

# Wildland Urban Interface Aquinnah, MA

## Hazard Mitigation Plan

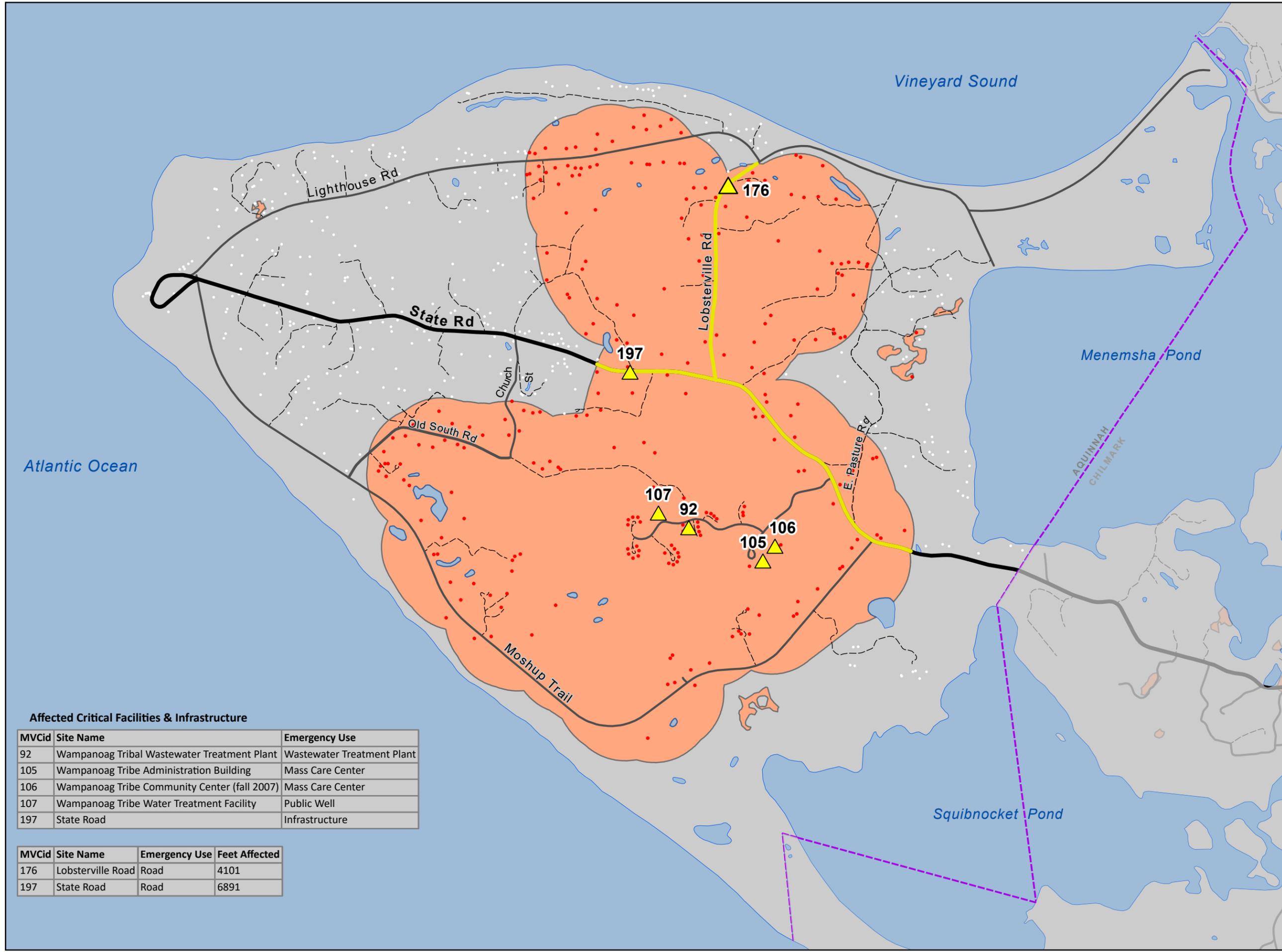
-  Affected Critical Facilities
  -  Affected Critical Infrastructure
  -  Affected Structures
  -  Unaffected Structures
  -  Wildland Urban Interface
- Roads**
-  Primary Road
  -  Secondary Road
  -  Neighborhood Road
  -  Local Road

Notes: Wildland Urban Interface (WUI) was delineated by the MVC from The Nature Conservancy's vegetation data (2002) and MassGIS land cover data (2016). Pitch pine and scrub/shrub oak habitats (TNC) were extracted along with subsets of evergreen and deciduous land cover from MassGIS. Any structures within the a) pitch pine/scrub oak habitat; OR b) contiguous woodland (50acre or greater patch); OR c) within 1,000ft of contiguous woodland are considered within the WUI.

