



## Resilient Nashua Initiative

### Risk Assessment & Capability Findings Meeting

Wednesday, June 13th, 2018 (8:30 AM - 12 PM)

Nashua City Hall

Auditorium (3rd Floor)

229 Main Street, Nashua, NH, 03060

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#### **Facilitators**

*Justin Kates, Nashua Office of Emergency Management*

*Anna McGinty, Nashua Office of Emergency Management*

**8:30 AM**      **Light Refreshments & Networking**

#### **Agenda**

**8:45 AM**      **Welcome**

**9:00 AM**      **Risk Assessment Findings:**

- Review Risk Assessment Findings (FEMA Requirement Element B1, B2, B3, B4)
- National Risk Index
- Social Vulnerability Index
- Baseline Resilience Indicators for Communities

#### **Break**

**Existing Community Capabilities & Plan Integration:**

- Review of existing policies supporting mitigation and resilience (FEMA Requirement Element A4, B3, C1, & C2)
- Plan Integration for Resilience Scorecard Process (FEMA Requirement Element A4, & B1)

#### **Break**

**Performance Goals:**

- Building Clusters & Desired Performance Goals Review
- Determining Anticipated Performance (FEMA Requirement Element B1 & B3)

**11:40 AM**      **Setting the Stage for Mitigation Strategy:**  
(FEMA Requirement Element C4)

- Resources to review prior to July Meeting
- Come to July meeting with mitigation & adaptation ideas!

**11:55 AM Next Steps & Closing:**

- Announcements & reminders
- Website: learn more & contact info
  - <http://www.livablenashua.org/resilient-nashua-initiative/>

## Meeting Minutes

8:30 – Sign-ins & Networking

8:45 – Introductions

8:45 – Justin: Introduction Welcome

- Slide - Resilience definition (review)
- Slide - Resilient Nashua Initiative  
Components (explaining involved parties)
  - Resilience Dialogues
  - NIST
  - Texas A&M – Scorecard
- Slide - Progress Update
  - Status of outreach strategy, steering committee, etc
  - Recap Feb (NIST process etc.) & April meetings (establishing the Nashua stressors & priorities). See slide for details.
- Slide - Risk vs. Vulnerability Definitions
  - Clarify what we mean by
    - Risk (likelihood of a negative outcome certain threshold to activate a response from city)
    - Vulnerability. Susceptible to damages (people, built environment, etc)
- Slide - Risk + Vulnerability Graphics
  - Discussion of “adaptive capacity”
- Slide - Risk Assessment Process

- o Explanation of the process: key components (see slide)
  - o Our focus is now Natural Hazards for FEMA, our first type focusing on
    - Will focus on the other types (technological, etc.)
- Slide - Hazard Identification & Classification
  - o Review of hazards in our 2013 hazards plan
  - o What included in state plan
  - o Shocks (Hazards) identified by community stakeholders in April meeting
- Slide - Peril Classification (IRDR)
  - o What are the standards or taxonomy to use in describing the hazards: Peril Classification (Families, Main Events, Perils). Providing a explanation of this.
- Slide - Non-applicable Perils
  - o explanation (such as volcanoes)
- Slide - Location
  - o Geographic specific hazards (flood) vs. non-specific (drought, earthquake)
- Slide - Extent (magnitude/strength)
  - o Magnitude of hazard extend. Explanation. It is specific on the hazard (hurricane categories)
- Slide - Data Sources & Methodology slide
  - o Explanation of our data sources (NWS, NOAA, etc.)
    - Sheldus Database (international database used for insurance losses at the county level).
- Slide - National Risk Index tool
  - o Tool for mapping risk index (data pulled)
  - o Online portal for everyone to look at available to the public
  - o Explanation of the Index methodology (see slide)
  - o 14 applicable hazards
  - o tool/portable is in a beta format still being tested
  - o By census tract
  - o Discussion of the Technological Park example how it was calculated. Showed map. 2<sup>nd</sup> West Hollis Street census tract area.
  - o Q: Discussion does tool address health hazards as a secondary due to a hazard event?

