



FEMA



Essex County, NJ Coastal Hazard Analysis Flood Risk Review Meeting

October 3, 2013

RiskMAP
Increasing Resilience Together



Agenda for Today

- **Kick-off and Introductions**
- **Risk MAP Program Overview**
- **Hazard Mitigation Planning Process and Mitigation Actions**
- **Overview of Non-Regulatory Flood Risk Products and Datasets**
- **Coastal Flood Risk Study and Mapping**
- **Flood Risk Communications**
- **Breakout Group Sessions**

FEMA's Risk MAP Program

- Risk Mapping, Assessment and Planning 2010 - 2014
- Builds on Map Mod digitized Flood Insurance Rate Map (FIRM) successes
- Will deliver quality data that **increase public awareness and lead to action that reduces risk to life and property**
- Regulatory Products: Flood Insurance Study (FIS) and FIRM (Coastal re-mapping)
- New Non-Regulatory Products and Datasets



Mapping



Assessment



Planning



Hazard Mitigation & Your Hazard Mitigation Plan

- Hazard Mitigation is defined as any sustained **action taken to reduce or eliminate long-term risk** to life and property from hazards
- Use new Risk MAP information to help with identifying mitigation actions when updating your Hazard Mitigation Plan

DFIRM Database

- Flood_Hazard_Data
- Political_Boundaries
- Public_Land_Survey_System
- TopoData
- Community_Panel_Info
- L_Comm_Info
- L_MT1_LOMC
- L_Pan_Revis
- L_Pol_FIRM
- L_Riv_Model
- L_Sin_Start
- L_Vtr_Nm
- S_Bfe
- S_DOQ_Index
- S_Firm_Pan
- S_Gen_Struct
- S_Label_Ld
- S_Label_Pt
- S_OMR
- S_Ferm_Bmk
- S_Quad
- S_Riv_Mrk
- S_Transport_Ar

Flood Risk Database

FLOOD INSURANCE STUDY

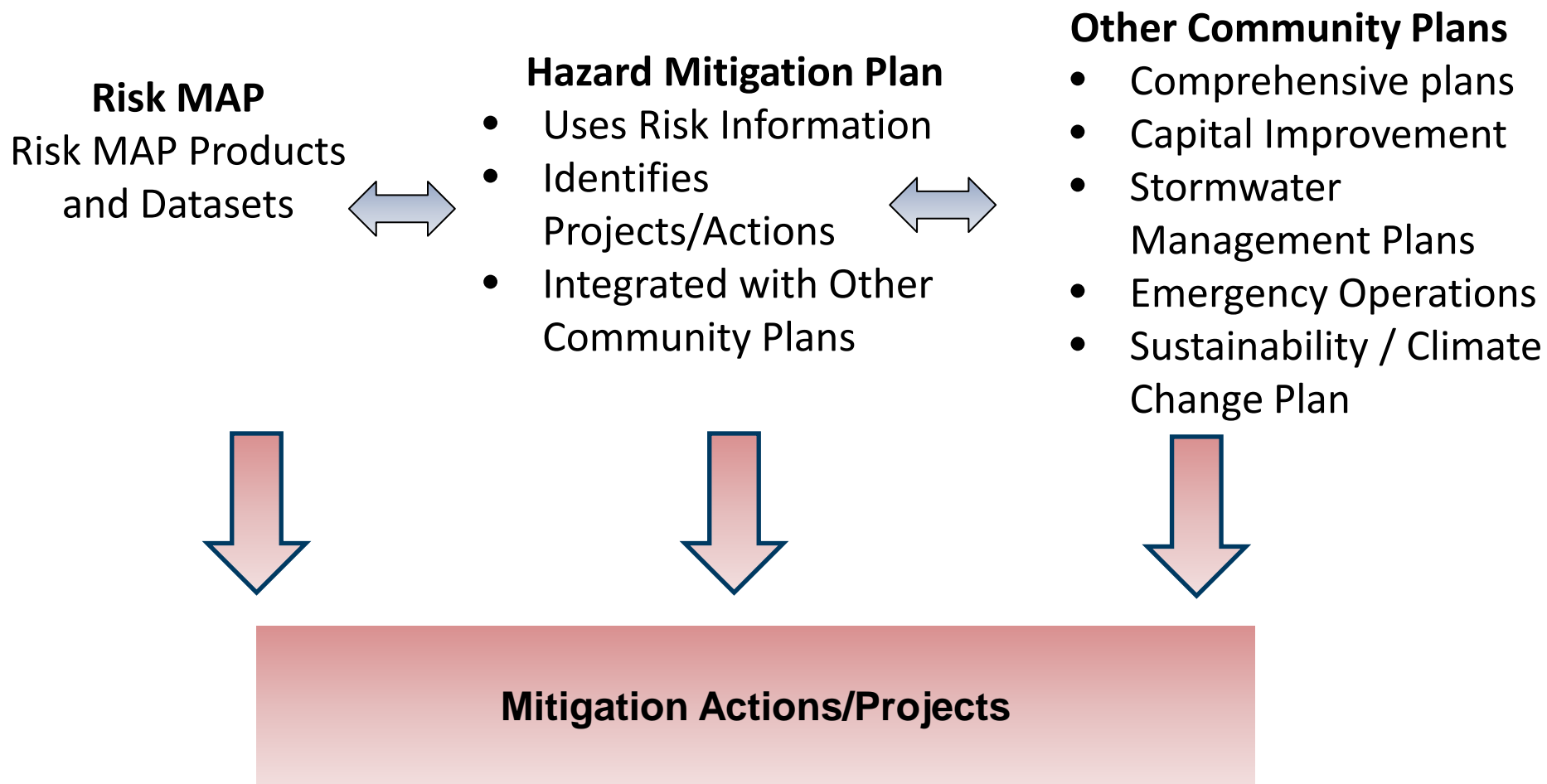
FLOOD COUNTY, USA AND INCORPORATED AREAS

