



Sizing the Personal Flood Insurance Market

Owner-occupied residential locations



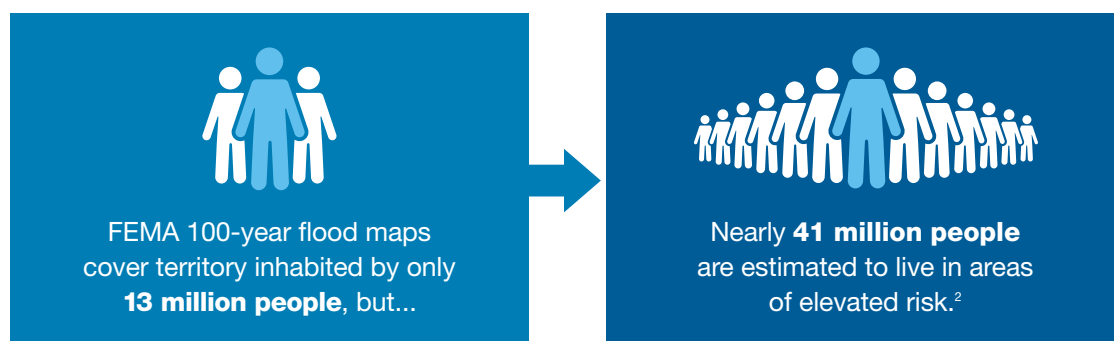
62 million residential locations

are at moderate to extreme risk
of flooding, according to Verisk
estimates.



Assessing U.S. flood risk

Flooding may be the most frequent natural disaster in the United States¹, but many Americans don't purchase insurance protection against this peril. Why? Some homeowners may mistakenly believe they only need flood insurance when lenders require it under federal banking regulations—typically for homes in 100-year flood plains as designated by the Federal Emergency Management Agency (FEMA). But flooding isn't limited to those areas.



The potential for high-severity, geographically concentrated losses from single events has left FEMA's National Flood Insurance Program (NFIP) as the principal market for insuring these losses. More frequent and severe floods have put repeated financial strain on the NFIP and brought attention to limitations in the program's coverage.

Meanwhile, the known scope of the threat grows as better tools evolve to identify exposure—and the conditions that lead to flooding intensify. Scientific and technological advances have produced new tools that can help insurers identify, measure, underwrite, and price flood risk on a more actuarially sound basis.

The private residential flood insurance market, long ceded to the NFIP's write-your-own program, may be ready for a comeback. But before jumping into any new line of business, it behooves insurers to ask critical questions, including some fundamental ones:

- What's the premium potential?
- Where are risk concentrations?
- What's the overlap with our risk appetite?
- How can we underwrite profitably?

This report will address these questions for insurers considering a venture into the personal lines flood market.



