

ADDRESS COASTAL ISSUES

4C

Overview

This “briefing booklet” has been prepared as part of the process of preparing an update to the 2008 Plan of Conservation and Development (POCD) for Branford. This booklet is intended to familiarize the members of the POCD Update Committee and others existing and potential future strategies related to coastal issues.

In October 2017, the Connecticut Institute for Resilience and Climate Adaptation (CIRCA) released a recommendation that Connecticut municipalities plan for sea level rise of 20 inches (0.5 meters) between 2017 and 2050.

Background

The 2008 POCD did not include a specific section on coastal issues. Rather, some coastal issues (coastal access and a general statement related to sea level rise) were included in other POCD chapters.

Over the last few years, however, the Town has been active in looking at issues associated with sea level rise, climate adaptation, and hazard mitigation as it related to the coastal area.

**Plan For
20”
By 2050**

Coastal Resources



Coastal Threats



At a public meeting early in the process of updating the POCD, participants identified coastal issues as one of the most important issues to consider as part of this planning process. Issues and concerns fell into two main areas:

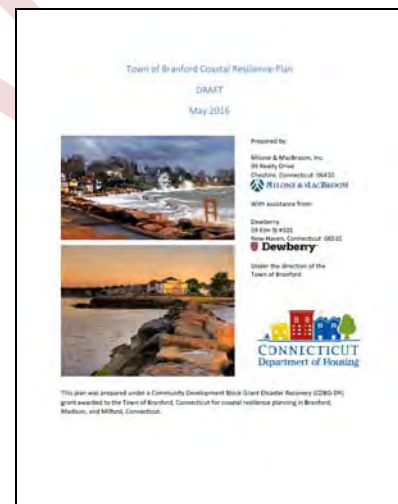
Sea Level Rise / Climate Change / Flooding	<ul style="list-style-type: none"> • How will Branford address a sea level rise of two feet or so? • Property values / tax base will be affected • We need to be resilient in a variety of ways <ul style="list-style-type: none"> ○ Public lands versus private lands ○ Access to property ○ Providing / protecting infrastructure
Other	<ul style="list-style-type: none"> • Coastal areas enhance attractiveness and support tourism • Accessibility to the water is important

The map on the facing page shows what is considered to be the “coastal area” in Branford. In addition, it shows some key resources within the coastal area. The graphics on the following two pages illustrate some scenarios for sea level rise and storm inundation through to 2080 if current trends continue.

Coastal Resilience Plan

The 2016 Coastal Resilience Plan identified potential vulnerabilities in Branford and potential responses. The Plan suggested consideration of the following approaches:

- **Protection** - protecting the land from the sea so that existing land uses can continue.
- **Accommodation** - people continue to use the land *at risk* but do not attempt to prevent the land from being flooded.
- **Retreat** - the coastal zone is abandoned and there is no effort to protect the land from the sea.



The 2016 Coastal Resilience Plan puts Branford well in front of other communities that are still coming to grips with this issue. However, the issue of the overall cost of some of the responses and relative priority is yet to be resolved.

The scope of the issues associated with sea level rise are so extensive and expensive that it will be difficult, if not impossible, for the Town of Branford or any other governmental organization to address them all.

As a result, it may be time to begin considering a preliminary approach, including shared responsibility, regarding how some of these issues might be addressed in the future.

Coastal Resources

Branford, CT

DRAFT

- Coastal Boundary
- Wetland
- 100-Year Flood Zone (including VE Floodzone)
- Open Space Area (see Open Space map)
- Shellfish Bed
- Boat Launch