Flood Risk Report

Watershed Risk Map: Watershed USA

Essex County's Hazard Mitigation Plan

Local Hazard Mitigation Plans (HMPs)



Mitigation Actions – Types, Examples



STRUCTURE AND INFRASTRUCTURE PROJECTS

Acquisition
Elevation
Retrofits
Drainage

LOCAL PLAN AND REGULATIONS

Zoning
Building Codes
Ordinances
Open Space Plan

COMMUNITY IDENTIFIED PROGRAMS

Firewise
StormReady
NFIP
CRS

NATURAL SYSTEM PROTECTION

Stream and wetland restoration
Erosion control

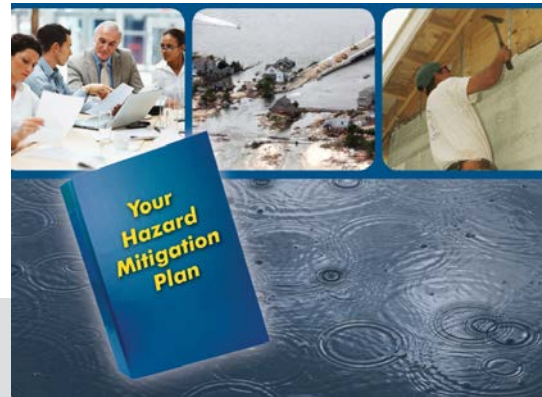
What Action Will You Take?

- What are some **areas of mitigation interest** in your community?
- Can you think of any **potential mitigation projects**?
- **Review draft Areas of Mitigation Interest and provide feedback** to NJDEP and FEMA representatives during the working session

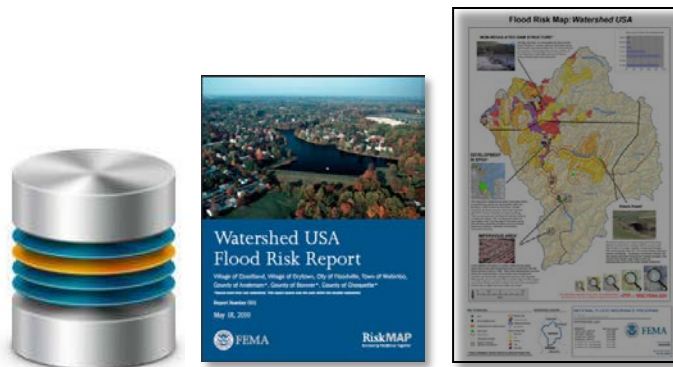


Mitigation Strategy Workshop

- A community's Hazard Mitigation Plan is only as good as its **mitigation strategy**. This interactive workshop is a chance to begin to:
 - Develop actions
 - Build a strategy for successful implementation
 - Coordination
 - Link your natural hazard risk, action and implementation
 - Use FEMA worksheets and examples
 - Communicate directly with FEMA planners



Non-Regulatory Coastal Flood Risk Products and Datasets



■ Flood Risk Products

- Flood Risk Report, Map, and Database

■ Flood Risk Datasets

- Changes Since Last FIRM (CSLF)
- Coastal 1% Depth Grid
- Areas of Mitigation Interest (AOMI)
- Flood Risk Assessment (refined Hazus analysis)

Changes Since Last FIRM – Identifying Actions

Legend

Effective_ABFE_Prelim_Change

Effective to Prelim

Effective to Prelim2 Zone Change

- Non-SFHA to AO
- Non-SFHA to AE
- Non-SFHA to VE
- AE to VE
- No Zone Change
- VE to AE
- AE to Non-SFHA
- VE to Non-SFHA



