


Newburyport Climate Resiliency Plan

Community Presentation


Donna D. Holaday, Mayor



Newburyport Climate Resiliency Plan

Newburyport Resiliency Committee

- Donna D. Holaday, Mayor
- Barry Connell, City Councilor At-Large
- David Chatfield, Co-Chair
- Michael Morris, Author and Co-Chair
- Chris Boelke, Resident
- Molly Ettenborough, Sustainability Manager
- Julia Godtfredsen, Conservation Administrator
- Chris LeClaire, Fire Chief
- William Mullen, Resident
- John O'Connell, Newbury Resident
- Lisé Reid, Parks Director
- Joe Teixeira, Conservation Commission Chair
- Jon-Eric White, City Engineer



October 8, 2020



Newburyport Resiliency Committee

Agenda

- Newburyport Resiliency Committee
- Resiliency Plan Framework
- Climate Change Hazards
- Climate Change Vulnerabilities
- Adaptation Strategies
- Implementation
- Summary & Request for Volunteers
- Audience Comments, Questions, Concerns



Resiliency Committee: Mission Statement

The committee will analyze, coordinate and develop a plan in conjunction with regional planning efforts to increase community resilience related to impacts of climate change including sea level rise, storm surge, flooding and extreme weather events throughout the City.

Further, the committee will advocate for and oversee implementation of the plan's recommendations.



Newburyport Resiliency Committee

Resiliency Plan Framework

- Executive Summary – 4 pages
- Resiliency Plan body – 133 pages
 - 1. Climate Change hazards
 - 2. Vulnerabilities
 - 3. Adaptation Strategies
 - 4. Implementation
- Supporting Appendices – 48 pages



Climate Change Hazards

- Sea Level Rise
- Coastal Storms
- Heavy Precipitation Events
- Flooding
- Wind
- Tornados
- Weather extremes – Drought, heat waves, winters and cold snap, persistent Precipitation

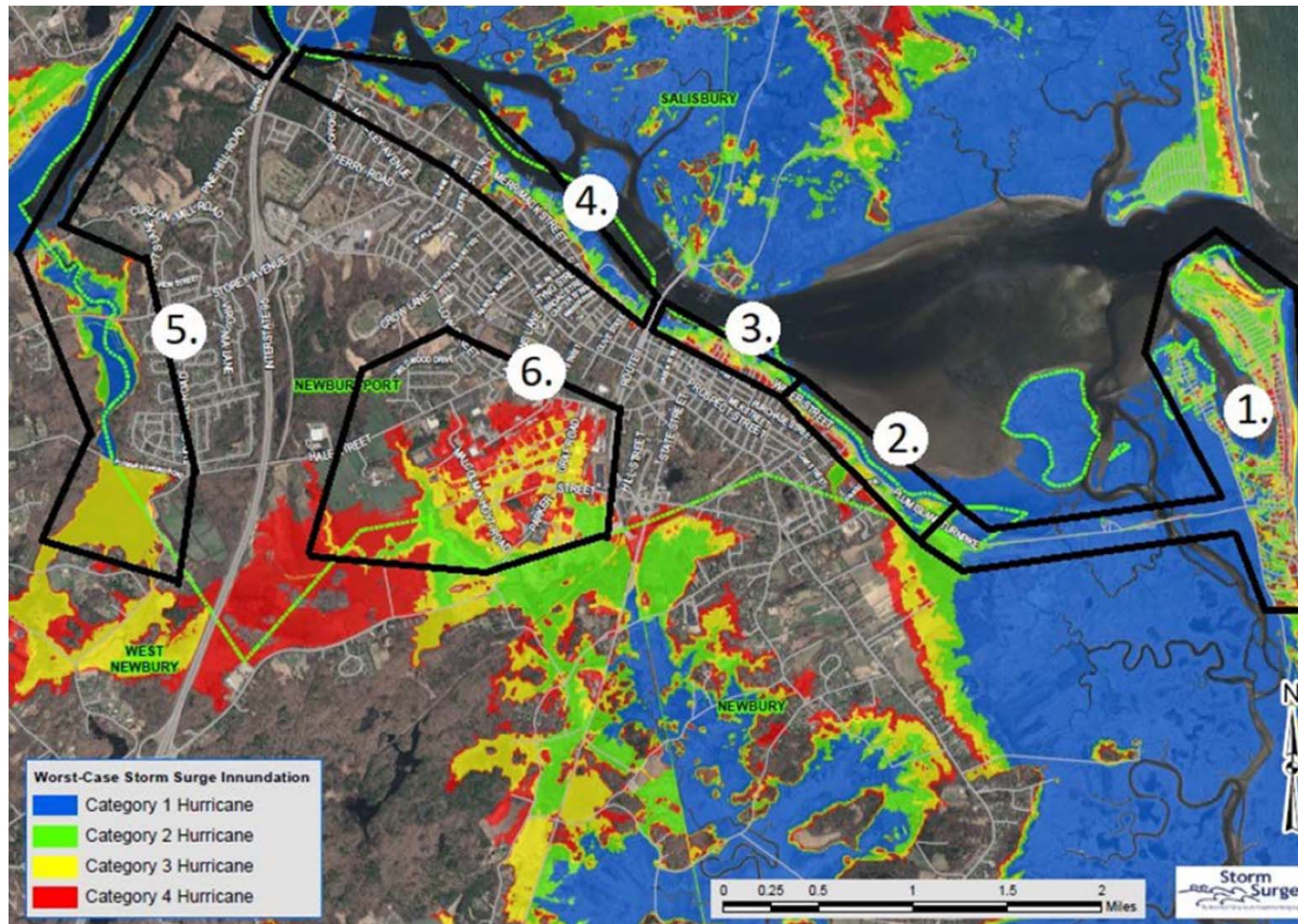


Key Vulnerabilities

- Flooding: residential, commercial, public areas
- Public water supply
- Waste water treatment facility
- Electrical sub station



Neighborhoods Vulnerable to Flooding



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Parker Street / Business Park Flooding

