



Guide to Expanding Mitigation

MAKING THE CONNECTION TO OLDER ADULTS



FEMA

AARP®



Photo: Columbus, OH suburbs with rural and natural landscape.
Cover Photo: Older women talking over lunch.

FEMA works with states, local communities, tribes and territories to raise awareness of natural hazards and mitigate the risks. Mitigation planning and projects rely on technical data. They also require emergency managers, local officials, civic organizations and the private sector from across the whole community to work together. Older adults can be a critical part of this process. AARP helps older adults through programs like its Livable Communities initiative. This supports local leaders in developing more age-friendly communities by:

- Creating safe, walkable streets and accessible public spaces.
- Expanding age-friendly housing and transportation options.
- Ensuring access to the services and amenities needed to safely age in place.
- Fostering opportunities for all residents to participate in community life and decision-making processes.



Photo: Couple walking through garden.

By 2034, the Census Bureau projects that adults aged 65 and older will outnumber those under the age of 18 in the country – a first in U.S. history. Decisions we make now about where, how and what to build determine whether our communities will be accessible places where people of all ages can thrive during both sunny skies and disasters. Older adults, often defined as those aged 60 or 65 and older, are an incredibly diverse population. Their needs and life experience vary widely. Keeping this in mind, emergency managers should build their community’s resilience alongside and in consideration of older adults.

Planning for older adults typically focuses on nursing homes and assisted living facilities. However, only 2.3% and 1.5% of older adults live in such facilities, respectively. The majority live dispersed throughout their communities, often alone. Building resilience begins with becoming aware of the range of older adults’ needs and concerns. This may include partnering with organizations such as a local branch of the Area Agencies on Aging, AARP state offices or religious and civic organizations.

Older adults often have long-term perspectives and longstanding relationships that can inform planning efforts. At the same time, older adults have historically been disproportionately impacted by disasters. As an inherently resilient population, older adults have much to offer to communities, both in steady-state life and in post-disaster recovery.

This *Guide to Expanding Mitigation for Older Adults* was created in partnership between FEMA and AARP, the nation’s largest advocacy organization representing the needs of Americans age 50 and older. It highlights the value of creating accessible communities for all ages. It also recommends ways for community officials to include older adults in efforts to reduce risk through hazard mitigation. That includes the planning and project development, implementation and evaluation processes. This guide serves as a starting point for community officials to discuss how these partnerships in mitigation can create more livable, accessible, and resilient communities for all.



This *Guide to Expanding Mitigation* is part of a [series](#) highlighting innovative and emerging partnerships for mitigation. Other related guides include information on making the connection to people with disabilities, equity and the whole community.



Photo: A power repair truck assists with clearing debris on a flooded road.



Photo: Man cleaning gutters.



Photo: Preparing an emergency survival kit.

HOW OLDER ADULTS ARE AFFECTED BY NATURAL HAZARDS

Older adults are a valuable part of their communities. They often volunteer their time, invest in local economies, and contribute their expertise and experience to civic efforts. A 2019 AARP study found that more than half of adults over 65 had volunteered at least monthly in the previous year. Yet older adults, as an age group, also often represent the greatest share of deaths from extreme weather events and other natural disasters. For older adults who survive, disasters can nevertheless lead to long-lasting effects on their health and well-being. Consider the following:

- Three out of four deaths during Hurricane Katrina in 2005 were older adults (60+), even though they represented just 16% of the total population.
- Most of the victims who lost their lives to the 2018 Camp Fire were older adults (60+).
- Two out of three North Carolinians who died in Hurricane Florence were older adults (60+), and almost half were 70 years or older.
- Adults 65 and older account for 16% of the U.S. population but 80% of total COVID deaths.

CASE STUDY: HURRICANE SANDY

The New York Academy of Medicine researched resilience and older adults following Hurricane Sandy. They found that older adults had not been engaged in emergency planning; as a result, emergency services often did not meet older adults' needs. However, local neighborhood institutions were helpful in keeping older adults safe. Furthermore, older adults helped the community during the disaster and used their professional skills (construction, data management, etc.) during recovery. Older adults were especially helpful in understanding and meeting the needs of other older adults.

