



No Adverse Impact

A Common Sense Strategy for Floodplain Management

An Indiana Perspective

presented by

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ASFPM / INAFSM Mission



Mitigate the losses, costs, and human suffering caused by flooding.

and



Protect the natural and beneficial functions of floodplains.



..“In your community, the National Weather Service predicts record Rainfall”.
It rains, the rivers rise, but.....

- ✓ No structural flooding;
- ✓ No roads closed;
- ✓ Emergency rescue teams not deployed;
- ✓ No citizens are injured;
- ✓ No rescue workers put at risk;
- ✓ Erosion & Sedimentation are at a minimum;
- ✓ Flood levels do not increase

The No Adverse Impact (NAI) Vision



If you are asking

“How can we get our community to this point where we don’t have to worry about future flood damages?”

- ❑ Your community must rely on natural floodplain systems to store and dissipate floodwater with no adverse impacts on humans or built infrastructure.
- ❑ Natural floodplains provide opportunities for open space, parks, recreation, habitat for wildlife and fish, hiking and biking trails, alternative agricultural crops and add to quality of life.

The No Adverse Impact (NAI) Vision



If you protect the natural floodplain systems in your community.....

- Structural damages can be minimized;
- Erosion and sedimentation can be minimized;
- Flood levels can be stabilized with no major increases; and
- The resulting open green space can be incorporated into future development so that the development does not impact others.

Trends in Flood Damages

So Why the Concern?

- Flood crests continue to increase;
- In the last 12 years we have had record crests set in a number of communities;
- Flood Damages continue to increase;
- Per Capita Damages increased by more than a factor of 2.5 in the previous century in real dollar terms.

Why advocate the NAI Vision?

- To reverse these trends;
- To reduce future damage potential

What is Influencing the Trend?

Increased Property at Risk

Current policy:

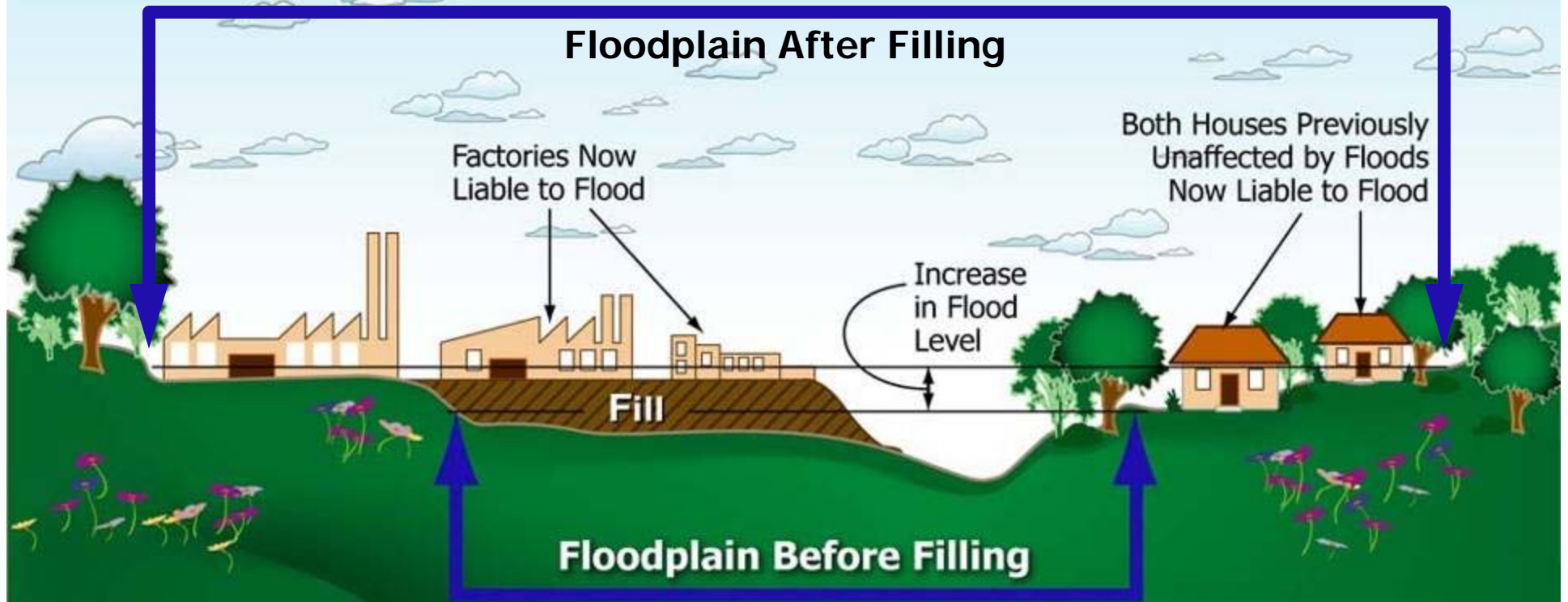
- Promotes intensification in risk areas
- Ignores changing conditions
- Ignores adverse impacts to existing properties
- Undervalues natural floodplain functions

