

# Town of Hull Conservation Dept.

Presentation to the Select Board

02 February 2022

C. Krahforst  
Conservation Administrator  
Renee Kiley  
Conservation Clerk

# What we do:

- Administer WPA
  - a. Assist Applicants in permitting
  - b. Review Applications and Plans
  - c. Set Agendas
  - d. Determine Resources Areas and Functionality
  - e. Determine FEMA Flood Zones and associated criteria
  - f. Conduct Conservation Commission meetings (twice monthly)
  - g. Organize site visits
  - h. Draft decisions *(Jan '21 – Jan '22: 61 NOIs, 22 RDAs, does not include CoC, Amendments, EO or non-compliance notices)*
  - i. Address compliance/violation issues
  - j. Participate in Litigation (Depositions, Witness)
  - k. Is area within c.91 Jurisdiction?

- Grants (writing, solicitation of contractors, Grant Administration
  - a. CZM Coastal Resiliency Grants (~\$600 K FY19 – present)
  - b. EEA's Municipal Vulnerability Preparedness Program
  - c. MAPC –technical assistance
  - d. Community Preservation Act (Straits Pond) (also Mass. Trails Program)
  - e. Hull's Elevation Grant Program





















# Municipal Vulnerability Preparedness

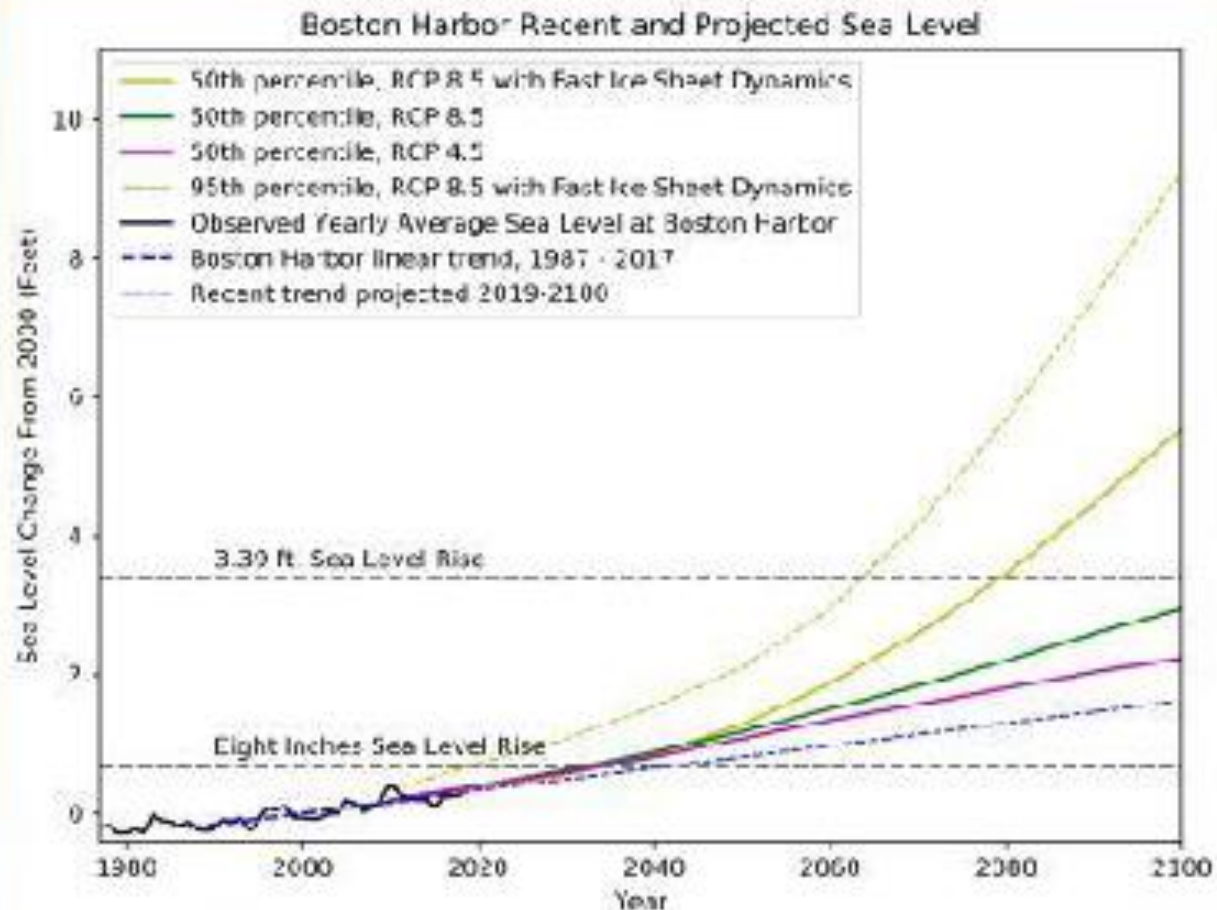


<https://www.town.hull.ma.us/conservation-department/pages/mvp-vulnerability-study-2019>