Justin Kates reviewed each of the slides index results below:  
(see slides for details)

- Slide - Cold Wave
- Slide - Earthquake
- Slide - Hail
  - Not only winter hazard
- Slide - Heat wave
  - This may change in the future. Certain parts of city more vulnerable
- Slide - Tropical Cyclones
  - Hurricanes , depression, etc.
- Slide - Ice storms
- Slide - Landslide
- Slide - Lightning
  - Low (we have less convective storms the compared to the southern US
- Slide - Riverine Flooding
  - Q: (Army Corp of Engineers ) How the method was put together by National Risk Index
  - A: Explanation from methodology programs. Note: we have our own historical data assessment, etc. Discussion Army Corp will have compare their mapping for flooding. Technological risk.
- Slide - Tornado
  - Low compared to other regions of the United States
- Slide - Wildfire
  - Justin notes: weakness of this tool. No hazard. However, we know wildfire is an issue smaller scale.
- Slide - Winter Storm/Blizzard
- Slide - Social Vulnerability Index (SoVI)
  - Apart of methodology for National Risk Index by census tract
  - Integrates the demographics of the City by Census tract
  - 8 specific components makes City socially vulnerable. Added layer on top of the

- o Q: Census data 8 years old
  - o A: We can compare for American Community Survey (ACS) (more current)
    - NIST could help us compare from ACS
  - o Q: Does risk assessment reflect our Capability to respond to the risk?
  - o A: No not for risk assessment. Vulnerability would incorporate that.
  - o Q: Insurance company data?
  - o A: Not available to the public (proprietary). Best source.
  - o Q: Comment: Private Insurance changing rates.
  - o A: NFIP claims data historical we have available.
- Slide - Social Vulnerability Index – National
    - o By census tract. Compared to the state (discussion)
  - Slide - Built Environment
    - o We are using HAZUS to look at built environment for earthquakes, floods, hurricanes.
    - o Gives a value of the built environment
    - o Based on the national risks index
    - o Review of map that reflects the risk on the map by a score.
  - Slide - BRIC Score – Explanation
    - o Data from Census
    - o Map compares to the USA.
  - Slide Baseline – Map
    - o See slide for details
  - Slide – Challenges
    - o Issues we encountered on data collection. Local data collect bad. Localized flooding in data not readily available.
    - o See slide
    - o We are more concerned with the threshold to determine our determine the risk/vulnerability
    - o Data: lacking specific location sources for several hazards.
  - Slide - Next steps
    - o Human caused (technological hazards)
    - o Incorporate stressors (climate change, aging infrastructure)
    - o HAZUS assessment modeling
    - o Creation of online risk assessment map
  - Slide - Plan Integration for Resilience Scorecard
    - o Jamie – explanation overview of the scorecard process

- o Slide – Highland, NJ – example of the Hazard Mitigation Plan to see if they were looking are floodplain. Phil Burke compared to the Master plan not reference to the flood hazard. The Scorecard process came out of this issue in NJ.
  - o Read all plans, review & compare plans: action items, policies, initiatives. The scorecard is focusing on the Policies because that impacts the actions that actually occur on the ground.
- Slide – Scorecard for City of Nashua
  - o Explanation of the print out scorecard for the City.
  - o We are focusing on flood risk for today.
  - o Explaining the columns to the right = the City of Nashua census tracts.
  - o Note: this is a smaller version of bigger spreadsheet for the City using.
  - o Spreadsheet corresponds with a GIS Map by the Census Tract.
- Slide – Example of a scorecard scoring results with the maps
  - o Shows how integrated the policies of the plans are for the actually vulnerability of the census tract.
- Slide – Timeline
  - o Process of timeline of the scorecard the City of Nashua is reviewing
    - (FEMA requirements – review existing plans/policies
  - o Today focus on green part of timeline – discussion of policy plan , then help us update the plans & policies/processes.
- Slide – Role of stakeholder group (today)
  - o Today’s exercise. Purpose to make small tweaks to policies. See slide for details.
  - o Purpose this will help frame policies potentially for the future. Such as maybe a new master plan, etc.
  - o Help us update ordinances and regulations
- Slide – Activity – Policy Conversations
  - o Explanation of the table instructions
  - o Handouts of the the scorecard process (20 mins)
  - o Each table has a laptop for an interactive map of the Census Tract to work through the exercise.
  - o Link available if people want to review at home.
  - o Read out groups
    - Group 1:
      - Mill yard policies: increase development not in floodplain. Slight modification

