

Increased Flooding in Your Community?



Over the last couple of years, Iowa has seen unprecedented weather. From the Derecho of 2020 to the Mississippi River flooding this last Spring. Unfortunately, these aren't isolated events. As the impacts of climate change increase, extreme weather events will become more frequent and will no longer be a "once in a lifetime" risk.

Extreme flooding will continue to be concentrated in regions where humans have built on floodplains and the risks will expand beyond the high-risk areas known today.

Why Should We Care?

The U.S. Environmental Protection Agency warns that "Large flood events can damage homes, roads, bridges, and other infrastructure; wipe out farmers' crops; and harm or displace people. Although regular flooding helps to maintain the nutrient balance of soils in the floodplain, larger or more frequent floods could disrupt ecosystems by displacing aquatic life, impairing water quality, and increasing soil erosion. By inundating water treatment systems with sediment and contaminants, and promoting the growth of harmful microbes, floods can directly affect the water supplies that communities depend on."



What Can We Do?

Continue to Educate Yourself

The Department of Natural Resources Floodplain Management Section has developed a series of Floodplain Management courses that will be offered throughout the year. Below are classes that are currently being offered:

- **Local Floodplain Permitting Course:** Local floodplain managers are responsible for issuing floodplain permits for construction in FEMA mapped floodplains in their communities. Understanding this responsibility and the requirements for these permits is critical to properly fulfilling this duty required by the National Flood Insurance Program. The course covers the floodplain permit review process and the floodplain manager's roles and responsibilities for issuing permits.
- **Letters of Map Change (LOMC) Course:** Local Floodplain managers need to understand the requirements and consequences of Letters of Map Amendment (LOMA) and Letters of Map Revision based on Fill (LOMR-F). This

course will increase community understanding on how these are issued and how they impact local floodplain permitting which is important knowledge for all floodplain managers

- Substantial Improvement and Substantial Damage: Local floodplain management ordinances contain state and federal requirements that apply not only to new structures, but also to existing structures which are “substantially improved” or “substantially damaged.” Enforcing these requirements is a very important part of a community’s floodplain management responsibilities. This course provides practical guidance and suggested procedures to implement the NFIP requirements for substantial improvement and substantial damage.
- Floodplain Management 101 Workshop: This half-day training provides an introductory review of the National Flood Insurance Program and floodplain management in Iowa to local floodplain managers. The course follows along with the Iowa Floodplain Management Desk Reference and covers floodplain mapping, regulatory standards, and the administrative procedures that comprise an effective floodplain management program.



The Iowa DNR and **Iowa State Extension Office** conducted *The Flooding in Iowa* project which is a series of web-based videos designed to educate local officials and the general public about floodplains, flood risks, and basic floodplain management principles. The videos are divided into five categories: Introduction to the NFIP, Understanding Flooding, Floodplain Mapping, Floodplain Regulation, and Flood Insurance. The videos can be viewed at <https://www.extension.iastate.edu/floodinginiowa/>

Continue to Conduct Research and Gather Data

The **Iowa Flood Center** at the University of Iowa received a \$1 million grant through Community Project Funding from Congress which will help install more stream monitors and hydrostations to monitor water levels in the Cedar River and Maquoketa River watersheds to provide better forecasting and tools to manage flooding.

The **Iowa Department of Natural Resources** is embarking on a new program to create a statewide seamless layer of updated two-dimensional hydraulic modeling, known as 2D Base Level Engineering (**2D BLE**). This new modeling program will provide the foundational data that will be used for future Flood Insurance Rate Maps (FIRMs) and enables modeling to be refined around areas of development and structures that can affect water flow.

Do Your Part and Get INVOLVED!

We also have many more paved and developed surfaces in our communities than ever before. Jennifer Fetter notes, “all of these impervious surfaces prevent water from soaking into the soils the way it would in a forest or meadow. Even residential lawns prevent most rainwater from soaking into the grounds because they have been so compacted during development.”

“Communities will need to pay attention during development to include better drainage and storm drains, while more innovative approaches could include porous pavements. A lack of green spaces and vegetation, and the paving over of many areas without heed to flood risk, has compounded the problem in many cities,” states Fiona Harvey.

Check to see if your community has a Stormwater Best Management Practices (BMP’s) Program that provides an incentive for property owners to install stormwater best management practices. These practices help enhance the water quality of stormwater runoff, decrease the amount of stormwater runoff that ends up in the storm drainage system, and repurpose the energy and nutrients of stormwater for healthier soils and landscaping. Your community could reimburse property owners for implementing some BMPs to encourage more implementation of stormwater management activities:

- Soil quality restoration
- Rain barrels
- Native planting

- Rain gardens
- Tillage
- Aeration
- Compost
- Bio-retention cells



Be Prepared and Stay SAFE!

Jennifer Fetter, Center for Agriculture Conservation, reminds us that “it's important to be safe around flood waters. The rainwater picks up litter and debris, automobile fluids and other hazardous chemicals, soils eroding off of disturbed areas, and anything else that happens to be on the ground. All that runoff is carrying all sorts of potential hazards that it has picked up along the way. Children and adults should never consider flood waters as an opportunity for recreation.”

Other ways we can practice flood safety

- Follow weather reports and news updates
- Pay attention to warning sirens
- Keep extra supplies and a bug out bag
- Create an evacuation plan
- Communicate with family and neighbors



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