

# Impacts to Municipal Infrastructure with Sea Level Rise

Municipal Facilities lower than  
6 feet NAVD88

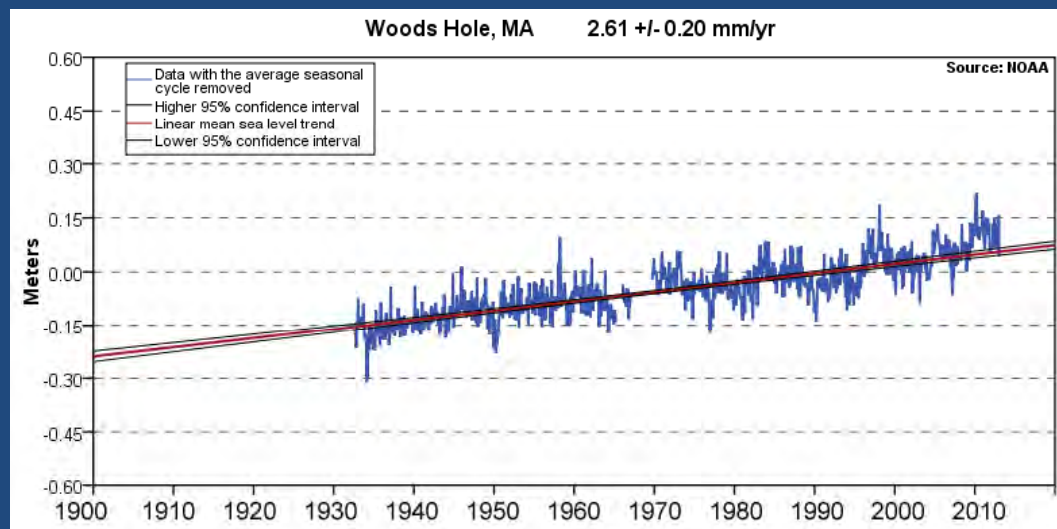


John Rockwell, Buzzards Bay National Estuary Program  
March 28, 2013

# Goals and Definitions

Beginning in the summer of 2013, the Buzzards Bay NEP will conduct a study where we extrapolate the annual high tide level (AHTL) with increasing sea level. Elsewhere, the annual high tide has been nicknamed the King Tide.

For the past hundred years, and for some time earlier, sea level has risen about 10+ inches per century. With warming climates, this rate will increase. Like our study of the expansion of the 100-year floodplain, we will use LiDAR data to extrapolate 1-, 2-, and 4-ft increases in sea level and how it will affect the extent of the annual high tide. On the following pages we give a quick preliminary survey of Buzzards Bay showing the location of the 6 ft Lidar contour, which is close to a +3 ft increase in sea level and how it may affect infrastructure.

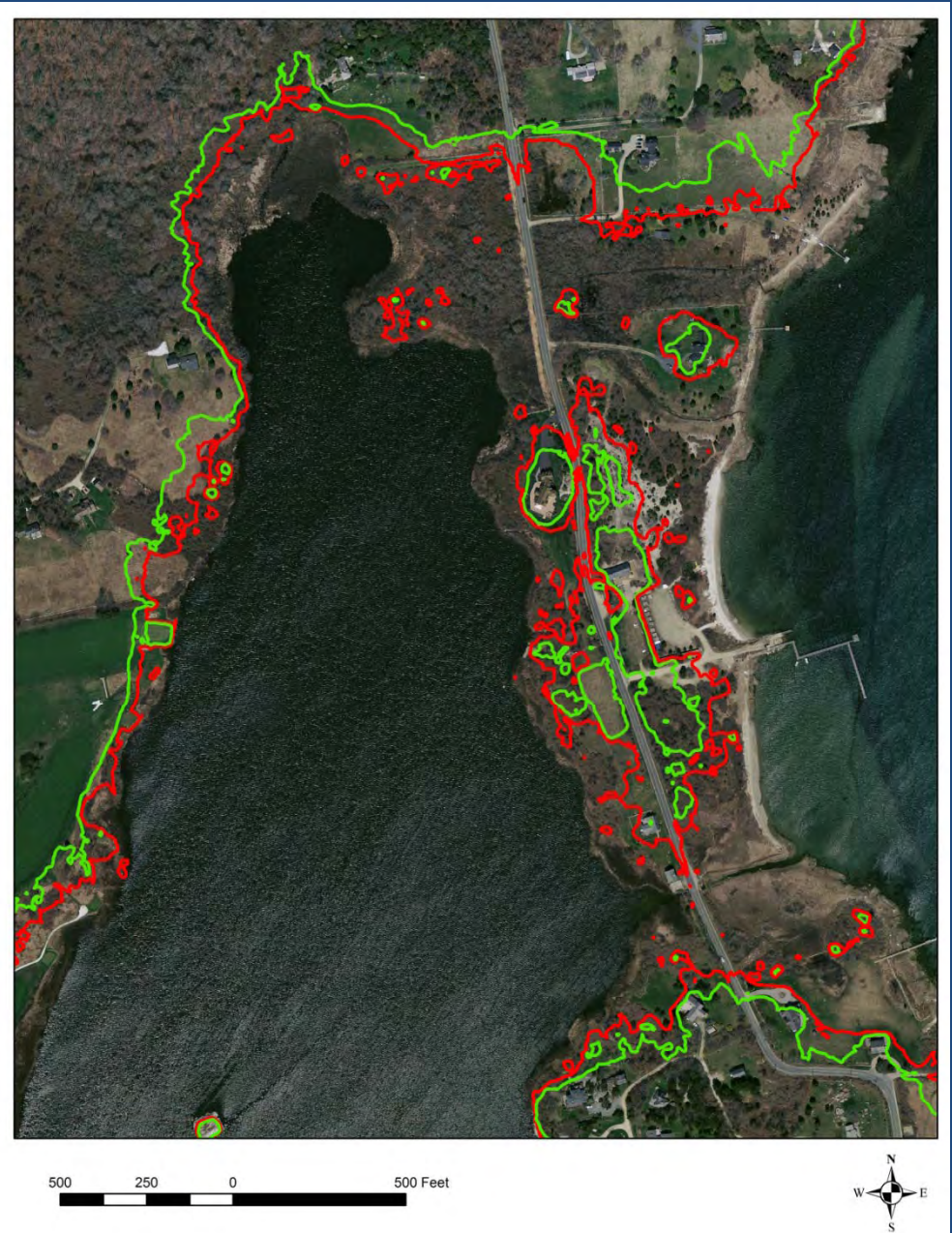


# Westport River Road

AHTL = 3.0 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Westport

## The Point Town Wharf

AHTL = 3.0 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



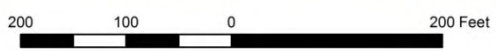
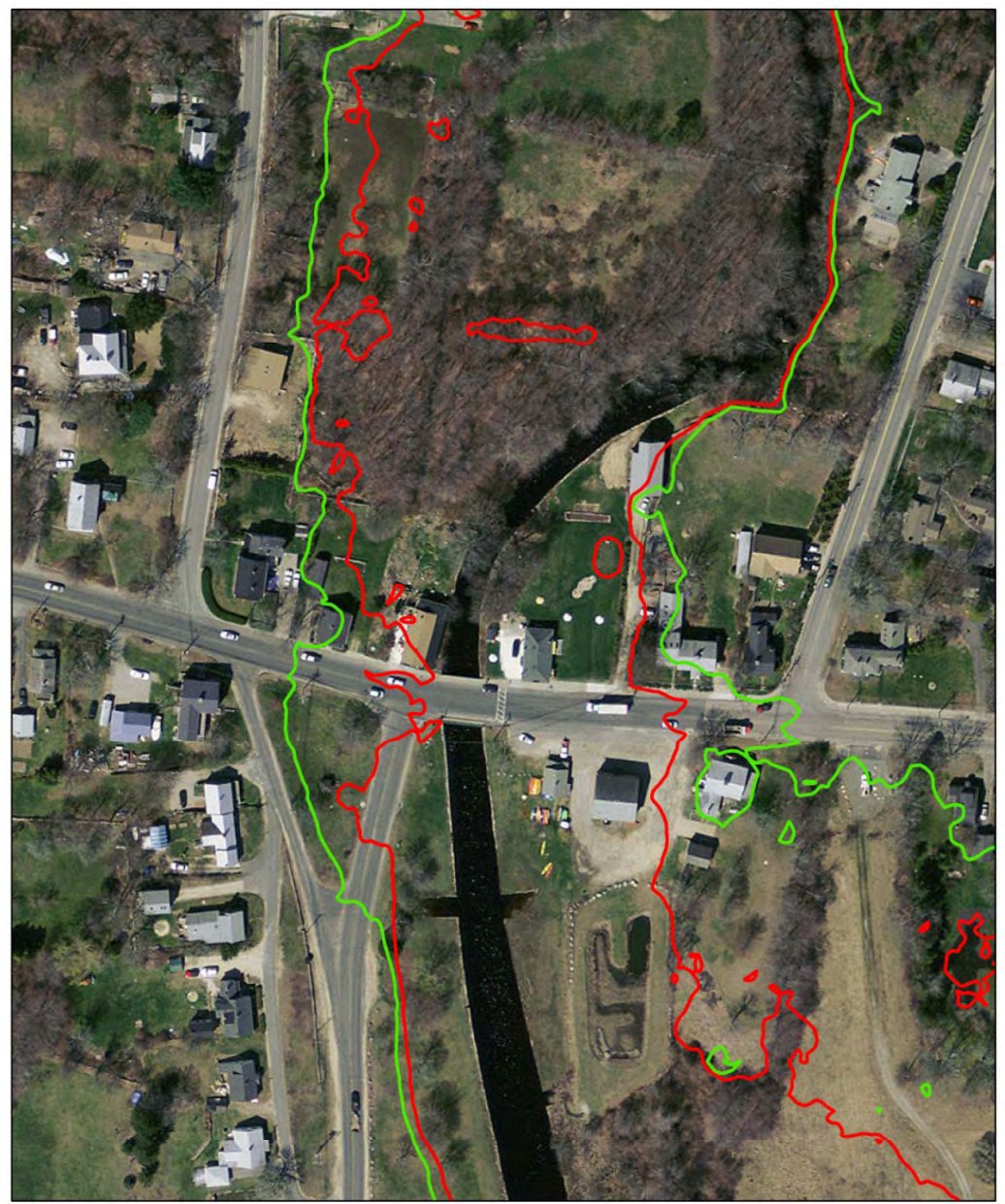
# Westport

## Head of Westport

AHTL = 2.7 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Westport East Beach Road

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



1,000 500 0 1,000 Feet



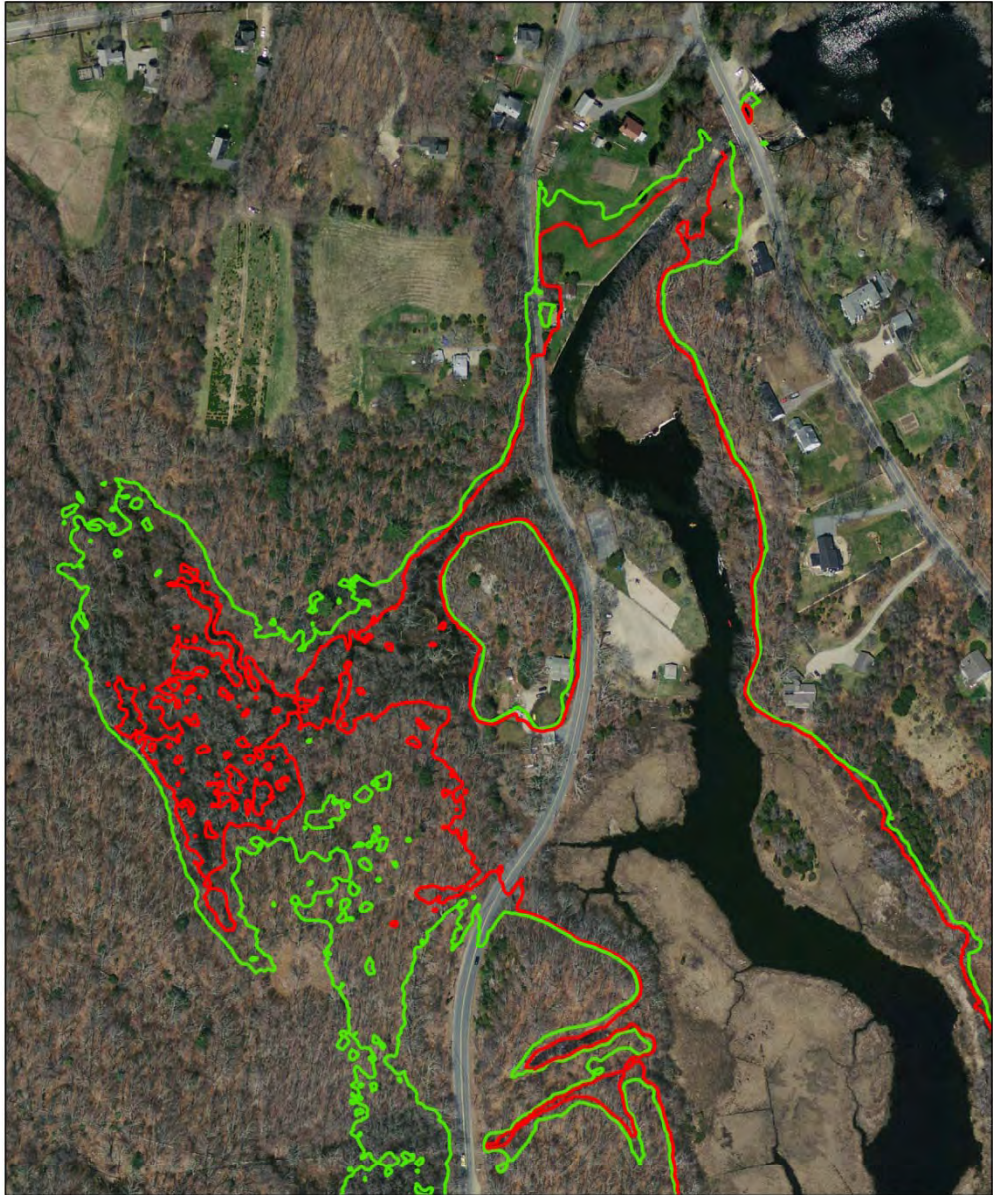
# Dartmouth

# Russell's Mill

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Dartmouth

## Little River Road

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88





# Dartmouth

## Round Hill Beach Road

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Dartmouth

## Gulf Hill & Smith Neck Roads

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



1,750 875 0 1,750 Feet



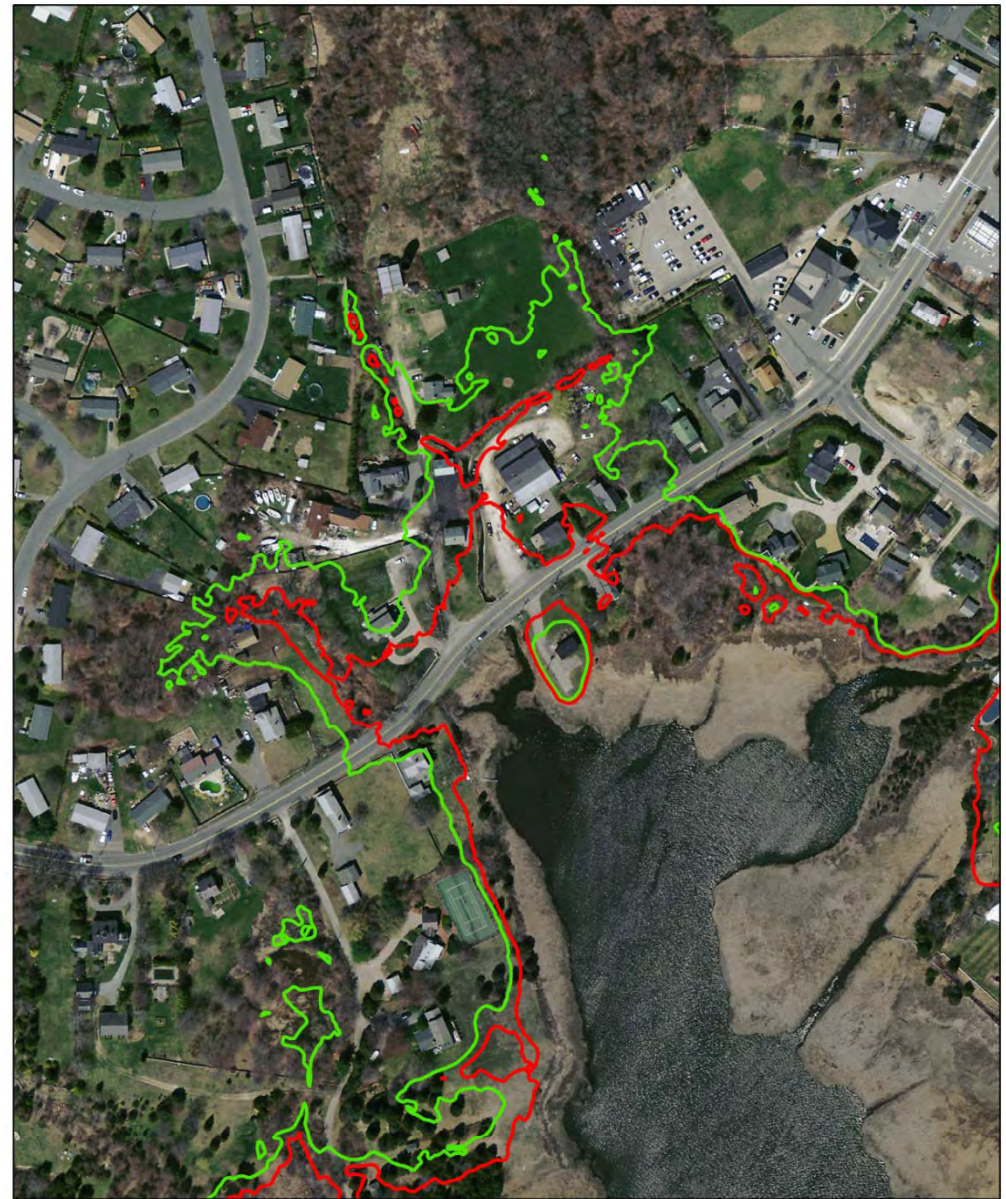
# Dartmouth

## Russell's Mill Road

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# New Bedford Padanaram Avenue

