

2024 Honolulu Flood Survey Executive Summary



Background and Methodology



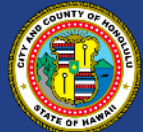
Climate change is increasing the frequency and severity of storms that contribute to flood risk. During the past five years, O‘ahu residents participating in FEMA’s National Flood Insurance Program (NFIP) filed over 360 claims, totaling more than \$27.4 million in loss and damages. Contributing to these claims were the extreme flooding events impacting the communities of Waimānalo, ‘Āina Haina, Hawai‘i Kai, and North Shore.

Between February and March 2024, the City and County of Honolulu (City) Office of Climate Change, Sustainability and Resiliency conducted a Flood Risk Survey aimed at understanding residents’ awareness of flood risk, knowledge of flood insurance, and experience with flooding events. The results do not include how attitudes or opinions may have changed due to the heavy rains experienced in May 2024. The survey was designed with input from staff at the City and County of Honolulu, State of Hawai‘i Department of Land and Natural Resources, and flood insurance experts on O‘ahu.

The survey effort consisted of three phases. The first phase was an address-based sample of 25,000 O‘ahu residents residing in high-risk flood areas. The second was input from managers of multi-family properties. Finally, the survey was opened to the public at large and promoted through various channels to residents.

The efforts resulted in a total of 1,046 completed surveys from a wide variety of residents across O‘ahu: 847 through the address-based sample and an additional 199 through the City and County’s open outreach efforts.

The project is funded by the Federal Emergency Management Agency’s (FEMA) Cooperating Technical Partnership Program.



FEMA Flood Maps and Zones



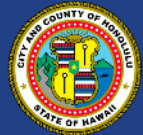
Flooding occurs naturally and can happen almost anywhere at anytime. One tool FEMA provides communities to reduce their risk are Flood Insurance Rate Maps (FIRMS) showing how likely it is for an area to flood. FIRMS apply a flood zone designation to a location based on a variety of factors that can influence their flooding risk. Below are descriptions of the flood zones most commonly found on O‘ahu and reported on in the summary.

Special Flood Hazard Zones (A, AE, AEF, AH, AO, V, and VE): areas regulated by the City and considered to having special flood or flood-related erosion hazard risk by FEMA

Flood Zone X: areas not regulated by the City and considered to have minimal flood hazard risk by FEMA

Flood Zone D: areas not regulated by the City and considered to have an undetermined flood hazard risk by FEMA

While some areas have lower or undetermined risk, **there is no such thing as a “no-risk” zone**. Additionally, FIRMs may not tell the full story of flood risk. They do not include future impacts from climate change and may not reflect current conditions as communities grow and land uses change. To learn about your flood zone, visit fhat.hawaii.gov/



How Prepared Are You for Flooding?



Survey participants were asked to consider the amount of damage six inches of standing water on their property for 1-2 days would cause. Despite recognizing the potential financial burden, **only one of five residents currently have flood insurance**. Renters, in particular, were not confident their losses would be covered or were unclear about their coverage (e.g. assuming their landlord was responsible for covering damage to their personal belongings).



82%

think it would cost **more than \$75,000 to rebuild and repair** if six inches of water sat on their property for 1-2 days.



61%

are not that confident they could rebuild and repair the damage to their home and return it to a livable condition.



21%

currently have a flood insurance policy for their property.