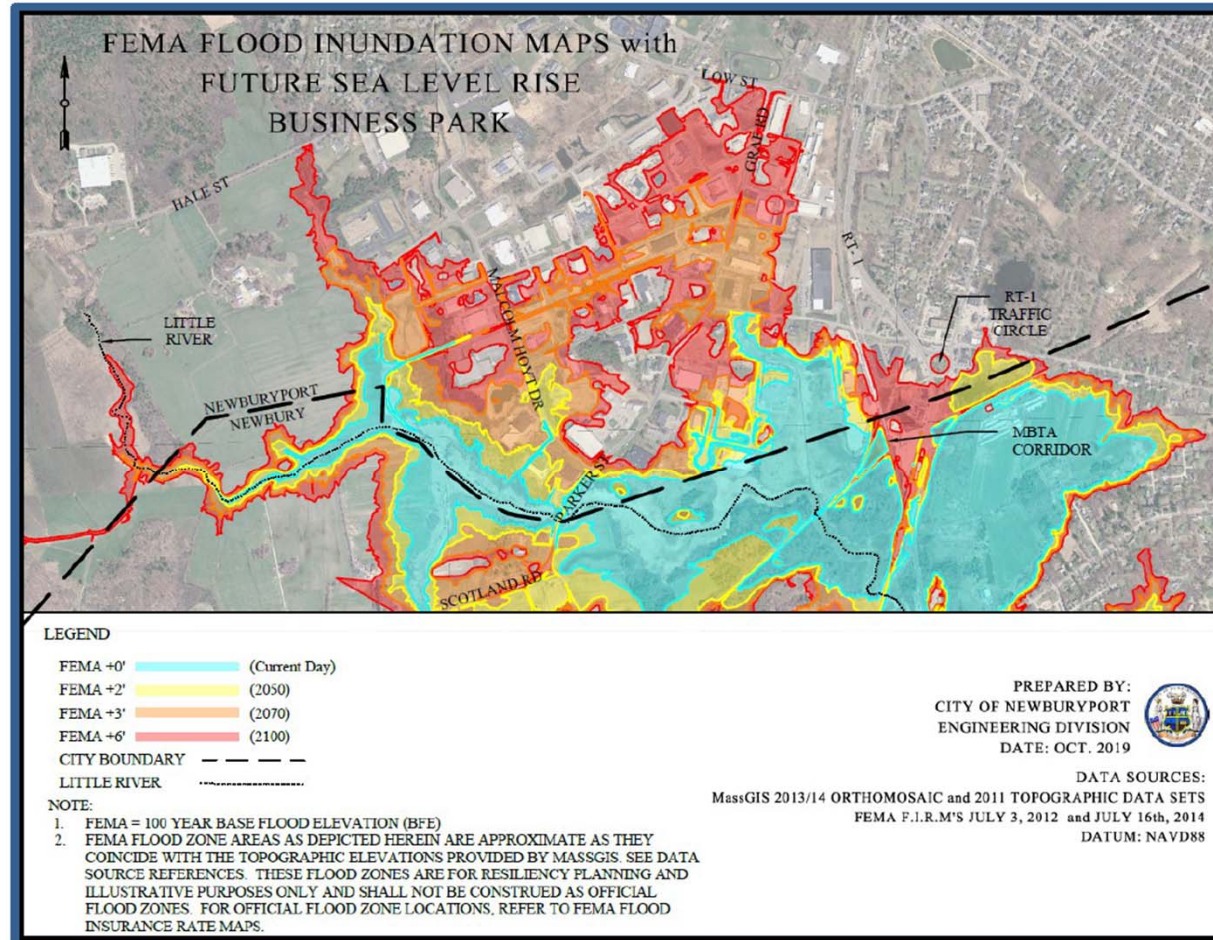


PHOTO: Joe Teixeira,NRC



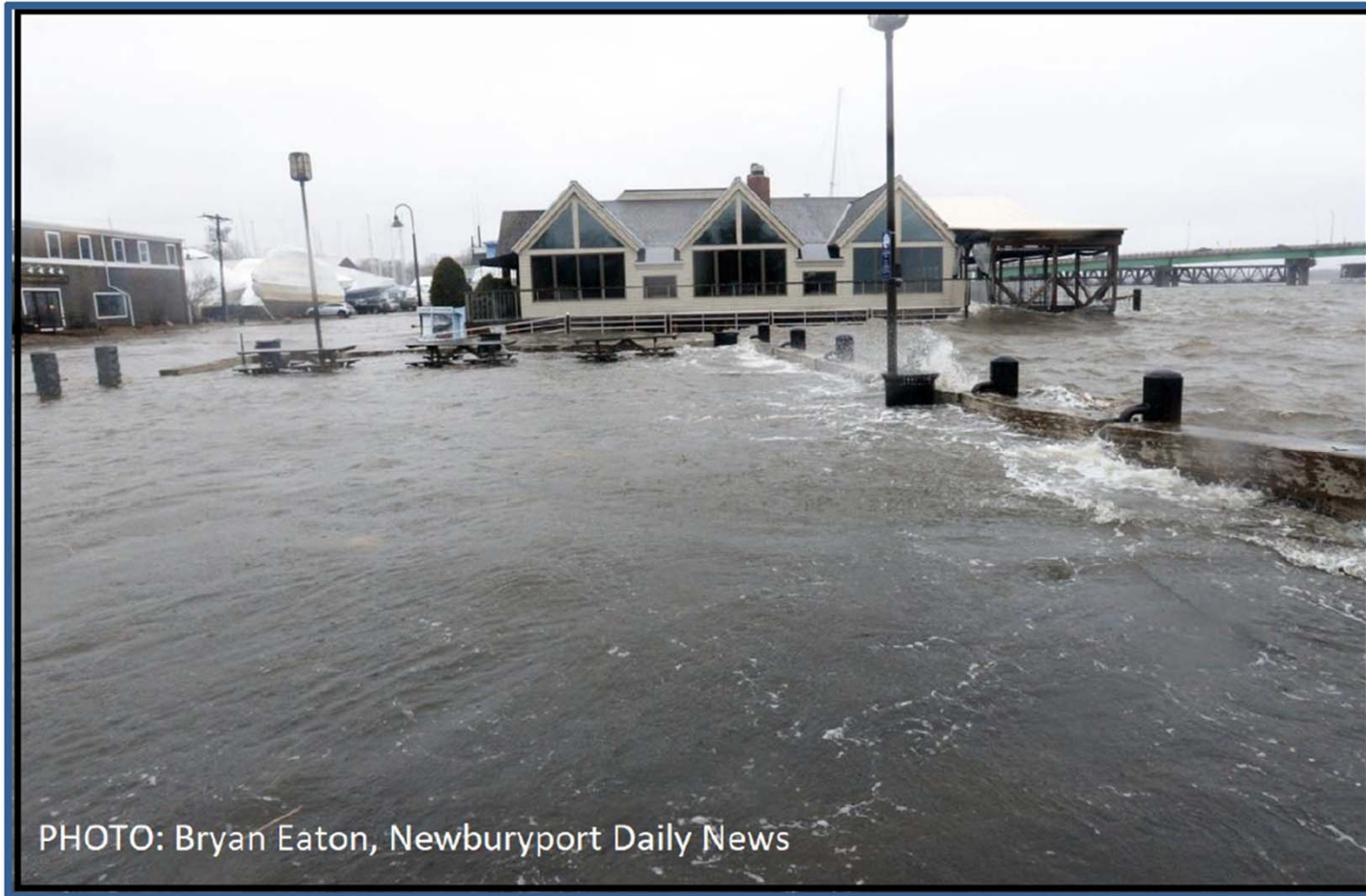
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Sea Level Rise & Business Park Flooding



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Downtown / Waterfront Flooding



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Market Square Flooding



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Cashman Park Flooding & Storm Surge



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Water Street Flooding & Storm Surge

