C-RiSe

The Climate Risk in the Seacoast: Assessing Vulnerability of Municipal Assets and Resources to Climate Change (C-RiSe) project provides maps and assessments of flood impacts to infrastructure and natural resources in the coastal Great Bay region associated with projected increases in storm surge, sea level, and precipitation.

TOWN OF MADBURY

Map 6: Roads and Transportation Assets
Sea-Level Rise + Storm Surge 1.7', 4.0', 6.3'

SLR Legend

Extent of Sea-Level Rise of 1.7' with Storm Surge

Extent of Sea-Level Rise of 4.0' with Storm Surge

Extent of Sea-Level Rise of 6.3' with Storm Surge

Approximate Mean High High Water Level

Impact Legend

DOT Projects

Evacuation Routes

Roads Impacted By SLR of 1.7 Feet w/ Storm Surge

Roads Impacted By SLR of 4.0 Feet w/ Storm Surge

Roads Impacted By SLR of 6.3 Feet w/ Storm Surge

SEA-LEVEL RISE SCENARIOS AT 2050 AND 2100

HIGHEST +6.3 feet sea level

INTERMEDIATE HIGH +4.0 feet sea level

INTERMEDIATE LOW +1.7 feet sea level

+2.0 feet sea level
+1.3 feet sea level
+0.6 feet sea level

Figure modified from NH Coastal Risks and Hazards Commission, Science and Technical Advisory Panel Report (2014)

Sea-Level Rise Scenarios
Please note that the sea-level rise scenarios used in this assessment were derived from the Wake, 2011 report (refer to table of values below from this report). These scenarios were selected prior to the release of the Science and Technical Advisory Panel Report to the N.H. Coastal Risks & Hazards Commission, in August, 2014 [1]. While slightly different than the scenarios cited in that report, they yield coverage estimates that are within the mapping margin of error.

[1] Wake C, Kirshen P, Huber M, Knuuti K, and Stampone M (2014) Sea-Level Rise, Storm Surges, and Extreme Precipitation in Coastal New Hampshire: Analysis of Past and Projected Future Trends, prepared by the Science and Technical Advisory Panel (STAP) for the New Hampshire Coastal Risks and Hazards Commission.

	2050		2100	
	Lower	Higher	Lower	Higher
Current Elevation of MHHW a,b	4.4	4.4	4.4	4.4
100-Year Flood Height	6.8	6.8	6.8	6.8
Subsidence	0.0	0.0	0.0	0.0
Eustatic SLR	1.0	1.7	2.5	6.3
Total Stillwater Elevation c	12.2	12.9	13.7	17.5

a- NAVD: North American Vertical Datum of 1988
b- MHHW: Mean High High Water at Fort Point, NH
c- Total Stillwater Elevation may not equal total of components due to rounding

Table 11. Estimates (in feet) of future 100-year Flood Stillwater elevations at Fort Point under lower and higher emission scenarios (relative to NAVD88) based on the statistical analysis presented in this report.

Wake C (2011) Climate Change in the Piscataqua/Great Bay Region: Past, Present, and Future. Carbon Solutions New England Report for the Great Bay (New Hampshire) Stewards.

Base Features

- Municipal Boundaries
- Waterbodies
- Rivers and Streams
- Class I Trunk Line Highway
- Class II State Aid Highway
- Class III Recreational Road
- Class V Town Road
- Class VI Not Maintained
- Private

1 inch = 773 feet

0   0.15   0.3   0.6   0.9 Miles

Road Asset Impacts: Town of Madbury

Road Name	Road Class	Miles Impacted	Road Name	Road Class	Miles Impacted	Road Name	Road Class	Miles Impacted
Creek Road	Not Maintained	0.04						

Note: Total miles impacted per road were calculated using the greatest sea-level scenario (6.3') extent + storm surge.

