



Rising Seas Swallow \$403 Million in New England Home Values

For Immediate Release: January 22, 2019

Data scientists from [First Street Foundation](#) and Columbia University have expanded their peer-reviewed housing market research to include 2.5 million coastal properties in Massachusetts, Maine, New Hampshire, and Rhode Island and found that increased tidal flooding caused by sea level rise has eroded \$403.1 million in relative home values between 2005 and 2017. Coastal homes in Massachusetts were hit hardest, losing \$273.4 million in relative appreciation. Homes in Maine saw \$69.9 million in unrealized value, followed by Rhode Island at \$44.7 million, and New Hampshire at \$15.2 million. One of the region's hardest hit homes, a triplex located on Marginal Street in Boston, currently valued at \$373,725, would be worth more than double at \$799,054 if not for increased tidal flooding due to sea level rise.

Homeowners can learn how much relative value their personal property missed out on over the 12 year study period and how much value it is projected to lose over the next 15 years at [FloodiQ.com](#). The interactive visualization tool also shows current inundation estimates for frequent and annual tidal floods as well as from hurricane storm surge, and how those levels are projected to increase over the next 15 years.

Steven A. McAlpine, Head of Data Science at First Street Foundation, and Dr. Jeremy R. Porter, a Columbia University professor and First Street Foundation statistical consultant first established their peer-reviewed methodology with an analysis of the Miami-Dade County real estate market. That study, published in the journal [Population Research and Policy Review](#), showed \$465 million was lost from 2005 to 2016 due to sea level rise flooding. McAlpine and Porter have since created 16 housing market-specific models. By analyzing approximately 11 million real estate transactions, and applying the results to 22.5 million properties, the researchers have found a \$15 billion loss in home values across 14 states. The Foundation's previous research was reported by [The Wall Street Journal](#), [Bloomberg](#), [Axios](#), [The Washington Post](#), and [The Christian Science Monitor](#)

"Each time we analyze a new state we see the same phenomenon," said Porter. "Increased tidal flooding leads to a loss in home value appreciation. As sea level rise accelerates, we expect the corresponding loss in relative home value to accelerate as well."

McAlpine and Porter's research is the first to quantify the observed negative impact of increasingly frequent flooding, driven by sea level rise, on the housing market. Other models have forecasted the future impact of sea level rise flooding on coastal properties, but this is the first to demonstrate value loss that has already occurred. By taking into account characteristics associated with home value,

such as square footage and proximity to amenities, and accounting for economic trends like the 2008 housing recession, the scientists were able to isolate the impact that increased frequent tidal flooding caused by sea level rise has had on home value. While most of the affected homes did appreciate over the studied period, they did so at a significantly lower rate than comparable homes unaffected by tidal flooding. The research is also the first to find that in addition to direct property-lot flooding nearby road flooding also has a major impact on home value.

