

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



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# Why Plan for Future Flood Risk?

- Delaware communities are already vulnerability 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.



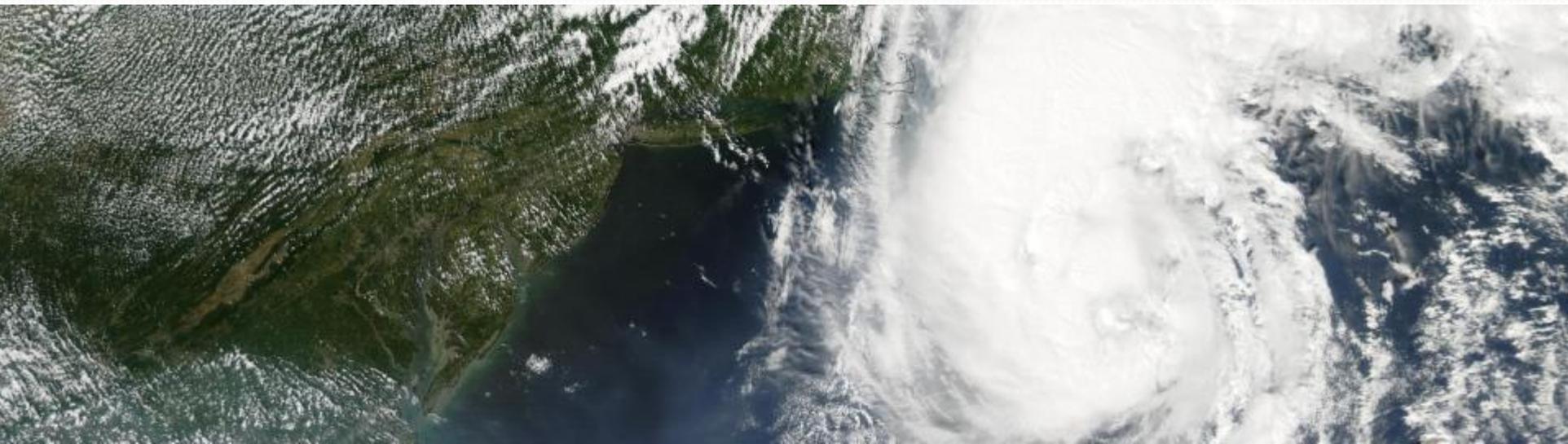
# Natural Hazards and Hazard Mitigation Plans

## 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?*

## New Castle County All Hazard Mitigation Plan



## Plan Executive Summary

January 6, 2010

New Castle County Department of Public Safety  
Office of Emergency Management

The logo for the City of Lewes, Delaware, featuring a checkered shield and the text "THE CITY OF LEWES DELAWARE". To the right are two photos of buildings.

### LEWES MITIGATION PLANNING TEAM

**PREVENTION**

Two photos: one of a building and one of a meeting.

**PARTNERSHIP**      **PROTECTION**

#### MITIGATION - What is it you may ask...

The Federal Emergency Management Agency's (FEMA) Mitigation Division defines mitigation as "the cornerstone of emergency management, it's the ongoing effort to lessen the impact disasters have on people's lives and property through damage prevention and flood insurance. Through measures such as, building safety within the floodplain or removing homes altogether, engineering buildings and infrastructures to withstand earthquakes, and creating and enforcing effective building codes to protect property from floods, hurricanes and other natural hazards.

#### THE VALUE OF MITIGATION:

Mitigation creates safer communities by reducing losses of life and property, and enables individuals and communities to recover more rapidly from disasters. Mitigation also lessens the financial impact of disasters on individuals and the U.S. Treasury, as well as state and local communities.

