



### PLANNING FOR DROUGHT RESILIENCE

#### Hazard Mitigation and Droughts

Hazard mitigation is the effort to reduce loss of life and property by lessening the impact of disasters. Hazard mitigation planning is the process used by state, tribal, and local leaders to understand risks from natural hazards and develop long-term strategies that will reduce the impacts of future events on people, property, and the environment. Hazard mitigation planning encourages communities to evaluate their risk, assess their capabilities, and establish an action plan to reduce risk.

Drought is a slow-onset hazard that can last for months or years. As a hazard, it has the potential to impact many aspects of life, including two of our most important needs: drinking water and food. Because of the long duration of droughts, the impacts last for years and can ripple through a community over time. Severe droughts are projected for the coming decades and may increase incidences of other events, like wildfires. Drought will affect the viability of communities and the economy across the nation. Working with state officials and tribal leaders, the Federal Emergency Management Agency (FEMA) is an active partner in helping communities plan for drought mitigation.

#### Supporting Drought Resilience through Mitigation Planning

FEMA's work in mitigation planning and advancing mitigation action supports the Presidential Memorandum and Federal Action Plan on Building National Capabilities for Long-Term Drought Resilience. This work supports communities taking action to reduce the impacts of drought hazards through the hazard mitigation planning regulations established in Title 44 of the Code of Federal Regulations (CFR) Part 201. Hazard mitigation planning includes the development of a strategy for risk reduction. FEMA encourages communities to plan for all hazards, including drought, and supports the use of watershed-level planning for hazard mitigation. Hazard mitigation supports drought resilience throughout the planning process, in the risk assessment, and in the mitigation strategy.

**Planning Process**—The mitigation planning process encourages the engagement of a wide range of sectors in plan development. These sectors include, but are not limited to, emergency management, economic development, land use and development, housing, health and social services, infrastructure, and natural and cultural resources. Also, climatologists can help gather drought data and help communities understand the impacts of drought. Because drought can affect many aspects of a community, it is important to bring a wide range of sectors to the table. Each sector can contribute expertise and resources to manage chronic drought, and together they can address the hazard comprehensively.

#### Long-Term Drought Resilience Federal Action Plan

In March 2016, the President issued a Memorandum and Federal Action Plan on Building National Capabilities for Long-Term Drought Resilience. The Memorandum and the Federal Action Plan develop long-standing drought resilience initiatives at all levels of government to better prepare for and reduce the impact of droughts.

The Memorandum and the Federal Action Plan establish six drought resilience goals, discuss associated activities, and outline the role of federal departments and agencies in supporting drought resilience. FEMA plays a role in supporting Goal 3: Drought Planning and Capacity Building.

For more information about the Long-Term Resilience Federal Action Plan, visit:

[www.whitehouse.gov/campaign/drought-in-america](http://www.whitehouse.gov/campaign/drought-in-america).

**Risk Assessment**—State, tribal, and local hazard mitigation plans must include a description of the type, location, extent, past occurrences, probability of future events, and impacts of all natural hazards to which they are vulnerable. The hazard profiles use the best available data to describe natural hazards, what is vulnerable, and potential economic losses from droughts or other relevant hazards. Communities are encouraged to work with their sector partners to integrate available data to support the risk assessment. The risk assessment also provides the opportunity to connect the impacts of drought to other types of hazards, like wildfire.

**Mitigation Strategy**—The mitigation strategy is the long-term action plan for risk reduction. The mitigation strategy focuses on developing actions that address the impacts and vulnerabilities discussed in the risk assessment. It looks at current, community hazard-management capabilities and describes how communities can expand those capabilities to address hazards like drought. The mitigation strategy also supports increasing community capacity to address hazards through adoption and enforcement of plans and regulations, implementing outreach programs, and initiating projects like stream corridor and wetland protection, aquifer storage and recovery, flood diversion and storage, and green infrastructure.

## Integrating Drought Hazard Mitigation into Other Plans

Identifying its drought risk during the planning process allows a community to address ways to reduce impacts before chronic drought reaches a crisis stage. Consider the following plans and regulations that can support drought resilience:

- Landscaping ordinances that dictate conserving and recycling potable water and the use of drought-tolerant plant species to help reduce water demand.
- Stormwater management plans that support a comprehensive approach to collecting, treating, and even reusing water to help mitigate drought.
- Capital improvement plans that consider drought can emphasize investment in efficient water systems that prevent loss of water during transmission.

Integrating drought mitigation into other community plans ensures consistency, eliminates redundancies, prevents conflicting outcomes, and supports overall drought resilience.

## Drought Planning Resources

FEMA and other federal agencies provide a variety of guidance, tools, and resources that support planning for drought resilience. These resources and more can be accessed from the [Hazard Mitigation Planning website](#).

- The [Local Mitigation Planning Handbook](#) is the official guide for developing, updating, and implementing local mitigation plans. The Handbook includes guidance, tools, and examples that help communities assess capabilities and develop actions that lessen the impact of natural hazards.
- [Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards](#) provides ideas for mitigation actions for a number of natural hazards, including drought.
- [Integrating Hazard Mitigation Into Local Planning: Case Studies and Tools for Community Officials \(2013\)](#) makes the case for integrating hazard mitigation and provides practical tips on how to insert mitigation and resilience into community planning.
- FEMA's [Climate Resilient Mitigation Activities for Hazard Mitigation Assistance](#) page describes new mitigation project-types that support drought resilience.
- The Environmental Protection Agency's [WaterSense](#) and [Water Research](#) programs address drought resilience.
- The [National Integrated Drought Information System](#) provides data, maps, tools, and resources at both a national and regional scale to help communities plan for drought.
- The [National Drought Mitigation Center](#) provides basic information on droughts, as well as planning and monitoring tools that can be used in mitigation planning and drought-resilience initiatives.
- [Climate.gov](#) and the [U.S. Climate Resilience Toolkit](#) provide data, tools, and case studies to support planning for changing climate.