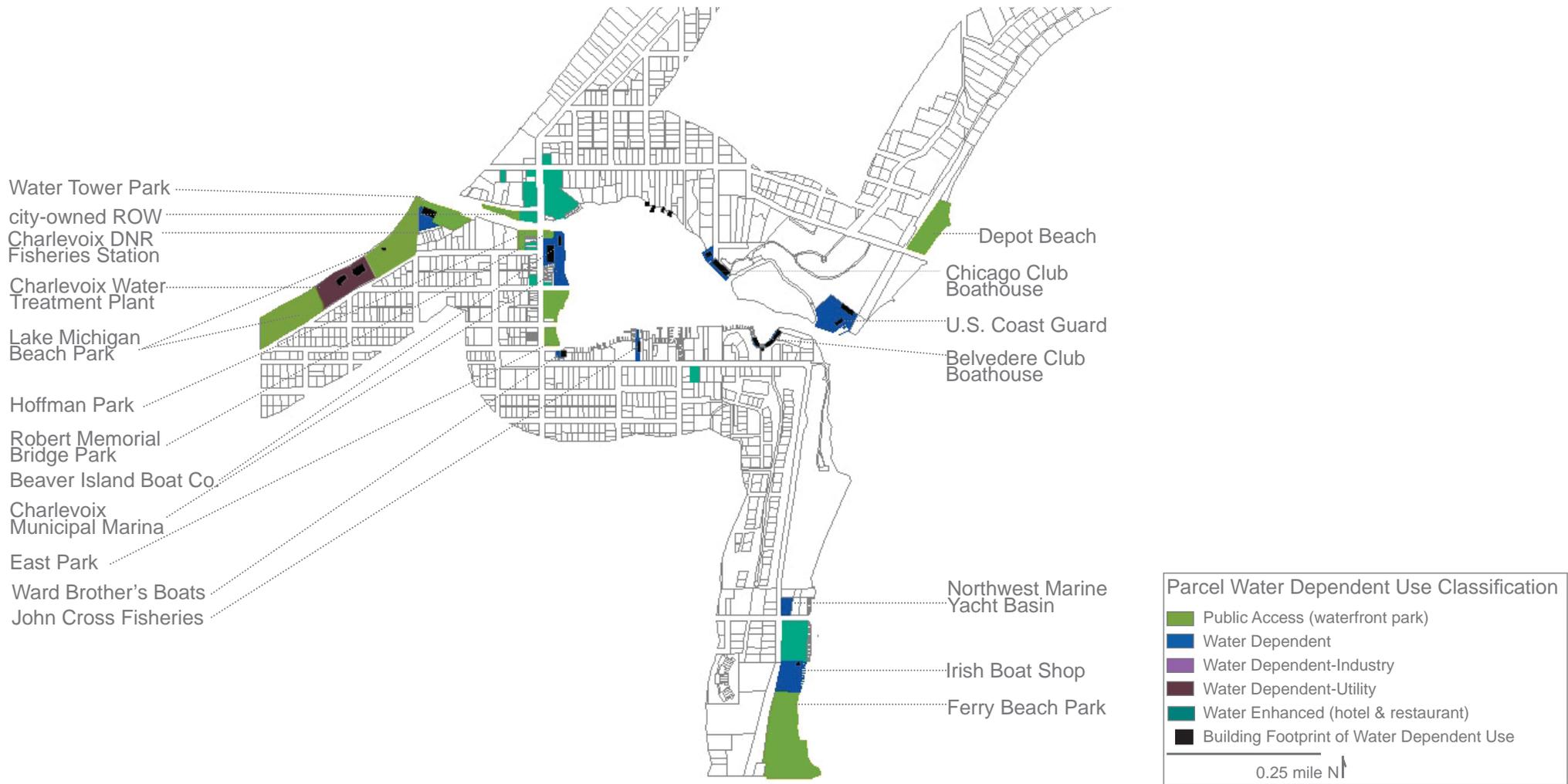


Case Studies | waterfront zoning - 1000ft buffer

