Midwest Mitigation Practices In
The Face of Great Floods

We flood a lot. Monster floods! We had a lot of damage. Then we got serious:

- 100% of Illinois’ communities have adopted higher FPM standards.
- We STRICKLY enforce those regulations.
- We aren’t afraid to kick communities out of the NFIP.
- We track cumulative damage after every flood
- We red tag a lot of buildings.
- We target our efforts on Rep Loss properties.
- We do a lot of mitigation projects.
Midwest Mitigation Practices In The Face of Great Floods

Now:

✓ Scores of communities pass major floods unscathed.
✓ Two major Mississippi/Illinois River floods in 2016.
✓ Floods in Illinois don’t even make the news.
✓ Less than 200 claims statewide (and only 4 of them post-FIRM).
✓ No declaration. Not even a PDA.
✓ We were bored.

Any questions?
Illinois? Floods? Really?
Illinois

“Where our Governors Make License Plates”

• 1st in the number of jailed Governors (5).
• 1st in the number of indicted state officials (1,000+).
• 1st in poor fiscal policy – the most broke state in the union.
• 1st in the most underfunded pension program.
• 1st in murders (765 in Chicago alone last year).

![Image of a cartoon and a photo of a man with a finger pointing upwards.](Image)
The largest **inland** system of rivers, lakes, and streams in the entire nation!

Declared Disasters
1994 - 2014
National Climate Data Center
Analyses of Flood-Causing Precipitation
National Climate Data Center
Assessment of Flood Trends

Trends in Flood Magnitude

Change per Decade (%)
- ▲ 3
- ▲ 6
- ▲ 9
- ▲ 12
- ▲ 15
- ▲ 18

Positive Trends
Negative Trends
Monster Floods on the Rise!
What is the “100 Year” Flood?

Mississippi River at St. Louis
Daily stage measurements available: 1861-2015

Source: Nicholas Pinter, UC Davis.
This morning in Ottawa, IL
Flood? What Flood?

**ILLINOIS RIVER AT OTTAWA**

**Universal Time (UTC)**

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Latest observed value: 459.85 ft at 9:30 AM CDT 29-Apr-2017. **Flood Stage is 463 ft**

- **Stage (ft):**
  - Major: 469.0'
  - Moderate: 466.0'
  - Minor: 463.0'
  - Action: 461.0'
  - 459.99 ft

Record: 472.2'
Illinois’ 1st State Coordinator
French Wetmore
Serious floodplain management

Strong Locals = Wimpy Floods
Going Above and Beyond in IL

- Restrictive 0.1’ floodway. Appropriate uses only. No buildings!
- Compensatory storage required (1 : 1.5).
- Cumulative Substantial damage regulations.
- Freeboard – one foot minimum.
- Stormwater regulations (detention/retention).
- Local regulatory maps.
- Critical facilities.
- Countywide ordinances.
- Strict compliance - fines!
The feathers in our cap...

Illinois is ranked #1 in the nation for:

1. Overall % reduction of Rep Loss properties.
2. Fewest % of flood insurance claims on post-FIRM (newer) structures.
3. The most NFIP suspensions for compliance (75% of the nation’s total)!
Climate Change is Happening
Evolution of Flood Risk

In the Midwest, it’s Happening!
No Doubt

.....but, how does it impact large river systems??
In Illinois..., 92% of flood damages now occur outside of the floodplain! Wow!

Sewer backup vs Flood insurance

NFIP losses are pocket change!
Our success is measured in silence….
The Easy 5
..and most have nothing to do with FPM

#1
Don’t Waste Time On The Fluff

#2
Abuse Your State Coordinator

#3
Avoid Natural Selection

#4
Chimplify

#5
Local Efforts Work!
**TIP #1**

**Don’t Waste Time On The Fluff**

- Tell us your flood risk.
- We will spend a lot of money.
- We will tell you your flood risk.

- Tell us your mitigation needs.
- We will ignoring you for 5 years.
- Tell us your mitigation needs again.

