

Aquidneck Island Resilience Strategy Issue Paper 3

Issue: ISLAND ECONOMY

Description of Concern: Aquidneck Island’s business community consists of a wide variety of industry types and sizes. The range of businesses within Middletown, Newport and Portsmouth includes tourism, technological research, defense, retail, health care, and agriculture. Newport is a “tourist mecca,” visited annually by approximately 3.5 million people drawn to the coastal environment, waterfront businesses, and shoreline access found on Aquidneck Island. The three municipalities all depend on each other for their economic well-being. For example, many tourists stay at hotels outside of Newport and over a quarter of the Newport business’ employees live in either Middletown or Portsmouth.

The United States Navy is Newport County’s largest single employer in terms of payroll and personnel statistics. There are large numbers of high-tech and defense-related jobs generated indirectly by the Navy on Aquidneck Island. In the 1980s, Middletown and Portsmouth experienced a high-tech boom stimulated partly by the location of the Naval Underwater Systems Center in Newport. The Island as a whole is becoming a high-technology hub with more than 80 software and engineering firms employing a large portion of the labor force.

Many of the Island’s commercial areas are concentrated on the coastline. In Newport over 50% of the city’s parcels lie within or touch the flood plain, which represents a total value of \$3.8 billion. A 2010 analysis revealed that the amount of municipal revenue attributed to water dependent uses (defined as use that requires direct access to marine or tidal waters and cannot be reasonably located inland) accounts for 54% of total City revenues. (FXM 2010, 7)

Some businesses, both in the defense and tourism sectors, may be exposed to sea level rise and storm surge, threatening the economy on the Island. From the tourism and marine trade businesses along Thames Street, to the Morale, Welfare and Recreation (MWR) businesses on Naval Station Newport and marine industries in Melville, there is a significant commercial presence in areas prone to coastal flooding island-wide. Sea level rise may pose challenges to waterfront businesses, historic structures, public shoreline access, and busy commercial areas, not to mention the roadways leading to them. There are resources available to businesses to help begin planning and strategizing so that they can more easily recover after a natural disaster or storm scenario. Communicating and coordinating within the business community may facilitate preparedness and a stronger economy.

Discussions with a range of Aquidneck Island stakeholders revealed the following issues and concerns:

1. **Flooding:** The vulnerability of economically vital areas, the roads leading to these areas, and the businesses themselves.

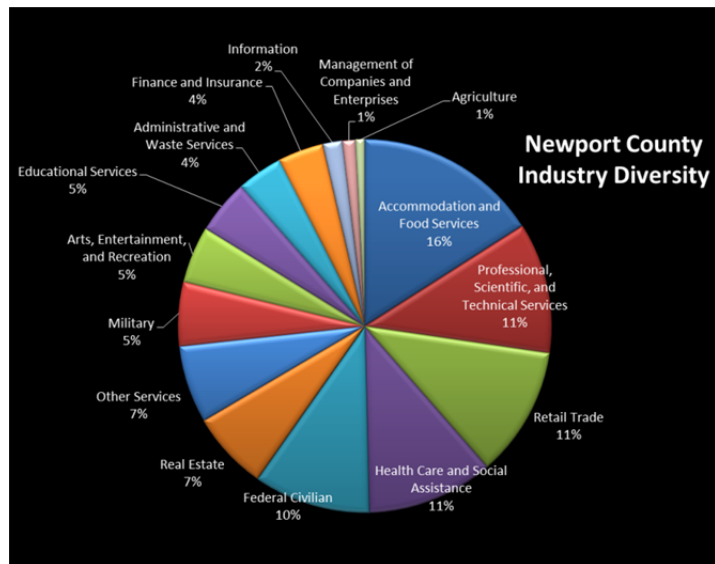


Figure 1.

- How do we help small businesses begin to think about what happens if they cannot get to their facility or their facility is damaged due to inundation?
 - How do we keep the economy going during and directly after a disaster or flooding event?
2. **Island-wide coordination** as it pertains to the economy on the Island.
- How long can the Island be self-sustaining if the bridges were to close down (in terms of providing goods, food, services, health care, etc.)?
 - Coordination is needed between public works, Rhode Island Department of Transportation (RI DOT), businesses, emergency managers, and the defense sector.
 - Emergency coordination from business perspective: if everyone is shutting down their businesses or evacuating, coordination of that effort is needed.
 - Rhode Island Emergency Management Agency (RIEMA) and local EMAs cannot possibly handle communicating to the entire business community.

