



The Iowa Policy Project

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EXECUTIVE SUMMARY

Flooding and Inequity: Policy responses on the front line

Disparate impacts and recoveries for communities as flooding rises in Iowa

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Communities on the front line of natural disasters vary in their ability to protect themselves, and to recover. Recent Midwest floods killed dozens and cost billions of dollars in economic loss. Flood damage has increased over the past century as flooding has become more common,¹ at the same time development has expanded in flood plains, bringing modified stream and river flows. As public policy has contributed to these destructive trends, policy makers in an era of climate change and greater problems must examine how to better focus on equity in policy responses.

Precipitation in the Upper Mississippi River Basin has risen on average about one inch per decade since the 1970s. Climate models predict these trends to accelerate — by 30 percent by 2041-50 for the number of five-year record two-day storm rainfall occurrences, with the largest increases in the Midwest.² Policy choices must consider how “frontline” communities can cope with new challenges.

Frontline Communities

Disasters do not affect all area residents equally. Frontline communities are the first and often hardest hit by flooding. These communities are more vulnerable before, during, and after a disaster. Residing in a frontline community is “an important indicator of everything from evacuation compliance during an event to successful long-term recovery after one,” and members of frontline communities are “more likely to die in a disaster event and less likely to recover after one.”³

Members of frontline communities impacted by recurring flooding are more likely to live below the poverty level, experience unemployment, have a lower level of education, have a disability, speak English as a second language, lack vehicle access, have children, be elderly, identify as African American or Latino, or be the female head of a household.

Iowa Examples of Vulnerable Recovery Inequity

Researchers at the University of Iowa looked at recovery indicators for flood-susceptible and non-susceptible communities in Cedar Rapids, Palo, and Iowa City following devastating 2008 floods. Frontline communities in these areas took longer than their wealthier neighbors to recover to pre-flood levels, and were less likely to receive full financial compensation or as timely compensation.⁴

One year after the 2008 flooding, Iowa was only able to spend \$24 million of \$798 million in federal block grants due to federal distribution rules. Meanwhile, confusion among property owners about local recovery funds led many to, in a panic, sell for pennies on the dollar to land speculators.⁵ Whole communities were scattered within the Cedar Rapids metropolitan area. There are signs of potentially similar issues in western Iowa following recent floods along the Missouri River in the unincorporated community of McPaul, Iowa. Needed local matching funds are less a problem in Cedar Rapids with its economic base and resources from a local option sales tax than in small, lower-income communities disrupted by a large-scale disaster. Iowa does offer assistance for individuals impacted by natural

disasters, but participation comes with many qualifications. Amounts are small — and must be repaid if an applicant receives federal assistance, which can be delayed.

Location-Based Flood Mitigation Efforts

Similar concerns dictate attention to equity in flood prevention. Based on the success of six years of mitigation projects such as ponds, terraces, wetlands, water and sediment control basins, Iowa in 2016 was awarded a \$96.9 million Department of Housing and Urban Development grant to continue mitigation projects in all nine major watersheds.

Comparing the location of these mitigation projects to the location of frontline communities in Iowa provides a window into additional mitigation and recovery challenges faced by these communities. Where benefit cost analysis is used, it makes it easier to justify an expensive mitigation project to protect higher-valued homes or land for people inherently better positioned to recover on their own, unlike frontline communities.

Policy Implications

Frontline communities often lack the ability to fully recover or move away from hazardous areas. Increased potential for severe flooding in the future may trap them in a cycle of disaster and recovery that leaves them worse off each time, until communities are broken apart.⁶

One possible intervention is to review mitigation efforts with an emphasis on community impact and vulnerability rather than up-front economic loss. Rebalancing benefit cost analysis may shift mitigation priorities toward community projects that emphasize needs of frontline communities.

FEMA faces administrative hurdles with mitigation proposals that span multiple jurisdictions. More flexible guidelines for such plans could ease community burdens and allow creative use of funds. Similarly, HUD directs Community Block Development Grant funds to the qualifying census block. But flood mitigation is best placed upstream and, depending on the size of census tracts and watershed configuration, the best place for mitigation efforts may be well outside the qualifying census block.

Iowa now stops processing and paying disaster claims once a federal disaster is declared, but federal funds may be delayed. Changes to keep funds flowing pending federal aid would directly help citizens.

Finally, to apply for mitigation efforts, project areas must have a well-supported, well-documented application. State support for a watershed coordinator to guide these applications in impactful watersheds would be a good use of state resources. Those job duties will be used again and again as Iowa adapts to severe weather driven by climate change.

¹ Iman Mallakpour. A Tale of Flooding over the Central United States. The University of Iowa. April 2016. Online <https://ir.uiowa.edu/cgi/viewcontent.cgi?article=6661&context=etd>

² James Boulter, "An Uncertain Future: The Outlook for Iowa Communities and Flooding as our Climate Changes." September 2019. <http://iowapolicyproject.org/2019docs/190905-Flood-Climate.pdf>

³ Juntunen, L. 2005. Addressing Social Vulnerability to Hazards. *Disaster Safety Review* 4(2):3–10.

⁴ Muñoz, Cristina E. and Eric Tate. "Unequal Recovery? Federal Resource Distribution after a Midwest Flood Disaster". *Int. J. Environ. Res. Public Health* 2016, 13(5), 507; <https://doi.org/10.3390/ijerph13050507>

⁵ Betsy Rubiner. "A Year After the Flood, Cedar Rapids Struggles". *Time*. June 17, 2009. Online Available at: <http://content.time.com/time/nation/article/0,8599,1904991,00.html>

⁶ Kerri Dickey, "Longitudinal Awareness: A Study of Vulnerability to Flooding in Polk County, Iowa." Iowa State University. <https://pdfs.semanticscholar.org/4ea7/6eda7da8fe3d24fa34952213cf735b72d158.pdf>

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