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Depth Grids – Identifying Actions

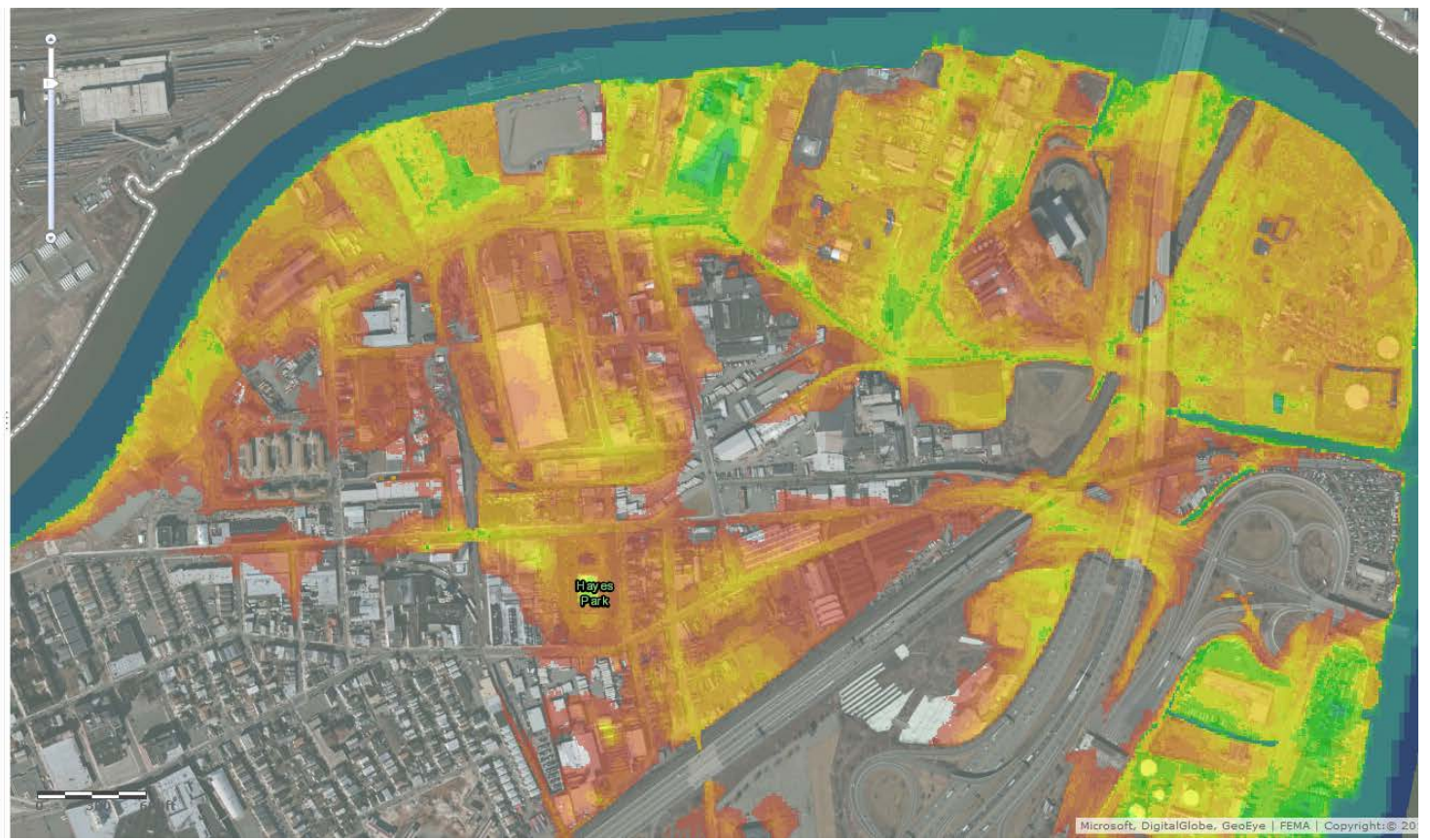
About Content Legend

Legend

Depth Grids Essex County, NJ
Essex 100-Yr Depth Grid (feet)

