



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.

# TRANSPORTATION ASSETS: TOWN OF NEWFIELDS

Extent of Projected Tidal Flooding  
Sea-Level Rise + Storm Surge 1.7', 4.0', 6.3'

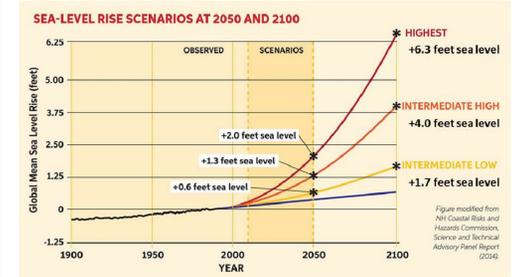
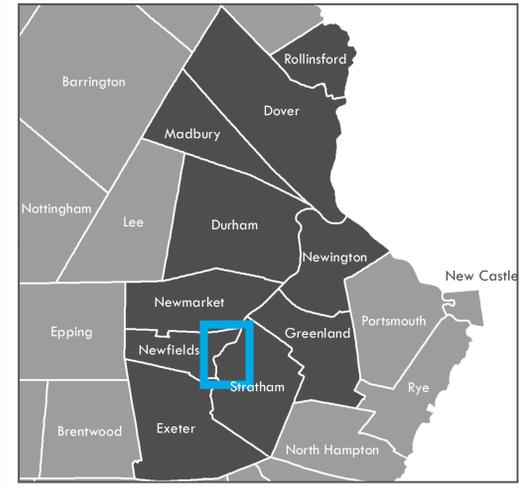
**SLR Legend**

- 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
- Culverts
- Evacuation Routes
- Roads Impacted By Sea-Level Rise of 6.3 Feet w/ Storm Surge
- Roads Impacted By Sea-Level Rise of 4.0 Feet w/ Storm Surge
- Roads Impacted By Sea-Level Rise of 1.7 Feet w/ Storm Surge

**Disclaimer:**  
NHDOT projects were derived from various sources within the New Hampshire Department of Transportation and may have been updated at different times and with varying levels of accuracy. Given redundancies and the need to provide meaningful maps for planning purposes, SRPC generalized projects according to vulnerable areas. A more comprehensive list of impacted projects can be viewed within the community's vulnerability assessment chapter.



**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, Kintner P, Huber M, Knott K, and Stimpone 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 <sup>a</sup>	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
Elastic SLR	1.0	1.7	2.5	6.3
<b>Total Stillwater Elevation<sup>c</sup></b>	<b>12.2</b>	<b>12.9</b>	<b>13.7</b>	<b>17.5</b>