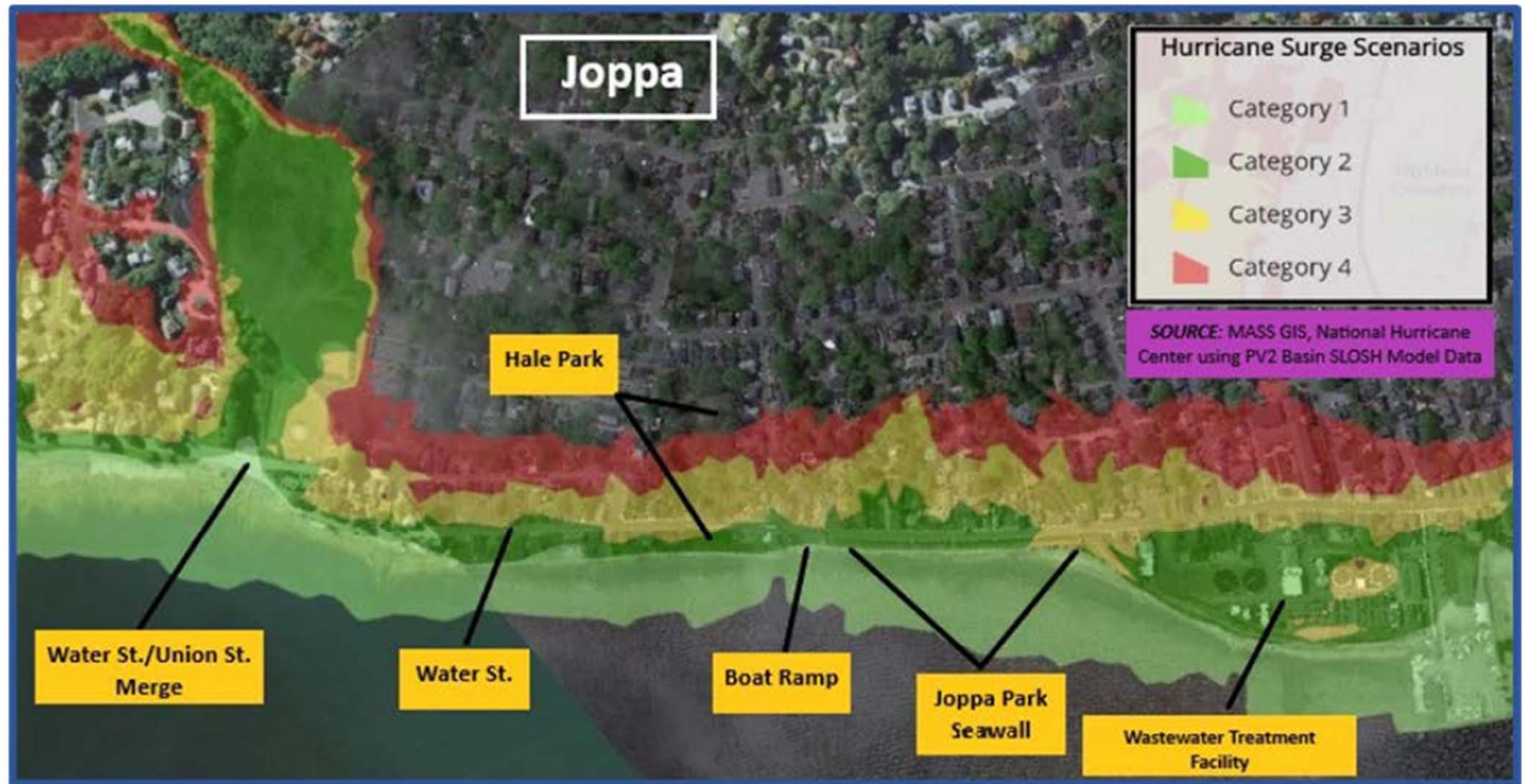


PHOTO: Mike Morris, NRC

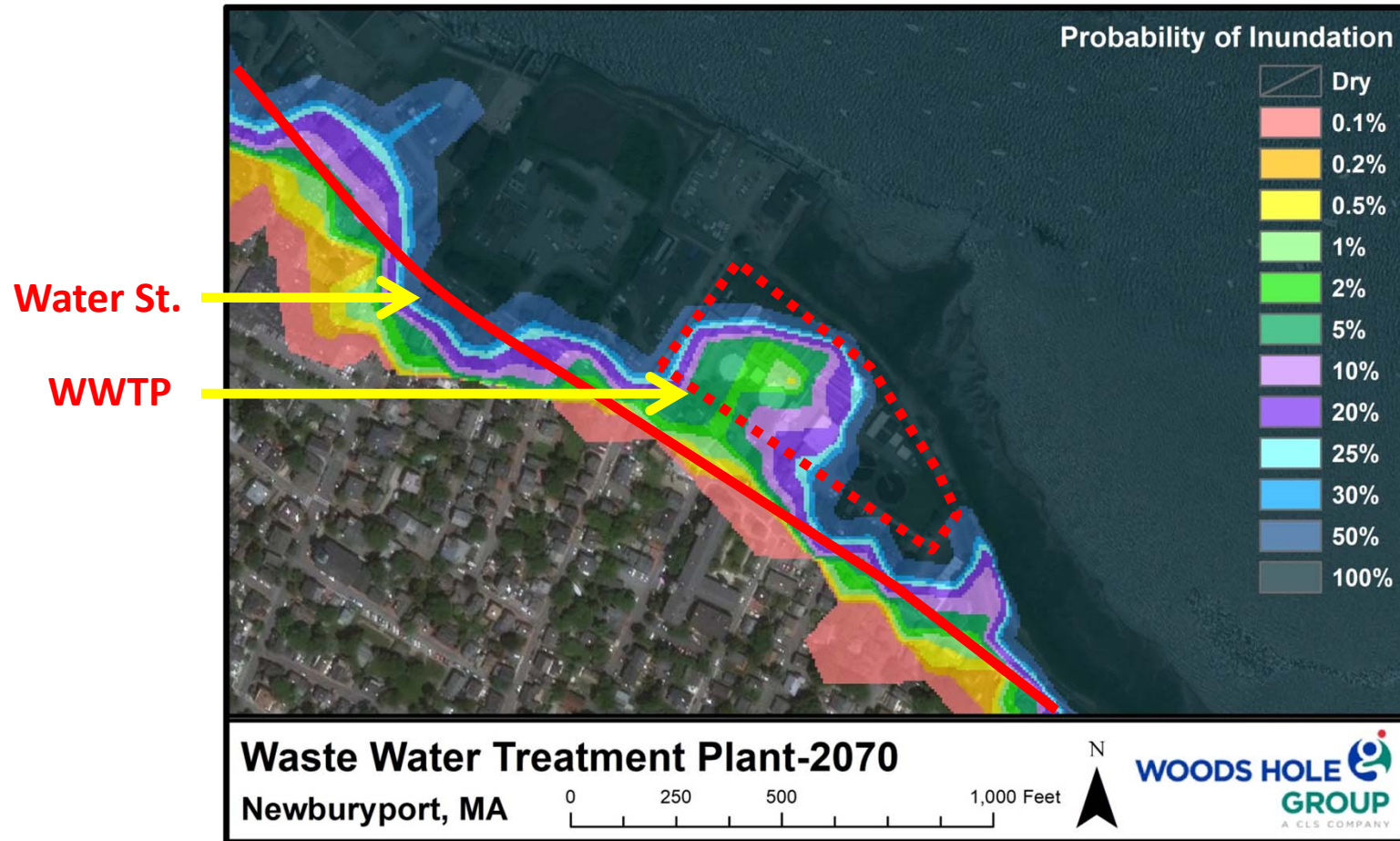


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Water Street Flooding & Storm Surge

