

# RESILIENT BEAVER ISLAND

## *Joint Planning Commission*

September 13<sup>th</sup>, 2016  
Peaine Township Hall  
2pm



# Introductions

## **LIAA Staff**

Claire Karner, Community Planner

Katie Sieb, Community Planner

## **St. James Planning Commission**

**Peaine Township Planning Commission**

An aerial photograph of a lush green forest with a dark, winding river or stream cutting through it. The forest is dense with various shades of green, and the river is a dark, almost black line. The overall scene is natural and serene.

# LIAA



*Innovative ideas for sustainable communities since 1993*

LIAA is a Section 501(c)3 nonprofit corporation created in 1993 to stimulate & support greater civic engagement. Our mission statement is:

*Helping people shape better communities through:*

- *participation,*
- *education,*
- *information &*
- *the effective use of technology*

*Resilient*



**BEAVER  
ISLAND**

This project is funded by the Michigan Coastal Zone Management Program, Department of Environmental Quality Office of the Great Lakes and the National Oceanic and Atmospheric Administration, U.S. Department of Commerce.





# Today's Agenda

- Introductions
- Overview of Workplan + Communication Checklist
- Demographic Data and Mapping Discussion
- Vulnerability Assessment process
  - Who should we talk to?
- Next Steps








# 1. OVERVIEW OF WORKPLAN

# The Resiliency Planning Process

Opportunity to hear from the community:

1. What are the key challenges on Beaver Island looking into the future?
2. What are the Island's valuable assets and resources?
3. How can we build strong community networks and **adaptive capacity** to address challenges and future changes?

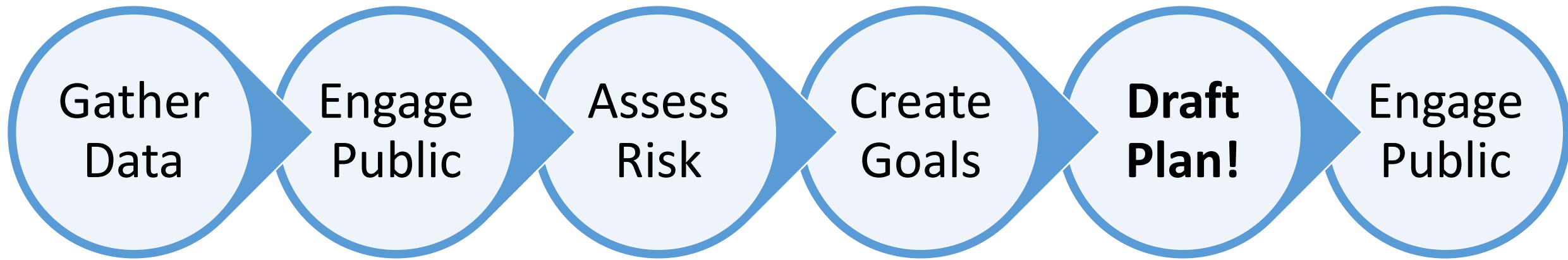
A graphic featuring a quote by Baron Baptiste. The background is a soft-focus image of a sunset or sunrise over a body of water, with warm orange and yellow tones. The quote is centered and reads: "THE PRIZE IS IN THE process." The words "THE PRIZE" and "IS IN THE" are in a bold, black, sans-serif font, while "process." is in a large, black, cursive script font.

"THE PRIZE  
IS IN THE  
process."

-Baron Baptiste



# The Resiliency Planning Process





# September Work Plan

## Tuesday, 9/13

- Joint Planning Commission Meeting to discuss process, review data, and learn about vulnerability assessment

## Tuesday-Wednesday, 9/28

- Joint Planning Commission Meeting @ 7pm to discuss community vulnerabilities and structure of Master Plan
- Stakeholder meetings with **diverse groups** to learn about Island vulnerabilities and risks.

