Portsmouth

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Municipal Resilience Program

Community Resilience Building Workshop

Summary of Findings

September 2019

Town of Portsmouth
Community Resilience Building Workshop
Summary of Findings

Overview

The need for municipalities, regional planning organizations, states and federal agencies to increase resilience and adapt to extreme weather events and a changing climate is strikingly evident amongst the communities of the state of Rhode Island. Recent events such as Tropical Storm Irene and Sandy have reinforced this urgency and compelled leading communities like the Town of Portsmouth to proactively collaborate on planning and mitigating risks. Ultimately, this type of leadership is to be commended because it will reduce the vulnerability and reinforce the strengths of people, infrastructure, and ecosystems and serve as a model for other communities across Rhode Island, New England, and the Nation.

In the spring of 2019, the Town of Portsmouth embarked on certification within the newly established state of Rhode Island's Municipal Resilience Program. As an important step towards certification, Rhode Island Infrastructure Bank (RIIB) and the Nature Conservancy (TNC) provided the Town with a community-focused process to assess current hazard and climate change impacts and to surface projects, plans, and policies for improved resilience. In July 2019, a Portsmouth core team organized a Community Resilience Building Workshop lead by TNC in partnership with RIIB. The core directive of this effort was the engagement with and among community stakeholders, to facilitate the assessment of climate vulnerabilities, and the education, planning and ultimately implementation of priority resilience actions for Portsmouth.

The Portsmouth Community Resilience Building Workshop's central objectives were to:

- Define top local natural and climate-related hazards of concern;
- Identify existing and future vulnerabilities and strengths;
- Develop prioritized actions for the Town of Portsmouth;
- Identify opportunities to collaboratively advance actions to increase resilience.

The Town of Portsmouth employed a unique "anywhere at any scale", community-driven process known as Community Resilience Building (CRB) (www.CommunityResilienceBuilding.org). The CRB's Risk Matrix and various reports, data, and maps were integrated into the workshop process to provide both decision-support and visualization around shared values and priorities across Portsmouth. The Portsmouth Hazard Mitigation Plan (2018) and Chapter 1 of Resilient Rhody - An Actionable Vision for Addressing the Impacts of Climate Change in Rhode Island (2018) where particularly instructive. Using the CRB process, rich with information, experience and dialogue, the participants produced the findings presented in this summary report including an overview of the top hazards, current concerns and challenges, existing strengths, and proposed actions to improve Portsmouth's resilience to hazards and climate change today, and in the future.

The summary of findings transcribed in this report, like any that concern the evolving nature of risk assessment and associated action, are proffered for comments, corrections and updates from workshop attendees and other stakeholders alike. The leadership displayed by the Town of Portsmouth on community resilience building will benefit from the continuous and expanding participation of all those concerned.

Summary of Findings

Top Hazards and Vulnerable Areas for the Community

During the CRB Workshop, participants identified top hazards for the Town of Portsmouth. The natural hazard of greatest concern was major storms including hurricanes, Nor'easters, and winter storms. The other hazards discussed included precipitation-driven flooding, coastal flooding and sea level rise, intense wind events, and extreme temperatures or heatwaves. These hazards have direct and increasing impacts on residents and resources such as its neighborhoods, natural areas (rivers, wetlands, watersheds, parks), farms, roads, bridges, salt marshes, places of employment, tourism, town facilities, drinking and wastewater systems, health care facilitates, social support services for disproportionately disadvantaged populations, and other critical infrastructure and community assets.

Top Hazards and Areas of Concern for the Community

Top Hazards

- Major Storms - Hurricanes, Nor'easters, Winter Snow Storms
- Flooding (Precipitation-driven Inland and Riverine)
- Coastal Flooding and Sea Level Rise
- High Winds
- Extreme and Extended Temperatures (Heatwaves)

Areas of Concern in Portsmouth* - Several categories and locations were identified as being particularly vulnerable by workshop participants including:

Infrastructure: Household Private Cesspools, Residential Septic Systems, Public Water Infrastructure, Two Core Power Supply Lines, Communications System/Towers Infrastructure, Tank Farms, Prudence Island Ferry and Dock, Old Stone Bridge, Potter's Cove, Sandy Point, High School Gymnasium, Melville Dam, Boyds Lane Culvert, Melville Marina District, Clements' Grocery Store, Park Avenue Culvert, Transfer Station, Melville Campground, Historic Buildings and Resources.

Ecosystems: Prudence Island, Low-lying Parks, Glen Park, Melville Park, Melville Pond, Salt Marsh (between Ferry Landing and northern extend of Common Fence Point), Beaches (closure due to water quality issues), Aquidneck Island Reservoir, Sakonnet River, Founder's Brook and Founder's Brook Park.

Roads and Road Network: Boyds Lane, Park Avenue, Route 24, Route 138 (select segments), East Main Street, West Main Street, Mount Hope Bridge, Sakonnet Bridge, Escape Bridge (out of Park Avenue), Main Road (Prudence Island), Neck Farm Road, Mill Creek Road, Common Fence Blvd, Old Colony Railroad Underpass, Mill Creek area on Prudence Island

Neighborhoods: Five Mobile Home Parks, Oakland Farms (mostly a retirement community), Island Park, Ferry Landing, Common Fence Point, East and West Side of Prudence Island, Melville.

Vulnerable Populations: Elderly, Special Needs, Prudence Island Residents, Campers, Farmers, Seasonal Renters/Transient Populations, Tourists, Disabled, Homeless.

*Information from workshop participants augmented with the Portsmouth HMP (2018). See Appendix for full list of vulnerable assets and associated mitigation actions from the Portsmouth HMP (i.e. Table 22).

Current Concerns and Challenges Presented by Hazards

The Town of Portsmouth has several concerns and faces multiple challenges related to the impacts of natural hazards and climate change. In recent years, Portsmouth has experienced a series of highly disruptive and damaging weather events including Tropical Storm Irene (August 2011), Tropical Storm Sandy, (October 2012), winter Nor'easter Nemo (February 2013), and other less impactful but more frequent events. Impacts from Irene included heavy, rain-induced, inland flooding and wind damage. Sandy caused extended coastal erosion and power outages across portions of Portsmouth. The winter storm Nemo dropped 19-20" of snow on the Town knocking out power and isolating residents and neighborhoods due to extended road closures. The magnitude and intensity of these events and others across Rhode Island has increased awareness of natural hazards and climatic change, while motivating communities like Portsmouth to proactively and comprehensively improve resilience.

This series of extreme weather events highlights that for Portsmouth the impacts from hazards are diverse; ranging from coastal flooding of roads and low-lying areas near rivers during intense storms and heavy precipitation events to property damage from trees, wind, snow, and ice. Longer periods of elevated heat, particularly in July and August, have raised concerns about vulnerable segments of the population including the elderly and disabled as well as residents of densely populated areas where there is the potential for fires. The combination of these issues presents a challenge to preparedness, response and mitigation priorities and requires comprehensive yet tailored actions for particular locations and/or areas across Portsmouth.

The workshop participants were generally in agreement that Portsmouth is experiencing more intense and frequent storms events and heat waves. The impacts have affected the daily activities of most residents. Additionally, there was a general concern about the challenges of being prepared and having written contingency plans for events such as hurricanes that may go beyond the response and governance capacities of the local service providers (i.e. major disasters, storms, hurricanes (Cat-1 or above)). It was also recognized that secondary hazards associated with hurricanes includes the not uncommon occurrences of tornados, as well as the starting of structural fires. The combating of structural fires is of concern, particularly following a hurricane, in the areas of Common Fence Point and Island Park where immediate access may be limited, the close proximity of houses, and the recent increase in home heating propane tanks as well as solar panels may help spread fire and inhibit firefighting efforts.

Specific Categories of Concerns and Challenges

As in any community, Portsmouth is not uniformly vulnerable to hazards and climate change, and certain locations, resources, and populations have and will be affected to a greater degree than others. Workshop participants identified the following items as their community's key areas of concerns and challenges across three categories - Infrastructure, Societal, and Environmental.

Infrastructure Concerns and Challenges

Roads, Road Networks, Bridges, Ferry:

- Low-lying coastal roads and roads in close proximity to riverine systems subjected to erosion and routine flooding from storm surge and stormwater runoff.
- Evacuation/escape options via bridges off of Aquidneck Island.
- Access to and from Prudence Island is limited to a ferry and dock system.

Septic Systems:

- Privately owned and maintained on-site wastewater treatment systems subject to flooding in high flood and seasonally high groundwater areas.

Dams:

- Recognition of number of large and small dams (privately or publicly owned) and potential for catastrophic failure under current and future precipitation projections.

Emergency Management and Preparedness:

- Any hurricane has potential to create disaster conditions resulting in significant local response and recovery management challenges, to include lack of a designated command post facility to house an Incident Management Team (IMT) or staff.

Housing:

- Direct impacts to structures from storms - flooding and wind.
- Isolation of homes when road network is compromised for extended periods.
- Education about potential for current and future impacts to structures.
- Concerns about household contaminants and storm debris post-storm.
- Lack of specific evacuation plans for mobile homes.
- Need for alternative energy sources to improve reliability.

Specific Categories of Concerns and Challenges (cont'd)

Societal Concerns and Challenges

Vulnerable Populations:

- Implications to local residents, visitors, and tourists in neighborhoods susceptible to flooding and isolation due to compromised/limited access and egress (i.e. Island Park Area, Common Fence Point)
- Implications on disproportionately disadvantaged populations (i.e. homeless, elderly, working poor, etc.) due to flooding, winter storms, and heat waves.
- Emergency communications with elderly populations.
- Need for more business continuity and recovery planning for major events.

Power:

- Power outages to residential homes and business particularly during the winter months increasing isolation.
- Low income households vulnerability due to power outages.

Environmental Concerns and Challenges

Beaches and Dunes:

- Ongoing routine and episodic (Storm Sandy) erosion and loss of beaches and dunes and potential impacts on attraction for visitors and tourists.
- Beach closures due to intense rain events.

Trees and Forests:

- Increasing impacts to tree health from pests and pathogens resulting in a large population of dead and damaged trees posing risks to power lines and blocking of roads during emergencies.

Salt Marsh:

- Loss of critical natural infrastructure that protects people and property.

Current Strengths and Assets

Just as certain locations, resources, and populations in Portsmouth stand out as particularly vulnerable to the effects of hazards and climate change, other features are notable as assets to Portsmouth's resilience efforts. Workshop participants identified the following items as their community's key strengths, and expressed interest in using them as the core of future resilience building interventions.

- Clearly, the responsive and committed leadership exhibited by officials and staff is a very appreciated strength within Portsmouth. Ongoing collaboration between the Town, business community, faith-based organization, NGOs, adjoining municipalities, County and State-level organizations among others on priorities identified will help advance comprehensive, cost-effective, community resilience building actions.
- The Town has highly experienced staff with access to adequate resources for most emergency situations. The coordination amongst various departments including leadership, Police, Fire, EMS, and the Emergency Management Agency was cited as a highly valued community strength despite the ongoing need to maintain volunteers over time.
- Emergency Operations Center (EOC) is functional with onsite, back-up power.
- The Town is part of an Island-wide sheltering program that uses various schools as primary and secondary shelters with generators and the Red Cross and local volunteer staffing.
- Open space and natural resources coupled with freshwater wetlands and riparian corridors as well as coastal marsh which provide protection from storm surge, flood water storage, freshwater resources, enhanced public amenities for recreation and gathering, and increase ecological function and biodiversity.
- Strong social support network and civic groups via active engagement and participation in municipal by faith-based organizations, community-action NGOs, a land trust, and neighborhood groups, among others.
- Several farms and supportive residents that help to increase availability of locally produced food.
- Willingness of local employers and retail businesses to contribute to the common good in times of disaster and major need.

Recommendations to Improve Resilience

A common thread throughout the workshop discussions was the recognition that Portsmouth needs to be better prepared through longer term, community-based, contingency planning across all areas of concern. This need and additional highlights surfaced and prioritized by the workshop participants are provided below across several subcategories including capacity building, projects, plans/preparedness/studies/outreach, and policy. Mitigation actions from Portsmouth HMP (2018) provided in Appendix.

Higher Priority

Capacity Building:

- Hire a full-time community resiliency building coordinator for municipality to lead the development of a comprehensive resilience plan and to coordinate studies, inventories, and prioritization processes for resilience policies, plans, and projects.
- Hire and maintain a town engineer position to help accelerate responsiveness of the town to issues and increase longer-term resilience of infrastructure across municipality.
- Reenergize and convene open space committee to inventory vulnerable properties for acquisition to reduce risk and improve resilience to people and ecosystems.
- Maintain adequate budgets to ensure emergency response capabilities and training of staff are maximized.
- Strengthen outreach and coordination with faith-based organizations to activate places of worship as heating, cooling, and charging stations, temporary shelters, and information hubs for local residents and businesses during major events.
- Continue the on-going collaboration with Aquidneck Island grocery and hardware stores to pre-stock emergency-related items.
- Coordinate with Red Cross, Potter League, adjoining municipalities, and state on creating a joint sheltering and evacuation protocol for pets in partnership with Rhode Island Emergency State Pet Shelter.

Projects:

- Complete structural improvements to High School Gymnasium and get it certified as a Red Cross shelter.

Community Resilience Building Workshop Recommendations

Higher Priority (cont'd)

(Credit: Adam Whelchel/TNC)

- Fix and raise Prudence Island emergency dock and road with long-term resilience considered in the design and final construction.
- Advance AIPC, EPA, and DEM "Island Water's" program that has identified over 80 sites for green infrastructure project installations by securing funding.
- Confirm and seek to address concerns with saltwater intrusion into outdated cesspools (to be replaced in 2025) in Island Park that could contaminate surrounding water as well as impact newer septic systems.
- Identify improvement needs for Sandy Point Dock and Potter's Cove Dock to maintain access and egress to and from Prudence Island.
- Identify and install green stormwater infrastructure in high priority areas across municipality experiencing routine flooding currently, with cross reference to other programs (i.e. Island Waters: The Aquidneck Island Water Quality Initiative).
- Redesign drainage near entrance to Common Fence Point to reduce street flooding and allow for reliable egress in coordination with and assistance from RIDOT.
- Secure funding and complete Phase III of Melville Dam project.
- Look to secure a pet annex at the shelter in partnership with ASPCA and/or other animal advocacy groups.
- Continue to ensure continuity of service and power generation at Clemons Grocery Store which has the ability and interest to supply water, refrigeration, and food to residents during extended power outages.
- Identify, map, and prioritize location across municipality for current and future salt marsh advancement zones suitable for land acquisition to help maximize natural storm buffers.
- Conduct salt marsh restoration projects in priority areas (i.e. between Ferry Landing and northern extent of Common Fence Point) to ensure current and future ecosystem are resilient and serving to reduce risk to people and property.