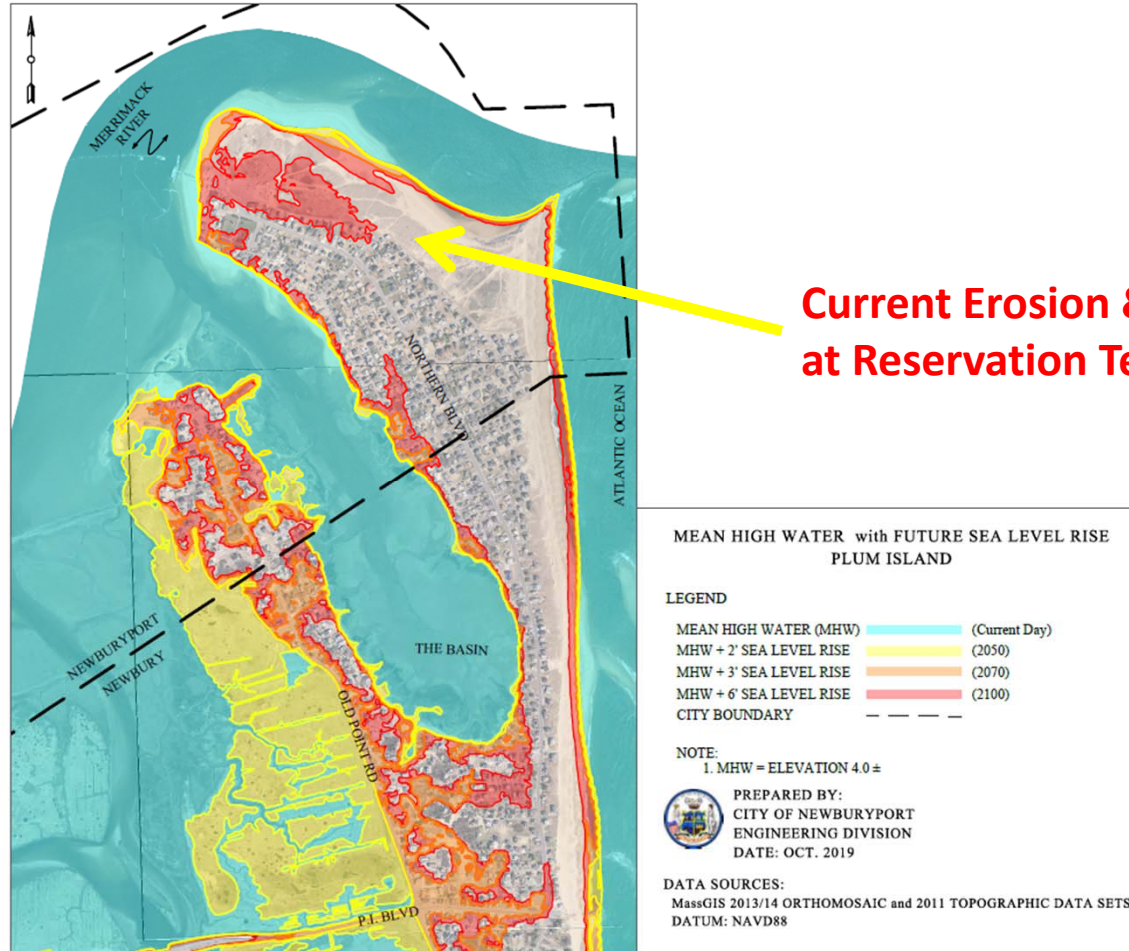


Projected Sea Level Rise at WWTP



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Projected Sea Level Rise at Plum Island

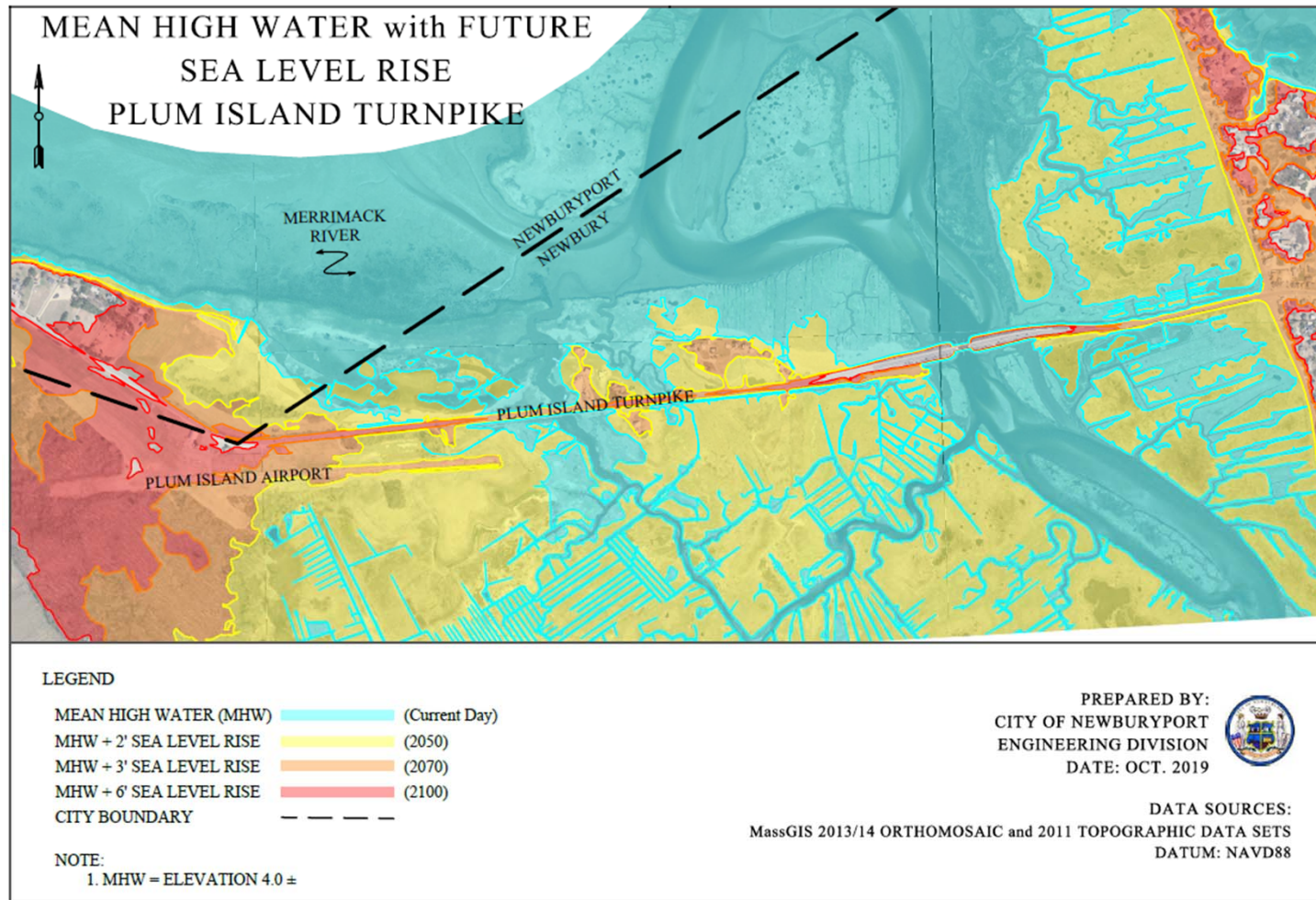


**Current Erosion & Dune Breach
at Reservation Terrace (2021)**



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Projected Sea Level Rise at P.I. Turnpike



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Impeded Access to Plum Island



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Impeded Access to Plum Island



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Flooding, Sea Level Rise, Storm Surge



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Flooding, Sea Level Rise, Storm Surge



Photo: Dailymail.com



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Flooding, Sea Level Rise, Storm Surge



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Flooding, Sea Level Rise, Storm Surge



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2021 Erosion at Reservation Terr. (73-75th St.)