State & Municipal Roadways (miles)

Roadway Type	Sea Level + Storm Surge Scenarios		
	1.7 feet	4.0 feet	6.3 feet
State	0.00	0.00	0.00
Local	0.00	0.00	0.00
Private	0.00	0.00	0.00
Not Maintained	0.03	0.04	0.04
Total Road Miles	0.03	0.04	0.04

Other Transportation Asset Impacts: Town of Madbury

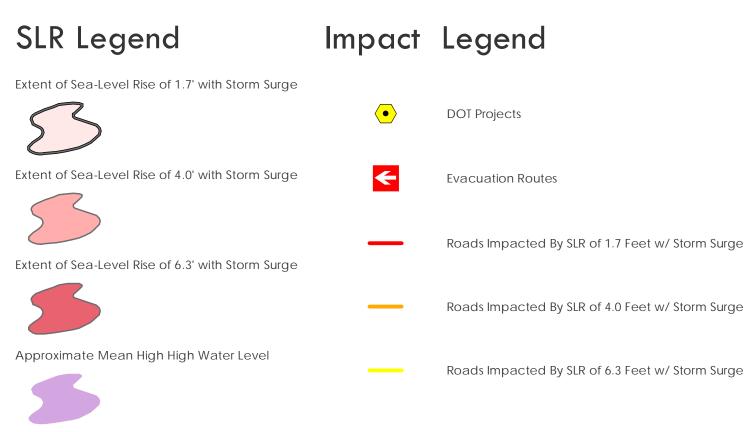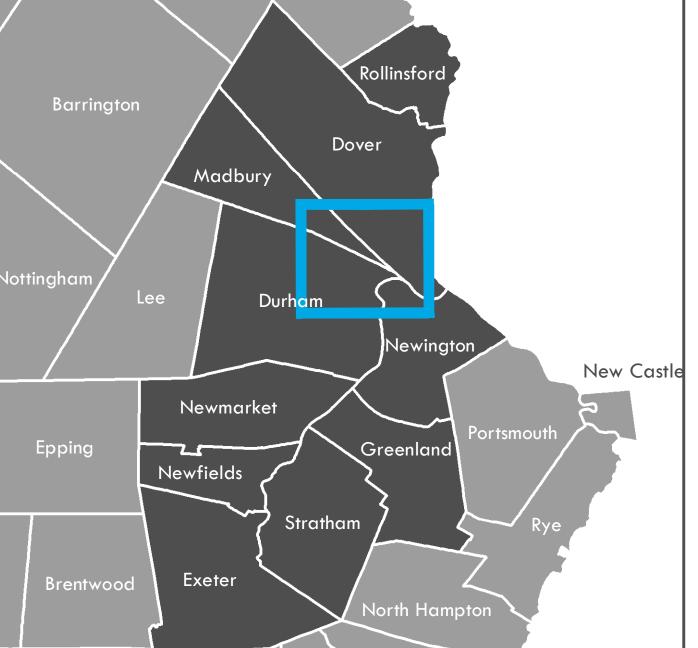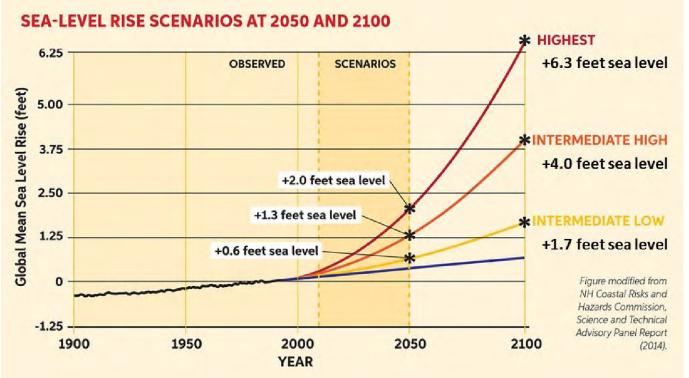| Impacted Asset	Metric	Metric Impact	General Location and Name
Urban Compact Areas	Acres	0	N/A
Evacuation Routes	#	0	N/A
Bridges	#	0	N/A
Airports	#	0	N/A
NHDOT Projects	#	0	N/A
Climate Ready Culverts	#	0	N/A

Note: Total number of impacted assets were calculated using the greatest sea-level rise (6.3') extent + storm surge.