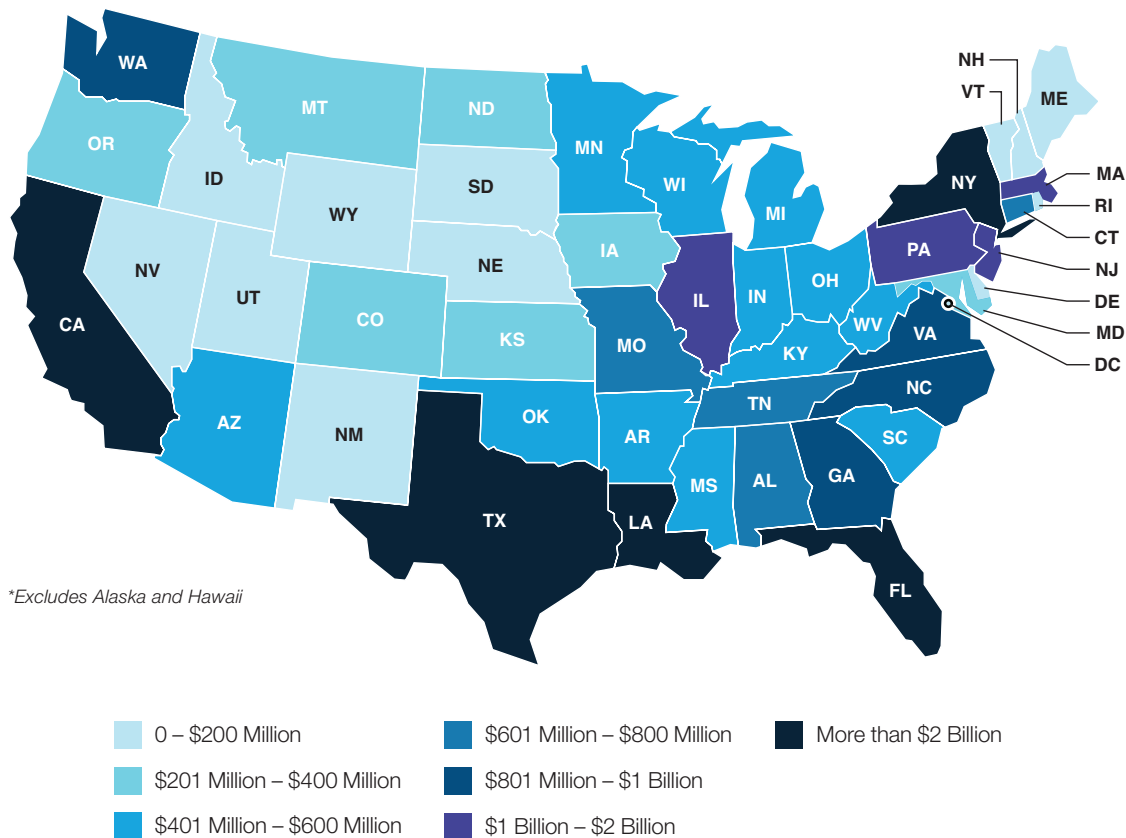
\$41.6 billion

Total potential personal flood premium (including properties already covered, primarily by the NFIP) for owner-occupied residences in the 48 contiguous states.

Where is the personal flood insurance premium opportunity?

About two-thirds of potential flood insurance premium is concentrated in ten states, and half is in the top five states. The leading states by potential premium track closely, but not entirely, with the number of owner-occupied housing units. Other factors also likely influence the premium potential, such as higher implied average rates in states with heavy concentrations of flood risk. Louisiana, for example, ranks fifth in potential premium, although it doesn't crack the top ten in number of housing units.

Total flood premium potential by state*

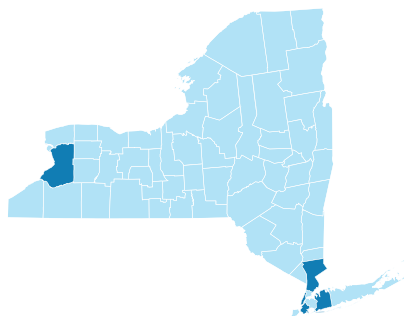


Flood premium: Top five counties in top five states

Knowing which states have the greatest potential premium is a start, but some states are the size of small countries. It takes finer detail to help insurers navigate these markets. Within the top five states, county-level Verisk data points to some unsurprising places, such as the metropolitan areas of New York City, Los Angeles, Miami, Houston, and New Orleans. But other hot spots may be less obvious—for example, areas around Buffalo, New York; Oakland, California; San Antonio, Texas; and Monroe, Louisiana. The charts below highlight the top five counties in the top five flood premium states.