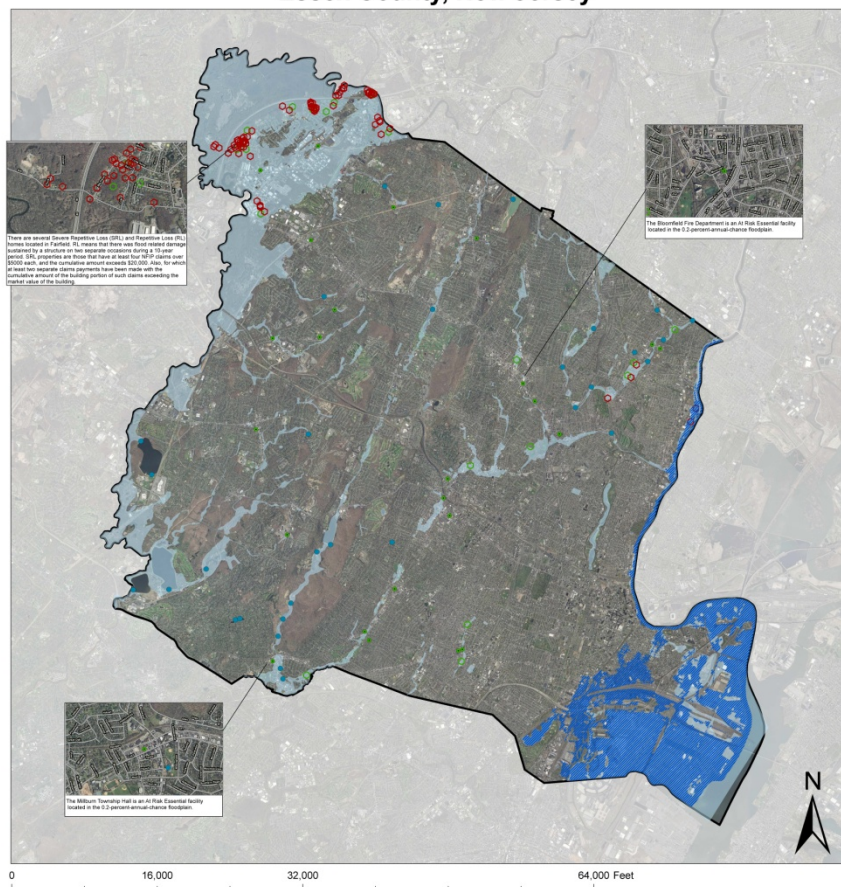
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1.01 - 2
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9.01 - 15
15.01 - 30
30.01 - 41
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Areas of Mitigation Interest – Identifying Actions

Areas of Mitigation Interest - DRAFT Essex County, New Jersey

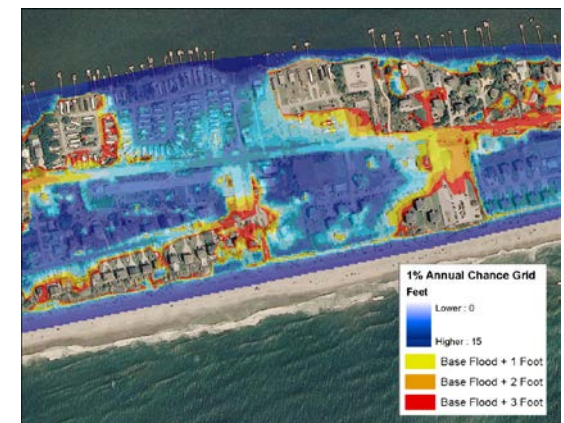
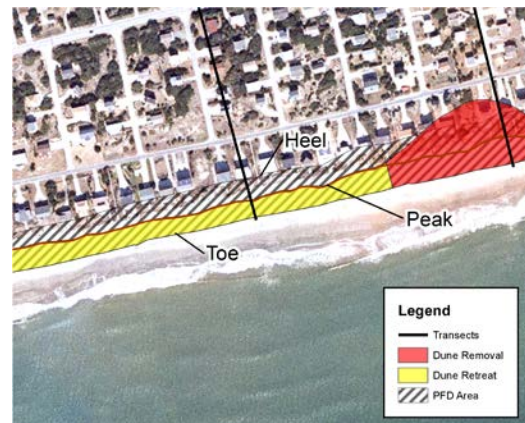