North
Branford

East
Haven



Brushy Plain Rd

Cedar St

E Main St

Main St

1

Damascus Rd
Pine Orchard Rd

146

Leetes Island Rd

146

Guilford

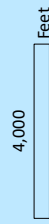
Stony Creek

Pine Orchard

Indian Neck

Short Beach

Branford Hill

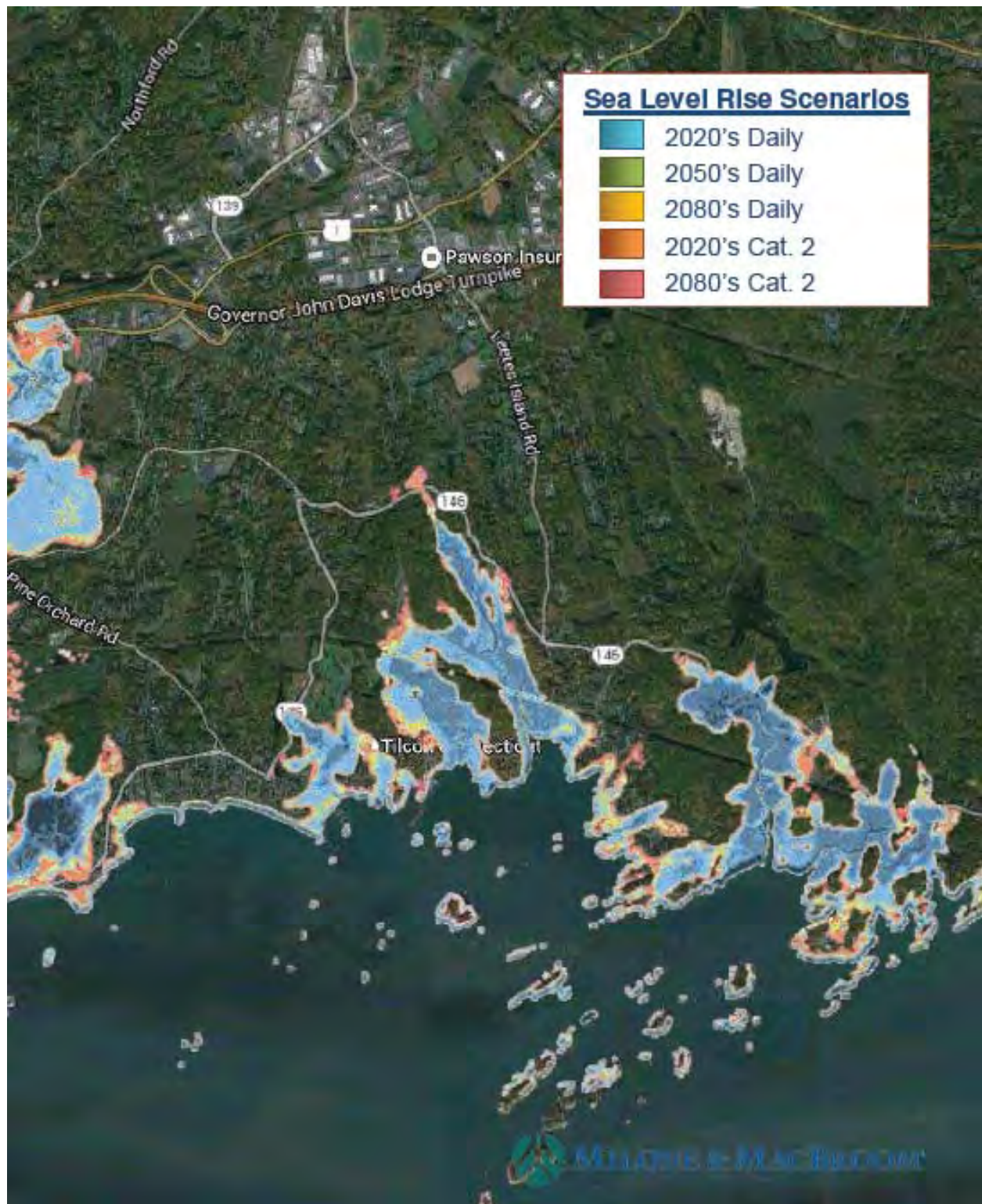


Sea Level Rise / Storm Flooding Scenarios – West



Branford Coastal Resilience Plan (2016)

Sea Level Rise / Storm Flooding Scenarios – East



Branford Coastal Resilience Plan (2016)

Possible Framework – For Discussion Purposes Only

Road And Utility Infrastructure

Infrastructure issues will likely need to be investigated on a case-by-case basis. A framework should probably be developed for:

- looking at action thresholds for different infrastructure items,
- estimating when (or if) that action threshold is likely to occur, and
- prioritizing improvements based on the action threshold.

In the future, the Town may wish to undertake a ***cost/benefit analysis*** to compare the costs of infrastructure improvements with the number of properties affected, the nature/extent of the risk, and the anticipated useful life of the improvement.

In some situations, it simply may not make fiscal sense for all of the Town taxpayers (or for a utility provider) to undertake some infrastructure improvements.