Background:

Aquidneck Island is a regional economic system

Aquidneck Island’s municipalities are often considered separately when it comes to analyzing economic activity. Plans for economic development, part of each local comprehensive plan, are drafted specifically with the unique character of the municipality in mind. While logical in some cases, operating in this way overlooks the reality that the region’s economy involves the entire island, as well as the rest of the state of Rhode Island. For example, there is a large contingent of residents who commute outside of their respective municipalities for work. Furthermore, there are those who cross the bridges and leave the entire Island to get back and forth to work. The fact is that the island is a regional economic system and

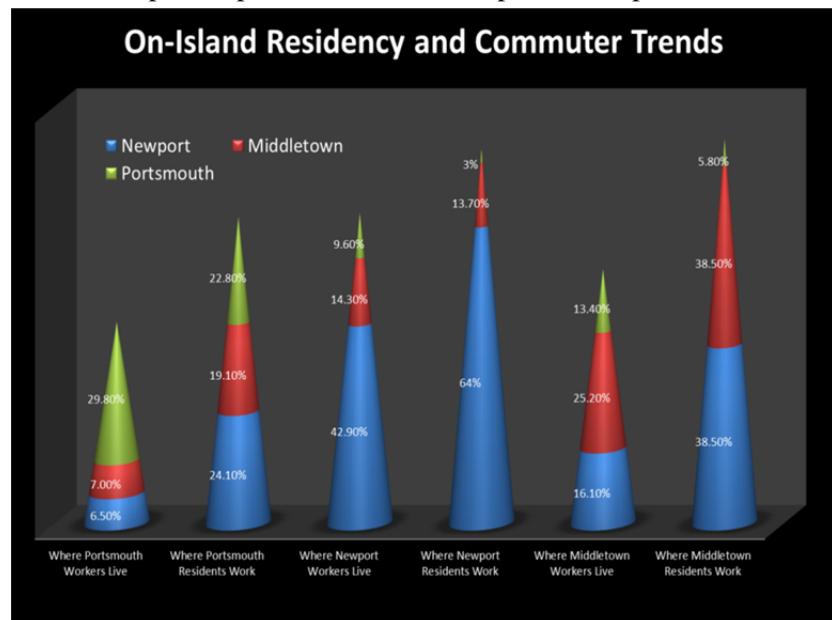


Figure 2.

is reliant on activity across the three municipalities and off island for its strength. Figures 2 and 3 are based on information from the Rhode Island Department of Labor and Training’s “Rhode Island Commuting Patterns,” a publication of the Labor Market Information Unit (2013).

Aquidneck Island Residency and Commuter Trends

When considering the interconnectedness of the Island, understanding the impact of storm damage and flooding in one area and its implications for business activity in another is important. Based on data shown in figures one and two, many of Portsmouth’s residents either work locally or commute off island, with only a small percentage commuting south to Middletown and Newport. Conversely, Newport has the highest rate of resident-workers remaining within the municipality. Middletown residents tend to work in

Newport or Middletown, and the town's workers come from the most the most diverse range of home-towns of the three. Overall, Aquidneck Island's residents largely live and work on the Island, while there is a smaller contingent of workers who commute on and off.

Impact of Storm Surge and Sea Level Rise on Aquidneck Island commercial buildings

While business owners are affected by a myriad of factors and threats, damage from coastal flooding is one that has the potential to be particularly disruptive. The State of Rhode Island Hazard Identification and Risk Assessment indicates that there is a near 100% probability of flooding (which includes sources besides coastal waters) in Newport County within the next 12-60 months, which will likely lead to a "short shutdown of some critical infrastructure and facilities." The effect of storm surge on low-lying areas is directly related to the size of the storm as well as the direction the storm is moving. While storm surge related flooding is a present day threat, sea level rise will have an amplifying effect in years to come.

On Aquidneck Island, the number of commercial buildings exposed to inundation from flood waters during a storm event was estimated as part of a statewide assessment completed by the Coastal Resources Management Council (CRMC). The assessment revealed that an event similar to Super Storm Sandy (2012) would impact over 300 commercial buildings if it occurred today. In 30 years (the approximate length of a household mortgage) that same event is anticipated to affect over 450 commercial buildings due to the addition of three feet of rising seas.

Events like astronomical high tides (aka king tides) are occurring naturally today, and have a similar effect, simulating what 1 to 2 feet of sea level rise may look like.

Events like astronomical high tides (aka king tides) are occurring naturally today, and have a similar effect, simulating what 1 to 2 feet of sea level rise may look like.