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



500 250 0 500 Feet

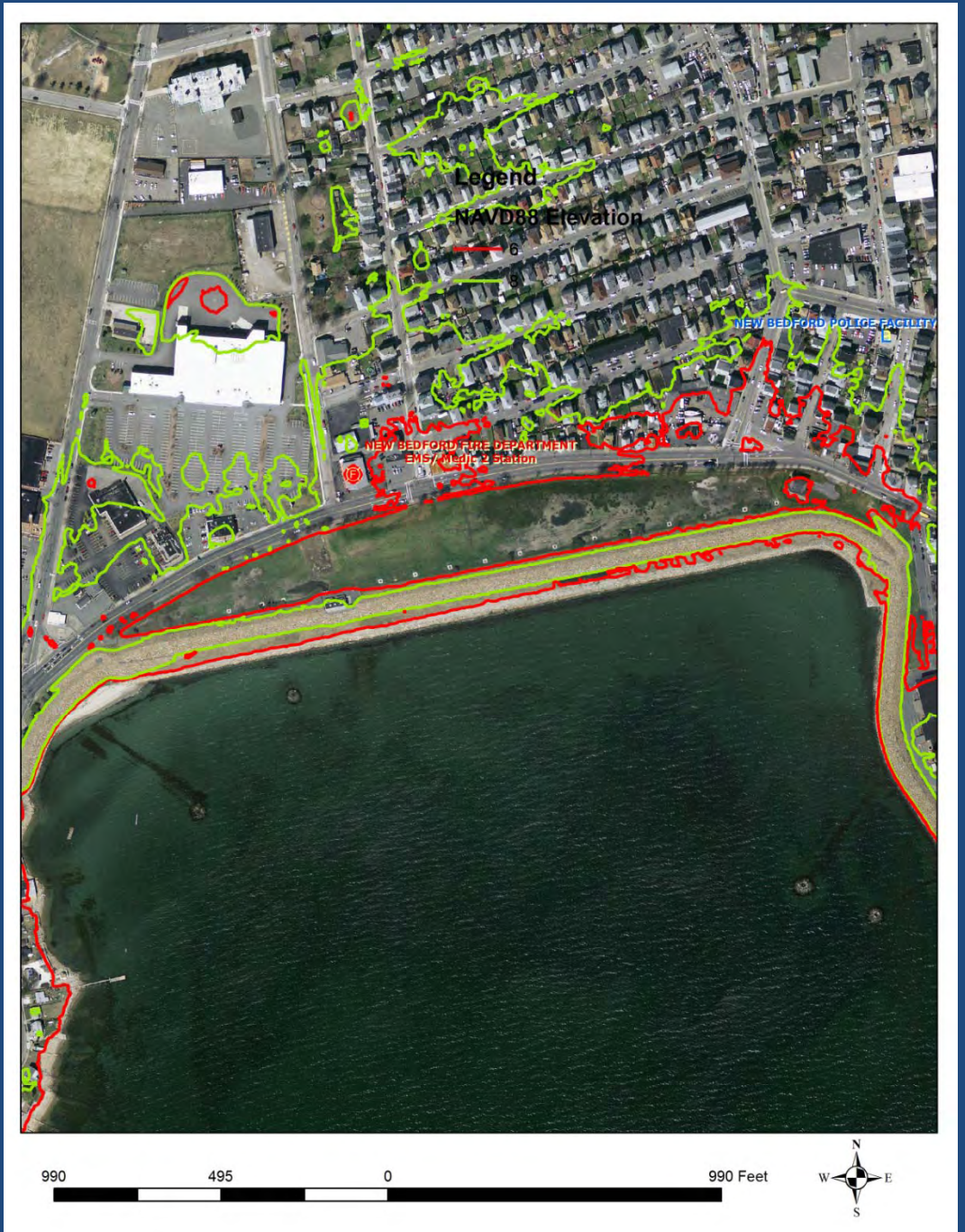


# New Bedford Cove Street

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# New Bedford East Rodney French Boulevard