Disclaimer: Data provided are for planning purposes only. These data are not adequate for regulatory interpretation. The MVC is not responsible for the end-user's interpretation of the data.

Compiled by: MVC, CL Seidel, [www.mvcommission.org](http://www.mvcommission.org); 508-693-3453  
 Data: Structures - MassGIS 2019; Roads 2017;  
 Town Line - MassGIS 2003/MVC 2020; Wildfire Urban Interface - MVC 2020  
 Coordinate Reference: Stateplane MassMainland NAD83 meters

Folder: Hazard Mitigation Plan  
 Project: HMPseries\_Fire.aprx;  
 Export: 1/20/2021 HMPseries\_Fire\_\*.pdf



### Affected Critical Facilities & Infrastructure

MVCid	Site Name	Emergency Use
92	Wampanoag Tribal Wastewater Treatment Plant	Wastewater Treatment Plant
105	Wampanoag Tribe Administration Building	Mass Care Center
106	Wampanoag Tribe Community Center (fall 2007)	Mass Care Center
107	Wampanoag Tribe Water Treatment Facility	Public Well
197	State Road	Infrastructure

MVCid	Site Name	Emergency Use	Feet Affected
176	Lobsterville Road	Road	4101
197	State Road	Road	6891

# FEMA Flood Zones

Aquinnah, MA

Hazard Mitigation Plan

-  Affected Critical Facilities
  -  Affected Critical Infrastructure
  -  Affected Structures
  -  Unaffected Structures
- FEMA Flood Zone**
-  100-year flood zone, VE
  -  100-year flood zone, AE
  -  500-year flood zone

Notes: Effective 2016, the 100 and 500-year flood zones represent a subset of the data presented on FEMA's Flood Insurance Rate Maps (FIRM). These data were developed by FEMA to support planning activities but do not replace the effective FIRM maps. These data are not suitable for engineering activities or site work nor can the data be used to determine the absolute delineation of flood boundaries. Instead the data should be used to portray zones of uncertainty and possible risks associated with flooding.

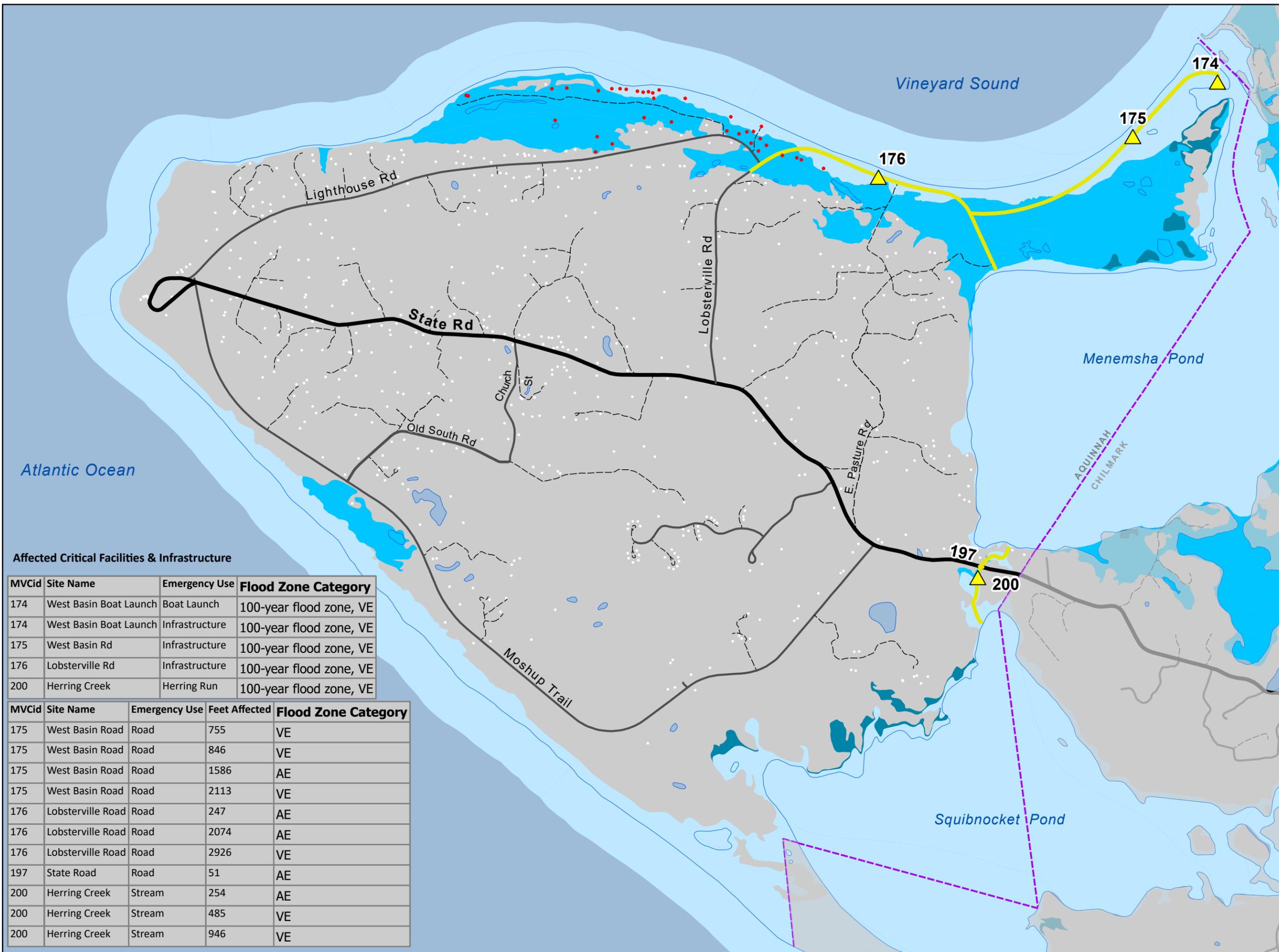
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Compiled by: MVC, CL Seidel,  
www.mvcommission.org; 508-693-3453  
Data: Structures - MassGIS 2019; Roads 2017;  
Town Line - MassGIS 2003/MVC 2020; FEMA  
Flood Zone - FEMA 2016  
Coordinate Reference: Stateplane  
MassMainland NAD83 meters