Community Resilience Building Workshop Recommendations

Higher Priority (cont'd)

- Continue to conduct inspection and maintenance program for onsite residential septic systems and increase education of home owners about the importance of spring time pump-outs.
- Identify all existing drainage studies for road network and seek to augment with update and/or new engineering studies to reduce flooding and improve road drainage (including use of green stormwater infrastructure).
- Look to establish a Command Post to provide a centralized facility to host all necessary personnel (potential for up to 200 individuals) associated with response and recovery before, during, and after major events.
- Explore options to bury power lines if feasible along Route 24 and Route 138 to help ensure continuity of power and accelerate recovery efforts after events.
- Reexamine weakness in emergency communication system and methods of contact with residents and look to make comprehensive improvements to enhance redundancy.
- Partner with municipality, ERICD and others to distribute rain barrels and provide other information on gutter diversions and bioretention (i.e. rain gardens, etc.).
- Look to expand the rain garden efforts in Common Fence Point neighborhood to other part of the municipality.
- Look to improve the longer-term resilience of Boyds Lane Marsh (Island Park – Common Fence Point) through restoration and maintenance of tidal flushing and flow underneath road.
- Advance increased open space acquisition across municipality.
- Continue to fund and advance the Mill Creek coastal resilience project including the installation of backflow preventors.
- Conduct Park Avenue culvert cleaning and drainage study.
- Work with state to repair and improve sea wall and drainage issues (silt build-up) on Park Avenue and Boyds Lane Culvert.
- Work with Navy to accelerate the remediation of brownfield at tank farms along Burma Road.

Community Resilience Building Workshop Recommendations

Higher Priority (cont'd)

- Compel RI DOT to revision and complete Old Stone Bridge to prevent inevitable impacts to property and other infrastructure across the entire effected area.
- National Grid to clear trees around power lines in coordination with municipal Tree Warden.
- Continue to maintain and trim existing trees with priority placed on main transportation and power distribution corridors.
- Ensure RI DOT enhances road capacity and condition for East and West Main Roads (two major routes off island) by continued maintenance, resurfacing roads, and resolve drainage issues by promoting of the installation of green stormwater infrastructure.

Plans/Preparedness/Studies/Outreach:

- Continue the on-going collaboration with Aquidneck Island communities to find an island-wide emergency operation center including option at the Innovate Newport County (old Sheffield School) building in Newport.
- Meet with RIBTA to clarify the criteria used to initiate closure of each bridge to help better inform local evacuation planning.
- Continue to preserve open space and educate citizens about the impact of development watershed health around St. Mary's Pond.
- Strengthen coordination with Middletown and Newport on evacuation plans, signage, policies, and procedures.
- Create a Comprehensive Resilience Plan and Guide to integrate needs and procedures together for officials and staff and codify/ institutionalize in policy for the municipality.
- Seek ways to enhance communications across municipality by exploring multiple methods including radio club, Free Portsmouth newspaper, local grocery store and other popular businesses, and two-way communications options.

(Credit: Adam Whelchel/TNC)

Community Resilience Building Workshop Recommendations

Higher Priority (cont'd)

- Increase outreach and public awareness via various communication channels and forums so community support for resilience is enhanced and accelerated.
- Develop outreach and awareness materials and process for the neighborhoods across municipality (i.e. Common Fence Point, Island Park, Bristol Ferry Landing, Prudence Island, etc.) that utilize options such as Citizen Emergency Response Teams (CERT) and lessons learned amongst neighborhoods.
- Identify and sustain funding sources for continued open space protection and maintenance at a watershed scale as a method to provide enhance public amenities, more viable ecosystems, and reduction of risk from hazards ("resilient triple bottom line").
- Conduct large scale emergency role playing and governance exercise that simulates procedures for major hurricane evacuation from Portsmouth.
- Inventory existing undeveloped lands across municipality and determine where targeting open space protection actions can help to improve resilience (i.e. flood buffering and storage, etc.).
- Comprehensively assess and identify optimal locations for green stormwater infrastructure and set aside annual installation funds in capital improvement plan.
- For under-developed parcels, consider producing documentation of risk and exploring strategic retreat, transfer of development rights, and zoning modifications to help improve resilience.
- Compel Navy to remediate the Melville fuel storage tank farm due to the presence of environmental contaminates and high ground water.
- Initiate the development of a post-disaster recovery plan.
- Develop a Prudence Island and Hog Island resiliency plan.
- Define cost and feasibility of municipal purchase of storm debris grinder versus contracting with local tree companies.
- Coordinate efforts with energy source utilities and agencies (DPUC, National Grid, OSHEAN) to study the implementation of smart grid microtech and fiberoptic technologies.

Community Resilience Building Workshop Recommendations

Higher Priority (cont'd)

- Educate home owners on lawn care practices that require less fertilizer use in order to help maintain water quality resilience across the municipality.
- Look to bolster the communications capacity of Aquidneck Island (e.g. bury/ harden lines).
- Encourage RIPTA and RIBTA to discuss plans to update bridge use protocols and help with evacuation needs prior to, during, and after major events.
- Continue to coordinate on proactive tree management within transportation right-of-ways with Tree Commission and Tree Warden.
- Expand conservation easement program for watershed protection on Aquidneck Island.

Policy:

- Provide "farm friendly" local ordinances and zoning provisions that enable existing farms to explore other income options for greater longevity of operation as farms.
- Rework zoning ordinance through the Comprehensive Plan update to mandate the use of green stormwater infrastructure where appropriate.
- Explore revisions to zoning that incentivize density, mixed use, and clustering of structures in less vulnerable areas of municipality and consider these areas as receiving zones for current home owners in exposed locations and neighborhoods.
- Look into alternate energy sources (wind, solar, etc.), strengthen public support, and establish ordinances that promote alternate sources of energy with a prioritization on microgrid zones.

Community Resilience Building Workshop Recommendations

Moderate Priority

Capacity Building:

- For Aquidneck Island, create a standing planning and response committee to support existing emergency management structure and staff.
- Convene agricultural community and farmers including nurseries to explore options for this community's engagement in emergency response and recovery and longer-term resilience for Portsmouth.

Projects:

- Add generator to Senior Center to ensure continuity of service as cooling center during heat waves.
- Conduct road maintenance to Potter's Cove Dock.
- Look to establish sheltering option for Prudence Island's 120 residents in the event the ferry becomes unavailable during a major event.
- Identify programs that will conduct resiliency audits of residential and commercial facilities to identify vulnerabilities and provide funding for voluntary enrollment and service.
- Consider establishing a Common Fence Point Firehouse to provide an additional satellite location.
- Look to reduce impacts from waste and stormwater runoff from agricultural lands specifically via strategically placed green infrastructure projects.
- Install alternative renewable sources of energy such as solar, geothermal, and wind across municipality to increase localized sources and minimize dependence on grid.

(Credit: Adam Whelchel/TNC)

Community Resilience Building Workshop Recommendations

Moderate Priority (cont'd)

Plans/Preparedness/Studies/Outreach:

- Conduct sheltering study to determine options and cost to ensure at least one building on Prudence Island meets code as a shelter for hurricanes.
- Open a discussion regarding limiting power outages on Prudence Island via conversation with utility, investigation of microgrid opportunities, solar farm installation, and all other options.
- Conduct a "Get To Know Your Neighbors" event that utilizes Map Your Neighborhood.
- Convene workshop with the NPT County Chamber and local businesses to discuss continuity and recovery planning.
- Conduct community-wide communications campaign to ensure residents have a storm preparedness kit including food for 3-4 days.
- Identify information on the short and long-term impacts of salt water on septic systems.
- Explore what potential impacts extended heatwaves will have on drinking water reservoirs longer-term (i.e. increased and more extensive algae blooms).
- Design and provide resilience education curriculum and/or modules for public schools in municipality (K-12 – RI Environmental Educators Association).
- Gain better understanding of fire department redundancy water availability plan of action should there be a break or malfunction in existing water supply lines.
- Explore potential of securing locally-housed satellite equipment and contract with video MD service to help treat residents in the event there is no way for transport to medical facility from Prudence Island and Aquidneck Island.
- Encourage neighborhood associations, senior center involvement, and communications that increase preparedness and resilience using the Common Fence Point approach.
- Educate homeowners about chemical runoff and requirements of farmers.
- Identify and formalize emergency landing sites on Prudence Island to ensure back-up evacuation is possible.

Community Resilience Building Workshop Recommendations

Moderate Priority (cont'd)

- Increase participation in registry of special needs and elderly population to ensure adequate and responsive monitoring is enhanced for these vulnerable populations.
- Seek to increase participation in Code Red alerts.
- Increase the overall knowledge of the location and needs of elderly and special needs communities across municipality.
- Strengthen coordination with Rhode Island DOT and examine capabilities of state garage facility to assist with local response and recovery efforts.
- Conduct feasibility study for installing sewers to Island Park neighborhood as well as relocation of willing residents after major disaster.
- Examine relocation options for wastewater treatment facility outside of current and future flood zones.
- Continue to update dam hazard mitigation plans and review annually with emergency management staff from Portsmouth and adjoining municipalities.
- Continue to engage with youth groups across community (i.e. Boy Scouts, Girl Scouts, etc.) and continue to provide education programs on emergency preparedness.
- Increase disaster preparedness outreach effort with trailer parks across municipality and ensure evacuation triggers and plans are well-known and updated routinely.
- Consider collaborating with Raytheon to expand options for larger scale disaster resource staging area.
- Highlight local businesses with continuity of operations plans and provide leadership to share those examples across business communities.
- Examine options to reduce the closure of Melville Pond due to bacteria.
- Increase communication to residents regarding food provisioning and preparedness – particularly on Prudence Island where there is no grocery stores.

Community Resilience Building Workshop Recommendations

Moderate Priority (cont'd)

Policy:

- Enforce short-term, summer rental registration requirements from owners to ensure contact information is up to date in case of emergency.
- Secure agreements with local school bus company to provide evacuation services to shelters for residents in advance of a major disaster.
- Create an instrument that facilitates mutual coordination among Portsmouth and the towns of Bristol and Tiverton, as well as with other stakeholders and state agencies, on traffic management issues.
- Establish dialogue with Prudence Island Ferry owner on emergency response procedures and continuity options (i.e. MOU/contract).
- Continue to require burying of power lines in new developments and consider in any redevelopment projects.
- Consider municipal ordinance to encourage the planting of native shrubs (versus trees) in areas of critical importance for transportation and power supply to reduce longer-term issues.
- Consider policies and incentives to increase the amount and access to affordable housing to increase the security of more vulnerable population.

(Credit: patch.com)

(Credit: estately.com)

(Credit: visitrhodeisland.com)

Community Resilience Building Workshop Recommendations

Lower Priority

Project:

- Investigate acquisition options and costs of high-water vehicles to access flooded areas during and after major flooding events.
- Correct erosion on west coast train tracks in an environmental responsible manner.
- Consider replacing existing power poles for main lines with concreate poles.
- Install snow fences on open lands and farmer field adjacent to vulnerable road segments.
- Address water conveyance situation at Island Park with particular attention directed towards minimizing clogging of outflows during storm events.

Plans/Preparedness/Studies/Outreach:

- Seek to enhance effectiveness and efficiency of evacuation route by increasing north bound capacity for Sakonnet Bridge, establishing 1-way traffic on Mount Hope Bridge, and reexamining options for the Newport Bridge.
- Plan for eventual redevelopment of Tank Farm property with uses that enhance overall resilience of municipality.
- Explore alternative ways of keeping residents aware of and better prepared for extreme weather events and the longer-term impacts of climate change.
- Enhance partnerships between agricultural communities and schools on educational programming around local food resilience.
- For Glen Park and Melville Park seek ways to provide temporary housing and develop a protection and recovery plan for animals.

CRB Workshop Participants: Department/Organization

Town of Portsmouth - Town Council Representatives
Town of Portsmouth - Town Administration
Town of Portsmouth - Emergency Management Agency
Town of Portsmouth - Department of Public Works
Town of Portsmouth - Police
Town of Portsmouth - Planning Department
Town of Portsmouth - Economic Development
Town of Portsmouth - Schools
Town of Portsmouth - Building Inspection
Town of Portsmouth - Planning Board
Town of Portsmouth - Conservation Commission
Town of Portsmouth - Solid Waste Disposal Commission
Town of Portsmouth - West Side Development Advisory Committee
Town of Portsmouth - School Committee
Town of Portsmouth - Harbor Commission
Prudence Island - Fire
State Representation District 11 & District 69 & District 72
Prudence Island Water District
Portsmouth Water and Fire District
Portsmouth Concerned Citizens
Clean Ocean Access
Aquidneck Island Planning Commission
Eastern Rhode Island Conservation District
Island Park Preservation Society
Aquidneck Land Trust
Common Fence Point Improvement Association
U.S. Navy Station - Newport
Greenvale Vineyards
Melville Park Commission
Shers Real Estate Company
Connect Greater Newport
Potter League for Animals
Clement's Market
Rhode Island Department of Environmental Management

Portsmouth Core Team

Ray Perry - Portsmouth Emergency Management Agency
Linda Ujifusa - Vice President, Portsmouth Town Council
Gary Crosby/Mike Asciola - Town Planner/Assistant Town Planner
Brian Woodhead - Director, Department of Public Works
Richard Talipsky - Director, Economic Development
Tom Vadney - School Committee
John McDaid - Conservation Commission

Workshop Facilitation Team

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The Nature Conservancy – Adam Whelchel (Lead Facilitator)
University of Rhode Island - Pam Rubinoff (Facilitator)
Independent - Brian Ambrette (Facilitator)
Department of Environmental Management - Jennifer West (Facilitator)
Department of Administration - Laura Sullivan (Facilitator)
Scribes - Jacqueline Schulz (Portsmouth), Alec Mehr (RIIB), Brianna McFadden (RIIB), Lauren Hanna (URI)