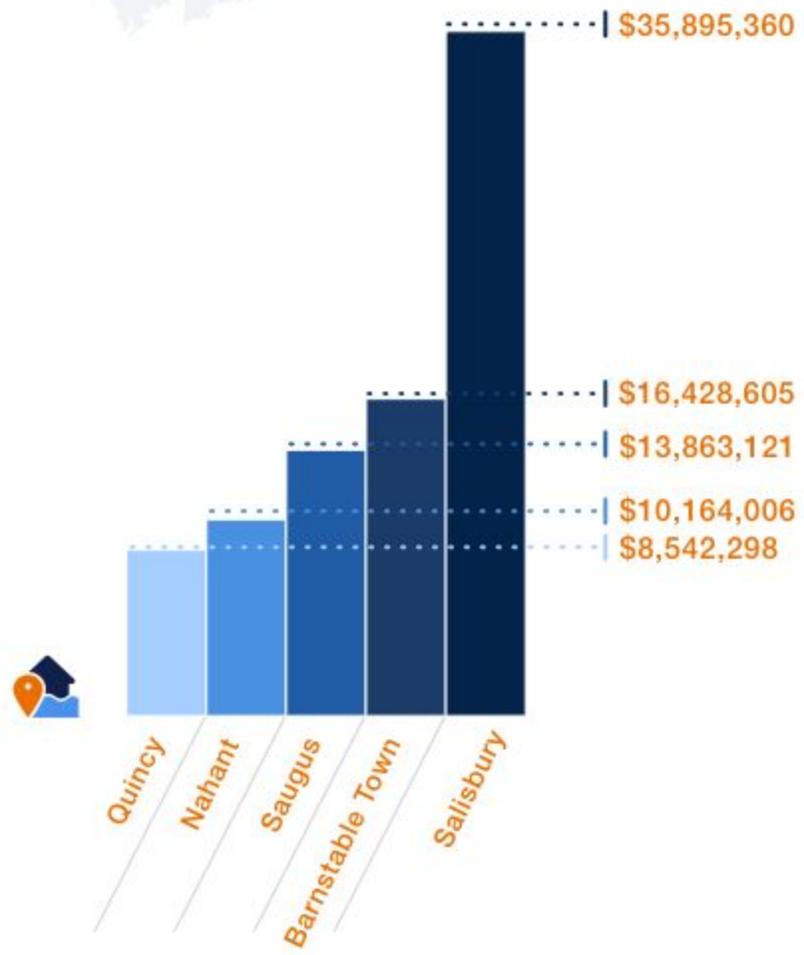
“It’s not just property lot flooding that leads to home value loss, persistent flooding of nearby roads has a significant impact as well,” said McAlpine. “Road flooding affects commutes and school bus access, and because it’s on display for everyone to see, it can give an area a negative reputation. In New England, winter flooding can create sheets of ice on roadways, adding another, dangerous, consequence to street flooding.”

FloodiQ.com is the first publicly available database that gives coastal residents, homeowners, and prospective homebuyers access to comprehensive flood risk and property value loss information.

“This levels the playing field for average Americans looking to invest in real-estate by giving them access to the same information as institutional investors and the wealthy,” said Matthew Eby, Executive Director of First Street Foundation. “Knowing the direct impact of previous flood events on the value of your home and understanding how the risks of flooding will increase as sea levels rise is something the public deserves to know.”

[First Street Foundation](http://FirstStreet.org) is a 501(c)(3) tech nonprofit that quantifies and communicates the impacts of sea level rise and flooding.

