Continuity of Operations through Intelligence & Resilience

Presented by

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18 - 20 February 2019 | Jumeirah Messilah Beach Hotel
State of Kuwait

Theme: Transforming HSE Culture for a Resilient Future
CONTINUITY OF OPERATIONS THROUGH INTELLIGENCE & RESILIENCE

✓ Discuss and provide case studies on Consequence Management best practices

✓ How to develop comprehensive, effective and reliable COOP playbooks

✓ An overview of the National Incident Management System (NIMS) used to protect organizations from unexpected disasters and business disruptions

✓ Overview of the IAFC National Mutual Aid System and who this system may be deployed internationally

✓ Use of Geographic Information Systems (GIS) systems intelligence applications
PREPAREDNESS RESILIENCE

- **HSEEP**
- **PrepToolKit**

**Exercises & Training**

- **NIMS**
- **Resource Management**
- **National Mutual Aid System**

**Risk Identification & Assessment**

- **THIRA Guidance**
- **Hazard Explorer Tool**

**Planning & Continuity of Operations**

- **COOP Planning Guidance / Tools**
- **Playbooks**
- **EOPs**

**NIMS & Resource Management**
THREAT HAZARD IDENTIFICATION AND RISK ASSESSMENT

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
Communities can use the THIRA/SPR to answer:

1. What do we need to prepare for?
2. What level of capability do we need to be prepared?
3. What are our current capabilities?
4. What gaps exist between the capabilities we need and the capabilities we currently have?
5. How can we address our capability gaps?
THIRA GUIDANCE

Link: https://www.fema.gov/media-library/assets/documents/165308

THIRA TOOLKIT

Link: https://www.fema.gov/media-library/assets/documents/26338
HAZARD EXPLORER TOOL


PrepToolkit and the National Preparedness System

The National Preparedness System outlines an organized process for everyone in the whole community to move forward with their preparedness activities and achieve the National Preparedness Goal.

The Preparedness Toolkit is an online portal that provides the whole community with tools to aid in implementing all six areas of the National Preparedness System. Select one of the six NPS areas to begin exploring.
Hazard Explorer Tool

Introduction and Purpose:

The National Exercise Program serves as the principal mechanism for examining the preparedness and readiness of the United States across the entire homeland security and management exercise. Communities design, coordinate, conduct, and evaluate exercises across the US as a part of their preparedness efforts.

This map journal serves as a tool to help you identify and evaluate potential exercise scenarios; examine hazard exposure, and other community-related factors to support exercise planning. In this tool, you will find:

DISCLAIMER: The information and data presented in this tool are meant as a general guide for narrowing an exercise location. The data sources in this tool are national-scale and are not meant to replace more detailed, local-scale data and analysis.

Image Source: FEMA
Hazard Explorer Tool

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This map journal serves as a tool to help you identify and evaluate potential exercise scenario locations, hazard exposure, and other risk-related factors to support exercise planning. In this tool, you will identify:

1. Which hazards exist near your location;
2. Where your population is most vulnerable; and
3. What infrastructure and resources would be most impacted in your selected scenario location.

The final output of this tool is a basic PDF map of your selected scenario location, as well as links to data sources that you can share with your GIS staff to conduct more in-depth analysis for use in planning and conducting your exercise.

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Image Source: FEMA
Explore Hazard Exposure

Hazard Explorer Tool

Explore Your Hazards

Use the map to the right to explore your hazard exposure in your community for 17 different natural, technological, and human-caused hazards. Areas in green are exposed to a lower number of hazards, while areas in red are exposed to a greater number of hazards.

Which hazard(s) exist in your community? Find out using the following steps:

1. Type your location of interest into the search bar near the top of the map. Arrow down to search by:
   - Street Address or Place
   - US National Grid (What is USNGT)
   - County Name

2. Click within your area of interest. A pop-up window will appear that indicates hazard exposure for that area. Note which hazards are marked “Yes”, indicating exposure to that hazard in your community.

3. For any hazard(s) that you are exposed to, click on its name in the list below to further explore potential impact and risk factors in your community.