NATIONAL FLOOD
INSURANCE PROGRAM
AOMI MAP

VERSION NUMBER: 1.1.1
RELEASE DATE: 8/13/2019

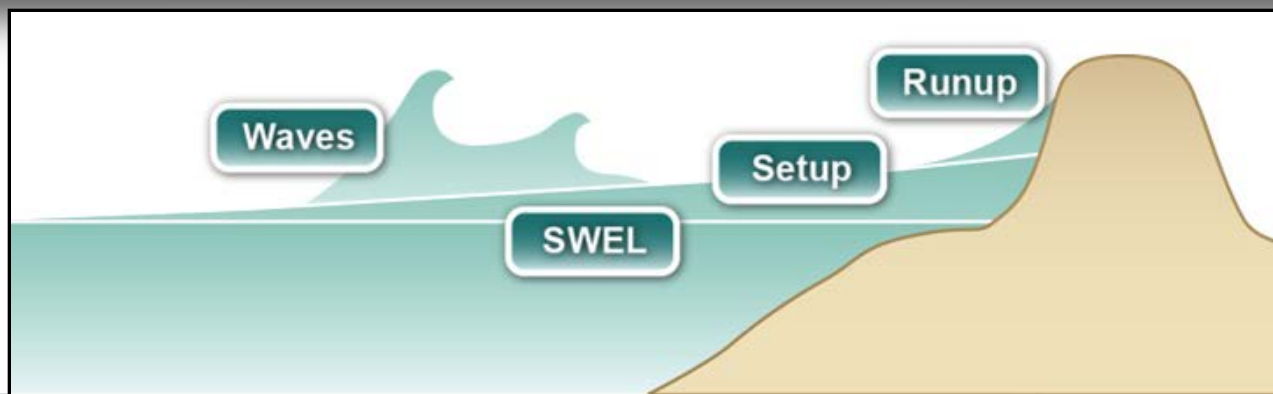
Non-Regulatory Coastal Flood Risk Products and Datasets

- **To be provided in the near future:**
 - Water Surface Elevation Change Grids
 - Coastal Flood Risk Assessments
 - Primary Frontal Dune (PFD) Erosion Areas
 - Coastal Increased Inundation Areas
 - Risk MAP report, map, database

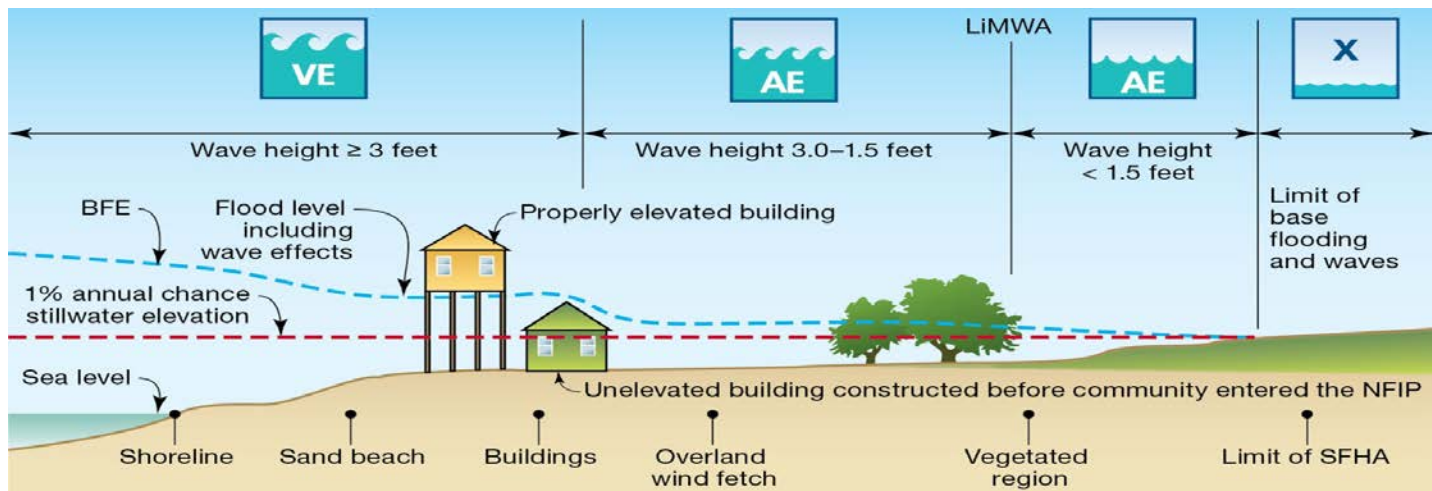
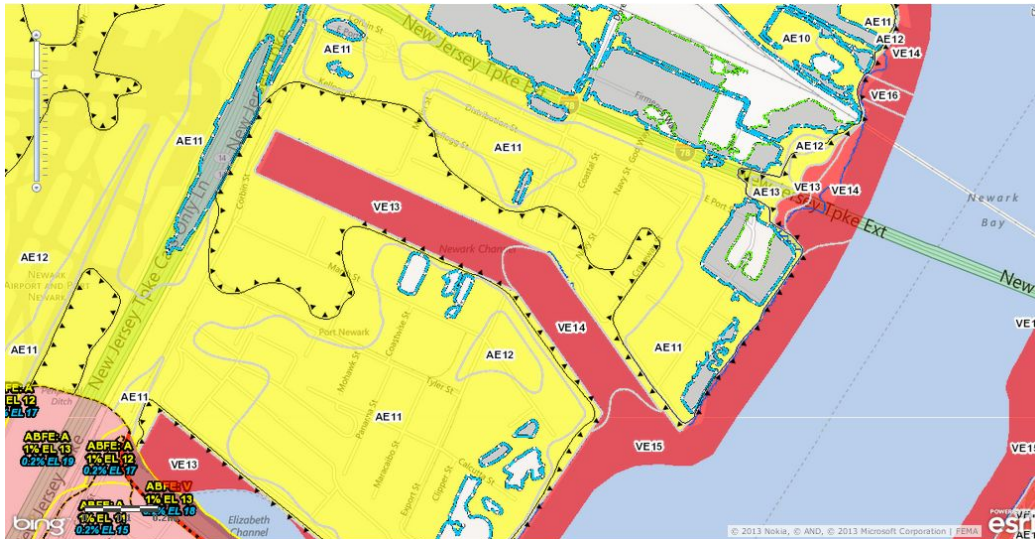