## Sea level rise: Projected to 2100 for Boston Harbor

Source: Northeast Climate Adaptation  
Science Center and MAPC





## Highest Priorities:

- **Nantasket Beach and Dune System**
- **Nourish the beach for enhanced protection.**
- **Wastewater Treatment System:**
- **Vulnerable populations:** Improve outreach and communication to seniors and low income populations.
- **Alternative Energy:** Develop alternative energy sources for the town. This will address both resilience and the need for climate mitigation.
- **Remove vulnerable trees that may impact power lines.**
- **Low-lying roadways:** Consider elevating critical roadways.

(Nantasket and Atlantic Avenues, Fitzpatrick Way, A Street, Hull Shore Drive, and Hampton Circle)

- **Seawalls:**
- **Stormwater:** Improve capacity of pipes and drainage pumps. Use zoning and Low Impact Development strategies to reduce impervious surfaces.
- **Communications:** Harden communications with alternative sources and redundancy. Adopt First Responder Network” for improved communication



# MAPC Technical Assistance

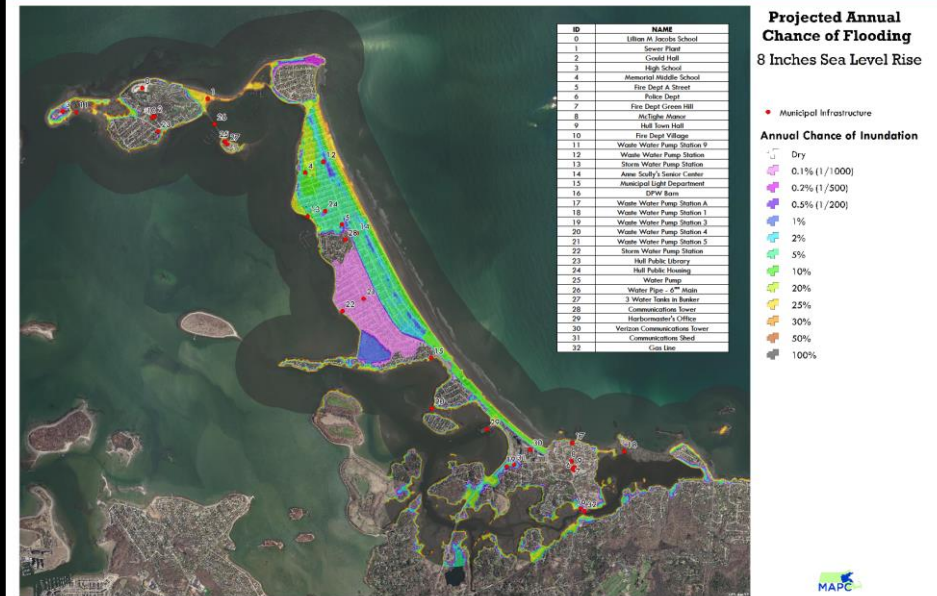
- Currently contracted to applying the Massachusetts Coast-Flood Risk Model

Now what?