Animal Disease Outbreak
Earthquake
Flood
Hazardous Materials Release
Hurricane
Hazard Explorer Tool

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   - Earthquake
   - Flood
   - Hazardous Materials Release
   - Hurricane
Hazard Explorer Tool

Flood Hazard Exposure

Now, we'll explore in more depth where the flood hazard exists, vulnerable populations that could potentially be impacted, and the presence of infrastructure.

1. **Flood Hazard Exposure.** Select the magnifier tool on the map to the right to zoom back into your community of interest and view this hazard in more detail.

2. **Vulnerable Populations.** Next, explore where people are most vulnerable to this hazard.
   - Select the Vulnerable Populations tab. Re-enter your location of interest in the search bar at the bottom-left corner of the map.
   - View the total population and the top 25th percentile of the vulnerable population. Counts are for the total visible map area.

3. **Infrastructural Data.** Select the magnifier tool on the infrastructure tab to zoom back into your community of interest and view this hazard in more detail.
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3. **Infrastructure.** Select the magnifier tool on the Infrastructure tab to zoom back into your community of...
Infrastructure: Community Lifelines

Hazard Explorer Tool

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3. **Infrastructure.** Select the magnifier tool on the infrastructure tab to zoom back into your community of interest.
Configure Community Map

4. Customize your map(s) to print. Once you have selected your area of interest, create a map (or maps) that will help you begin developing your scenario and planning your exercise. There are a number of tools at the bottom of the map to the right that can help you do this:
   - Select the Customize for Print tab.
   - The "Layer List" tool can be used to turn on/off layers in the map. Choose which layers you want to show in your final map(s).
   - The "Draw" tool allows you to annotate the map with drawings, text, etc.
   - The "Basemap" tool allows you to change the background map.
   - Once you are satisfied with your map(s), use the "Print" tool to export the map to a PDF. Make sure to save this map, as it will help you as you move forward in the exercise process.

5. You should now have a broad sense of the flood risk in your community, as well as an initial exercise scenario location map for use in the exercise planning process.
Exercise Location: Flood Scenario

- CDC's Social Vulnerability Index (2016)
  - 0 - 0.25: Lowest Vulnerability
  - 0.2501 - 0.5: Mild Vulnerability
  - 0.5001 - 0.75: Moderate Vulnerability
  - 0.7501 - 1: Highest Vulnerability

- Nursing Homes
- Hospitals
- Day Care Centers

Flood Hazard:
- No Data
- Yes
The "Draw" tool allows you to annotate the map with drawings, text, etc.

The "Basemap" tool allows you to change the background map.

Once you are satisfied with your map(s), use the "Print" tool to export the map to a PDF. Make sure to save this map, as it will help you as you move forward in the exercise process.

5. You should now have a broad sense of the flood risk in your community, as well as an initial exercise scenario location map for use in the exercise planning process. In addition, if you have your own GIS capability and want to produce additional products, use the final tab (5) to access the data sources used in this tool.

Go Back to Explore Other Hazards

Flood Hazard Exposure: Infrastructure and Populations

Flood Data Links

Data sources related to flooding.

owned by taml.martin, FEMA

Description

An in-depth description of the group is not available.

Latest Content

Flood Vector Layer
by taml.martin_FEMA
Created: Jul 24, 2016
Updated: Feb 14, 2019
View Count: 9
Number of Downloads: 4

FEMA National Flood ... by taml.martin_FEMA
Created: Jul 24, 2016
Updated: Feb 14, 2019
Number of Downloads: 8

HfLFD Open Data Hom... by taml.martin_FEMA
Created: Jul 23, 2016
Updated: Feb 5, 2019
Number of Downloads: 8

Owner

Owner

Tags

Advanced Technology Integration, PrepToolKit, Flood
DISCUSSION

1. How do you currently identify and assess risk?

2. How is the THIRA model and guidance applicable to the GCC?

3. Would a solution like the Hazard Explorer Tool improve your company/agency risk assessment?
PREPAREDNESS RESILIENCE

- HSEEP
- PrepToolKit

- NIMS
- Resource Management
- National Mutual Aid System

- THIRA Guidance
- Hazard Explorer Tool

- COOP Planning Guidance / Tools
- Playbooks
- EOPs
PLANNING AND CONTINUITY OF OPERATIONS

1. COOP Planning Guidance and Tools
2. COOP Model Playbooks
3. Emergency Planning
CONTINUITY PLANNING POLICY

• **Presidential Policy Directive-40, National Continuity Policy**, outlines the policy of the United States to maintain a comprehensive and effective continuity capability by ensuring a coordinated effort within and among the executive, legislative, and judicial branches of the government at all levels.