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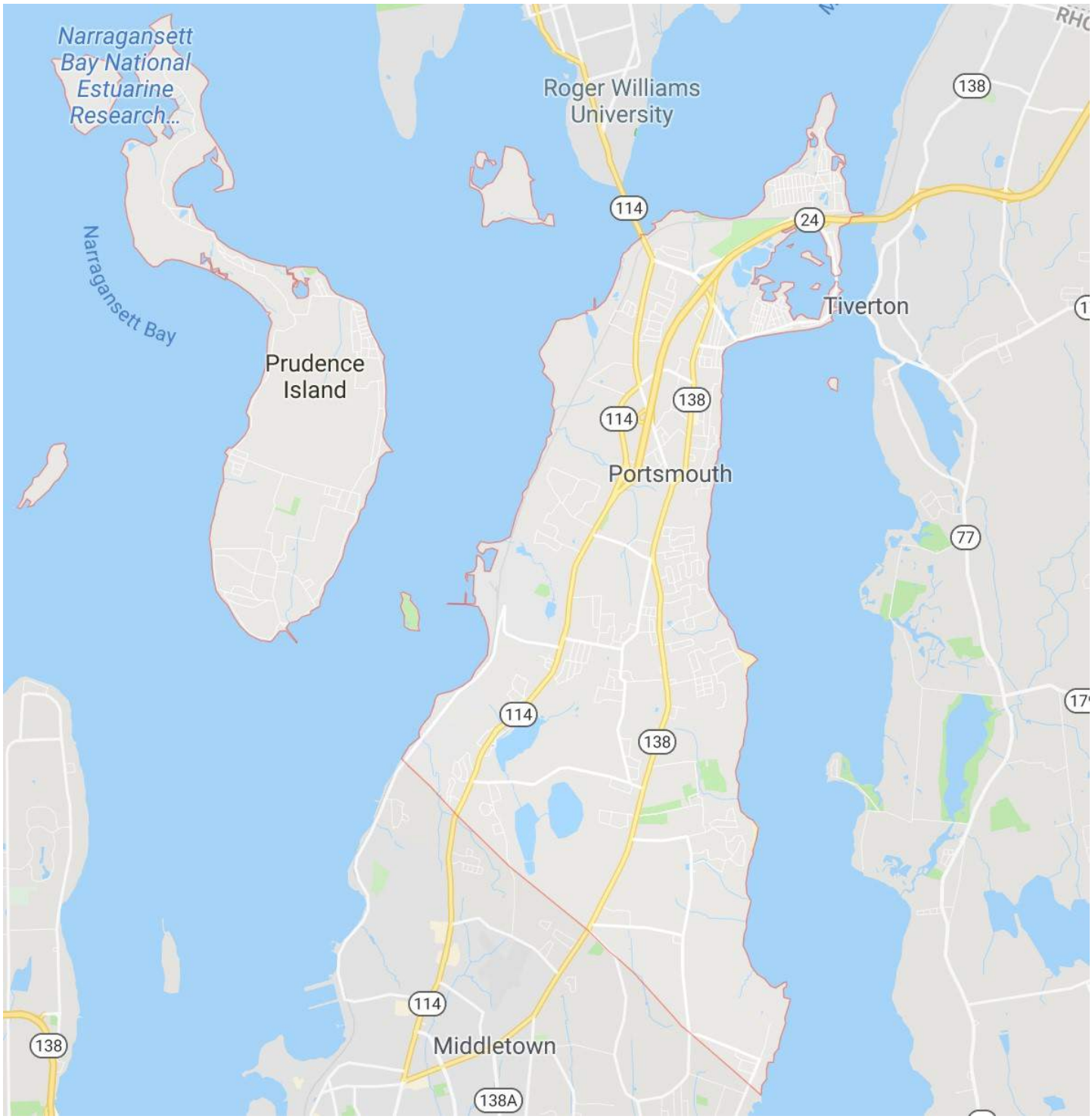
Appendix

Base Map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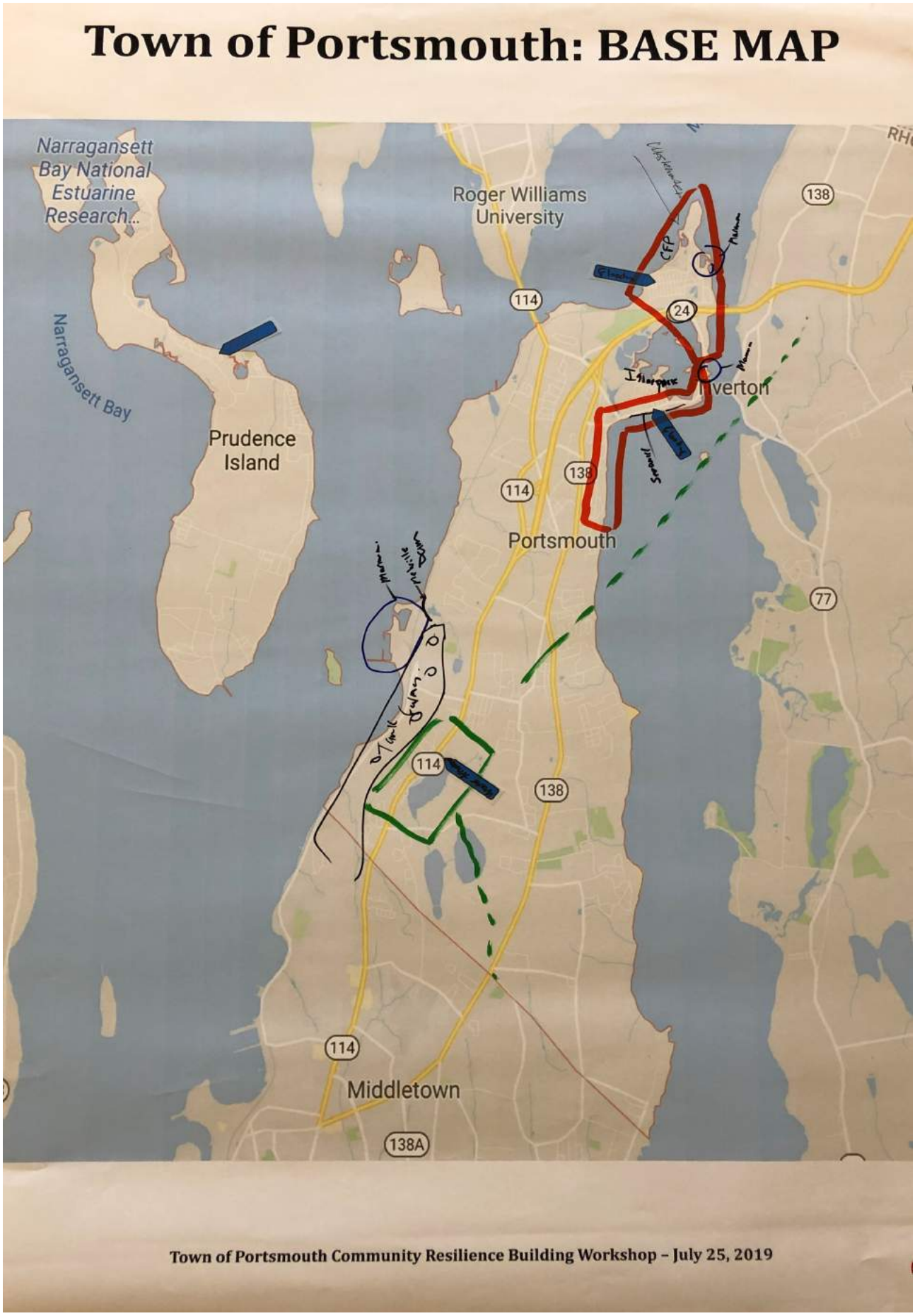
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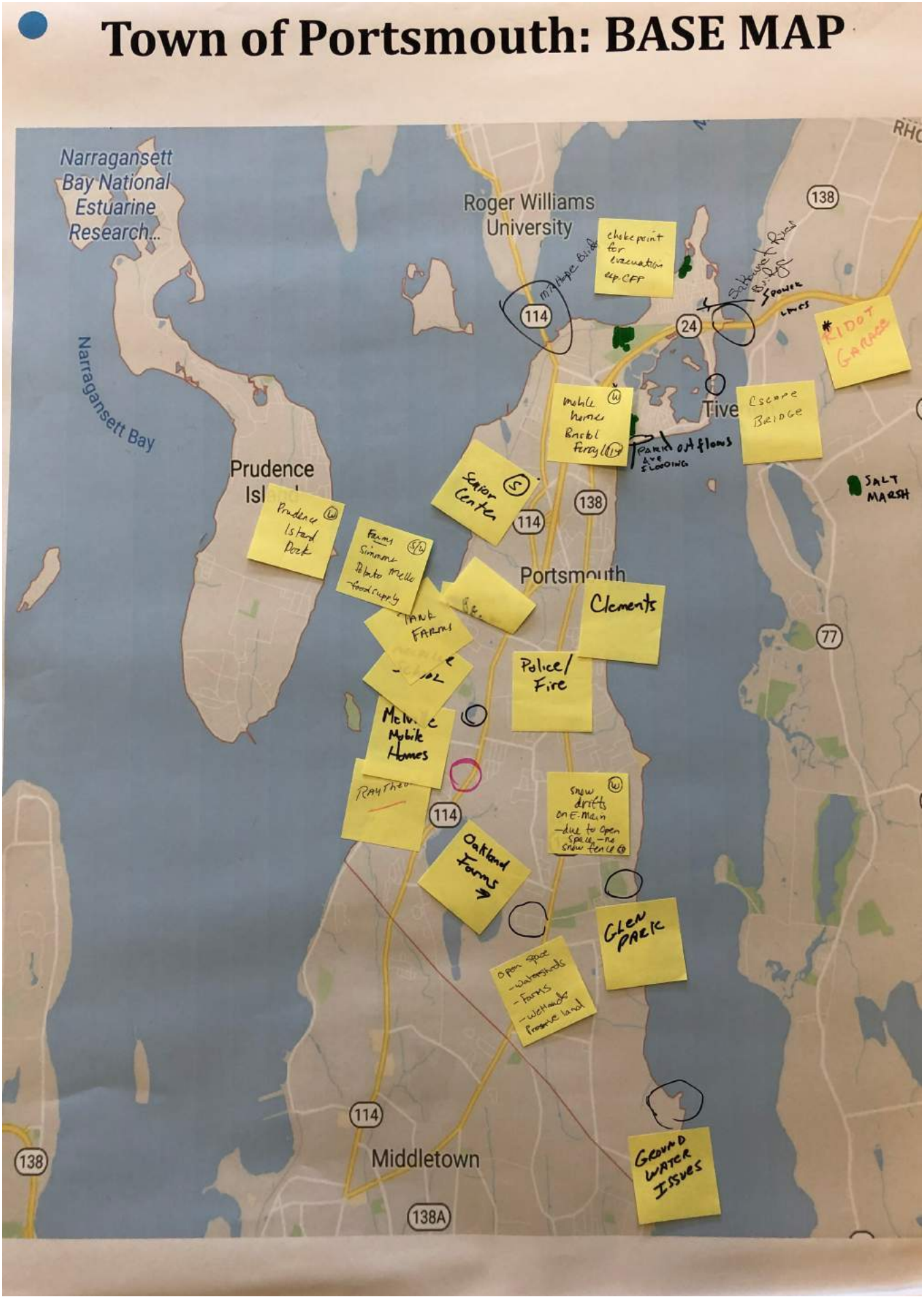
Middletown
Town of Portsmouth Community Resilience Building Workshop – July 25, 2019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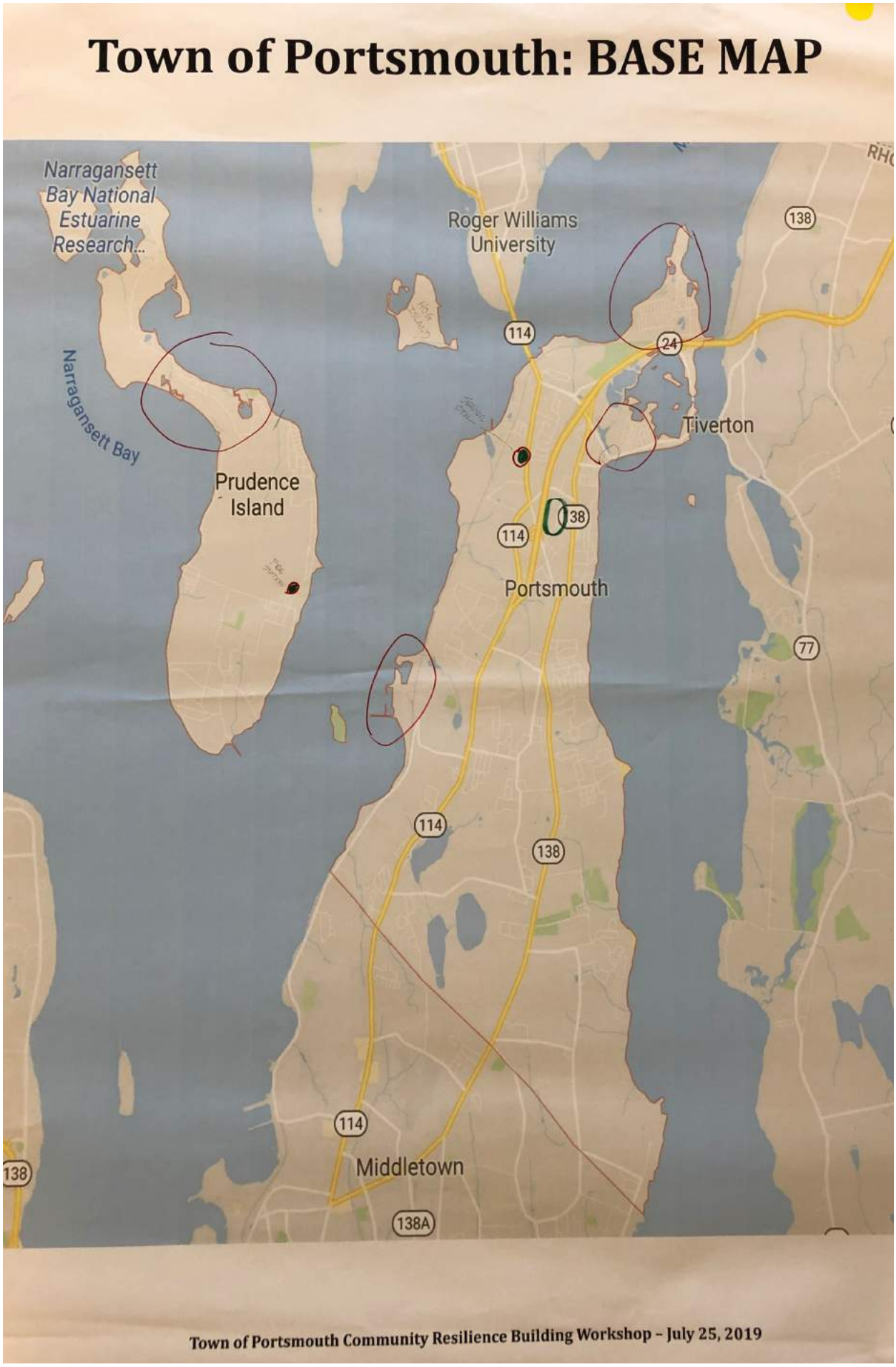
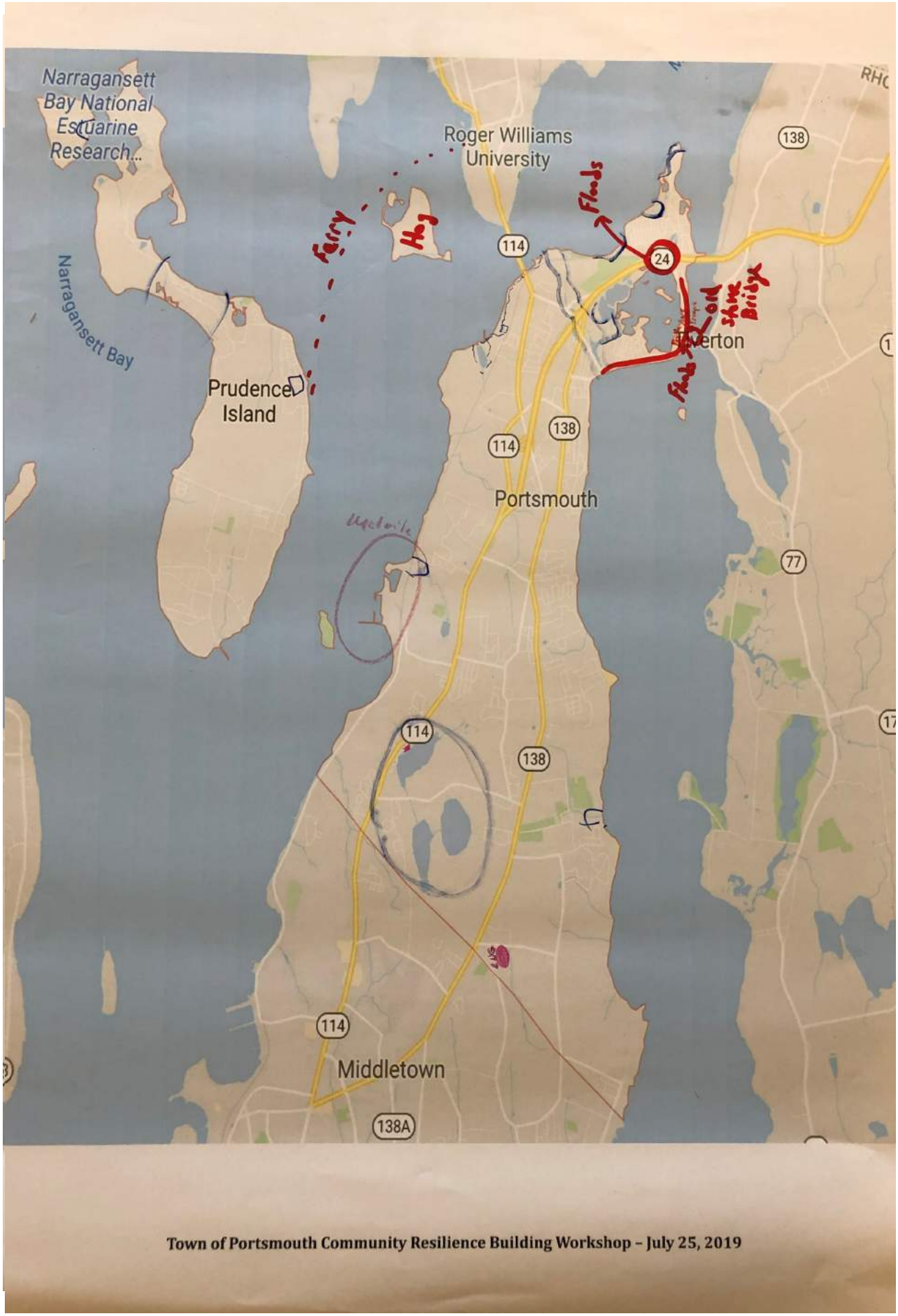
Narragansett Bay
Roger Williams University
Prudence Isl
Portsmouth
Middletown
Tiverton
choke point for evacuation esp CFP
RIDOT GARAGE
Escape BRIDGE
SALT MARSH
Senior Center
Prudence Island Dock
Clements
Police/ Fire
Mobile Mobile Homes
snow drifts on E. Main -due to open space -no snow fence
Oakland Farms
GLEN PARK
Open space -watersheds -farms -wetlands Preserve land
GROUND WATER ISSUES
114
138
24
77
138A