# Hull

## Built Environment

Coastal storms are projected to subject roads and buildings to more frequent and severe flooding. Flooding may also result from increasing large rainfall events. Power outages affecting infrastructure and communications may become more frequent as a result of high energy demand during hurricanes. Water outages may increase as a result of more energetic water storms and hurricanes.



Map Source: Kleinfelder: Coastal Climate Change Vulnerability Assessment and Adaptation Study, Town of Hull, MA, June 30, 2016. Modeling from Woods Hole Group, Boston Harbor Flood Risk Model (BH-FRM). These maps are unrelated to FEMA flood maps. The flood scenarios shown here include only coastal surge flooding, not flooding from rainfall and runoff. The future flood scenarios shown in the maps are derived from combinations of sea level rise projections and changes in coastal storm intensity (winds become more severe at the end of the century). The map was developed through rigorous but approximate physically-based modelling, so borders of the floodplain and flood likelihood categories should not be interpreted as exact. Maps should not be used to assess flood hazard at the single-building level.



MVP Target Pilot

January 28, 2022





## What we do (continued):

- FEMA's Community Rating System
  - a. Flood Elevation Certificate compliance (coordinates with Building Dept)
  - b. Flood Information Sharing documented
  - c. Outreach to realtors regarding flood information (documented)
  - d. Outreach to residents of the community re: Flood information
  - e. Evaluate FEMA Flood insurance claims for the community
  - f. Open Space Planning
  - g. Local Bylaw incentives (Flood overlay district, Freeboard Incentive, etc)
  - h. Ensure erosion control measures for construction in floodplain
  - i. Hazard Mitigation Planning**
  - j. New requirements (V-Certificates, Flood proofing Certificates, Construction Certificate Management Procedures)

## Resiliency Planning

8/9/2017

update info on flooding critical areas  
then go through what we've done  
set goals for next 5 yrs, prioritize.

perhaps add another one to look at the 12700

2 public meetings. ~~Worman~~

- one piggy back on PB or concomm
- one selectmen

## Newly Identified.

- A-L St on Central Ave - add for flooding.
- Boat House @ Pemberton Pier. Bayshore impact

