Community Engagement and Identifying Adaptation Strategies – Planning for Future Flood Risk in Your Community

Wendy Carey, PhD, CFM
Coastal Hazards / Resiliency Specialist
University of Delaware Sea Grant College Program
May 20, 2016
Why Plan for Future Flood Risk?

– Delaware communities are already vulnerable to floods.
– The climate is changing, these changes are becoming more pronounced and they will exacerbate many existing conditions and hazards.
– Today’s choices will shape tomorrow’s vulnerabilities.
– Significant time is required to motivate and develop adaptive capacity, and to implement changes.
– Proactive planning is often more effective and less costly than reactive planning, and can provide immediate benefits.
Natural Hazards and Hazard Mitigation Plans

Hazard Mitigation Plans

Many communities have hazard mitigation plans --- a plan focusing on how the community should prepare for and react to natural disasters.

Generally, the way we plan for natural hazards is based on historical information.

Adaptation planning should reflect changing conditions.
Have you been involved in hazard mitigation planning activities in your community?
Collaborative Mitigation and Adaptation Planning

- Increases understanding of risks, vulnerabilities, and capabilities.
- Educates residents, property owners, and businesses.
- Builds partnerships within a community.
- Provides opportunities for coordination between emergency managers, floodplain managers, community planners, and others.
This Planning Process is Not New or Different

 ✓ Build on existing plans and programs
 ✓ Engage/involve the public
 ✓ Identify problems
 ✓ Propose solutions
 ✓ Develop implementation plans
 ✓ Adopt the plan
 ✓ Monitor, evaluate, and update
Guide Local Officials and Residents Through the Process of

– synthesizing available information on risks and hazards in the community;

– assessing vulnerabilities and identifying data/planning gaps, especially related to natural hazards, climate change and associated risks;

– developing recommendations and strategies from local, regional, and national best practices;

– identifying strategic opportunities to increase community resiliency;

– ensuring outcomes are reflective of local needs and capabilities.
Community Engagement

Question: How might the region – where you live, work, and play – be influenced by increased flooding, extreme heat, more intense storms?
Vulnerability Self-Assessment

Self-Assessment
• Critical Facilities
• Societal Analysis
• Economic Analysis
• Environmental Analysis

Key Vulnerabilities Identified:
• Homes and land use - Flooding
• City infrastructure - Flooding
• Water resources – Precipitation pattern changes, salt water intrusion, flooding
Review/Discuss Best Practices – Useful Tools and Strategies for Reducing Vulnerability and Building Resilience
Useful Tools and Strategies – Planning for Future Flood Risk

1. Planning Tools
2. Community Engagement Tools
3. Information Gathering Tools
4. Ecosystem-Based Tools
5. Regulatory Tools
7. Spending Tools
Integrated Approach to Adaptation
Connections to Community Planning Initiatives

- Natural Resource Management
- Land Use Planning
- Building Codes & Infrastructure Design Planning
- Transportation Planning
- Emergency & Disaster Preparedness

Community Planning Process
Master Plan
Comprehensive Plan
Planning / Adaptation Strategies - Examples

Many communities include consideration of flood hazard mitigation / adaptation as part of the regular update of planning documents.

- Local hazard plans
- Open space management plans
- Comprehensive plans – particularly land use and safety elements
- Zoning codes
- Land acquisition programs
- Floodplain management policies

Exeter is planning on it
www.CAPENH.net

Preparing for Climate Change in Groton, Connecticut: A Model Process for Communities in the Northeast

The City of Lewes
Hazard Mitigation and Climate Adaptation Action Plan

Delaware City
Hazard Mitigation and Climate Adaptation Action Plan

January 2014
The City of Lewes Hazard Mitigation and Climate Adaptation Action Plan (2011)

Co-benefits and Connections

- Hazard mitigation planning / projects
- Floodplain management (NFIP / CRS)
- Comprehensive Plan (2015)
- Mayor/Council, Lewes Planning Commission, Emergency Managers, and Hazard Mitigation Planning Team

- Dynamic process – continually working to determine how to implement strategies through additional funding opportunities and/or collaborations
- Mitigation Planning Team meets quarterly
Identify Potential Actions to Reduce Vulnerabilities

What works best for your community?

Synthesize list of best practices and evaluate community capacity to implement:
- Local plans and regulations
- Structure and infrastructure projects
- Natural systems protection
- Education/awareness programs

Obtain input and feedback via:
- Surveys
- Public meetings
- Committees / commissions
- Consultants
Adaptation Strategies Vary from Simple to the Complex
Assess/Review Community Capabilities to Address Hazards/Vulnerabilities

Cost, Feasibility, Timing, Practicality, Community Capacity

Planning: coordinate with timing / cycle of rewrites and revisions

Floodplain management plan updates: consider higher standards?

Regulations and ordinances: coordinate with building / zoning code updates?

Resources: staff and funding

Availability of data?
Most Effective Adaptation Strategies...

1) Affect multiple sectors of society
2) Utilize available resources
3) Are integrated into existing plans, policies, and projects
4) Offer co-benefits for the community and local economies
5) Have political support and identifiable leadership
Adaptation Planning With Uncertainty

- **No regrets (and low cost) strategies**
  
  Address climate change projections in a manner that provides benefits now regardless of the future impacts. Focus on existing weather-related problems and flexible actions. (short-term maintenance to prevent localized flooding; urban tree planting)

- **Low regrets strategies**
  
  Address climate change projections in a manner that creates greater climate resilience at little additional cost or risk. (freeboard; improving stormwater capacity)

- **Win-win or Co-benefit strategies**
  
  Reduce climate change impacts while providing other environmental, social, or economic benefits. (living shorelines; rain gardens, LID)
Effecting Adaptation at the Local Level

1) Focus on an immediate and recognizable threat.

2) Identification of simple, low-cost or no-cost actions.

3) Consideration of co-benefits.

4) Collaboration and communication across multiple sectors.

5) Informed and dynamic process – review, updates and revisions.

6) Utilization of existing tools and approaches when feasible.

7) Integration into existing planning processes and goals.
What Can a Community Official Do to Reduce Future Flood Risk?

**Plan** – participate in development of a mitigation/adaptation action plan; research best practices and benefits of higher standards.

**Initiate** – integrate adaptation policies/strategies into existing planning documents; encourage / facilitate implement of identified actions.

** Communicate** – support adoption of higher standards; champion mitigation/adaptation action planning goals.
Delaware-Specific Resources

The City of Lewes
Hazard Mitigation and Climate Adaptation
Action Plan

January 2014
Creating Flood-Ready Communities: A Guide for Delaware Local Governments

January 2016

written by
Brandon Grabelsky, Public Administration Fellow
Marda S. Scott, Policy Scientist

prepared by
Institute for Public Administration
School of Public Policy and Administration
College of Arts and Sciences
University of Delaware

funded by the
Delaware Department of Transportation

This work was sponsored and funded by the Delaware Department of Transportation (IIPA). The contents of this report reflect the views of the authors, who are responsible for the facts and accuracy of the research. The contents do not necessarily reflect the official view of IIPA.
Questions?