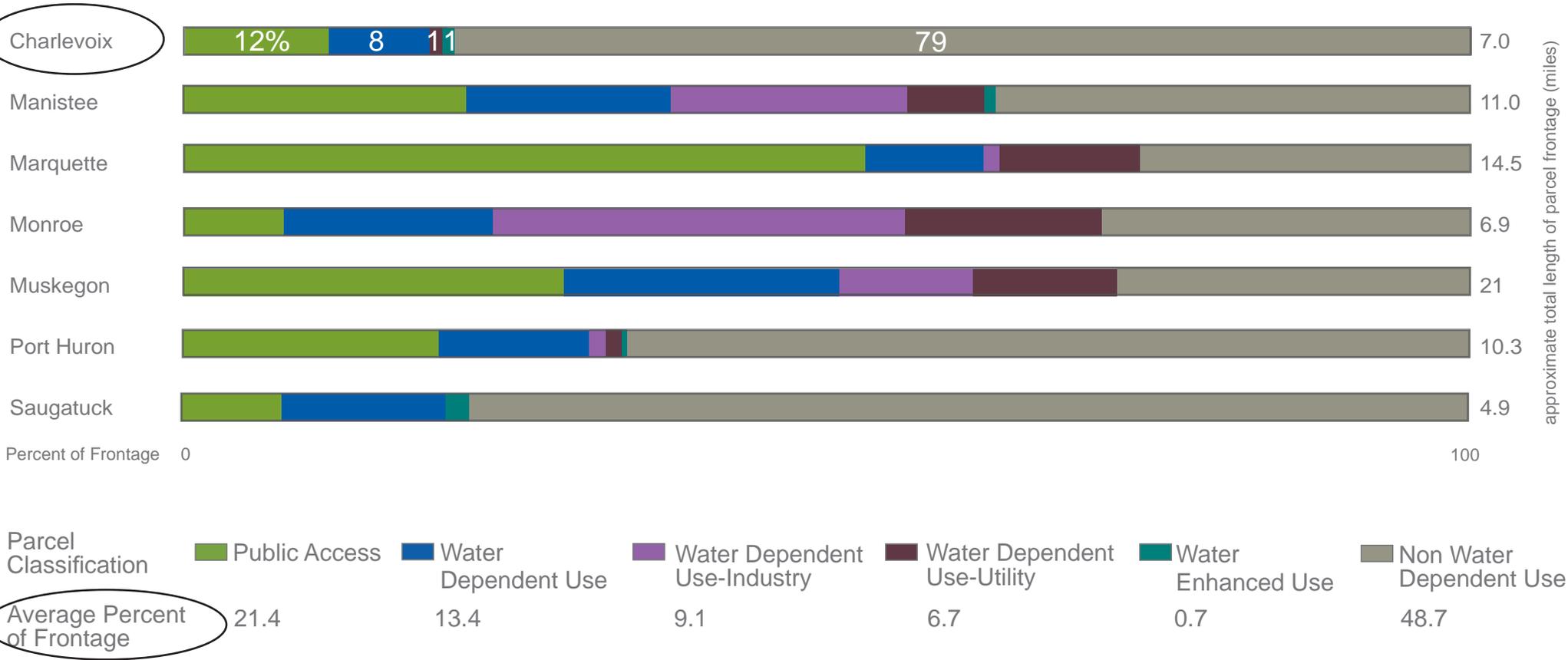
Land Use within a 1000 foot Buffer of the Waterfront (percent of total area)