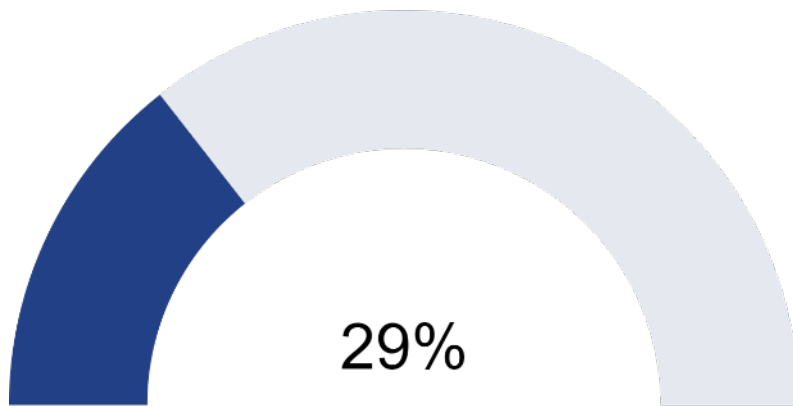


One in Three Residents Have Experienced Flooding

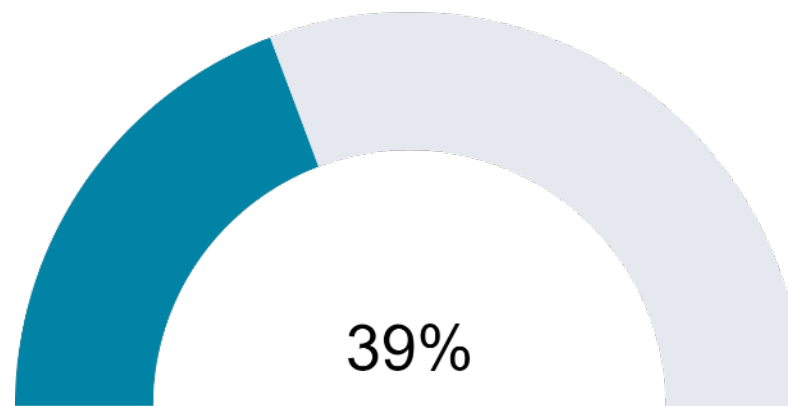


Regardless of their designated flood zone, people across the island have experience with flooding. Approximately one-third of residents have first- or second-hand experience with flood damage. While many residents have not experienced flooding, 69 percent of those directly impacted were uninsured when they were affected. After their flooding experience, **81 percent of the uninsured now have flood insurance policies in place.**

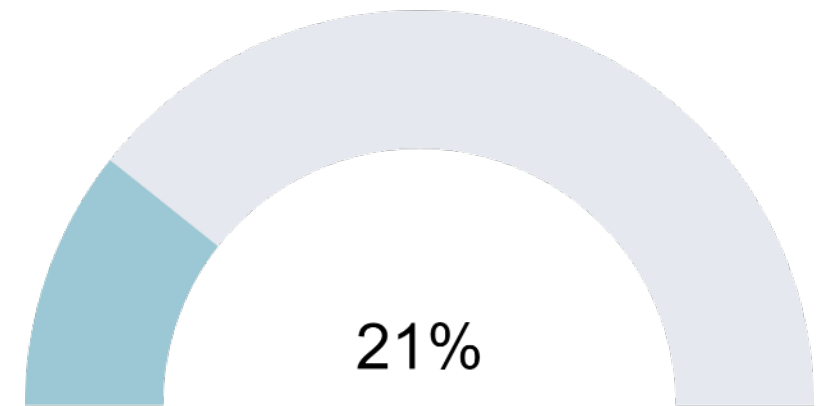
Special Flood Hazard Zones



Flood Zone X



Flood Zone D



Percentage of respondents living in the flood zone that have first-or second-hand experience with flooding

