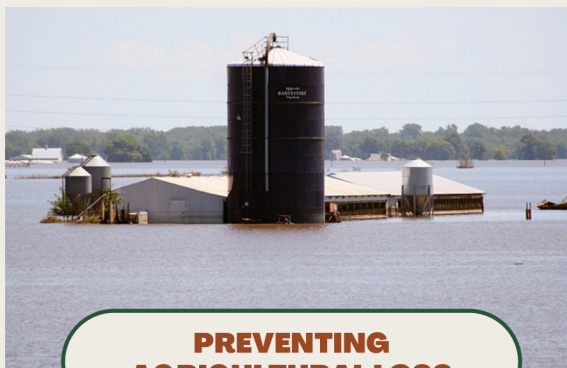


# NATURE-BASED FLOOD MITIGATION

Flooding increases water pollution, harms communities, has a deep economic cost and more. Natural infrastructure, as opposed to gray infrastructure, holds water in a safe area and reduces floodwater downstream. Wetlands and floodplains can be used to promote, restore, or emulate natural ecological functions, such as floodwater control and water quality improvement.



**PROTECTING  
COMMUNITIES**



**PREVENTING  
AGRICULTURAL LOSS**

## EFFECTIVE ALTERNATIVES

Nature-based flood mitigation, also known as natural infrastructure, uses natural features such as wetlands and floodplain reconnection to restore natural ecological functions. Nature-based flood mitigation is very effective at reducing flood damage, is cost-effective, and provides additional benefits such as cleaner water and wildlife habitat.

## PREPARING FOR CRISIS

Extreme weather events increasingly threaten Iowa's farms, communities, economy, and public health. Iowa ranks 4th in the nation for states most impacted by natural disasters<sup>1</sup>. Since the 1980s, Iowa suffered \$52 billion in losses due to catastrophic flooding, droughts, tornados, and derechos<sup>2</sup>. Investing in natural infrastructure will protect Iowa lives and property, boost economic stability and development opportunities, and increase our ability to weather and recover from natural disasters.

Published November 2023

## RESOURCES

1. <https://dailyiowan.com/2023/01/11/why-iowa-is-one-of-the-states-most-impacted-by-natural-disasters/>

2. <https://www.desmoinesregister.com/story/money/agriculture/2022/03/24/tornados-iowa-climate-related-disasters-derechos-flooding-storms-weather/9430309002/>

# SUCCESS STORIES OF NATURAL INFRASTRUCTURE



## NAHANT MARSH RESTORATION: DAVENPORT, IA

- 382-acre restored wetland
- Protects local infrastructure and downstream communities
- Absorbed billions of gallons of water during 2019 floods
- Education center and nature preserve

"It's remarkable what has managed to come back [after the 2019 floods]. Believe it or not but this lower section of our prairie looks better than it did a year ago... I'm convinced that mother nature is resilient."  
– Brian Ritter, Nahant Marsh Executive Director on WQAD<sup>3</sup>

## FLOODPLAIN RECONNECTION: ATCHISON CO, MO

- Flood prevention project in response to historic 2019 floods that breached levee L-536 in seven places
- The 2019 flood caused an estimated \$25 million loss in ag revenue, destroyed 121 miles of roads, and flooded 166 homes
- Collaborative effort between local governments to reconnect floodplains

"It's about preserving nature and coexisting with it. We both benefit when it's done correctly."  
– Ryan Ottmann, President, Atchison County Levee Board<sup>4</sup>

## FLOODPLAIN RECONNECTION: FREMONT CO, IA

- Severe flooding in 1952, 1993, and 2011 resulted in levee breaches on the L-550 and L-575 along the Missouri River
- The 2011 floods amounted to nearly \$2.7 billion in damages and 5 fatalities
- Army Corps of Engineers funded the levee setback, creating more space for the floodplain

"This is a win-win situation – by setting the levee back, we're increasing the floodway and realigning the levee on to a more stable foundation." – Bryan Flere, Omaha District Levee Safety Coordinator<sup>5</sup>

## RESOURCES

3. <https://www.wqad.com/article/news/local/drone/8-in-the-air/wildlife-at-nahant-marsh-bounces-back-after-extreme-spring-flooding/526-ad9376ab-aaa4-4470-9b76-38f6722a1fd5>

4. <https://www.nature.org/en-us/about-us/where-we-work/united-states/missouri/stories-in-missouri/missouri-river-levees/>

5. <https://www.nwo.usace.army.mil/Media/News-Releases/Article/487108/corps-awards-contract-on-3-mile-setback-for-portion-of-levee-l-575/>