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- Floods, intense winds, and strong currents from extreme storms can put people at risk of injuries, drowning, or death
- During extreme storms, floodwaters can contaminate the drinking water supply
- Respiratory and cardiovascular illness, waterborne diseases, and food contamination
- Infrastructure damages from extreme storms increase mental health effects from trauma and property loss, destroy roads, and limit access to supporting health services
- Crops and food supplies can be damaged or lost
- Standing water after storms can lead to increased vectors, mold and contamination issues

Health effects caused by extreme storms contribute to school and work absences as well as decreased productivity.

More than 26 MILLION were affected by disasters between 1980 and 2010 due to natural catastrophes. These events collectively caused more than $544 billion in damage costs or roughly $17.5 billion per year during the 30-year period.4

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Though global, the effects of climate change are inherently local. All people are susceptible to physical and mental health impacts; however, certain groups carry a heavier burden. These populations include children, people of color, older adults, people with disabilities, and people in impoverished communities.

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ENVIRONMENTAL HEALTH WORKFORCE ROLE

EH professionals play an essential role in prevention, disaster recovery efforts, and reducing public health risks of poor air and water quality exposure. Extreme storms increase the need for preparedness and response from EH professionals. An EH professional who specializes in severe storm response has the appropriate education and training needed to support local extreme weather impacts and protect human health.

In order to address the health threats of extreme storms, EH professionals must be able to:

• Investigate and assess hazardous pollution agents that can contaminate water, air and soil
• Provide recommendations, interventions, and policies to protect and control water and soil hazards to health following a severe storm event
• Notify the public of severe weather events and develop evacuation plans with sheltering options, boil water orders and local partners to assist during the severe weather
• Facilitate cross-sectoral engagement including community members, climate change coalitions, and industry to gain insight and support from these local leaders
• Interpret extreme storm and health research utilizing science and understand the impact on health outcomes
• Provide recommendations to residents on how to prepare for and recover from disasters
• Providing education to both residents and businesses, including restaurants, on food safety after a disaster
• Understand the impact that systems, social and structural inequities, institutional power and structural racism can have on climate change

EH professionals are uniquely qualified to respond to extreme storm impacts due to their in-depth knowledge of the relationship between severe weather, health, and the environment.

RECOMMENDATIONS

• EH organizations should support work to mitigate climate impact by reducing greenhouse gas emissions and enforcing evacuation regulations.
• Health departments should support efforts to create preparedness policies and forge partnerships that assure equitable access to health services.
• Health departments should utilize CDC’s Building Resilience Against Climate Effects (BRACE) Framework to estimate the burden of health outcomes and vulnerabilities associated with extreme weather events.
• Academic EH programs should develop a highly skilled and well-trained workforce to develop evacuation and communication plans.
• Health departments should develop EH Strike Teams to prepare and establish a plan for future disasters.
• EH professionals should undergo the Environmental Health Professional Certification Program (EHPCP) and train in Emergency Response (EHTER) training. The Awareness Level training focuses on EH responders’ role to prepare for, respond to, and recover from air pollution emergencies, and the Operations Level involves hands-on operation practice and response to simulated events.

ASSESSMENT

EH professionals identify, assess, and help recommend solutions for extreme storm vulnerabilities.

• Assess local weather and temperature data and investigate current community health needs by identifying environmental hazards and the effect on human health; for example, monitoring daily severe weather and what is causing it; tropical storms or temperature changes.

POLICY DEVELOPMENT

EH professionals support community efforts to address extreme storms through policy.

• Weave climate and extreme storm adaption into community design plans to adjust to current climate change conditions and mitigation policies to reduce flooding, injuries, and fatalities.
• The Pandemic and All-Hazards Preparedness Act of 2019 (PAHPA) was recently signed to sustain and strengthen the nation’s preparedness for public health emergencies. The new revision now specifically identifies EH professionals as an essential contributor to emergency preparedness.

ASSURANCE

EH professionals have an important role in protecting the health of the public by ensuring local extreme storm preparedness, management and evacuation plans, and recovery actions.

• Include all forms of media to alert the public of extreme storms, such as phone, social media, television, and print media. In addition to numerous media outlets, providing different resources in different languages is essential.
• Maintain key infrastructure features through multidisciplinary partnerships with civil engineers or urban planners.

Resources