

Starting the Search

Look for resilience information and find the right team

Things to Keep in Mind

- Include resilience factors in your home search from the beginning and be sure to research the disaster history.
- Realtors and sellers may not know or be required to disclose information about hazard risk voluntarily.
- Professional home inspectors often don't address hazard vulnerability unless it relates to required construction regulations or building codes.
- Know the resilience questions to ask your realtor, home inspector, mortgage broker, and insurance agent (see checklists in Appendix II).

The first step to finding and purchasing a resilient home is understanding what risks you may face where you are buying.

You can start your search at Inspect2Protect.org* to identify the building codes used in the community, including whether it has adopted the International Residential Code (IRC) and International Building Code (IBC) models. You can also review the disaster history of the community, as well as historical code information and retrofit recommendations specific to the home's current building code status. Try searching online for the address of the home and do the same search for all the perils, including earthquake, flood, hurricane, tornado, or wildfire.

*Inspect2Protect.org is funded by DHS Science & Technology Directorate, Systems Engineering and Standards Division, as well as FEMA.



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You may also want to contact your local building or planning department to learn about the code enforcement requirements as they may be voluntary, mandatory, or nonexistent.

Consider also the disaster history for the broader area beyond your community. Just because a community hasn't experienced disaster already doesn't mean it won't in the future.

Various tools show areas of past and expected weather or other disaster events, including these maps and resources:



 Earthquake: seismic design category (earthquake design in the International Residential Code), seismic-hazard maps (USGS – earthquake potential shaking), fault map (USGS – interactive quaternary faults database), and landslide map (USGS – landslide inventory)



Flood: FEMA Flood Map Service Center (flood maps and other products)



 Hurricane: hurricane-prone regions (hurricane design in the International Residential Code), select windborne debris region (hurricane and high-wind design in the International Residential Code), windborne debris region (hurricane and high-wind design in the International Residential Code), U.S. Hurricane Return Periods (NHC NOAA – frequency of return hurricanes), and CONUS Hurricane Strike Density Maps (NHC NOAA – history of hurricane strikes).



• *Tornado:* U.S. Tornado Climatology (NOAA – various tornado resources)



Wildfire: Wildfire Hazard Potential map (USDA Forest Service, Fire Modeling Institute) and
 Wildfire Risk to Communities map

You also can review the state or territory's hazard mitigation plan. Local jurisdictions may have a hazard mitigation plan, as well.

Once you've completed your research, ask your realtor, mortgage broker, insurance company, or agent (and home inspector) what disasters have occurred or are typical for the community or neighborhood you are considering.

Professionals may not be required to disclose disaster history unless you ask. Write down your questions and their answers. Use your list to evaluate each professional you need to assist you in your home search and purchase.

Finally, your home inspector may not address your prospective home's ability to withstand any disaster unless specifically related to the building code or home construction methods. However, you can ask the inspector to use the disaster-specific checklists (Appendix II) to help you learn more about the presence or absence of disaster-resistant home features and overall risk profile. You can also use those checklists to identify retrofits and upgrades that will make your prospective home stronger and more disaster resistant.



Check the building codes, disaster history, and recommended retrofits for the home.

Selecting a Resilient Community

Think beyond the school zone to find a resilient community

Things to Keep in Mind

- Understanding the historic and current building codes in a community helps you gauge resilience.
- Research previous disaster events in the area like repetitive flooding.
- Your home's location within the community and its construction and siting features can make a big difference in its performance during a disaster.

Community resilience comes from various factors, including adoption and enforcement of current model building codes, participation in the Community Rating System, designation as a NOAA StormReady Community, and much more. Community features can influence resilience even if your individual home is built using up-to-date building codes.



Is the community only accessible by one bridge/road that could be damaged in an earthquake or flood or suffer severe congestion if everyone is told to evacuate?

Can emergency vehicles easily access your neighborhood?

These factors reflect the building code quality and enforcement, inspections followed to construct a home, management of neighborhood common areas for stormwater flow and wildfire fuel control, and community investment in things like emergency management and utility line maintenance.

Before a disaster, policies and practices vary widely and can either help or hinder disaster recovery and impact quality of life in affected communities.

The state, territory, or local jurisdiction's hazard mitigation plan can provide insights on identified hazards and actions taken by the community to reduce the impact of disasters.

Another way to gauge your community's overall resilience is to contact your insurance agent or company. They can advise you on your prospective home's insurability, identify the building code effectiveness grading schedule, and counsel you on specific challenges like flooding or sinkholes. They likely can provide you with information on discounts for following modern building codes and any surcharges for insurability challenges due to high disaster activity.