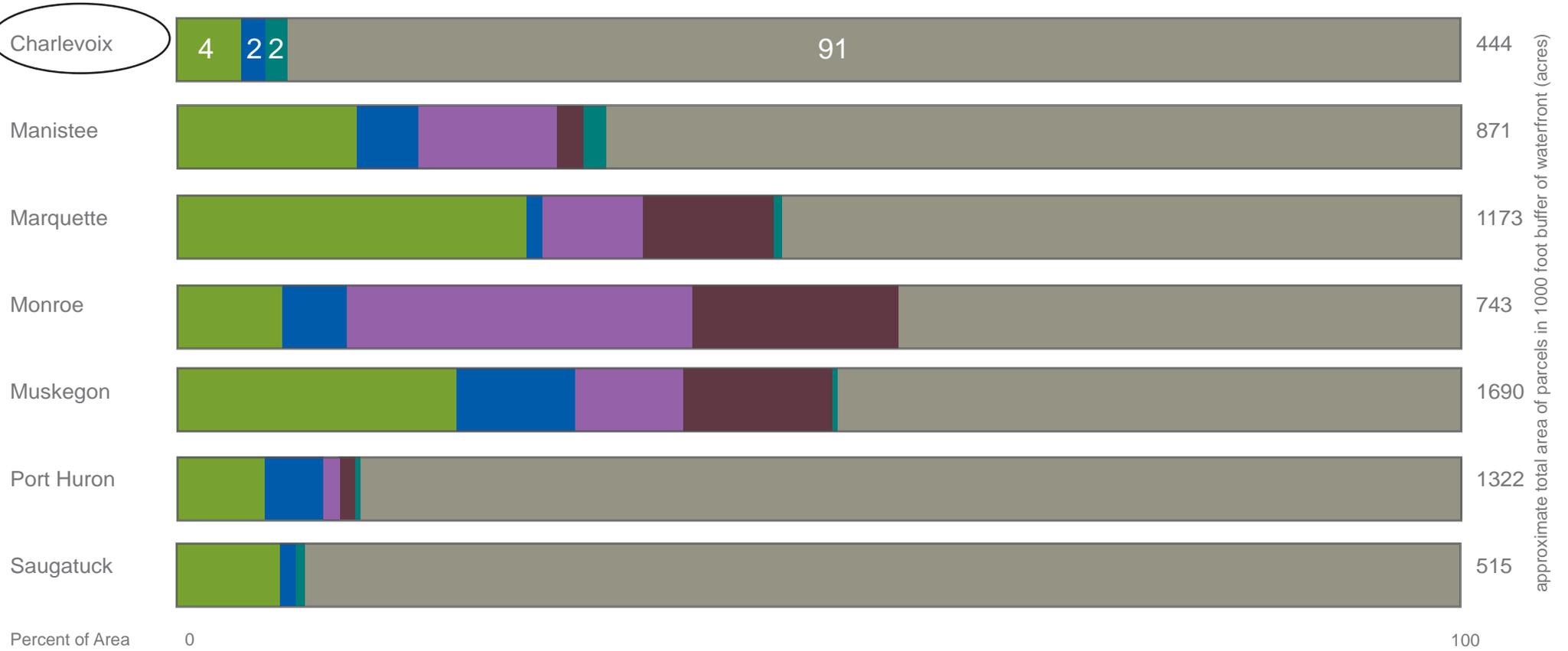
Charlevoix | parcel analysis + asset inventory



Parcel Use along the Waterfront (percent of total frontage)



Parcel Use within a 1000 foot Buffer of the Waterfront (percent of total area)



Charlevoix | zoning ordinance

- All 14 of city’s zoning districts fall within 1000ft of the waterfront
- 8 districts permit public access, industry, or water related use by right or special use
- Marine Commercial District specifically intended to support water-related uses
- Scenic Reserve District provides public access to lakes

Zoning District	Intent of District	Principle Use	Conditional Use
Marine Commercial District	Established at locations with water frontage to protect and promote historic and unique heritage and fishing village feel, district is intended to accommodate a mix of land uses including single family, condos, marine related commercial and professional offices	Dock/boat launch, Fishing charter service, Public dock/boat launch, Private noncommercial dock, Public or private marina, Public or private park/playground/beach, Boat service and repair, Boat/marine sales and related retail, Boat/marine construction and maintenance equipment and storage	Boat house, Boat fuel/gasoline sales
Scenic Reserve	Purpose is to protect the scenic attributes of certain properties along the shore of the city’s abutting lakes, provide visual connection to water and views from the lake, natural areas intended to be protected from future development, includes public and private lands that are also highly valued for recreational activities	Dock/boat launch, Fishing charter service, Public dock/boat launch, Private noncommercial dock, Public or private marina, Public or private park/playground/beach, Outdoor recreation	Boat House