Town of Portsmouth: BASE MAP
Narragansett Bay National Estuarine Research...
Roger Williams University
Narragansett Bay
Prudence Island
Tiverton
Portsmouth
Middletown
114
138
24
77
138A
Town of Portsmouth Community Resilience Building Workshop – July 25, 2019


Narragansett Bay National Estuarine Research...
Roger Williams University
Ferry
Hog
Floods
114
24
138
Narragansett Bay
Prudence Island
Portsmouth
77
Middletown
138A
Town of Portsmouth Community Resilience Building Workshop – July 25, 2019

Appendix

Portsmouth Hazard Mitigation Plan (2018)
Vulnerable Assets & Mitigation Actions Table
(Table 22)

Table 22 Portsmouth Critical Infrastructure/Community Assets

At Risk	Location	Hazard/Problem	Mitigation Actions
Flood Prone Drainage Systems/Streets, and Infrastructure	Park Avenue Seawall- protects evacuation route Park Ave./Boyd's Lane Old Colony Railroad underpass West end of Cedar Avenue Riverside Street- at hollow at end of Morgan Frank Coello at Glen Road McCory at Windstone Glen Road at Glen Farm Road Common Fence Blvd Mill Creek Narragansett Road Nagg's Pond on Prudence Island Neck Farm Road Old Mill Lane Melville neighborhood Boyds Lane Narragansett Ave. Neck Farm Road Park Avenue State Highway 24N (and on-ramp) State Highway 24S Exit 2 Railroad Ave. Anthony Road	Flooding due to ground saturation, and coastal flooding. Storm surge and SLR	• **1a** Create an internal list of flood-prone parcels for the town to consider for open space acquisition • **1b** Explore interest in voluntary acquisition program • **1c** Acquire vacant or underdeveloped properties • **2** Amend zoning ordinance to incorporate multiple hazards • **3a** Distribute NFIP information to all households in the floodplain area • **3b** Public outreach to residents and business owners in the most vulnerable areas • **3c** Signage for high water line from past storm surge events • **4a** Structural evaluation of Park Avenue seawall • **4b** Beach nourishment adjacent to seawall • **4c** Culvert replacement at seawall • **5a** Figure out who owns the Stone Bridge abutments • **5b** Ask RIDOT to do a structural evaluation on Stone Bridge abutments • **6** Ask RIDOT to do a structural evaluation on the Common Fence Point railroad underpass • **7** Install an inground stormwater injection system along Riverside Street • **8** Install riprap on the north side of Common Fence Point Boulevard

At Risk	Location	Hazard/Problem	Mitigation Actions
			• **9** Repair cement roadway on Prudence Island that leads to the dock • Inventory of areas subject to flooding (ongoing) • Design and engineering solutions (ongoing)
Bridges	Sakonnet River Bridge (operated by RITBA) Hummocks Escape Bridge to/from Island Park Mount Hope Bridge (operated by RITBA) Boyds Lane NB and SB The Cove/ Escape Bridge Bradford Ave. RR	High wind Emergency Water Supply Line Evacuation Routes Evacuation Routes Storm surge and SLR	• **10** Communicate with RI Turnpike and Bridge Authority about storm-time operations of Sakonnet River Bridge and Mount Hope Bridge
Wastewater	On-site septic (ISDS) Sewer lines from Newport that service the west side (Melville and Navy housing) go to the sewage treatment plant in Newport. Carnegie Abbey has own sewage treatment plant. Navy wants to self-sustain. Sewer line on Jefferson Lane from Lawton Valley water treatment plant to Middletown, RI	Loss of power from severe storms	• Distribute information regarding proper management of ISDS systems (ongoing)
Water Supply Systems	Main water source from Newport Emergency main line over Sakonnet River Bridge Portsmouth Water and Fire Lawton Valley Water Treatment Plant in Portsmouth, jurisdiction of Newport. Water lines for Navy in same area as sewer.	Drought, Hazardous material contamination, Loss of power from other hazards, Extreme Temperatures	• **11** Purchase a second generator for Prudence Island pump stations • **12** Improve communications with Newport Water

At Risk	Location	Hazard/Problem	Mitigation Actions
	Prudence Island Water District- 4 public wells, 2 are functioning, 2 are emergency Hog Island private wells and septic systems		
Services/Utilities	Transfer Station- 305 Hedly Street Transfer station on Prudence Street lights (not town owned yet) Turbine safety- next to water department, owned by Green Energy, feeds into the Town, on Town land Tank farms on Navy property Gas mains Electric power lines Portsmouth Water- 4 water tanks (1 is in Newport)	High winds, hurricane	• **13a** Conduct Power Assessments for Prudence Island and Hedley Street transfer stations • **13b** Purchase and install generators for Prudence Island and Hedley Street transfer stations
Communication Towers	Police/Fire Station- Town Access Crown Castle State Police Barracks (800Mhz) Cell Towers- town wide	Wind Lightning	• Maintain equipment and redundancy by department (ongoing)
Dams	Lawton Valley (High)- owned by City of Newport Sisson (High)- owned by City of Newport St. Mary's (High)- owned by City of Newport Melville #1 (Significant)- owned by Town of Portsmouth Four low hazard dams	Severe storms- flooding upstream and downstream	**14** Have all dam emergency action plans on file.
Marinas/Docks	Ferry Docks (2 for Prudence) Brewer Sakonnet Marina New England Boatworks Pirate Cove Marina Hinckley Yacht Services Public Safety vessels at Carnegie Abbey	Storm surge, coastal flooding and erosion	• Keep response plans up to date (ongoing) • Stage vessels pre-storm if necessary (ongoing)

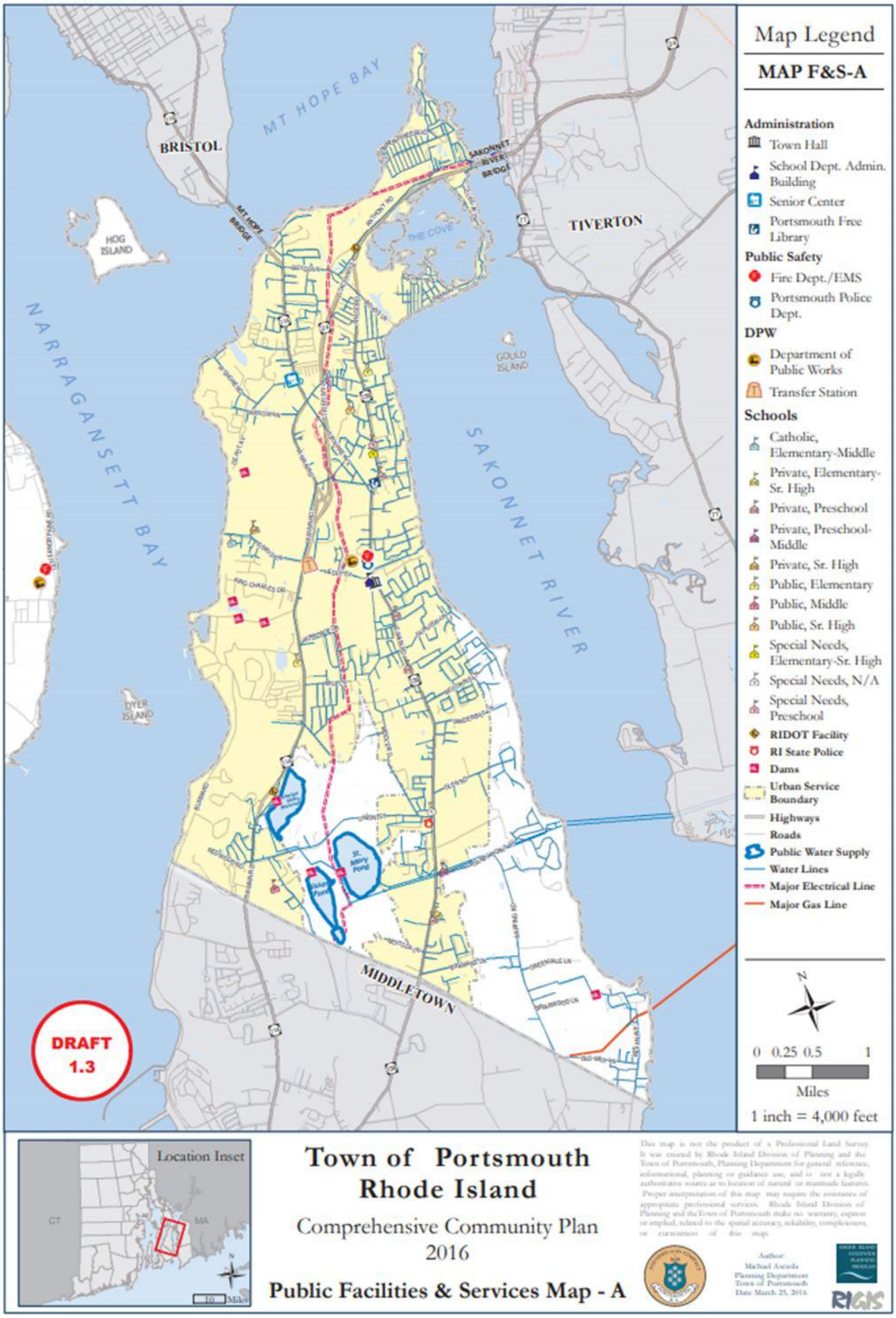
At Risk	Location	Hazard/Problem	Mitigation Actions
Critical Municipal Hazard Response Facilities	Police Station • 2270 East Main Road • 838 East Main Road (State Police) Fire Station • 2300 East Main Road • 0292 Narragansett Avenue, Prudence Island (volunteer) Town Hall- 2200 E. Main Road Public Works- 143 Hedley Street Prudence Island 01351 Narragansett Ave. Portsmouth Canvassing Authority 2200 E. Main Road	All hazards.	• **15** Codify orders of succession during an emergency. • **16** Adopt Continuity of Operations Plan (COOP) for each Town agency. • Annual inspection of all town-owned, non-school buildings (ongoing)
Populations	All residents Elderly and infants Island Park Common Fence Point <u>Assisted Living</u> Atria Aquidneck Place- 125 Quaker Hill Lane Anthony House <u>Public Housing</u> Quaker Estates Anthony House (or Assisted Living)- highest fire calls locations <u>Mobile Homes</u> Melville Trailer Park Melville Campground Sunny Acres Davey Lane <u>Education</u>	All hazards	• **3a** Distribute NFIP information to all households in the floodplain area • **3b** Public outreach to residents and business owners in the most vulnerable areas • **3c** Signage for high water line from past storm surge events • **17** Participate in the Community Rating System (CRS) program • **18a** Explore funding opportunities to build a public safety complex on Prudence Island • **18b** Consider including sheltering capacity as part of the plans to build a new public safety complex on Prudence Island • **19** Inspect all senior housing facilities for compliance with building code. • **20** Verify all senior housing facilities have up-to-date emergency response plans • **21** Create an inventory of known elderly living alone that may need assistance during an emergency.

At Risk	Location	Hazard/Problem	Mitigation Actions
	Roger Williams dormitories Portsmouth Abbey resident students Shelters Portsmouth High School (primary local, secondary regional)- 120 Education Lane Portsmouth Middle School (secondary local)- 120 Jepson Lane No designated Prudence Island Shelter Gaudet Middle School (primary Red Cross Regional Shelter)- 113 Aquidneck Avenue, Middletown, RI Special Needs Registry 100 people on the registry		• **22** Provide information online for improved tie-down methods for mobile homes • Up to date information on hazards and preparedness activities on Town website (ongoing) • Provide public information regarding post-disaster rebuilding regulations (ongoing). • Fire department does wellness checks before and after a destructive event (ongoing).
Businesses	Raytheon- Defense Marina District Melville Clements Market CVS Pharmacy Town gas stations State highway garage- fuel facility for this section of the state. Private farms	Severe Storms Blizzards Wind	• **23** Back-up power for pharmacy, grocery, and north and south gas stations. Conduct a power needs assessment (generator needs study) for each site.
Schools	Portsmouth High School (primary shelter)- 120 Education Lane Portsmouth Middle School (secondary shelter)- 120 Jepson Lane Hathaway Elementary Melville Elementary Penn Field	Severe Storms Blizzards Wind Extreme Heat	• All town-owned school buildings inspected for compliance with building code (ongoing). • Verify all public and private schools have up to date emergency response plans (ongoing).