Message Alert

Even if we perfectly implement
current standards,
damages will increase.

Yes, we have done a number of positive things, but Mitigation Actions are being out-paced because we have not learned from the past.....

Today's Floodplain Is Not Necessarily Tomorrow's Floodplain



**If large areas of the floodplain are filled, then there will be an increase in the land area needed to store flood waters.
This means your home or business may be impacted.**

Why No Adverse Impact?

Flood damages are rapidly increasing
unnecessarily!

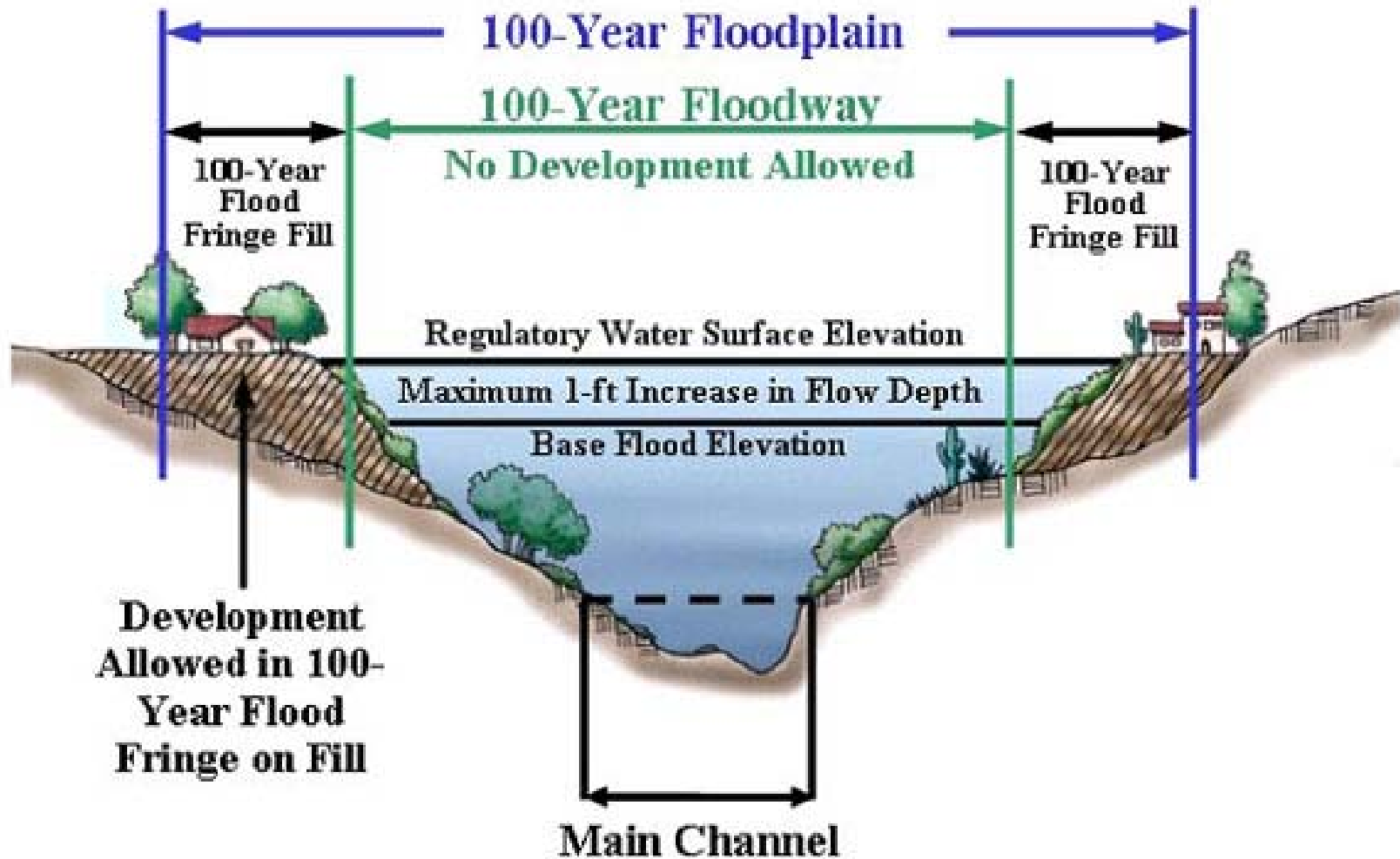
Current approaches deal primarily with *how to build in a floodplain vs. how to minimize future damages*