Folder: Hazard Mitigation Plan  
Project: HMPseries\_FEMA.aprx;  
Export: 1/23/2021 HMPseries\_FEMA\_\*.pdf



FEMA



### Affected Critical Facilities & Infrastructure

MVCid	Site Name	Emergency Use	Flood Zone Category
174	West Basin Boat Launch	Boat Launch	100-year flood zone, VE
174	West Basin Boat Launch	Infrastructure	100-year flood zone, VE
175	West Basin Rd	Infrastructure	100-year flood zone, VE
176	Lobsterville Rd	Infrastructure	100-year flood zone, VE
200	Herring Creek	Herring Run	100-year flood zone, VE

MVCid	Site Name	Emergency Use	Feet Affected	Flood Zone Category
175	West Basin Road	Road	755	VE
175	West Basin Road	Road	846	VE
175	West Basin Road	Road	1586	AE
175	West Basin Road	Road	2113	VE
176	Lobsterville Road	Road	247	AE
176	Lobsterville Road	Road	2074	AE
176	Lobsterville Road	Road	2926	VE
197	State Road	Road	51	AE
200	Herring Creek	Stream	254	AE
200	Herring Creek	Stream	485	VE
200	Herring Creek	Stream	946	VE

# Hurricane Surge Inundation Aquinnah, MA

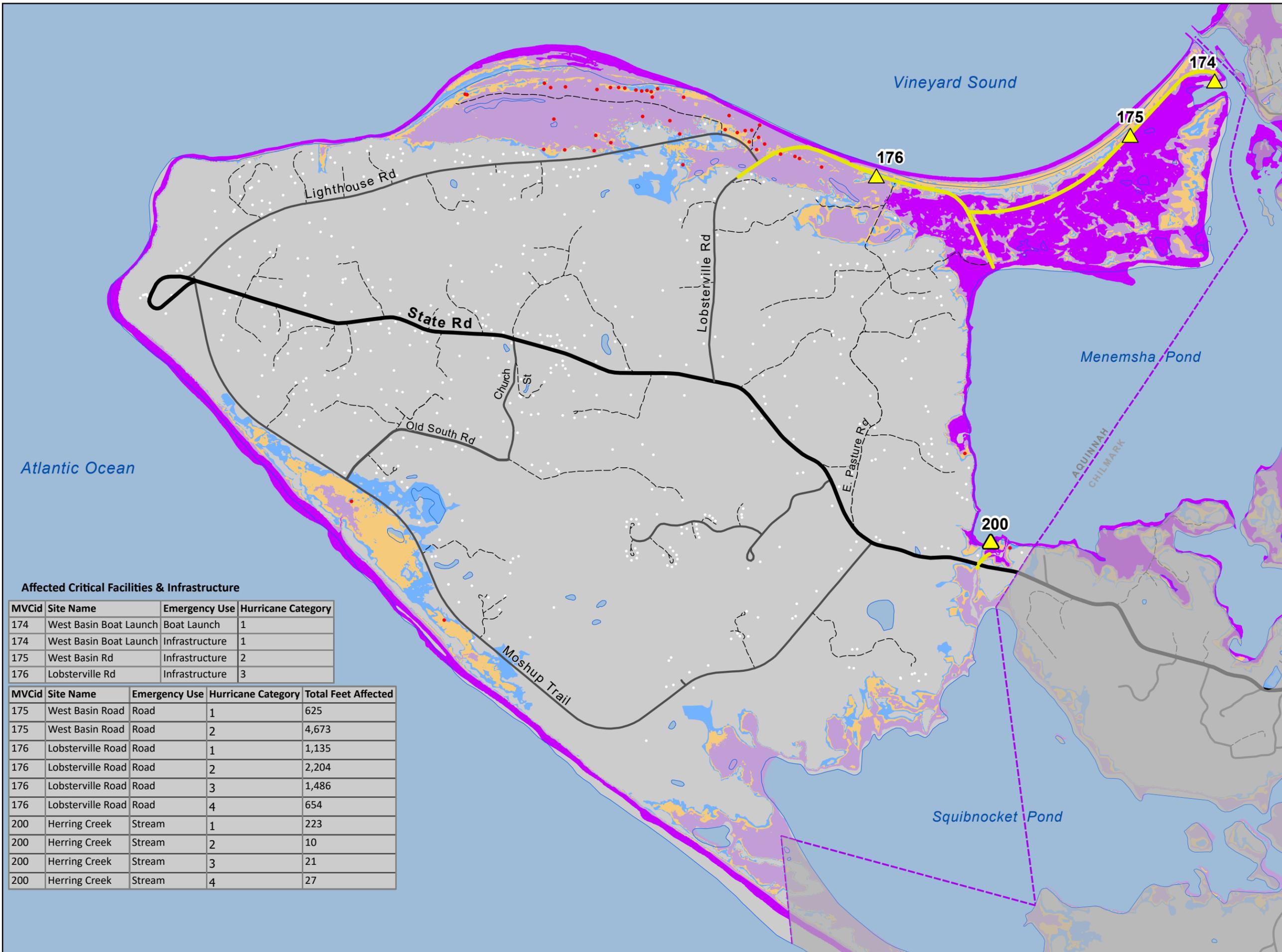
## Hazard Mitigation Plan

-  Affected Critical Facilities
  -  Affected Critical Infrastructure
  -  Affected Structures
  -  Unaffected Structures
- Hurricane Surge Inundation**  
*Worst Case Scenario*
-  Category 1
  -  Category 2
  -  Category 3
  -  Category 4

Notes: Per USACE: "Hurricane surge elevations were determined by the National Hurricane Center using the PV2 SLOSH model basin, and assumed peak hurricane surge arriving at mean high water. The hurricane surge inundation areas shown on this map depict the inundation that can be expected to result from a worst case combination