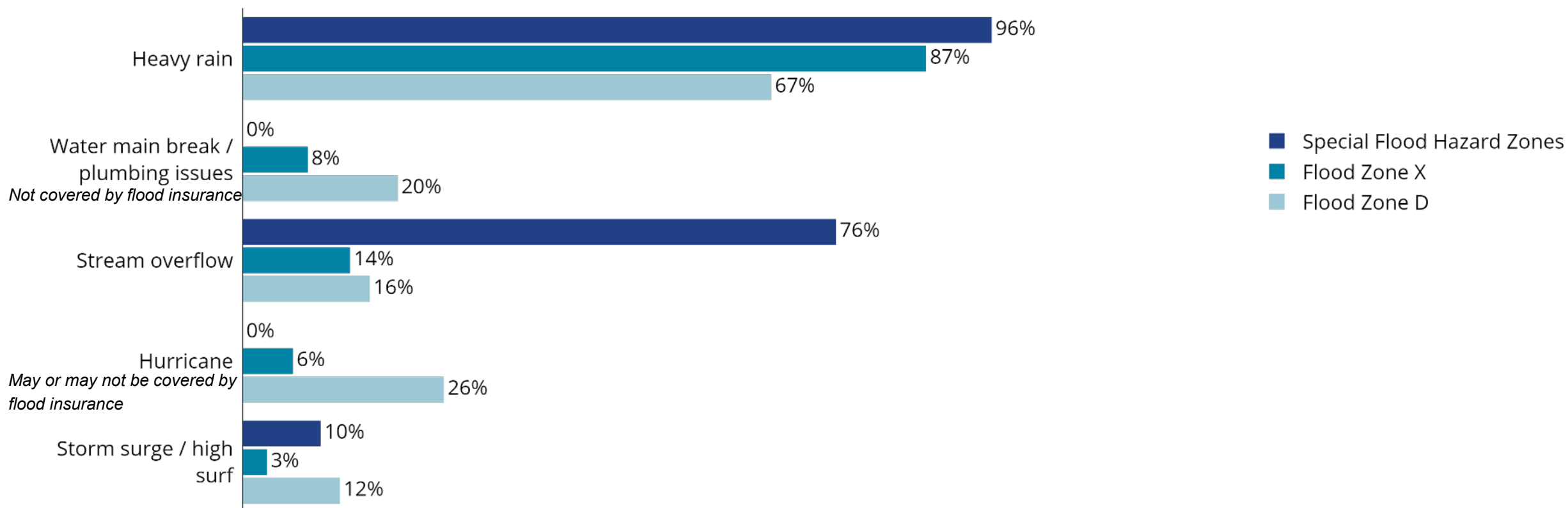


Heavy Rains are Reported as the Leading Cause of Flooding



Heavy rains were the highest reported cause of flooding regardless of housing type. Knowing what causes of flooding are covered by insurance is critical to staying protected. For example, flooding caused by plumbing issues is not covered by flood insurance, and flooding caused by hurricanes may or may not be covered.

What caused the flood?



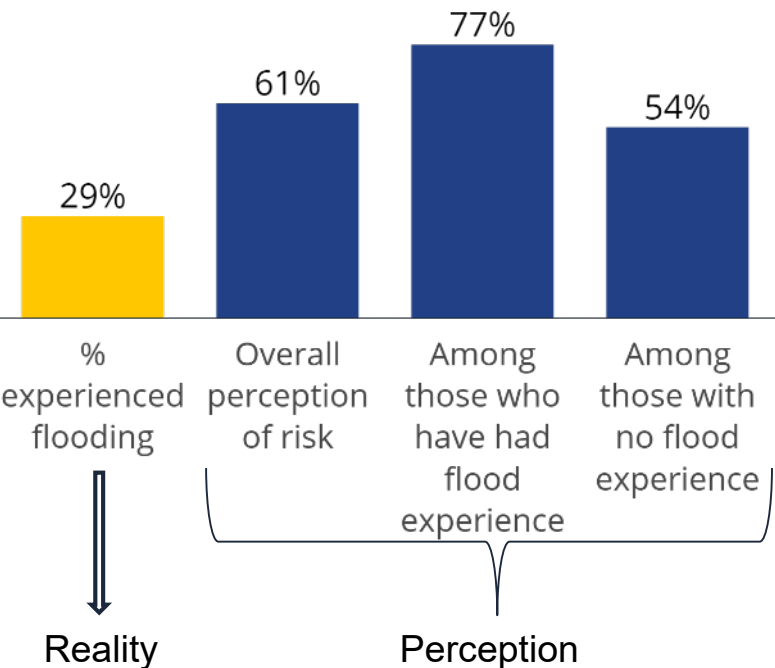


Perceptions of Risk Vary from Reality

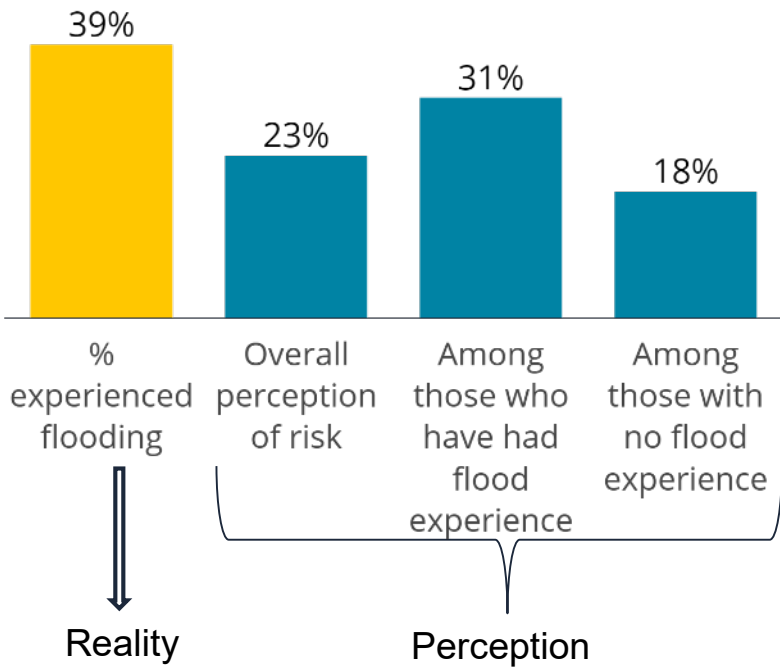
Residents were asked two questions related to where they live and the risk of flooding. When asked which flood zone(s) they live in, only one-quarter of respondents knew the correct zone. Perceptions of risk also differed from reality, particularly among those who live in lower risk flood zones as they seriously underestimate the risk of flooding.

