Planning and Zoning the Waterfront
Case Studies from Michigan

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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
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
• 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
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
Context | Michigan’s Great Lakes waterfront

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

Lake Michigan 1889

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
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

Percent of Frontage

- Residential: 28%
- Commercial: 20%
- Open Space: 49%
- Other: 3%

7.0 miles total frontage
Charlevoix | waterfront zoning - 1000ft buffer

Percent of Area: 64%

- Residential: 450 acres in 1000ft buffer
- Commercial: 11
- Industrial: 1
- Open Space: 16
- Other: 8

2012 Charlevoix Zoning Districts:
- Residential Low Density
- Residential Medium Density
- Residential Mixed Use
- Residential Multi-Family
- Residential Planned High Density
- Private Residential Clubs
- General Commercial
- Commercial Hospitality
- Central Business District
- Commercial Mixed Use
- Professional Office
- Marine Commercial
- Industrial
- Scenic Reserve
- Public Facilities
- PUD
- Building Footprint of Water Dependent Use

Lake Michigan
Round Lake
Lake Charlevoix
Case Studies | waterfront zoning - frontage

Land Use along the Waterfront (percent of total frontage)

<table>
<thead>
<tr>
<th>City</th>
<th>Residential</th>
<th>Commercial</th>
<th>Industrial</th>
<th>Mixed Use</th>
<th>Open Space</th>
<th>Other</th>
<th>Total Length (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlevoix</td>
<td>28%</td>
<td>20%</td>
<td>49%</td>
<td>3%</td>
<td>7%</td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>Manistee</td>
<td>20%</td>
<td>20%</td>
<td>14%</td>
<td>3%</td>
<td>14%</td>
<td></td>
<td>11%</td>
</tr>
<tr>
<td>Manistique</td>
<td>23%</td>
<td>16%</td>
<td>20%</td>
<td>1%</td>
<td>17%</td>
<td></td>
<td>8%</td>
</tr>
<tr>
<td>Marquette</td>
<td>25%</td>
<td>18%</td>
<td>22%</td>
<td>2%</td>
<td>23%</td>
<td></td>
<td>14%</td>
</tr>
<tr>
<td>Monroe</td>
<td>25%</td>
<td>19%</td>
<td>25%</td>
<td>1%</td>
<td>19%</td>
<td></td>
<td>6%</td>
</tr>
<tr>
<td>Muskegon</td>
<td>23%</td>
<td>22%</td>
<td>23%</td>
<td>1%</td>
<td>21%</td>
<td></td>
<td>23%</td>
</tr>
<tr>
<td>Ontonagon</td>
<td>25%</td>
<td>21%</td>
<td>22%</td>
<td>2%</td>
<td>21%</td>
<td></td>
<td>7%</td>
</tr>
<tr>
<td>Port Huron</td>
<td>25%</td>
<td>19%</td>
<td>21%</td>
<td>1%</td>
<td>20%</td>
<td></td>
<td>16%</td>
</tr>
<tr>
<td>Saugatuck</td>
<td>25%</td>
<td>19%</td>
<td>21%</td>
<td>1%</td>
<td>20%</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>Sault Ste. Marie</td>
<td>25%</td>
<td>19%</td>
<td>21%</td>
<td>1%</td>
<td>20%</td>
<td></td>
<td>36%</td>
</tr>
</tbody>
</table>

Percent of Frontage

Generalized Zoning Category
- Residential
- Commercial
- Industrial
- Mixed Use
- Open Space
- Other

Average Percent of Frontage
- Residential: 24.6%
- Commercial: 13.3%
- Industrial: 16.5%
- Mixed Use: 13.0%
- Open Space: 20.8%
- Other: 11.8%
Case Studies | waterfront zoning - 1000ft buffer

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

Charlevoix
- 64%

Manistee
- 853
- 11%
- 8%
- 1%
- 16%
- 7%

Manistique
- 789
- 13%
- 16%
- 16%
- 8%
- 7%

Marquette
- 1321
- 13%
- 20%
- 16%
- 8%
- 7%

Monroe
- 743
- 11%
- 11%
- 16%
- 8%
- 7%

Muskegon
- 1667
- 11%
- 11%
- 16%
- 8%
- 7%

Ontonagon
- 723
- 11%
- 11%
- 16%
- 8%
- 7%

Port Huron
- 1321
- 11%
- 11%
- 16%
- 8%
- 7%

Saugatuck
- 515
- 11%
- 11%
- 16%
- 8%
- 7%

Sault Ste. Marie
- 2032
- 11%
- 11%
- 16%
- 8%
- 7%

Generalized Zoning Category
- Average Percent of Area
  - Residential: 38.1%
  - Commercial: 12.0%
  - Industrial: 19.5%
  - Mixed Use: 9.6%
  - Open Space: 13.6%
  - Other: 7.3%
Charlevoix | parcel analysis + asset inventory

