

Estimating undisclosed flood risk in real estate transactions in Arkansas

Financial Implications for single-family home buyers

Commissioned by Natural Resources Defense Council (NRDC)

Larry Baeder, Data Scientist
Sean Gao, Data Scientist
Greg Dietzen, FCAS, MAAA, Consulting Actuary



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

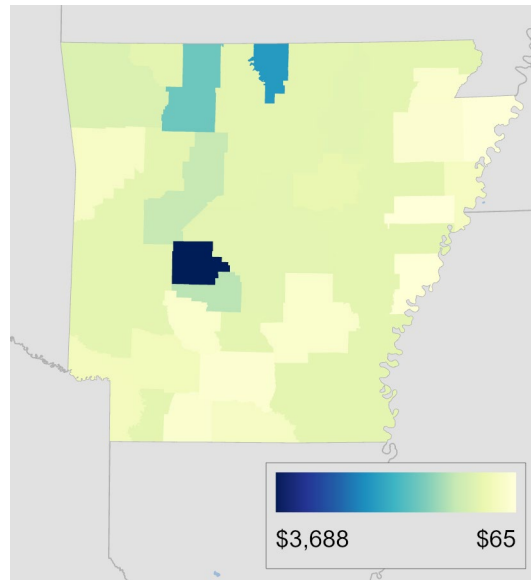


TABLE 1: RANKING OF KEY METRICS IN 25 STATE STUDY AREA

NFIP paid claims count	11 th
NFIP average claim amount	2 nd
Percent of homes with prior flood damage	4 th
Home sales with prior flood damage	6 th
Average Standard AAL of home with prior flood damage	18 th
Total cost of flooding for sold homes with prior flood damage	9 th

State Summary

Arkansas has the second largest average paid claim amount for NFIP claims since 2010 with an average loss of \$38,694. In Arkansas, our analysis estimates that 14,312 homes have been previously flooded between 2010-2024 (1.7% of all single-family homes) and 1,174 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 \$629,379.

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

Total Single-Family Homes	858,240
Single-Family Homes with NFIP Claim (since 2010)	2,292
Estimated Single-Family Homes with Flood Damages	14,312
Estimated 2023 Home Sales with Flood Damages	1,174
Total Cost of Flooding	\$629,379

The map in Figure 1 shows the average Standard AAL for damaged homes by MSA across the state of Arkansas. The average Standard AAL for a previously damaged home varies from \$65 to \$3,688 depending on the MSA in Arkansas. This shows that the state average AAL of \$580 does not accurately describe the potential financial impact for particular geographies. There are four MSA's that have an average AAL value above \$1,000: Harrison, Hot Springs, Malvern, and Mountain Home.

In the analysis, Memphis has a percentage of homes damaged of 18.5% which is significantly higher than any other MSA in Arkansas. Five other MSA's have a percentage of homes damaged higher than 2% but their average AAL values are less than \$1,000. These MSA's represent 53% of the damaged homes in Arkansas while only representing 26% of the single-family homes.

Arkansas has the 18th largest difference in AAL, \$507, between a home that has been previously flooded and the state average for the Standard scenario. This dollar difference grows by 29% under the High scenario to \$655. 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	\$73	\$77	\$85
AAL Damaged Homes	580	641	740

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 Arkansas, we would expect an average flood cost of \$8,696 over the 15-year period ($\$8,696 = 15 * \580). 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	\$8,696	\$9,611	\$11,106
30 Year	17,392	19,222	22,212

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

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CONTACT

Larry Baeder
larry.baeder@milliman.com

Greg Dietzen
greg.dietzen@milliman.com