Older adults are not a homogenous population. They have diverse lived experiences as a result of race, education, health status, disability, and other socioeconomic factors. Adults in their sixties have very different needs, on average, than adults in their nineties. Age is only one factor among many that can increase older adults' vulnerability to the effects of natural hazards. Other characteristics include:

- Impaired mobility, cognition or senses (e.g., vision or hearing impairments).
- Challenges with physical and mental health.
- Uneven access to resources, such as internet access, income and savings.
- Limited social networks that result in less assistance from friends and family.

Factors like these can further increase the vulnerability of older adults. For example, several barriers prevent older adults from evacuating when needed. Many older adults cannot drive and do not have access to reliable, accessible public transportation, depend on home-based medical equipment, require specialized accessibility supports, or cannot bring pets when evacuating. Some older adults are caregivers to spouses or partners with one or more vulnerabilities that may also hinder their ability to take timely action and remain safe.

Older adults may lack the financial means to temporarily relocate or fear the loss of connection to nearby medical or social supports. For those who do evacuate or are displaced during disasters, challenges persist in recovery. These include financial constraints and complicated administrative processes to apply for support, compounded by the mental and emotional toll of living through the disaster. Some older adults are not physically able to stand for extended periods of time waiting in line for services. Many people can reduce their risk before an event by obtaining insurance, preparing their home, stockpiling food and medicine or creating a "go kit." However, even these risk reduction efforts can be out of reach for older adults on fixed incomes or with limited savings.

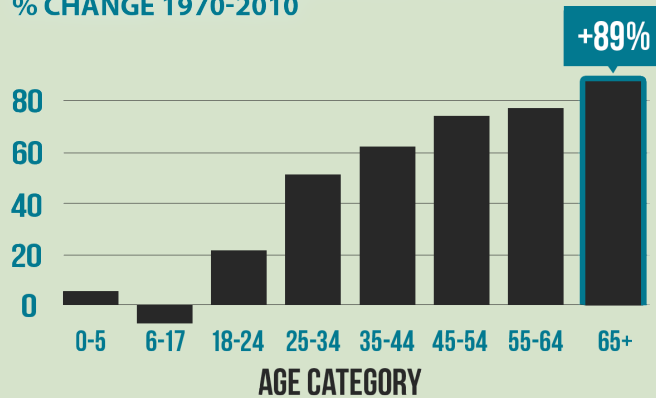
As a growing segment of the U.S. population, older adults are likely to become proportionally more vulnerable due to climate change. A 2021 study by Climate Central examined the threat to older adults from sea level rise in coastal areas. The study compared the physical location of nursing homes and assisted living facilities in five states with projected sea levels in 2050. The study found that two out of every three beds in Florida’s care facilities will potentially be exposed to flooding. Additionally, more older adults are living in coastal communities. Coastal homes are at risk of flooding due to hurricanes and major storms. Even “nuisance” or “sunny day” flooding from high tides that flood streets but not houses can prevent older adults from going to doctor appointments or needed support seeking services. The pattern of outsized impacts to older adults extends to other hazards as well. Rural communities with many older adults suffered higher fatality rates than the overall affected population during wildfires in 2019 and 2020. Longer, hotter summers—especially in places with high heat and humidity, and regions where temperatures remain hot at night—also contribute to heat illness and premature death, particularly among older adults who do not have access to air conditioning and home insulation.

Disasters pose a threat to the financial security of older adults, in addition to their health. Many retired Americans live on fixed incomes but have

substantial equity in their homes. Homes in the wildland urban interface are threatened by increasingly severe and frequent wildfires. In coastal areas, anticipated sea level rise has depressed property values and increased property taxes and insurance. Older adults who own their homes outright do not have a lender who may require flood insurance. They may be unable to afford insurance or unaware of the importance of it. This adds to the risk of losing their accumulated home equity—which may otherwise be a significant source of saving for retirement.