Don’t get mad yet. We are only on #1.
TIP #2
Abuse Your State Coordinators (and your SHMO)
NFIP State Coordinators

1. All are Certified Floodplain Managers.
2. 95% of the nation’s community assistance.
3. Coordinate mitigation projects.
4. NFIP and FPM training.
5. Floodplain mapping and LOMCs.
6. Flood disaster response and damage assessments.
7. Will take a bullet for locals!
TIP #3
Avoid Natural Selection
Evolve
In a floodplain? Elevate or move!
Been flooded? Elevate or move!
IAFSM Natural Selection Award
How NOT to sandbag your home
IAFSM Natural Selection Award
How NOT to get your drinking water

Water Intake Line

Septic Discharge Line

Water Intake Line
Pew Charitable Trust
National Flood Survey
April 2017

- 80% Support disclosure of past floods with home sales
- 80% Support new construction in FP be done to withstand flooding
- 75% Support buyouts rather than reconstruction
- 66% Support higher insurance premiums if a community floods and then makes no investment to reduce flooding.

Natural Selection:
~80% of people have evolved. Upright thinkers.
~20% of people have not evolved. They need our help.
TIP #4
Chimplify

Simplification to the extreme; making something so simple a monkey could understand it.
• Speak in plain English.
• Avoid Acronyms and buzz words (like the plague).
• Keep all your letters one page.
• Be honest and say things directly. “Sorry, you can’t rebuild this damaged home….it has to go up 32 feet. Now let’s figure out how to get it done!”
Meet Lou Ann Gavin ....

- Has never once used the words “Special Flood Hazard Area” or “SFHA”...it’s a floodplain!
- Can’t spell “Collaboration” but knows everyone in town.
- Has never looked at a DFIRM. But can tell you exactly the flood risk and depth of flooding anywhere in town.
- Isn’t afraid to say “NO”. Frequently says “H**l NO!”.
- Loves and trusts her State Coordinator (and he loves her).
- Has all but eliminated her city’s flood risk!
TIP #5
Local Effort Work! TRUST!
All The Best Communities:

- Take ownership!
- Don’t rely on FEMA/State.
- Have a local champion.
- Increase outreach. It’s not all about fancy “products”.
- Have strong regs and enforce them....STRICTLY!
- Take advantage of programs and incentives.
- Make friends (and trust their friends).
To Recap..The Easy 5

#1
Don’t Waste Time On The Fluff. Do it and move on to the real work.

#2
Abuse Your State Coordinator. Make them get muddy!

#3
Avoid Natural Selection. Use common sense.

#4
Chimply. Make the process simple.

#5
Local Efforts Work! Make friends help them achieve mighty feats!
Peoria County Local Official are a little too serious!

NOTICE

This structure has sustained flood damage. A permit MUST be acquired from the Department of Planning & Zoning prior to any rehabilitation of the structure. Failure to do so will result in fines and court hearings.

Please contact (309) 672-6915 to schedule an inspection.

Posted on this __ day of __, 20__.

45 foot freeboard

Red Tag!
A great View!
Look at all that **GREEN** in Grafton!

THANK YOU
The National Flood Insurance Program is a voluntary program. If a community feels that the building requirements are too burdensome, they don’t have to participate.

Earl Blumenauer

1993 = 1,200 lease cabins (nearly all of them Rep Loss)
2016 = 200 lease cabins (and all of them elevated)
Illinois vs The US Army

Illinois Floodplain Managers vs U.S. Army Corps of Engineers
Floodplain Management isn’t Rocket Science!

You only need two tools in life: WD-40 and duct tape

**Diagram:**
- **Does it move?**
  - No
    - Should it?
      - No
      - [Beer]
      - [Beer]
  - Yes
    - Should it?
      - Yes
      - [WD-40]
      - [WD-40]
      - [Beer]
      - [Beer]
    - No
      - It's a cockroach
      - [Duct Tape]
      - [Lighter]
Substantial Damage
“The 50% Rule”

If damages from ANY source (flood, fire, tornado, etc..) exceed 50%.

The structure must be brought into compliance with floodplain regulations (elevated or floodproofed).
Grafton
Illinois’ River Town - long term vision

- Has flooded every year since 1800!
- Serious flood mitigation started after 1993 and 1995 floods
- Buyouts
- Relocation
- Strict compliance
- No Worries!

“NFIP resources are not sufficient to achieve its goals, or to keep pace with urbanization or changes in climate”
American Institute for Research (AIR) report

1. **States should set the example for communities by adopting higher regs and providing financial support to floodplain management.**

2. **Revise NFIP to encouraging state and local programs to adopt higher standards. Create incentives!**

3. **FEMA should devote more resources to improving state and local FPM programs.**

4. **If states do not comply fully, they should face the same NFIP sanctions as communities. Disaster deductibles?**