No Adverse Impact Defined

Activities that could adversely impact flood damage to another property or community will be allowed only to the extent that the impacts are mitigated or have been accounted for within an adopted community-based plan.

Do No Harm; Good Neighbor Policy

Regulatory Floodplain

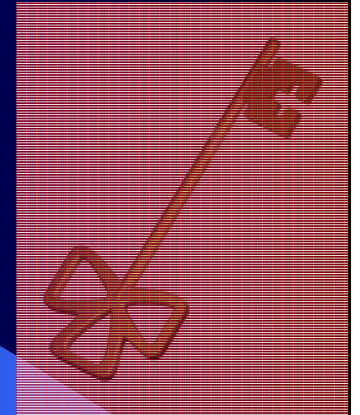


No Adverse Impact Roles

Local government is the key

Floodway Fringe is regulated by.....

THE LOCAL COMMUNITY!



- Develop and adopt NAI community-based plans
- Adopt NAI strategies
- Educate citizens on the “Good Neighbor Policy”

No Adverse Impact Roles

State Government

- ❑ Update State Executive Orders / State Law
 - Freeboard Requirement; is 2' enough or should it be 3'?
 - Floodway Surcharge limited to 0.14'; should it be changed to 0.00?
- ❑ Provide locals technical & planning assistance
- ❑ Adopt policies with incentives to encourage NAI

NO ADVERSE IMPACT

A Toolkit For Common Sense Floodplain Management



2003

Community Activities that can Incorporate NAI:

**These tools are organized under
seven “building blocks:”**

1. Hazard Identification and floodplain mapping
2. Education and Outreach
3. Watershed-based Master Planning
4. Regulations and Development Standards
5. Mitigation Actions
6. Infrastructure
7. Emergency Services

There are three levels of effort under each building block:

1. The **Basic** level - what is usually done to meet the minimum requirements of the National Flood Insurance Program (NFIP) or other State or Federal rules.
2. The **Better** level lists floodplain management activities that are more effective than the basic in protecting floodprone properties. **Better** level tools usually prevent or minimize adverse impacts on other properties.

There are three levels of effort under each building block:

3. The **NAI** level identifies the most effective ways under each building block to protect everyone's property *and* prevent increased flood problems. ASFPM recommends use of **NAI** tools over the "better" level of activities. Effective implementation is done through sound planning, in addition to buy-in by all community stakeholders.

This Toolkit is a reference document, not a "how-to" manual.

Hazard Identification

- Use a comprehensive approach
 - A. Detailed Studies in urban areas;
 - B. Approximate Studies in rural areas;
- Reflect future conditions
- Calibrate FIS Models after major events
- Identify hazards not mapped by FEMA

Education and Outreach

- Develop Flood Warning System
- Target specific audiences
- Modify existing outreach efforts
- Your message should be:
 - know your hazards / risk
 - understand how your actions could adversely impact others
 - identify how community members can protect themselves and others