of hurricane landfall location, forward speed, and direction for each hurricane category." ACCURACY: SLOSH Model Elevation Data: +/-20 percent LiDAR Elevation Data: +/- 0.5ft vertical; +/-1ft horizontal; Shoreline Data: Less accurate than LiDAR; Hence, discrepancies will be visibly noticeable when displayed together.

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www.mvcommission.org; 508-693-3453  
Data: Structures - MassGIS 2019; Roads 2017;  
Town Line - MassGIS 2003/MVC 2020;  
Hurricane Inundation - USACE 2013  
Coordinate Reference: Stateplane  
MassMainland NAD83 meters  
Folder: Hazard Mitigation Plan  
Project: HMPseries\_SLOSH.aprx;  
Export: 1/24/2021 HMPseries\_SLOSH\_\*.pdf



### Affected Critical Facilities & Infrastructure

MVCid	Site Name	Emergency Use	Hurricane Category
174	West Basin Boat Launch	Boat Launch	1
174	West Basin Boat Launch	Infrastructure	1
175	West Basin Rd	Infrastructure	2
176	Lobsterville Rd	Infrastructure	3

MVCid	Site Name	Emergency Use	Hurricane Category	Total Feet Affected
175	West Basin Road	Road	1	625
175	West Basin Road	Road	2	4,673
176	Lobsterville Road	Road	1	1,135
176	Lobsterville Road	Road	2	2,204
176	Lobsterville Road	Road	3	1,486
176	Lobsterville Road	Road	4	654
200	Herring Creek	Stream	1	223
200	Herring Creek	Stream	2	10
200	Herring Creek	Stream	3	21
200	Herring Creek	Stream	4	27

# Annual Coastal Flood Exceedance Probability

2050 Scenario: 2.57ft Sea Level Rise relative to year 2008

## Aquinnah, MA Hazard Mitigation Plan

- Affected Critical Facilities
- Affected Critical Infrastructure
- Affected Structures
- Unaffected Structures

