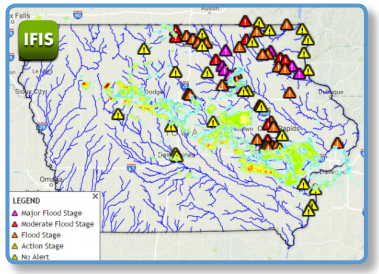
Iowa Flood Center

Serving Iowans with innovative tools and reliable information

THE UNIVERSITY OF IOWA

THANKS TO THE IOWA LEGISLATURE'S LEADERSHIP AND FORESIGHT IN CREATING the Iowa Flood Center (IFC) in 2009, Iowans have access to the latest technology and resources to help them prepare for floods and become more resilient to their effects. The center's outward-facing philosophy focuses on providing direct services to benefit the people of Iowa. The IFC is actively engaged in flood-related projects that help Iowans understand their flood risks and make better flood-related decisions.

The IFC puts science-based information and technology in the hands of Iowa's decision-makers, emergency managers, home- and business-owners, and the general public. Our work is accessible to everyone through the online Iowa Flood Information System (IFIS). The IFC is part of the University of Iowa College of Engineering. IFC researchers, staff, and students strive to develop the most advanced tools and projects to improve Iowa's flood preparedness and resiliency, and to reduce future flooding.



IFIS

The Iowa Flood Information System (IFIS), a web-based tool, provides real-time, science-based flood information for more than 1,000 communities and other locations in Iowa. IFIS had more than 300,000 page views in 2017, with the average site visit lasting 26 minutes. View IFIS at:

http://ifis.iowafloodcenter.org/ifis/

"MidAmerican relies on stream gauge data, inundation mapping, IFIS, and the updated statewide floodplain maps to guide operations, emergency response, and regulatory compliance activities."

■ JESSE LECKBAND
MidAmerican Energy

Stream Sensors

A growing network of 250 real-time stream gauges monitors river levels statewide, keeping communities informed and enhancing flood prediction and response.

"The stream gauge sensors are very helpful to fill in the gaps where USGS gauges don't exist ... Inundation maps have proven to be invaluable. "

■ JUSTIN GEHRTS
KCRG TV—*Cedar Rapids*

Flood Maps

Floodplain maps showing the probability, extent, and depth of flooding are available for every Iowa stream draining more than one square mile (created in collaboration with IDNR, USACE, FEMA, and the Iowa Natural Heritage Foundation). In addition, community flood inundation maps show the extent and depth of predicted flood levels for 23 Iowa communities, and growing.

"Many of our operations are in the floodplain of the Cedar and Wapsi Rivers, thus accurate real-time flood data is critical to managing the aggregate needs for east-central Iowa."

■ JOHN TUTHILL
Wendling Quarries

Flood Mitigation

The IFC led the successful HUD-funded Iowa Watersheds Project (2010-16) and helped bring a new $97M grant to the state for the Iowa Watershed Approach (www.iowawatershedapproach.org). IFC's leadership in watershed improvement strategies has created a vision for Iowa.

"As chairman of the Turkey River Watershed Management Authority, I can say with the utmost confidence that without the guidance and partnership of the IFC, the TRWMA could not have developed its watershed resiliency plan and implementation of that plan."

■ ROD MARLATT
Turkey River WMA

A Good Investment

IFC-leveraged projects have brought over $123M of funding to the state of Iowa—ten times the state funding the Center has received since it was established in 2009. The IFC is currently funded at $1.2M.

"The [Iowa Flood] Center's importance to river communities can't be overstated. Its value vastly exceeds its budget."