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2021 Erosion at Reservation Terr. (73-75th St.)



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2021 Erosion at Reservation Terr. (73-75th St.)



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2021 Erosion at Reservation Terr. (73-75th St.)



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Adaptation Strategies

- Infrastructure Installations and Improvements
- Regulatory & Administrative Approaches
- Community Communication & Education
- Mitigation through Carbon Footprint Reduction



Infrastructure Protection

Proposed Flood Gate at Lower Artichoke Dam



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Infrastructure Protection

Proposed Flood Gate at Lower Artichoke Dam



Photo Courtesy of Tighe and Bond



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Infrastructure Protection

Stone Revetment at Wastewater Treatment Plant



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Infrastructure Protection

Stone Revetment at Wastewater Treatment Plant



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Infrastructure Protection

Flood Walls, Storm Surge Protection

WWTP & National Grid Electrical Substation

N.Grid Substation

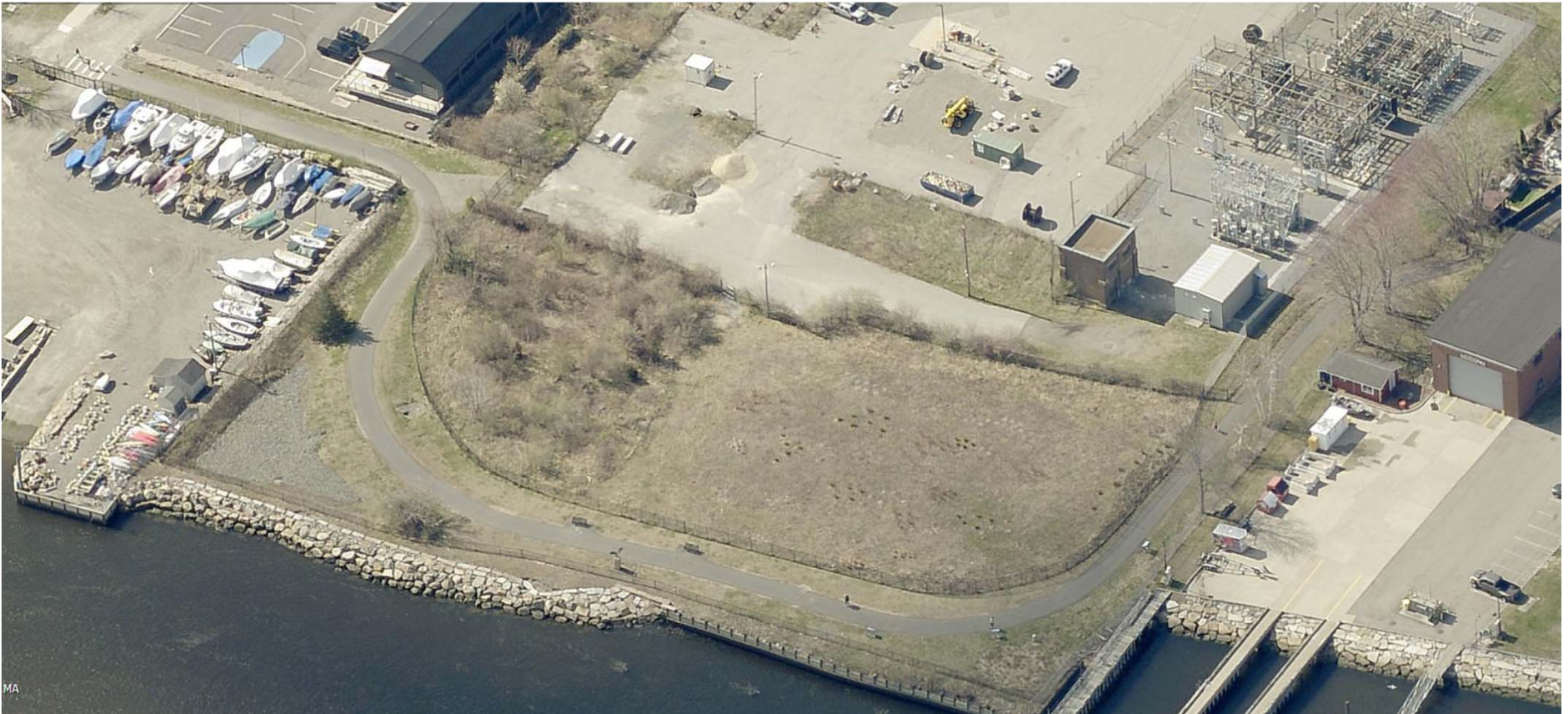
WWTP



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Infrastructure Protection

Stone Revetment at Electrical Substation



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Infrastructure Protection

Flood Walls, Storm Surge Protection

National Grid Electrical Substation



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Current Pattern of Permitting - P.I. Expansions

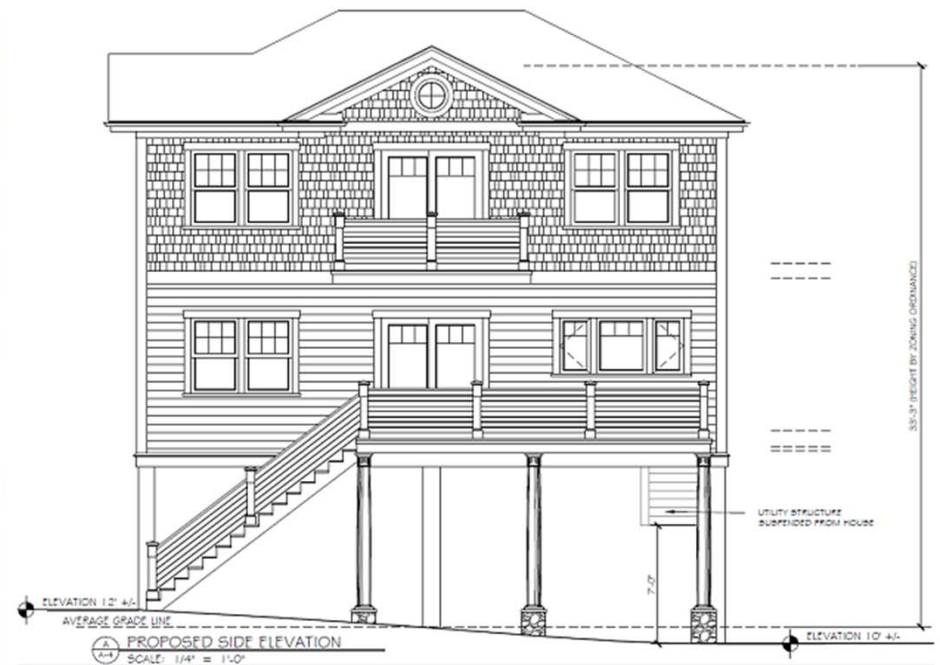
Example Cited as “Not More Detrimental” to
P.I.O.D. Purposes & District/Neighborhood Impacts