AHTL = 3.2 feet NAVD88

8.0 feet NAVD88

6.0 feet NAVD88



# New Bedford Waterfront

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# New Bedford Waterfront

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



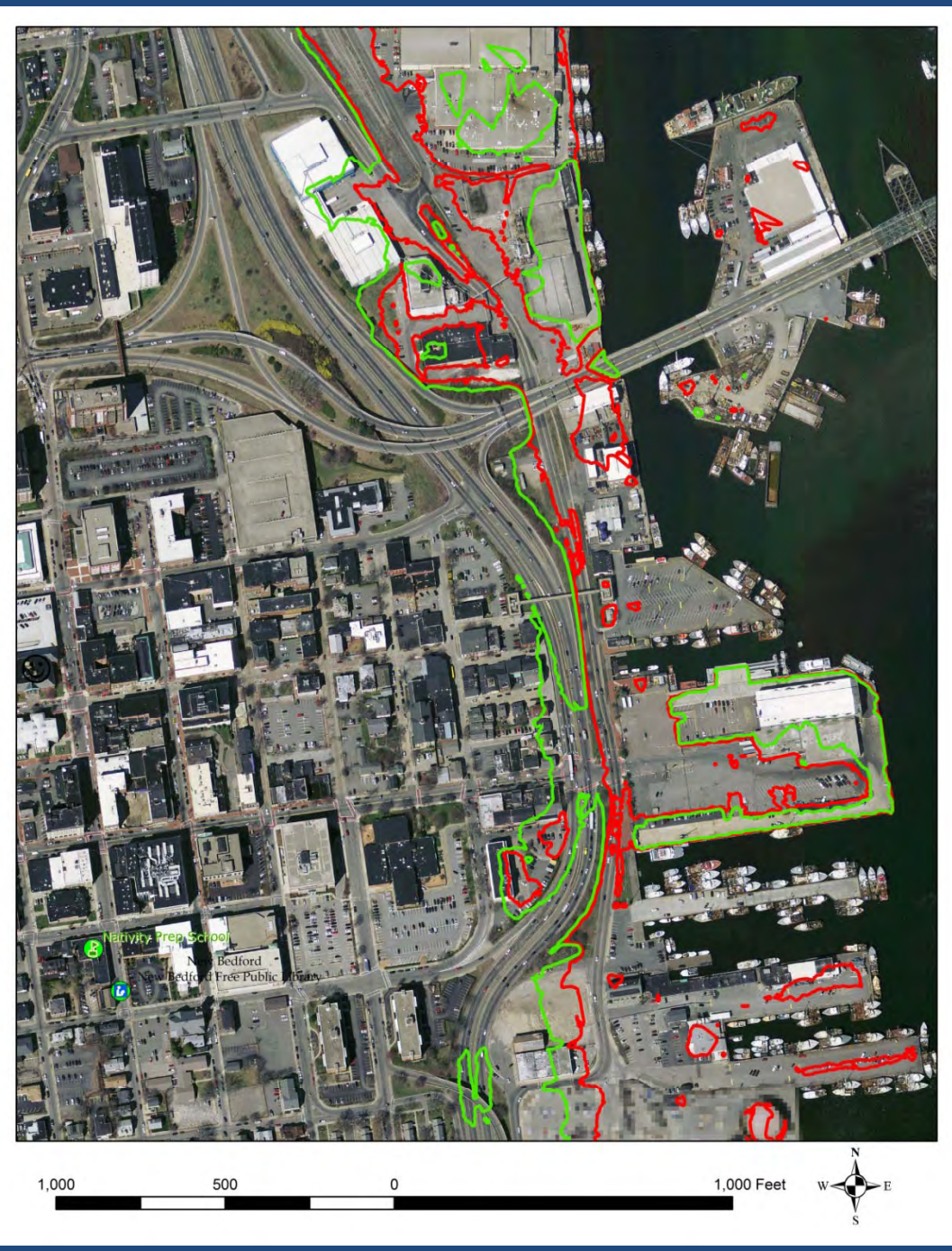


# New Bedford Waterfront

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88

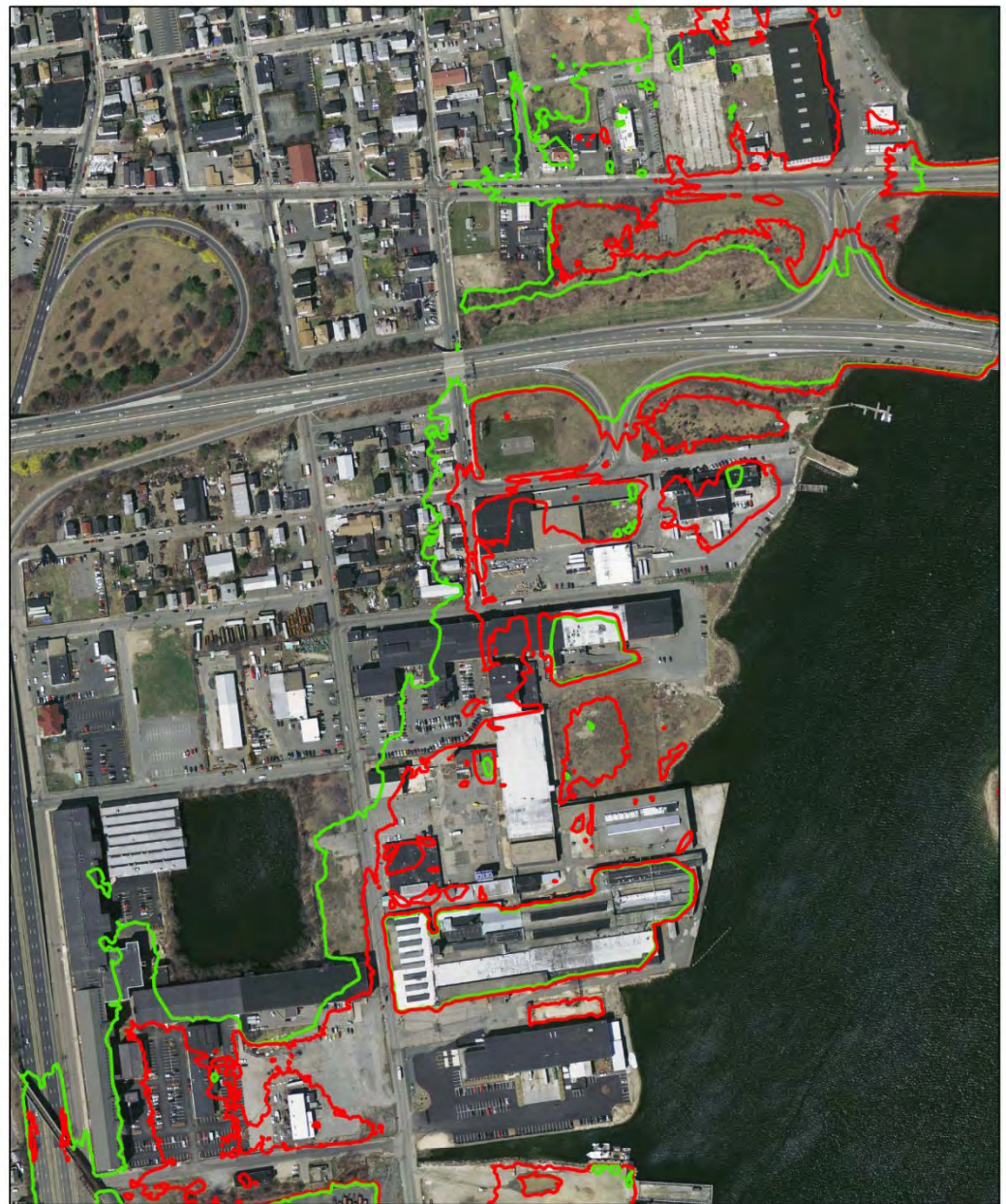


# New Bedford Waterfront

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# New Bedford Waterfront

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



1,000 500 0 1,000 Feet



# New Bedford Waterfront

AHTL = 3.2 feet NAVD88

- 8.0 feet NAVD88
- 6.0 feet NAVD88



# New Bedford River Road

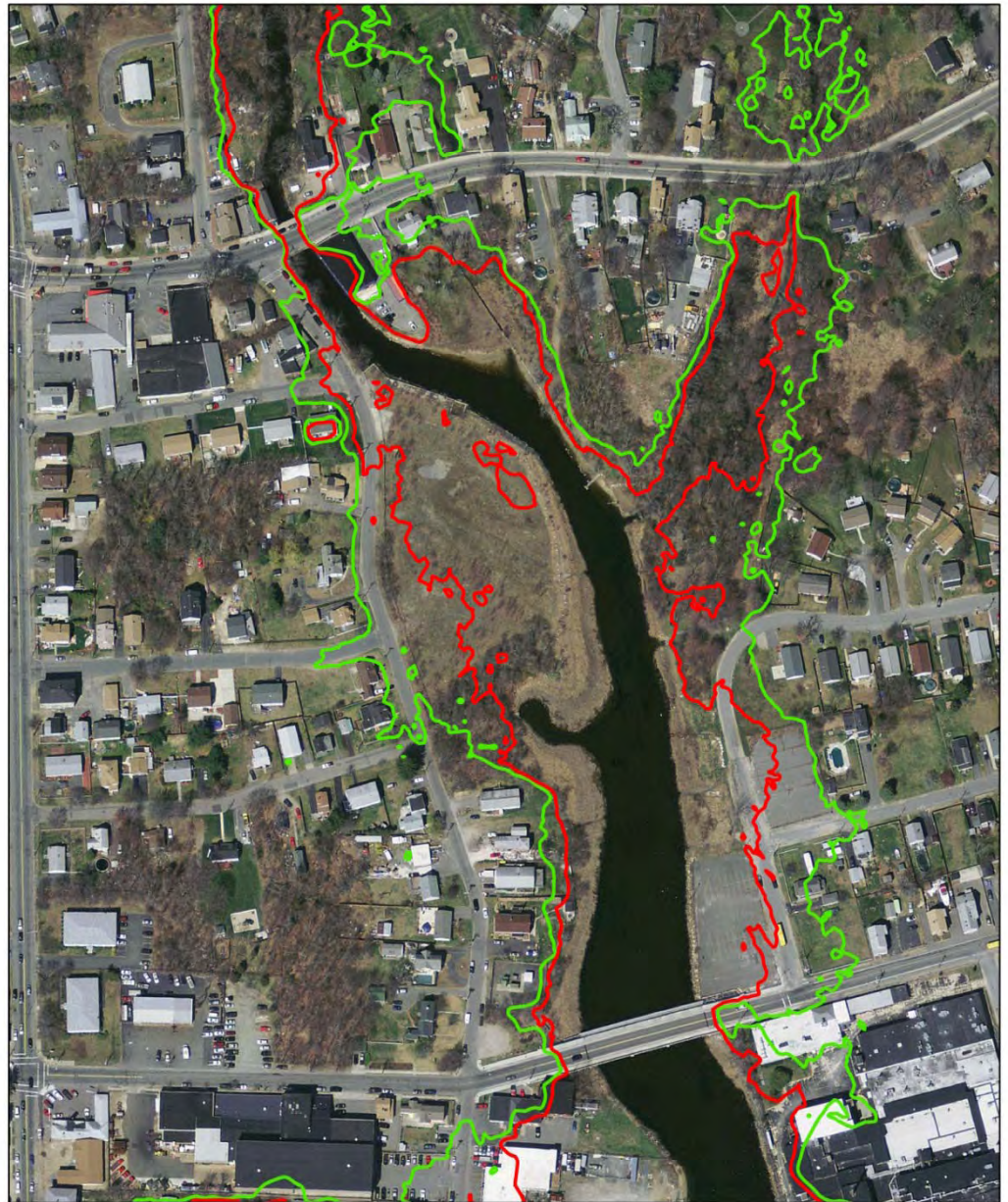
AHTL = 3.2 feet NAVD88



8.0 feet NAVD88



6.0 feet NAVD88



500 250 0 500 Feet



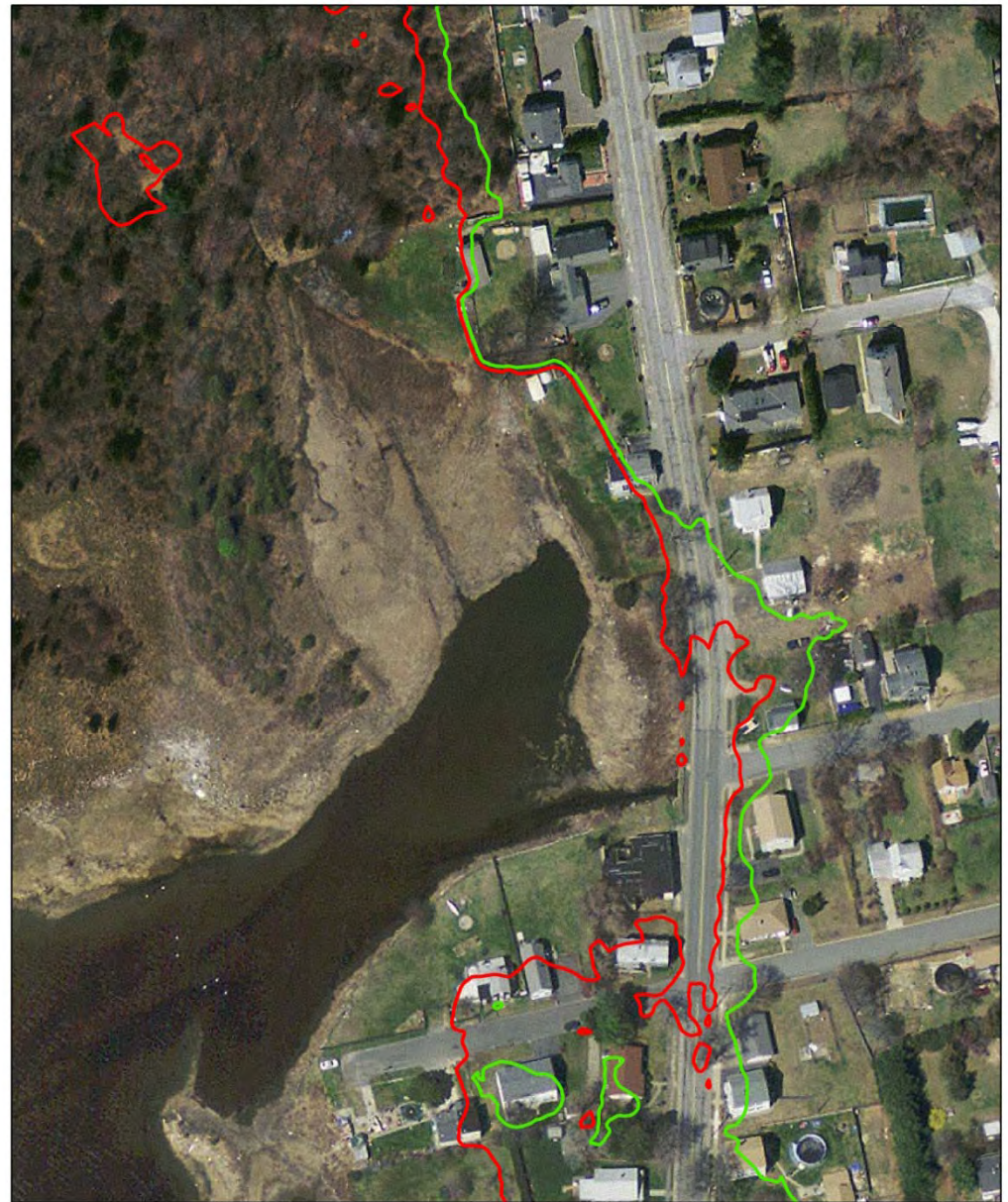
# Fairhaven

## Sycamore Street

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



300 150 0 300 Feet



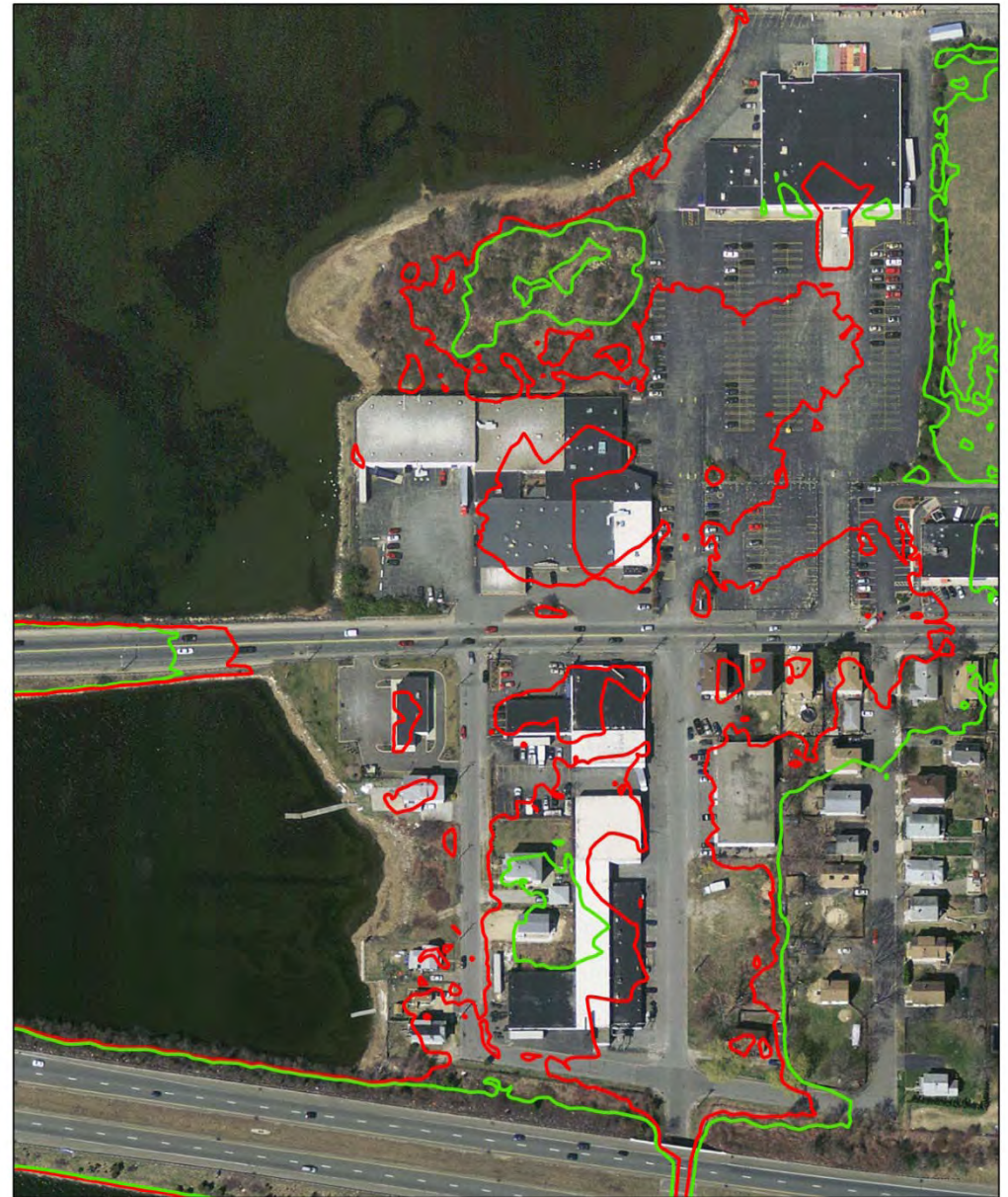
# Fairhaven

## Howland Street

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



400 200 0 400 Feet



# Fairhaven

## Cushman Park

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



900 450 0 900 Feet





# Fairhaven

## Commercial Waterfront

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



600 300 0 600 Feet



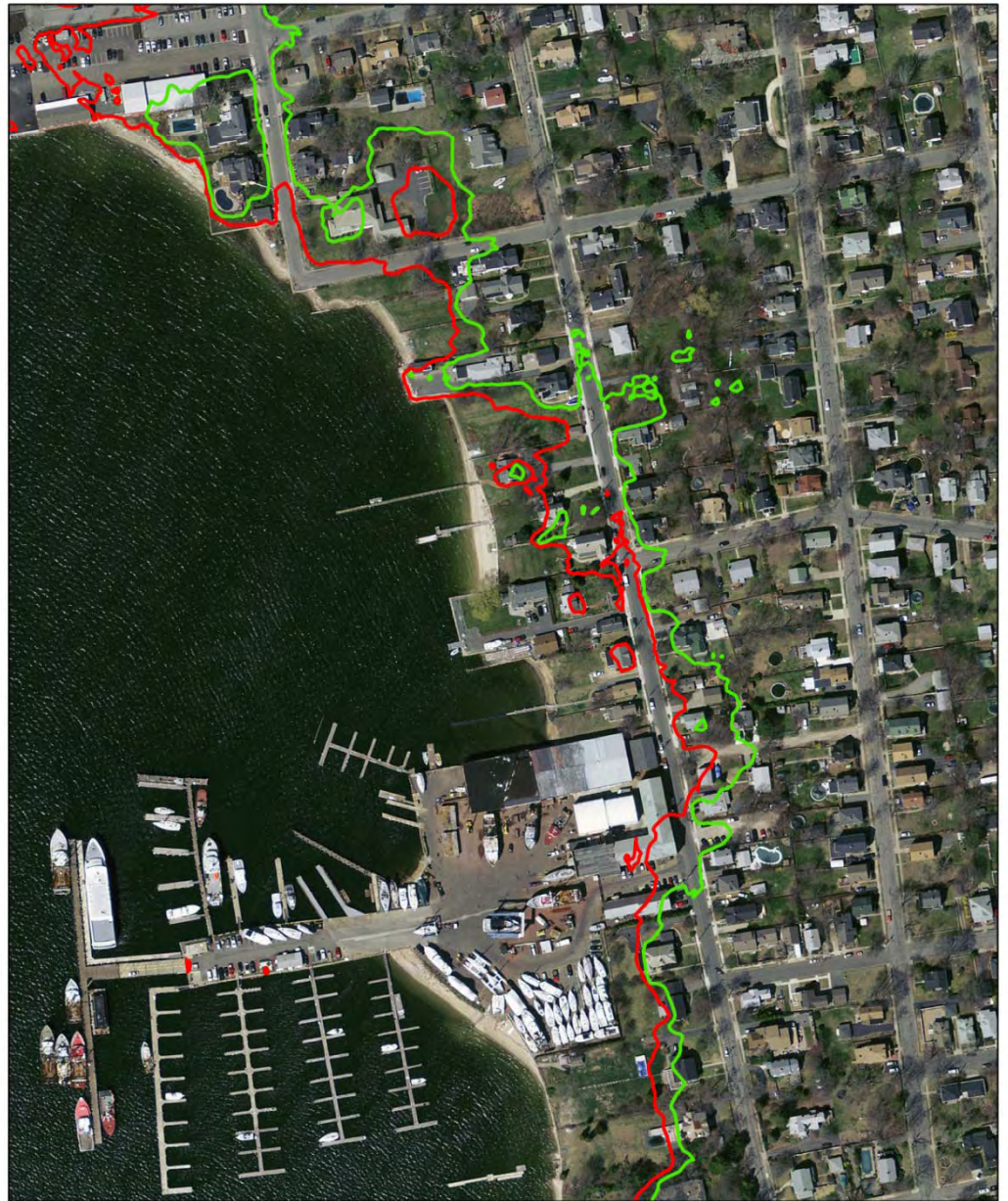