• **Federal Continuity Directive 1** implements requirements establishes the framework, requirements, and processes that support the development of continuity programs.

• **Federal Continuity Directive 2** provides direction and guidance to Federal Executive Branch Departments and Agencies to assist in validation of Mission Essential Functions and Primary Mission Essential Functions.
NATIONAL ESSENTIAL FUNCTIONS
FOUNDATION OF CONTINUITY

- **State, Territorial, & Insular Governments:** Coordinate and apply in-state/territory resources to assist local response efforts.
- **Individuals & Families:** Preparing home and family by building an emergency plan and emergency supply kit.
- **Communities:** Leverage Community Emergency Response Teams to assist others in the community following a disaster.
- **NGOs:** Deliver critical services, including meals, family reunification services, and health services.
- **Private Sector:** Work with public sector partners to provide response resources and equipment.
- **Tribes:** Build relationships with tribal and non-tribal entities to provide mutual support during an incident.
- **Local Government:** Provide critical jurisdictional emergency services, including fire and police services.
- **Critical Infrastructure:** Stabilize critical infrastructure functions and restore systems and services, including transportation and energy.
- **Federal Government:** Manage implementation of Federal incident response efforts.

**NEF #6**
Providing rapid and effective response to and recovery from the domestic consequences of an attack or other incident.
## BUSINESS CONTINUITY PLANNING

### Business Impact Analysis
- Develop questionnaire
- Conduct workshop to instruct business function and process managers how to complete the BIA
- Receive completed BIA questionnaire forms
- Review BIA questionnaires
- Conduct follow-up interviews to validate information and fill any information gaps

### Recovery Strategies
- Identify and document resource requirements based on BIAs
- Conduct gap analysis to determine gaps between recovery requirements and current capabilities
- Explore recovery strategy options
- Select recovery strategies with management approval
- Implement strategies

### Plan Development
- Develop plan framework
- Organize recovery teams
- Develop Relocation Plans
- Write business continuity and IT disaster recovery procedures
- Document manual workarounds
- Assemble plan; validate; gain management approval

### Testing & Exercises
- Develop testing, exercise and maintenance requirements
- Conduct training for business continuity team
- Conduct orientation exercises
- Conduct testing and document test results
- Update BCP to incorporate lessons learned from testing and exercises

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30
BUSINESS CONTINUITY PLANNING

• Conduct a business impact analysis to identify time-sensitive or critical business functions and processes and the resources that support them.

• Identify, document, and implement to recover critical business functions and processes.

• Organize a business continuity team and compile a business continuity plan to manage a business disruption.

• Conduct training for the business continuity team and testing and exercises to evaluate recovery strategies and the plan.
BUSINESS CONTINUITY TOOLS

Business Continuity Planning Suite

Link: https://www.ready.gov/business-continuity-planning-suite

Continuity Assessment Tool

Link: https://www.fema.gov/media-library/assets/documents/158679
The National Capital Region PLAYBOOK

One Region… One Team… One Focus…
Achieving Public Expectations

July 10, 2017
PLANNING

Preparedness
Continuity of Operations Plans
Continuity Playbooks
Emergency Operations Plan
Crisis Communications Plan
IT Disaster Recovery Plan

Readiness
Watch Desk
Daily Monitoring

Response
Crisis Action Plans
Incident Action Plans
MODEL BEST PRACTICE

1. How do you currently do business continuity planning?

2. Which of these continuity guidance and tools are most application?

3. How would you adapt these resources to support enhanced continuity planning?
PREPAREDNESS RESILIENCE

- HSEEP
- PrepToolKit

- NIMS
- Resource Management
- National Mutual Aid System

- THIRA Guidance
- Hazard Explorer Tool

- COOP Planning Guidance / Tools
- Playbooks
- EOPs
NIMS: STRUCTURES OF RESPONSE

NIMS AND CONTINUITY OF OPERATIONS: PUTTING THE COMPONENTS OF RESPONSE TOGETHER WHEN IT COUNTS
Considerations & Issues

1. What are the NIMS Guiding Principles? Do they still “make sense” for all hazards?

2. How do NIMS Management Characteristics and the ICS organization “work together”?
What is NIMS?
2004, the Department of Homeland Security released the National Incident Management System (NIMS)