Effective vs. New Coastal Study

Coastal Study Component	Effective Study (2007)	New Study (2013)
Topographic data	1950s to 1970s	2006-2007 LiDAR
SWELs	N/A	2010 FEMA study
Modeled transects	0	36
Wave setup	No	Yes
Wave runup	No	Yes
LiMWA	No	Yes



Mapping



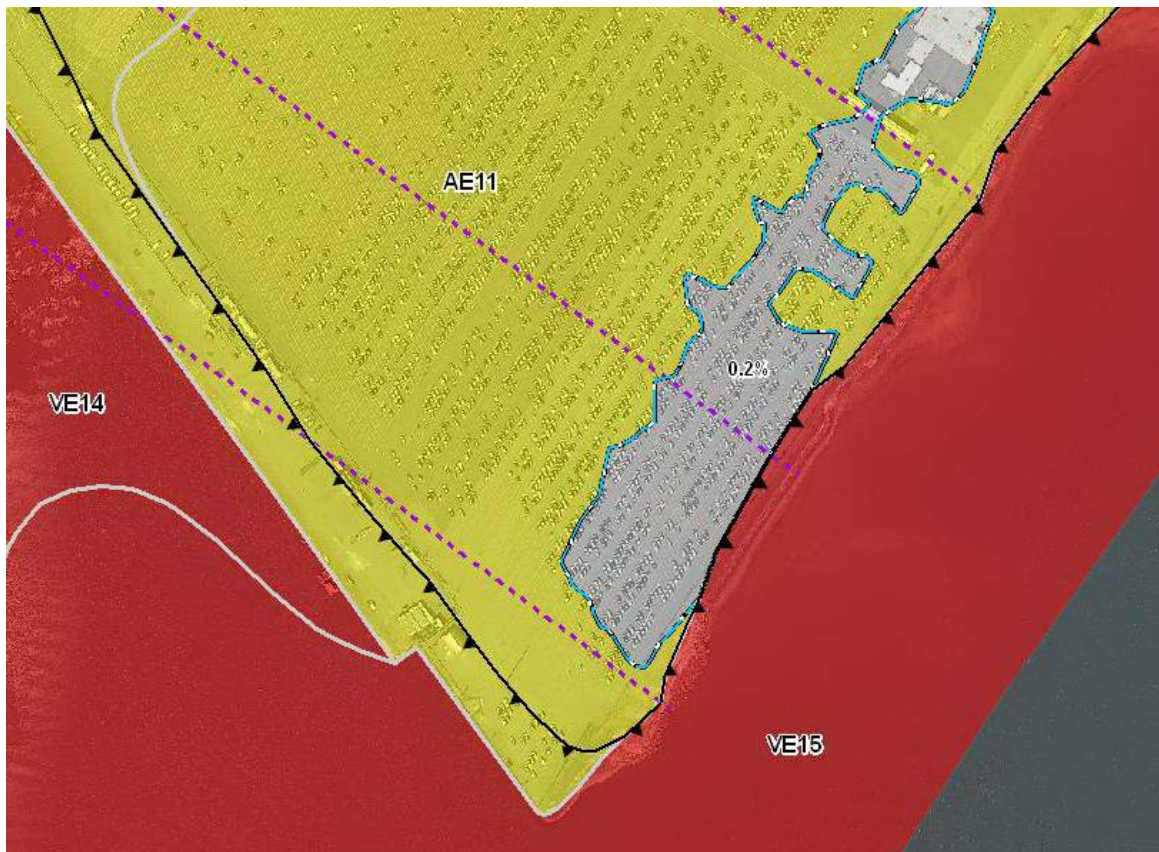
Wave Runup

- Runup modeled for beaches, bluffs, cliffs and coastal structures
- Calculate top 2% of runup elevations (vs. previous studies using mean runup)
- Methods:
Runup 2.0, TAW, CSHORE