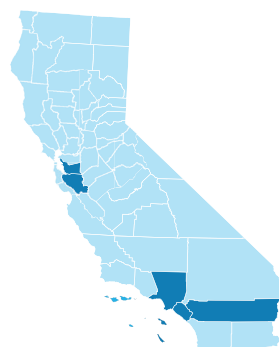
New York

County	Estimated Premium
New York (Manhattan)	\$522 million
Erie	\$418 million
Nassau	\$389 million
Kings (Brooklyn)	\$250 million
Westchester	\$216 million



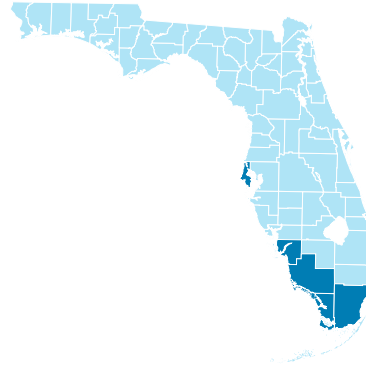
California

County	Estimated Premium
Los Angeles	\$1 billion
Orange	\$496 million
Alameda	\$310 million
Santa Clara	\$308 million
Riverside	\$246 million



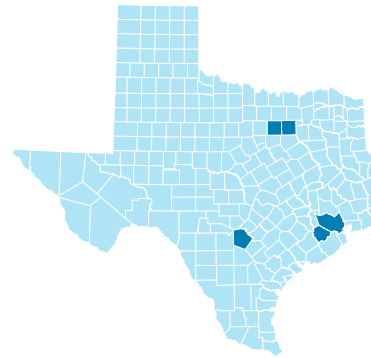
Florida

County	Estimated Premium
Miami-Dade	\$797 million
Lee	\$680 million
Collier	\$668 million
Monroe	\$353 million
Pinellas	\$346 million



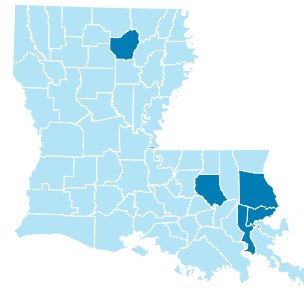
Texas

County	Estimated Premium
Harris	\$868 million
Fort Bend	\$285 million
Dallas	\$251 million
Bexar	\$219 million
Tarrant	\$212 million