# October Workplan

## Monday-Tuesday, 10/10-11

- **MASTER PLAN WORKSHOP**
  - Series of meetings including 1-2 speakers, public visioning activities, and results of vulnerability assessment
  - Planning Commission Meeting @ 2pm on 10/11 to discuss goals and future land use plan

## Monday, 10/24

- Draft Plan presented to Planning Commissions for initial review

# November Work Plan

## Dates TBD

- Public Open House to receive comments on the Draft Plan
- Special meeting to revise and edit draft plan (if desired)
- Review any public comments and begin 63-day comment period (***Board approval required***)



# Getting the Word Out

## Opportunities for public involvement:

- Attend a Stakeholder Meeting (Sept 27-28)
- Attend Master Plan Workshop (Oct 10-11)
- Attend the Public Open House (November)
- Interactive Website
  - Email Updates to be sent when website is updated

## Communication Tools:

- Project Website
- Radio
- Facebook
- Newspapers/Press
- Forum Posts
- Local Contacts (Krys Lyle)
- Printed Flyers
- Newsletter/Email Updates

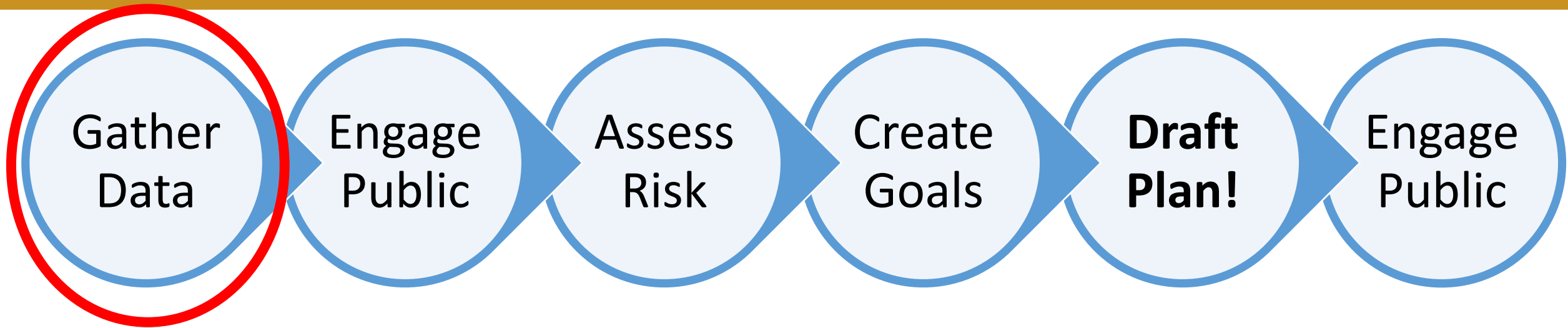




## 2. DEMOGRAPHIC DATA AND MAPPING DISCUSSION



# Data Gathering



Data Gathering is a key step in the Master Plan process.

- **Qualitative** Data- Interviews, surveys, existing documents
- **Quantitative** Data- Trends in demographics, environment, economy, and land use