Flood Prone Areas

The Thames Street area of the City of Newport is one of the most exposed commercial areas on the Island, but it is not alone. Given the importance of Newport Naval Station as an economic driver, flooding on Coaster's Harbor Island, and the area north of the Pell Bridge (rt 138) is particularly vulnerable. Elsewhere, Melville, Common Fence Point and Island

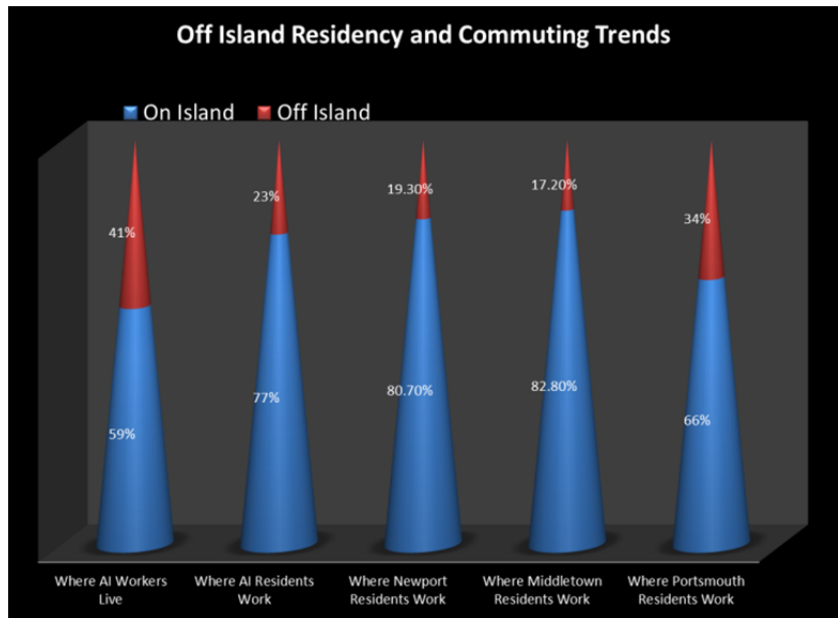


Figure 3.

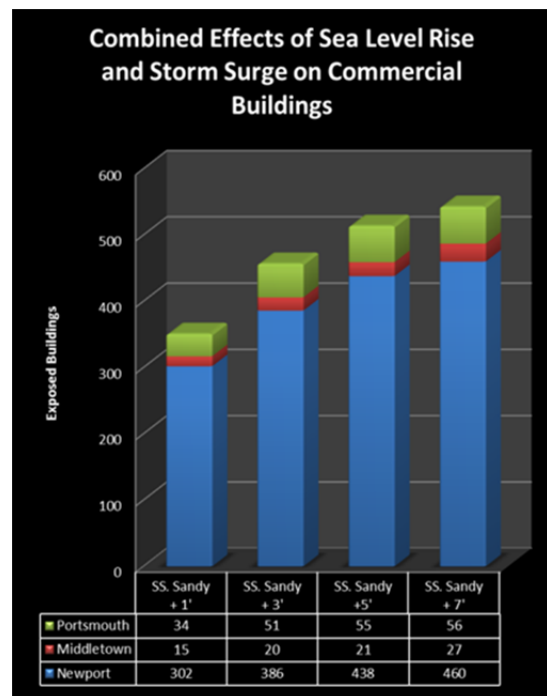


Figure 4.

Park in Portsmouth are home to both residential homes and commercial buildings exposed to flooding. In Middletown the Atlantic Beach community, including Wave Avenue and Aquidneck Avenue all have commercial buildings in low lying areas.

Public Coastal Access Points

While the obvious threat of coastal flooding to the island economy is the inundation of commercial buildings, the loss of coastal public access points is another detrimental impact. The draw of beach access and open space is a significant part of the Island’s strong tourism industry. Out of 58 total public shoreline access points on the island;

- 1 is impacted by 1 to 2 feet of sea level rise alone
- 5 are impacted by 3 feet of sea level rise alone
- 31 are impacted by a 25 year storm combined with 1’ of sea level rise
- 39 are impacted by a 100 year storm combined with 3’ of sea level rise

Current Initiatives:

RI Alliance of Business Resilience

- Creates competitive advantage for RI businesses by maximizing the time businesses stay open before, during and after disaster
- Allows RI businesses to “plug into” a supportive and collaborative resilience network
- Provides better access to timely information, education and training to enhance business resiliency
- Helps RI become more attractive to outside businesses

Innovate Newport

- As part of a larger “Model for National Resilience,” Newport has cooperated with the Chamber of Commerce and Economic Development Fund for Rhode Island to create a technology center called Innovate Newport/Tech-works at the former Sheffield School on Broadway.
- A series of 10 projects around the city aimed at providing jobs and economic growth while demonstrating “integrated resilience”

Newport County Chamber of Commerce

- An independent, non-profit organization with over 1,100 member companies employing more than 50,000 workers throughout Newport County and greater Rhode Island

