



Guide to Expanding Mitigation

MAKING THE CONNECTION TO PUBLIC HEALTH



FEMA



Photo: Ambulance driving on winding remote road
Cover Photo: Couple riding bicycles by river bank



Photo: Turn around don't drown sign

One aim of hazard mitigation is to reduce the vulnerability of health and social systems, networks of relationships between individuals and groups, while promoting equity. During and following a disaster, public health professionals, first responders, and community officials work together to minimize death and injuries, prevent disease outbreaks and illnesses, and ensure safe housing and facilities for individuals and families. Public health has become increasingly focused on disaster preparedness, to prevent potential impacts on health care related facilities and services.

Community officials use a hazard mitigation plan to identify resiliency goals, risks and potential mitigation projects. Though public health issues have not historically been addressed through mitigation projects, people in the health field also plan proactively to make populations more resilient. By bringing public health and community officials together, they can work together toward the common goal of minimizing the impacts of disasters. Public health experts can offer important insights in areas such as:

- Physical and mental health challenges,
- Environmental hazards and communicable disease, and,
- Public health data.

This *Guide to Expanding Mitigation* explores how community officials can work with the public health sector to support hazard mitigation, including the planning process. This guide can help community officials initiate a conversation about mitigation investments that also address public health goals.



This *Guide to Expanding Mitigation* is part of a [series](#) highlighting innovative and emerging partnerships for mitigation.



Photo: A floodwall protected the Lourdes Hospital in Binghamton, N.Y., from damage during a historic flood in 2011

PUBLIC HEALTH IN YOUR COMMUNITY

Disasters can disrupt health services, pollute the environment, cause food shortages, and affect survivors' emotional health and well-being. For example, flooding can damage sewer systems. If untreated sewage enters drinking water systems, widespread gastrointestinal illness could occur. Flooding can also cause mold which thrives in damp environments. Unless the mold is removed quickly, its presence can lead to respiratory illnesses. This is especially true for the elderly and people with disabilities. In addition to the more visible damage to property and infrastructure, disasters can disrupt vital health services like dialysis and breathing machines.

When mitigation plans are not developed holistically, disasters can have greater impacts. Some of those affect local health. For example, urban growth that does not consider the ecology can result in:

- More destructive fires and poor air quality when development is allowed in high-risk fire zones or does not use fire management principles.
- Increased flood risk when buildings and roads replace green space that filters rainwater. Higher and faster runoff can add to the damage and danger.
- Changes in biodiversity that can increase the number of and exposure to disease-carrying insects when land cover patterns shift.

Public health workers can identify these and many other patterns, yet they are infrequently engaged during the mitigation planning process. For successful mitigation, we must understand local risks, address problems, and invest in long-term resilience. By including public health in mitigation planning, community officials can find projects that both reduce risk and help the larger community.



WHAT IS PUBLIC HEALTH?

Public health is a science that seeks to protect and improve the health of people and communities. Through policy advice, health education, outreach, and research, public health workers seek to understand and address the root causes of health issues.



Photo: Man takes samples of soil and groundwater for environmental research



Photo: Southern California brush fire near houses



Photo: Couple restoring their home after a disaster



Photo: Evacuation route sign in Florida

A PLACE FOR PUBLIC HEALTH AT THE TABLE

Hazard mitigation is usually led by emergency management agencies. Their organization and focus are different from those of public health agencies. But local health officials can share community-specific information or introduce experts from the broader field of public health. Public health experts can add insights to hazard and impact analyses, as well as identifying projects that protect health. When discussing structural mitigation projects, they can help identify public health co-benefits.

Collaboration between emergency managers, community planners, and public health officials can lead to:

- Identifying toxic sites within the floodplain or near potable and well water sources.
- Sharing insight into how vulnerability to hazards varies across populations, and the ways that children, older adults, low-income communities, public housing residents and some communities may be disproportionately affected.
- Identifying resiliency or preparedness investments that address the unique vulnerabilities across these populations.
- Identifying health services and mental health providers that are not listed as critical facilities.
- Identifying critical records stored in hazardous areas, that should be relocated and digitized.
- Combining risk awareness and emergency preparedness campaigns with existing public health campaigns and engaging with health officials as part of their planning process.



