New Hampshire THIRA/SPR Webinar Series

Part 3: THIRA Step 2 – Give the Threats and Hazards Context
Resources

- U.S. Department of Homeland Security
- Federal Emergency Management Agency
- National Preparedness Directorate
- National Training and Education Division
- Texas A&M Engineering Extension Service (TEEX)
- National Emergency Response and Recovery Training Center (NERRTC)
- New Hampshire Homeland Security and Emergency Management
Target Audience

- Law Enforcement
- Fire Service
- Hazardous Materials (HazMat) Responders
- Emergency Medical Services
- Emergency Management
- Public Works
- Health Care

- Public Health
- Governmental Administration
- Public Safety Communications
- Public Elected Officials
- Private Sector and Non-Government Offices*
- Military*

*As requested by host agency
Learning Objectives

- Discuss factors to consider for threats and hazard descriptions
- Discuss how to develop effective context descriptions
- Develop context descriptions for community threats and hazards
- Estimate impacts of the threats and hazards
The THIRA is a three-step risk assessment completed every 3 years.

1. Identify Threats and Hazards
   - List of threats and hazards of concern

2. Give Threats and Hazards Context
   - Context descriptions and impact numbers

3. Establish Capability Targets
   - Capability targets based on standardized target language
Step 2 of the THIRA Process

- Develop context statements/scenarios that would challenge the State’s core capabilities prior to requesting out-of-state assistance
- Determine the quantitative impacts of those context statements using estimates based on planning for the 1/500 year incident
  - Consider community-wide sources such as
    - Real-world events
    - SME’s
    - Exercises
    - Response & Recovery Plans
    - Modeling
    - Tools
Context Descriptions

- Context Descriptions (or scenarios)
  - Detail a threat or hazard incident determined to most challenge a community’s capabilities

- Threats and hazards can have different impacts depending on the time, place, and conditions in which they occur

- Elements of the scenario that are essential to the understanding of the impact of an incident and the capabilities required to manage it should be included
  - Include critical details such as location, magnitude, date/time of the incident, conditions, and generalized impacts on general population and infrastructure systems
    - Use conditions relevant to the location
    - Extend the scale of the incident to the most realistic possibility
    - Provide the circumstances under which the incident would be likely to occur
Context Description Considerations

- Time
- Place
- Adverse conditions
- Demographics
- Climate
- Built environment
  - Man-made structures within a geographical space that use regularly
- Community infrastructure
  - All the assets and organizations in the public and private sector that are part of normal life and economic activity in the area
    - Include not just critical infrastructure but also secondary assets that local would rely on in the event the critical assets are affected
    - Roads, bridges, rail, phone lines, power lines, broadcast towers, natural resources, local cultural significance, etc.
Context Description Essentials

- Threats and hazards have different impacts; Varying threat and hazard conditions will result in different context statements/scenarios
- More than one context description may need to be developed
- Will any indirect factors affect the Critical Infrastructure or population?
- ALWAYS write a statement that will most challenge the capabilities
- Describe in detail the “who, what, when, where, why, and how”
- Be specific in describing ALL elements of event
- Extent the statement/scenario beyond the community’s “comfort zone”
  - Help determine at what point would a community need to request outside assistance (Mutual aid, local to state, state to other state, state to federal)
Context Description Essentials

- Consider multiple incidents
  - Suggest creating 4-6 Context Descriptions/scenarios in order to adequately and realistically challenge capabilities

- Consider cascading effects

- Factors subject to change:
  - Demographics
  - Climate
  - Built environment
Estimate Impacts

- Communities write impacts in the language of the common emergency management metrics
- The THIRA process uses standardized impact language
- Impacts are developed by adding community-specific numbers to standardized impact language

**Composition of an Impact**

Standardized impact language

\[ \text{(#)} \text{ people requiring long-term housing} \]

\[ + \]

Community-specific number

\[ 1,350 \]

\[ = \]

Impact

\[ 1,350 \text{ people requiring long-term housing} \]
Estimate Impacts

- Engage relevant stakeholders and SMEs with varying perspectives
- May include as many other impacts in the THIRA as deemed necessary
- The impact with the largest number is not necessarily always the most challenging to address
Estimate Impacts

- Communities use standardized impacts data to create capability targets.

<table>
<thead>
<tr>
<th>Standardized Impact Language</th>
<th>Community-specific Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fatalities</td>
<td></td>
</tr>
<tr>
<td>Number of structure fires</td>
<td></td>
</tr>
<tr>
<td>Number of hazmat release sites</td>
<td></td>
</tr>
<tr>
<td>Number of people requiring rescue</td>
<td></td>
</tr>
<tr>
<td>Number of jurisdictions affected</td>
<td></td>
</tr>
<tr>
<td><strong>Miles of road affected</strong></td>
<td>890</td>
</tr>
<tr>
<td>Number of customers without power service</td>
<td>11,000</td>
</tr>
<tr>
<td>Number of businesses closed due to incident</td>
<td>190</td>
</tr>
<tr>
<td>Number of customers without water service</td>
<td>9,800</td>
</tr>
<tr>
<td>Number of people requiring medical care</td>
<td>230</td>
</tr>
<tr>
<td>Number of exposed people (hazmat related)</td>
<td>24</td>
</tr>
</tbody>
</table>

Example Standardized Target Language:

Within (#) days of an incident, clear (#) miles of road affected, to enable emergency responder access.
Impact Estimation Factors

- Can be expressed in terms of:
  - Size of affected geographical area
  - Complexity
  - Intelligence requirements and needs
  - Casualties
    - Number of displaced households
    - Number of fatalities
    - Number of illness or injuries
  - Disruption of critical infrastructure
  - Loss or degradation of communications
  - Amount of direct economic impacts
  - Economic effects of supply chain disruption
Estimating Impacts

- Should involve whole community partners
- May be aided by tools or modeling software
  - Standard Unified Modeling, Mapping and Integration Toolkit (SUMMIT)
- Should enlist the help of local experts
SUMMIT

- Standard Unified Modeling, Mapping and Integration Toolkit
  - DHS Science and Technology Directorate software toolkit to access integrated suites of modeling tools and data sources for planning, exercises, or operational response
  - Currently in use for the THIRA process
  - SUMMIT for Homeland Emergency Response and Planning (SHERPA)
  - Website: https://dhs.summit.us
Summary

- Discussed factors to include in context descriptions/scenarios
- Discussed importance of effective context descriptions/scenarios
- Discussed how to estimate impacts of the threats and hazards using the standardize impacts to create the standardized context target statement to be used in Step 3