

# Estimating undisclosed flood risk in real estate transactions in Rhode Island

## Financial Implications for single-family home buyers

Commissioned by Natural Resources Defense Council (NRDC)

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## Purpose of Report

The Natural Resources Defense Council (NRDC) is a not-for-profit organization that engaged Milliman, Inc. (Milliman), an independent actuarial consulting firm, to study the potential amount of undisclosed flood risk in 25 states by estimating the total number of homes damaged by prior flooding.

## Background

Like most states, those in the study area generally do not have laws that effectively require that flood damage be disclosed in real estate transactions. Homes that have experienced flooding in the past are more likely to experience flood damage in the future, meaning buyers of previously damaged homes can unknowingly purchase homes that are at an increased risk of flooding relative to the average home. Milliman estimates that 4% of homeowners in the United States have any flood insurance coverage, potentially leaving unsuspecting buyers of previously damaged homes to be substantially more at risk of paying out of pocket for unexpected flood damages. Additionally, these home buyers could be less likely to purchase flood insurance without the awareness that a home had previously flooded or take actions to lower their risk of flood damage in the future such as raising the home or relocating important systems. Those home buyers who do purchase insurance may be subject to higher premiums to insure their homes than they had anticipated.

The following information is only specific information about the impact of flooding on the state. For a comparison of all the states in the study area as well as full details of the data sources and methodology used in the study, read the [full report](#).

FIGURE 1: AVERAGE STANDARD AAL FOR DAMAGED HOME BY MSA

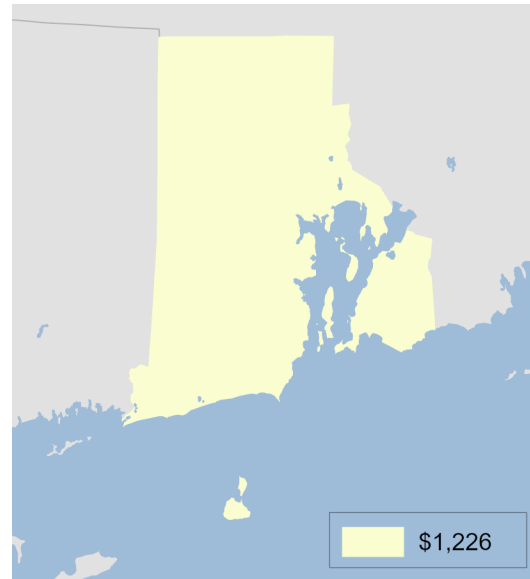


TABLE 1: RANKING OF KEY METRICS IN 25 STATE STUDY AREA

NFIP paid claims count	13 <sup>th</sup>
NFIP average claim amount	21 <sup>st</sup>
Percent of homes with prior flood damage	3 <sup>rd</sup>
Home sales with prior flood damage	16 <sup>th</sup>
Average Standard AAL of home with prior flood damage	14 <sup>th</sup>
Total cost of flooding for sold homes with prior flood damage	16 <sup>th</sup>

## State Summary

Rhode Island has had 2,044 NFIP claims since 2010 for single-family homes with an adjustment factor of 94% which indicates few repeated events for flooded homes. In Rhode Island, our analysis estimates that 5,197 homes have been previously flooded between 2010-2024 (2.0% of all single-family homes) and 214 of those were subject to sale in 2023. The total expected annual cost of flooding for these sold homes (average AAL \* the home sales by MSA) is \$262,349.

**FIGURE 2: SUMMARY STATISTICS ON NUMBER OF SINGLE-FAMILY HOMES**

Total Single-Family Homes	260,463
Single-Family Homes with NFIP Claim (since 2010)	2,044
Estimated Single-Family Homes with Flood Damages	5,197
Estimated 2023 Home Sales with Flood Damages	214
Total Cost of Flooding	\$262,349

The map in Figure 1 shows the average Standard AAL for damaged homes by MSA across the state of Rhode Island. Rhode Island is the only state with only one MSA, Providence-Warwick. The average AAL for Providence-Warwick is \$1,226 with an estimated number of single-family homes with flood damage of 5,197. These homes have an increased AAL under the Medium and High scenarios of \$1,364 and \$1,959 respectively.

Rhode Island has the 14<sup>th</sup> largest difference in AAL, \$1,177, between a home that has been previously flooded and the state average for the Standard scenario. This dollar difference grows by 61% under the High scenario to \$1,890. Overall, the effect of climate change may adversely impact homeowners whose homes have already been flooded more than the average homeowner in the state.

**FIGURE 3: AVERAGE ANNUAL LOSS BY SCENARIO**

	Climate Scenario		
	Standard	Medium	High
AAL All Homes	\$49	\$55	\$69
AAL Damaged Homes	1,226	1,364	1,959

The total cost of flood damage over the life of a 15-year or 30-year period is expected to be a significant amount for a home with previous flood damage. If a home is occupied for 15 years in Rhode Island, we would expect an average flood cost of \$18,393 over the 15-year period (\$18,393 = 15 \* \$1,226). This difference in flood costs highlights the importance of flood disclosure laws so that home buyers have a clear picture of the potential financial burden from flooding.

**FIGURE 4: AVERAGE ANNUAL LOSS BY SCENARIO**

Average Flood Cost	Climate Scenario		
	Standard	Medium	High
15 Year	\$18,393	\$20,463	\$29,385
30 Year	36,785	40,925	58,771

Limitations of this analysis can be found included within the [full report](#).

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