

# Building Shoreline Resiliency in Marshfield & Duxbury Through Beach & Dune Nourishment

Public Meeting – August 18, 2021

Source: Wicked Local

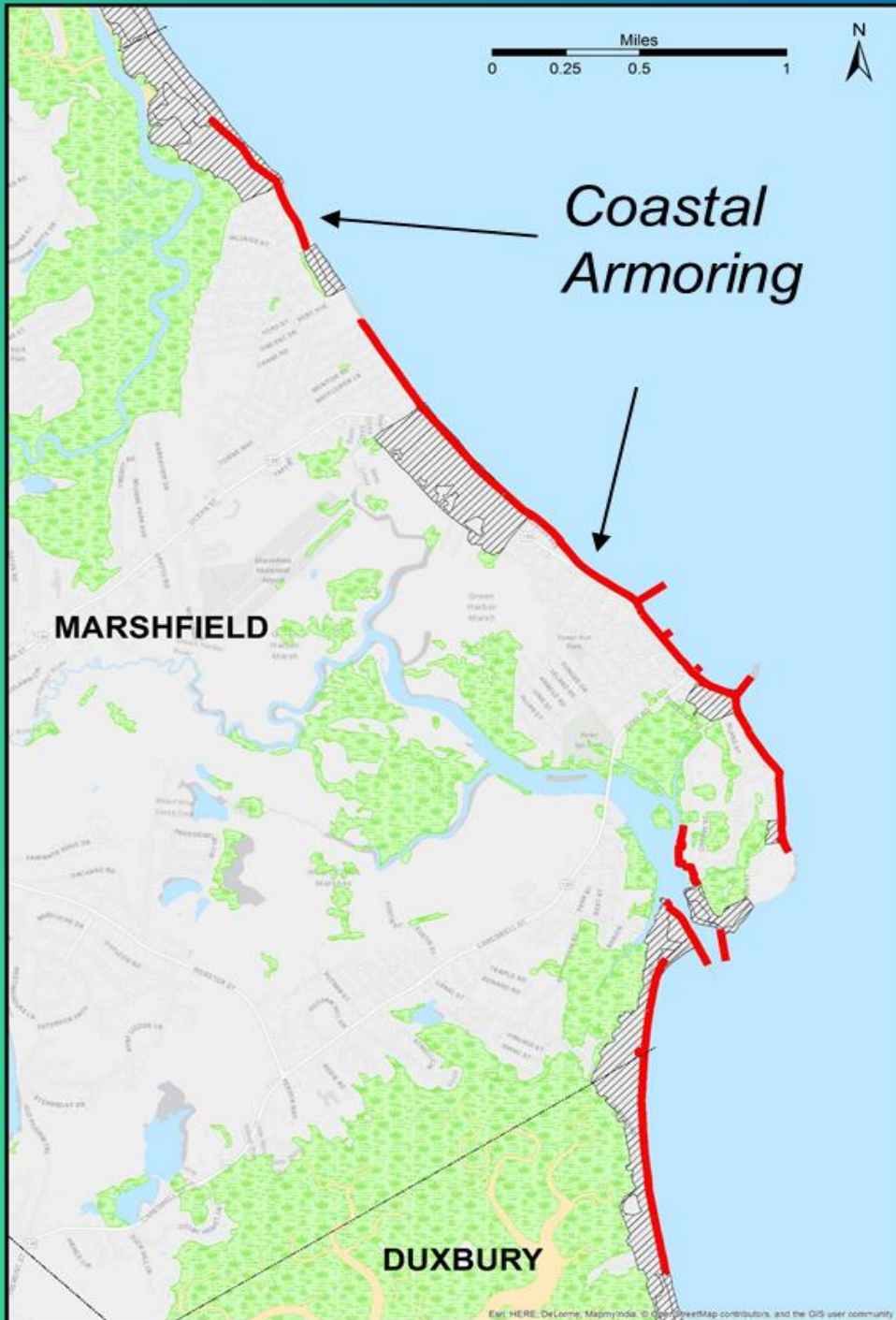




## Meeting Agenda

- Introductory Remarks – Towns of Marshfield & Duxbury
- Presentation on Project Need & Proposed Activities
- Requirements for Easements to be Signed by Private Property Owners
- Estimated Schedule
- Questions & Answers





