

# Estimating undisclosed flood risk in real estate transactions in Maine

## 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

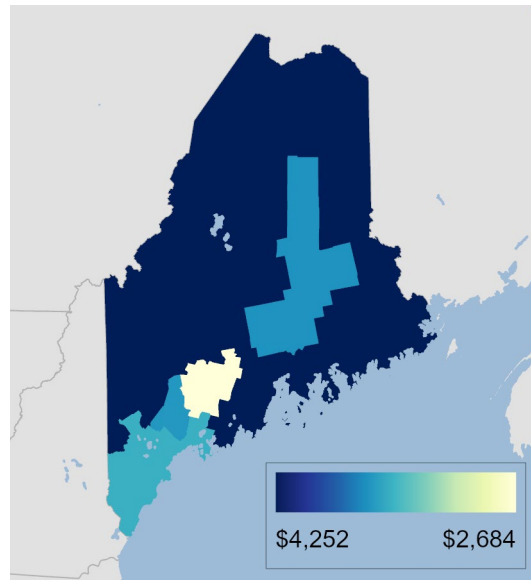


TABLE 1: RANKING OF KEY METRICS IN 25 STATE STUDY AREA

NFIP paid claims count	17 <sup>th</sup>
NFIP average claim amount	7 <sup>th</sup>
Percent of homes with prior flood damage	22 <sup>nd</sup>
Home sales with prior flood damage	22 <sup>nd</sup>
Average Standard AAL of home with prior flood damage	7 <sup>th</sup>
Total cost of flooding for sold homes with prior flood damage	15 <sup>th</sup>

## State Summary

Maine has the 7<sup>th</sup> highest average NFIP paid loss amount in the study area while having the 17<sup>th</sup> most NFIP paid claims. In Maine, our analysis estimates that 1,448 homes have been previously flooded between 2010-2024 (0.4% of all single-family homes) and 82 of those were subject to sale in 2023. The total cost of flooding for these sold homes (average AAL \* the home sales by MSA) is \$300,410.

In addition to other historical events, the KatRisk modeling results included impacts on Maine market basket locations from Hurricanes Irene, Sandy, and Hermine. The modeled results differed from the relatively insignificant NFIP claims record in Maine for these events. Therefore, the impact of these storms on Maine market basket locations was removed from the KatRisk modeling results. These storms were not removed from the historical modeling results for other states.

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

Total Single-Family Homes	406,709
Single-Family Homes with NFIP Claim (since 2010)	709
Estimated Single-Family Homes with Flood Damages	1,448
Estimated 2023 Home Sales with Flood Damages	82
Total Cost of Flooding	\$300,410

The map in Figure 1 shows the average Standard AAL for damaged homes by MSA across the state of Maine. The average Standard AAL for a previously damaged home varies from \$2,684 to \$4,252 depending on the MSA in Maine.

In the analysis, Portland-South Portland has the most estimated single-family homes with prior flood damage, 881, and an average AAL of \$3,504. All the other MSA's combined have 567 estimated homes with prior flood damage.

Maine has the 7<sup>th</sup> largest difference in AAL, \$3,394, between a home that has been previously flooded and the state average for the Standard scenario. This dollar difference grows by 12% under the High scenario to \$3,790. Overall, the effect of climate change will adversely impact homeowners whose homes have already been flooded significantly more than the average homeowner in the state.

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

	Climate Scenario		
	Standard	Medium	High
AAL All Homes	\$293	\$325	\$420
AAL Damaged Homes	3,687	3,929	4,211

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 Maine, we would expect an average flood cost of \$55,309 over the 15-year period (\$55,309 = 15 \* \$3,687). 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	\$55,309	\$58,940	\$63,159
30 Year	110,618	117,879	126,318

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

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