Required by Homeland Security Presidential Directive HSPD-5, Management of Domestic Incidents and HSPD-8 Preparedness

HSPD-5 established and designated the National Integration Center (NIC) Incident Management Systems Division as the lead federal entity to coordinate NIMS compliance and ensure that NIMS remains an accurate and effective management tool
STRUCTURES OF RESPONSE
NIMS AND CONTINUITY OF OPERATIONS:
PUTTING THE COMPONENTS OF RESPONSE TOGETHER WHEN IT COUNTS

NIMS: Guiding Principles
NIMS: Guiding Principles

A basic premise of the NIMS and National Response Framework (NRF) is that incidents should be managed at the lowest jurisdictional level possible.

The National Response Framework (NRF) presents the guiding principles that provide the structure and mechanisms to ensure effective Federal support of state, tribal, and local related activities.
NIMS: Guiding Principles

✓ Flexibility

NIMS components are adaptable to any situation, from planned special events to routine, local incidents, to incidents requiring the activation of interstate mutual aid, to those requiring coordinated Federal assistance. Some incidents require multiagency, multijurisdictional, and/or multidisciplinary coordination. Flexibility in NIMS allows it to be scalable and, therefore, applicable for incidents that vary widely in terms of geography, demographics, climate, and culture.
NIMS: Guiding Principles

✓ Standardization

Coordination and standardization are essential to effective incident management. NIMS contains standard organizational structures that improve integration and connectivity among jurisdictions and organizations. NIMS presents standard practices that allow incident managers to work together more effectively and foster cohesion among the various organizations involved in an incident. NIMS also includes common terminology, which fosters effective communication among jurisdictions and organizations involved in managing an incident.
NIMS: Guiding Principles

✓ Unity of Effort

Unity of effort means coordinating activities among various organizational representatives to achieve common objectives. Unity of effort enables organizations with jurisdictional authority or functional responsibilities to support each other while allowing each participating agency to maintain its own authority and accountability.
What NIMS is...

✓ Comprehensive, nationwide systematic approach to incident management

✓ Core set of doctrine, concepts, principles, terminology and organizational processes for all hazards

✓ Essential principles for a common operating picture and interoperability of communications and information management

✓ Standardized resource management procedures for coordination among different jurisdictions and organizations

✓ Scalable and applicable for all incidents
What NIMS is not...

✓ A response plan
✓ Only used during large-scale incidents
✓ Only applicable to certain emergency management / incident response personnel
✓ Only the Incident Command System (ICS)
✓ Only an emergency management system
STRUCTURES OF RESPONSE

NIMS AND CONTINUITY OF OPERATIONS:
PUTTING THE COMPONENTS OF RESPONSE TOGETHER WHEN IT COUNTS

Key NIMS Component: Standardization

✓ Standardized organizational structures
✓ Improve integration and connectivity among jurisdictions and disciplines
✓ Allow those who adopt NIMS to work together
✓ Foster cohesion among various response organizations
Key NIMS Component: Interoperability

Ability of emergency personnel to interact and work well together:

✓ Communications Systems
✓ Information Technology
✓ Common Terminology
✓ Plain Language
NIMS RESOURCE MANAGEMENT
Key NIMS Component: Resource Typing & Credentialing
NIMS Management Characteristics and ICS:

The Incident Command System (ICS) is based on the following 14 proven NIMS management characteristics, each of which contributes to the strength and efficiency of the overall system:

1. Common Terminology
2. Modular Organization
3. Management by Objectives
4. Incident Action Planning
5. Manageable Span of Control
6. Incident Facilities and Locations
7. Comprehensive Resource Management
8. Integrated Communications
9. Establishment and Transfer of Command
10. Unified Command
11. Chain of Command and Unity of Command
12. Accountability
13. Dispatch/Deployment
14. Information and Intelligence Management
STRUCTURES OF RESPONSE
NIMS AND CONTINUITY OF OPERATIONS: PUTTING THE COMPONENTS OF RESPONSE TOGETHER WHEN IT COUNTS

NIMS & ICS: All Hazards; All Events

✓ Local Incidents
✓ Regional Incidents
✓ State and National Incidents
✓ Planned Events
✓ Multi-Disciplinary Issues
NIMS: 2018 Refresh

1. Reiterates concepts and principles of the original 2004 version and the updated 2008 version;

2. Reflects and incorporates lessons learned from exercises, real world incidents, and policy updates;

3. Reflects progress in resource typing and mutual aid and builds a foundation for the development of a national qualification system;
NIMS: 2018 Refresh

4. Clarifies that NIMS is more than just the Incident Command System (ICS) and that it applies to all stakeholders with roles in incident management across all five mission areas (Prevention, Protection, Mitigation, Response, and Recovery);

5. Explains the relationship among ICS, the Center Management System (CMS) for operations centers and coordination centers, and Multiagency Coordination Groups (MAC Groups); and
NIMS: 2018 Refresh

6. Enhances information management processes to improve data collection plans, social media integration, and the use of geographic information systems (GIS).
STRUCTURES OF RESPONSE

NIMS AND CONTINUITY OF OPERATIONS:
PUTTING THE COMPONENTS OF RESPONSE TOGETHER WHEN IT COUNTS

NIMS: Does it Work?
GIS TO IMPROVE CRISIS RESPONSE PLANNING

JEFF DULIN, STRATEGIC ADVISER

INTERNATIONAL ASSOCIATION OF FIRE CHIEFS
Everything will be a Sensor in the Future

Everyone needs to be ready
HOW WILL WE UNDERSTAND THIS DATA!

• Human Collected
• Sensors
• Base Layer Data
• Atmospheric Conditions
• Data from Artificial Intelligence
Challenges of Data In Crisis

Multi-Agency Integration “Different Priorities”

Crisis Response “My Hair Is On Fire”

Data Collection & Analysis In Different Ways

Access To Data In A Timely Manner

Resource Management “Using Things Wisely”

Where Am I, What Is Around Me, What Is Happening, & How Do These Things Effect Each Other!
WHAT INFORMATION DO WE NEED TO PLAN TO PROVIDE IN A CRISIS

• Who
• What
• When
• Where
GIS IS A “SYSTEM OF ENGAGEMENT USED FOR PLANNING & REAL-TIME EVENTS”
GIS IS MORE THAN JUST A MAP

GIS IS DATA IN MANY FORMS & ABOUT MANY THINGS!
GIS provides deep insights for greater efficiency during Crisis.

Integrating People, Processes, Assets, and Data About Them
GIS DATA SHOULD TELL A STORY
DATA WITHOUT CONTEXT IS JUST NOISE!
ENGAGE WITH CITIZENS THROUGH CROWDSOURCING
LET THEM HELP TELL THE STORY
DATA FROM SPREADSHEETS VS THIS
EASY TO USE MOBILE APPS FOR FIELD DATA COLLECTION
GIS SUPPORTS THE PLANNING FOR RESILIENCY BY

• Providing Historical Records that can be compared to present day.

• Used to help predict consequences from cascading events by showing in interdependencies.

• Paints the same picture to everyone at the same time for easy deconfliction.

• Allows planners to run modeling against known and un-know scenarios.
GIS Requirements for Crisis Response Planning

In order to support Public Safety Missions, GIS must provide:

* Agility – The ability to change and modify when required

* Flexibility – The ability to expand (scale) and retract as required

* Easy to Use – Usable by operations personnel
Successful GIS Deployment Patterns

GIS Needs to be Embedded into the Daily Operation
Defined Workflows
Content / Data Management Strategy
Continuous User Engagement
Mission Specific App’s
Policies & Procedures
Organizational Leadership Support