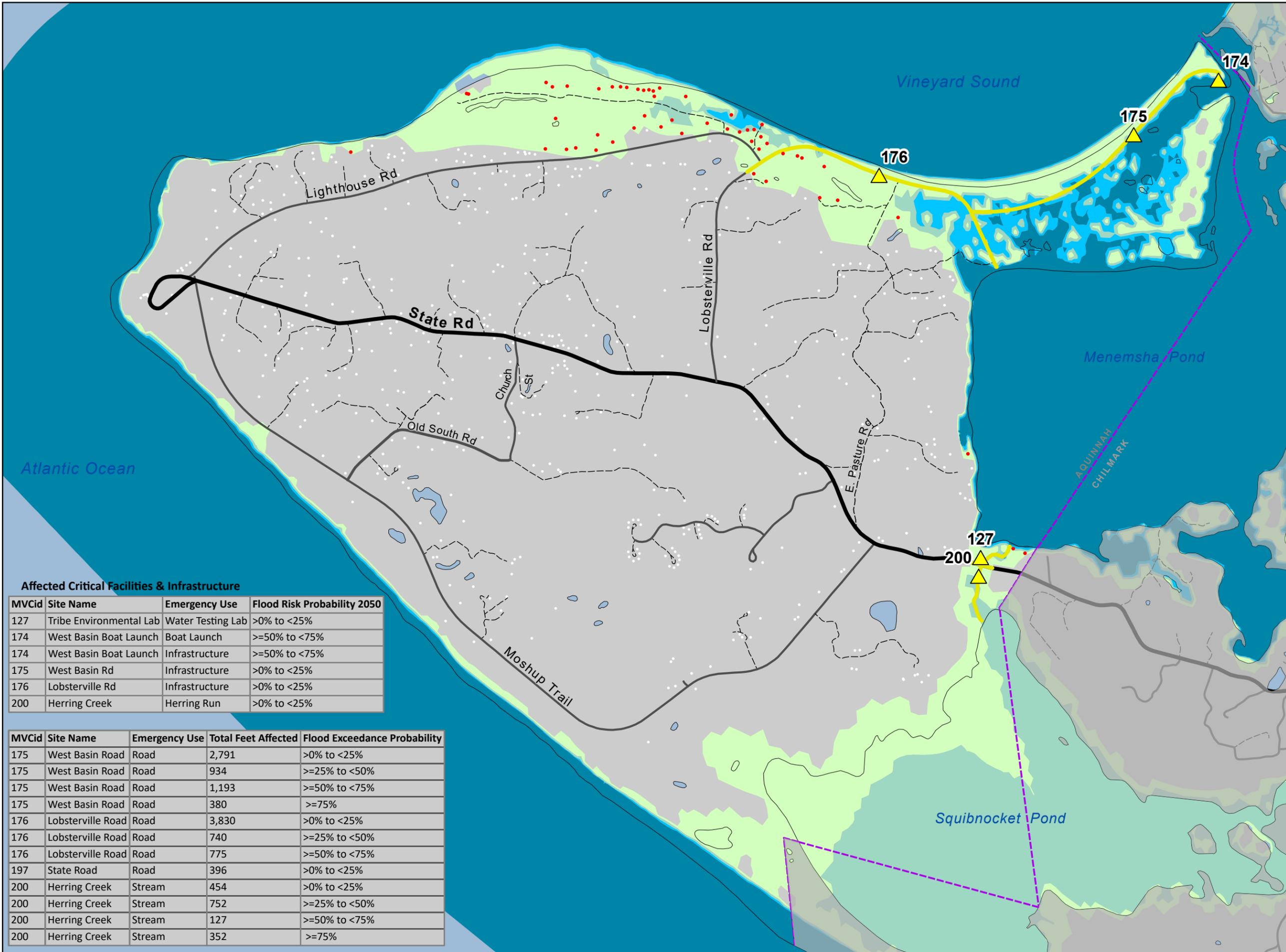
**Coastal Flood Exceedance Probability**

- >=75%
- >=50% to <75%
- >=25% to <50%
- >0% to <25%

Notes: These data are derived from output of the MA Coast Flood Risk Model (MC-FRM) for several time horizons, sea level rise and coastal storm simulations as described in the report "Assessing the vulnerability of MassDOT's coastal transportation systems to future sea level rise and coastal storms, and developing conceptual adaptation strategies" (2020). Sea level rise values utilized in the model are those adopted by ResilientMA.org and MassCZM. The probabilities is the percent chance that a location would be inundated under a given climate condition. For example, an area of 2% Probability has a 2% chance of flooding in a given year.