DID YOU KNOW?

The past 23 years of federally funded natural hazard mitigation is estimated to have prevented 4,000 cases of Post-Traumatic Stress Disorder.

- Launching successful engagement strategies and building social capital by partnering with community organizations.
- Sharing ideas for turning post-buyout or floodwater storage areas into recreational areas. These areas support physical activity, improve mental health, and create space for social gatherings.
- Identifying locations to invest in and promote active modes of travel that do not rely on fuel.
- Brainstorming locations for regional distribution of medicine during and after a disaster. These are known as Points of Dispensing, or PODs.
- Analyzing key issues and challenges by reviewing the root causes of complex public health challenges and considering how mitigation projects and investments can be leveraged to address them.



Consider collaborating with these or other health-related groups during hazard mitigation planning:

- Senior care organizations.
- Faith-based organizations.
- Community-based organizations.
- Public housing agencies or authorities.
- Dialysis centers.
- Community health centers.
- Hospitals.
- Health emergency preparedness coalitions.
- Public Health and Emergency Preparedness Coordinators.
- Local departments of health.
- U.S. Department of Health and Human Services.
- Academic institutions.



Photo: Alcoa East Superfund Site, a former aluminum smelter on the Grasse River near Massena, N.Y.

OVERCOMING BARRIERS TO COLLABORATION

The first step to bridging the gap is to reach out to local and state health departments. Health departments and staff from the public health sector can identify champions who understand risks and have ideas to minimize those risks through mitigation actions. Being connected with others in the public health sector, these champions can help increase awareness of the importance of joining the mitigation planning process. For example, Public Health and Emergency Preparedness Coordinators (affiliated with the Centers for Disease Control and Prevention, or CDC) and local public health officers often work at the intersection of these two fields.

Ideally, stakeholders will work together to develop a shared approach to mitigation. They will agree on common terms, identify a greater variety of funding sources for projects, and begin building a base of shared skills. In Monmouth County, New Jersey, for example, the emergency management department meets regularly to review hospital emergency management plans, has an ongoing commitment to communicate health care preparedness information, and collaborates with the planning department to include public health and pandemics in the mitigation planning process.

Public health agencies are responsible for preventing disease, protecting people from environmental hazards, responding to disasters, and helping communities recover. Their work and that of mitigation and hazard experts naturally overlaps. More cooperation and collaboration between these two fields can improve community resilience.

RESOURCES

Guides to Expanding Mitigation

<https://www.fema.gov/mitigation-risk-reduction>

Link to all available Guides to Expanding Mitigation.

FEMA Hazard Mitigation Planning

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning>

Review standards and guidance for the planning process.

Emergency Support Function #8: Public Health and Medical Services

https://www.fema.gov/sites/default/files/2020-07/fema_ESF_8_Public-Health-Medical.pdf

Learn which health agencies may provide more resources for mitigation efforts.

U.S. Department of Health and Human Services (HHS), Office of the Assistant Secretary for Preparedness and Response

<https://www.phe.gov>

Learn how HHS supports disaster response and builds public health capabilities for preparedness.

Fourth National Climate Assessment, Human Health

<https://nca2018.globalchange.gov/chapter/14/>

Learn how climate change affects the health and well-being of the American people, and how adaptation reduces risks and improves health.

Funding Opportunities

<https://toolkit.climate.gov/content/funding-opportunities>

Learn about a range of government and private financing for climate adaptation and resilience projects.



ENGAGE WITH US

Are you a state, local, tribal or territorial official interested in making the connection between public health and hazard mitigation? Are you a public health worker interested in connecting with local officials to reduce risk from hazards? Please contact us at FEMA-ExpandingMitigation@fema.dhs.gov.

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