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Regulatory & Permitting Changes

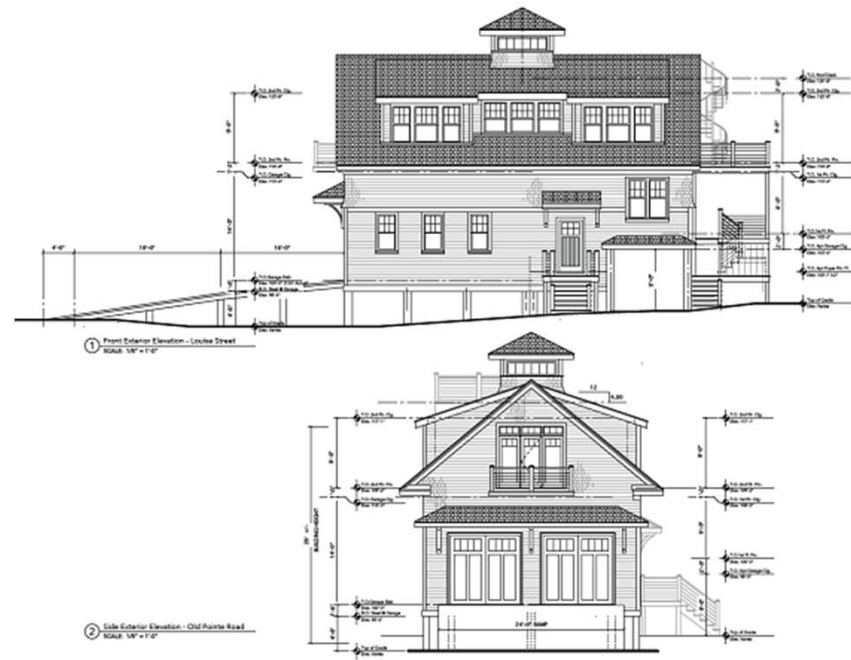
Recently Approved Expansions on Plum Island



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Regulatory & Permitting Changes

Recently Approved Expansions on Plum Island



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Community Education

Webpage & Mailer/Insert “Infographic”