## Project Goals

- ID locations where beach & dune nourishment can be implemented to build shoreline resiliency at critically eroded beaches
- Complete engineering design
- Complete environmental permitting
- Conduct public education on benefits of nourishment & build support for the project



### *Coastal armoring*

- *Marshfield – 83%*
- *Duxbury – 91%*

# Coastal Armoring Impacts



## Pros & Cons of Armoring

Pro: last line of defense for erosion

Con: adversely impacts fronting beaches

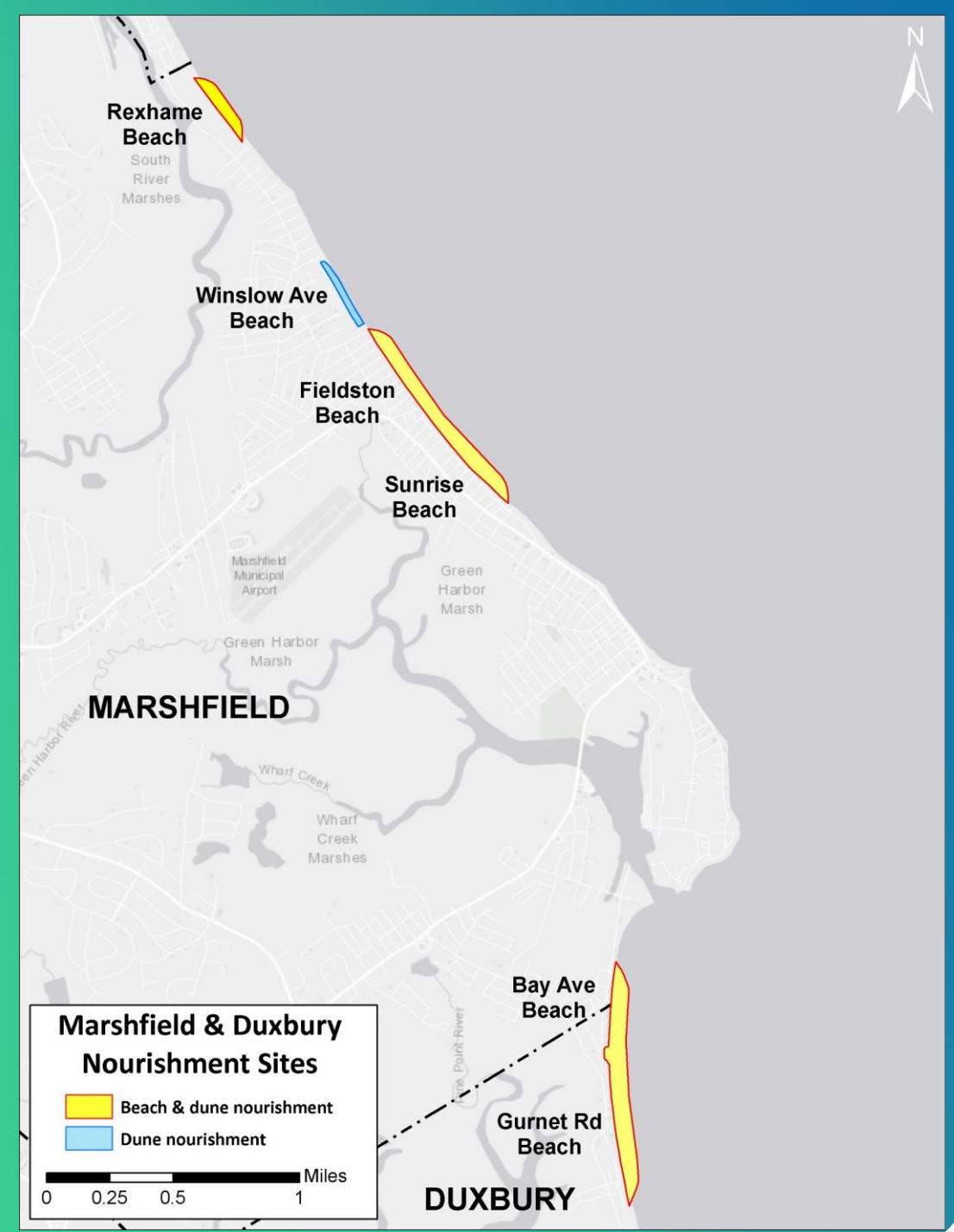


Source: Patriot Ledger



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## Selected Sites

### Dune Nourishment

- Winslow Ave. Beach

### Beach Nourishment

- Rexhame Public Beach
- Fieldston & Sunrise Beaches
- Bay Ave. & Gurnet Rd. Beaches

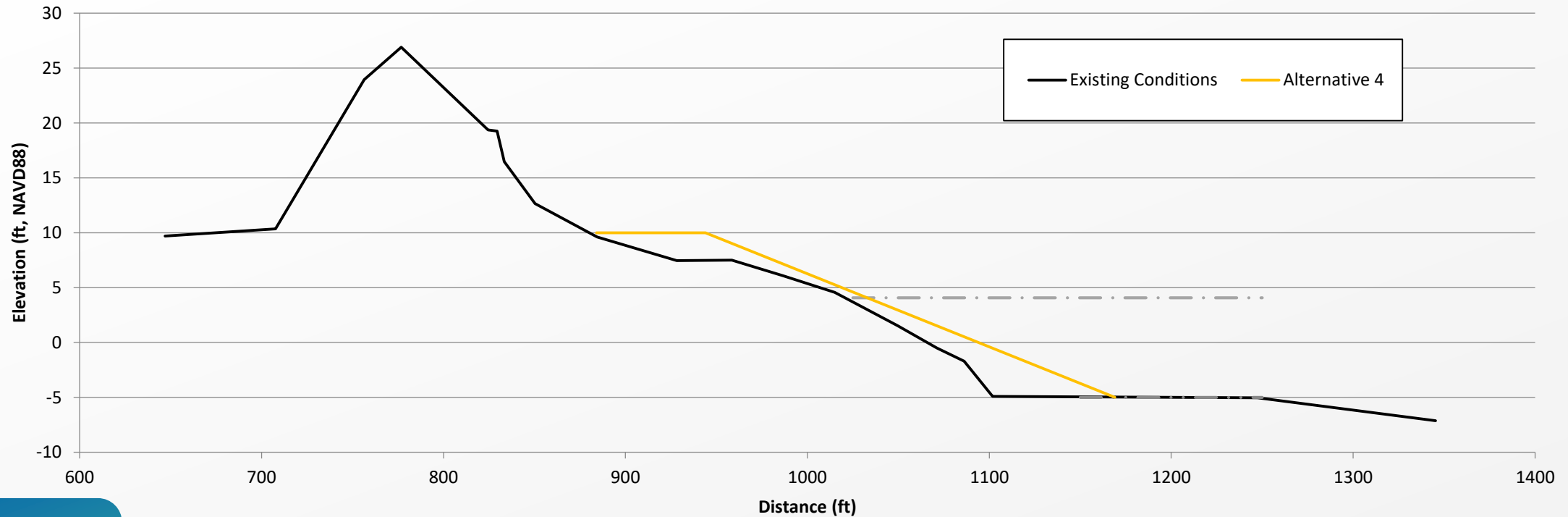
# Rexhame Public Beach



- 8.2 acres
- 33,870 cy fine to medium-grained sand
- 1,650 linear ft -Town of Marshfield property
- Benefits for:
  - Storm damage protection
  - Recreation
  - Shorebird habitat