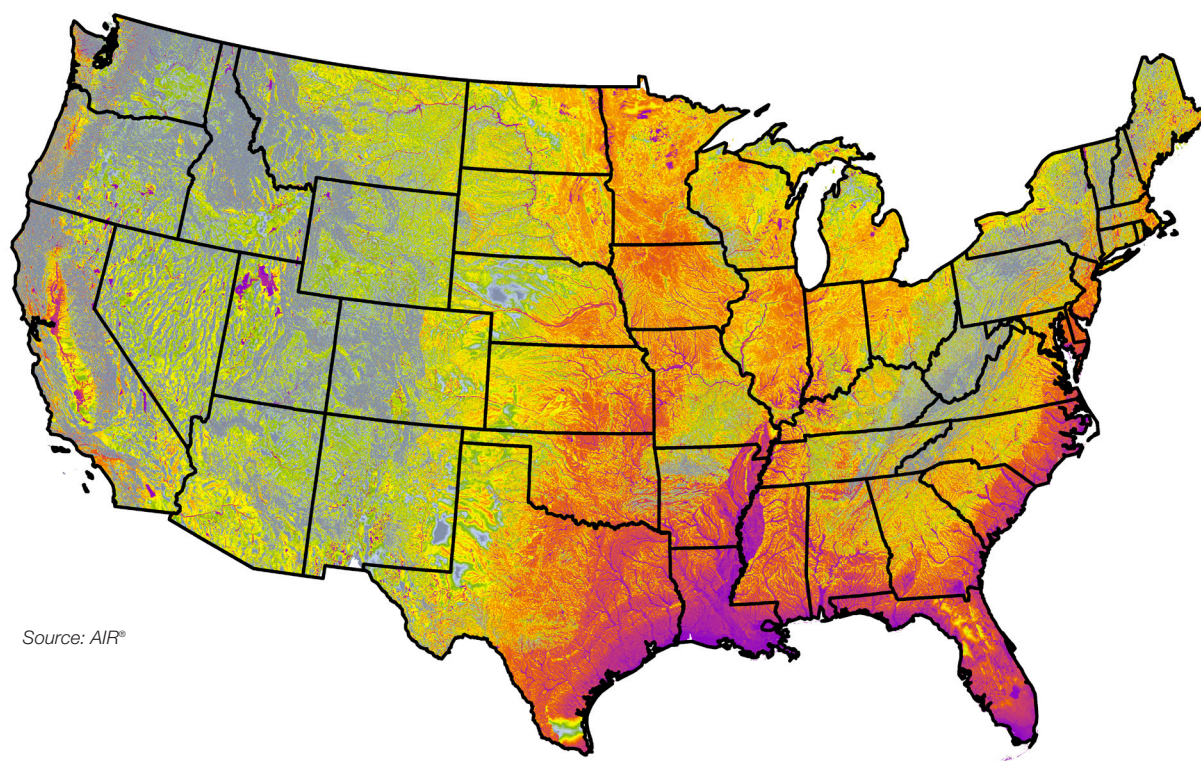
Louisiana

Parish	Estimated Premium
Jefferson	\$629 million
Orleans	\$374 million
St. Tammany	\$189 million
Livingston	\$112 million
Ouachita	\$107 million



Where are properties most exposed to damaging flood?

FEMA flood zone maps provide much of the basis for the NFIP and are commonly used to assess flood risk in the United States. These maps, while generally perceived to provide complete and accurate flood risk information, are often outdated, incomplete, and at times inaccurate. Rigorous hydrologic and hydraulic engineering principles provide a scientific, yet simple and intuitive way to assess a location's flood hazard. The map below uses WaterLine™, Verisk's flood hazard scoring tool, to provide a more accurate view of flood risk across the contiguous United States.