Intense weather and natural disasters affect older adults differently than other groups. On average, heat and extreme temperatures are responsible for the most weather-related deaths in the U.S. each year. Older adults are more vulnerable to heat illness and death due to factors associated with age, including a lessened ability to regulate body temperature through sweat and blood circulation and weaker cardiovascular systems. Hazardous air quality from wildfires exacerbates these age factors, particularly heart and lung conditions. Pre-existing health conditions and side effects from medications can put older adults at even greater risk. Physical health issues, disrupted routines and displacement can adversely impact mental health as well. The effects of climate change will likely affect segments of the older adult population unevenly, based on such factors as access to income, race, education and overall health.

AGING U.S. COASTAL POPULATION % CHANGE 1970-2010



Source: U.S. Census Bureau, 2011; NOAA, 2012; Crowell et al., 2010

CLIMATE CENTRAL



Photo: River Walk by Skagit River in Washington State.



Photo: Man installing fiberglass insulation.



Photo: Woman pushing man in wheelchair on pedestrian walkway near water.



Photo: California brush fire near houses.



Photo: Evacuation Route sign in Florida.

MITIGATION STRATEGIES FOR MAKING COMMUNITIES MORE RESILIENT FOR OLDER ADULTS

The built environment and community systems can be designed to better meet the needs of older adults and advance resilience and mitigation. To date, most work that considers the impacts that disasters have on older adults has focused on preparedness and response, rather than mitigating risk. Mitigation is most effective as a community-wide, long-term effort in tandem with individual actions to reduce risk. Community-scale decisions on housing location, density and design, walkability and transportation systems, green space and other neighborhood features have a major impact on older adults' resilience.

Community-level hazard mitigation and personal preparedness efforts are not always labeled as such. Some “complete streets” or “livability” programs may not mention either older adults or disasters, but they will benefit both. Programs designed to improve water quality also often reduce flooding. Many states have programs to help older adults and others in need to upgrade air conditioning or insulation. Emergency managers should think creatively about potential programs and partners.

Communities that want to become more resilient and “age-friendly” choose to plan and build pedestrian-oriented, mixed-use downtowns and town centers; safe and accessible transportation options; a variety of housing options; and accessible public spaces and amenities—as well as systems that address the information and health needs of older adults. Mitigation strategies that make communities more accessible to older adults benefit everyone and increase community resilience.

Emergency managers, planners, development officials and other state, local, tribal, and territorial officials can:

- Adopt more resilient and efficient [building](#) and [land use](#) standards.
- Avoid siting senior housing, nursing and assisted living facilities in hazard-prone areas, like floodplains and locations with high wildfire and/or earthquake risk.
- Ensure that critical facilities, such as hospitals, have alternative power sources and accessible transportation connections.
- Reduce the risk of natural hazards to [Community Lifelines](#), the most important services in the community, which include but are not limited to Food, Water, Shelter; Health and Medical; and Transportation.
- Use [nature-based solutions](#) to reduce flood risk and the urban heat island effect, creating public parks and open spaces for public gathering and socialization.
- Educate older adults about the need for flood, earthquake, and other hazard insurance that may not be part of a typical homeowners policy, as well as the need for coverage for renters.
- Ensure older adults have access to timely information in a variety of formats, accessible transportation sources and assistance if evacuation is required.
- Ensure that emergency shelters are designed for older adults (incorporating medical needs, pets, and cognitive or physical limitations).
- Provide cooling centers and/or clean air centers.
- [Partner with faith-based civic organizations](#), advocacy groups for older adults, and health care providers in mitigation planning, project development, risk communication and ongoing community engagement.
- Work with organizations and programs such as [Rebuilding Together](#) and Habitat for Humanity's [Aging in Place](#) to ensure safe housing for older adults at all points of the disaster lifecycle.



Photo: Older women drinking coffee and talking in a cafe.