# Population from 1990-2014

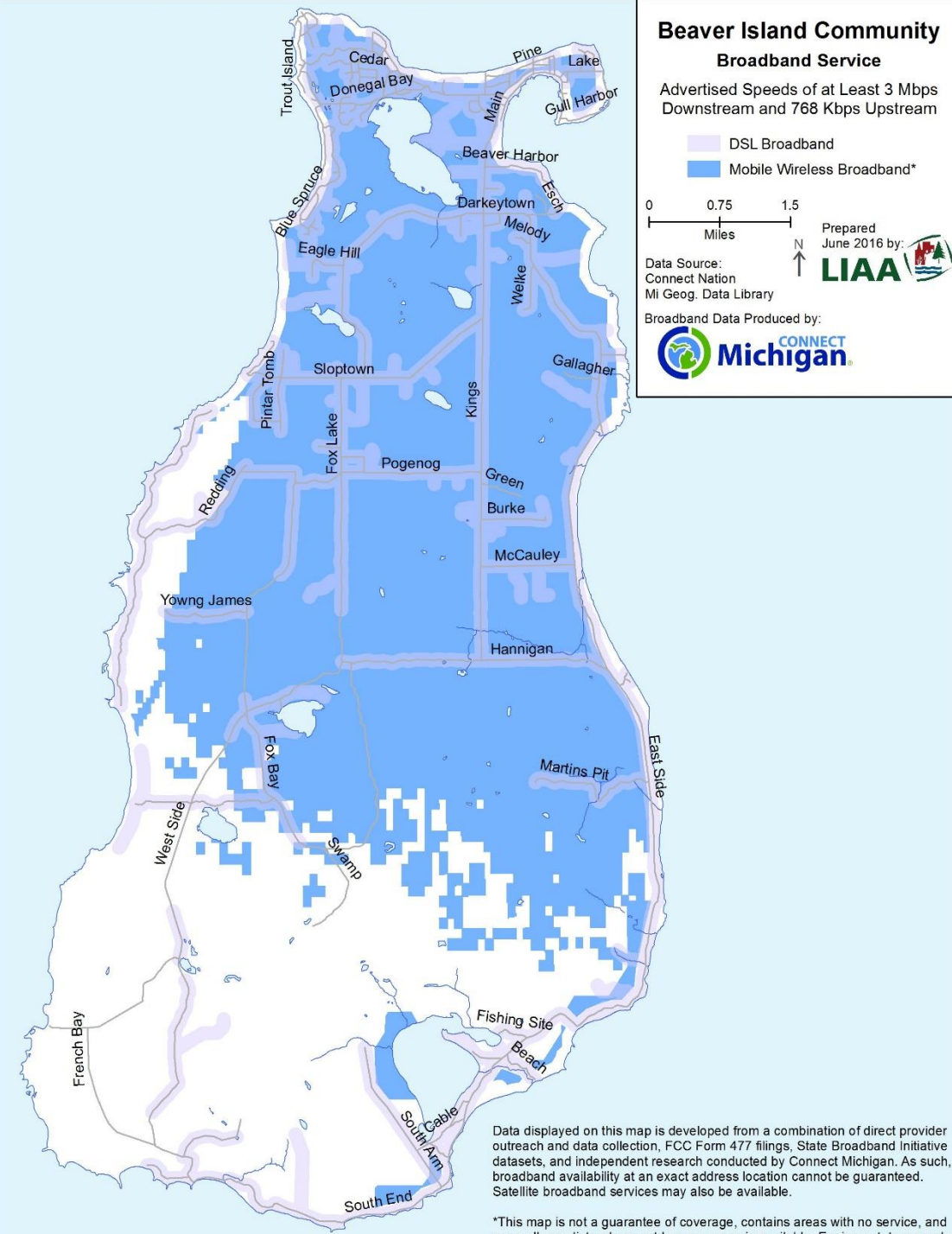
	1990	2000	2014	% Change 1990 to 2000	% Change 2000 to 2014
Peaine Township	128	244	280	90.6	14.8
St. James Township	276	307	317	11.2	3.3
Charlevoix County	21,468	26,090	26,038	21.5	-0.2
State of Michigan	9,295,297	9,938,444	9,889,024	6.9	-0.5
Source: U.S. Census Bureau (1990, 2000), American Community Survey (2010-2014)					

- Beaver Island grew substantially from 1990 to 2000, growth tapered from 2000 to 2014.
- Much different than County and statewide trends.

## What about future growth?

- Charlevoix County Projection
- Building Permit Data
- Seasonal Housing Units

# Map Example- Broadband and Mobile Service



# Quantitative Data Gathering

## Tables or Charts

- Population Trends
- Land Use changes
- Age
- Income
- Race
- Educational Attainment
- Unemployment and Poverty
- Employment
- Industry
- Commuting Patterns
- Threatened or endangered species
- Housing Types
- Length of Time in Home
- **Seasonal Units**
- **Home Values**
- **Building Permit Data**

## Maps

- Public/Private Lands
- Land Use
- Wetlands
- Dunes
- Water bodies
- Parcels
- Broadband/Communications
- Forest Types
- Well heads
- Wildfire Risk
- Floodplains or Flood-prone areas
- Roads
- Elevation/Shoreline Mapping
- Soils



# Trends in the Data (DRAFT!)

- Beaver Island population growth has tapered, but still growing faster than the County and State
- Largest age group in Peaine: 45-49
- Largest age group in St. James: 65-69
- Can likely expect growth in the future
- Some communication infrastructure is present, but limited broadband is available

# Discussion Questions

1. Does any of the data surprise you?
2. Are there topics you'd like to know more about?
3. What do you feel about the differences in housing, population, and other trends between the two Townships?
4. Do you know of any local data sources?
5. What locations may be helpful for comparison to Beaver Island?