Category	Element / Options
Roadway Infrastructure	<ul style="list-style-type: none">• Elevate Roads• Relocate Access• Retire / Discontinue / Abandon As Town Roads• Accept Alternative Access At Times• Do Nothing
Drainage Infrastructure	<ul style="list-style-type: none">• Improve Road Drainage• Maintain Tide Gate• Do Nothing
Water Supply Infrastructure	<ul style="list-style-type: none">• Extend Public Water Supplies• Do Nothing
Sewage Disposal Infrastructure	<ul style="list-style-type: none">• Wastewater Floodproofing• Treatment Plant• Pumping Stations• Community Septic Systems• Do Nothing
Power Supply Infrastructure	<ul style="list-style-type: none">• Relocate Power Utilities• Strengthen Power Utilities• Do Nothing
Communications Infrastructure	<ul style="list-style-type: none">• Strengthen Wired Communications• Strengthen Wireless Systems• Do Nothing

Possible Framework – For Discussion Purposes Only

Neighborhood Approaches

There may be a “middle-ground” situation where a project:

- may be larger than just one property,
- may not be prudent as a Town investment (i.e. - the cost-benefit of an improvement does not warrant Town funding), and
- may not be practical unless all property owners benefitting participate.

In such situations, other options may include:

- neighborhood associations undertaking such projects,
- the Town coordinating and administering an “assessment of benefits” approach,
- the Town facilitating establishment of a “special service district” for the affected property owners,
- property owners (as a group).

Such improvements might include:

Category	Element / Options
Hard Protection	<ul style="list-style-type: none">• Seawalls• Bulkheads• Revetments• Dikes• Groins• Breakwaters
Soft Protection	<ul style="list-style-type: none">• Beach Nourishment• Dune Restoration
Hybrid Protection	<ul style="list-style-type: none">• Bioengineered Banks• Artificial Reefs

In 2017, Moody’s Investor Service advised communities that they will begin incorporating climate risk and potential exposure into their community evaluation and bond rating system.

Possible Framework – **For Discussion Purposes Only**

Individual Buildings / Properties

With regard to individual buildings, the responsibility for the building will likely rest with the property owner. While the Town will be responsible for its facilities, it may be unlikely that the Town will be in a position to address issues associated with individual buildings.

The Town should continue to participate in the National Flood Insurance Program so that flood insurance will be available to private property owners.

The Town should continue regulations which will allow homeowners to elevate their buildings within the parameters established by the National Flood Insurance Program and in ways which are consistent with state and federal policy and do not present an undue risk to public health and safety.

The Town expects should consider encouraging or requiring property owners to do more than the minimum requirement (i.e. – freeboard) to reduce future risk since FEMA flood elevations are likely to lag behind the projected rise in sea levels.

The Town MAY wish to consider:

- adopting stricter flood standards to ensure that new construction is appropriately constructed for the anticipated risks.
- allow some flexibility on height limits and/or other standards which may ease the process of reconstruction for damaged properties.
- establishing some standards for design of elevated structures.

Category	Element / Options
Individual Buildings / Properties	<ul style="list-style-type: none">• Stormproofing• Elevation• Retreat• Abandonment• Property acquisition / disposition• Do Nothing
Regulations	<ul style="list-style-type: none">• Stricter building / zoning requirements (freeboard, Coastal V zone standards)• Height issues (freeboard under / total height)• Design issues (lattice / breakaway)• Do Nothing

Possible Strategies For 2018 POCD

Protect Coastal Resources

NEW
STRATEGY

A. Protect Coastal Resources

1. Continue to protect coastal resources.

Maintain And Enhance Coastal Access

NEW
STRATEGY

A.

1. Continue efforts to enhance visual access to coastal areas and resources.	
a. <u>Continue to seek ways to protect, preserve, and enhance visual access to and from coastal areas and resources.</u>	<input type="checkbox"/>
2. Continue efforts to enhance public access to coastal areas and resources.	
a. Continue to <u>seek</u> opportunities to acquire waterfront open space and recreation areas.	<input type="checkbox"/>
b. <u>Continue to seek opportunities to provide boardwalks and shorefront trails to enhance public access to coastal areas and resources.</u>	<input type="checkbox"/>
c. Consider a uniform coastal access signage program.	<input type="checkbox"/>
d. <u>Consider ways to facilitate recreational fishing and shell-fishing by residents.</u>	<input type="checkbox"/>
3. Continue efforts to enhance boating access to coastal areas and resources.	
a. <u>Continue to maintain / improve</u> public boat ramps.	<input type="checkbox"/>
b. Carefully <u>manage</u> commercial <u>marinas so</u> they can thrive <u>while minimizing</u> impacts to adjacent residential neighborhoods.	<input type="checkbox"/>
c. <u>Consider the benefits of preparing a harbor management plan.</u>	<input type="checkbox"/>
d. <u>Maintain navigation channels through dredging and other means</u>	<input type="checkbox"/>