# Rexhame Public Beach – Cross Section

**Transect 3 - Rexhame Public Beach**



- 10 ft NAVD88 berm elevation
- 60 ft wide berm
- Gradual 15H:1V nearshore slope



# Winslow Ave. Beach (Porter St. To Rexhame Rd.)

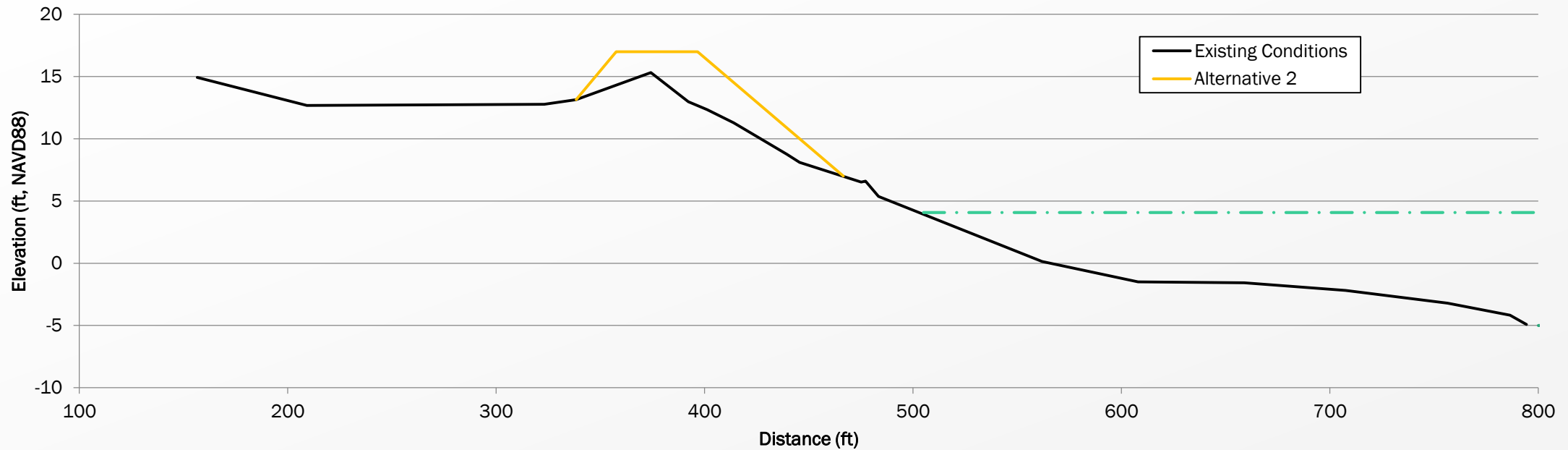


- 4.5 acres
- 17,850 cy cobble and gravel sized sediment
- 1,540 linear ft -Town of Marshfield property
- Benefits for:
  - Storm damage protection



# Winslow Ave. Beach – Cross Section

Transect 9 - Winslow Ave Beach (Kent Ave)



- 17 ft NAVD88 dune crest elevation
- 40 ft wide dune crest
- 7H:1V seaward slope

