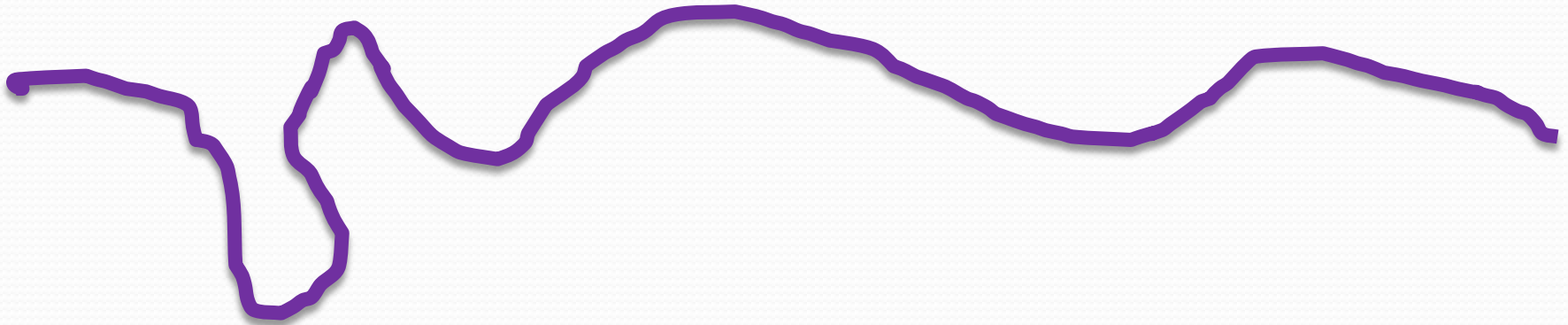


Close your eyes

- There is no linear, straight line that the development of Boston took from the time of the Pilgrims to now.



Sustainability

- Sustainable development is a moving target. It represents a continuous effort to balance and integrate the three pillars of social well-being, economic prosperity and environmental protection for the benefit of present and future generations.
 - Gisbert Glaser United Nations

At Risk

- New York
- New Orleans
- Miami
- Boston



Disaster Relief

- Rebuild/repair residential structures
 - Rebuild/repair infrastructure/public structures
- 25% cost share




Disasters Are Us

- 151 disasters since 1980 each exceeded \$1 billion at the time of the event.
- 12 in 2011—the most for any year on record, with total costs being approximately \$52 billion.
- 7 in 2013 - damages exceeded \$1 billion



The National Flood Insurance Program

-24 Billion



Why Doesn't it Work?

Why is flooding still so costly?

Let's talk about the National Flood Insurance Program



The Stool

Mapping
Insurance
Regulations

Mapping



- Mapping program uses sound engineering and science and informs us of the risk
- Maps are only current the day the map is finalized
- Maps account for human made changes
- Maps do not predict individual flooding events



Insurance

- The NFIP has paid millions of claims over the past 46 years
- The NFIP lacks the capacity to adequately cover catastrophic flooding events
- 2% of flood insurance holders have Repetitive Loss and accounts for 38% claims paid
- Number of Pre-FIRM structures

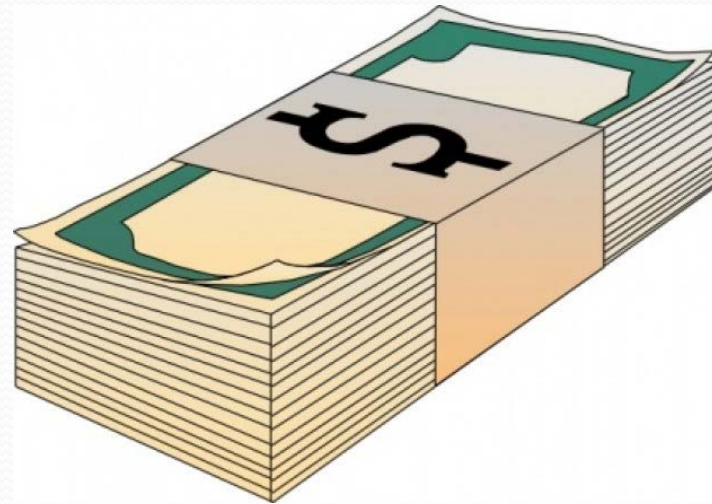
Regulations



- Have significantly reduced flood damages nationwide
- Extremely complex
- Up to the local floodplain administrator
- Substantially damaged/improved

More and More Costly Disasters

- Sandy upped the debt load from \$19 billion from Katrina to roughly \$25 billion
- 5.5 million policies that takes in \$3.6 billion in premiums



Public Policy



- The characteristics of a floodplain are fixed
- Costs of damages need to be accounted for
- Individual and societal responsibility
- floodplains are and can be for the common good

Public Policy



- Disaster costs must be built into the cost of floodplain development:

Educate those most associated with development:

- Individuals – live there (work and play)
- Developers – cost/profits
- Realtors - communication

Ideas





Future Ideas/Mapping

- What if we mapped the geologic floodplain
- Without human development changes
 - Create zones by known historical flooding, and landforms.
 - No more future mapping funding necessary
 - Floodplain remains constant, no moving properties in and out of the floodplain



Future Ideas/Flood Insurance

- State Regulated
 - Rates and coverage determined by the state
 - Private insurance companies administer the program
 - losses are absorbed by passing the cost of participation in such pools (high hazard groups) along to all their customers

Future Ideas/Flood Insurance

- Community self insure
 - Limit payouts (repetitive structures)
 - Premium disbursements to community
 - Disbursements go to mitigation measures – buy out homes where flooding occurs
 - Stricter regulations for floodplain management
 - Progressive plan with aggressive implementation
 - Community is invested in protecting their community

Ideas



Future Ideas/Regulations

- Avoidance – less development in the floodplain
- Increase technical assistance
- Multi-objective benefits
- Strengthen programs such as Community Rating System



Of the People

- Right mix of:
 - Stakeholders
 - Decision makers
 - Experts
- Common Vision
- Road map
- Invent tools and new policy



By the People

- Educate and involve citizens
- Understand community values
- More technical hands on assistance



FOR THE
PEOPLE



- Education/Technical Assistance
 - help people learn how to learn on their own
 - To discover a sustainable vision for the future
 - make informed decisions

NFIP Reform

- Biggert-Waters 2012
 - Policy that addressed major issues in the NFIP



- Flood Insurance Affordability Act 2014
 - Focused on the impact of flood insurance rates on individuals

- It cannot be overemphasized that the mere supply of information as to where the water has reached and when,
- does not necessarily lead decision makers to avoid the flood threat.
 - A Unified National Program for Managing Flood Losses, Report to Congress, 1966



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