

STORMWATER MANAGEMENT AND THE ROLE OF COUNTIES

Regional Planning Agency Meeting

Springfield, IL, May 31, 2018

**Hal Sprague
Center for Neighborhood Technology**



CNT

Innovations laboratory
for urban sustainability

- Original research
- Services, tools & business ventures
- Policy Advocacy

Agenda

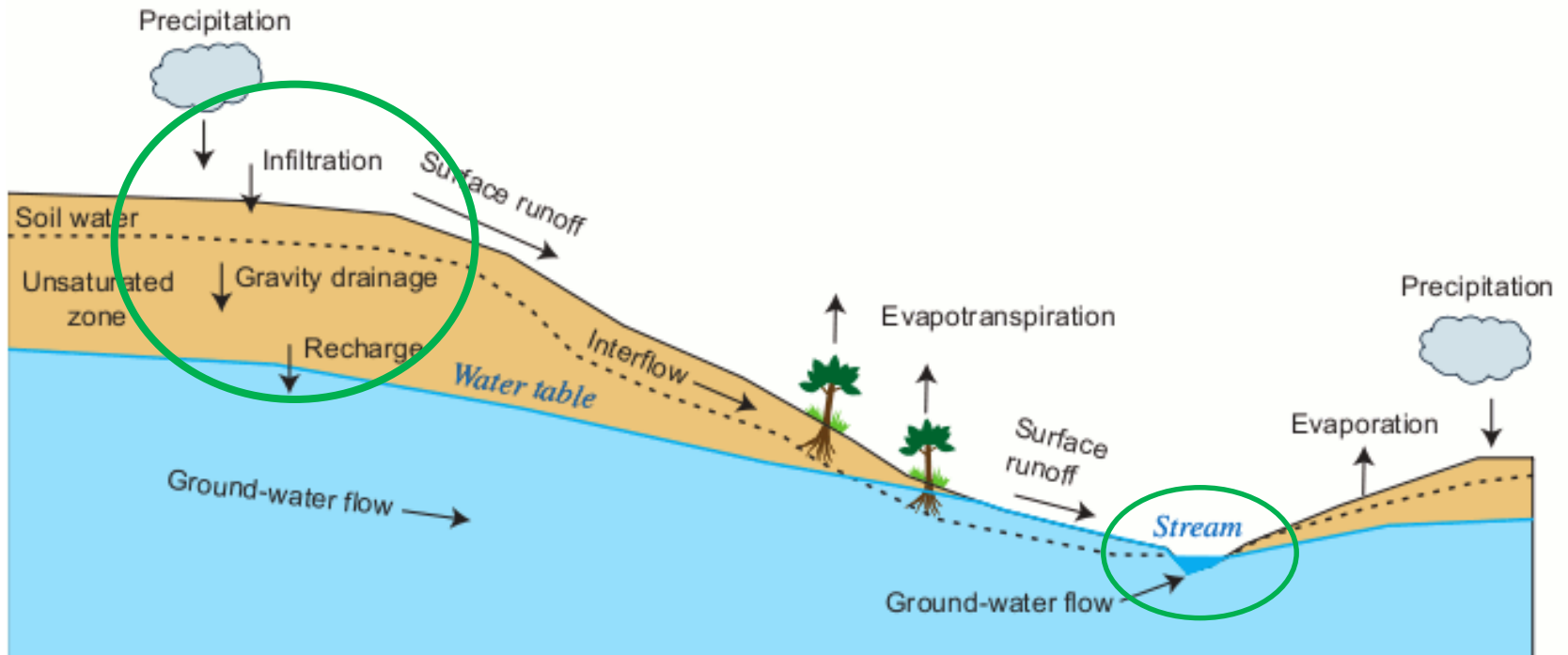
- 1. Background on “urban flooding” and why stormwater management is important**
- 2. County Stormwater Management Authority under HB 4748**

(Blog on this topic: CNT/ Blog – May 25)