Perceptions of Flood Risk

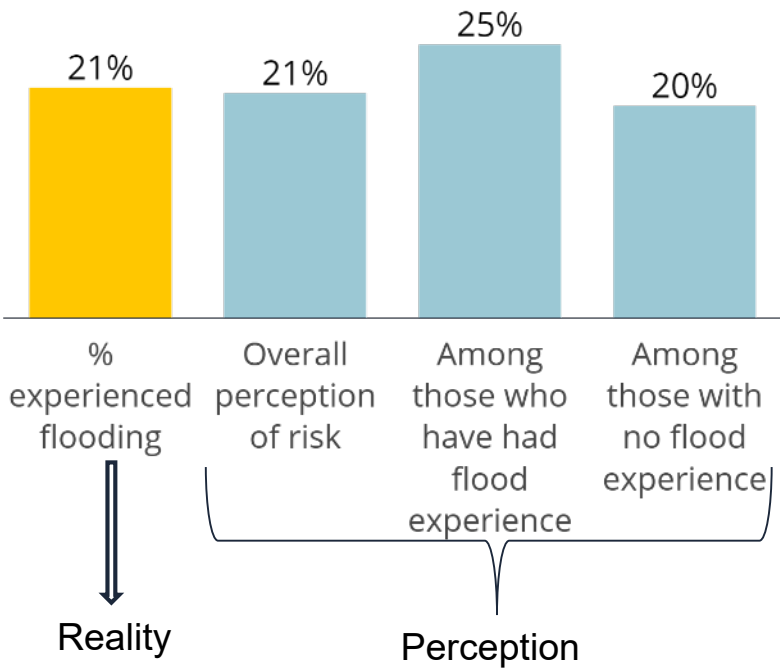
Special Flood Hazard Zones



Flood Zone X



Flood Zone D





Ways to Reduce Your Flood Risk



Aside from flood insurance, there are simple ways to protect your property and 'ohana from floods while also improving our island's water quality. However, a majority of respondents have not yet taken preventative actions. Find resources from the City and County of Honolulu at www8.honolulu.gov/swq/info-resources/residents/ and www.resilientoahu.org/get-flood-ready