## Historic Sites

- Carousel

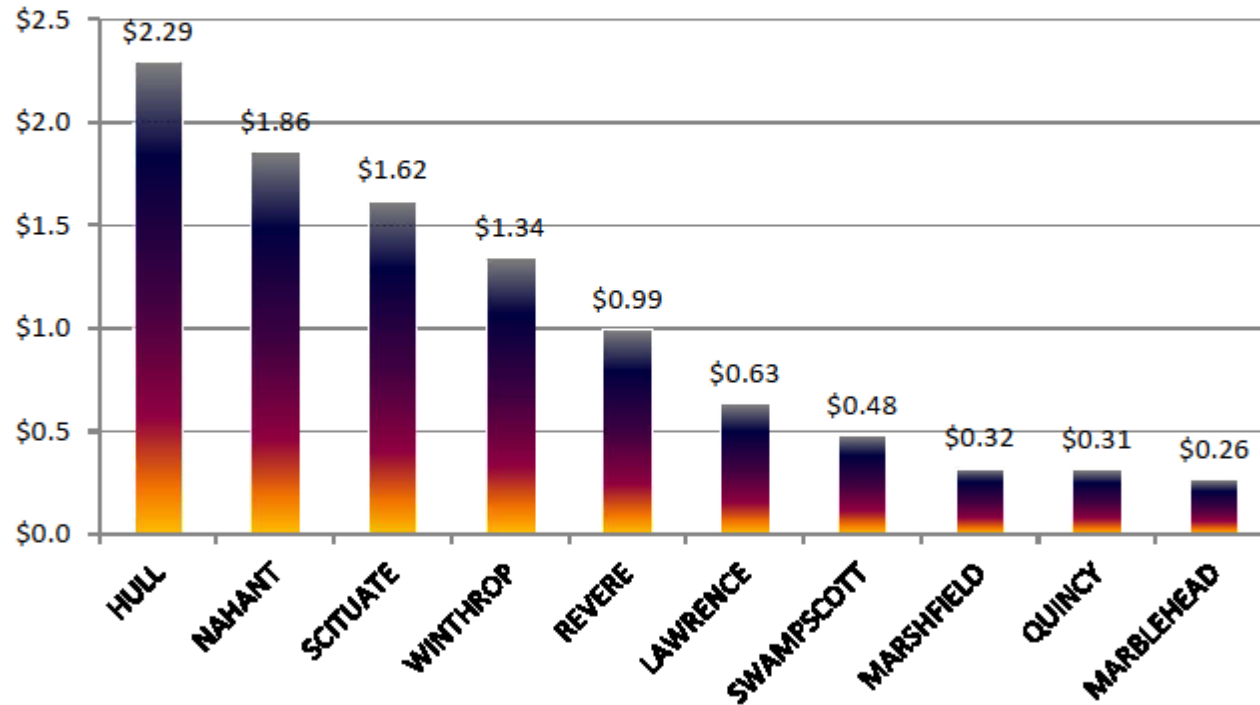
## Potential Future Development

## Table 11

- remove G.W. Blvd beach
- remove Beacon shed on 157 Main St
- 4 St breakwater, remove
- remove 162
- add Spinnaker Isle beach
- remove 157
- remove tr town baptist church (31)
- 64/63, combine
- ~~160~~ - top of strawberry hill, same w/ 160



**Top 10 MA Towns: Total NFIP Claims Paid per unit Area  
(\$/square meter; 1978 - May 2018)**



**Krahforst, Chris**

**From:** Duperault, Joy (DCR) <joy.duperault@state.ma.us>  
**Sent:** Tuesday, February 1, 2022 8:33 AM  
**To:** Krahforst, Chris; Willmer, Ralph  
**Cc:** Lemnios, Philip; Burtner, Jason (ENV)  
**Subject:** RE: Town of Hull Request for Technical Assistance

May I add that if there's one community in MA that would most need to perform this type of assessment, it would definitely be Hull. Thank you for considering the town's application!

**Joy Duperault, CFM**

State NFIP Coordinator/Director, Flood Hazard Management Program  
MA Dept. of Conservation & Recreation  
617-626-1406 or [joy.duperault@mass.gov](mailto:joy.duperault@mass.gov)  
<https://www.mass.gov/guides/floodplain-management>

**From:** Krahforst, Chris <ckrahforst@town.hull.ma.us>  
**Sent:** Monday, January 31, 2022 4:50 PM  
**To:** Willmer, Ralph <rwillmer@mapc.org>  
**Cc:** Lemnios, Philip <plemnios@town.hull.ma.us>; Duperault, Joy (DCR) <joy.duperault@mass.gov>; Burtner, Jason <jason.burtner@mass.gov>  
**Subject:** Town of Hull Request for Technical Assistance

**CAUTION:** This email originated from a sender outside of the Commonwealth of Massachusetts email system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear Mr. Willmer,

Please find attached the Town of Hull's request for technical assistance from MAPC to help add to our efforts to address climate change and build resiliency for coastal community. We hope to develop further our partnership with MAPC to produce effective management strategies to address climate change impacts not only for the now but the distant future. Please let us know if we can provide any additional information that may be helpful in ensuring a successful partnership in this endeavor.