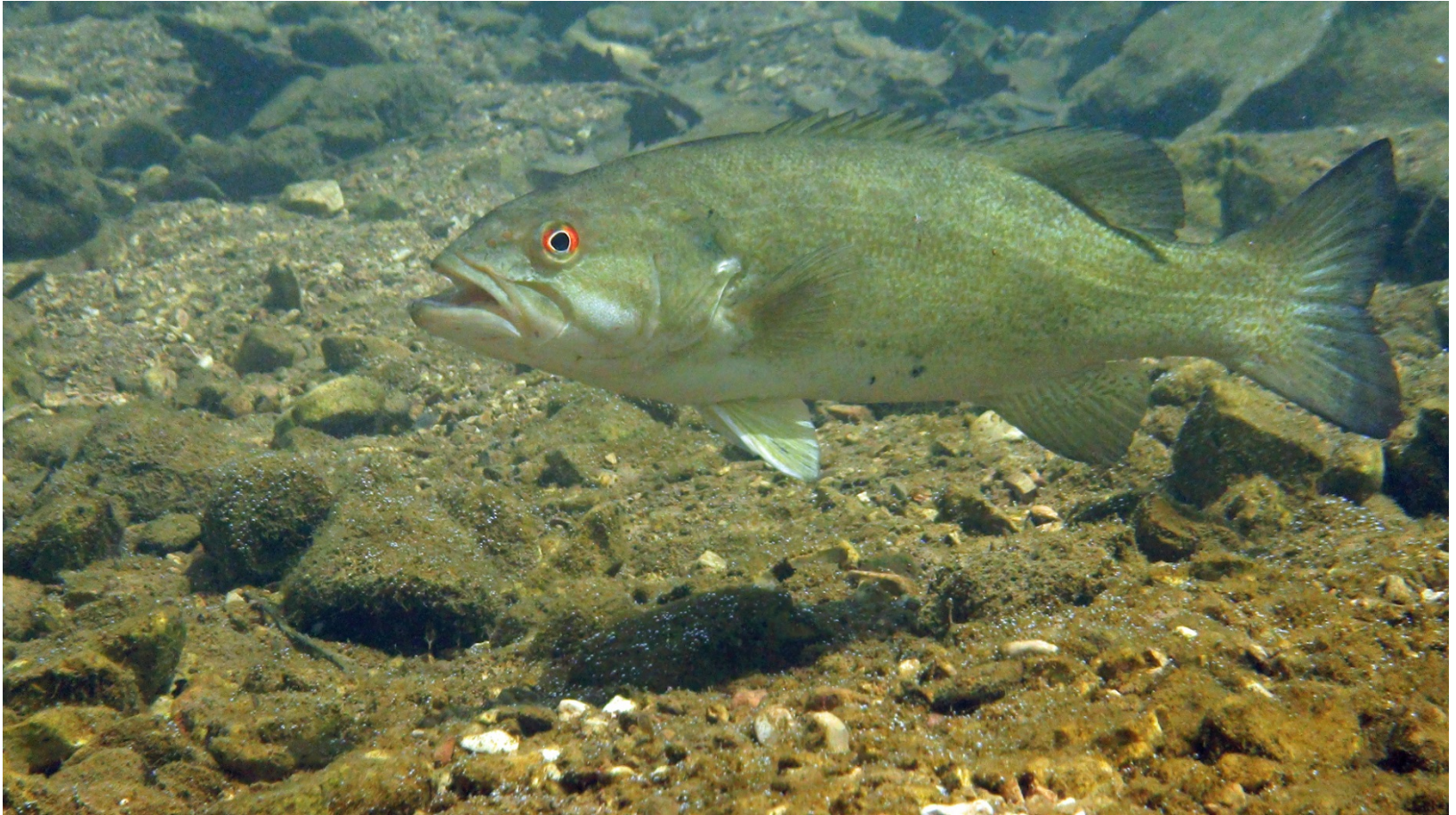
Water Cycle: Pre-Humanoid Era



The Hidden World of Stormwater Runoff