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 Coordinate Reference: Stateplane MassMainland NAD83 meters  
 Folder: Hazard Mitigation Plan  
 Project: HMPseries\_FRMprob2050.aprx;  
 Export: 2/2/2021 HMPseries\_FRMprob2050\_\*.pdf

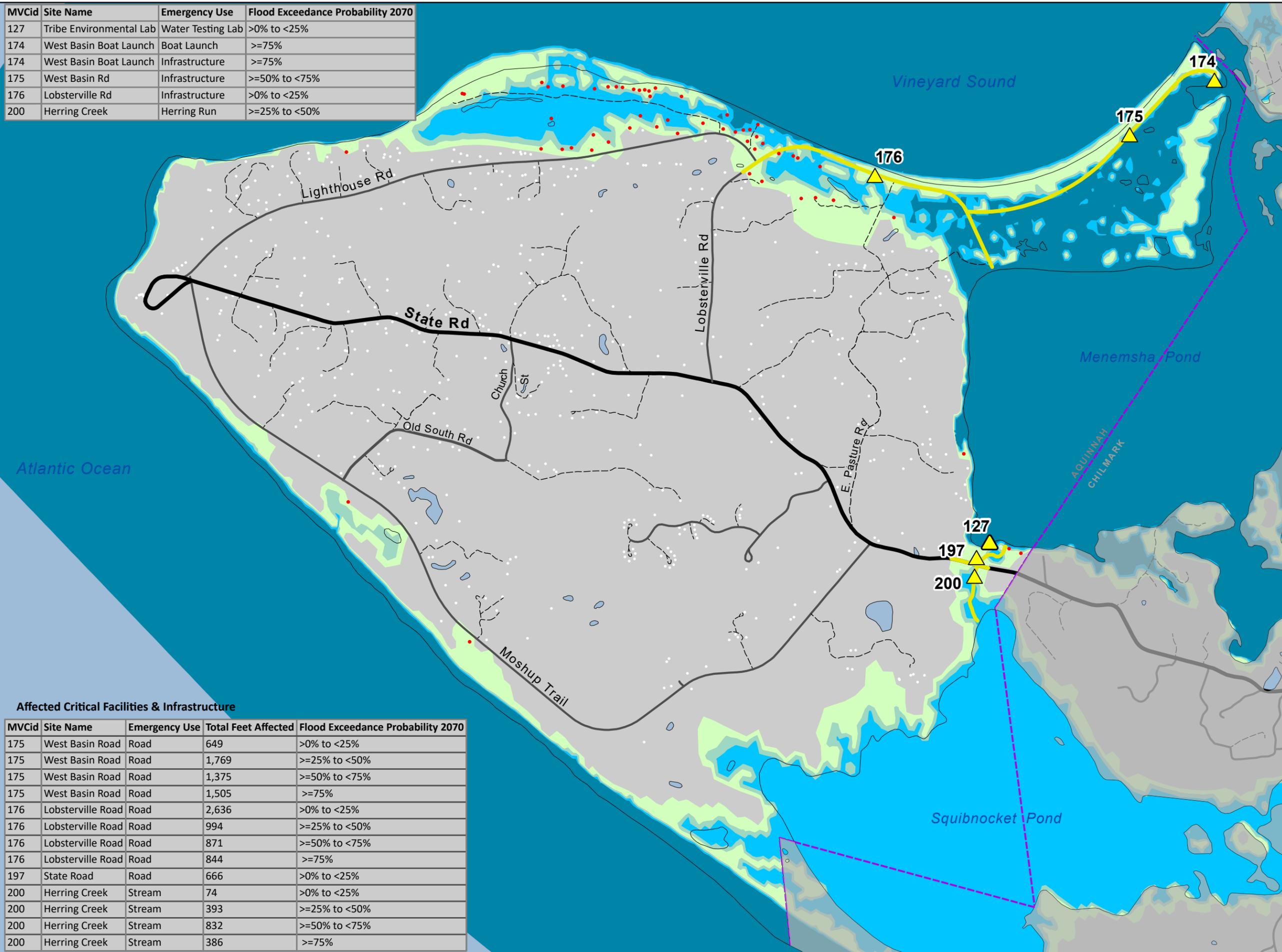


### Affected Critical Facilities & Infrastructure

MVCid	Site Name	Emergency Use	Flood Risk Probability 2050
127	Tribe Environmental Lab	Water Testing Lab	>0% to <25%
174	West Basin Boat Launch	Boat Launch	>=50% to <75%
174	West Basin Boat Launch	Infrastructure	>=50% to <75%
175	West Basin Rd	Infrastructure	>0% to <25%
176	Lobsterville Rd	Infrastructure	>0% to <25%
200	Herring Creek	Herring Run	>0% to <25%