Charlevoix | working waterfront challenges

- Ex: Marine Commercial District permits mixed uses, on Round Lake most of district comprised of non-water dependent uses
- Area's last remaining commercial fishing property is surrounded by condos



- Marine Commercial District
- Water Dependent Uses
- Public Access (waterfront park)
- Water Dependent
- Water Dependent-Industry
- Water Dependent-Utility
- Water Enhanced (hotel & restaurant)
- Building Footprint of Water Dependent Use

Ward Brother's Boats



source: Ward Brother's Boats

John Cross Fisheries



What are communities doing to plan their waterfronts?

How are communities transitioning primarily industrial waterfronts to adapt to a changing economy and changing community needs?



Waterfront Planning | Ontonagon



- Adopted hybrid zoning ordinance
- Rezoned former industrial property to mixed use, reserving deep water access for future industrial use
- Utilizes Form Based Code to promote connection to the public waterfront, open space, and downtown through design



Waterfront Planning | Marquette



- Participated in EPA/NOAA Smart Growth Technical Assistance program
- Engaged in community waterfront visioning process
- Commissioned harbor studies
- Established Waterfront Form Based Code districts to connect waterfront to downtown



Waterfront Planning | Manistee



- Provides universal access to waterfront resources
- Created riverwalk that provides opportunities for fishing, recreation, charter fishing dockage and access to beaches, riverfront, and historical sites
- Maintained industrial zoning for waterfront industry on Manistee Lake
- Permits marinas as a special use in many zoning districts



Waterfront Planning | Alpena



- Regional collaboration
- Partnered with regional council of governments and university to conduct regional port study
- Developed riverwalk with educational signage and LID for managing stormwater



Waterfront Planning | Muskegon



- Created downtown park and event grounds on former, vacant industrial waterfront property
- Established Smartzone along waterfront to help attract new business
- Commissioned waterfront master plan
- Utilized waterfront commercial and recreational zoning to establish hubs of water related businesses



Waterfront Planning | Saugatuck



- Established Kalamazoo Lake Harbor Authority, an interlocal body with authority to develop lake, water resources development, and TIF and development plans
- Encourages larger lot development to protect visual access to waterfront and mixed uses that emphasize water access and usage on waterfront property
- Commissioned dredging studies



Waterfront Planning | Fishtown, Leland



- Established Fishtown Preservation Society
- Commissioned planning and historic structures studies
- Created master plan
- Adopted historic district



General findings

- High potential for protecting and supporting working waterfronts at the local level
- Analyzing coastal zoning and conducting an inventory provides baseline information about working waterfront assets, a snapshot of existing land use, and can be a useful tool for identifying threats, opportunities, and planning needs
- Coastal land use and zoning ordinances vary by community
- There are examples of marine districts that specifically provide for water related uses but few examples of zoning districts that prohibit non water related uses along the waterfront
- Capacity to plan for the future of a community's waterfront is crucial
- Lack of capacity and development pressure contribute to low prioritization for waterfront planning
- Opportunity and need to plan for the future of waterfront land and working waterfronts now



Some next steps for MI working waterfronts

- Look to other states for successful zoning and planning examples and models
- Investigate methods to incentivize water dependent uses
- Develop guidance for zoning ordinance, FBC language
- Integrate planning for working waterfronts into current statewide initiatives and programs
- Continue to implement Waterfront Smart Growth Workshops
- Initiate long term strategic planning to adapt to low/high lake levels, lack of federal dredging funding, shoaling and sedimentation, severe weather events, a changing economy, etc.
- Increase awareness of the value and vulnerability of working waterfronts





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