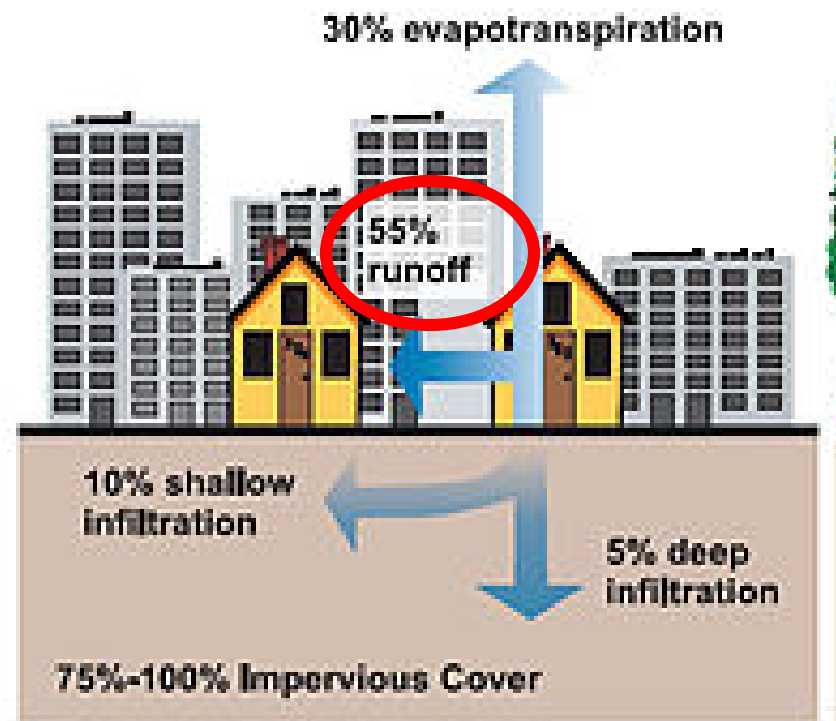
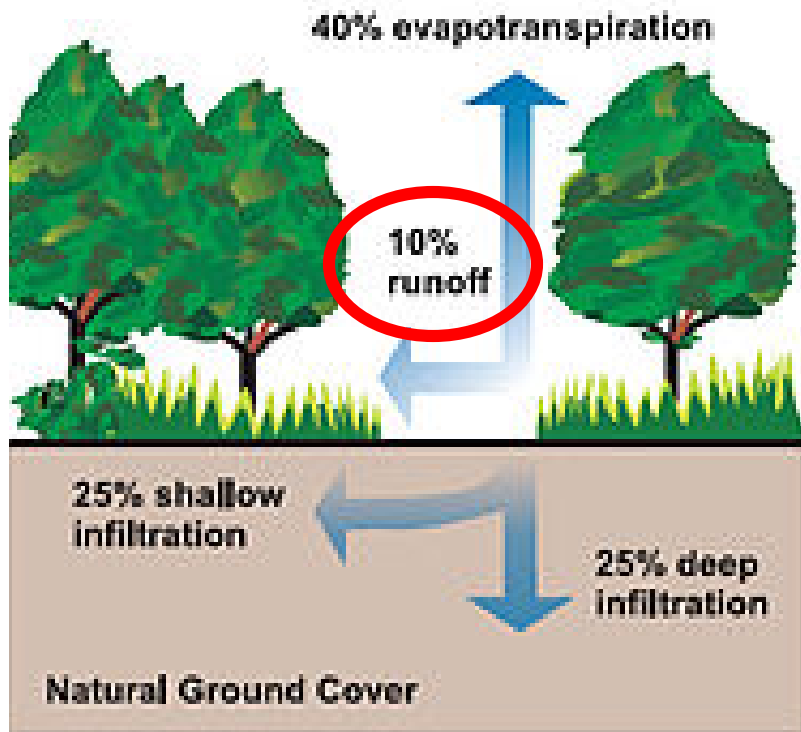