Massachusetts: Top 5 Hardest Hit Cities



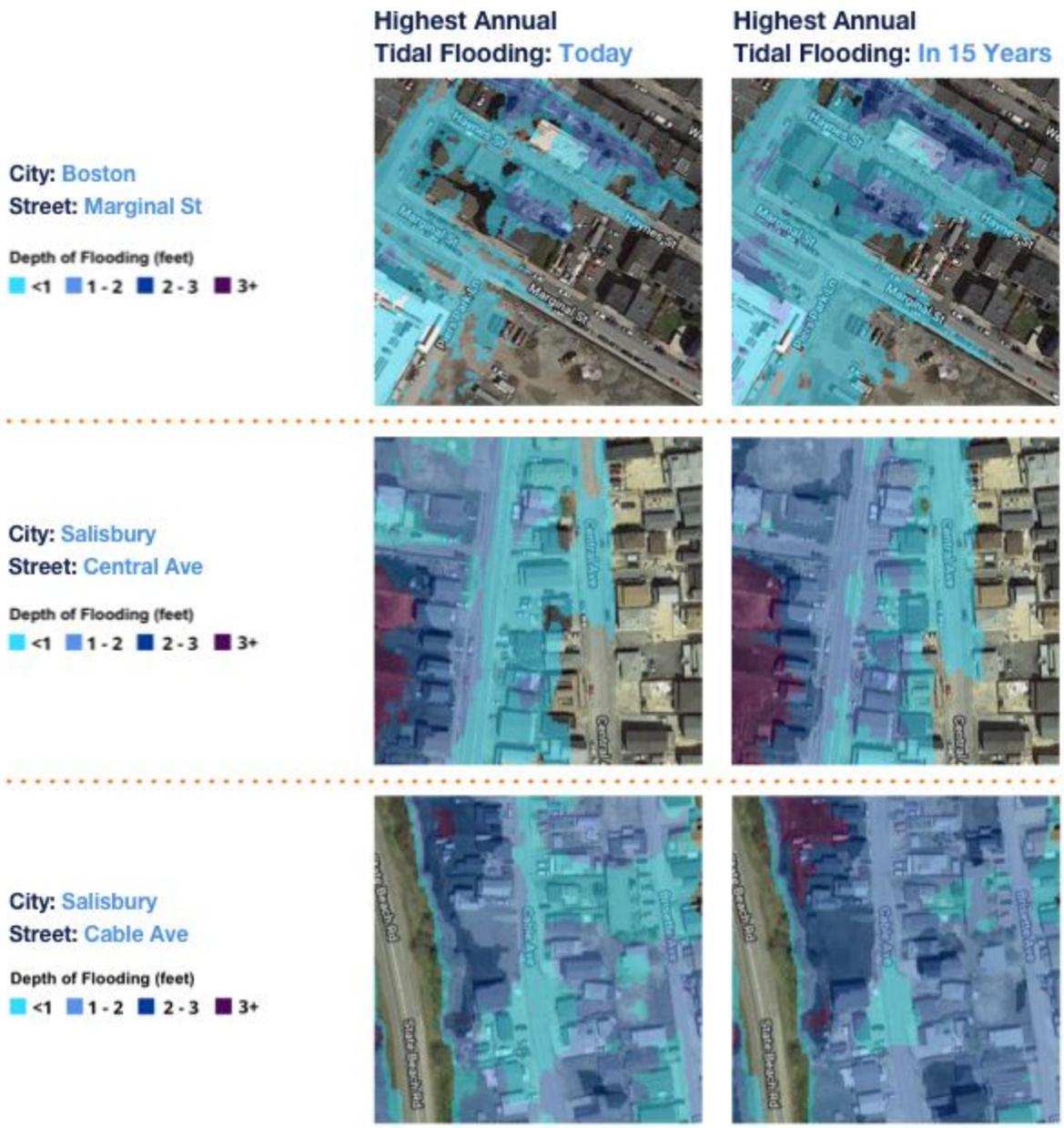
Massachusetts: Top 3 Hardest Hit Homes

City: Boston
Street: Marginal St
Tax Assessed Value: \$373,725
Should be Worth: \$799,054
Relative Value Loss: -\$425,329

City: Salisbury
Street: Central Ave
Tax Assessed Value: \$227,900
Should be Worth: \$421,822
Relative Value Loss: -\$193,922

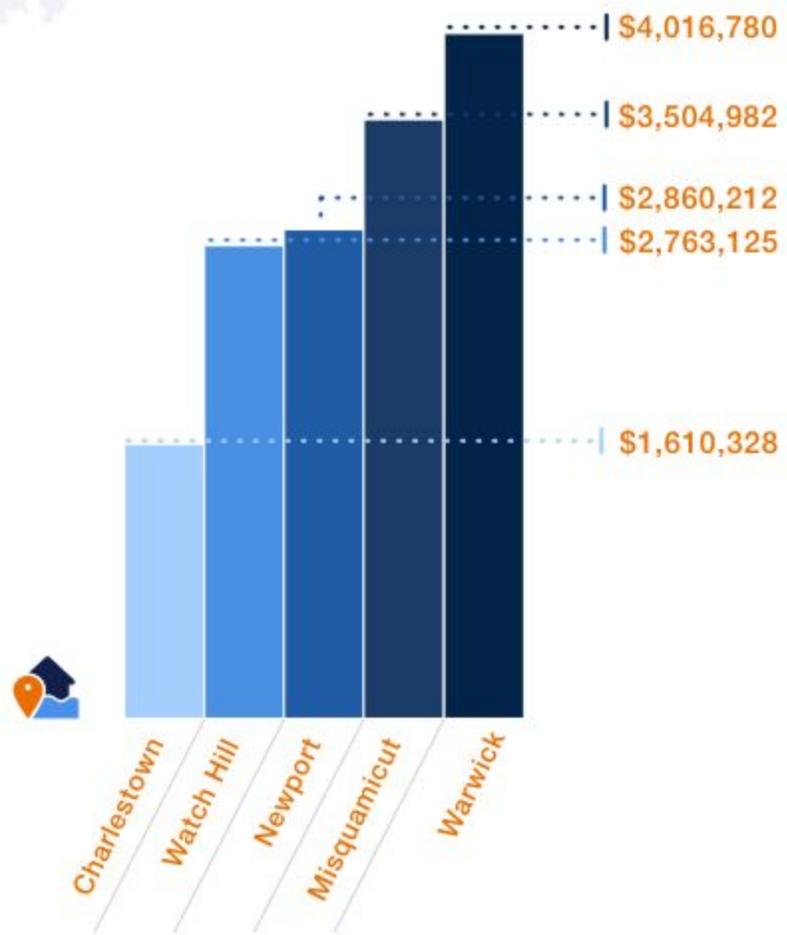
City: Salisbury
Street: Cable Ave
Tax Assessed Value: \$349,000
Should be Worth: \$582,422
Relative Value Loss: -\$233,422