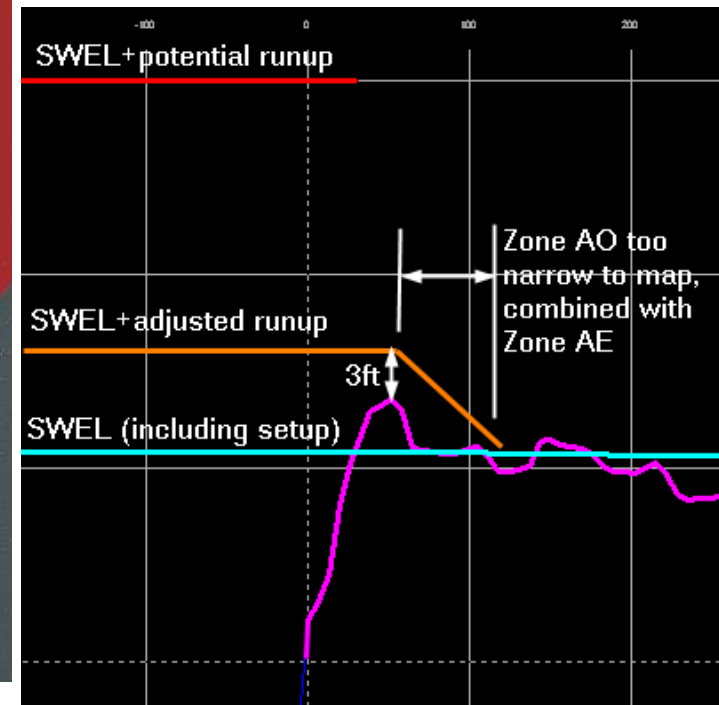


Wave Runup

How is runup mapped?



Profile view of Transect



LiMWA on the Map

- **LiMWA sits inside of a Zone AE**
- **LiMWA can cross Zone AE lines**
- **Triangles point to higher waves**
 - Indicates where wave height exceeds 1.5ft
- **Also referred to as Coastal A Zone**



Preliminary Work Map vs. Preliminary FIS/FIRM

Essex County, NJ
Preliminary Work Map



For Informational Purpose,
Not Intended for Official Use

Flood Hazard Information

- 0.2% Annual Chance Boundary
- 1% Annual Chance Boundary
- Cutter Line
- LMVA
- Transect Station
- AE
- VE
- AO
- Shaded X (0.2% Floodplain)
- Published Transects
- Mapping Transects
- Shoreline
- Physical Boundary
- Elevation
- 4
- 8
- 12
- 15

Panel 0159

This preliminary work map contains coastal flood hazard information only. Inverine flood hazard information not included.

FEMA Risk Assessment, Mapping, and Planning Partners

Preliminary FIRM



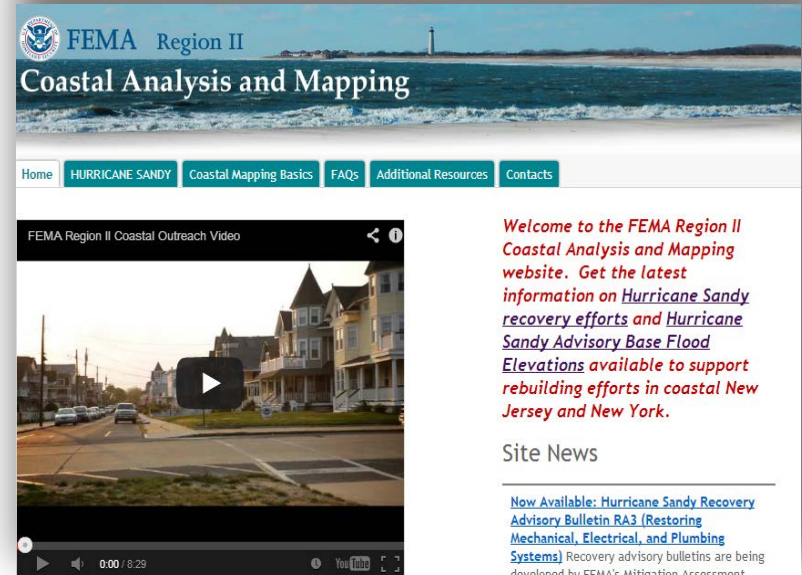
Risk Communications

- **Federal/State/Local goals:**
 - Creating safer communities reducing risk to lives and property
 - Effectively communicate risk and increase public awareness, leading citizens to make informed decisions regarding risk

- **Key factors contributing to successful achievement of these goals are:**
 - Community engagement and exchange of flood risk information
 - Effective collaboration through partnerships
 - Strategic communications plan development