Selecting the Right Home for You

Create a shortlist of homes the right way

Things to Keep in Mind

- Run through resilience checklists for each potential home choice and include critical details (year built, building code used, etc.).
- Understand key features to look for as you choose a home that may be vulnerable to disaster.
- Understand the retrofit and upgrade options that will make your new home disaster-resistant.

Ask the right questions and identify homes that will best suit your family's needs today and someday when disasters strike. You can begin by answering the questions in the basic resilience checklist (Appendix I) and then reviewing the disaster-specific checklists (Appendix II). Once you complete these checklists, you will have created a working profile for your prospective home.

For example, if you are shopping for a new home in earthquake country, you will want to first identify the building code used because modern seismic building codes provide far superior structural performance in earthquakes. If you learn that your prospective home was constructed using an outdated code in a seismic zone, the disaster-specific checklists will help you identify the types of retrofits and upgrades that can bring your home up to current standards. Some of the suggested retrofits and upgrades in earthquake country include bracing cripple walls, reinforcing roof-to-wall connections, and identifying problematic soft and weak story construction.



Make a working profile for all prospective homes to gauge their resilience potential.

Selecting the Right Home for You

Create the right budget for resilience when qualifying for a mortgage

Things to Keep in Mind

- Understand the total cost of ownership with resilience in mind.
- Know what to include in budgeting for both cosmetic and resilience improvements.
- Consider different types of mortgages (green/energy-efficient, renovation, etc.) that could help incorporate resilience into your home after closing.
- Consult with a mortgage broker to explore options that support resilience.

Most homebuyer's guides offer details about how to determine what you can afford when buying a new home. They cover homeownership costs and explain down payment requirements, income qualifications, and the monthly amount paid for Principal, Interest, Taxes, and Insurance, commonly known as PITI. The calculation may consider cosmetic improvements like kitchen cabinets or bathroom remodeling but frequently overlooks resilience or strengthening upgrades, which means it does not calculate the total cost of ownership in the context of resilience.



If a hurricane damages your home, will you be able to afford the percentage deductible required under most homeowners policies? For a home insured for \$200,000 with a 5% hurricane deductible, you would be responsible for the first \$10,000 payment for repairs before insurance is applied.



If you are thinking ahead about resilience, you might consider installing hurricane shutters instead to help avoid those potential losses altogether. In that case, you might enjoy annual insurance savings if you live in Florida or other states with discount programs for resilient features. Such savings can even pay back the cost of hurricane shutters over time.



If you live in an earthquake-prone region, you could ask your inspector to check the cripple walls in your basement. Bracing them is relatively inexpensive but can prevent collapsed walls when an earthquake strikes. If you live in California, you may even qualify for the California Earthquake Authority "Brace + Bolt" grant program.



Installing flood vents may make your new home more resilient and save you money with flood insurance discounts, as well.

Some private and government grant and loan programs will underwrite resilience features and retrofits. You may find that you are eligible for different types of mortgages (Green/Energy-Efficient, FHA 203k Rehab Loan, etc.) that incorporate energy efficiency or disaster resilience upgrades into your new home. Ask your mortgage broker to identify options, including borrowing extra cash to cover retrofits like installing hurricane shutters and an impact-resistant garage door.

No matter where you are looking to buy, you should create a budget that includes the amount needed immediately and for later projects or retrofits to create a resilient structure. Use the disaster-specific checklists (Appendix II) to identify resilience upgrades and estimate their costs.



Make a budget that includes what you need now and later for resilience upgrades.

Leveraging Your Home Inspection

Take advantage of the home inspection to learn more about resilience features

Things to Keep in Mind

- Get a home inspection and understand its limitations related to disaster resilience.
- Ask your home inspector to run through the relevant disaster-specific checklists for the area.
- Talk to the neighbors about disaster history, and check out any homeowners' association (HOA) covenants about retrofits.

When you put in an offer, include the right contingencies, including a home inspection. Your mortgage company may not require a home inspection. Still, if issues are found during the inspection, you may be

able to cancel, renegotiate, or request repairs depending on what is stated in your offer. You may consider a pre-offer inspection. A realtor or lawyer can provide more information about offers and home inspections.

Know the limits of a home inspection and what questions to ask. Customary home inspections may not address the risks nor reflect how prepared or unprepared your home is for disasters. Use the disaster-specific checklists (Appendix II) to get your resilience questions answered.



