ILLINOIS URBAN FLOOD AWARENESS ACT

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Definition: Urban

- Our Definition
  - Get rid of the US Census Bureau population minimum
  - Density requirement only
  - Illinois = 7.8% Urban Area
  - Now includes 91% of municipalities
Data Collection

- Illinois Department of Insurance
  - Basement backup claims
- Federal Emergency Management Agency
  - Disaster Assistance
  - National Flood Insurance claims
- Urban Flooding Survey
  - 120 municipalities responded
- Urban Flooding Symposium
  - Professional judgement
- Other data collection
  - Stakeholder information
Sections of the Report
• Past, Current, and Future
• Prevalence, cost, and trends
• Impacts of climate change
• Review technology to evaluate risk
• Effectiveness of Projects, Programs and Policies
• Strategies for Reducing Urban Flood Damages

2007 2008 2009 2010 2011 2012 2013 2014
$0 $100 $200 $300 $400 $500 $600 $700 $800
Payments ($ Millions)

Private  NFIP  IA  PA
County Claims

Legend
Claims by County
- 1 - 49
- 50 - 99
- 100 - 249
- 250 - 499
- 500 - 999
- 1,000 - 2,499
- 2,500 - 4,999
- 5,000 - 9,999
- 10,000 - 24,999
- 25,000 - 49,999
- 50,000 - 100,000
- 100,000+

6 County Chicago Metro Area
Maintenance Problems
Between 2007-2014 there have been a total of 1972 urban flood damage claims within Rock Island County. Roughly three fourths (71.3%) of the claims occurred outside the mapped floodplain.
Illinois, Precipitation, January-December

1895-2014 Trend
+3.92"/Century

Precip
Rainfall Statistics

10-yr, 2-hr Precipitation Totals

100-yr, 24-hr Precipitation Totals
Rainfall Statistics

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Difference in Inches
-0.4 to -0.2
-0.2 to 0.0
0.0 to 0.2
0.2 to 0.4
0.4 to 0.6
No Data

-1.0 to -0.5
-0.5 to 0.0
0.0 to 0.5
0.5 to 1.0
1.0 to 1.5
1.5 to 2.0
No Data
Warmer air holds almost 4% more water vapor for every degree increase.
Possible increases in 2041-2070 based on 1971-2000 period
Homeowner Responsibility

**Downspouts**
The home directs storm-water from the roof into downspouts, which connect to the lateral.

**Kitchen, Bathroom, and Appliances**

**Laundry**

**Foundation Drain**

**Local Sewer**
The local sewer is not at capacity; the lateral is freely emptying into it.

**Backup**
More water has entered the lateral than can flow through it, so it backs up.

**Lateral**
Due to blockages, damage, or insufficient diameter, the lateral can reach capacity.
Real-time Stormwater Monitoring
Study Topographic Wetness Indices
Buyout Funding

1982. The Ottawa “flats” underwater

2008. The same Ottawa “flats” after buyouts
Continue Funding Data Collection
Update Rainfall Frequency Data
Research Low Income Insurance Coverage
Questions?

The report is available with the state model local stormwater ordinance on the IDNR website (search: Urban Flooding)

Thank you to the:

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- Bender Consulting Services
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