MVCid	Site Name	Emergency Use	Total Feet Affected	Flood Exceedance Probability
175	West Basin Road	Road	2,791	>0% to <25%
175	West Basin Road	Road	934	>=25% to <50%
175	West Basin Road	Road	1,193	>=50% to <75%
175	West Basin Road	Road	380	>=75%
176	Lobsterville Road	Road	3,830	>0% to <25%
176	Lobsterville Road	Road	740	>=25% to <50%
176	Lobsterville Road	Road	775	>=50% to <75%
197	State Road	Road	396	>0% to <25%
200	Herring Creek	Stream	454	>0% to <25%
200	Herring Creek	Stream	752	>=25% to <50%
200	Herring Creek	Stream	127	>=50% to <75%
200	Herring Creek	Stream	352	>=75%

MVCid	Site Name	Emergency Use	Flood Exceedance Probability 2070
127	Tribe Environmental Lab	Water Testing Lab	>0% to <25%
174	West Basin Boat Launch	Boat Launch	>=75%
174	West Basin Boat Launch	Infrastructure	>=75%
175	West Basin Rd	Infrastructure	>=50% to <75%
176	Lobsterville Rd	Infrastructure	>0% to <25%
200	Herring Creek	Herring Run	>=25% to <50%



# Annual Coastal Flood Exceedance Probability

Year 2070 Scenario: 4.37ft Sea Level Rise relative to year 2008

## Aquinnah, MA Hazard Mitigation Plan

▲ Affected Critical Facilities  
— Affected Critical Infrastructure  
● Affected Structures  
● Unaffected Structures

**Coastal Flood Exceedance Probability**

- >=75%
- >=50% to <75%
- >=25% to <50%
- >0% to <25%

Notes: These data are derived from output of the MA Coast Flood Risk Model (MC-FRM) for several time horizons, sea level rise and coastal storm simulations as described in the report "Assessing the vulnerability of MassDOT's coastal transportation systems to future sea level rise and coastal storms, and developing conceptual adaptation strategies" (2020). Sea level rise values utilized in the model are those adopted by ResilientMA.org and MassCZM. The probabilities is the percent chance that a location would be inundated under a given climate condition. For example, an area of 2% Probability has a 2% chance of flooding in a given year.

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 Coordinate Reference: Stateplane MassMainland NAD83 meters  
 Folder: Hazard Mitigation Plan  
 Project: HMPseries\_FRMprob2070.aprx;  
 Export: 2/10/2021 HMPseries\_FRMprob2070\_\*.pdf



### Affected Critical Facilities & Infrastructure

MVCid	Site Name	Emergency Use	Total Feet Affected	Flood Exceedance Probability 2070
175	West Basin Road	Road	649	>0% to <25%
175	West Basin Road	Road	1,769	>=25% to <50%
175	West Basin Road	Road	1,375	>=50% to <75%
175	West Basin Road	Road	1,505	>=75%
176	Lobsterville Road	Road	2,636	>0% to <25%
176	Lobsterville Road	Road	994	>=25% to <50%
176	Lobsterville Road	Road	871	>=50% to <75%
176	Lobsterville Road	Road	844	>=75%
197	State Road	Road	666	>0% to <25%
200	Herring Creek	Stream	74	>0% to <25%
200	Herring Creek	Stream	393	>=25% to <50%
200	Herring Creek	Stream	832	>=50% to <75%
200	Herring Creek	Stream	386	>=75%