52%

have installed gutters and downspouts on their roof



33%

regularly clean their gutters and downspouts



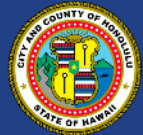
44%

store valuable personal property out of harm's way



25%

have their machinery and equipment elevated



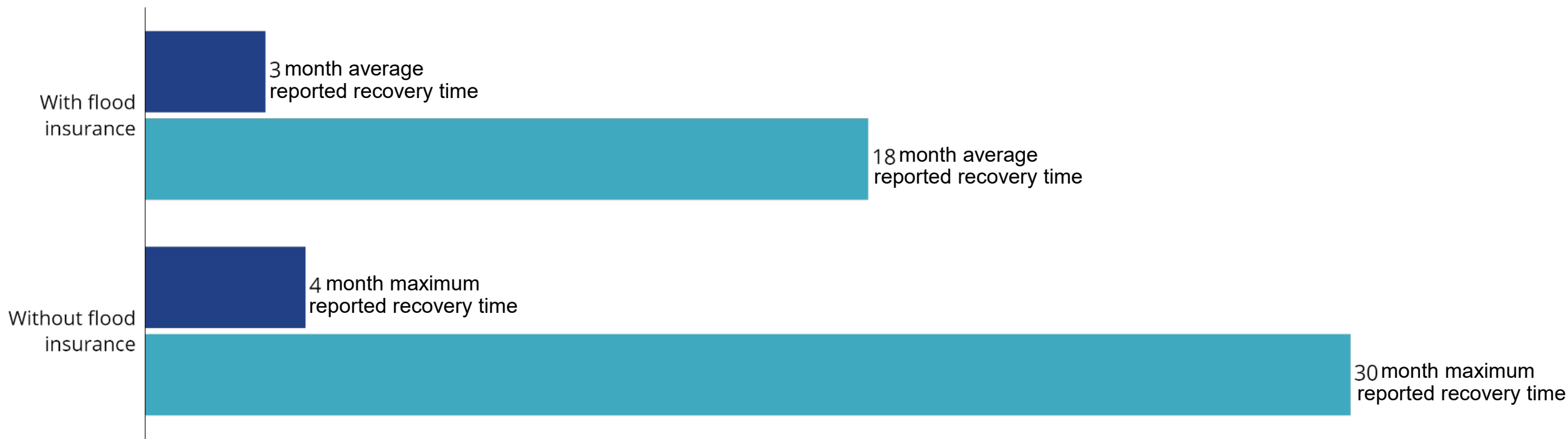
Rebuilding and Repairing is Time Consuming



It can be costly and time consuming to rebuild and repair after a flooding event. Having flood insurance and understanding your policy can save on out-of-pocket expenses, but more importantly can significantly cut recovery time.

"...flood...caused damage to my house and other properties. Lost all our furniture and most of belongings. Had to rebuild the kitchen, etc.; replace all appliances, and furniture. This also caused ground termite infestation from next door property coming onto my property and caused even more extensive damage for 7 years. Had to rebuild main beams, etc. several times throughout the years. Very costly to repair."