Tidal Flooding will Increase with Sea Level Rise





Rhode Island: Top 5 Hardest Hit Cities



Rhode Island: Top 3 Hardest Hit Homes

City: Warren
Street: Child St
Tax Assessed Value: \$179,300
Should be Worth: \$294,148
Relative Value Loss: -\$114,848

City: Warren
Street: Metacom St
Tax Assessed Value: \$130,700
Should be Worth: \$213,373
Relative Value Loss: -\$82,673

City: Warren
Street: Market St
Tax Assessed Value: \$131,500
Should be Worth: \$205,699
Relative Value Loss: -\$74,199



Tidal Flooding will Increase with Sea Level Rise

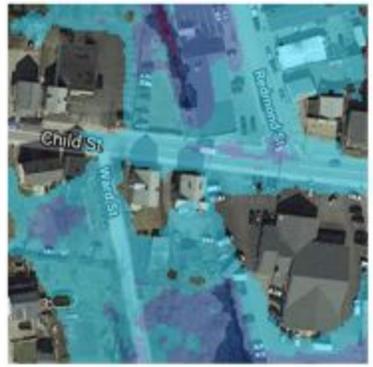


Highest Annual Tidal Flooding: Today

Highest Annual Tidal Flooding: In 15 Years

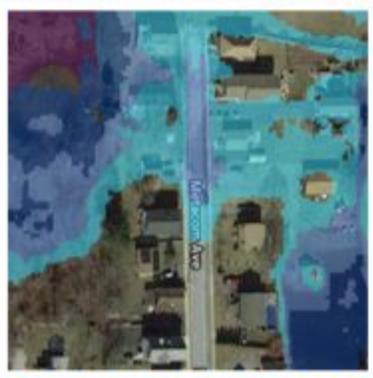
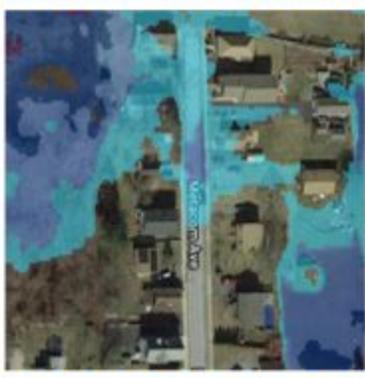
City: Warren
 Street: Child St