Be Ready, Be Well Informed Of Your Community Ahead Of Time
Summary

It’s Not So Much About the Technology

Leadership
Governance
Standard Operating Procedures
Training and Exercises
Good People Do Good Things,
Great People Do Great Things!
Background

- International Association of Fire Chiefs (IAFC) developed and operated Mutual Aid Net application serving 18 states and 9,640 agencies since 2012.
- The architecture and technology was old and lacked GIS foundation.
- IAFC asked Juvare and ESRI to help them “update” Mutual Aid Net and “Bounce Forward” with a next generation mutual aid solution with latest Crisis Management and GIS Technologies.
- It went live September 2018, replacing Mutual Aid Net
Who are the companies behind NMAS?

- The new home of WebEOC is the nation’s leading Crisis and incident management platform
- Since 1873, the IAFC has advocated for the fire industry and their leaders
- The global market leader in GIS since 1969
- All three organizations are the acknowledged leaders in their respective industries
- NMAS is a collaborative project leveraging many decades of experience from each group
What is the National Mutual Aid System (NMAS)?

- The next-generation evolution of IAFC’s Mutual Aid Net
- A regional and national database of National Incident Management System (NIMS) typed resources for fires, natural and man-made disasters, and mass casualty incidents
- A solution to request and assign mutual aid within a state, across state lines, and potentially, across international borders
- A mutual-aid request notification system connecting emergency response agencies across a state or region
- A historical database of resource requests and deployments that can be used for reporting, analysis, and financial reimbursement
Existing Mutual Aid Net (18 States)
Geo-Enable Mutual Aid
NMAS Early Adopter States
Interoperability of Resources
Mapping, Routing, Tracking
### Organizations List

<table>
<thead>
<tr>
<th>Organization</th>
<th>Available Quantity</th>
<th>Requested Quantity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD Post Morgan City Fire Department</td>
<td>4</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>DD Buckley Fire Dept</td>
<td>2</td>
<td></td>
<td>No Location Specified</td>
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<td>DD Island Fire Dept</td>
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<td>Hillsborough Fire Service</td>
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<td>FL Bureau of State Fire Marshal</td>
<td>27</td>
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<td>FL Fight 1075 Fire Dept</td>
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<td>FL Fire Lauderdale Fire Rescue</td>
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<tr>
<td>FL Olive Branch Fire Rescue</td>
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<tr>
<td>FL General Wayne Fire Rescue</td>
<td>1</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>FL-MI Houghton Clarks Fire Rescue</td>
<td>11</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>FL Jacksonville Fire Rescue</td>
<td>13</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>FL Jackson Fire Rescue</td>
<td>1</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>FL Keystone Fire Dept</td>
<td>1</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>FL-Clint County Fire Rescue</td>
<td>1</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>FL-Clare County Fire Rescue</td>
<td>1</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>FL-Clarington Fire Rescue</td>
<td>1</td>
<td></td>
<td>No Location Specified</td>
</tr>
</tbody>
</table>
Locate Resources

Select the type of resource you want from a drop down list and NMAS will display those resources in a list and on a map.
How is NMAS deployed

• Cloud-based solution that can be accessed by any authorized user with an industry standard browser

• Purchased as a subscription model in which one annual fee authorizes access for every fire department and other public safety agencies in a state for mutual aid purposes. State EM, State Fire Marshals, and State Fire Chief’s Associations are target entities.

• Not a replacement for full-fledged incident management systems (WebEOC), can integrate with State WebEOC
  • This is also not a board or special WebEOC plugin
  • Integrates with existing ESRI ArcGIS Platforms
Architecture Overview

• NMAS System Components:
  • A single, Nationwide, NMAS instance exists to manage organizations, inventory, incidents, requests and assignments of all organizations in US
  • Directed by IAFC
  • Administered by Juvare
  • Hosted at Microsoft Azure

• System Integrations:
  • ESRI ArcGIS Online
  • IAFC “Helix” SSO (users must have a Helix account to authenticate)
  • SMS notifications (Twilio)
Daily or Crisis Process

- Organization and Inventory are pre-event management
- Incidents are created, Locate your Resources needed
- Requests for Mutual Aid occur, Your partners Respond and can immediately Deploy
- Assignments manage the resource status
Economic Justification