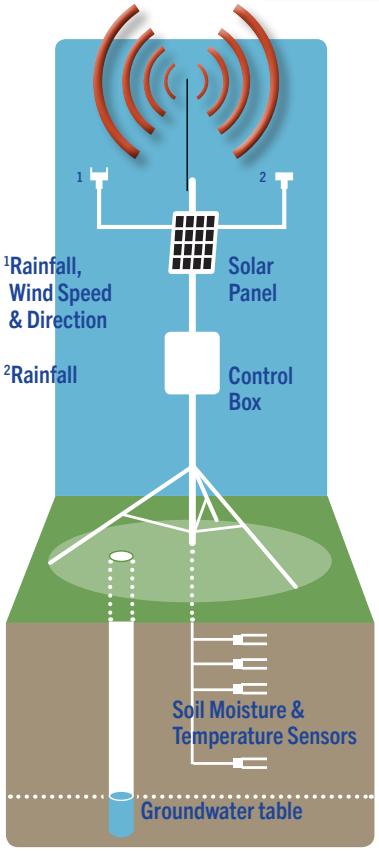
■ CEDAR RAPIDS GAZETTE
Editorial

Iowa Flood Center

Staying Ahead of the Flood

Future services for Iowans

The University of Iowa



"We are observing firsthand the impressive resources that IFC can bring to bear on the scientific management of watershed's, flood response, and hydrology."

JOE ARTZ
Earthview Environmental Consulting

Statewide Hydrologic Network

The IFC has developed and already deployed 20 state-of-the-art hydrologic sensors that measure soil moisture and temperature, precipitation, and more. These new stations, which provide information that is valuable to farmers, are an expansion of the IFC's existing rain gauge network and will help the IFC reach its goal to deploy one station in each of Iowa's 99 counties. This proposed dense network of about 100 hydrologic stations would help better predict floods, assess droughts, manage water resources, and benefit Iowa's agricultural producers. Through the development and deployment of its existing network of sensors, the IFC has demonstrated its capacity to provide this service to Iowa's agricultural community.

"Winneshiek County relies on the Iowa Flood Center for up-to-date information, especially during flood events."

■ JON LUBKE
Winneshiek County GIS Department

Collaborative Flood Leadership

The IFC continues to develop advanced tools and resources to more accurately predict and prepare for floods. As a national leader in flood science, Iowa has the opportunity to collaborate with colleagues in North Carolina and elsewhere to strengthen these efforts. Working with other major players nationwide, we can achieve more, more quickly. These partnerships will likely strengthen the IFC's efforts to make the state more flood resilient. For instance, a state-specific flood insurance program similar to a program in North Carolina (to be developed in partnership with state agencies and other partners in Iowa), could save money for Iowans while also making us more flood-resilient.

"The IFC has been very beneficial to the city of Cedar Falls. Being able to answer questions with a high level of confidence when a flood is occurring is invaluable."

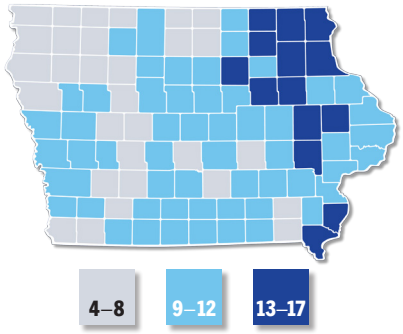
■ CORY HINES
GIS Coordinator, Cedar Falls

Recalibrating Flood Frequency Estimations

FEMA data show that from 1988 to 2016, no Iowa county has escaped with fewer than four flood-related presidential disasters—a trend that is only increasing. FEMA data also reveal that the way we calculate estimates of flood frequency is not working—how often have you heard the complaint that 100-year floods are now occurring every 10 years or so? We need a new procedure to develop more accurate estimates. The IFC is well-equipped to develop scientific standards that planners and engineers can use to better protect Iowans.

"During the floods of 2016, I checked IFIS hourly to ensure friends and family across the state were aware of the flooding threats in their area and remained safe. When searching for my new home, I utilized IFIS regularly to check the flood threat for each potential property."

■ ISAAC SCHROCK
Iowa City resident



Flood-related Disaster Declarations
1988–2016 (*total:* 951)

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"The information provided by the IFC has been critical in our decision making process . . . IFC provides vital public safety information not available elsewhere."

■ KIP LADAGE
Bremer County Emergency Management Agency