# Fairhaven

## Commercial Waterfront

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



600 300 0 600 Feet



# Fairhaven

## Sconticut Neck Road

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



500 250 0 500 Feet



# Fairhaven

## Sconticut Neck Road

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Fairhaven

## West Island Causeway

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



980 490 0 980 Feet



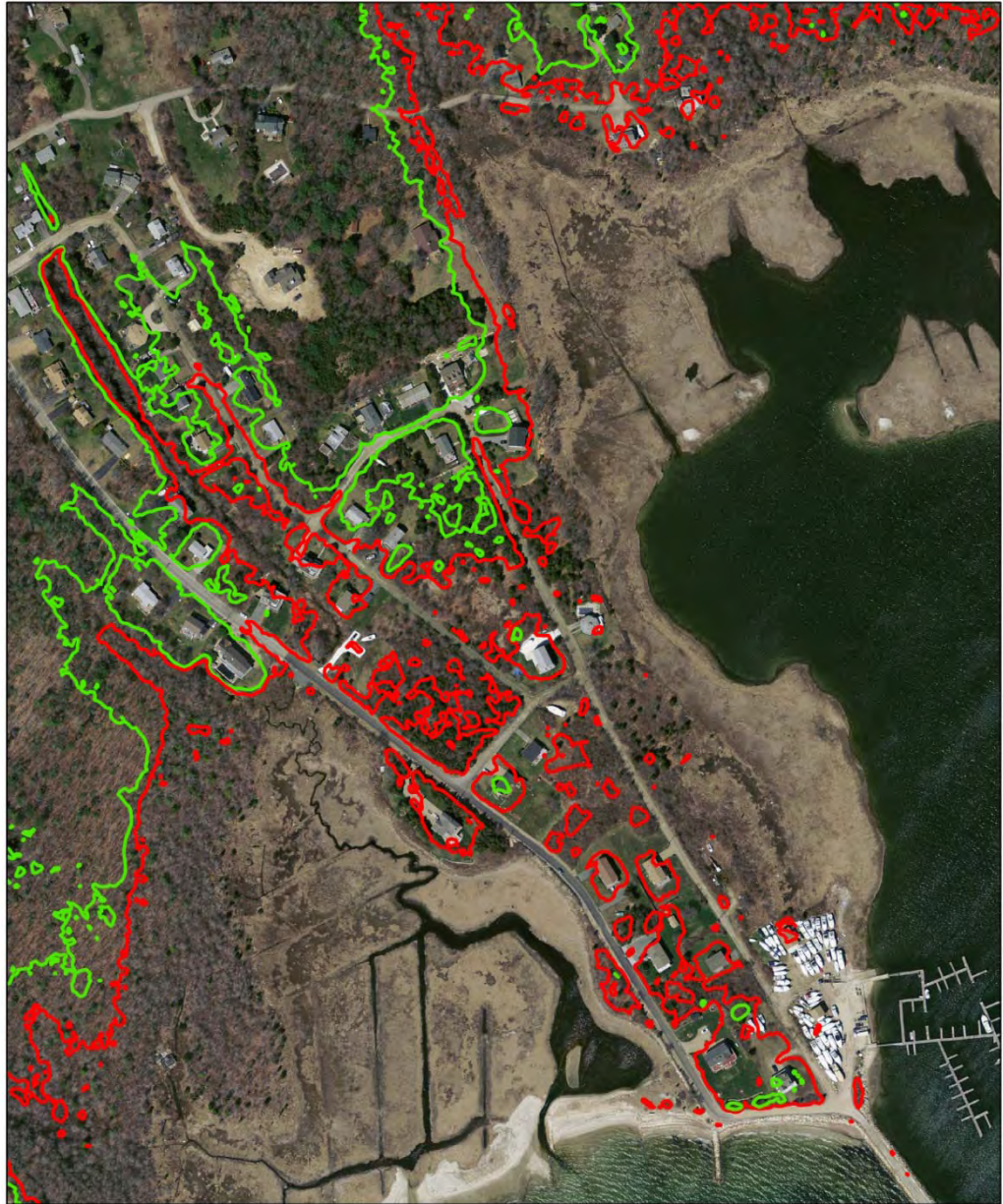
# Mattapoisett

## Brandt Island Road

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



800 400 0 800 Feet



# Mattapoissett

## Neck Road

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



1,200 600 0 1,200 Feet



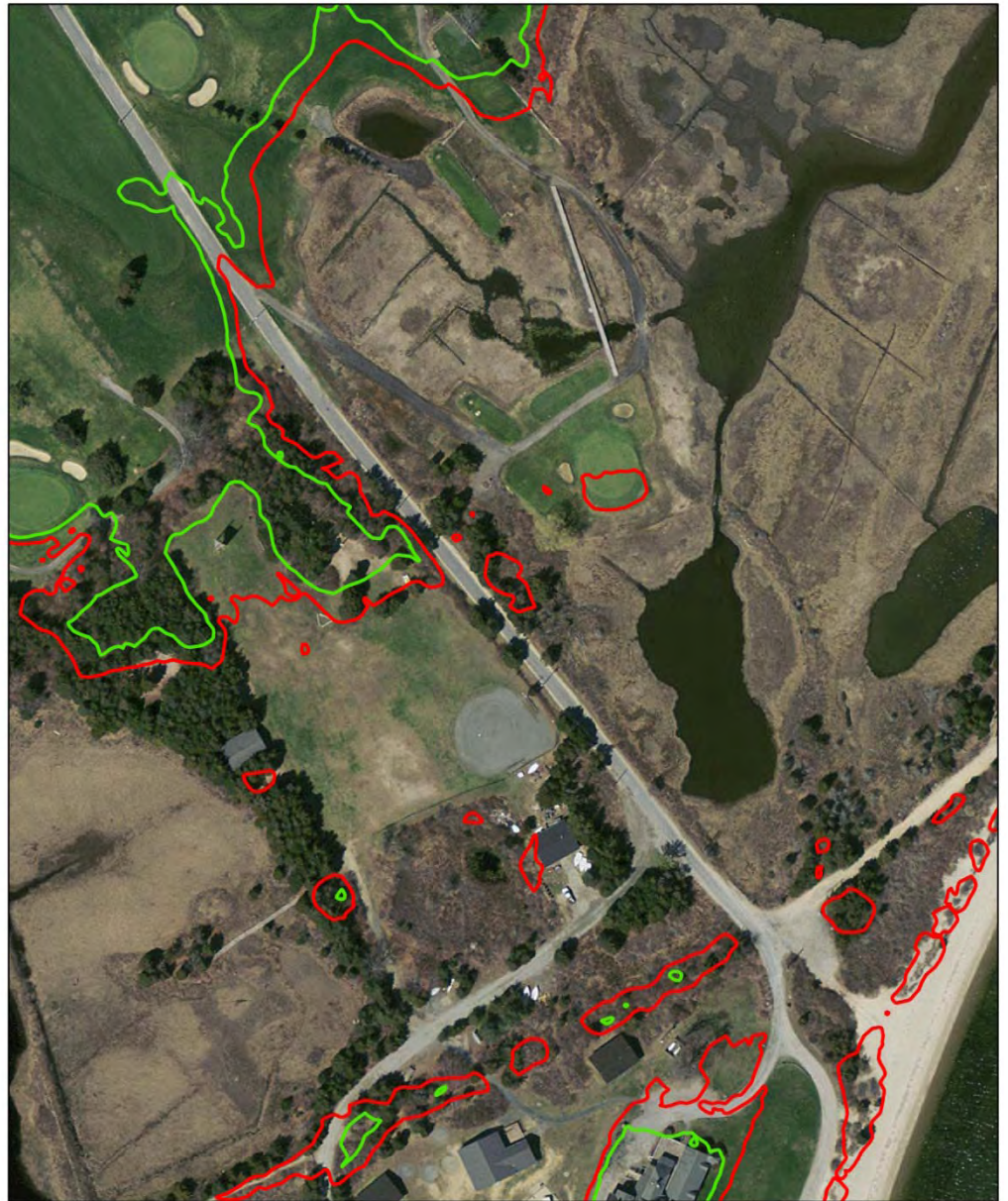
# Mattapoissett

## Reservation Way

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



400

200

0

400 Feet W





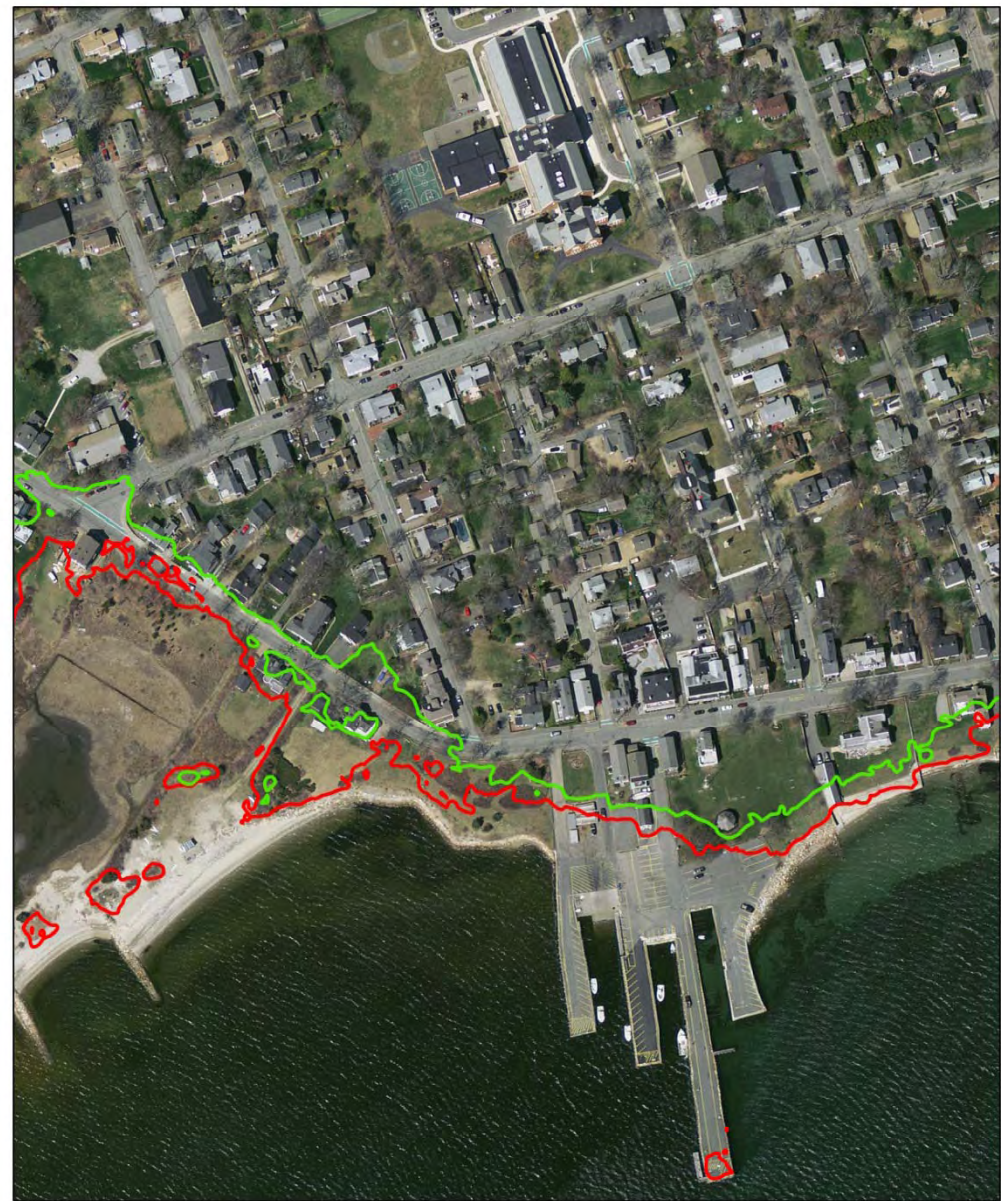
# Mattapoissett

## Town Wharf

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Mattapoisett

## Ned's Point

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



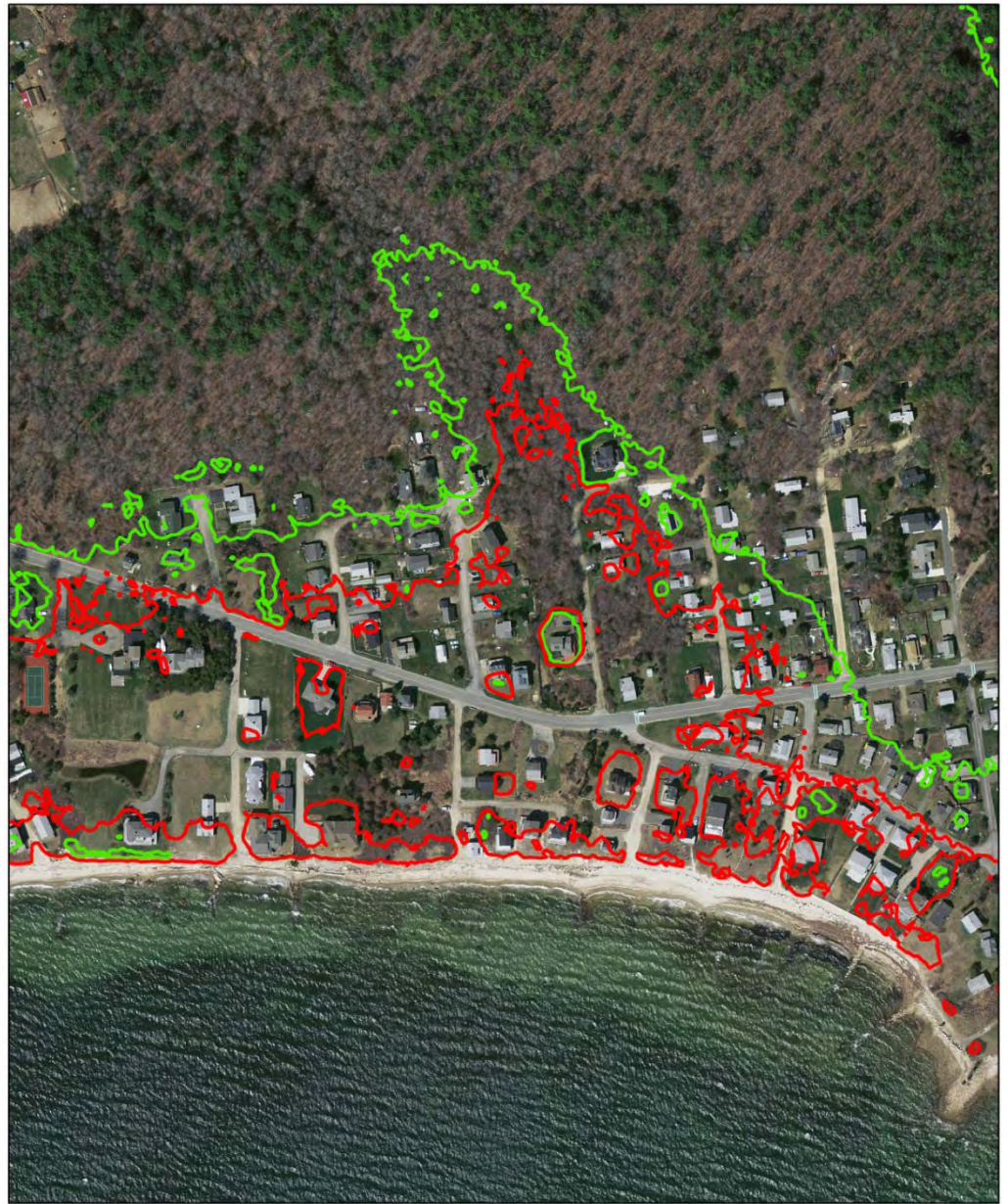
# Mattapoisett

## Angelica Avenue

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



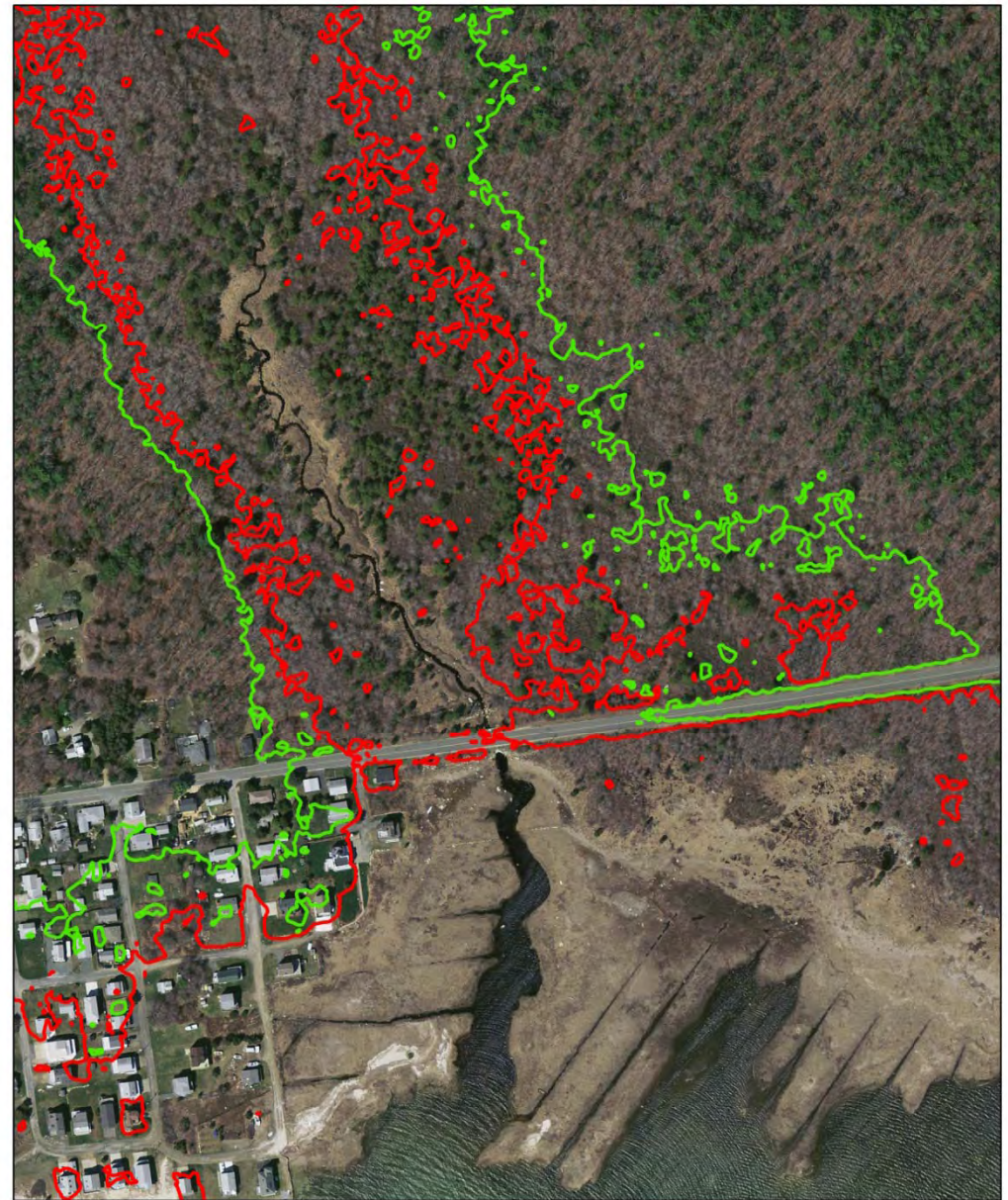
# Mattapoisett

## Angelica Avenue

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



750

375

0

750 Feet