### 3. VULNERABILITY ASSESSMENT PROCESS



# Defining *Vulnerability*

The Intergovernmental Panel on Climate Change (IPCC) defines vulnerability as "the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes."

As community planners, we are interested in addressing community vulnerability to **ALL** unforeseen challenges, including economic stressors, public health emergencies, population shifts, and natural resources trends.

Through this vulnerability assessment, we hope to:

1. Identify community vulnerabilities that can be addressed to increase resilience.
2. Serve as a tool to assist community officials in choosing policy options that foster resilience in the face of unforeseen challenges.



# Quantifying Community Vulnerability

*Vulnerability = Exposure + Sensitivity*

# Exposure can be...

Areas of the community with conditions less suitable for septic

Areas of the community prone to:

- Extreme rain and recurrent flooding events
- Severe winter storms (based on historical records)
- Negative impacts of wildfire

Coastal areas at risk for storm surge, erosion, and inundation

Exposure assessment can also look at ecosystems health and habitat health, focusing on:

- Forest resources
- Wetlands
- Susceptibility to invasive species

# Sensitivity can be...

1. Islanders prone to loss of power because of utility services
2. Areas with poor access to communications (e.g. internet and phone service)
3. Island residents with less access to resources (financial and other)
4. People living in aging infrastructure

*Are there other community attributes of island residents identified through the Island Institute exchange?*

# Understanding Risk

We can estimate vulnerability by understanding existing conditions and future trends.

A Risk Assessment allows us to move step further. By talking with locals and collecting data, we can better estimate the likelihood of an event and the overall consequence to the community.





# Planning for a Changed Climate

*“If you fail to plan, you are planning to fail.” –Benjamin Franklin*

Risk	By Mid-Century	By End of Century	Summary
<b>Convective Weather</b> (Severe Winds, Lightning, Tornadoes, Hail)	?	?	While extreme precipitation has increased dramatically in the region, specific severe weather types, such as tornadoes and hail, have remained relatively stable over time.
<b>Severe Winter Weather Hazards</b> (Ice/Sleet Storms and Snow Storms)	?	↓	Warmer, shorter winters will reduce the period of the year in which winter impacts are likely to happen, but some areas may see more ice, sleet, freezing rain, and wet snow with slightly warmer winter temperatures.
<b>Extreme Temperatures</b>	↑	↑ ↑	The number of extremely hot days, over 95°F, 100°F will likely increase, though not as fast as in areas farther south. Overnight lows have warmed faster than daytime highs, which may lessen opportunities for relief during heat waves
<b>Flood Hazards: Dam Failures</b>	↑	↑ ↑	Stronger and more extreme precipitation events coupled with aging dam infrastructure will increase the probability of dam failure, if appropriate measures are not taken.
<b>Flood Hazards</b>	↑	↑ ↑ ↑	Stronger and more extreme precipitation events coupled will be more likely to overwhelm stormwater infrastructure without appropriate adaptation efforts.
<b>Fire Hazards: Wildfires</b>	?	↑	Summer drought and the number of consecutive dry days may increase in the future, despite more precipitation annually, increasing the risk of wildfires.

# Finding Solutions

Strategies and priorities can be applied once we understand the vulnerability and risk. Examples include:

1. Pursue distributed power or require a back-up power supply
2. Enhance reliability of the transportation system
3. Invest in high quality communication systems and services
4. Move infrastructure outside of the floodplain, wetland areas and/or areas with hydric soils
5. Employ adaptive management strategies for changing natural resources  
e.g. coastline and fluctuating wetland boundaries

**How can we make this Assessment relevant to Beaver Island?**

# Stakeholder Interviews

Groups to talk to:

- Younger residents (20-40 years old)
- Tourism-related business leaders
- Real-estate/Housing groups
- Wildlife groups

# Next Steps

Tuesday, 9/27 @ 7pm

- Joint Planning Commission Meeting to discuss community vulnerabilities and structure of Master Plan
- Stakeholder meetings on Tuesday 9/27 and Wednesday 9/28 with **diverse groups** to learn about Island vulnerabilities and risks.



# Establishing Priority Planning Areas

	Low Vulnerability	High Vulnerability
High Risk	<i>May be</i> a planning priority	<i>Should be</i> a planning priority
Low Risk	<i>Are likely</i> to be a planning priority	<i>May be</i> a planning priority