BENEFITS FROM COLLABORATING WITH OLDER ADULTS

Engaging older adults can be challenging, just as it is for other traditionally under-represented groups. Potential ways to break down barriers include:

- Make the right connections and build relationships with existing, trusted advocates for older adults, such as age-friendly programs (including those part of the [AARP Network of Age-Friendly States and Communities](#)), home-based care organizations, senior housing and centers, and assisted living facilities.
- Communicate effectively, in plain language, and through many kinds of media. Ensure public information lines (such as 211 or 411 lines) are frequently updated. Provide information in a range of languages and through a range of formats, including those available to people with disabilities. Make sure people can easily receive the information without a smartphone or internet access.
- Identify and include volunteer leaders (who represent the diverse needs and backgrounds of the community's older adults) in planning for disaster and mitigating risk (on both individual and community scales). Ensure that volunteer or professional leaders account for the range of socioeconomic factors, functional and access needs, and language preferences by the older adult population.

The importance of connecting preparedness and mitigation efforts with community-based advocates for older adults cannot be overstated. Engage groups that represent the needs and interest of older adults in the mitigation planning and project development process. AARP, for example, has promoted preparedness to its members across the United States

and through many of its state offices for several years. AARP has released a [Disaster Resilience Tool Kit](#)—written in coordination with FEMA—to inform local leaders of new opportunities to strengthen community-wide resilience in ways that further protect older adults. Organizations that serve older adults can provide data, capacity and expertise to the mitigation planning process. They can serve as trusted messengers by using their existing relationships and broaden an emergency manager's reach within a community.

Opportunities abound to engage these organizations in mitigation:

- **Updating the state, local, tribal or territorial [hazard mitigation plan](#):** Organizations that serve older adults can contribute data, insights and expertise in assessing vulnerabilities and developing mitigation strategies. They can illustrate the impacts of natural hazards on adults, identify the critical facilities on which they rely, develop strategies and understand local capacity that could be leveraged to reduce risk. Engage older adults throughout the planning process. They can share stories of past hazard events and contribute other hazard information based on their lived experiences.
- **Integrating hazard mitigation into community planning:** State, local, tribal, or territorial emergency management officials may be invited to contribute to or advise on the development of local comprehensive plans or broader state planning initiatives, such as climate adaptation or resilience plans. Communities and states that have joined AARP's [Network of Age-Friendly States and Communities](#) also have age-friendly action plans to augment local plans. These plans emphasize the needs of older adults in housing, transportation, and other decisions. Several include explicit—but often incomplete—information on how to strengthen preparedness and reduce the risks to older adults. Include groups that serve older adults, such as age-friendly coalitions, in planning processes. Incorporating these voices increases equity in the planning process and can translate to a lower need for response and recovery.
- **Supporting the development of [risk reduction strategies](#):** Whether at a state, local, tribal or territorial level, organizations that serve older adults can contribute data and expertise to help you understand where mitigation investment would have the most impact on reducing the risk of natural hazards to older adult populations. These partnerships may be helpful when advocating or gaining public support for large-scale infrastructure projects or communicating the benefit of smaller-scale risk reduction measures by households or communities.



Photo: Woman reading news on a tablet.



Photo: Fisherman on pier.



Photo: Couple doing Tai Chi outdoors.

ORGANIZATIONS AND RESOURCES TO ENGAGE OLDER ADULTS

Overall, a greater integration of emergency professionals and advocates for older adults—and an increased focus on mitigation in addition to preparedness—will promote community resilience and more livable communities. Emergency managers, community planners and other leaders should expand their collaborative efforts with organizations that serve or advocate for older adults, such as the following:

- [Area Agencies on Aging](#).
- [AARP State Offices](#), including each AARP [State Director](#).
- Disability advocacy organizations, such as local centers for independent living.
- Home health agencies.
- Neighborhood and civic associations, such as the Rotary Club.
- Non-profit community centers like YMCA.
- Faith-based/religious organizations.
- State agencies, such as State Units on Aging, which develop and administer plans that advocate and provide assistance to older adults and their caregivers.
- FEMA's [Office of Disability Integration and Coordination](#), which includes a regional network of Disability Integration Advisors.
- FEMA's [Office of Equal Rights](#).
- [DHS Center for Faith-Based and Neighborhood Partnerships](#), which serves as a clearinghouse for information, connecting and coordinating with faith-based organizations.