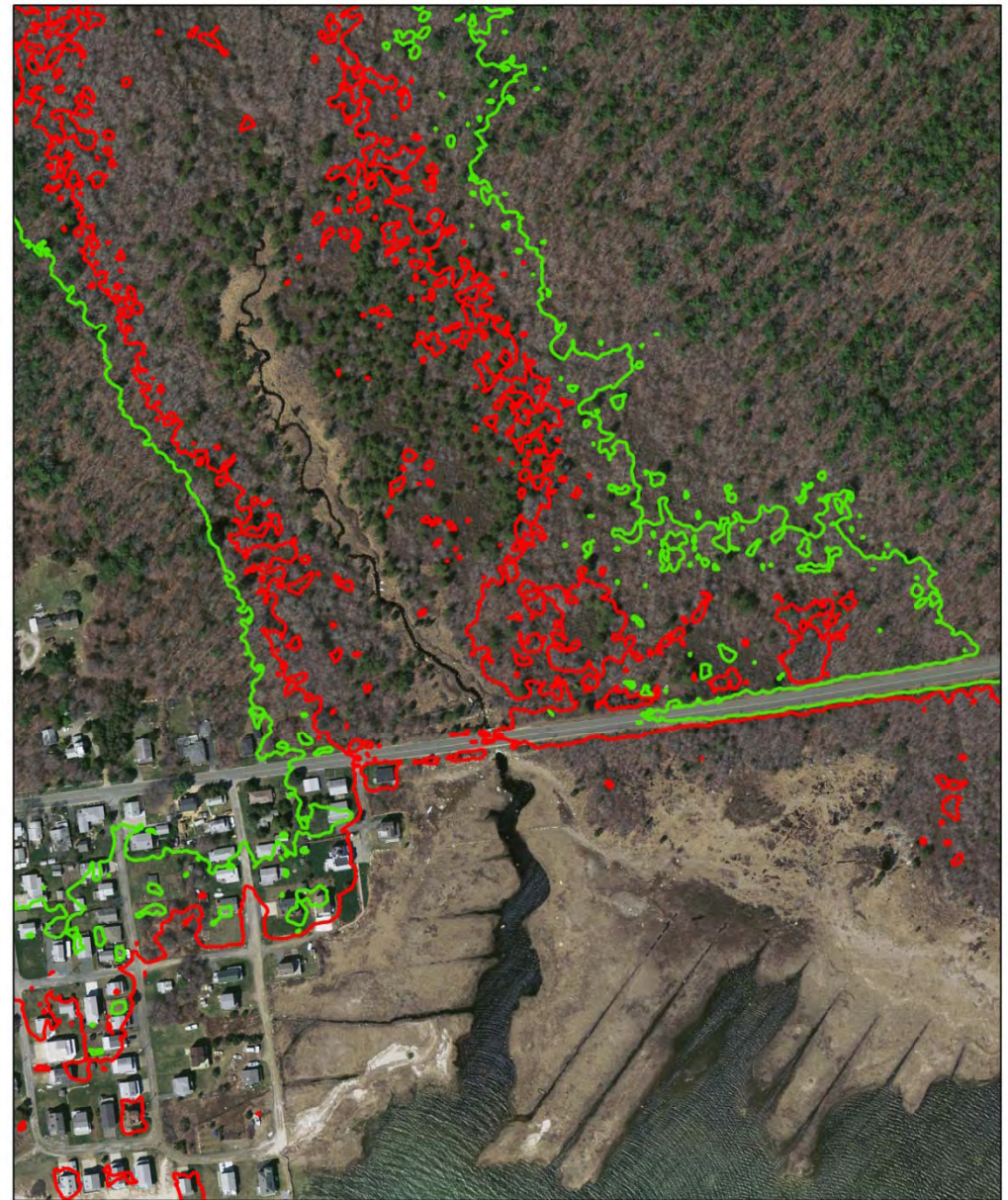
# Mattapoisett

## Angelica Avenue

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



750

375

0

750 Feet



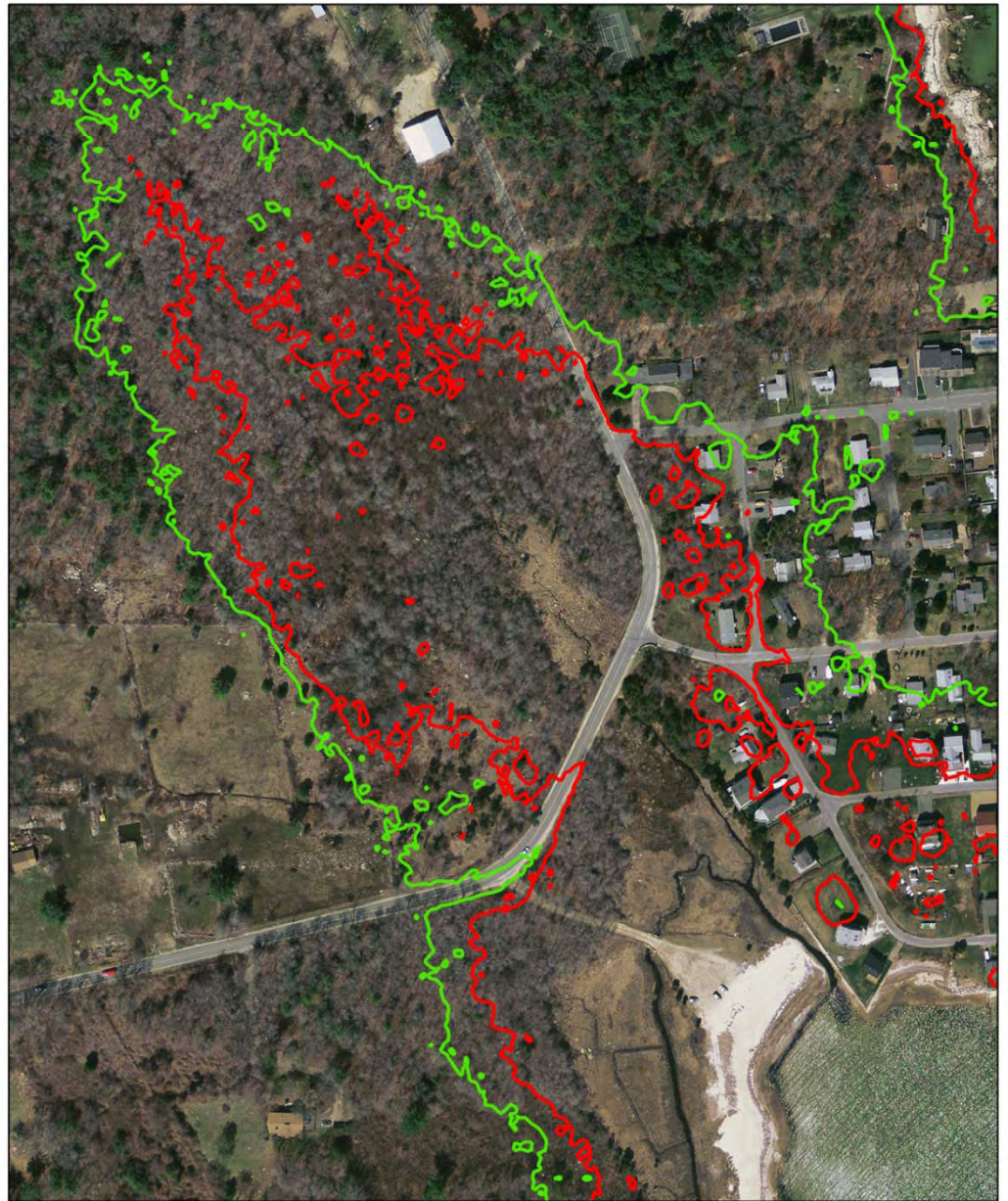
# Mattapoissett

## Aucoot Road

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



600 300 0 600 Feet



# Marion

## Silvershell Beach

AHTL = 3.4 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Marion

## Island Wharf

AHTL = 3.4 feet NAVD88



8.0 feet NAVD88



6.0 feet NAVD88



300 150 0 300 Feet





# Marion

## Front Street

AHTL = 3.4 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



300 150 0 300 Feet



# Marion

## Front Street

AHTL = 3.4 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



400 200 0 400 Feet



# Marion

## Point Road

AHTL = 3.4 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



200 100 0 200 Feet



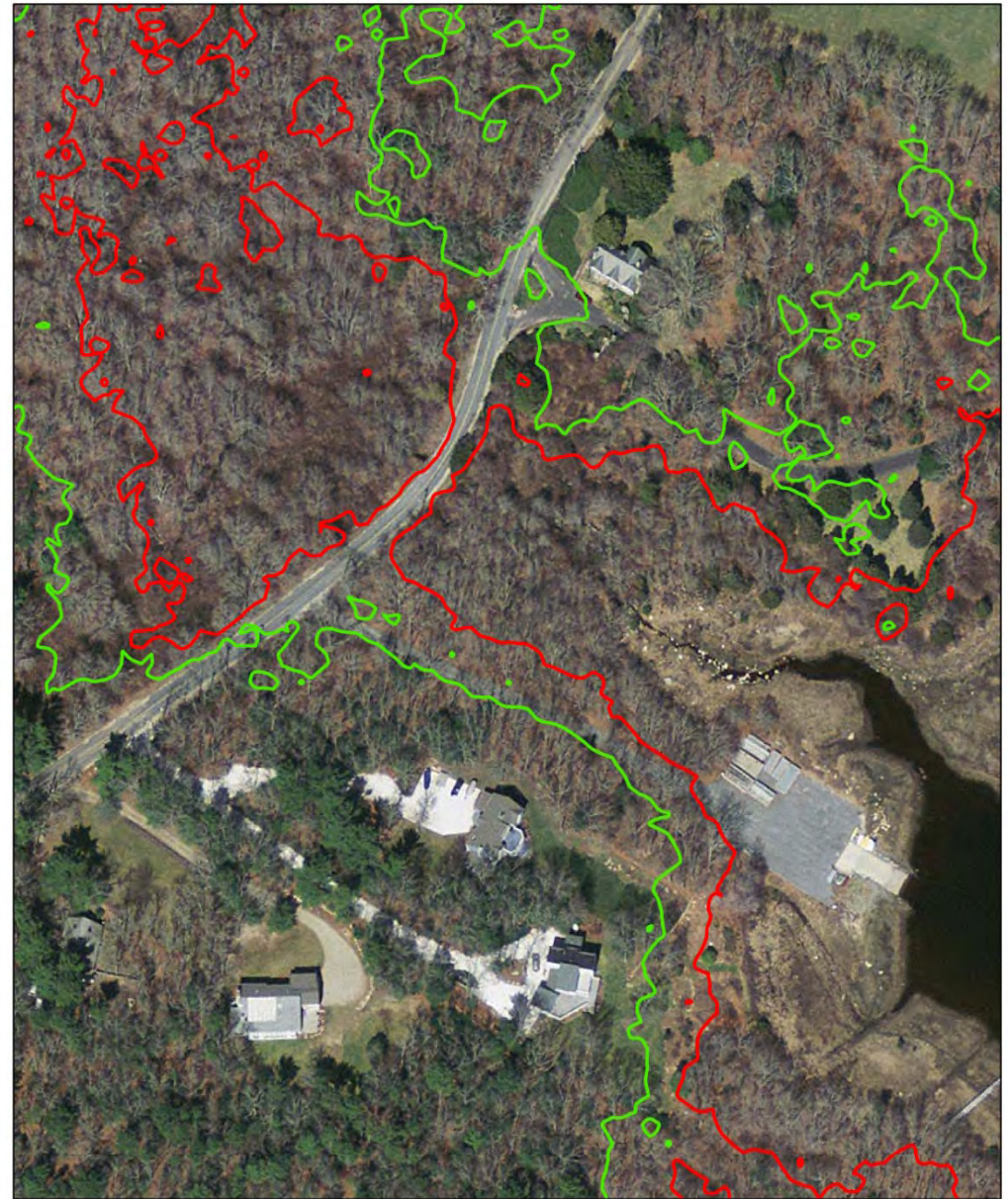
# Marion

## Wing's Cove Boat Ramp

AHTL = 3.4 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



300 150 0 300 Feet



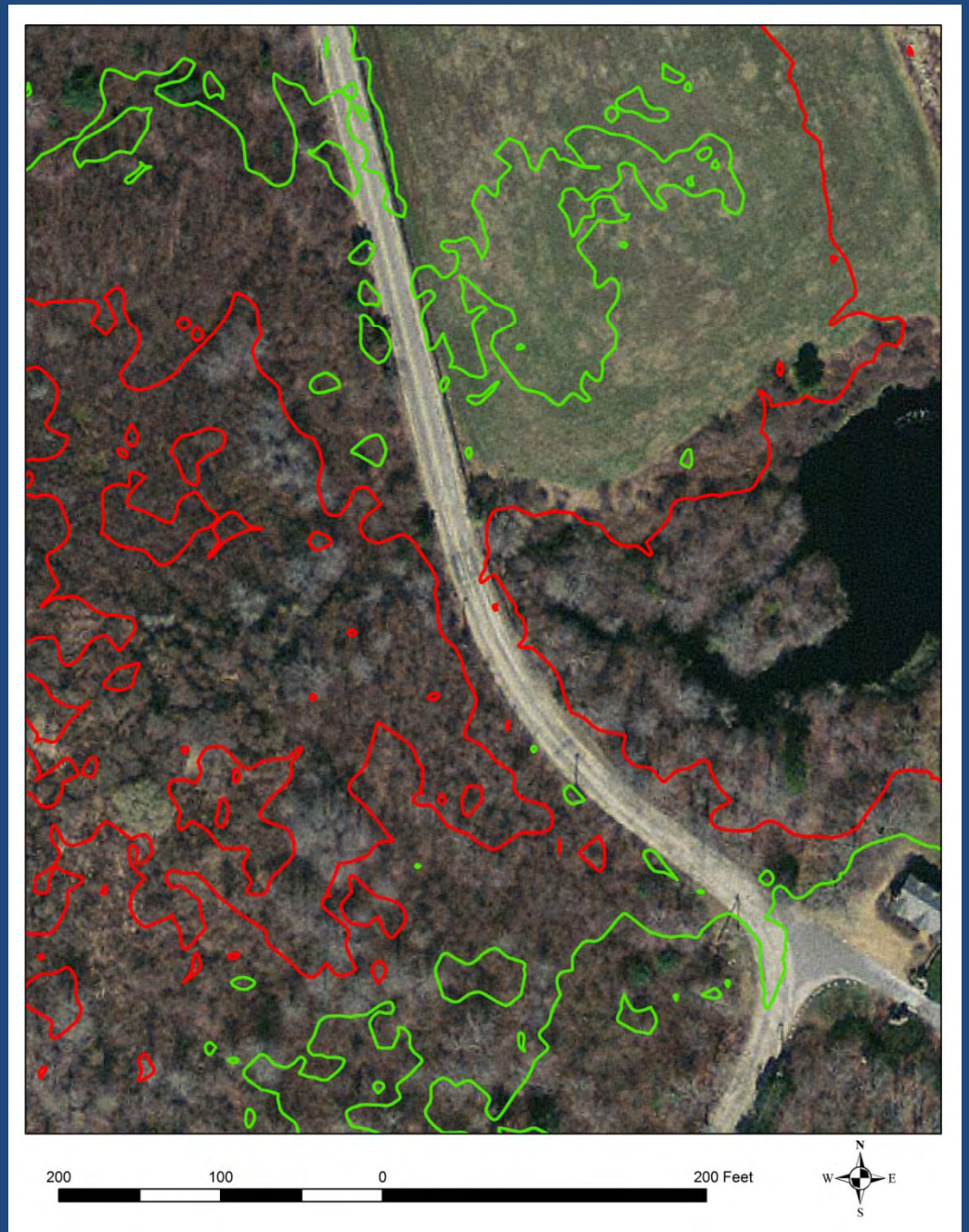
# Marion

## Delano Road

AHTL = 3.4 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Wareham

## Blackmore Pond Road

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



400 200 0 400 Feet



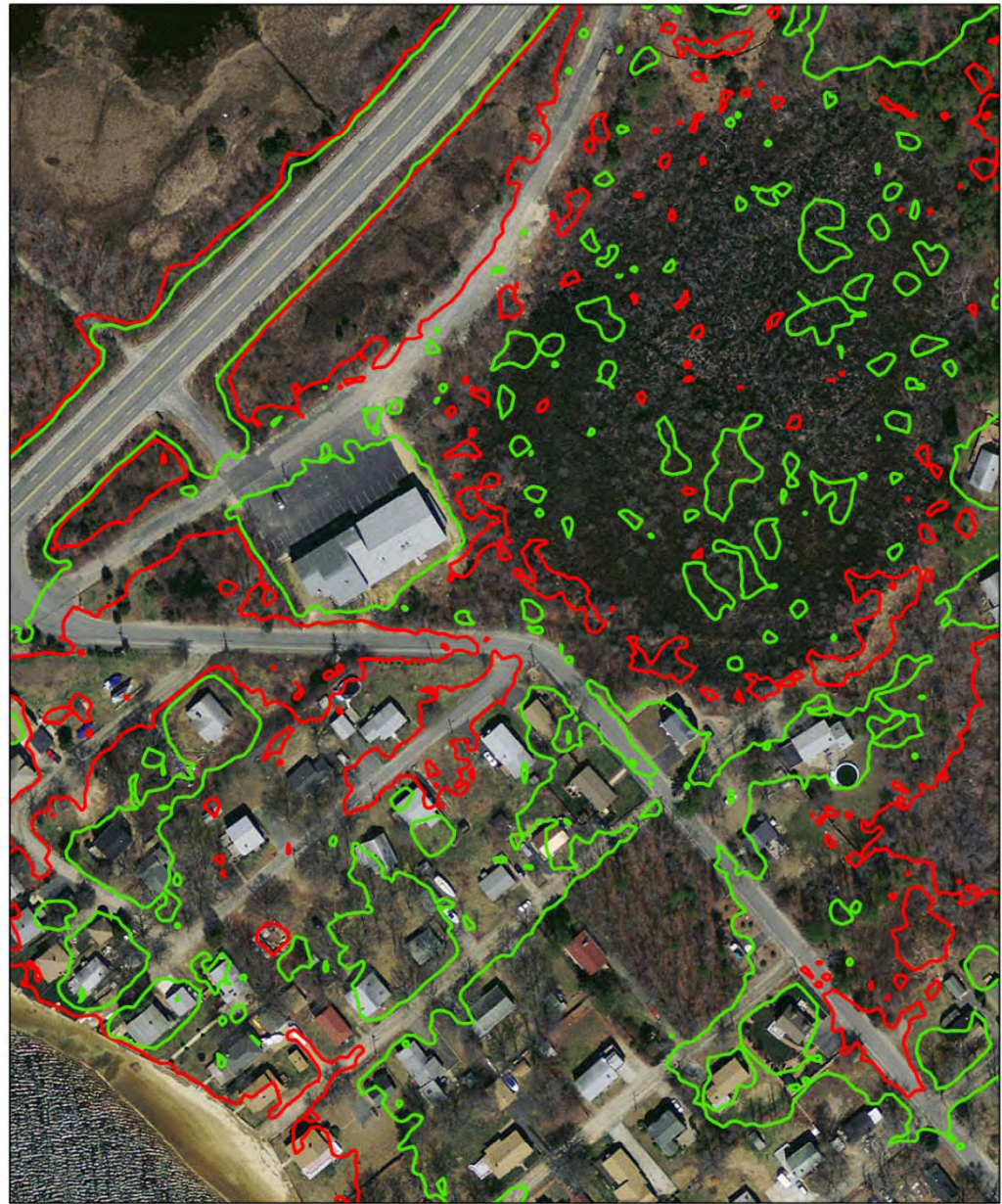
# Wareham

## Briarwood Road

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