Depth of Flooding (feet)
 <1 1-2 2-3 3+



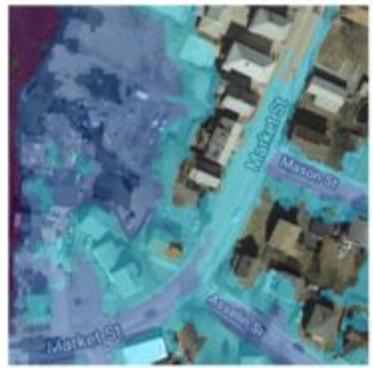
City: Warren
 Street: Metacom St

Depth of Flooding (feet)
 <1 1-2 2-3 3+

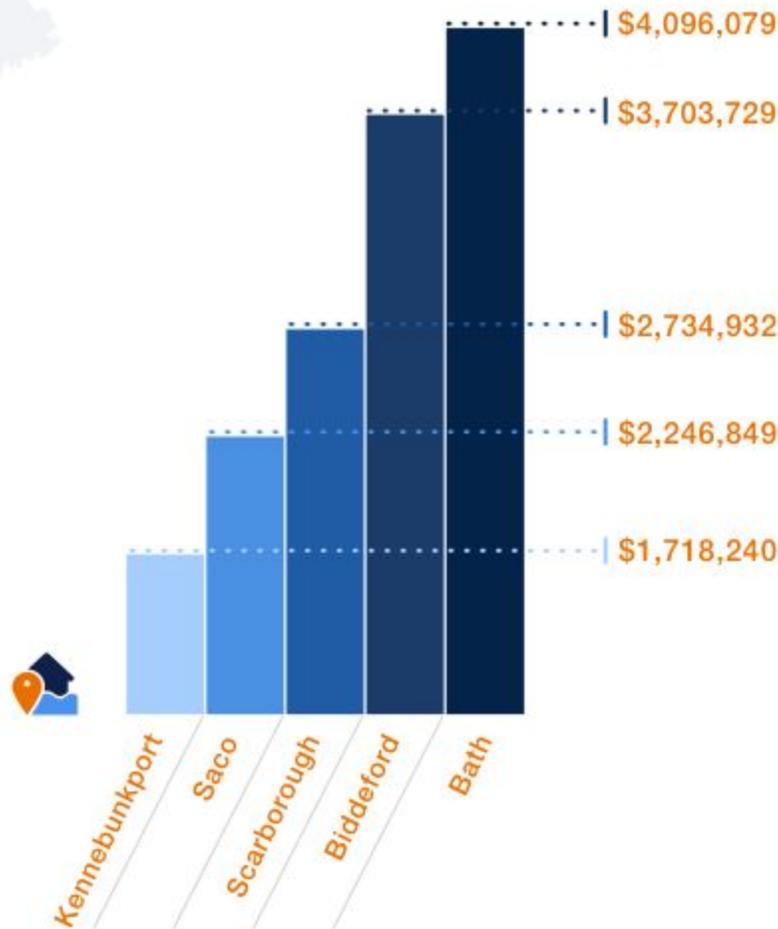


City: Warren
 Street: Market St

Depth of Flooding (feet)
 <1 1-2 2-3 3+



Maine: Top 5 Hardest Hit Cities



Maine: Top 3 Hardest Hit Homes

City: Scarborough
Street: E Grand Ave
Tax Assessed Value: \$117,100
Should be Worth: \$248,556
Relative Value Loss: -\$131,456

City: Bath
Street: Varney Mill Rd
Taxed Assess Value: \$92,900
Should be Worth: \$150,674
Relative Value Loss: -\$57,774

City: Bath
Street: Washington St
Taxed Assessed Value: \$93,800
Should be Worth: \$145,898
Relative Value Loss: -\$52,098



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Tidal Flooding will Increase with Sea Level Rise

City: Scarborough
Street: E Grand Ave

Depth of Flooding (feet)

<1 1-2 2-3 3+

Highest Annual Tidal Flooding: Today



Highest Annual Tidal Flooding: In 15 Years



City: Bath
Street: Varney Mill Rd

Depth of Flooding (feet)

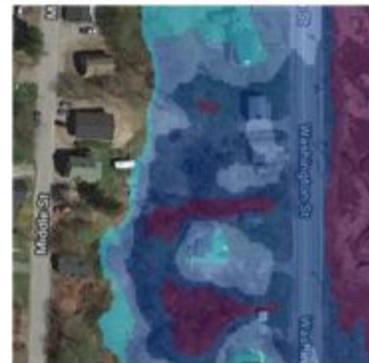
<1 1-2 2-3 3+



City: Bath
Street: Washington St

Depth of Flooding (feet)