# Fieldston & Sunrise Beaches (Rexhame Rd. to 1st St.)

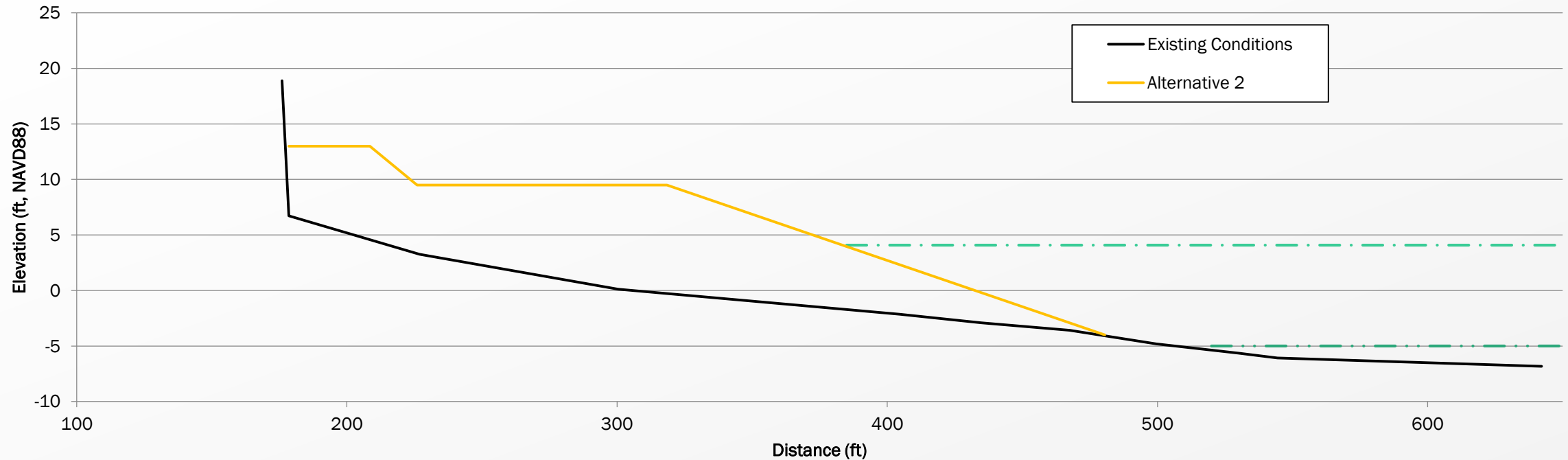


- 30.5 acres
- 390,000 cy sand mixed with gravel & cobble
- 5,600 linear ft
- 1 Town of Marshfield parcel
- 66 private properties
- Benefits for:
  - Storm damage protection
  - Reduced wave overtopping
  - Recreation
  - Shorebird habitat



# Fieldston & Sunrise Beaches – Cross Section

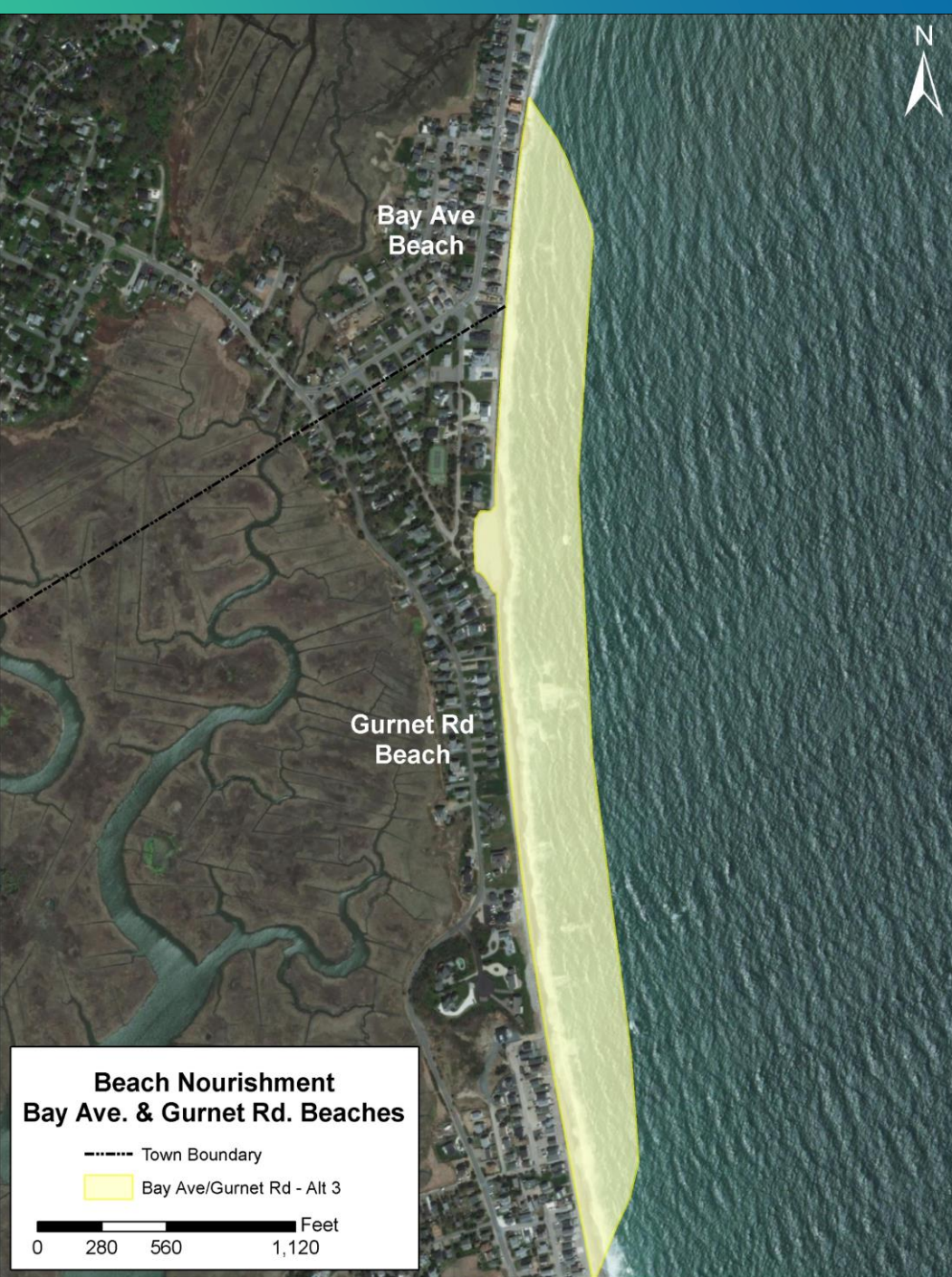
**Transect 12 - Sunrise Beach (11th St)**