Aquatic Ecosystem

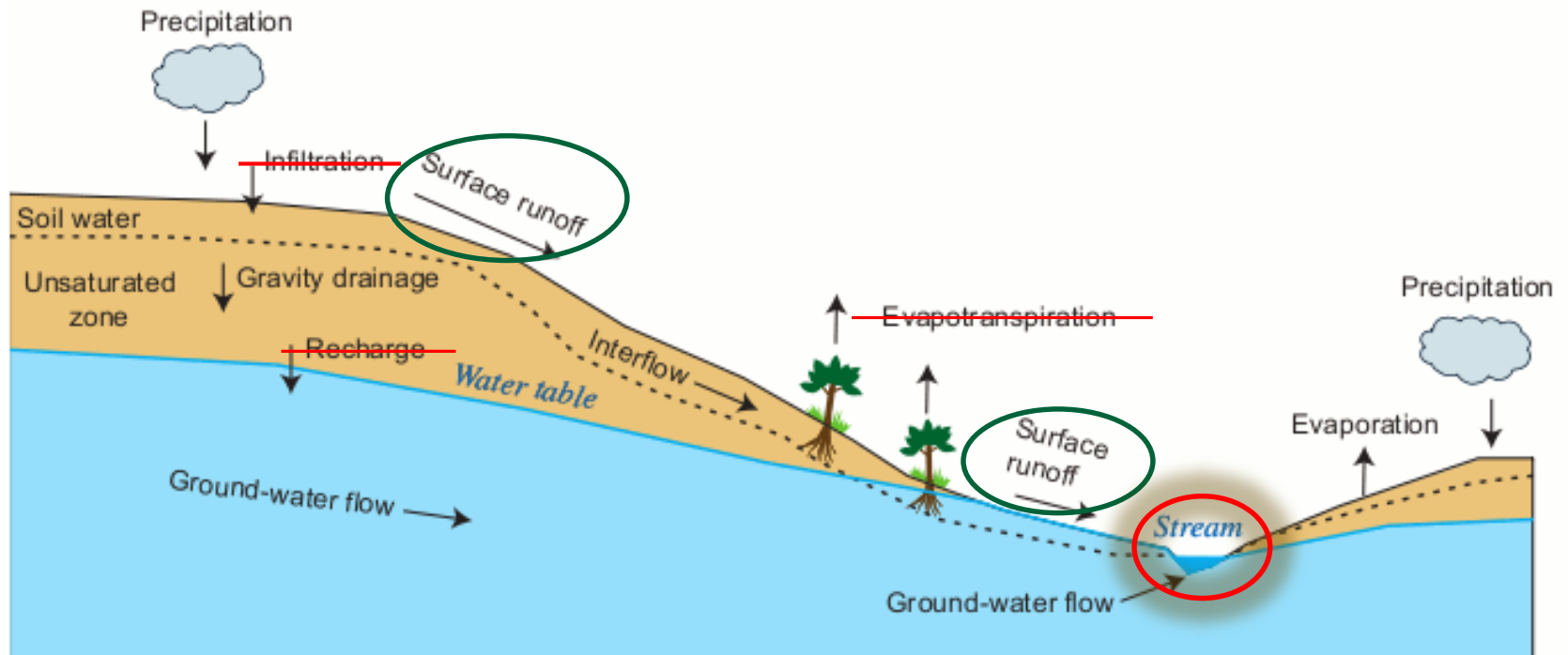




Urbanization Changes Things



The Hidden World of Stormwater Runoff – Urban Version



Some Consequences

Peak flow

Temperature



Pollutant load

Base flow



Eroded Streams



CSO Pollution

Urbanization Affects Water Quality



Urban Stormwater Runoff: Besides water quality, there are other consequences





URBAN FLOODING

A very personal problem



A man wearing a white lab coat, a white cap, and glasses is speaking into a microphone at a wooden podium. He is gesturing with his left hand. In the background, a diverse group of people are seated at tables, listening. There are large windows and informational posters on the wall.

Research

Study: Prevalence and Cost

What do people do when their property
is damaged from flooding?

File Claims

- **Claims Paid Out (Cook County)**

They do NOT talk about
it with their friends!
(Hidden stories)

- **Sources:**

- (1) Private Insurance
- (2) Natl. Flood Ins. Program (NFIP)
- (3) FEMA Disaster relief (IA)
- (4) Public assistance (PA)
- (5) Small Business Admin.