- Encourage in-fill of commercial areas. Thought we should do that; use floodsmart flood proof practices. Don't want development
- Other ones are good however need: be more specific.
  - (Important) Vague policies need to be more targeted.
  - Ex. Forest pavement.
- Discussion: more specific will make more actionable items (Jamie)
- Consolidated plan (Carrie) HUD requirement
  - Vulnerable groups are identical to the results of the SoVI census tract that are most vulnerable.
- Paving Plan (Anglo) add that to the current map
- Group 2: Rob
  - Canal comment; pedestrian park. Reasoning for their scoring.
  - Jamie – Local knowledge is very important.
  - Rob – Flooding - In-fill; raised utilities, 1<sup>st</sup> floor putting in parking
  - Comment – Bob – comment on flooding event Mill Park to the canal to the river of washout from event. That would result in more flooding.
  - Comment – Madeleine – redoing the floodplain map with USGS, etc. hydrology. The modeled for washouts. Says that is not a concern.
  - Comment. Washout mine falls park – levee. If levee stays in take. If the canal over tops that is an issue.
  - Comment – Madeline – there are systems to control the flow in this case.
- Group 3 –
  - Updated master plan for addressing hazards
  - Addressing open space vs. regulations on development – balancing the risks /vulnerability
  - Floodplains – need to increase the resilience of people in floodplains already. Need to support them.
  - Need to look at areas not developed. City needs to decide about developing the parcels in the floodplain.
  - Flooding – drainage capacity can only be done to a certain extent.

## **NIST - Performance Goals Presentation** (Stephen Cauffman) – Progress Report

Purpose: Helps inform the hazard mitigation planning (Mitigation Strategy) .  
Provided an update on the NIST process behind the scenes and how it fits into the Hazard Mitigation plan (especially with the HAZUS mapping)

- Slide – Performance Goals
  - Introduction of NIST team
  
- Slide – outline
  - See slide
  
- Slide – Review of the NIST process - Social Functions and Built Environment
  
- Slide – Mapping Social Functions to Building clusters
  - Review of the Performance Table Spreadsheet of “Building Clusters” – Justin and team working on. Such as hospitals,
  - Columns: Building Clusters, Functions Services, Category
  
- Slide – HAZUS Scenarios
  - 3 historical events. See slide for details
  
- Slide – Map to show the previous hazus analysis from a couple years ago.
  - - Show as an example to show the functionality from the HAZUS map.
  - Slide – School Functionally
  
- Slide – Graph of # of days of return to functionality (able to use) comparing the 2 different hospitals.
  
- Slide – Hazard Scenarios & Hazards Levels
  - Types: Routine, design, extreme. Note: Design for resilience should plan for “design” scenarios (such as a building function for a design level event 1% flood event.)
  - See slides details
  
- Slide – Feb. Performance Table for tab (?)
  - Review of Feb. performance table results filled out during the meeting.
  - How our HAZUS mapping will help us fill out the rest of the performance tables.