Identify and understand any homeowners' association (HOA) covenants, if applicable. There could be rules regarding deployment of hurricane shutters, special surcharges for planned management of common areas, or contingency surcharges in the event of a disaster.

Also, consider talking to neighbors to learn more about any significant events in the home or neighborhood. Share any disaster-specific checklists (Appendix II) with your home inspector and ask them to answer each peril's questions that affect the community where your new home is located.

Finding the Right Insurance Coverage

Determine how disaster risk and home construction impact policy needs

Things to Keep in Mind

- Adequate home insurance is essential to resilience.
- Determine if you need separate policies for wind, earthquake, or flood.
- Understand how the home's construction and location affects your policy and which features qualify for discounts.

Having the right amount of home insurance is critical to resilience and your ability to bounce back after a disaster, so take time to understand the different factors before you buy.

For example, you will typically need separate policies to cover different disaster events like earthquakes and flooding. And most hurricane policies carry percentage deductibles, so you should establish an emergency fund to pay the deductible if a hurricane strikes. Older buildings may have to be updated to meet newer building codes if substantial damage occurs, so it is essential to know how much coverage you will have if that happens.

Your insurance company or agent can walk you through the contingencies associated with insuring your new home. However, it is critical to speak with someone before you commit to buy. Knowing details about your prospective home's construction, mitigation features, and other features can help you better understand how your home details affect your insurance policy and potential discounts.

For example, flood insurance requires a 30-day waiting period, and flood losses often occur well outside the mandatory flood insurance area. Flood insurance is an excellent economic investment — whether it is required or not. For example, the 2019 Florida average annual FEMA flood insurance premium was \$700.

Fortunately, policies outside the mandatory purchase area can be very affordable. The emerging private flood insurance marketplace offers competitively priced policies, as well.



After Your Home Purchase Is Complete

Know the basics of resilience-related home maintenance

Things to Keep in Mind

• Simple activities will keep your home ready for disasters of all kinds.

Record the details and warranties for all home appliances and services, including your resilience features. If you have features that require activation (for example, portable generators, hurricane panels or shutters, or gas shut-off valves), be sure you know how to deploy and operate them. Have them serviced on their recommended schedule.

Test systems like lightning and surge protection regularly and refresh any battery-operated devices as needed and schedules indicate.

Gather your family and ensure that everyone knows how to operate any resilience features safely. Use your phone to create a custom "how-to" video tour of your home, showing exactly how everything works, and share it with each family member.



When You're Planning Renovations

Make disaster-resilient upgrades when renovating your home

Things to Keep in Mind

• Create a savings plan for major upgrades that could increase the resilience and value of your home.

Create a funding or savings plan for significant upgrade projects you identified through your research and checklists.

Identify resilience projects that can align with ordinary home maintenance like re-roofing. Remember, many retrofits can offer multiple upgrades in one project. For example, during re-roofing, you can add a sealed roof deck to protect from high winds and rainwater intrusion, as well as Class A (most fire-resistant) impact-resistant shingles for wildfire and hail.

Sample Resilient Roof Upgrades - Don't forget these resilience upgrades when you are re-roofing	
Wind	Sealed Roof Deck & Roof-to-Wall Connectors
Wildfire	Fire-Resistive Shingles
Hail	Impact-Resistant Shingles

Roofs 20 years or older are typically harder to insure. If you are able to insure an older roof, you may only qualify for "actual cash value" reimbursement coverage as opposed to replacement cost coverage. This is one of the many reasons that it is critical to consider roof age when selecting your new home.

Look for low-cost/high-impact resilience projects like installing impact-resistant, design-pressure-rated garage doors for high wind; caulking and re-flashing around windows and doors to prevent water penetration; or yard cleanup to remove vegetation or debris that could become fuel for a wildfire or windborne debris.

Visit FLASH.org for more ways to improve your new home's resilience against the perils you face in your area.

Stay Resilient Out There

Make disaster-resilient upgrades when renovating your home

You deserve a home that not only fills you with a sense of pride, but also protects your family and investment. We hope that this guide is helpful as you make informed choices during one of life's most exciting times: the purchase of a new home.

We created this guide to help you ensure that your home tells a "tale" of survival and resilience when the next disaster comes. We hope that you will share it with others to help overcome the ever-increasing threat of disasters that we confront across our country nearly every day.

The Federal Alliance for Safe Homes (FLASH) and our partners have dedicated more than two decades to our mission of strengthening homes and safeguarding families from disasters of all kinds, and we stand by ready to help you.

Happy house hunting!