- 30 ft wide dune crest at elevation 13 ft NAVD88
- 90 ft wide berm at elevation 9 ft NAVD88
- Gradual 12H:1V seaward slope

# Bay Ave. & Gurnet Rd. Beaches (N of Pearl St. to end of Ocean Rd. South)

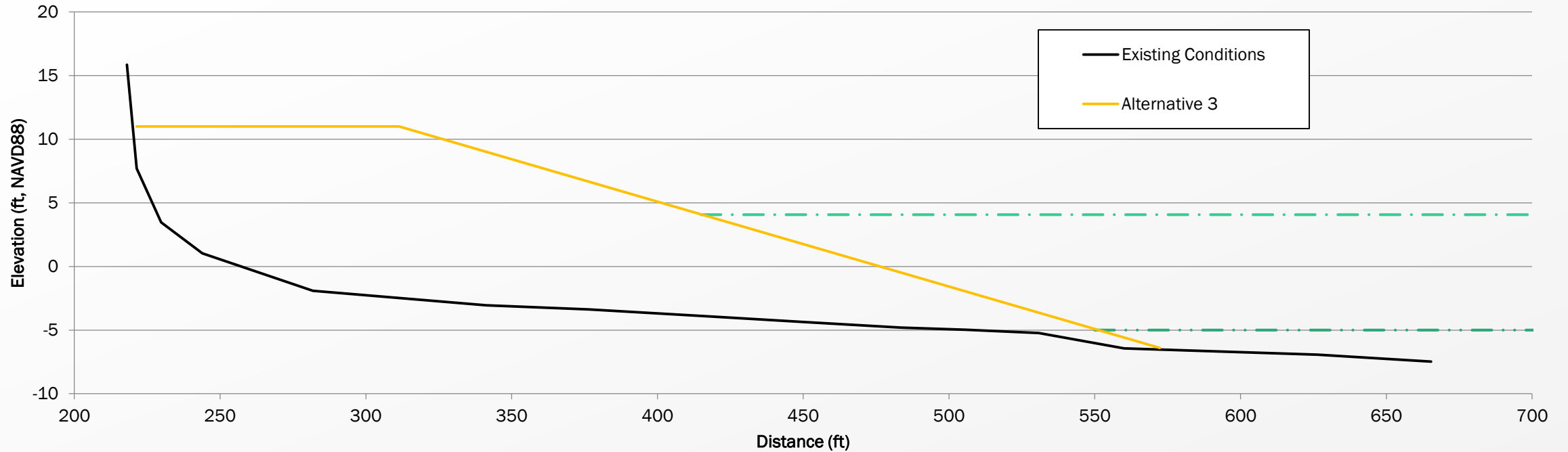
- 38.1 acres
- 480,640 cy sand mixed with gravel & cobble
- 5,090 linear ft (970 ft in Marshfield/4,120 ft in Duxbury)
- 16 private properties in Marshfield
- 66 private properties in Duxbury
- Benefits for:
  - Storm damage protection
  - Reduced wave overtopping
  - Recreation
  - Shorebird habitat