Example Brochure:
Keep Plum Island Beautiful

SIMPLE VISUAL MESSAGING

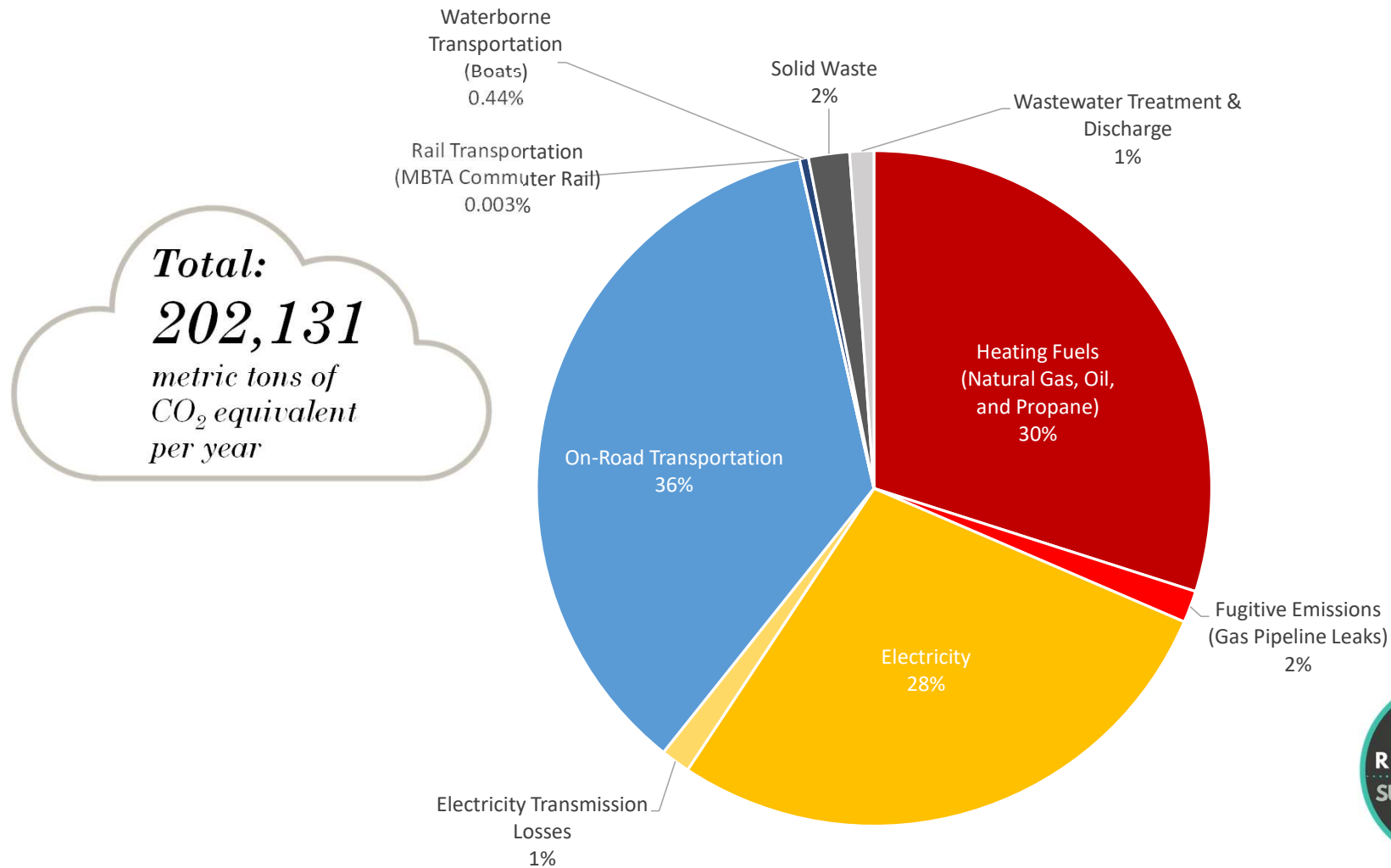


<p>Replacing or putting up a new fence?</p> <p>Fences can help to delineate and beautify a property or contain a pet. On Plum Island, fences can serve these purposes while still allowing for the free movement of sand and growth of vegetation necessary to protect the stability of the island. New fences must receive approval from the Conservation Commission.</p> 	<p>Thinking about renovating or adding a new addition?</p> <p>All construction on Plum Island requires either a building permit or approval from the Conservation Commission or both. In addition, all new structures, additions and "substantial improvements" must be elevated at least two feet above the ground surface or FEMA base flood elevation, whichever is higher.</p> 	<p>Doing some landscaping to spruce up your yard?</p> <p>Many beautiful plants are native to Plum Island and will thrive on your property. Non-native or invasive species are prohibited. Patios, decks and walkways can enhance your outdoor spaces; however such landscaping projects require review and approval from the Conservation Commission.</p> 	<p>Resurfacing your driveway?</p> <p>When it's time to resurface your driveway, please be aware that new asphalt, concrete or other solid surfaces, including pavers, are not permitted. Pea gravel, shells, or other loose, pervious material is preferable and encouraged to allow the Plum Island ecosystem to continue to function as nature intended.</p> 
<p>What to Do:</p> <ul style="list-style-type: none"> • Consult the Conservation Commission website for guidelines on fencing, www.cityofnewburyport.com/conservation-commission • Contact the Newburyport Conservation Commission to request approval for the new fence. • Email Conservation@cityofnewburyport.com 	<p>What to Do:</p> <ul style="list-style-type: none"> • Contact the Newburyport Planning Office/Zoning Administrator to find out what building/zoning permits are necessary. Planning@cityofnewburyport.com • Contact the Conservation Commission to find out what kind of permit or approval is necessary. • Email Conservation@cityofnewburyport.com 	<p>What to Do:</p> <ul style="list-style-type: none"> • Contact the Newburyport Planning Office/Zoning Administrator to find out what building/zoning permits are necessary. Planning@cityofnewburyport.com • Go to the Conservation Commission website to find a list of native plants and guidelines for landscaping on Plum Island, www.cityofnewburyport.com/conservation-commission 	<p>What to Do:</p> <ul style="list-style-type: none"> • Contact the Newburyport Building Commissioner's office to find out what building and/or zoning permits are necessary. • Contact the Conservation Commission to find out what kind of permit or approval is necessary. • Email Conservation@cityofnewburyport.com



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Newburyport Community GHG Emissions