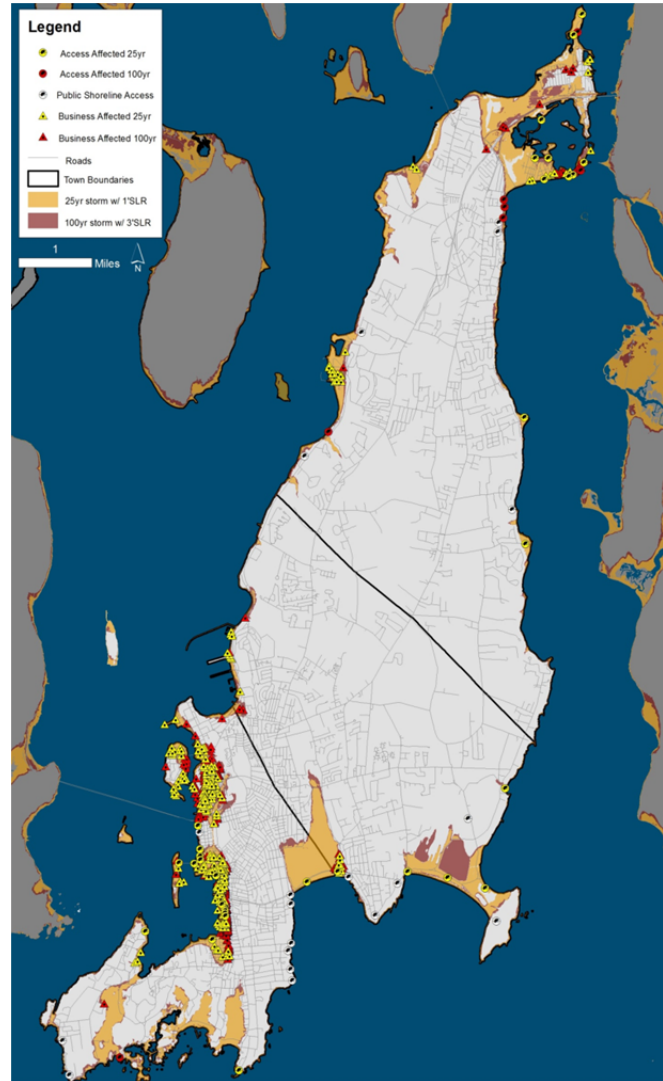


Figure 5.

- Purpose: to leverage the region's core assets to find solutions in the areas that matter most to the business and community, quality jobs, quality growth and quality of life
- In collaboration with the University of Rhode Island Coastal Resources Center (CRC), Rhode Island Coastal Resources Management Council (CRMC) and Rhode Island's U.S. Senator Whitehouse, holding a business resilience luncheon for local small business leaders

Other groups involved in supporting businesses on Aquidneck Island

- Discover Newport
- Portsmouth Economic Development Committee
- Middletown Economic Development Advisory Committee
- Commerce RI
- Portsmouth Business Association

Previous Studies and Reports regarding Business Resilience to Sea Level Rise:

- Newport Waterfront Economic Study
- Special House Commission Study: Economic Risk Due to Flooding and Sea Level Rise
- Newport Resilience Assessment Tour
- Catalog of Adaptation Techniques for Coastal Waterfront Businesses
- Understanding the Economic Development Opportunity & Impact of Climate Change

Recommendations/Potential Actions:

1. Establish AIPC's role as the Island's pre-disaster business community preparedness facilitator, and Newport County Chamber of Commerce as the during and post-event communications resource for efficient information transfer between emergency managers and business leaders.
2. With AIPC's assistance, hold networking events focused on the following objectives:
 - a. Raise the issue of coastal threat resilience into the consciousness of the business community.
 - b. Developing business to business networks in preparation for disruptive events.
 - c. Share of adaptation resources and best practices, and potentially costs for mitigation projects that benefit multiple businesses.
 - d. Develop cooperative plans for raising issues and proposals to municipal decision makers.
3. Companies with 24-7 onsite staff who operate during all weather events should coordinate closely with their respective public works department to ensure response and assistance priority.
4. Identify businesses that either have critical facilities, basic supplies or services needed to get the community back on its feet and establish lines of communication between them and Emergency Managers. Initially, create a map indicating where the various recovery goods and services are located. Ultimately, develop a crowd-sourced "Open for Business" app indicating what businesses are open and where.
5. Upgrade broadband on the Island.
6. Engage the business community in dialogue about resiliency topics such as the financial impacts and economic risks of storm scenarios and sea level rise, and the process of understanding when and how to relocate a threatened business.
7. Provide the business community with information about opportunities to engage in continuity or preparedness planning.
8. Plan for future shoreline access sites in the wake of retreat from periodically flooded shoreline property by private owners.