# Tsunami Hazard Zone

Aquinnah, MA

Hazard Mitigation Plan

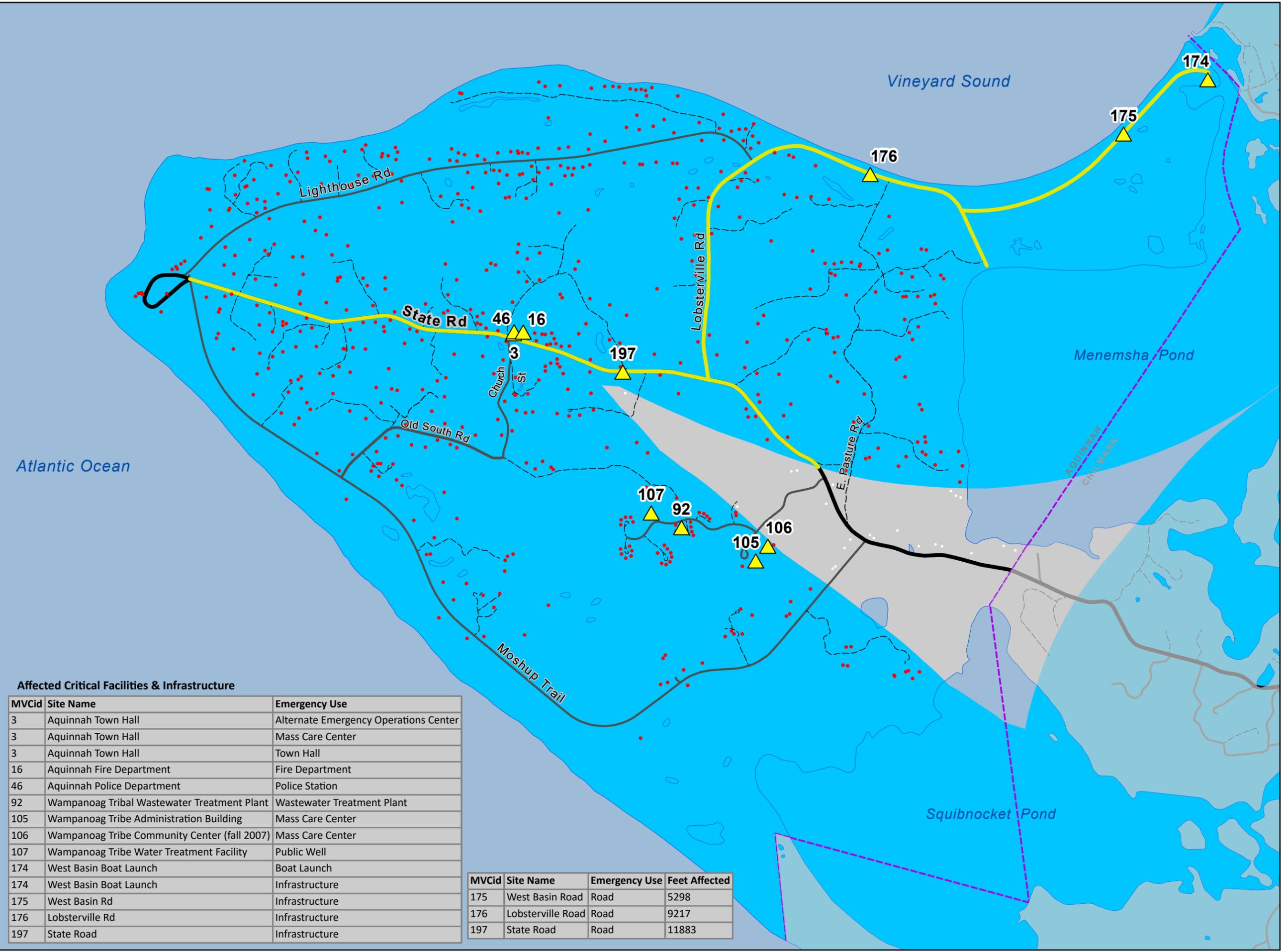
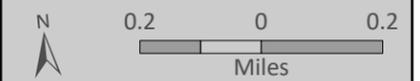
-  Affected Critical Facilities
  -  Affected Critical Infrastructure
  -  Affected Structures
  -  Unaffected Structures
  -  Potential Tsunami Hazard Zone
- Roads**
-  Primary Road
  -  Secondary Road
  -  Neighborhood Road
  -  Local Road

Notes: The potential tsunami hazard zone is any land or water area within 1 mile of the coastline. The 1 mile buffer was not applied to the shoreline of coastal ponds.

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 Data: Structures - MassGIS 2019; Roads 2017; Town Line - MassGIS 2003/MVC 2020; Tsunami Hazard Zone - MVC 2020  
 Coordinate Reference: Stateplane MassMainland NAD83 meters

Folder: Hazard Mitigation Plan  
 Project: HMPseries\_Tsunami.aprx;  
 Export: 1/22/2021 HMPseries\_Tsunami\_\*.pdf



**Affected Critical Facilities & Infrastructure**

MVCid	Site Name	Emergency Use
3	Aquinnah Town Hall	Alternate Emergency Operations Center
3	Aquinnah Town Hall	Mass Care Center
3	Aquinnah Town Hall	Town Hall
16	Aquinnah Fire Department	Fire Department
46	Aquinnah Police Department	Police Station
92	Wampanoag Tribal Wastewater Treatment Plant	Wastewater Treatment Plant
105	Wampanoag Tribe Administration Building	Mass Care Center
106	Wampanoag Tribe Community Center (fall 2007)	Mass Care Center
107	Wampanoag Tribe Water Treatment Facility	Public Well
174	West Basin Boat Launch	Boat Launch
174	West Basin Boat Launch	Infrastructure
175	West Basin Rd	Infrastructure
176	Lobsterville Rd	Infrastructure
197	State Road	Infrastructure

MVCid	Site Name	Emergency Use	Feet Affected
175	West Basin Road	Road	5298
176	Lobsterville Road	Road	9217
197	State Road	Road	11883