At Risk	Location	Hazard/Problem	Mitigation Actions
	St. Philomena's Portsmouth Abby Bradley School Roger Williams University classrooms School Administration Building		
Recreation Facilities	Island Park beach (Teddy's Beach, State Beach) Town Beach at Sandy Point Sand Point beach on Prudence Island McCorrie Point Glen Farm Stables Glen Park Melville Ponds Campground Portsmouth Senior Center- 110 Bristol Ferry Road Founders Brook Dog park on Smith Road Common Fence Point Community Center Elmhurst Park Bristol Ferry Town Commons Gardner Seventy Sports Complex Brown House Library Newport National Golf Greenvalley Montaup Sandy Point Stables Carnegie Abby Golf Club	Erosion Severe storms	• **24**- Dredge Founders' Brook near Old Boyd's Lane to reduce flooding at Founders' Brook Park and Boyd's Lane. • Install sand fencing annually at Town Beach (ongoing).
Historic Resources	Battle of Rhode Island Historic District Fort Butts Prudence Island Lighthouse Portsmouth Friends Meeting house Lawton-Almy-Hall Farm Greenvale Farm Hog Island Lighthouse	Wind, Severe Storms	• Continue to support historical society (ongoing).

Appendix

Resources and Maps Used During Workshop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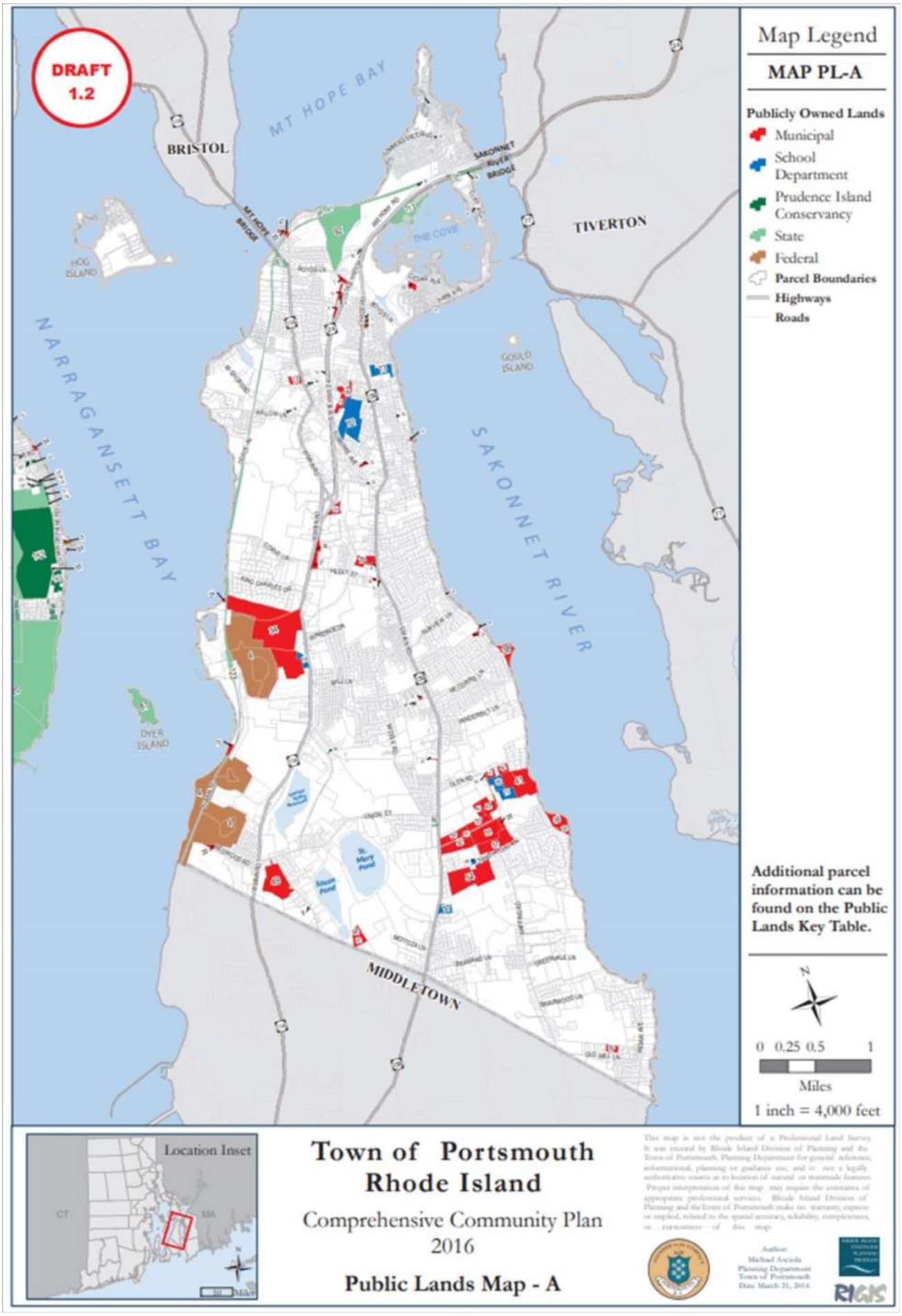
MAP F&S-A
Administration
Town Hall
School Dept. Admin. Building
Senior Center
Portsmouth Free Library
Public Safety
Fire Dept./EMS
Portsmouth Police Dept.
DPW
Department of Public Works
Transfer Station
Schools
Catholic, Elementary-Middle
Private, Elementary-Sr. High
Private, Preschool
Private, Preschool-Middle
Private, Sr. High
Public, Elementary
Public, Middle
Public, Sr. High
Special Needs, Elementary-Sr. High
Special Needs, N/A
Special Needs, Preschool
RIDOT Facility
RI State Police
Dams
Urban Service Boundary
Highways
Roads
Public Water Supply
Water Lines
Major Electrical Line
Major Gas Line
N
0 0.25 0.5 1
Miles
1 inch = 4,000 feet
MT HOPE BAY
BRISTOL
TIVERTON
HOG ISLAND
NARRAGANSETT BAY
SAKONNET RIVER
GOULD ISLAND
DYER ISLAND
MIDDLETOWN
THE COVE
DRAFT 1.3
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2016
Public Facilities & Services Map - A
Author:
Michael Ascola
Planning Department
Town of Portsmouth
Date: March 25, 2016
RIGIS


DRAFT
1.2
MT HOPE BAY
BRISTOL
TIVERTON
NARRAGANSETT BAY
SAKONNET RIVER
HOG ISLAND
GOULD ISLAND
DYER ISLAND
MIDDLETOWN
THE COVE
SAKONNET RIVER BRIDGE
MT HOPE BRIDGE
Map Legend
MAP PL-A
Publicly Owned Lands
Municipal
School Department
Prudence Island Conservancy
State
Federal
Parcel Boundaries
Highways
Roads
Additional parcel information can be found on the Public Lands Key Table.
N
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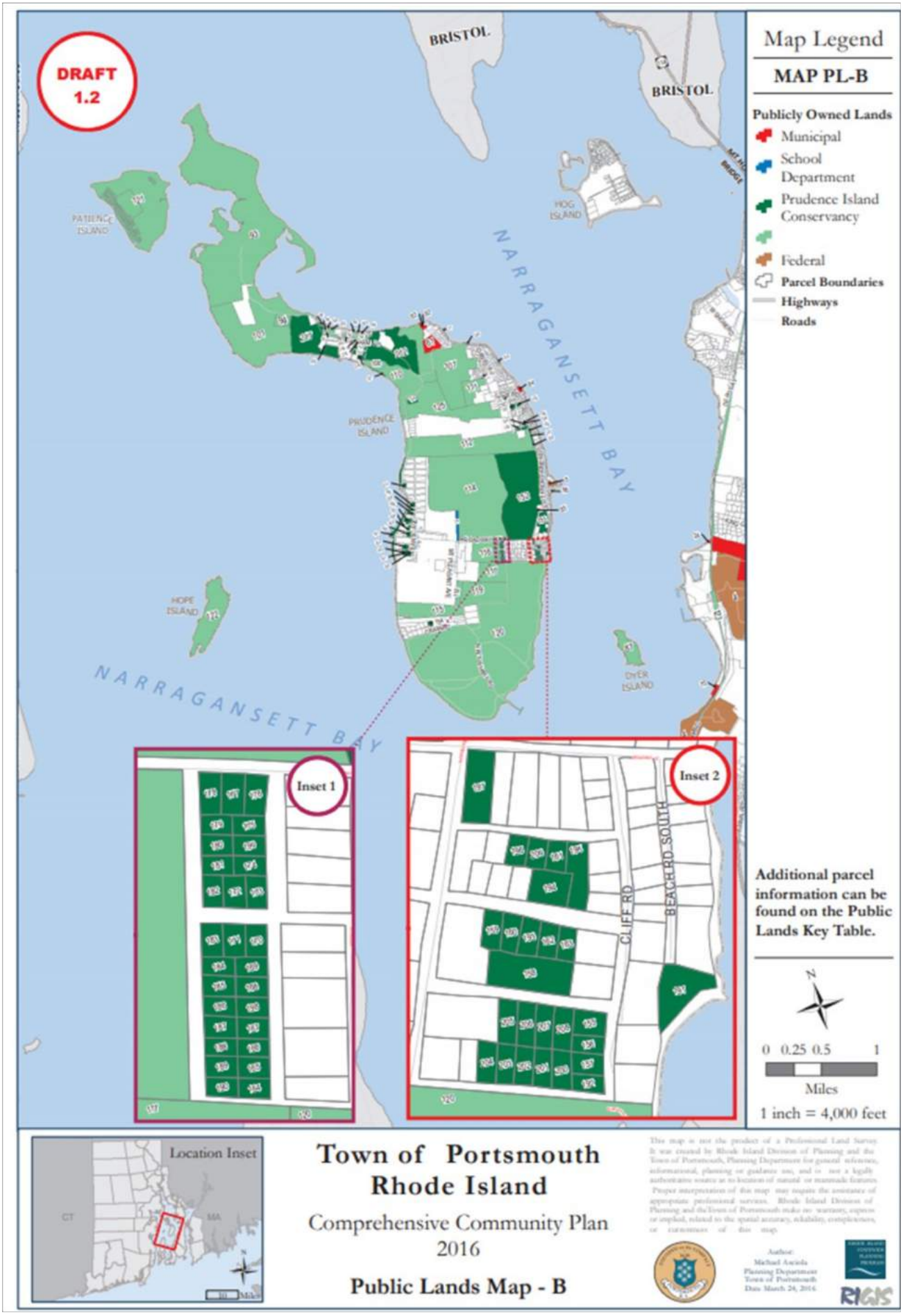
Miles
1 inch = 4,000 feet
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2016
Public Lands Map - A
Author:
Michael Ascioti
Planning Department
Town of Portsmouth
Date: March 21, 2016
RIGIS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1.2
BRISTOL
BRISTOL
NARRAGANSETT BAY
NARRAGANSETT BAY
PATIENCE ISLAND
HOG ISLAND
PRUDENCE ISLAND
HOPE ISLAND
DYER ISLAND
Inset 1
Inset 2
CLIFF RD
BEACH RD SOUTH
Map Legend
MAP PL-B
Publicly Owned Lands
Municipal
School Department
Prudence Island Conservancy
Federal
Parcel Boundaries
Highways
Roads
Additional parcel information can be found on the Public Lands Key Table.
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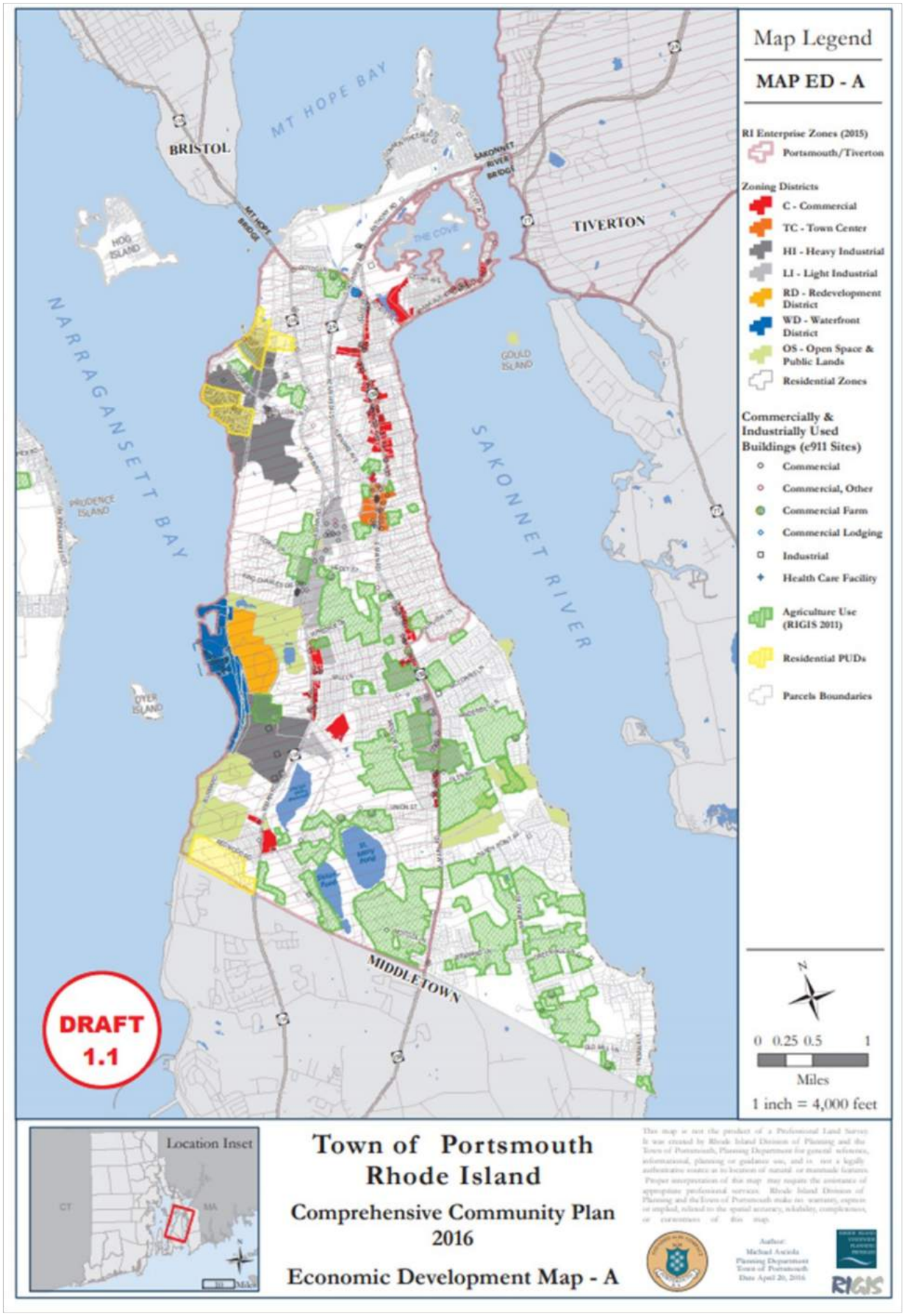
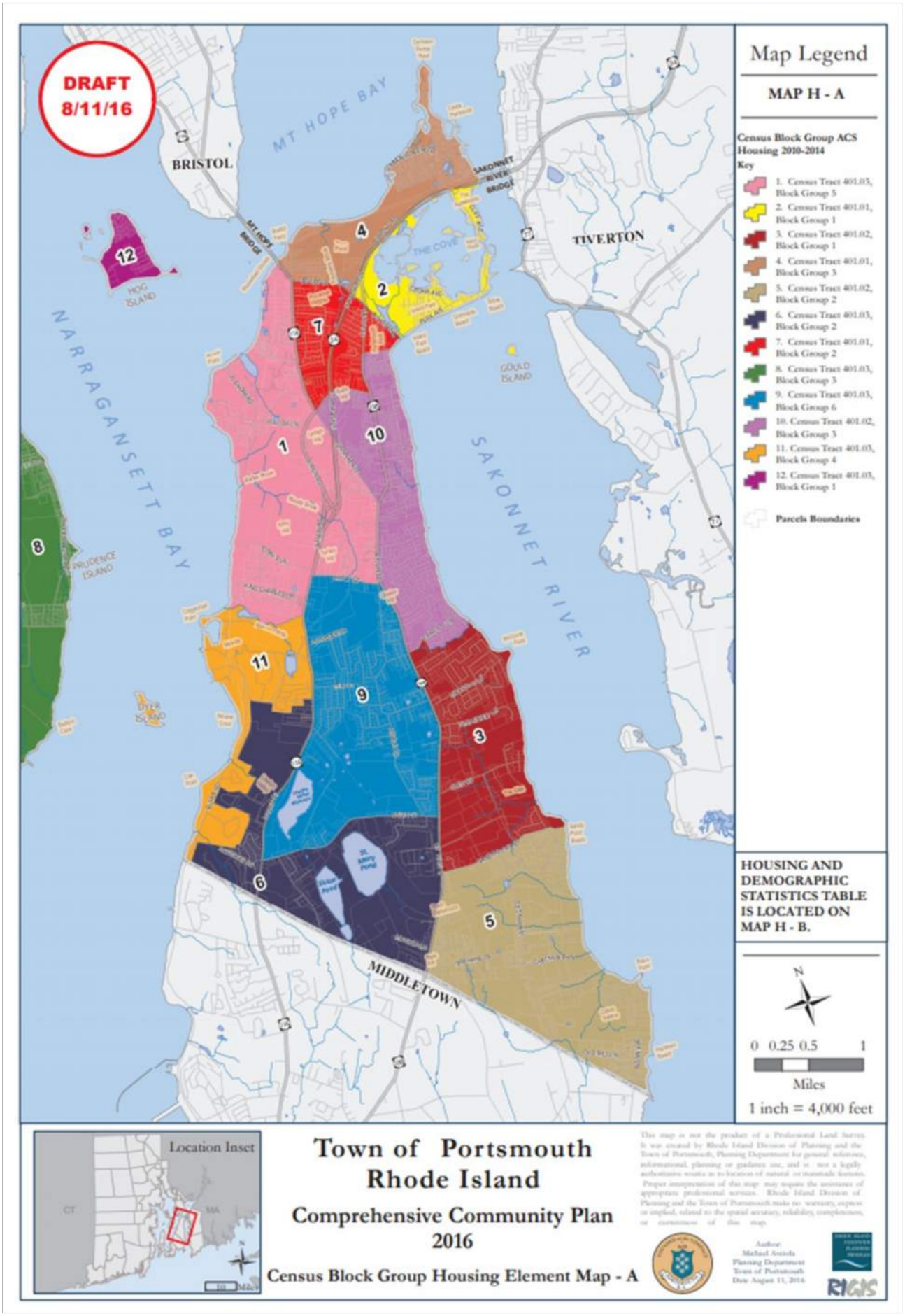
1 inch = 4,000 feet
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2016
Public Lands Map - B