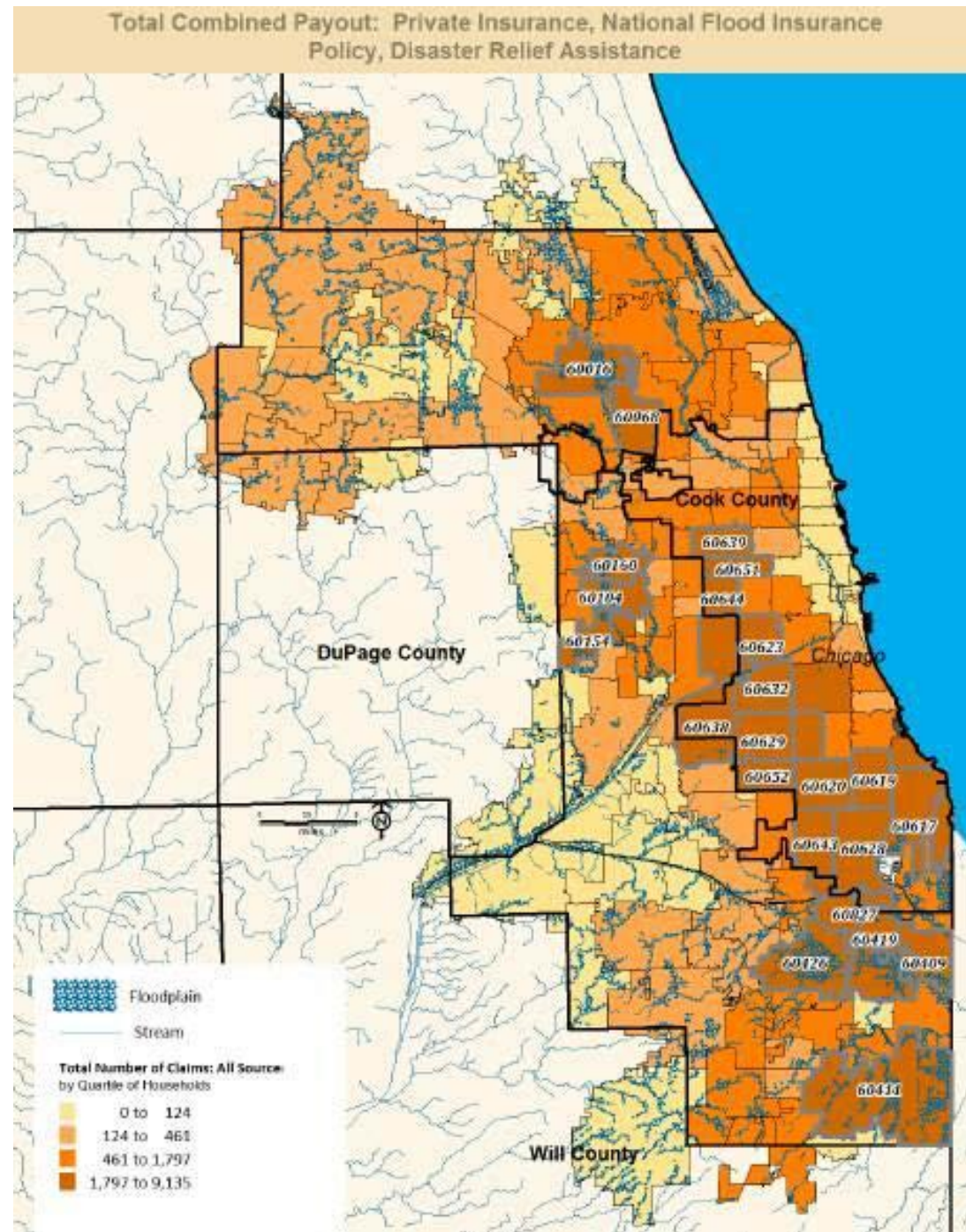
- **2007 – 2011, zip code**



>180,000 claims
>\$773 Million
>\$4,000 per claim

Large number of
claims – outside
any floodplain

*WHY IS THIS
HAPPENING?*



Urban Flooding

Problem: Stormwater runoff from urban landscapes causing “*local flooding*”

Consequences:

- **Flooded homes, businesses and streets**
- **Significant property damage**
- **Health problems**
- **Lost time at work, wages**
- **Sewer backups, overflows**



URBAN FLOODING

Inundation of land or property in built environment caused by rainfall overwhelming the capacity of the drainage systems, such as storm sewers

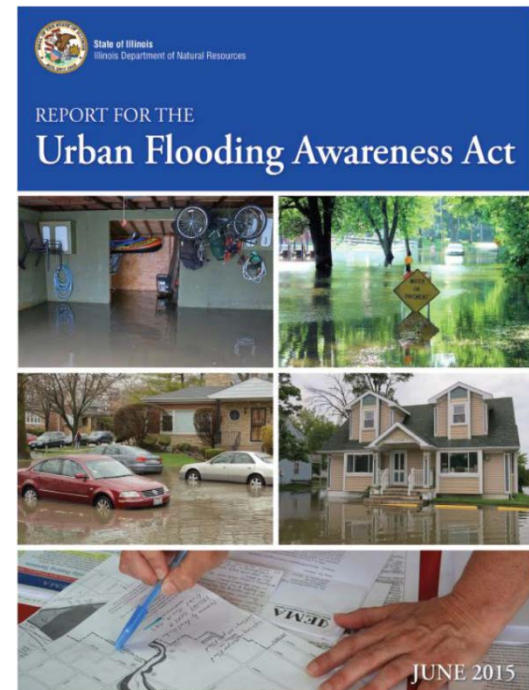
Urban Flooding Awareness Act

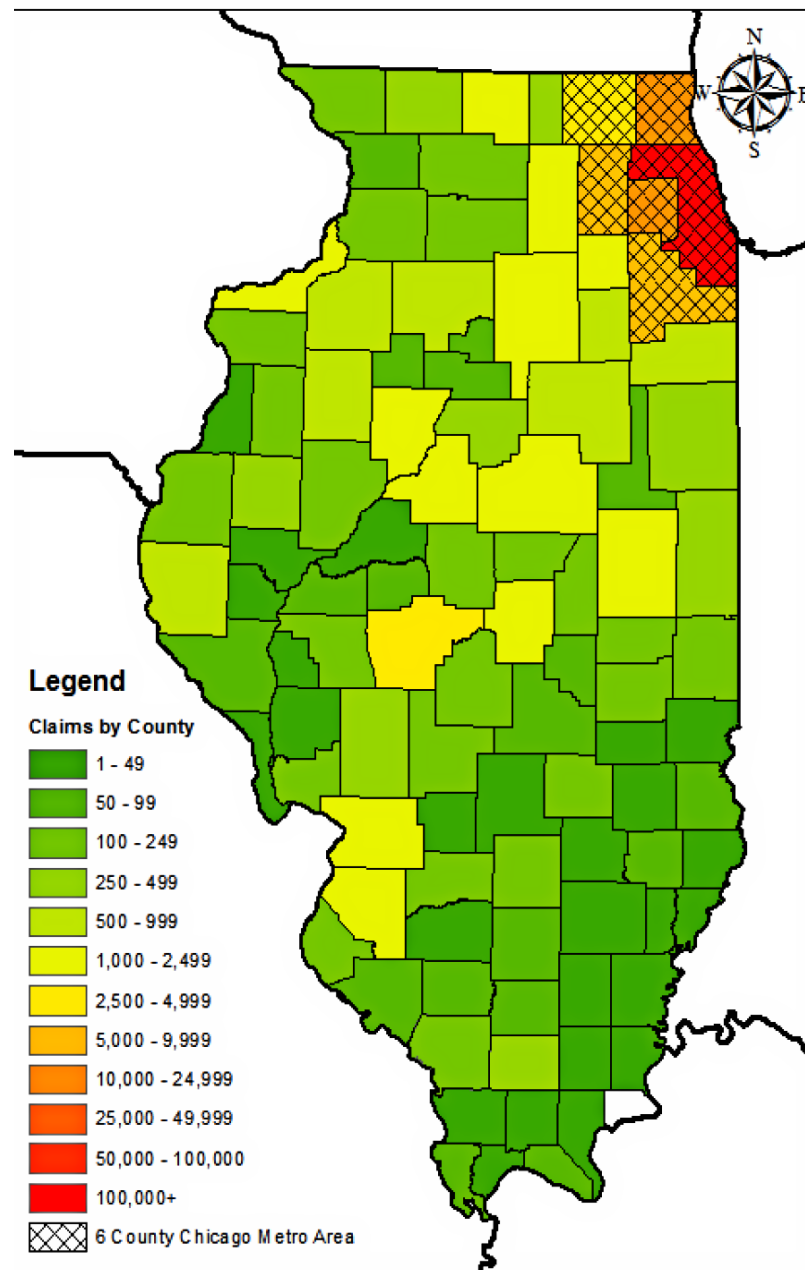
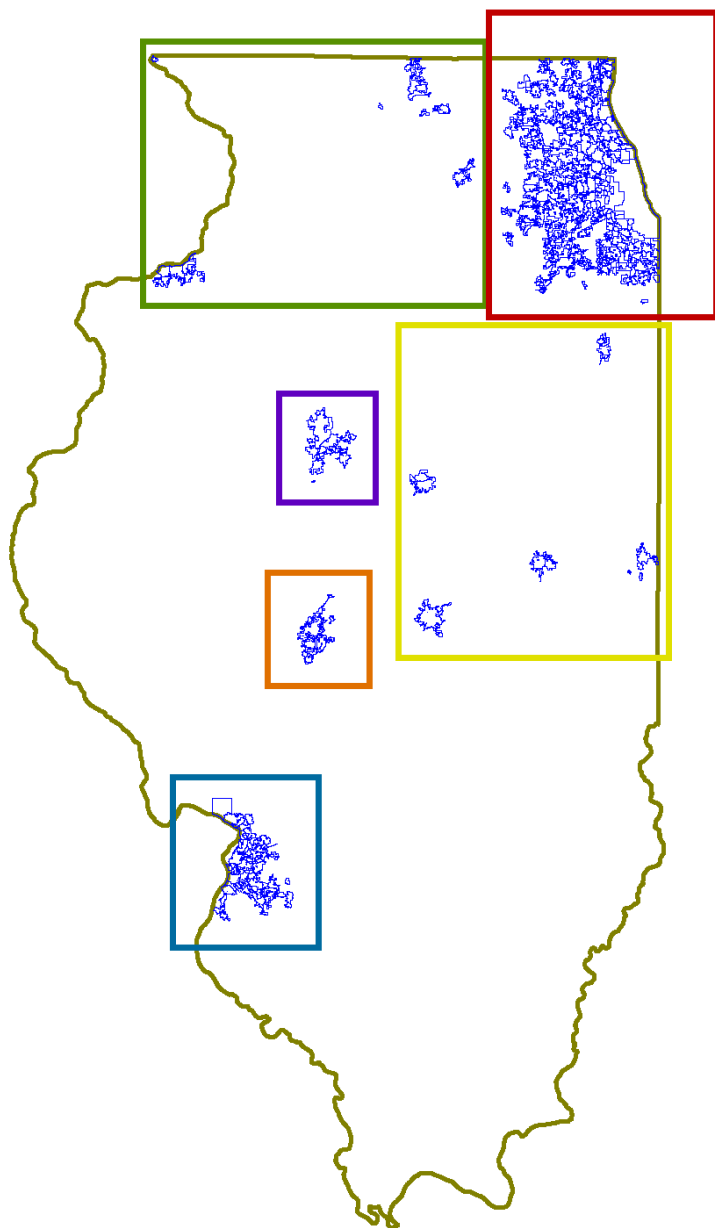
Illinois Legislature (2014)

**Directed IL Dept. of Natural Resources
to conduct *study of urban flooding across
entire state***

**Claims data: NFIP and
Private Insurance**

**8 years – census block
aggregation**





Recommendation #2

“Stormwater planning and management authority should be granted to all Illinois counties to adopt countywide stormwater ordinances, projects and programs.”

Because:

Under current law, only 16 counties can develop countywide stormwater plans and adopt ordinances.