- Slide – Anticipated Performance
  - See slide
  - For building cluster types and when it can provide its serve (be functional)
- Q: on 1 part of hospital built in the 60's not required to the built for earthquake code.
- Chris: HAZUS data based on data but in. He notes that smaller scale shaking ok. HAZUS data needs to be validated. This example from 2013 / 2014. Justin – most likely default values entered into the data.
- Justin – multi-site facilities we are still trying to get feedback on the buildings; infrastructure for those buildings we are reaching out. Justin notes: if we do not have more current data, the program will use the default class in the program for a particular structure (school default settings).
- (Discussion) Justin – design level
  - Provides details on the code built to, if built to code, built before the current code, etc.
  - Explaining process for collecting the building data, work done to talk to the building owners, etc. Gaps in the data. Discussion of why we are including types of buildings in the HAZUS assessment (such as churches) because it corresponds with the performance tables for building clusters.
- Chris – Comments – Performance table ties into the Mitigation Activities we will be planning.
- Justin - goal
  - Data from building owners & infrastructure by July 1. To run models in 2 -3 weeks.
  - Send to planning team to review.
  - This will help us with the overall hazard mitigation plan process
- Q: on models for recovery of rebuilding & debri removal
- A: Steve – that would be subject experts (discussion) currently do not have matching models to correlate with the performance tables
- Q: Restoration of energy
- A: Restoration to restore in a prioritization to restore functionally to certain building clusters. There are smart grid options that some utilities are looking into.
- Justin – asking of Dean from Eversource
  - Discussion of eversource prioritization place for important sites. In past based on the Justin's opinion. Now, we can have a collaborative discussion of prioritization.
- Dean
  - Activities: vegetation management
  - Smart Grid
  - Automated switching

- o 80,000 customers plan to restore within 5 min (even day like today)
- o Comment on the whole community building types for restoration and how they are impact each other. Shifting prioritization.
- o Steve - Point to have ongoing conversations with the community to identify key locations that impact each other.

### **Existing Community Capabilities Presentation (Justin Kates)**

#### Slide - Existing Community Capabilities

- Explanation of the process for reviewing the worksheet/survey with the City departments
- 4 categories – see slide

#### Slide - Planning & Regulatory – see slide

- Building Code – needs update
- Various plans need updates
- See slide
- Site plan process is good.

#### Slide - Administrative and Technical

- See slide

#### Slide - Financial

- Issue many capital improvements proposed but not many approved in the City
- Revolving loan fund – Federal & state – however not for mitigation risk reduction

#### Slide - Outreach & Public Education

- CERT
- Red Cross – fire risk
- Storm ready certified community
- Public Health
- Public /private partnership with public health & OEM office

#### Slide - Safe Growth Audit

- See slide

#### Slide - NFIP

- Madeleine – gives broad overview . certification every 5 year. We participate in program. NFIP homeowners only do it when required by bank. Madeleine tries to encourage
- Only 2 repetitive flood losses.
- See slide for details.
- CRS – Community Rating System – voluntary.

- o Purpose provides NFIP homeowners a discount on their insurance rate premium.
- o Opportunity - This is an area to improve our rating based on the Mitigation Strategy action plan.
- o Q: about claims. Why small?
- o A: could be a cap on the insurance coverage – claim looks smaller. Ex. Cap at \$10,000, damage \$15,0000
- o Note: Conservation land & floodplain ordinance has significantly contributed to our points. The efforts to conserving land

### **Slide - Announcements & Next steps**

(setting stage for the Hazard Mitigation & Adaptation strategy)

- o Working with our partners (NIST, texas, etc.)
- o Mitigation Ideas – We would like everyone to read the document as homework to prepare for our Mitigation Strategy
- o Reviewed link for Nationally Resilience Communities link
- o Goal – is to clarify mitigation actions. Not buying items. Action actions, such as public outreach to reduce risk.
- o Expectation Scorecard with certain stakeholder here today to review policies
- o **Next upcoming meeting** – Will likely be hosted at the **beginning of August** to focus on **our mitigation strategy**

### **Closing Slide - Next steps & Information**

- Contact information
- Resilient website
- Upcoming Event! FEMA roadmap to resilience training – here in July