Having Flood Insurance Can Cut Restoration Times Nearly in Half

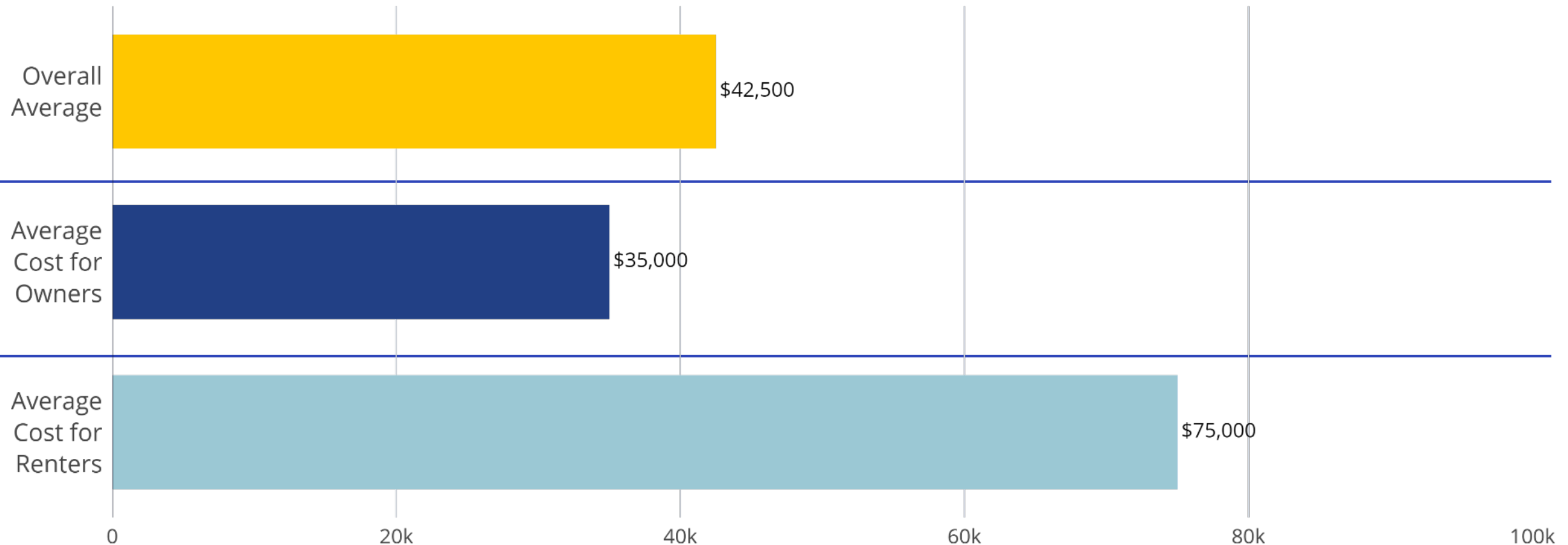




Rebuilding and Repairing is Also Costly



In addition to the time it takes to repair flood damage, there are also considerable costs. The average repair cost reported by survey respondents was just over \$42,000. Additionally, renters are not exempt. In fact, flood recovery for renters takes longer and costs more. Having flood insurance, even as a renter, and understanding your policy can help cut recovery time and out-of-pocket expenses.

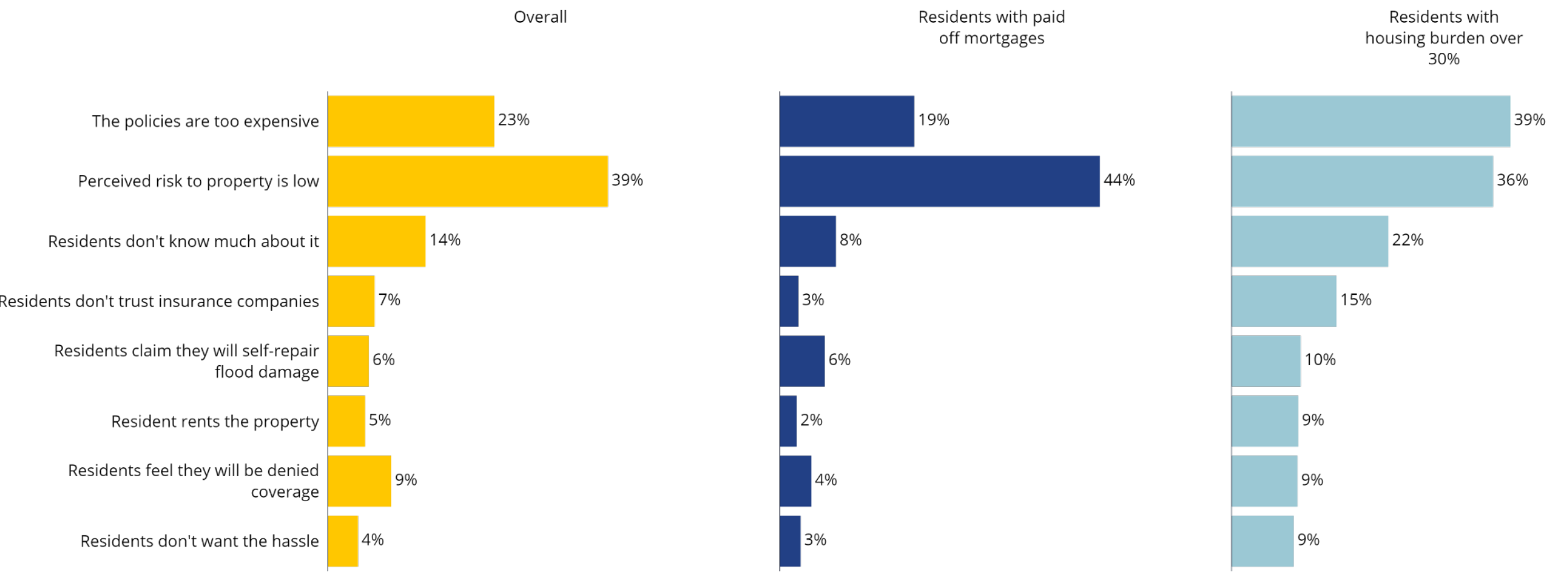




Risk Awareness and Cost Reported as Top Barriers to Obtaining Flood Insurance



The primary barriers to obtaining a flood insurance for residents without a policy are: the perceived risk to property is low, the cost of insurance, and lack of information about flood insurance. The perception of risk is significantly higher among residents with paid off mortgages. They are 10% more likely than others to think they don't need flood insurance due to low risk. For residents with a housing burden over 30 percent, cost was the primary barrier.