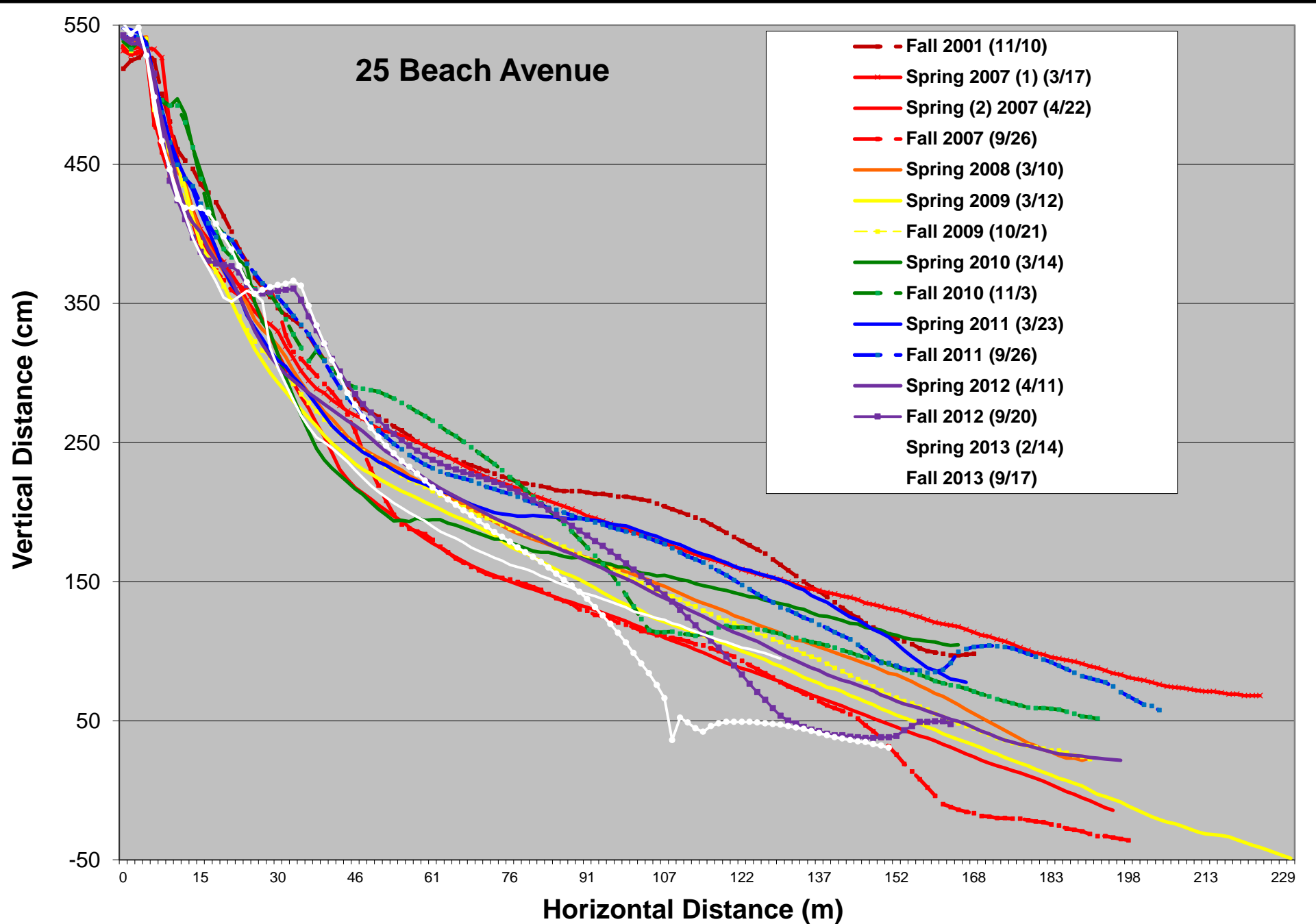
- Straits Pond
  - a. Water quality monitoring
  - b. Tide gate operations and maintenance
  - c. Conservation
  - d. Research and mitigation (midges, algae, water pollution)
- Dept. website management
- GIS data layer maintenance and analyses (new orthophotos available *yesterday*)
- Coordination among Town Depts.
  - a. Seawalls (Permitting support, Pt. Allerton Nantasket Ave Seawall)
  - b. Road Reconstruction
  - c. Storm Drainage
  - d. MS4 Stormwater Authority
- Storm Damage monitoring and Reporting, member of the State Emergency Support Function Team