Map Legend
MAP ED - A
RI Enterprise Zones (2015)
Portsmouth/Tiverton
Zoning Districts
C - Commercial
TC - Town Center
HI - Heavy Industrial
LI - Light Industrial
RD - Redevelopment District
WD - Waterfront District
OS - Open Space & Public Lands
Residential Zones
Commercially & Industrially Used Buildings (e911 Sites)
Commercial
Commercial, Other
Commercial Farm
Commercial Lodging
Industrial
Health Care Facility
Agriculture Use (RIGIS 2011)
Residential PUDs
Parcels Boundaries
N
0 0.25 0.5 1
Miles
1 inch = 4,000 feet
DRAFT 1.1
Location Inset
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2016
Economic Development Map - A
RIGIS
BRISTOL
TIVERTON
MIDDLETOWN
MT HOPE BAY
NARRAGANSETT BAY
SAKONNET RIVER
HOG ISLAND
PRUDENCE ISLAND
DYER ISLAND
GOULD ISLAND
THE COVE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NARRAGANSETT BAY
SAKONNET RIVER
MIDDLETOWN
PRUDENCE ISLAND
HOG ISLAND
GOULD ISLAND
DYER ISLAND
THE COVE
Map Legend
MAP H - A
Census Block Group ACS Housing 2010-2014
Key
1. Census Tract 401.03, Block Group 5
2. Census Tract 401.01, Block Group 1
3. Census Tract 401.02, Block Group 1
4. Census Tract 401.01, Block Group 3
5. Census Tract 401.02, Block Group 2
6. Census Tract 401.03, Block Group 2
7. Census Tract 401.01, Block Group 2
8. Census Tract 401.03, Block Group 5
9. Census Tract 401.03, Block Group 6
10. Census Tract 401.02, Block Group 3
11. Census Tract 401.03, Block Group 4
12. Census Tract 401.03, Block Group 1
Parcels Boundaries
HOUSING AND DEMOGRAPHIC STATISTICS TABLE IS LOCATED ON MAP H - B.
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Miles
1 inch = 4,000 feet
Location Inset
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Town of Portsmouth
Rhode Island
Comprehensive Community Plan
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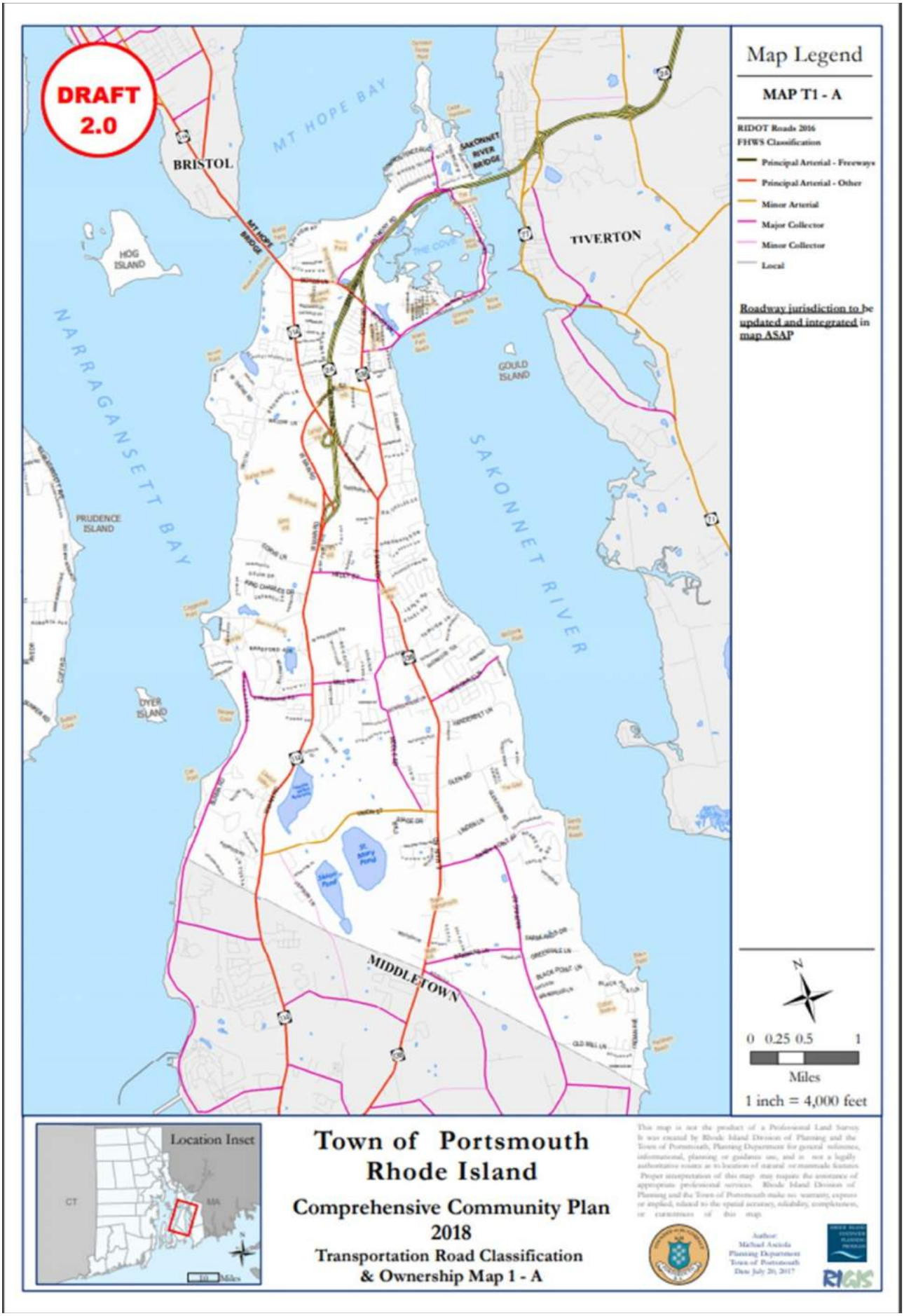
Census Block Group Housing Element Map - A
Author:
Michael Sciscia
Planning Department
Town of Portsmouth
Date August 11, 2016
RIGIS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HOG ISLAND
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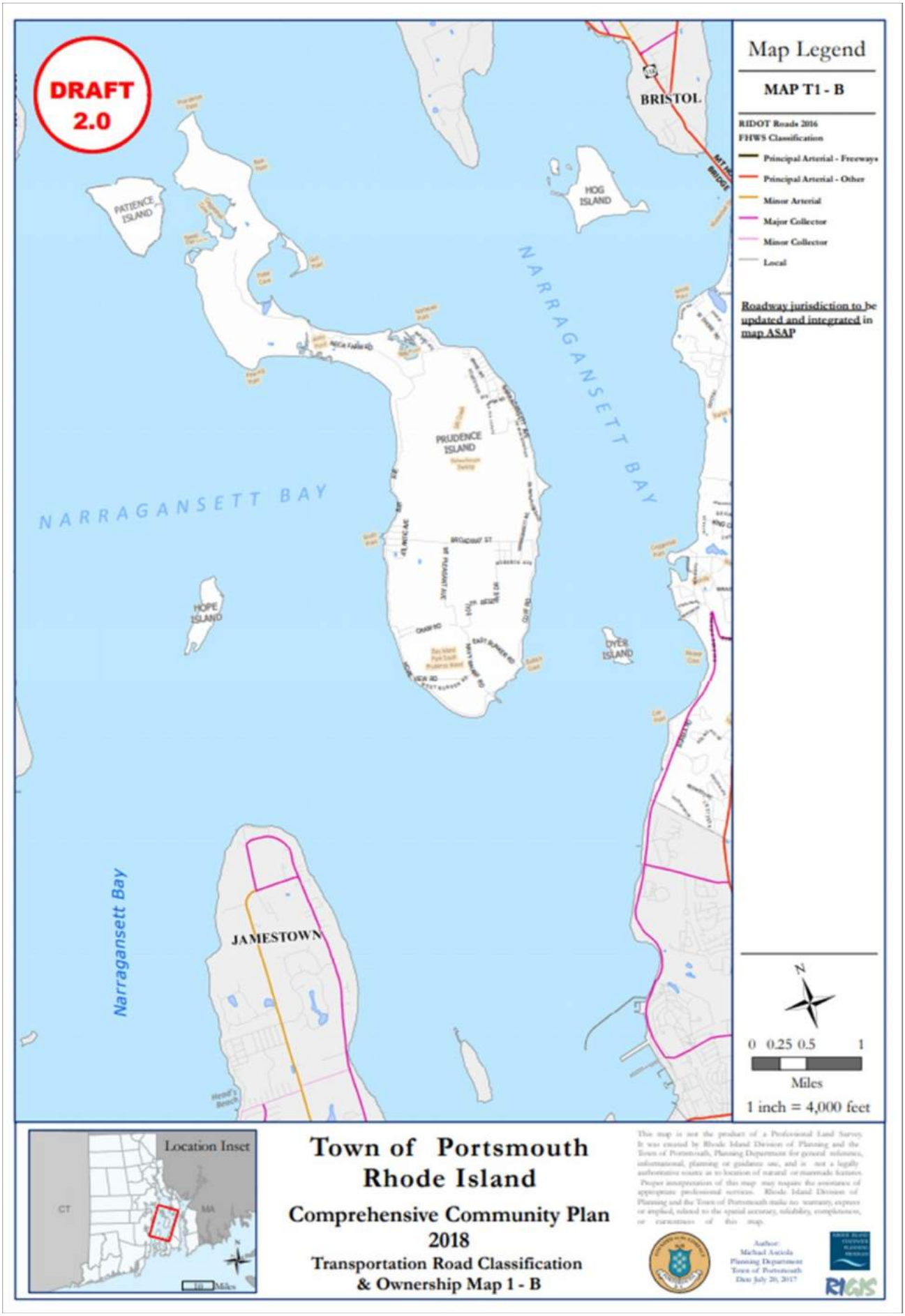
DYER ISLAND
SAKONNET RIVER BRIDGE
MT HOPE BRIDGE
THE COVE
TIVERTON
GOULD ISLAND
SAKONNET RIVER
MIDDLETOWN
Map Legend
MAP T1 - A
RIDOT Roads 2016
FHWS Classification
Principal Arterial - Freeways
Principal Arterial - Other
Minor Arterial
Major Collector
Minor Collector
Local
Roadway jurisdiction to be updated and integrated in map ASAP
N
0 0.25 0.5 1
Miles
1 inch = 4,000 feet