Water Tower Park
city-owned ROW
Charlevoix DNR Fisheries Station
Charlevoix Water Treatment Plant
Lake Michigan Beach Park
Hoffman Park
Robert Memorial Bridge Park
Beaver Island Boat Co.
Charlevoix Municipal Marina
East Park
Ward Brother's Boats
John Cross Fisheries

Depot Beach
Chicago Club Boathouse
U.S. Coast Guard
Belvedere Club Boathouse

Parcel Water Dependent Use Classification
- Public Access (waterfront park)
- Water Dependent
- Water Dependent-Industry
- Water Dependent-Utility
- Water Enhanced (hotel & restaurant)
- Building Footprint of Water Dependent Use

0.25 mile N

Percent of Area
7.0 miles total frontage
450 acres in 1000ft buffer

Percent of Frontage

12% 8 11 79

4% 2 2 91
Parcel Use along the Waterfront (percent of total frontage)

<table>
<thead>
<tr>
<th>Parcel Classification</th>
<th>Charlevoix</th>
<th>Manistee</th>
<th>Marquette</th>
<th>Monroe</th>
<th>Muskegon</th>
<th>Port Huron</th>
<th>Saugatuck</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Access</td>
<td>12%</td>
<td>7.0</td>
<td>11.0</td>
<td>6.9</td>
<td>21.0</td>
<td>10.3</td>
<td>4.9</td>
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<tr>
<td>Water Dependent Use</td>
<td>8</td>
<td>11.0</td>
<td>14.5</td>
<td>21.0</td>
<td>21.0</td>
<td>10.3</td>
<td>4.9</td>
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<tr>
<td>Water Dependent Use-Industry</td>
<td>79</td>
<td>11.0</td>
<td>14.5</td>
<td>21.0</td>
<td>21.0</td>
<td>10.3</td>
<td>4.9</td>
</tr>
<tr>
<td>Water Dependent Use-Utility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Water Enhanced Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Water Dependent Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Average Percent of Frontage:
- Public Access: 21.4%
- Water Dependent Use: 13.4%
- Water Dependent Use-Industry: 9.1%
- Water Dependent Use-Utility: 6.7%
- Water Enhanced Use: 0.7%
- Non Water Dependent Use: 48.7%

Approximate total length of parcel frontage (miles):
- Charlevoix: 7.0 miles
- Manistee: 11.0 miles
- Marquette: 14.5 miles
- Monroe: 6.9 miles
- Muskegon: 21.0 miles
- Port Huron: 10.3 miles
- Saugatuck: 4.9 miles
Parcel Use within a 1000 foot Buffer of the Waterfront (percent of total area)

<table>
<thead>
<tr>
<th>Location</th>
<th>Public Access</th>
<th>Water Dependent Use</th>
<th>Water Dependent Use-Industry</th>
<th>Water Dependent Use-Utility</th>
<th>Water Enhanced Use</th>
<th>Non Water Dependent Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlevoix</td>
<td>4</td>
<td>22</td>
<td>91</td>
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<tr>
<td>Manistee</td>
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<td>Marquette</td>
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<td>1173</td>
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<tr>
<td>Muskegon</td>
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<td></td>
<td></td>
<td>1690</td>
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<tr>
<td>Port Huron</td>
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<td></td>
<td></td>
<td>1322</td>
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<tr>
<td>Saugatuck</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>515</td>
</tr>
</tbody>
</table>

Percent of Area

Average Percent of Area: 12.5
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

<table>
<thead>
<tr>
<th>Zoning District</th>
<th>Intent of District</th>
<th>Principle Use</th>
<th>Conditional Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine Commercial District</td>
<td>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</td>
<td>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</td>
<td>Boat house, Boat fuel/gasoline sales</td>
</tr>
<tr>
<td>Scenic Reserve</td>
<td>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</td>
<td>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</td>
<td>Boat House</td>
</tr>
</tbody>
</table>
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
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
• 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
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
• 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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