- North Nantasket Beach Management
  - a. Beach Management Plan (updated in 2019, needs new)
  - b. Beach Grass Planting
  - c. Dune monitoring (note: BMC does an aspect of this too)
  - d. Nourishment,
  - e. DPW oversight in cleanups and dune restoration



• Pre-





# What's coming down the pike and what we could/should be doing

- Floodplain Bylaw (required after FEMA Flood Maps are updated)
- FEMA Funding **Building Resilient Infrastructure and Communities and Flood Mitigation Assistance**
- Integration of ARPA Funding Initiatives in Hazard Mitigation
- Certification for Floodplain Management
- Participation in Regional and State initiatives for Climate Change vulnerability and Floodplains Management
- Participation in Climate Change Mitigation and Floodplains Management Training

## Section 2. Required Local Bylaws

- For those National Flood Insurance Program minimum requirements that are not found in existing state law, the following articles must be adopted by the community as a part of their local bylaws or ordinances, if these are not already adopted. The suggested language in this section is compliant with the federal requirements.
- Designation of community Floodplain Administrator:

The Town/City of \_\_\_\_\_ hereby designates the position of \_\_\_\_\_ to be the official floodplain administrator for the Town/City.



# Dept. FY23 Budget increase of 36% sought for:

- **Assistant Director, Conservation, Town of Hull**

The Town of Hull is seeking qualified applicants for the full-time position of Assistant Conservation Director. The Assistant Director provides support, coordination and professional management to the Conservation Director and Conservation Commission in carrying out its mandate and its mission to protect the Town's natural resources and serves as a liaison between the Town, developers, and the public, while promoting the best interests of the Town in matters of conservation and wetlands protection. Assistant Director essential functions include, but are not limited to: Reviews conservation permit submittals including Request For Determination Of Applicability, Abbreviated Notice Of Resource Area Determination, Notice Of Intent, Enforcement Order, Emergency Certification and other conservation permits; reviews for completeness of documentation, fees, abutter notification, etc., identifies any missing submittal requirements, notifies applicants directly or by providing a detailed additional information request and deadlines for resubmittal, and advises the Director of any missing submittal requirements; reviews Building Permits and Planning Permit submittals assigned to the Conservation Department, notifies Conservation Director if additional conservation permitting is required and performs sign-off as appropriate. Prepares relevant forms/reports and documentation. Performs on-site inspections for numerous purposes including wetland delineation reviews, conservation permit submittal field observations and documentation, pre-commencement of work meetings, enforcement action, response to complaints and other germane reasons. Notifies Conservation Director and Commission of violations. Maintains WPA permit database, prepares draft Conservation Commission agendas for Commission review, and ensures timely submission of Conservation Commission meeting minutes. Conducts due diligence reviews associated with a range of public requests from homeowners, realtors, lawyers, builders, developers, town officials as examples to address new construction or construction on existing lots within conservation jurisdictional boundaries and violations. Ensures awareness of Wetlands Protection Act and state regulations, germane town bylaws that overlap conservation laws and regulations, physical presence of Hull wetlands and natural resource areas. Assists Conservation Director in meeting requirements of the FEMA Community Rating System. Minimum of an associate's degree in environmental science, conservation biology, ecology or a related field, Class D operator's license, one to three years of related work in wetlands protection, land conservation, environmental management or a related field, or an equivalent combination of education and experience. Knowledge of Massachusetts conservation laws, Wetlands Protection Act and Regulations, and local Wetland Protection Ordinance and Regulations. Knowledge of GIS software (i.e., ESRI ArcMap) and OpenGov programs a bonus. Notary Public helpful. MACC Fundamental Certificate preferred.

## Restoration

# Large-Scale Beach & Dune Nourishment Planning





Request the Town to recruit strong candidates for Commissioners on the Conservation Commission

# October 2021 Drone Survey