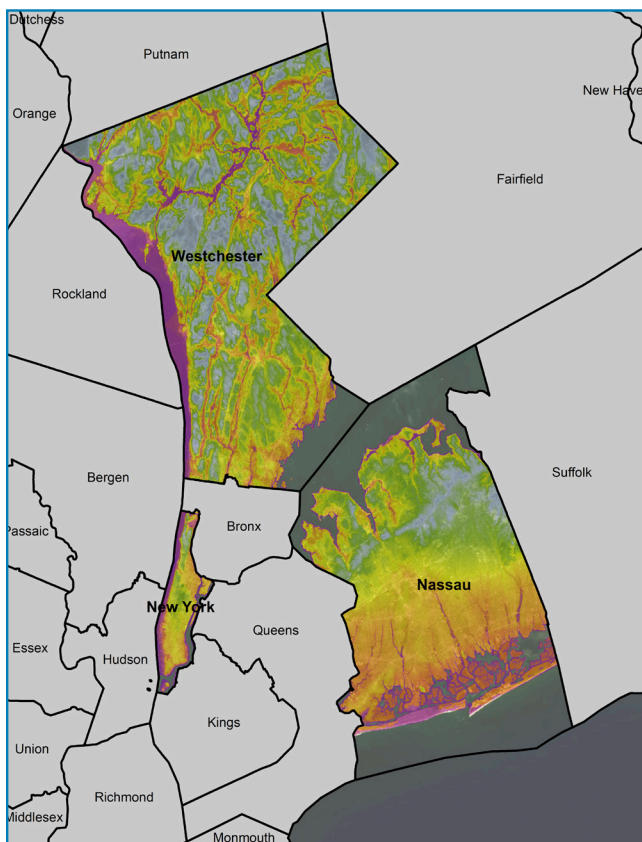
Source: AIR®

WaterLine Score



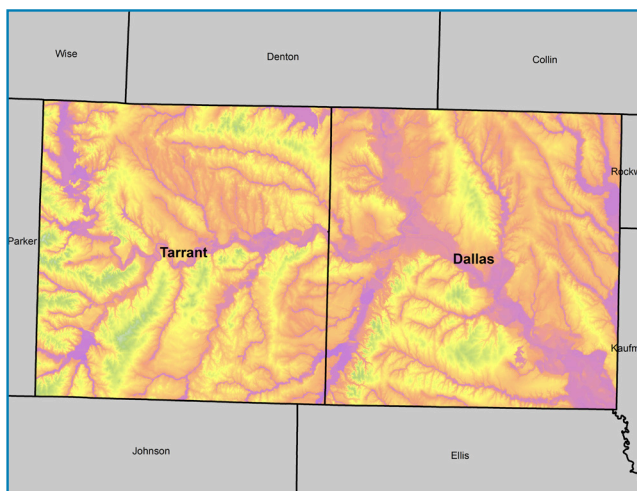
After identifying the counties with the greatest premium potential (or parishes in the case of Louisiana), it's important to go further and assess the risk exposure within those counties to ensure that targeted properties match consistently with risk appetite. Even within high-exposure areas, there can be pockets of homes at relative lower risk.

Westchester, New York (Manhattan), and Nassau County, New York



Source: AIR®

Dallas and Tarrant County, Texas



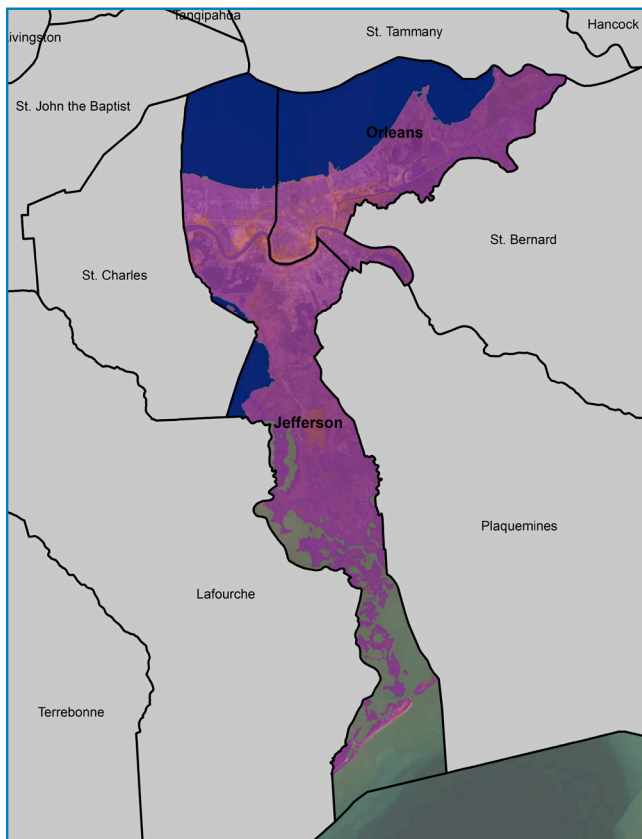
Source: AIR®

WaterLine Score



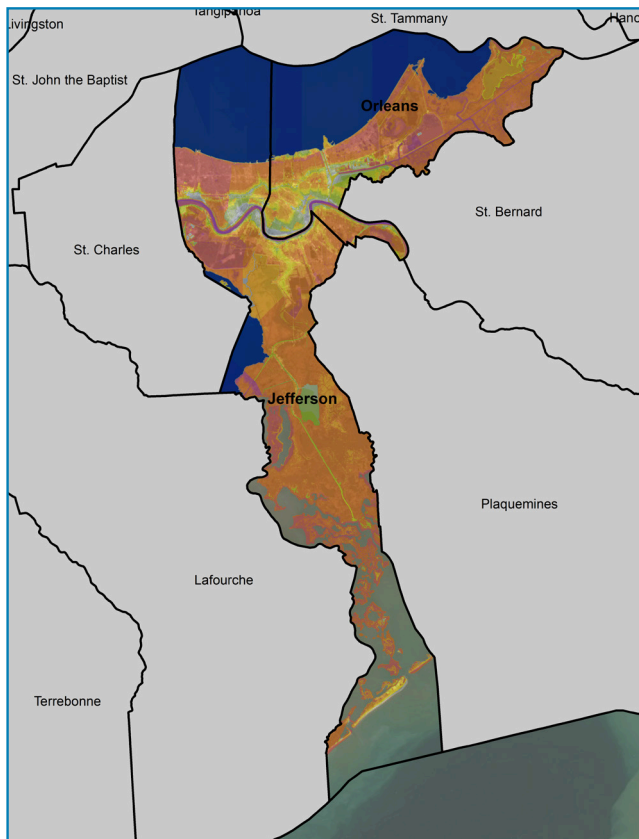
A solution such as WaterLine can provide property-level insight. In the example below from Louisiana, the map at right shows the gradations within areas with generally high risk scores, illustrating the granularity that's possible with WaterLine.