#### MITIGATION TEAM:

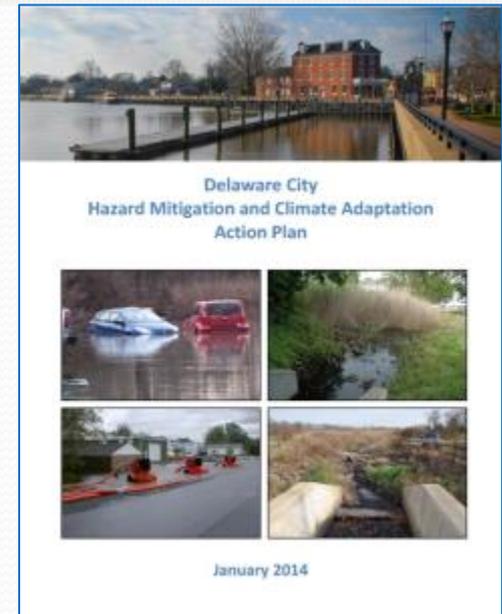
The Lewes Mitigation Planning Team was appointed by former Mayor George H.P. Smith and City Council on March 18, 2002 in order to establish an ongoing mitigation program for the City. The purpose of the Team is to carry on the pre-disaster mitigation initiatives that began in 1998 with the City's designation by the Federal Emergency Management Agency (FEMA) as a "Project Impact" Community.

Learn more about "Project Impact" and view the projects that were completed with the grant funding made available to the City under the "Project Impact" initiative.

The members of the Mitigation Planning Team work in partnership with Local, State and Federal representatives and agencies to make our community more resistant to disasters by implementing actions to reduce our vulnerability through a variety of projects and initiatives. Current members of the Team include:

# 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
6. Economic Tools – Financial Incentives
7. Spending Tools



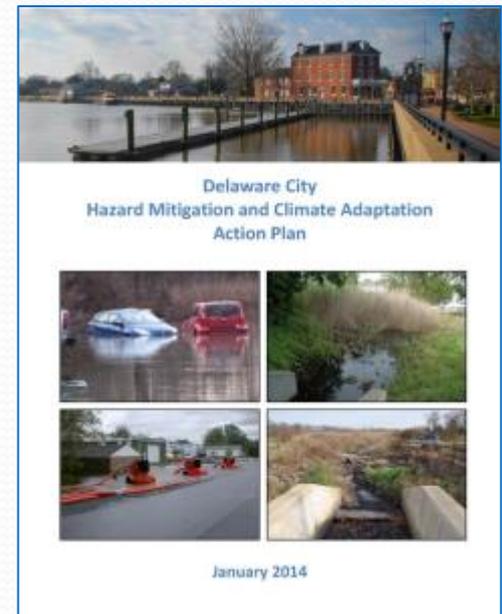
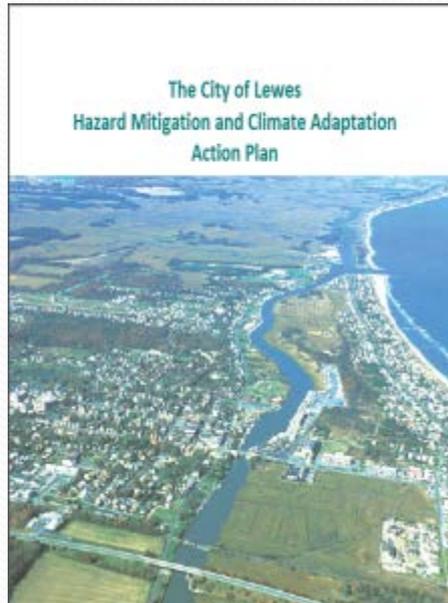
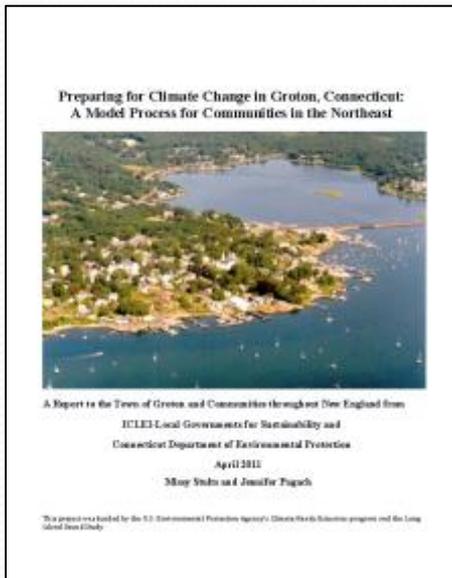
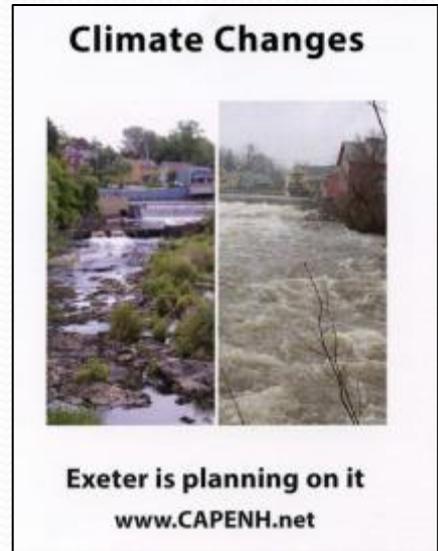
# Integrated Approach to Adaptation Connections to Community Planning Initiatives