# Bay Ave. & Gurnet Rd. Beaches – Cross Section

Transect 19 - Bay Ave Beach



- 90 ft wide berm at elevation 11 ft NAVD88
- Gradual 15H:1V seaward slope

# Easements

- State regulation (310 CMR 9.40(4)(a)1) requires easements from private property owners to allow public access along beaches that are nourished with public funds.
- The easements would allow the public to walk along areas of the beach seaward of the pre-project high water mark.
- Letters and easement documents have been sent to the property owners.
- 54% returned in Marshfield & 23% returned in Duxbury
- 51% returned for Fieldston & Sunrise
- 28% for Bay Ave. & Gurnet Rd.
- All property owners need to sign & return the easements so the projects can proceed





# Questions & Answers

[https://www.town.duxbury.ma.us/sites/g/files/vyh1if3056/f/uploads/czm\\_grant\\_public\\_outreach\\_question\\_and\\_answer.pdf](https://www.town.duxbury.ma.us/sites/g/files/vyh1if3056/f/uploads/czm_grant_public_outreach_question_and_answer.pdf)

## What rights are being sought?

- *Public foot passage on nourishment areas, all in front of the seawalls.*
- *Neither town has plans to create new beach access points.*

## What if some people do not sign the easements?

- *Without the easements, the nourishment projects are unable to proceed.*

## What type of sediment will be used for the nourishment?

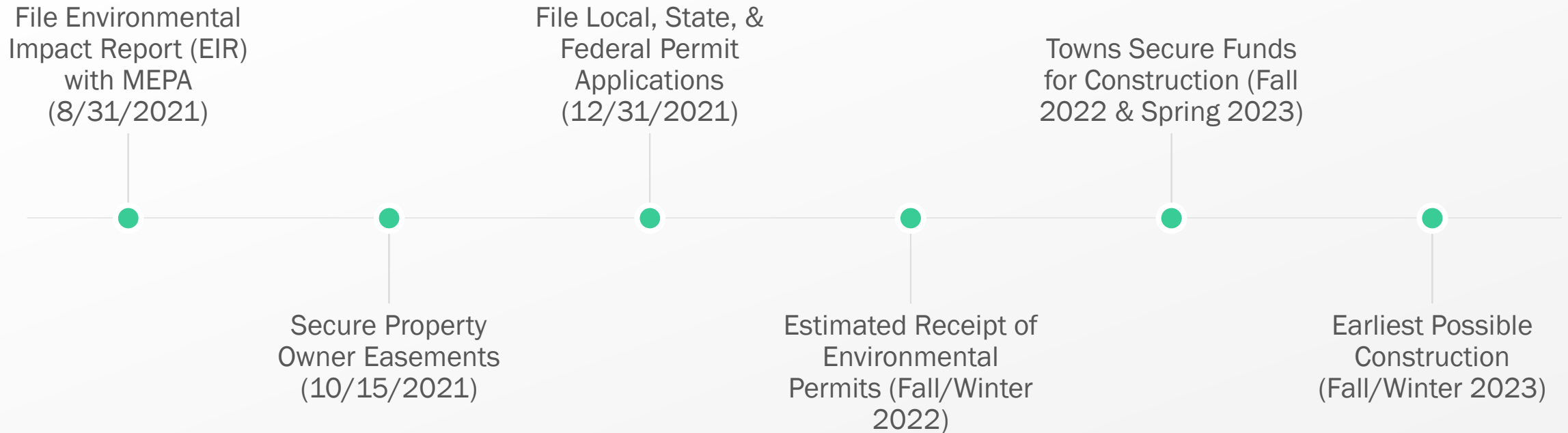
- *The nourishment must match current sediments on the beaches; mixture of sand, gravel, cobble.*

## How long will the nourishment last?

- *Engineering analyses suggest that renourishment will be needed every five years.*