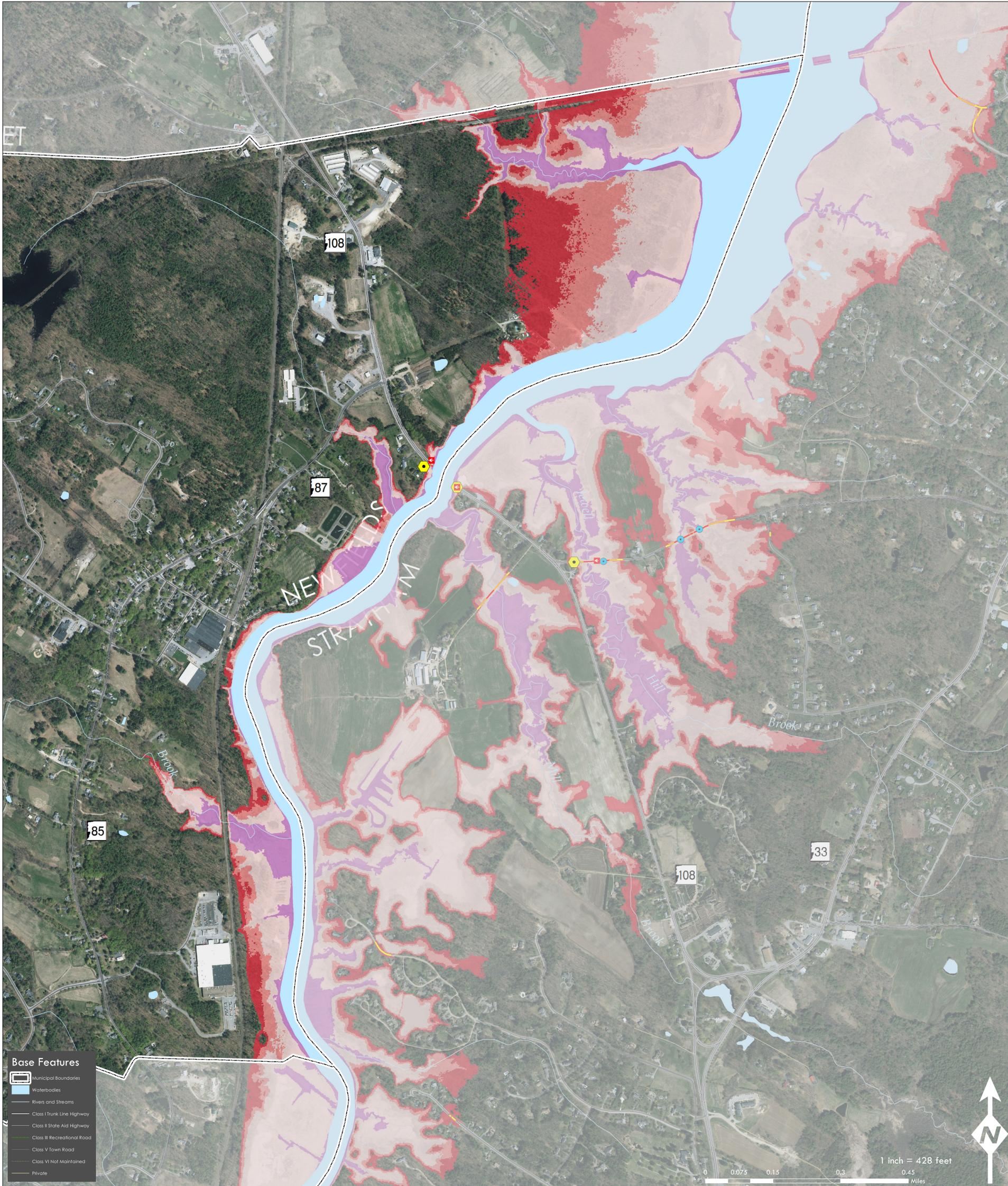
a - NAVD: North American Vertical Datum of 1988  
b - MHHW: Mean Higher High Water at Fort Point, NH  
c - Total Stillwater Elevation may not equal total of components due to rounding.  
Based on the statistical analysis presented in this report.  
Wolke C.E., Benford, E. Kelly, M. Rhyne, A. Stone, C. Warren, E. Douglas (2011) Climate Change in the Portsmouth/Great Bay Region: Past, Present, and Future. Carbon Station New England Report for the Great Bay New Hampshire District.

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Path: M:\Region\Project\_Special\_Merit\Maping\Final\_Maps\_By\_Community\Newfields\Newfields\_Transportation\_4\_6.mxd

**Data Sources:**  
Data sets were retrieved from the NH GRANIT database, December, 2015. Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Earth Systems Research Center (ESRC), under contract to the Office of Energy & Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. Neither OEP nor ESRC make any claim as to the validity or reliability or to any implied uses of these data.

The C-RiSe project is funded by the National Oceanic and Atmospheric Administration under the Coastal Zone Management Act (CZMA) Enhancement Program. Project of Special Merit for FY 2015, authorized under Section 309 of the CZMA (16 U.S.C. § 1456).



**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

Road Asset Impacts: Town of Newfields			State & Municipal Roadways (miles)			Other Transportation Asset Impacts: Town of Newfields							
Road Name	Road Class	Miles Impacted	Road Name	Road Class	Miles Impacted	Roadway Type	Sea Level Scenarios			Impacted Asset	Metric	Metric Impact	General Location and Name
Route 108	State	0.00					1.7 feet	4.0 feet	6.3 feet				
						State	0.00	0.00	0.00	Urban Compact Areas	Acres	0	N/A
						Local	0.00	0.00	0.00	Evacuation Routes	#	1	Route 108
						Private	0.00	0.00	0.00	Bridges	#	0	N/A
						Not Maintained	0.00	0.00	0.00	Airports	#	0	N/A
						Total Road Miles	0.00	0.00	0.00	NHDOT Projects	#	1	Route 108 bridge replacement over Squamscott River
										Climate Ready Culverts	#	0	N/A

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