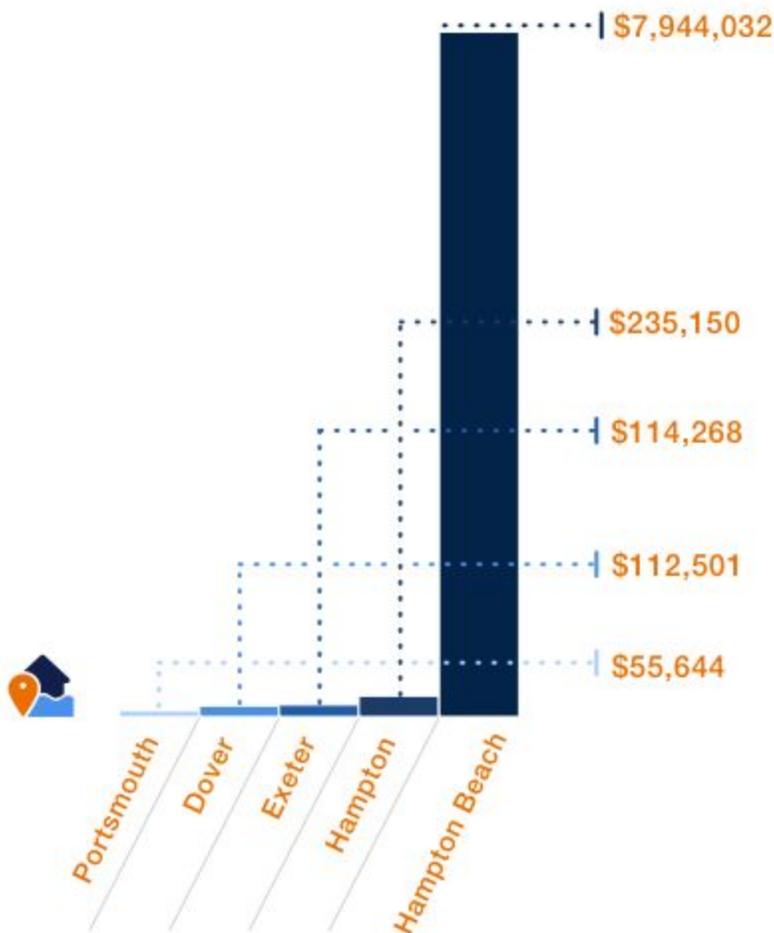
<1 1-2 2-3 3+





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New Hampshire: Top 5 Hardest Hit Cities



New Hampshire: Top 3 Hardest Hit Homes

City: **Hampton Beach**
Street: **Page Ln**
Tax Assessed Value: **\$516,800**
Should be Worth: **\$841,066**
Relative Value Loss: **-\$324,266**

City: **Hampton Beach**
Street: **Perkins Ave**
Tax Assessed Value: **\$560,700**
Should be Worth: **\$840,406**
Relative Value Loss: **-\$279,706**

City: **Hampton Beach**
Street: **Wall St**
Tax Assessed Value: **\$236,800**
Should be Worth: **\$425,731**
Relative Value Loss: **-\$188,931**



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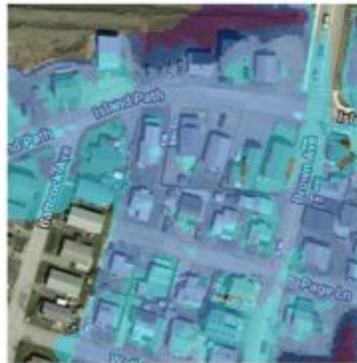
Tidal Flooding will Increase with Sea Level Rise

City: Hampton Beach
Street: Page Ln

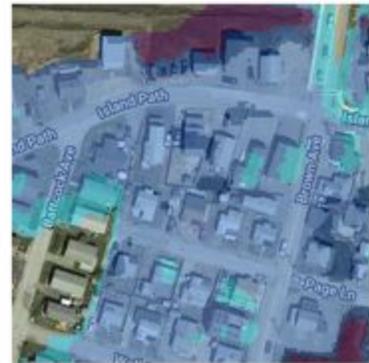
Depth of Flooding (feet)

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Highest Annual Tidal Flooding: Today



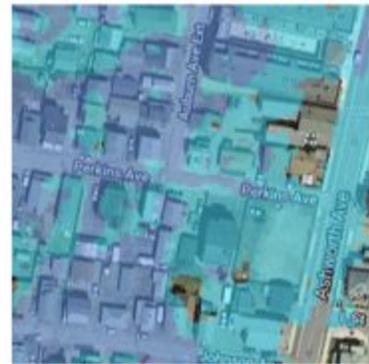
Highest Annual Tidal Flooding: In 15 Years



City: Hampton Beach
Street: Perkins Ave

Depth of Flooding (feet)

<1 1-2 2-3 3+



City: Hampton Beach
Street: Wall St

Depth of Flooding (feet)

<1 1-2 2-3 3+