400 200 0 400 Feet



# Wareham

## Cromesett Road

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



350 175 0 350 Feet





# Wareham

## Swift's Beach

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



500 250 0 500 Feet



# Wareham

## Pilgrim Avenue

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



500 250 0 500 Feet



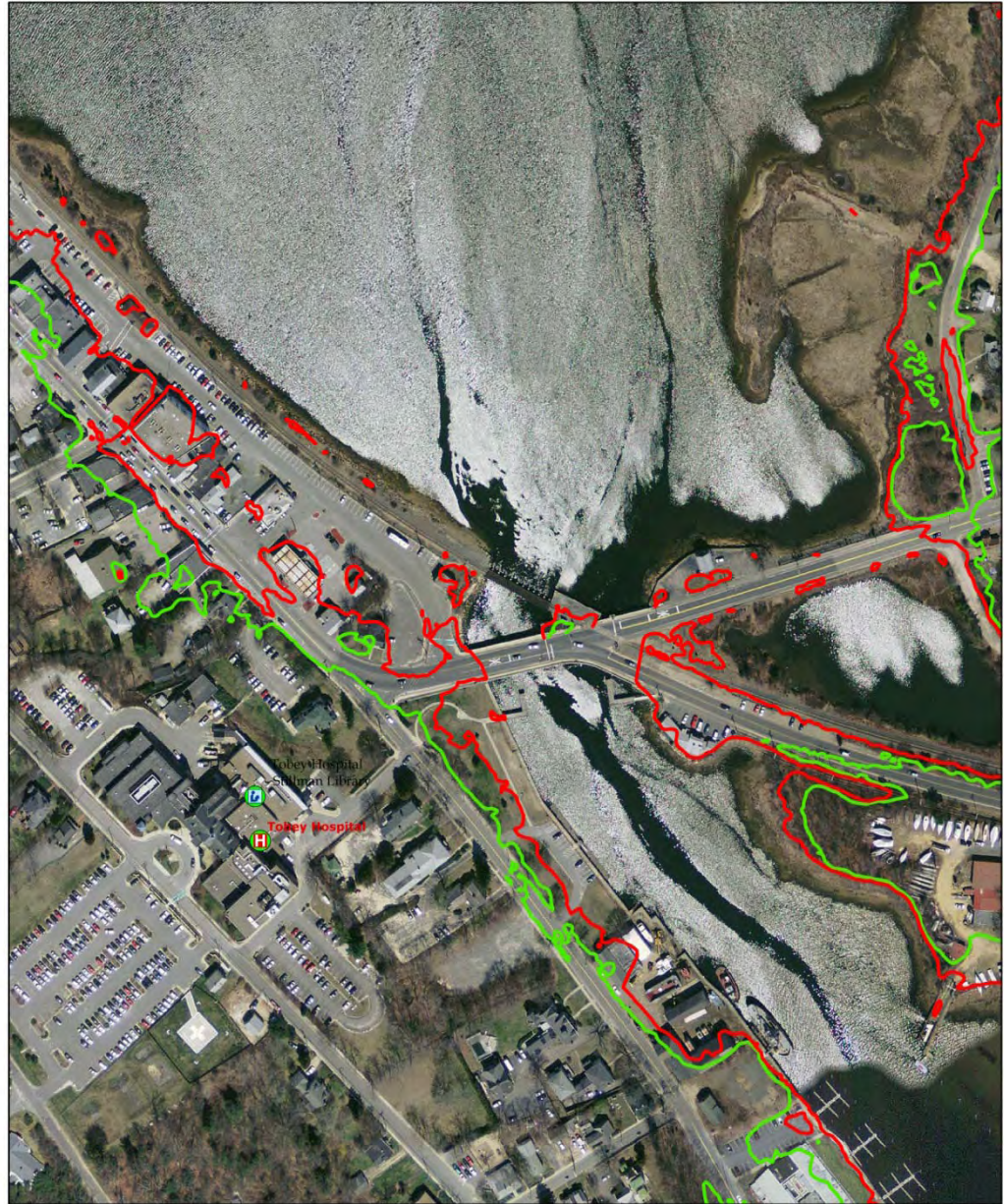
# Wareham

## The Narrows

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



600 300 0 600 Feet



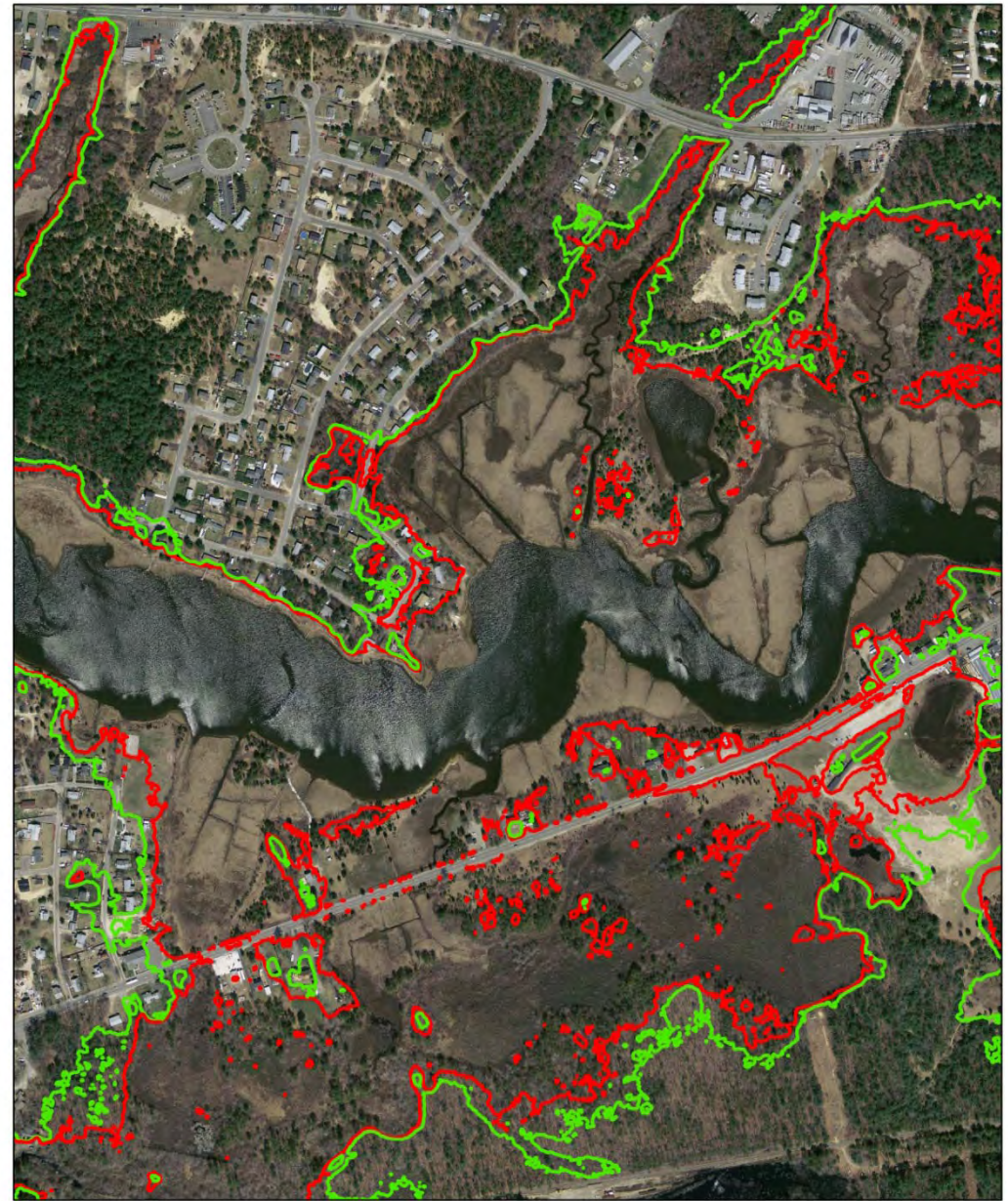
# Wareham

## Route 6

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



1,400 700 0 1,400 Feet



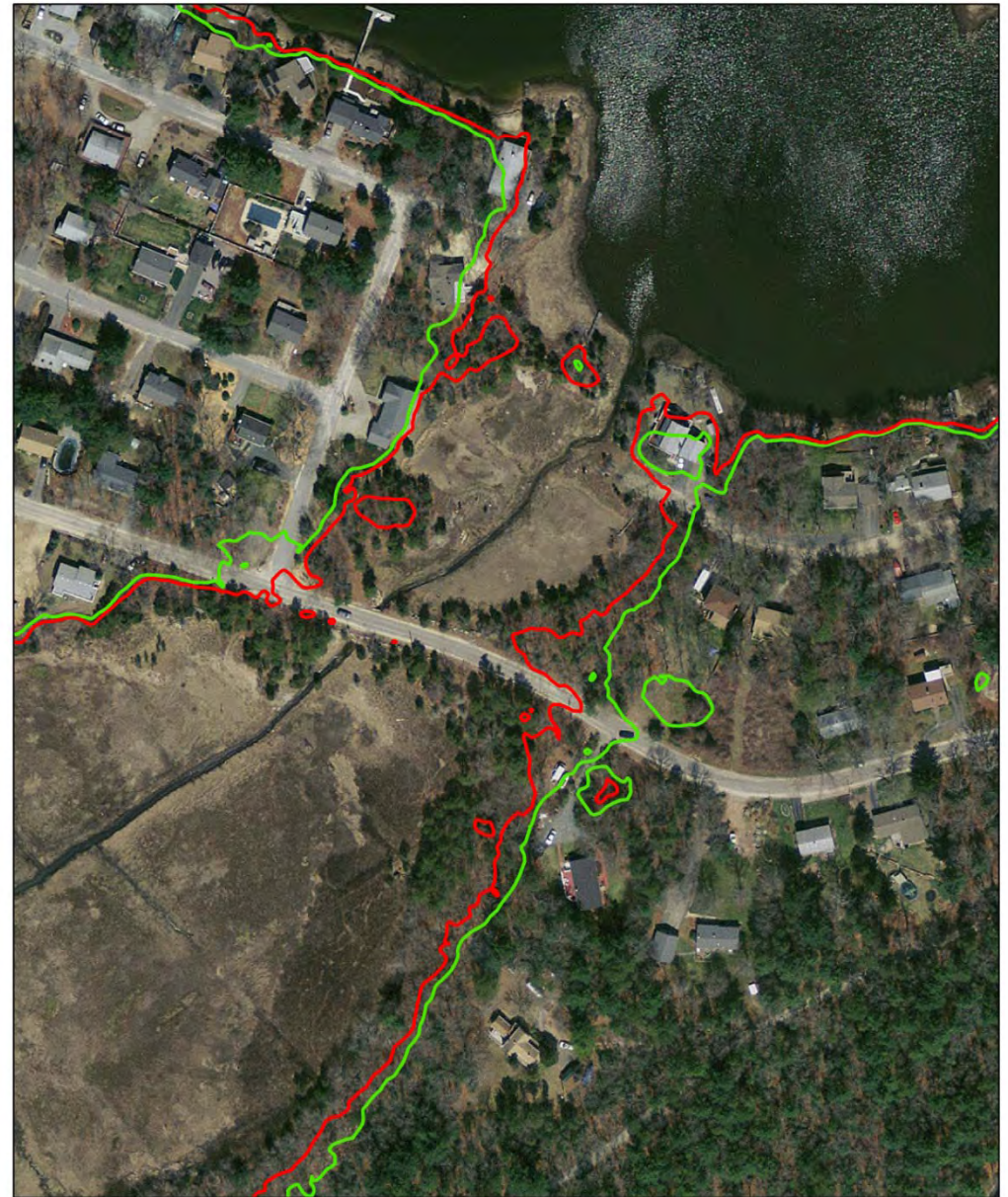
# Wareham

## Alden Road

AHTL = 3.3 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



400 200 0 400 Feet



# Wareham

## Little Harbor Beach

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



600 300 0 600 Feet



# Wareham

## Agawam Beach

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



480 240 0 480 Feet



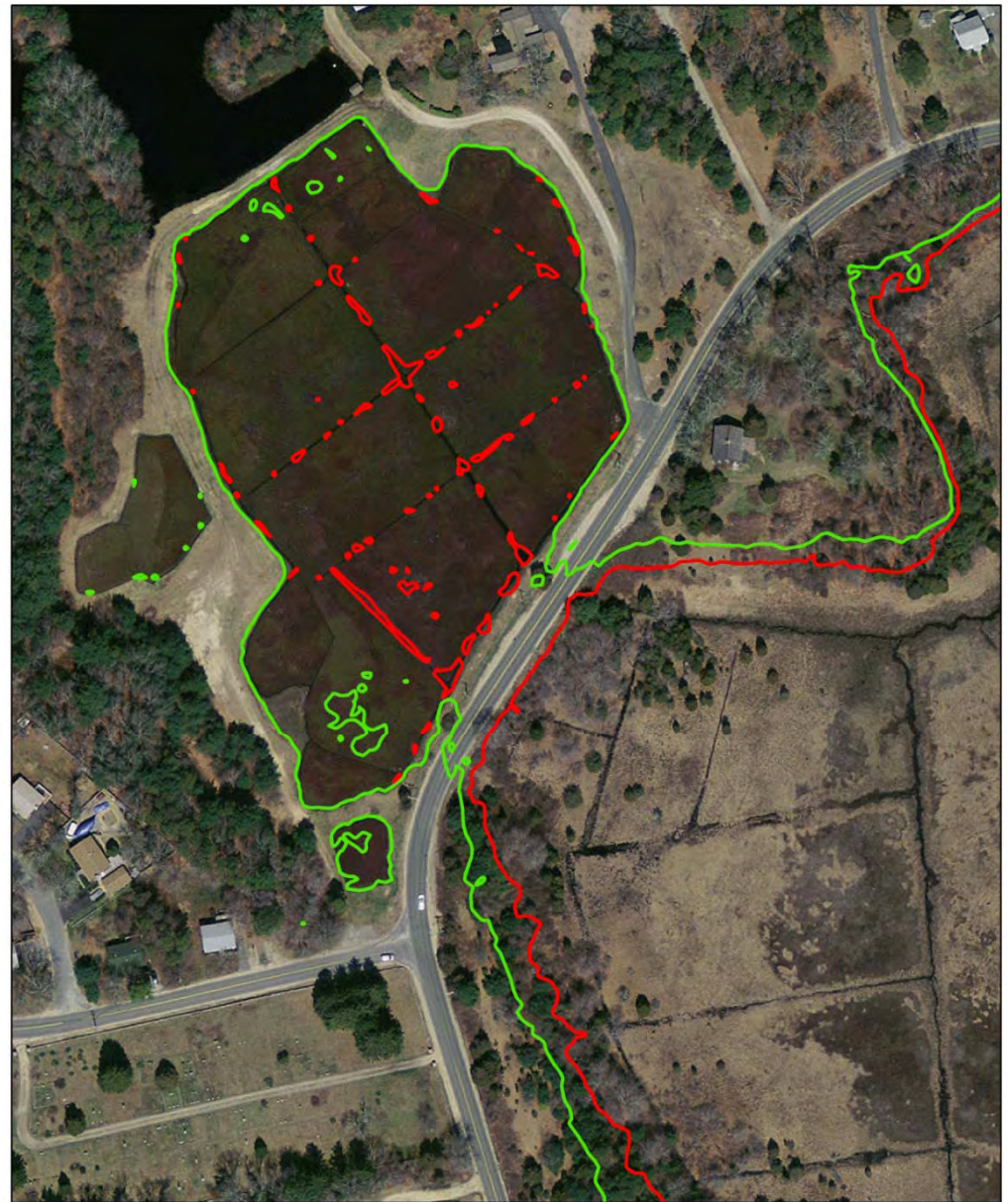
# Wareham

## Great Neck Road

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



400 200 0 400 Feet





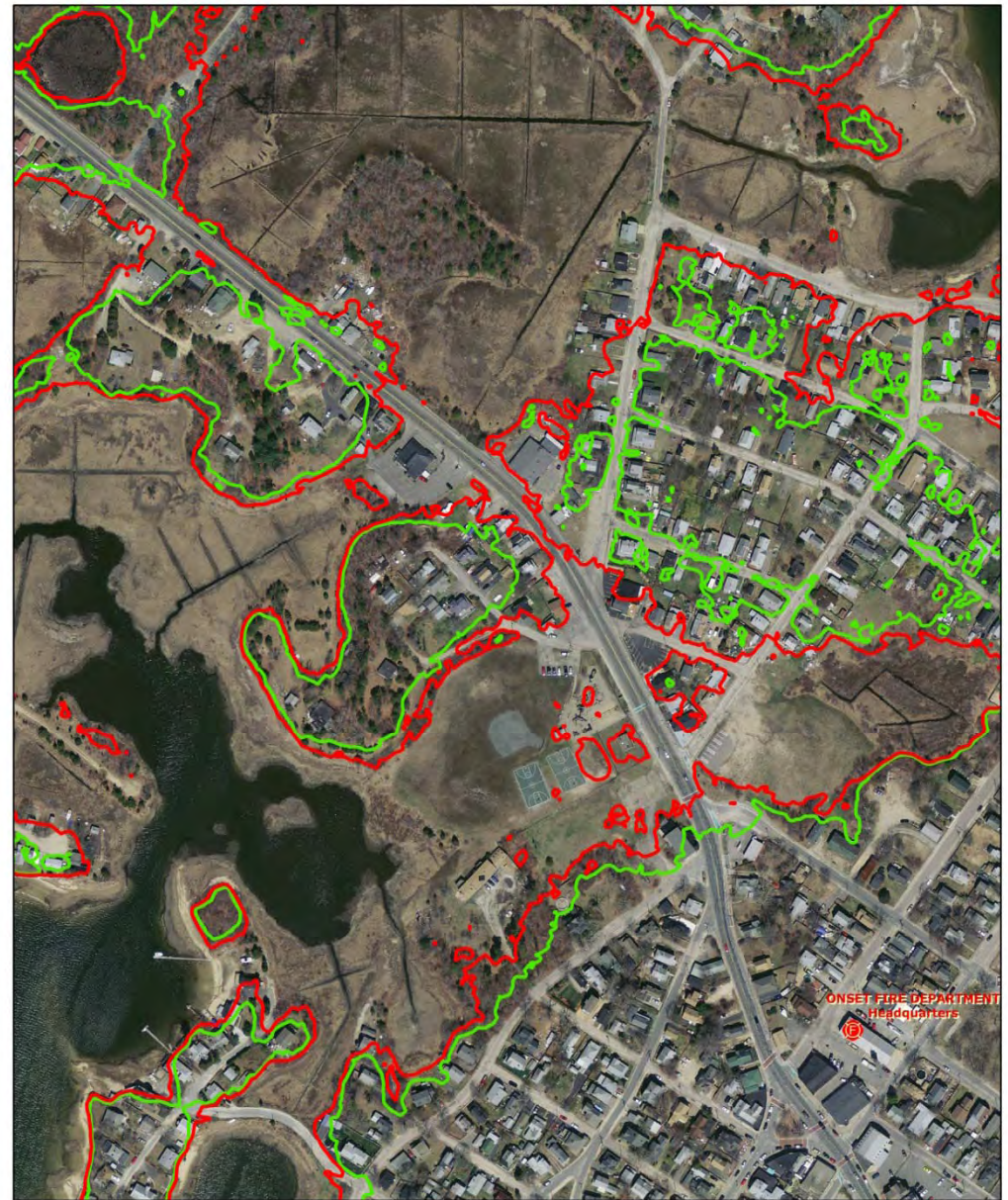
# Wareham

## Onset Avenue

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



700 350 0 700 Feet



# Wareham

## Water Street

AHTL = 3.2 feet NAVD88



