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The Iowa Watershed Approach
Highlights of Flood Resilience Survey Results

WHEN ASKED ON THE SURVEY...

Indicate your level of agreement with the statement: “My community is flood resilient.”
Responses varied between feeling pretty resilient and not resilient

In what important ways does your community need to become more flood resilient?
• Mitigation practices
• Increase public awareness and education
• Review regulations and policies

Who else do you think should be involved in the IWA project or in resilience activities who were not present at this meeting?
• Ag groups
• Landowners
• Community members
The Flood Resilience Team is looking forward to working with you to improve flood resilience in your watershed and communities!
Previous Hydrologic Update

- IWA website launched (www.iihr.uiowa.edu/iwa/)
- Flooding trends
- Modeling introduction
- BMP mapping inventory
- ACPF tool
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Watersheds Requiring WMA Formation
North Raccoon
E. Nishnabotnas
W. Nishnabotnas

Watersheds with WMAs
Upper Iowa
Upper Wapsipinicon
Middle Cedar
Clear Creek
English

IWA Program Timeline
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Existing BMPs

BMPs are being collected by 12-digit HUC and finished products can be downloaded at:
https://athene.gis.iastate.edu/consprac/consprac.html
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- Corn (40.7% - 45.6%)
- Soybeans (31.9% - 27.0%)
- Grassland/Pasture (10.2% - 12.4%)
- Developed/Open Space (6.0% - 5.8%)
- Deciduous Forest (2.7% - 2.5%)
- Developed/Low Intensity (3.1% - 1.7%)
- Woody Wetlands (1.9% - 1.3%)
- Open Water (0.6% - 0.9%)
- Other (2.8% - 2.9%)
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Surface Elevation (feet)
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Average annual precipitation (inches). Estimates are based on the 30-year annual average (1981-2010).

(Data source: http://www.prism.oregonstate.edu/).
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Estimated fraction of precipitation lost to evapotranspiration 1971-2000

0.0 - 0.09
0.1 - 0.19
0.2 - 0.29
0.3 - 0.39
0.4 - 0.49
0.5 - 0.59
0.6 - 0.69
0.7 - 0.79
0.8 - 0.89
0.9 - 0.99
1.0 - 1.09
1.1 - 1.19
1.2 - 1.29

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(a) Cedar River upstream of CR

(b) Cedar River at CR

(c) Cedar River at CR

Streamflow / Rain (%) vs. Time

Baseflow / Streamflow (%) vs. Time
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Historic Crests, Cedar River at Cedar Rapids. 

Major Flood Stage = 16 ft

- 31.12 ft on 06/13/2008
- 21.95 ft on 09/27/2016
- 18.30 ft on 05/27/2004
- 18.23 ft on 06/02/2013

Maps showing accumulated rainfall for different years with Mason City and Waterloo marked on each map. The maps are color-coded to represent the amount of rainfall in inches.
Hydrologic Assessment

- Develop and run watershed-scale hydrologic models (PIHM) to estimate watershed responses to rainfall events
- Modeler breaks the watershed down into manageable and representative user defined areas
- Simulate hydrologic processes using a physically-based approach
- Compare simulated results to observed hydrologic time series (e.g. streamflow) to assess model performance
- Quantify the impact of existing and potential BMPs
- Documentation
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