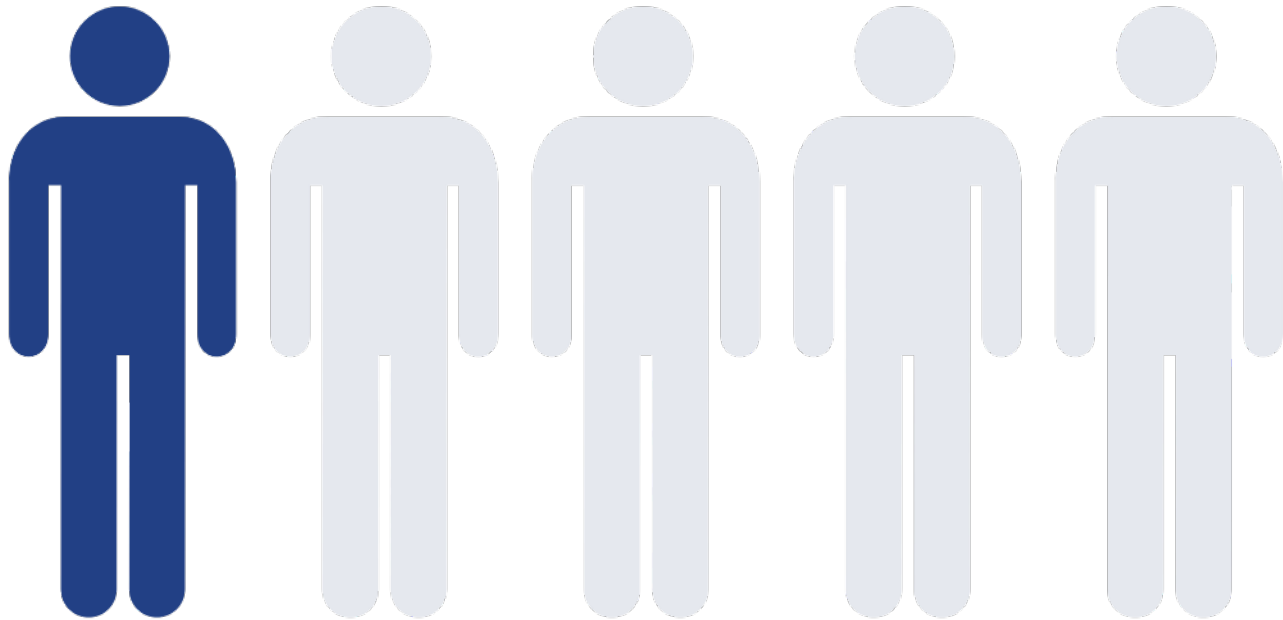


Need for More Education and Awareness



While the majority of residents have homeowners' insurance and hurricane insurance, only one in five residents have flood insurance. Residents expressed confusion regarding which kind of insurance covers what. The City is working with insurance providers to develop resources on how to increase awareness and understanding of flood insurance and how it differs from other insurance policies.

Only 1-in-5 Residents Were Aware That...



Standard homeowners' and renters' insurance does not cover flood damage.

Hurricane insurance does not cover standing water caused by storm surge.

Were aware that properties not mapped in FEMA flood risk areas could still be at risk.



What Does Flood Insurance Actually Cover?



It's essential to review your specific insurance policies and speak with your insurance provider to understand what is covered and what is not. Generally, flood insurances covers damage caused by external flooding from natural sources like heavy rain, storm surge, or overflowing bodies of water such as streams. You can also go to www.floodsmart.gov/whats-covered to get more information about what flood insurance covers. There are two types of coverage: building and contents coverage.

Building coverage:

- Electrical and plumbing systems
- Furnaces, water heaters, fuel tanks, well water tanks and pumps, and solar energy equipment
- Refrigerators, stoves, dishwashers
- Permanently installed carpeting, cabinets, bookcases
- Window blinds
- Foundation walls, anchorage systems, and staircases.
- Detached garages

Contents coverage:

- Clothing, furniture, and electronic equipment
- Washer and dryer, portable and window air conditioners
- Microwave oven

Flood insurance does not cover:

- Damage caused by internal sources within the home, such as burst pipes, sewage backups, or malfunctioning appliances.
- Damage resulting from gradual seepage of water or moisture, rather than a sudden and unexpected flood event
- Damage to landscaping, decks, patios, and other exterior