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Transportation Road Classification
& Ownership Map 1 - A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MAP T1 - B
RIDOT Roads 2016
FHWS Classification
Principal Arterial - Freeways
Principal Arterial - Other
Minor Arterial
Major Collector
Minor Collector
Local
Roadway jurisdiction to be updated and integrated in map ASAP
BRISTOL
HOG ISLAND
PATIENCE ISLAND
PRUDENCE ISLAND
HOPE ISLAND
DYER ISLAND
JAMESTOWN
NARRAGANSETT BAY
Narragansett Bay
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Miles
1 inch = 4,000 feet
Location Inset
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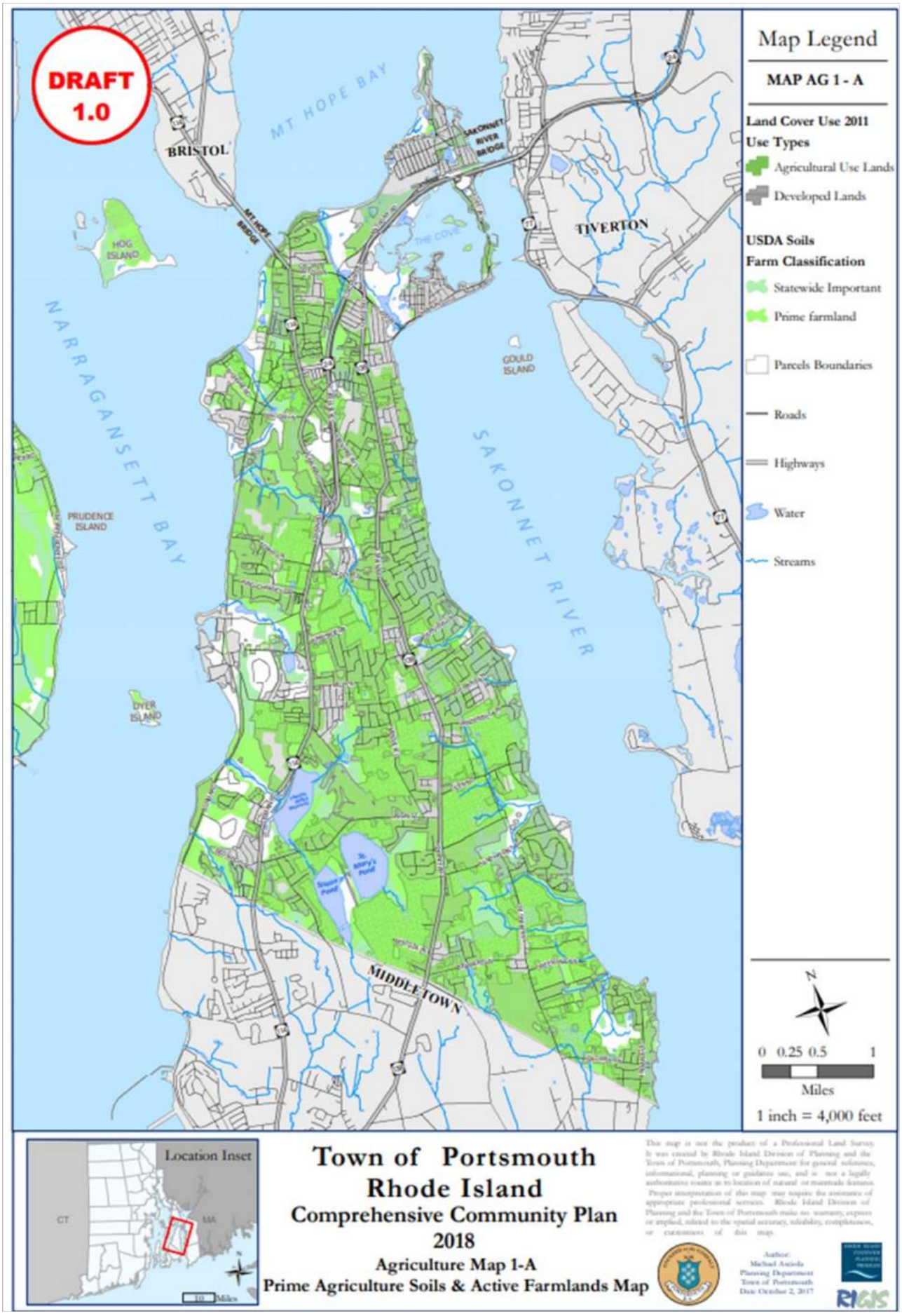
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Transportation Road Classification
& Ownership Map 1 - B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SAKONNET RIVER BRIDGE
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GOULD ISLAND
SAKONNET RIVER
PRUDENCE ISLAND
DYER ISLAND
MIDDLETOWN
Map Legend
MAP AG 1 - A
Land Cover Use 2011
Use Types
Agricultural Use Lands
Developed Lands
USDA Soils
Farm Classification
Statewide Important
Prime farmland
Parcels Boundaries
Roads
Highways
Water
Streams
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Miles
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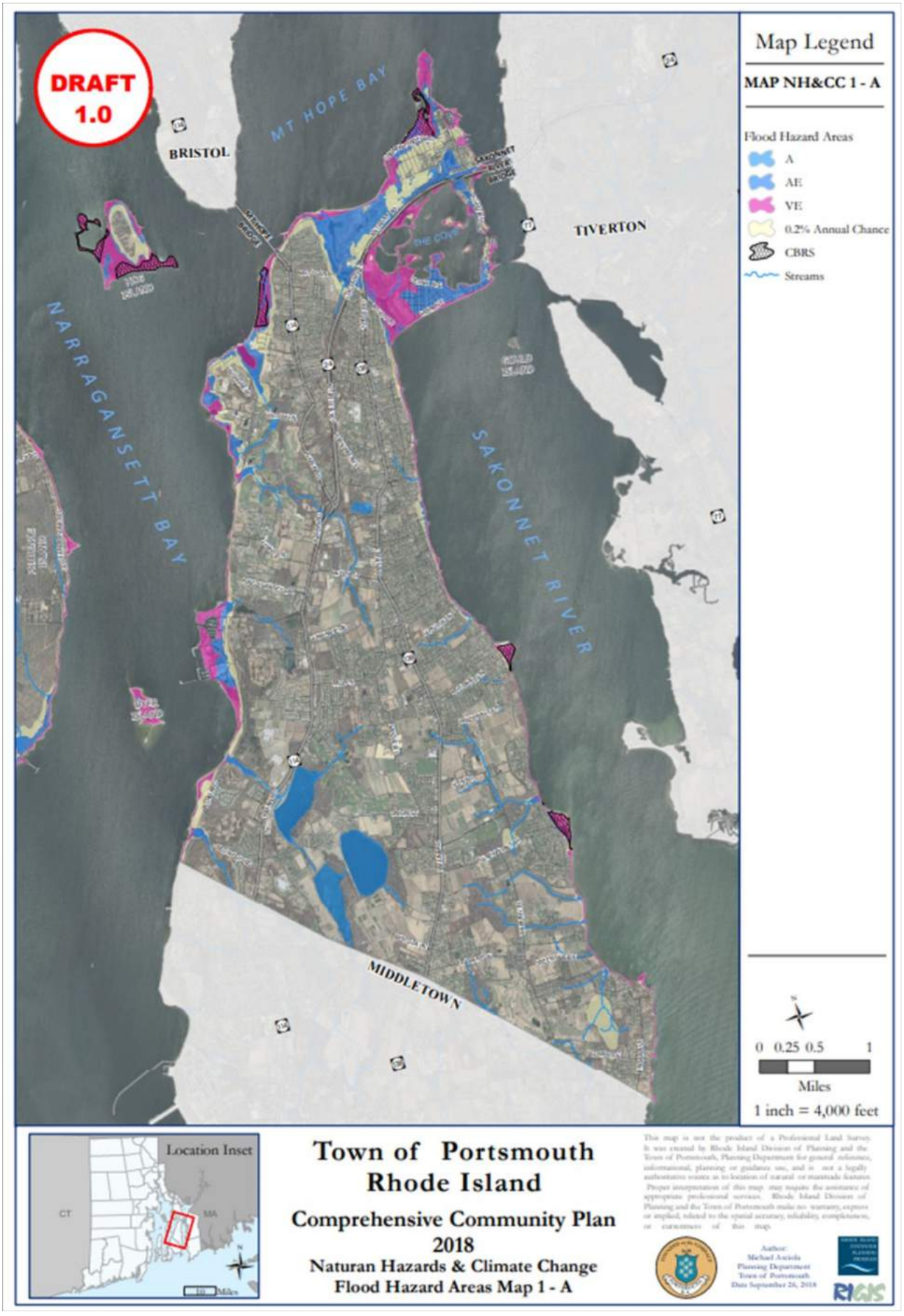
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Agriculture Map 1-A
Prime Agriculture Soils & Active Farmlands Map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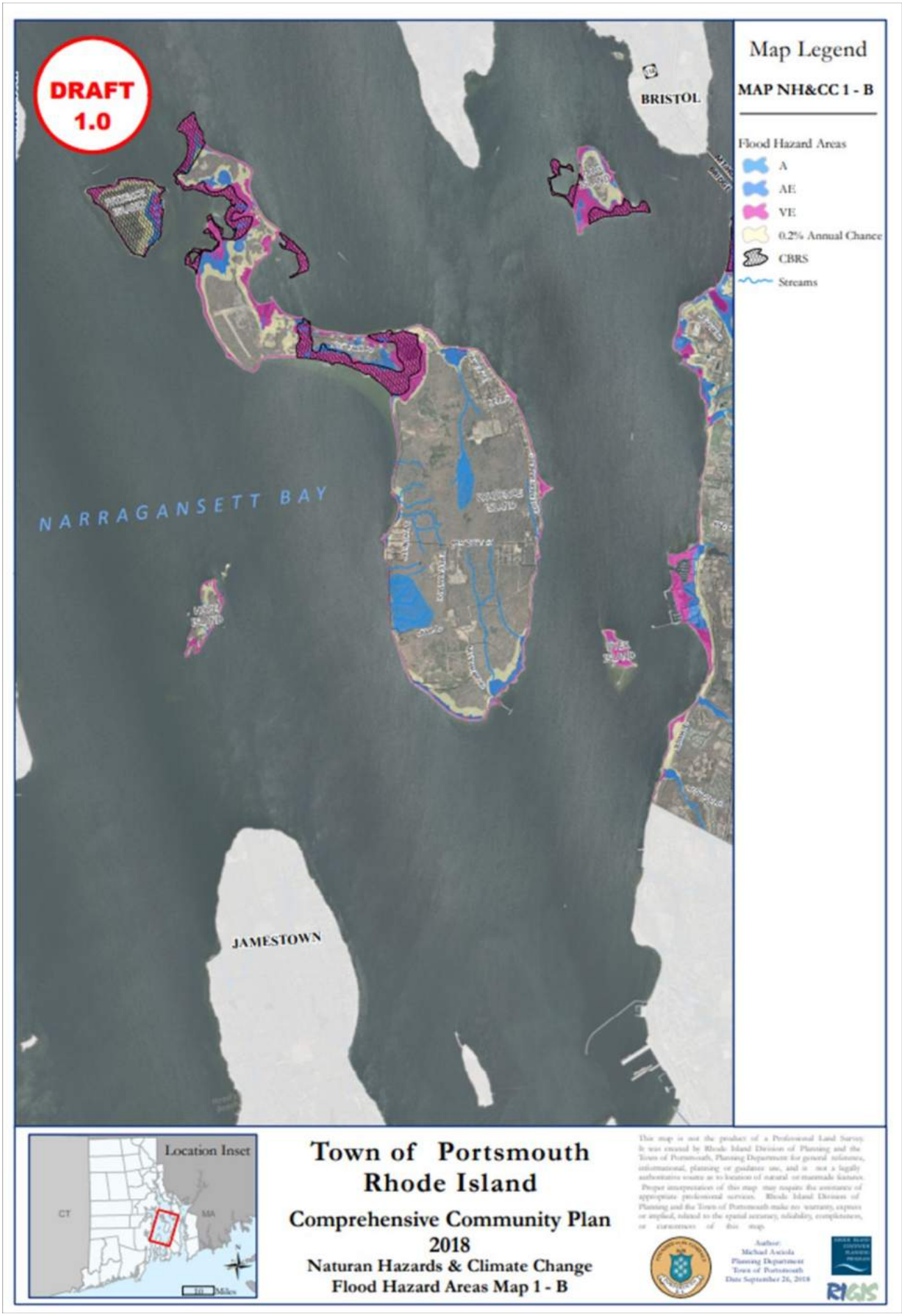
TIVERTON
NARRAGANSETT BAY
SAKONNET RIVER
MIDDLETOWN
Map Legend
MAP NH&CC 1 - A
Flood Hazard Areas
A
AE
VE
0.2% Annual Chance
CBRS
Streams
0 0.25 0.5 1
Miles
1 inch = 4,000 feet
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Naturan Hazards & Climate Change
Flood Hazard Areas Map 1 - A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JAMESTOWN
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MAP NH&CC 1 - B
Flood Hazard Areas
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AE
VE
0.2% Annual Chance
CBRS
Streams
Location Inset
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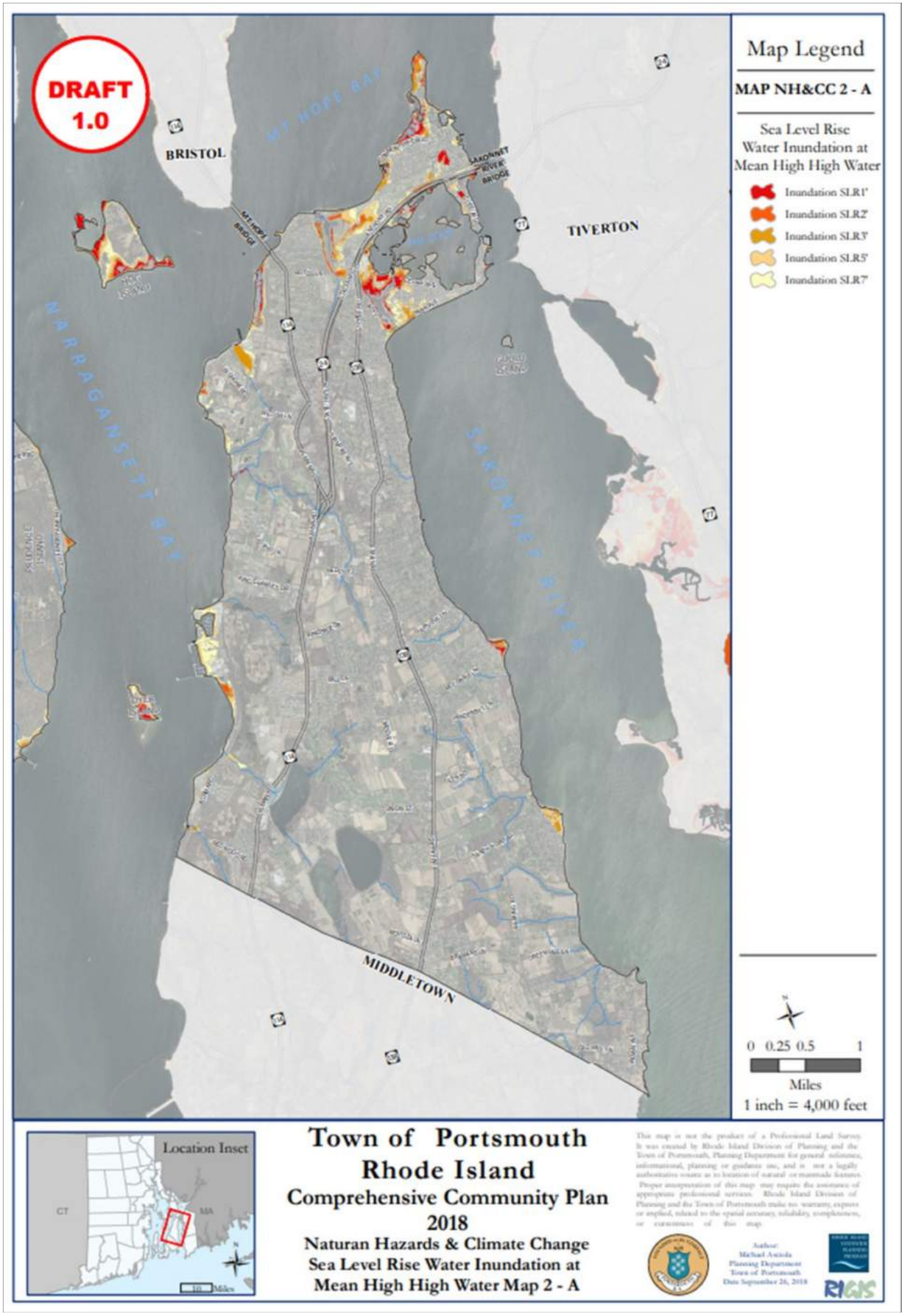
Miles
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Naturan Hazards & Climate Change
Flood Hazard Areas Map 1 - B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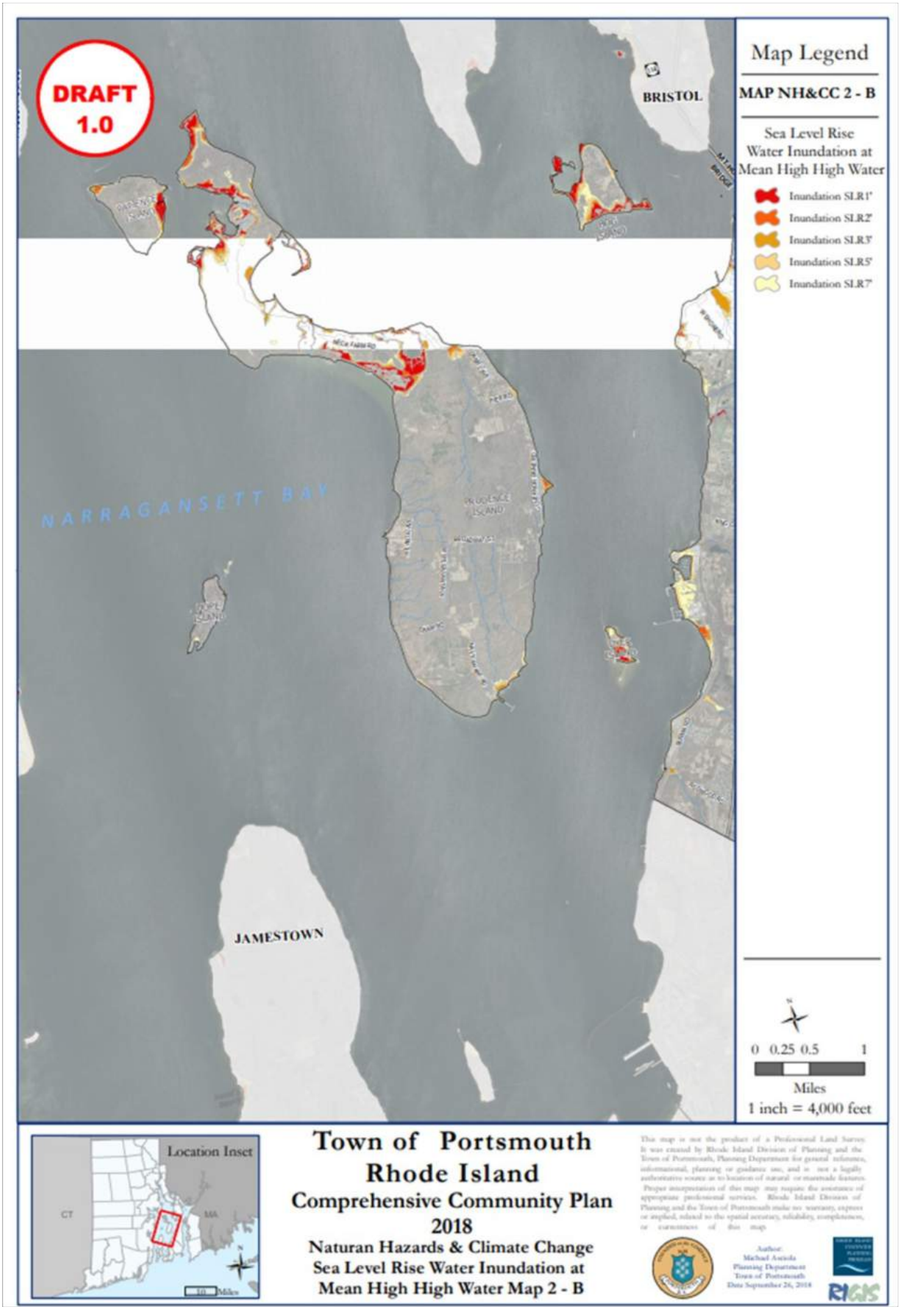
MT HOPE BRIDGE
SAKONNET RIVER BRIDGE
TIVERTON
NARRAGANSETT BAY
SAKONNET RIVER
MIDDLETOWN
Map Legend
MAP NH&CC 2 - A
Sea Level Rise
Water Inundation at