Jefferson and Orleans Parish, Louisiana



Source: AIR®

WaterLine Score



Source: AIR®

WaterLine Score



Insurers can now explore the private flood market without getting out of their depth

The major challenges in building a profitable private flood insurance program call for access to enhanced data analytics and underwriting information that historically hasn't been readily available to insurers. Based on limited data, the potential for high-severity, geographically concentrated losses from single events has appeared greater than some insurers can safely bear. All of this has made flood a daunting risk for insurers to assume. So, how can insurers gain the insight they need to move forward?

Start with a toolkit of deep, high-quality data enhanced by advanced analytic tools and market-ready solutions:

- an industry-leading probabilistic flood model
- property-level hazard scores
- actuarially sound advisory prospective loss costs
- coverages that seamlessly align with the standard homeowners policies customers already know

With a solid program built on refined data and analytics, insurers can focus on identifying leads and adding business in risk classes and regions that support their unique growth strategies and goals. They may be able to consider growth in a direction that previously seemed unthinkable. In fact, the strategy can be at once defensive and proactive in addressing two common issues:

- Separate standard homeowners and NFIP policies can make for a confusing package of coverages. The simplicity of delivering them side by side through the same insurer can create a formidable competitive advantage.
- Many homeowners have learned only at point of claim that their standard policy doesn't cover flood damage—a scenario that can pose reputational risk to an insurer. Offering to add flood coverage at point of sale can help mitigate that risk.

Private flood insurance is no longer a distant prospect. The tools to offer such coverage are in the market now—and so is the data to support the strategies of insurers that are ready to move forward.

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About our methodology

Any effort to size the personal flood insurance market requires a clear definition of what's being measured. What business is included? Does the baseline data support an accurate calculation of growth? Is the “buzz” surrounding this business influencing estimates of its size? A proven, bottom-up methodology points the way to capturing the most accurate numbers.

The above residential flood premium potential was modeled by starting with U.S. Census five-year (2013–17) estimates of owner-occupied housing units and market values located in more than 200,000 census block groups. We then combined that information with ISO loss costs for each residential flood territory to create market premium-potential estimates operating under the following set of assumptions:

- The owner-occupied universe included all single- and multifamily buildings with owner occupants, including farms and condominiums.
- Insured values were assumed to be 80 percent of census-reported market values.
- Personal property was assumed to be 50 percent of insured value.
- Loss of use was presumed to be 30 percent of insured value.
- ISO loss costs for coverages for dwelling (including garages and other structures), personal property, and loss of use were applied to the total insured values for each census block, using census tools to relate ISO residential flood territories to census block groups.
- Pure premiums were computed for each coverage and then adjusted to a market estimate, assuming a 1.35x loss cost adjustment factor.

It's important to note the premium-potential estimates are not meant to reflect actual underwriting, pricing, or market outcomes, each of which will be determined by factors beyond the scope of census information and these simplified assumptions.

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Fresh, well-integrated insights can help you master flood insurance

There's more to understanding hazard and risk than just analyzing FEMA flood maps. It's time to acquire and integrate new data and insights as you invest strategically in entering this new market. To go to market quickly, grow your book profitably, and shape the customer experience, Verisk has you covered.



Sources:

1. Federal Emergency Management Agency (FEMA), "Flooding: America's #1 Natural Hazard!"
2. Scientific American, "National Flood Insurance Is Underwater Because of Outdated Science," March 23, 2018