8.0 feet NAVD88



6.0 feet NAVD88



480 240 0 480 Feet



# Wareham

## Cove Street

AHTL = 3.2 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



# Wareham

## Jefferson Shores

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



480 240 0 480 Feet



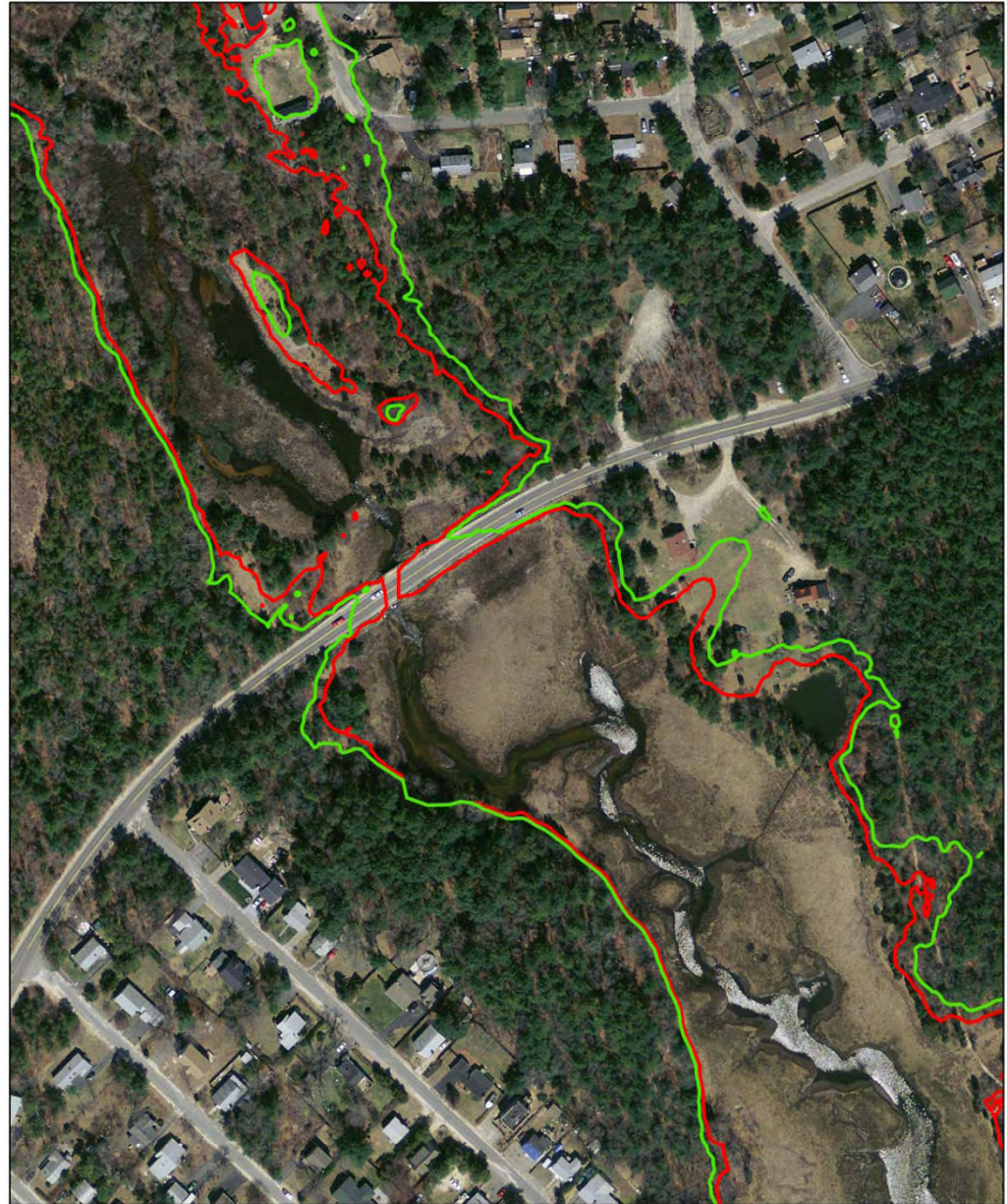
# Wareham

## Red Brook Road

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



480 240 0 480 Feet



# Bourne

## Bourne Marina

AHTL = 3.1 feet NAVD88

 8.0 feet NAVD88

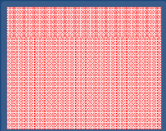
 6.0 feet NAVD88



# Bourne

## Mashnee Road

AHTL = 3.1 feet NAVD88



Area less than 6 feet NAVD88



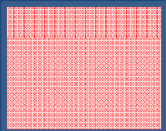
300 150 0 300 Feet



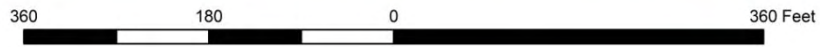
# Bourne

# Mashnee Island

AHTL = 3.3 feet NAVD88



Area less than 6  
feet NAVD88

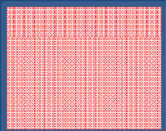




# Bourne

## Monument Beach

AHTL = 3.5 feet NAVD88



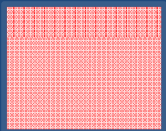
Area less than 6 feet NAVD88



# Bourne

## Wing's Neck

AHTL = 3.5 feet NAVD88



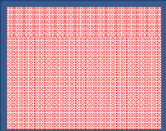
Area less than 6 feet NAVD88



# Bourne

## Hen Cove

AHTL = 3.5 feet NAVD88



Area less than 6 feet NAVD88



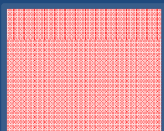
1,000 500 0 1,000 Feet



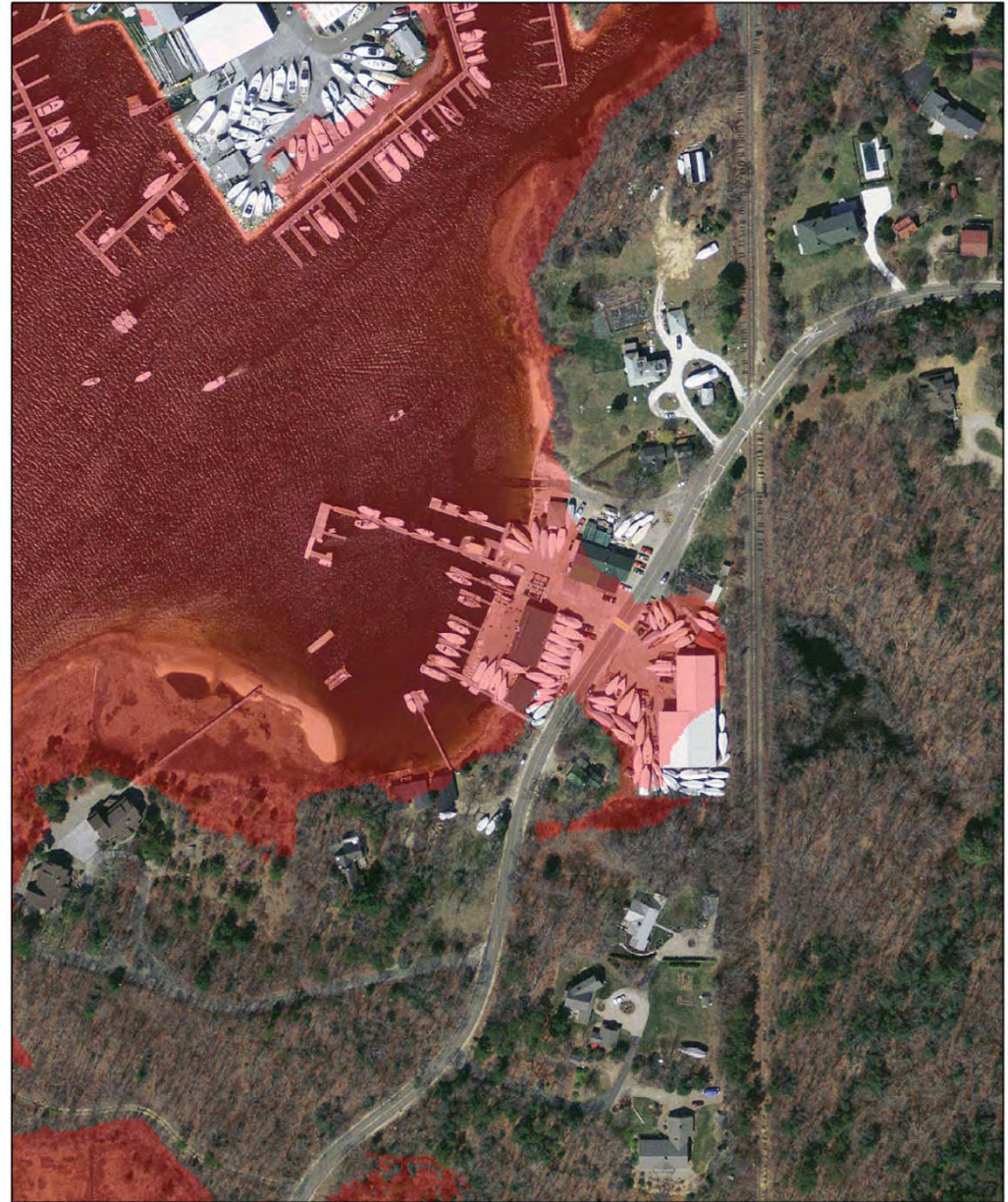
# Bourne

## Parker's Boat Yard

AHTL = 3.5 feet NAVD88



Area less than 6 feet NAVD88