Mean High High Water
Inundation SLR1'
Inundation SLR2'
Inundation SLR3'
Inundation SLR5'
Inundation SLR7'
0 0.25 0.5 1
Miles
1 inch = 4,000 feet
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Naturan Hazards & Climate Change
Sea Level Rise Water Inundation at
Mean High High Water Map 2 - A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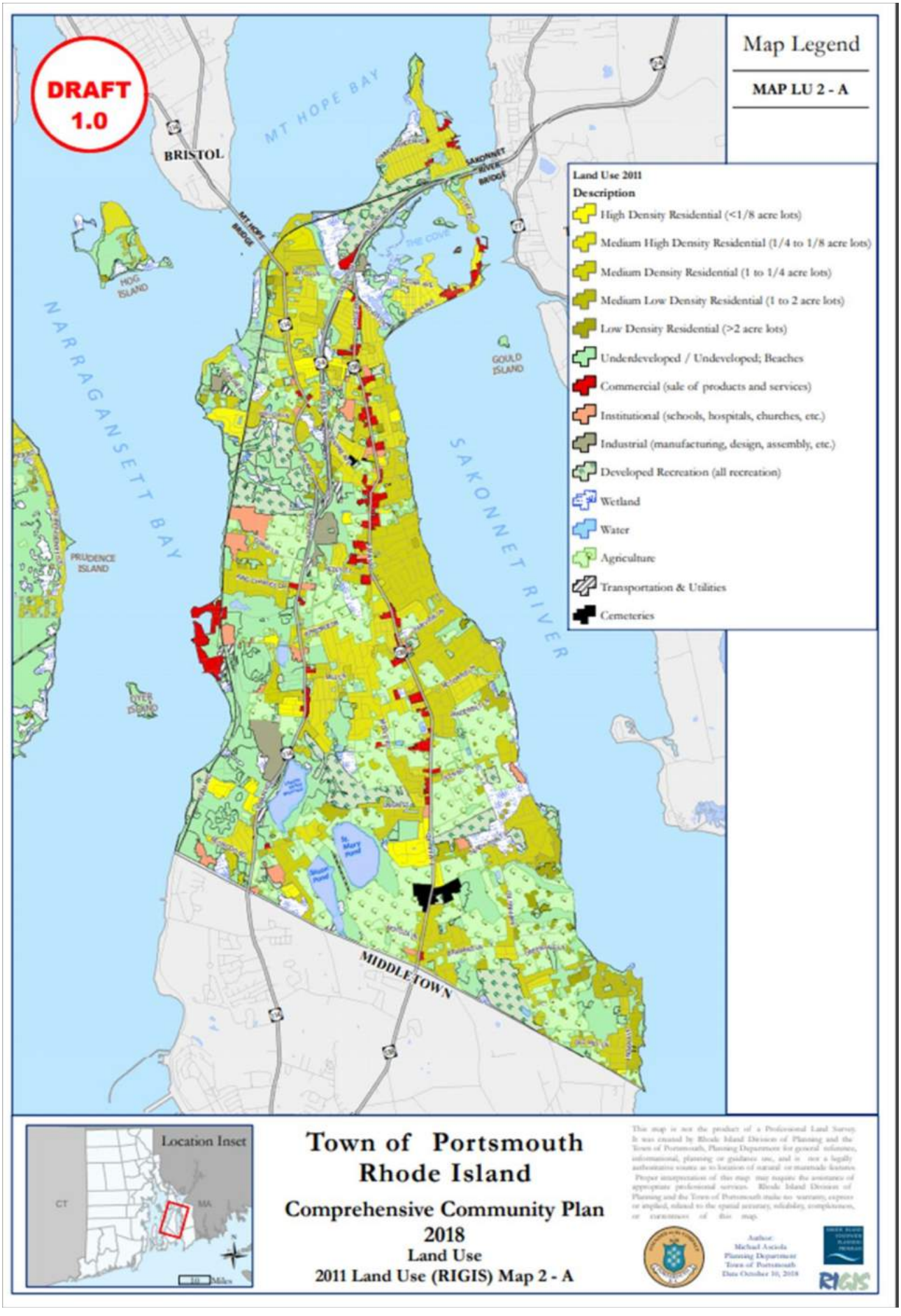
BRISTOL
NARRAGANSETT BAY
JAMESTOWN
Map Legend
MAP NH&CC 2 - B
Sea Level Rise
Water Inundation at
Mean High High Water
Inundation SLR1'
Inundation SLR2'
Inundation SLR3'
Inundation SLR5'
Inundation SLR7'
0 0.25 0.5 1
Miles
1 inch = 4,000 feet
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Naturan Hazards & Climate Change
Sea Level Rise Water Inundation at
Mean High High Water Map 2 - B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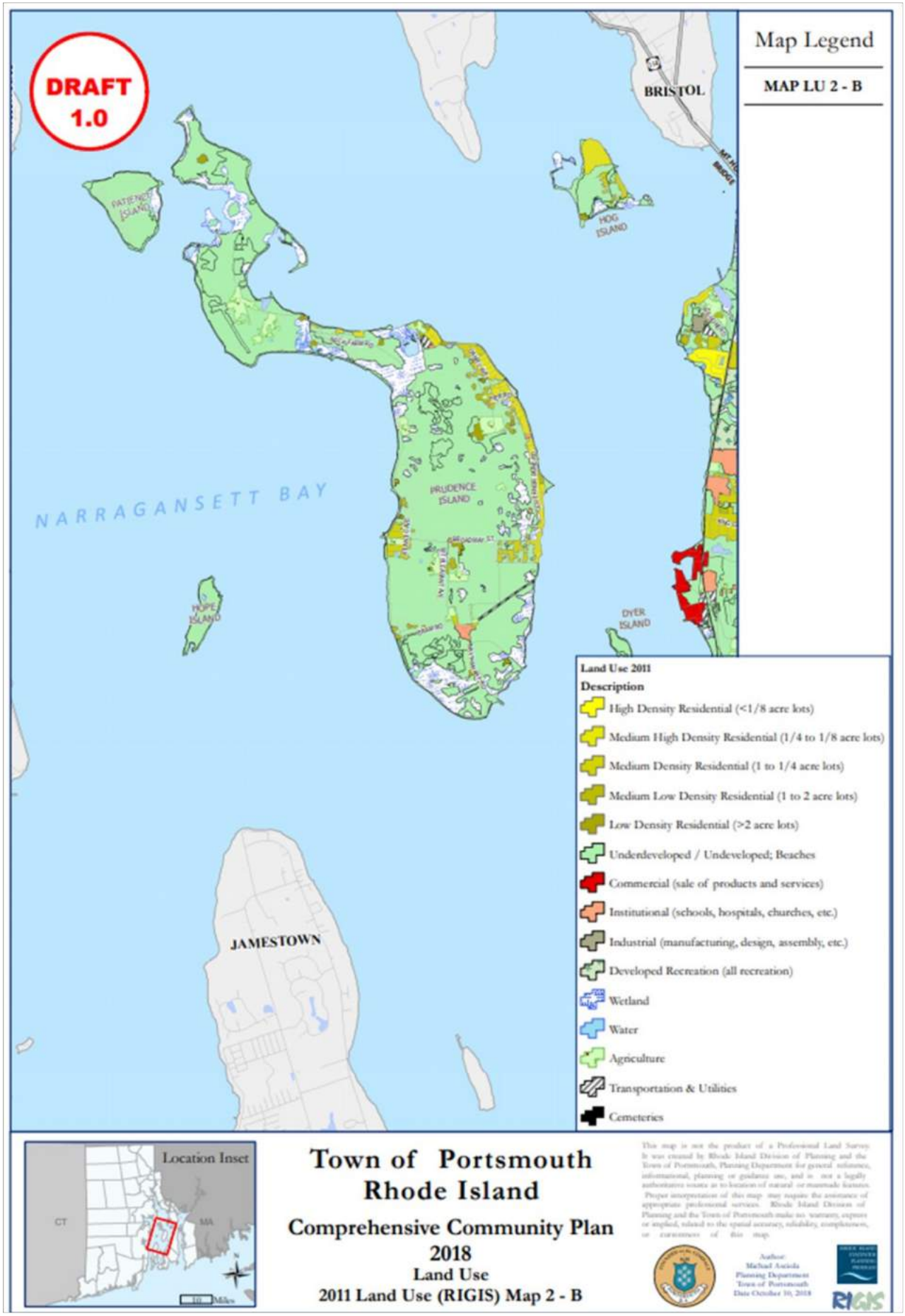
Map Legend
MAP LU 2 - A
Land Use 2011
Description
High Density Residential (<1/8 acre lots)
Medium High Density Residential (1/4 to 1/8 acre lots)
Medium Density Residential (1 to 1/4 acre lots)
Medium Low Density Residential (1 to 2 acre lots)
Low Density Residential (>2 acre lots)
Undeveloped / Undeveloped; Beaches
Commercial (sale of products and services)
Institutional (schools, hospitals, churches, etc.)
Industrial (manufacturing, design, assembly, etc.)
Developed Recreation (all recreation)
Wetland
Water
Agriculture
Transportation & Utilities
Cemeteries
MT HOPE BAY
BRISTOL
NARRAGANSETT BAY
SAKONNET RIVER
PRUDENCE ISLAND
HOG ISLAND
GOULD ISLAND
MIDDLETOWN
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Land Use
2011 Land Use (RIGIS) Map 2 - A
RIGIS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1.0
Map Legend
MAP LU 2 - B
BRISTOL
HOG ISLAND
PATIENCE ISLAND
NARRAGANSETT BAY
PRUDENCE ISLAND
HOPE ISLAND
DYER ISLAND
JAMESTOWN
Land Use 2011
Description
High Density Residential (<1/8 acre lots)
Medium High Density Residential (1/4 to 1/8 acre lots)
Medium Density Residential (1 to 1/4 acre lots)
Medium Low Density Residential (1 to 2 acre lots)
Low Density Residential (>2 acre lots)
Underdeveloped / Undeveloped; Beaches
Commercial (sale of products and services)
Institutional (schools, hospitals, churches, etc.)
Industrial (manufacturing, design, assembly, etc.)
Developed Recreation (all recreation)
Wetland
Water
Agriculture
Transportation & Utilities
Cemeteries
Location Inset
CT
MA
Town of Portsmouth
Rhode Island
Comprehensive Community Plan
2018
Land Use
2011 Land Use (RIGIS) Map 2 - B

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