The 5-Year POCD Review indicated that the Town had Improved coastal access, including renovation of State boat ramp (DEEP).

Establish A Framework For Addressing Sea Level Rise

See briefing booklet on Natural Resources for discussion of strategies related to inland flooding.

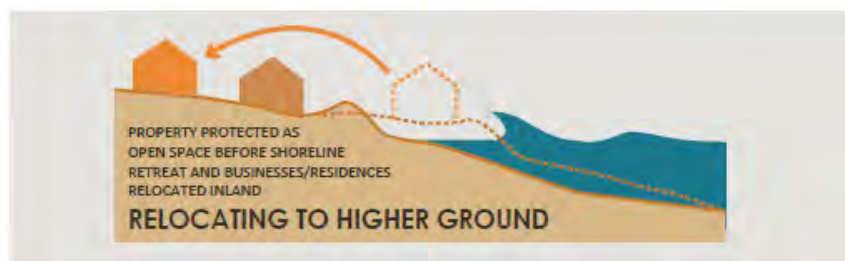
A. Incorporate Coastal Resilience Plans Into The POCD		
1. <u>Incorporate coastal resilience plans into the POCD.</u>		
a. <u>Consider the 2016 Coastal Resilience Plan for Branford as part of this POCD.</u>	<input type="checkbox"/>	
b. <u>Consider the 2017 SCRCOG Regional Framework for Coastal Resilience as part of this POCD.</u>	<input type="checkbox"/>	
c. <u>Consider the 2018 SCRCOG Multi-Jurisdiction Hazard Mitigation Plan as part of this POCD.</u>	<input type="checkbox"/>	
d. <u>Continue to participate in updating and maintaining the SCRCOG Hazard Mitigation Plan in order to coordinate and guide regional efforts.</u>	<input type="checkbox"/>	

B. Establish A Coastal Vulnerability Working Group		
1. <u>Establish a coastal vulnerability working group.</u>		Reactivate the Flood & Erosion Control Board? New Committee?
a. <u>Establish a framework and/or program for addressing coastal vulnerability issues:</u> <ul style="list-style-type: none"> <u>Cost-benefit analysis</u> <u>Life-cycle costing</u> <u>Greater good of the community</u> 	<input type="checkbox"/>	
b. <u>Assemble information in terms of "orders of magnitude" for the costs associated with different coastal vulnerability responses (based on sea level rise scenarios of 2, 4, and 6 feet)..</u>	<input type="checkbox"/>	
c. <u>Prepare a conceptual capital improvement program to balance affordability with coastal issues / needs.</u>	<input type="checkbox"/>	

C. Address Other Coastal Vulnerability Issues

1. Evaluate whether Branford should impose stricter restrictions on development in coastal floodplain areas.	
2. Investigate ways to partner with regional, state, and federal agencies to encourage property owners to retreat from vulnerable locations over a long period of time through a combination of: <ul style="list-style-type: none">• Income tax deductions• Property tax relief for land dedication• Other approaches.	
3. Continue to work with regional, state, and federal agencies and other organizations to address issues related to coastal vulnerability	

Resilience Strategy Alternatives | Montauk



Dodson & Flinker

Reference Materials

1. Branford Plan of Conservation and Development (2008)
2. Branford Coastal Resilience Plan 2016
3. Regional Framework for Coastal Resilience, SCRCOG, 2017
4. SCRCOG Multi-Jurisdiction Hazard Mitigation Plan
5. A Salt Marsh Advancement Zone Assessment (2014)
6. Moody's Investor Services –Environmental Risks Assessment (Climate Change) 2017
7. SCRCOG Draft Regional Plan (2017)
8. Zoning Regulations

Are there any other policies or action steps you believe should be included in Branford's coastal issues strategies?

If so, please make notes below.

Notes & Comments



Planimetrics

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