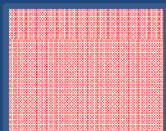
500 250 0 500 Feet



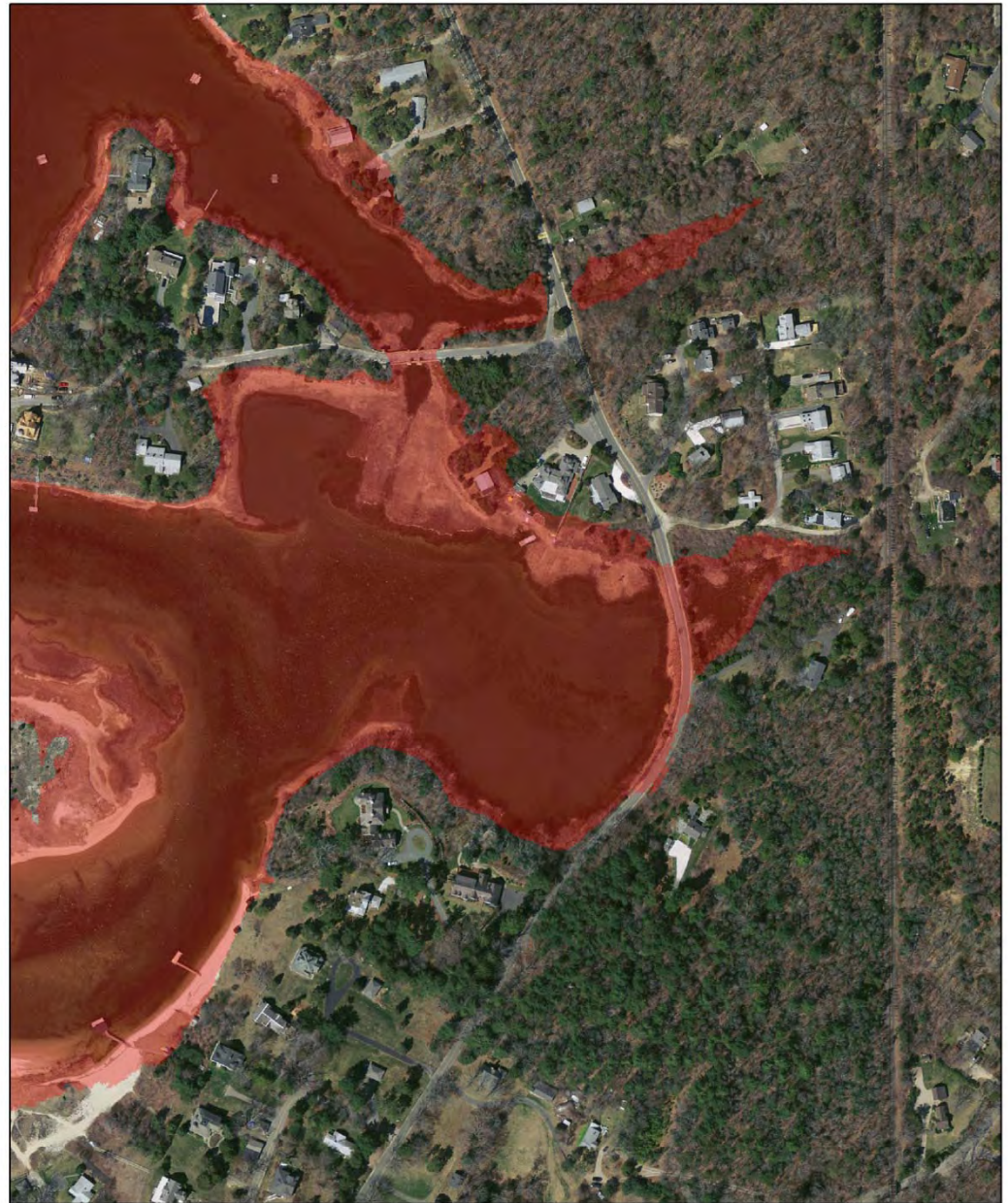
# Falmouth

## Megansett Road

AHTL = 3.4 feet NAVD88



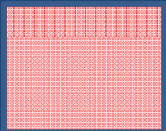
Area less than 6 feet NAVD88



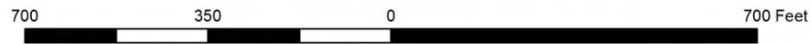
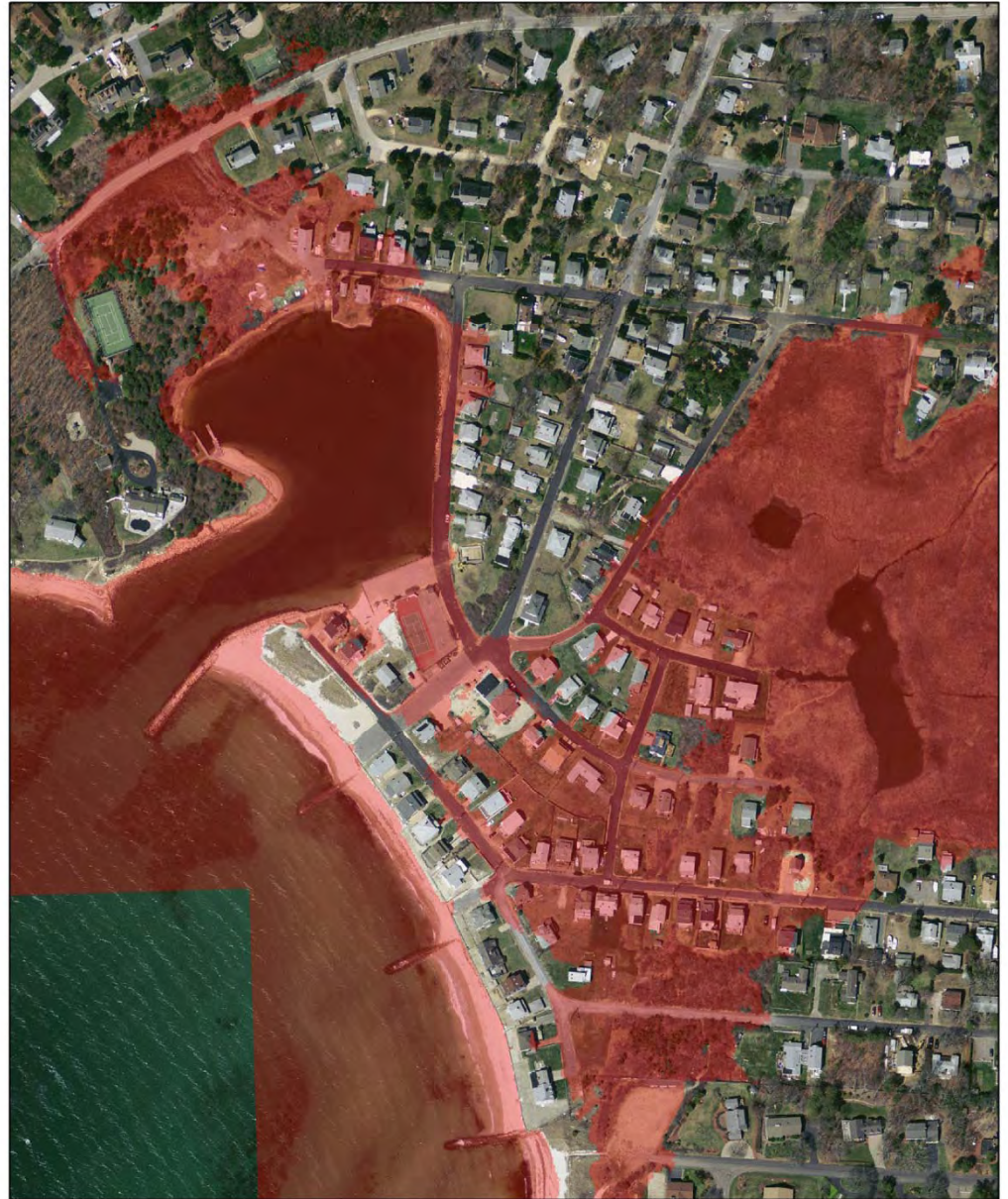
# Falmouth

## Silver Beach West Avenue

AHTL = 3.4 feet NAVD88



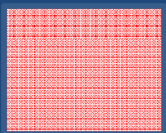
Area less than 6  
feet NAVD88



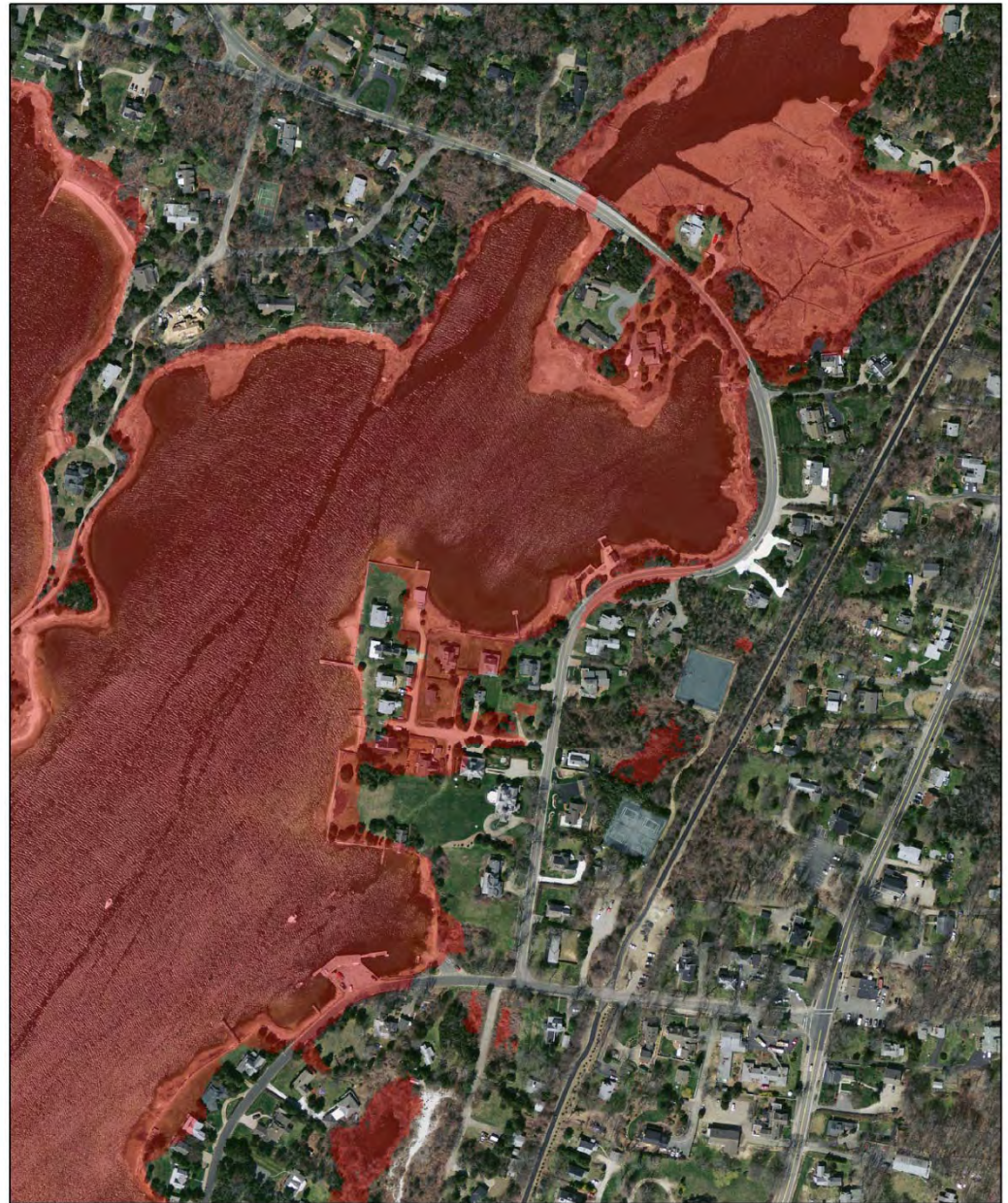
# Falmouth

## West Falmouth Harbor

AHTL = 3.4 feet NAVD88



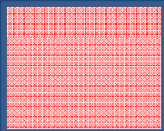
Area less than 6 feet NAVD88



# Falmouth

## Quissett Harbor

AHTL = 2.4 feet NAVD88



Area less than 6 feet NAVD88





# Gosnold

## Gas Dock

AHTL = 3.0 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



240 120 0 240 Feet

Elevation data was collected between November 16, 2009 and February 4, 2010.



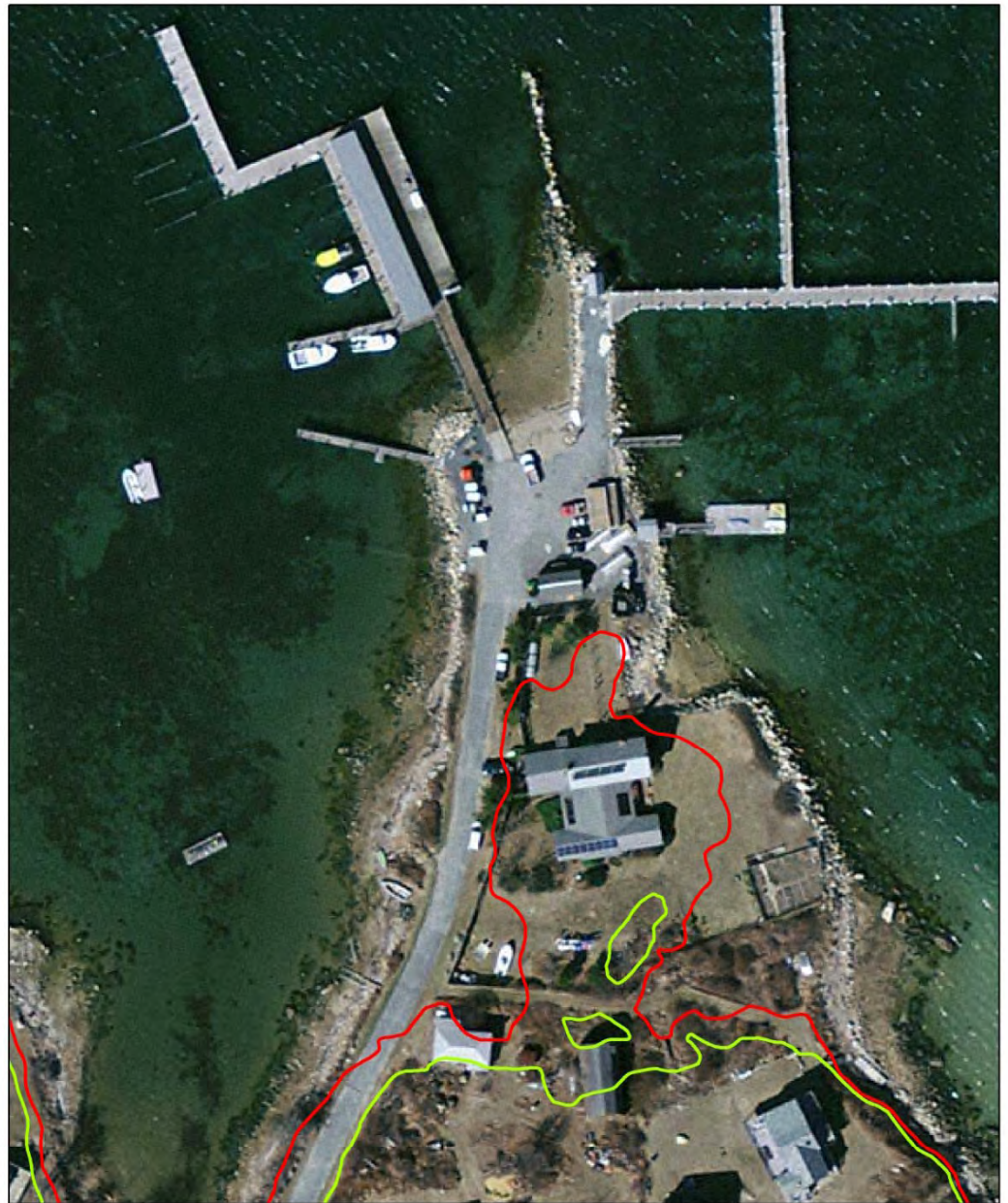
# Gosnold

## The Point Fish Dock & Marina

AHTL = 3.0 feet NAVD88

 8.0 feet NAVD88

 6.0 feet NAVD88



200 100 0 200 Feet

Elevation data was collected between November 16, 2009 and February 4, 2010.



For more information contact John Rockwell at the  
Buzzards Bay National Estuary Program, 2780  
Cranberry Highway, East Wareham, Ma 02538  
#508-291-3625 x14 email: [john.rockwell@state.ma.us](mailto:john.rockwell@state.ma.us)