Carbon Footprint Reduction

Energy Purchasing/Sourcing



Water & Sewer Dept. from Solar Field in Salisbury



School Dept. from Western Mass



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Carbon Footprint Reduction

Solar Installations & Energy Efficient Facilities



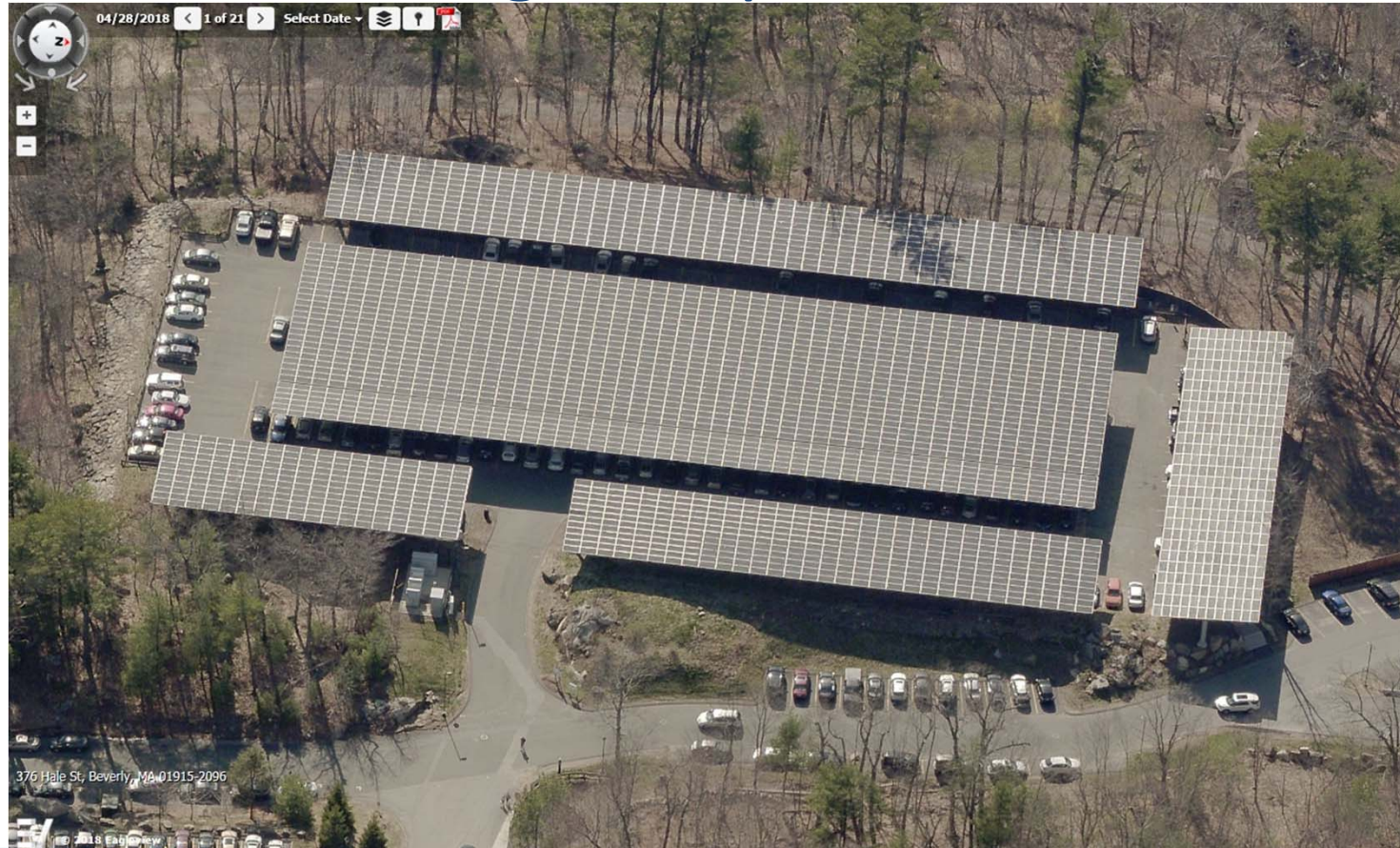
Rooftop Solar at Nock Molin School



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Carbon Footprint Reduction

Solar Parking Canopies *(Endicott College)*



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Carbon Footprint Reduction

Solar Installations & Energy Efficient Facilities



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Carbon Footprint Reduction

Solar Parking Canopy Installations



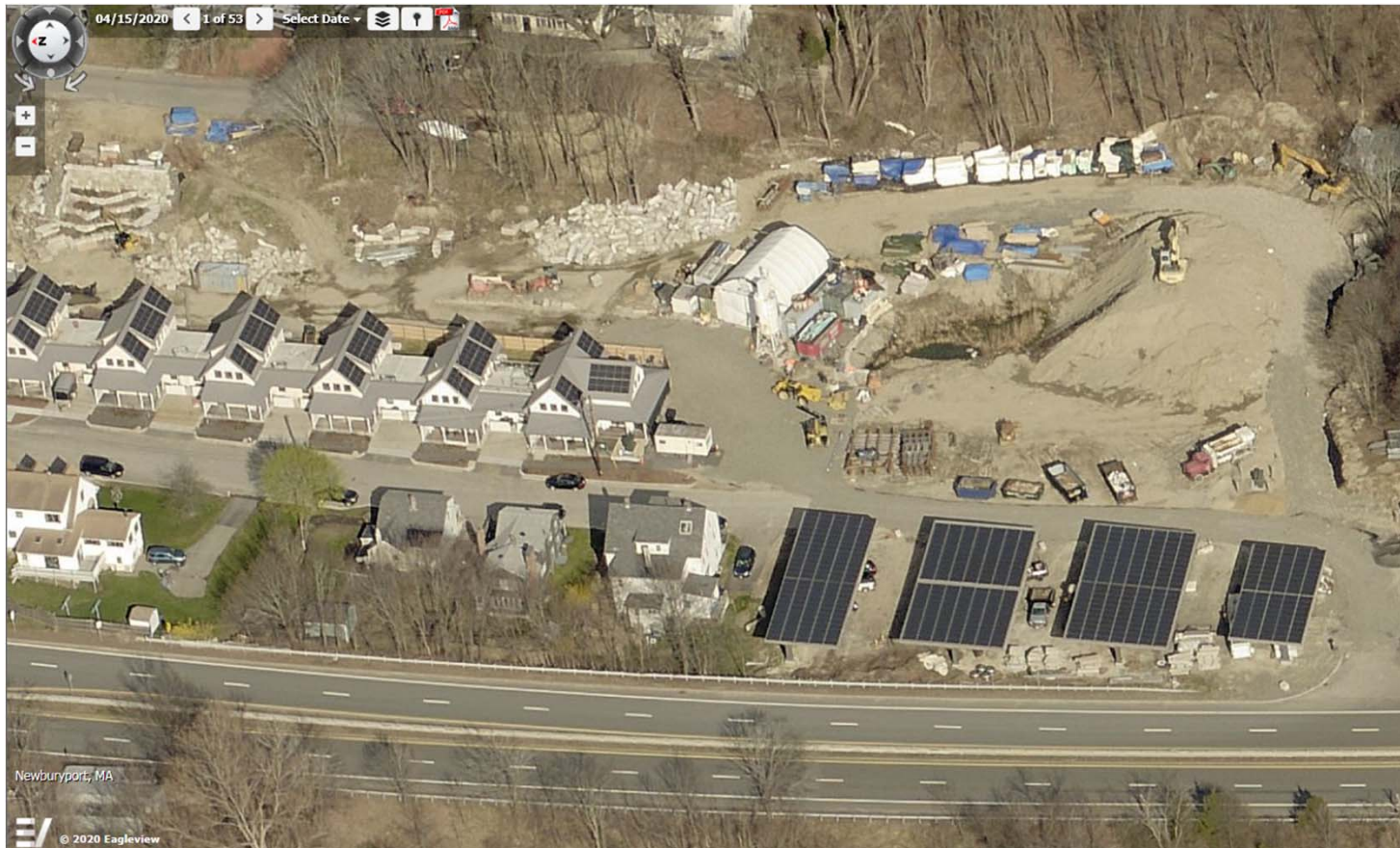
Image Source: BySolar.com



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Carbon Footprint Reduction

Solar Panels & Parking Canopies *(Hillside Sustainable Dev.)*



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Carbon Footprint Reduction

Solar Panels – Home & Business Installations



Brown Square (Small Business)



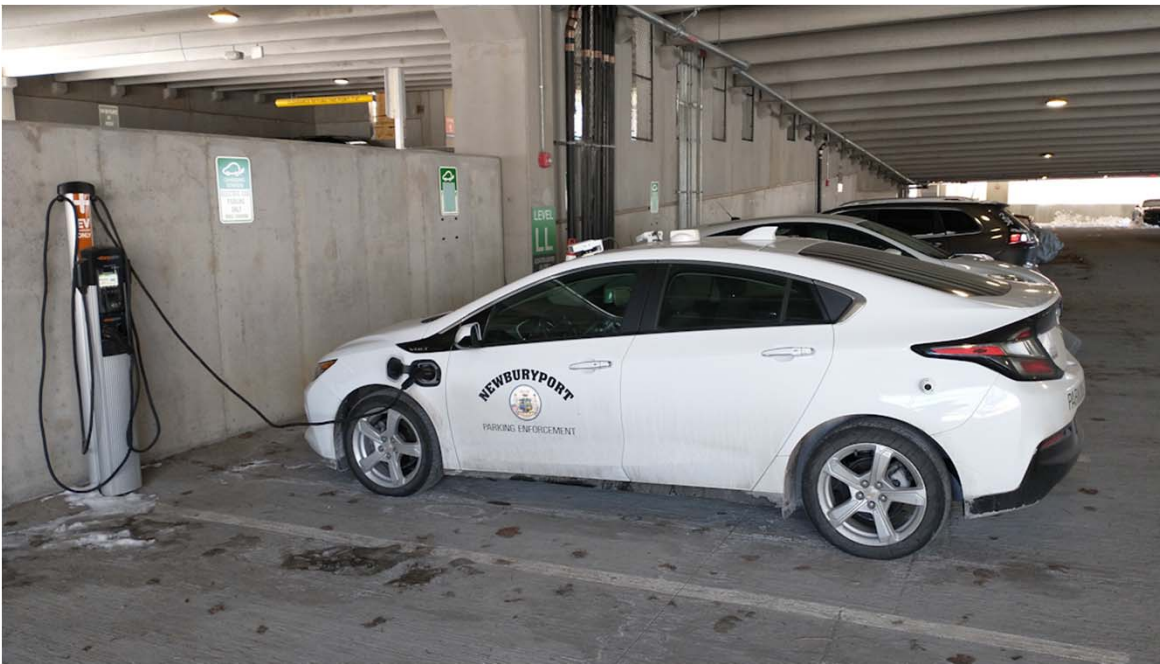
Rooftop at Tannery Marketplace



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Carbon Footprint Reduction

Electric Vehicles & Public EV Charging Stations



Titcomb Street Parking Garage / EV Parking Enforcement Vehicle



Senior Community Center



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Carbon Footprint Reduction

Trash & Recycling



Organic Waste Pilot Program in Action



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Implementation

There are advantages in being a climate change resilient community and there is a lot to be done.

- Municipal Leadership
 - Involve all city departments
 - Resourcing resiliency efforts – city employees and volunteers
 - Funding (Grants, etc.)
- Personal adaptations
- Volunteer efforts



Special Thanks & How to Get Involved

- Thanks to the Resiliency Committee and all the other volunteer efforts in the City, including but not limited to the Energy Advisory Committee, Zero Waste groups, Storm Surge, etc.
- We need volunteers to assist with monitoring for ongoing implementation of this plan. If you would like to get involved or are interested in serving on the Resiliency Committee please email:

Donna Musumeci, Executive Assistant to the Mayor
DMusumeci@CityofNewburyport.com



Newburyport Resiliency Committee

Comments, Questions or Ideas ?

- For the Complete Resiliency Plan and additional information please visit the City website here:
- <https://www.cityofnewburyport.com/recycling-energy-resiliency-sustainability/resiliency-sustainability>

or

- <https://www.cityofnewburyport.com> >> Government >> Resiliency Committee



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Thank You For Attending!

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