HAZARD MITIGATION STRATEGIES TO FOSTER COMMUNITY RESILIENCE

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Symposium January, 2013
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Gilbert F. White—in 1939 said:
U.S. National Flood Policy is essentially one of:

- Protecting the occupants of the floodplain against floods;
- Aiding them when they suffer flood losses, and
- To encourage more intensive use of floodplains

- Has it changed in 70 years??   Is it working?
• $6 billion annually by 2000
• Three-fold increase from early 1900s
• Per capita damages increased by more than a factor of 2.5 in the previous century--in real dollar terms
• And then there was 2004-05-08-10-11
### Policies that Contribute to Risk

#### Federal Policies
- NFIP & the 100-Year Standard
- Emphasis on structural approaches
- Disaster relief environment

#### States & Communities
- Control land use for short-term benefits
- Perceive flooding to be a federal problem
- Externalize the costs & consequences

#### Public
- Unaware of – or unwilling to accept - residual risk
- Misplaced concern about having to obtain flood insurance
Engineered solutions

• In last 110 years we have spent around $120 billion for “flood-control” structures
• And damages have increased 300%

• The approach was: “you can build where you want, because we can keep the river from your door”

• But……what happens with structural?
Who benefits—who pays?

- Locals choose a levee as their mitigation option and commit/agree to long-term O&M
- Locals permit new and increased development behind levee and benefit from property tax
- Levee degrades over time; watershed develops so runoff changes render levee inadequate and no longer meets NFIP 100 year standard
- Property owners now required to buy flood insurance—clamor for levee “improvement” and accreditation—and usually ask federal taxpayer to pay for that
Who benefits—who pays?

- About 6% of people in nation live in flood risk areas—but other 94% help pay cost for those who live at risk
- Few, if any, economic incentives for communities to site new development out of harm’s way
- When floods strike or levee fails or overtop, locals can externalize costs to federal taxpayers through federal disaster assistance from many fed programs
What to do?

• Avoid development of high risk areas
  – Through planning and wise land use

• Better/smarter Regulations & Land Use
  – Map future floods, not Yesterday’s flood
  – Avoid cumulative flood rise—no floodway development
  – Freeboard for new buildings above flood level
  – Critical Facilities—must be accessible and operable during the 500 year flood event
Use Natural Systems

• Manage resources and plan on a watershed basis;
• Permanently restore and preserve flood-prone areas as open space, through land acquisition;
• Living next to open space demands a premium
• Development plans with ecological benefits gain stronger community support
Shared Flood Risk Management: Buying Down Risk Risk

Initial Risk

Planning & Zoning -- Local

Building Codes -- Local, State

Outreach to public -- Local, neighborhood, State, Local, Individual, State, Federal

Emergency Plans -- Individual, NFIP

Flood Insurance -- Local, State, Federal

Use Natural FP functions for Storage -- Local, indiv, State, Fed

Retreat, buyouts, elevation-Non-Structural -- Local, Fed, State

Levees and dams--Structural

And we still have Residual Risk

Risk Reduction Tools (Cumulative)

All stakeholders contribute to reducing risk!
Local Roles & Responsibilities

• Establish & enforce local development standards
  – Ensure proposed development will be safe from flooding
  – Determine impact of proposed development on other properties
  – Ensure mitigation of impacts before building (NAI)
Community planning

- Communities face/can reduce risk to:
  A. Existing development
  B. Future development

- Role of land use and planning
  A. Retreat from highest risk areas, elevate or protect in lower risk areas
  B. Use high risk areas for open space, which can pay for itself with increased value
Community Plan Elements

• Local plans need to preserve areas of high flood risk as open space
• Integrate comp plans with hazard mitigation and other local plans
• Plans reflect all hazards-identify actions with multiple benefits.
What is Smart Growth?

- In last couple decades we have seen:
  - Sustainable movement
    - New Urbanism
    - Smart Growth
    - Resilience movement
  - Emphasis on Green/energy and carbon footprint
- Walkable communities
What is Sustainable?

- But too many smart growth approaches did not address Natural Hazards

- SMART GROWTH IN DUMB PLACES IS THE OPPOSITE OF SUSTAINABILITY*

* Lisa Dun, law prof at Utah who studied New Orleans
Feds-States can foster resilience

• Incentives & Disincentives Can be Tools to support sustainable communities

• Policy Initiatives Need to Support Wise and Sustainable Decisions

• Consider long term life-cycle costs to those at risk and those helping pay the costs
Sliding cost-share Incentives

• Communities that are leading the way need support w/ sliding scale Federal support

• Tie all federal cost share and grants to local and state efforts to reduce flood risk

• Sustainable local efforts should also get higher priority for grants
Summary & Conclusion

• Foster good Local Planning and Utilization of Natural Floodplain Functions to Achieve Sustainable Growth

• PROTECTS PRIVATE INVESTMENT by:
  – Reducing personal losses
  – Reducing reliance on disaster assistance
  – Reducing down time for businesses

• PROTECTS PUBLIC INVESTMENT by:
  – Reducing incentives for private investment in high risk areas
  – Reducing long term impact to public infrastructure budgets
  – Reduced need for emergency services to serve citizens
Questions??

More information will be available on the ASFPM website, future newsletters and member/chapter alerts!

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