Many of the remaining 86 counties suffer severe flooding, but they can only manage stormwater in unincorporated areas, which are becoming smaller all the time. This prevents them from providing flood protection services to villages, homeowners, businesses.

What the Study Says

- Counties with countywide authority have profoundly impacted urban flooding through programs and projects aimed to reduce stormwater runoff.
- County stormwater ordinances have common requirements including safe flow paths for the largest rain events, retaining runoff on-site, and requiring stormwater management for new land disturbance or impervious surfaces.
- Countywide programs are able to address more efficiently program management issues in urban areas (e.g., permitting, inspections) than small communities, especially in the most highly developed areas.
- Counties are better able to conduct watershed-based analysis of stormwater management issues.
- Counties have access to funding that may not be available to small communities.

HB 4748 – 2018 Legislation

House Bill 4748 amends the Counties Code and grants this authority to the remaining 86 counties, and

- Defines “urban flooding” and gives specific authority to address it
- Prioritizes use of “cost-effective solutions to flooding problems” (green infrastructure)
- Authorizes grants to local government, non-profits and landowners to assist with stormwater management programs and projects
- Not a mandate
- Requires establishment of stormwater mgt. committee

HB 4748 – 2018 Legislation

Benefits:

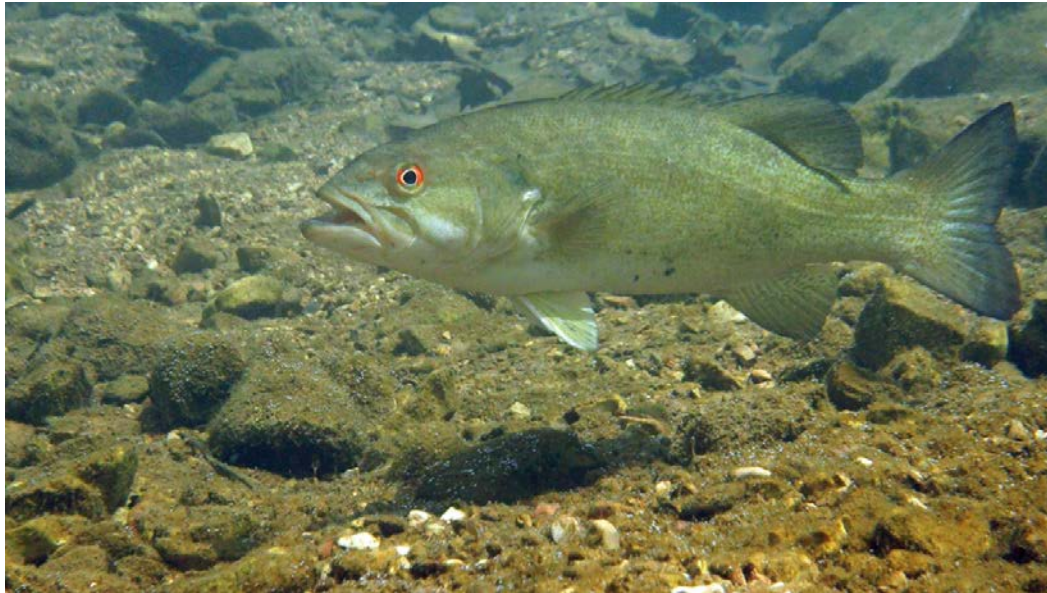
- Consolidate and unify existing municipal programs
- Plan on watershed level, avoid upstream-downstream inequities
- Create consistent set of standards for developers across county
- Take advantage of pooled resources and help small and disadvantaged communities

For the Legislative Nerds

HB 4748 – Amends 55 ILCS 5/5-1062, 1062.2, 1062.3

- 5-1062: (1987?) Cook and (five) surrounding urban counties required to develop stormwater management plans and implement them.
- 5-1062.1: (2004) Turns stormwater management in Cook County over to MWRD.
- 5-1062.2: (2005) Allows nine more named urban counties to develop stormwater management plans and implement them. (By now Kendall has been added to CMAP region.)
- 5-1062.3: (2013) Allows DuPage and Peoria Counties to adopt stormwater fee programs.

THANK YOU



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