Risk Communications - Resources

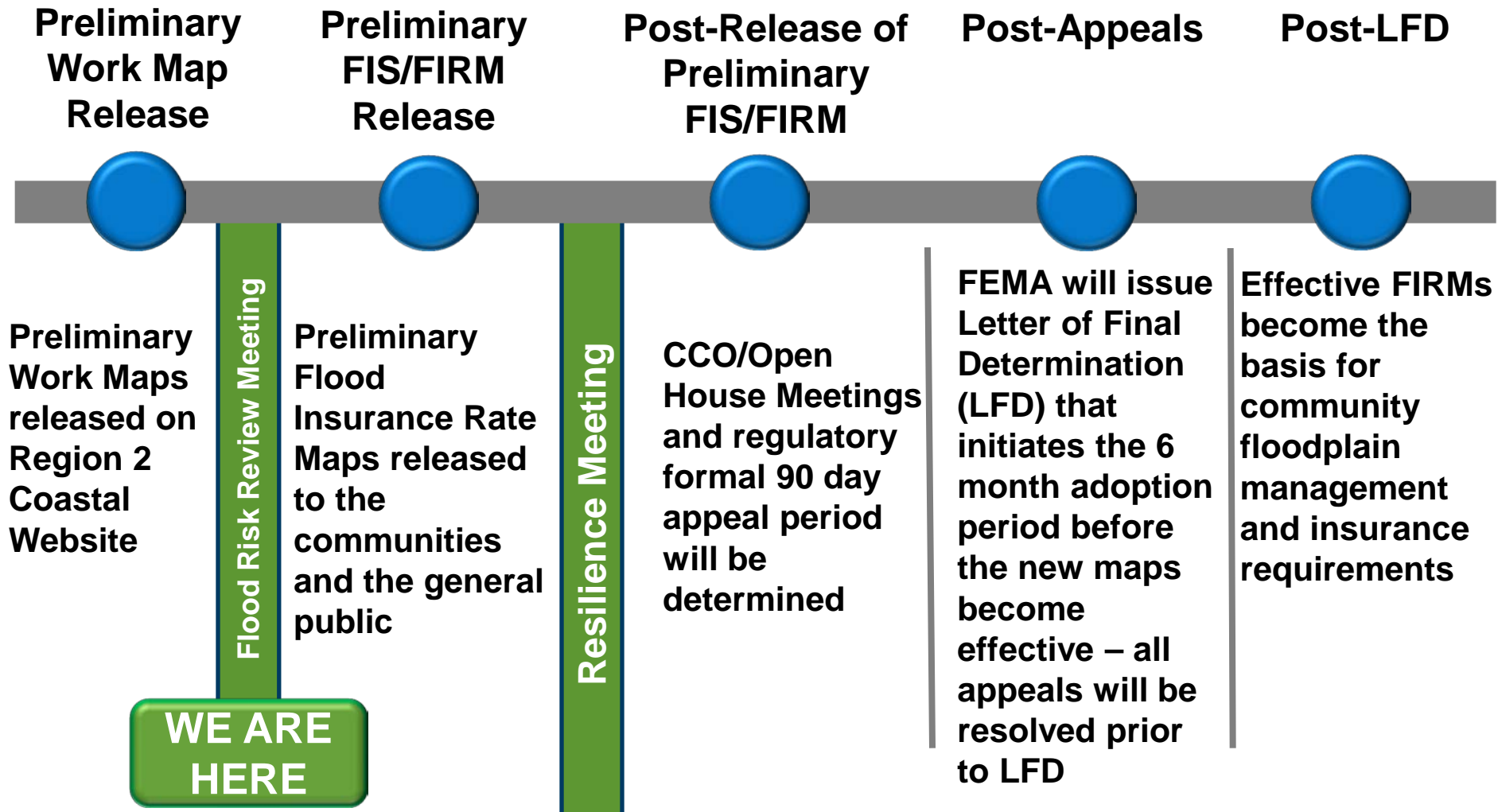
- Visit our Website:
www.region2coastal.com
- Outreach factsheets
- Frequently Asked Questions
- Coastal Risk Educational Videos
- Best Available Data (Preliminary Work Maps)
- Non-Regulatory Products and Datasets



Timeline for Essex County – Past

- **NJ/NYC Coastal Flood Risk Study – started in 2009**
- **Meetings with local officials:**
 - Introduction to Risk MAP: July, 2010
 - Risk Assessment Workshop: May, 2012
- **Post-Sandy:**
 - ABFEs – December, 2012
 - Multiple meetings with local officials and public
 - Preliminary Work Maps – July, 2013
 - Webinar with local officials

Timeline for Essex County – Future



Conclusion: Community Resilience

Risk Changes Over Time



FEMA Provides Best Available Data



Community Officials Adopt Higher Standards



Property Owners Build to Higher Standards



More Resilient Communities Created



Together, we all can create stronger and safer communities

Breakout Groups

- **Modeling / Engineering**
- **CSLF & Depth Grids**
- **AOMI & Hazard Mitigation Planning and Actions**
- **State**

Please don't forget to turn in your evaluation sheets!



FEMA