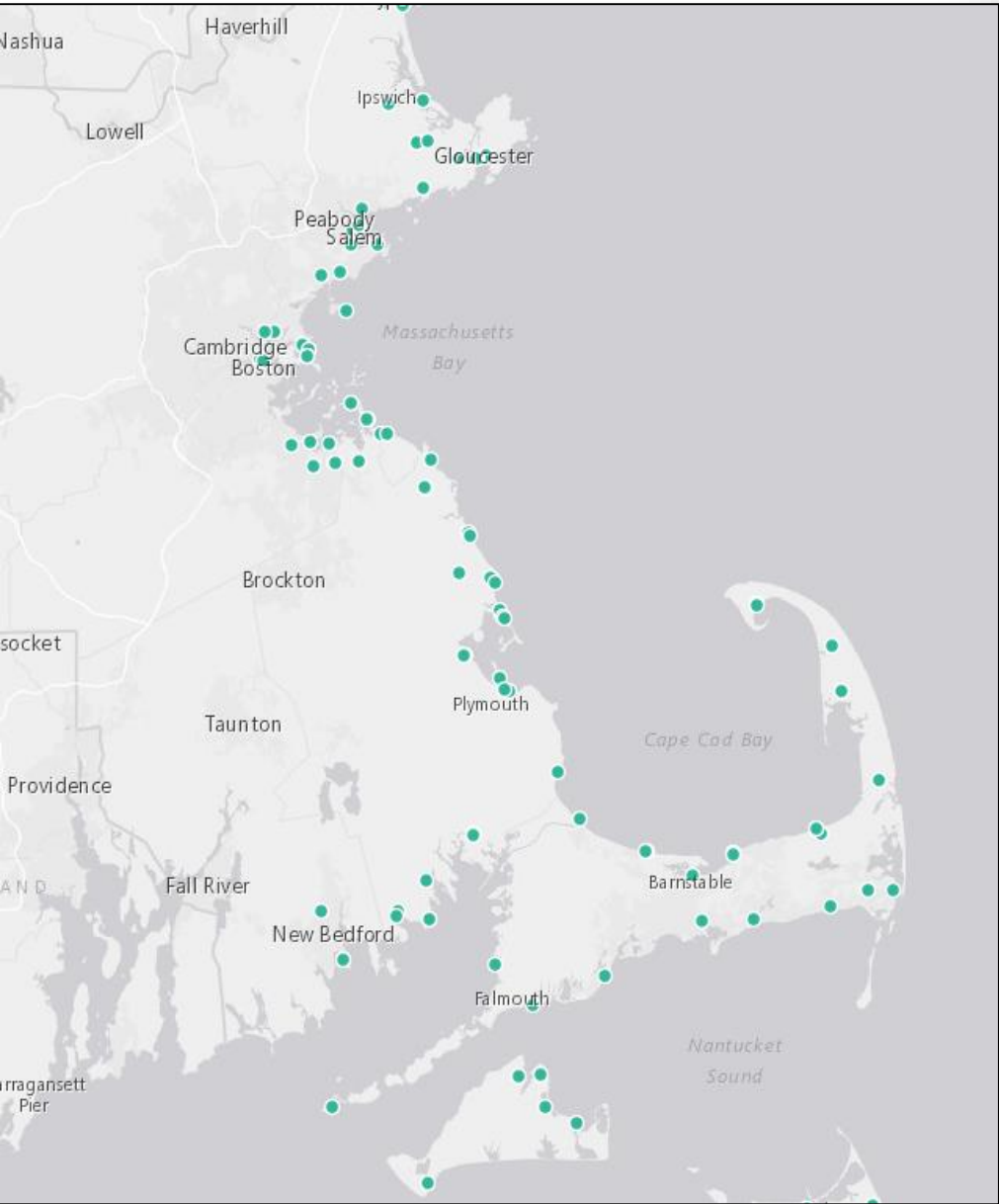


# Next Steps



August 18, 2021





Thank you

Question and Answer Session

Submit Written  
Questions/Comments to:  
[gguimond@townofmarshfield.org](mailto:gguimond@townofmarshfield.org)  
[massard@town.duxbury.ma.us](mailto:massard@town.duxbury.ma.us)

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