AARP and other organizations have developed resources that can begin to help emergency managers partner with older adults in mitigation:

1. AARP resources include:
 - a. AARP's [Livable Communities website](#), which includes information on the AARP Network of Age-Friendly States and Communities
 - b. Publications, such as its [Disaster Resilience Tool Kit](#)
2. Federal resources include:
 - a. HUD's [Community Resilience Toolkit](#)
 - b. FEMA's [Hazard Mitigation Planning Program](#)
 - c. FEMA's [Guides to Expanding Mitigation](#)
 - d. FEMA's [Engaging Faith-based and Community Organizations](#)
 - e. Veteran Affairs' [Toolkit for communities to better integrate homeless populations into their disaster preparedness](#)
3. State-based model resources include:
 - a. New Jersey's [Creating Great Places to Age in New Jersey: A Community Guide to Implementing Aging-Friendly Land Use Decisions](#)

REFERENCES

AARP Policy Book 2021-2022. Chapter 13: Livable Communities. <https://policybook.aarp.org/policy-book/livable-communities>

Climate Central. (2021). Coming Storms: Climate Change and the Rising Threat to America's Coastal Seniors. Princeton, NJ. https://medialibrary.climatecentral.org/uploads/general/Seniors_and_SLR_-_Full.pdf

Climate Central. (2020). Seniors at Risk: Heat & Climate Change. Princeton, NJ. https://ccimags-2020.s3.amazonaws.com/2020HeatAndSeniors/2020HeatAndSeniors_Final0623.pdf

Kwan, C., & Walsh, C.A. (2017). Seniors' disaster resilience: A scoping review of the literature. *International Journal of Disaster Risk Reduction*, 25, 259-273

New Jersey Future. (2020). Creating Great Places to Age in New Jersey: A Community Guide to Implementing Aging-Friendly Land Use Decisions. State of New Jersey. https://www.njfuture.org/wp-content/uploads/2020/11/ImplementationGuide_Nov2020.pdf

ACKNOWLEDGEMENTS

Project Team: Kelly Pflücke, FEMA; Jack Heide, FEMA Region 2; Danielle Arigoni, AARP, Jason Tudor, AARP, Gabriella Spitzer, *Resilience Action Partners*; Melissa Herlitz, *Resilience Action Partners*.

We thank the following individuals who contributed their time to advance our understanding of mitigation and older adults:

- AARP California: **Nancy McPherson, David Azevedo, Michael Murray, Rafi Nazarians, and Shea McCaslin.**
- AARP Florida: **Jeff Johnson and Victoria Funes.**
- AARP Louisiana: **Bobby Savoie and LaTonya Scott Smith.**
- AARP Oregon: **Bandana Shrestha.**
- American Red Cross: **Charley English.**
- Build Strong America: **Pamela Williams.**
- FEMA: **Angie Gladwell, Camille Crain, Jeremiah Christopher and Matt Campbell.**
- National Fire Protection Association: **Don Bliss.**
- Palo Alto University: **Dr. Lisa M. Brown.**
- Puerto Rico University Center for Excellence in Education, Research and Service on Developmental Disabilities: **Carol Salas.**
- University of Colorado Natural Hazards Center: **Dr. Nnenia Marie Campbell.**
- Veterans Emergency Management Evaluation Center (VEMEC): **Dr. June Gin and Dr. Tamar Wyte-Lake.**
- Wesley Living: **Stacey Orr and Chesley Thomas.**



Photo: Couple paying bills at home.



ENGAGE WITH US

Are you a state, local, tribal or territorial official interested in making the connection between older adults and hazard mitigation? Are you an advocate for older adults and interested in connecting with local officials to reduce risk from hazards? Please contact us at FEMA-ExpandingMitigation@fema.dhs.gov or livable@aarp.org.