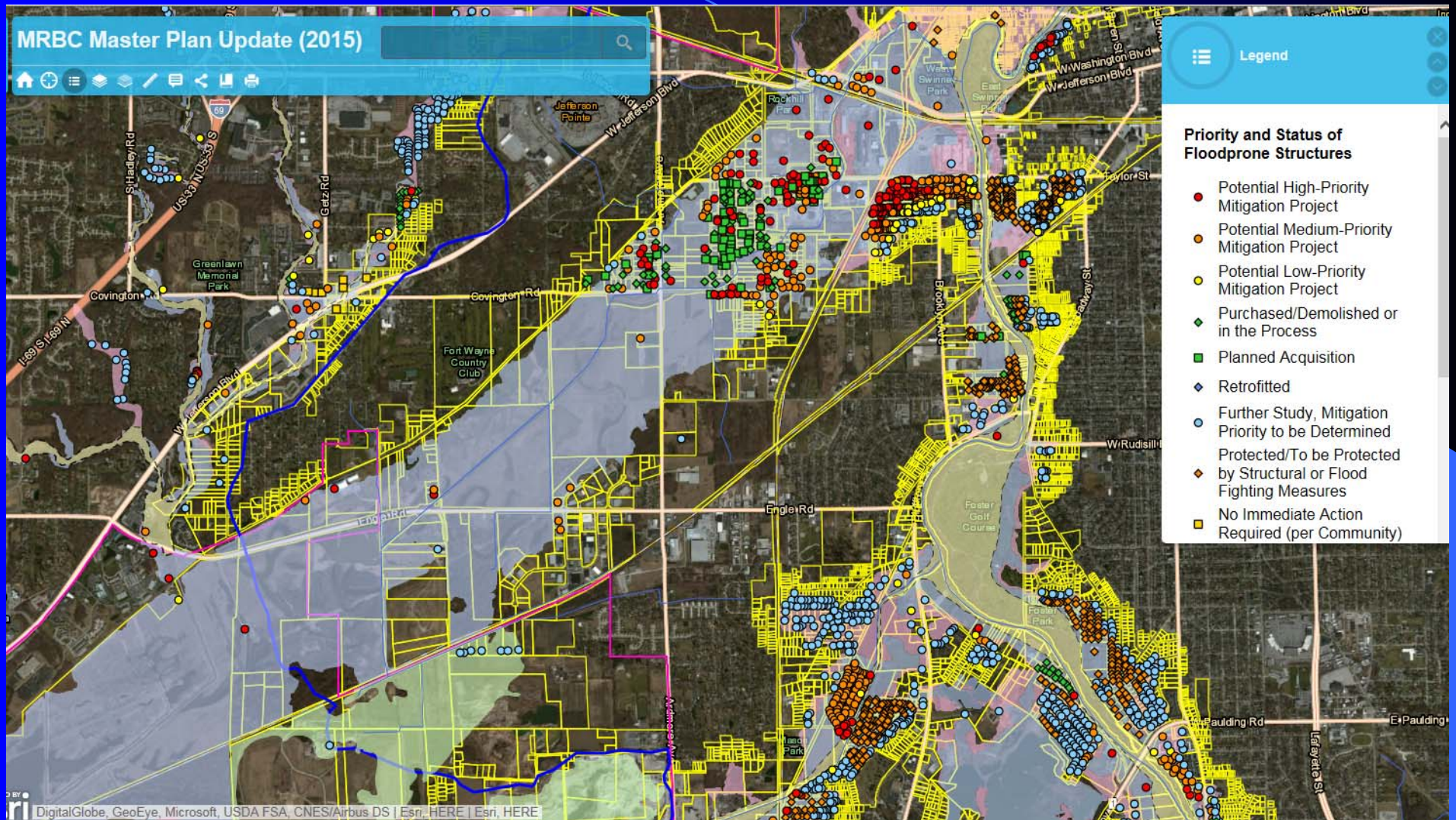


Planning

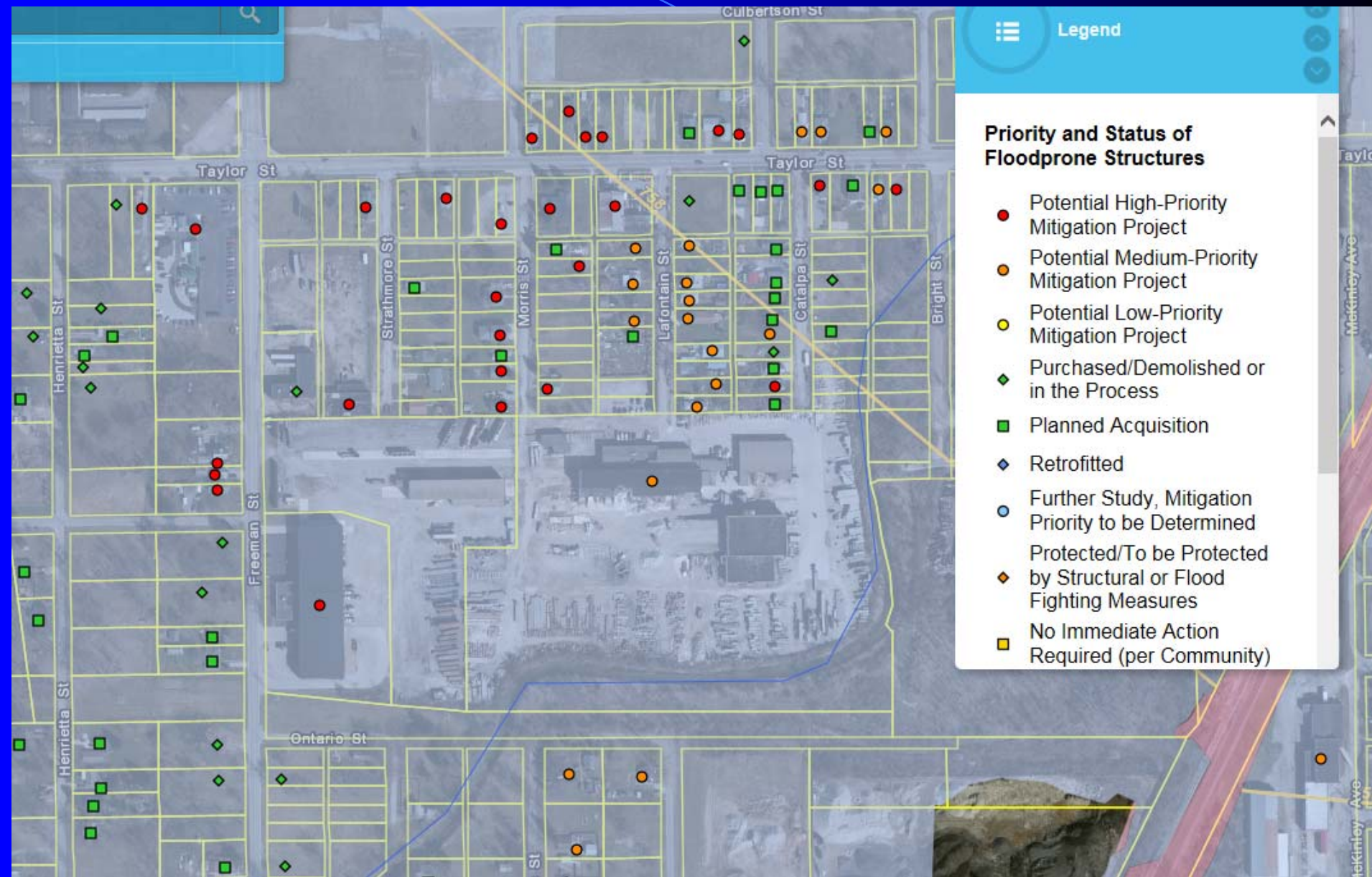
- Use a comprehensive watershed-based approach
- Incorporate NAI in all planning activities



Planning



Planning



Regulations and Standards

- Current standards don't consider all impacts
 - Current and future impacts
 - Cumulative impacts
- Ordinances and Regulations must go beyond NFIP
 - Zero rise floodways--do not put more water on others
 - Additional freeboard to account for mother nature
 - Compensatory Storage – do not fill in the floodplain
- Consequences of ignoring impacts are drastic
 - Higher flood crests with lower discharges
 - Footprint of Floodplains is enlarged
 - Damages increase beyond \$6 billion per year
 - Downstream and upstream damage--and loss of life

Mitigation Actions

- Practice Avoidance as much as possible;
- Mitigate while not transferring the problem elsewhere
- Non-structural mitigation on individual structures:
 - Elevation (promote ICC)
 - Acquisition
 - Relocation
 - Flood proofing
- Structural---often cause adverse impacts to others
 - levees, dams, channels

Infrastructure

- Consider impacts of maintenance, repair and new construction
- Consider individual and cumulative impacts
- Mitigate infrastructure while not transferring the problem elsewhere



Emergency Services

- Disaster response should consider cumulative impacts
 - Sand bags--levees, etc.
- Pre-plan flood fighting to avoid adverse impacts
- Emergency actions should not increase flooding on others



Actions Your Community Can Take

- Define “adverse impact”, based on your community’s unique condition
- Evaluate your hazards and programs
- Identify existing adverse impacts in the floodplain and throughout the watershed
- Require adverse impacts to be mitigated when development occurs
- Participate in the Community Rating System (CRS) Program

CONCLUSION

I challenge all of you to “lead the charge” and advocate for your community to adopt NAI practices / policies!

Current Practices Create Future Disasters

If we continue to encourage at-risk development and ignore the impact to others, can we accept the consequences...

... and, are you willing to pay for it?