# 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

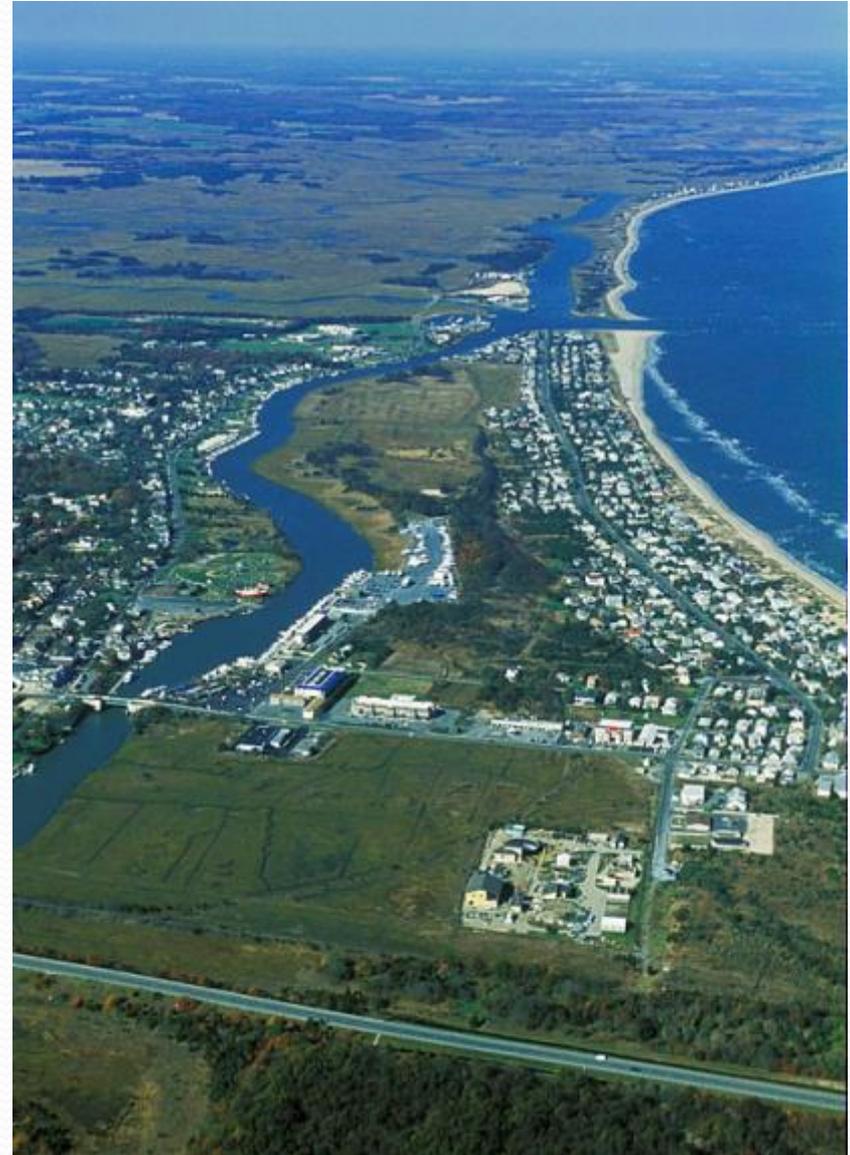


# Integrated Planning Lewes, Delaware

## 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?

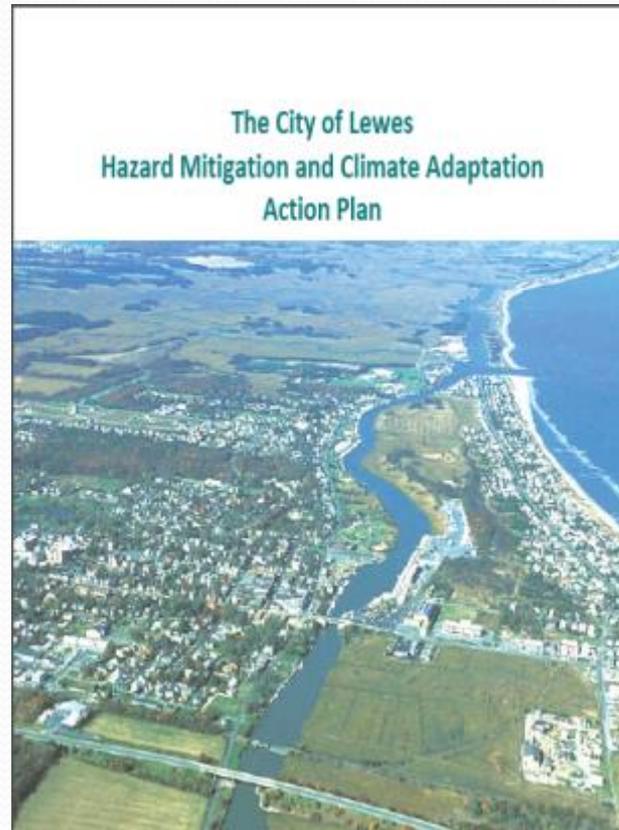
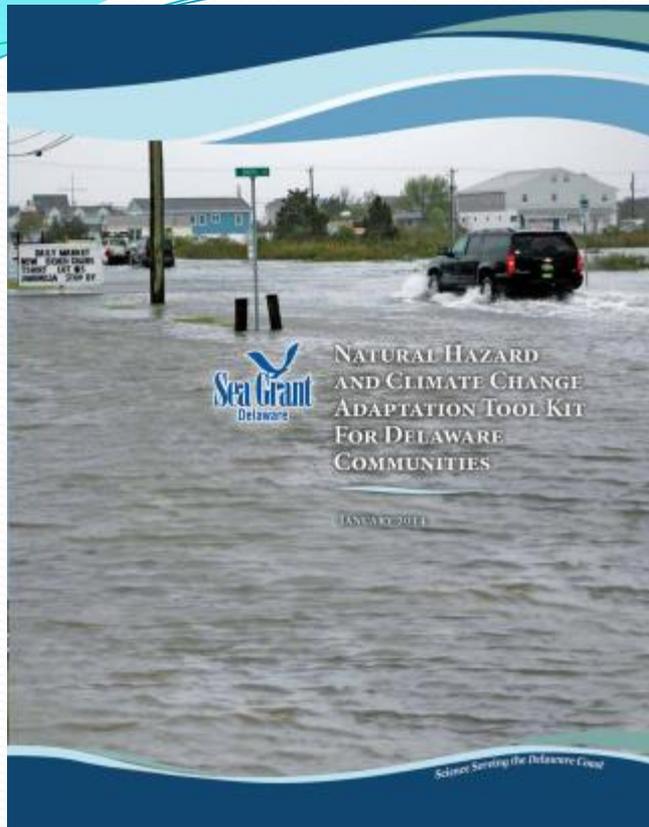
**Plan** –participate in development of a mitigation/adaptation action plan; research best practices and benefits of higher standards.

**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



Delaware City  
Hazard Mitigation and Climate Adaptation  
Action Plan



January 2014

# Delaware-Specific Resources

## Complete Communities DELAWARE Project Site attractive, inclusive, efficient, healthy & resilient places



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

January 2016

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# Questions?



Photo courtesy Delaware Sea Grant



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