- Reduce administrative burden and delay
- Minimize damage to life and property which are increasingly expensive. Quicker response and assets on scene.
- Potential reduced equipment spend. “Just in time VS. Just in case”
- Analytical trending of equipment use and easier financial reporting
Agency Inventory List

Inventory List - CO-Colorado Division of Homeland Security & Emergency Management
Resource Request Form
### Available Resources

<table>
<thead>
<tr>
<th>Organization Name</th>
<th>Available Quantity</th>
<th>Requested Quantity</th>
<th>Distance</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Columbia</td>
<td>4</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>St. Louis Fire Dept.</td>
<td>2</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>503-10</td>
<td>11</td>
<td>3</td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-11</td>
<td>1</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-12</td>
<td>2</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-13</td>
<td>3</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-14</td>
<td>1</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-15</td>
<td>3</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-16</td>
<td>2</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-17</td>
<td>1</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-18</td>
<td>1</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
<tr>
<td>521-19</td>
<td>1</td>
<td></td>
<td></td>
<td>No Location Specified</td>
</tr>
</tbody>
</table>

---

**NMAS**
Request, Locate, Deploy.
Agency Requested

Response Details: CO-CEM - 197 Pending

<table>
<thead>
<tr>
<th>Details</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Mission</td>
<td>Local</td>
</tr>
<tr>
<td>Requesting Organization</td>
<td>Colorado Division of Homeland Security &amp; Emergency Management</td>
</tr>
<tr>
<td>Incident</td>
<td>Structured Fire</td>
</tr>
<tr>
<td>Requested Resource</td>
<td>Engine, Fire Pump</td>
</tr>
</tbody>
</table>

**Deployment Details**

- **Report to Location**
  - Address: [Insert Address]
  - CO-CEG: [Insert CO-CEG]
  - Latitude/Longitude: [Insert Latitude/Longitude]

- **Mission Description**
  - Employment Duration: [Insert Duration]
  - Special EPP or Other Required Capabilities: [Insert Capabilities]
  - Additional Deployment Details or Clarifications: [Insert Details]
  - Alternate Request Number: [Insert Number]

**Resources**

<table>
<thead>
<tr>
<th>Resource Identifier</th>
<th>Resource Name</th>
<th>Type</th>
<th>Resource Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine 01</td>
<td>Engine, Fire Pump</td>
<td>Type 1</td>
<td>Available</td>
</tr>
<tr>
<td>Engine 02</td>
<td>Engine, Fire Pump</td>
<td>Type 1</td>
<td>Available</td>
</tr>
<tr>
<td>Engine 03</td>
<td>Engine, Fire Pump</td>
<td>Type 1</td>
<td>Available</td>
</tr>
<tr>
<td>Engine 04</td>
<td>Engine, Fire Pump</td>
<td>Type 1</td>
<td>Available</td>
</tr>
<tr>
<td>Engine 05</td>
<td>Engine, Fire Pump</td>
<td>Type 1</td>
<td>Available</td>
</tr>
<tr>
<td>Engine 06</td>
<td>Engine, Fire Pump</td>
<td>Type 1</td>
<td>Available</td>
</tr>
</tbody>
</table>
Agency Submits Resources
NMAS tracks status of each response
Requesting Jurisdiction Authorizes to Deploy
Resources Check En Route

Response Details: CO-CEM - 197 Authorized to Deploy

<table>
<thead>
<tr>
<th>Details</th>
<th>Deployment Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Details</td>
<td></td>
</tr>
<tr>
<td>Type of Mutual Aid</td>
<td>Incident: Bureau of Homeland Security &amp; Emergency Management</td>
</tr>
<tr>
<td>Requesting Organization</td>
<td>Response Mode: initial action</td>
</tr>
<tr>
<td>Requested Quantity</td>
<td>Resource Requested: Engine, Fire Pumps</td>
</tr>
<tr>
<td>Resource Type</td>
<td>Type 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources</th>
<th>Resource Identifier</th>
<th>Resource Name</th>
<th>Type</th>
<th>Resource Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Engine 01</td>
<td>Engine Fire Pump</td>
<td>Type 1</td>
<td>In Route</td>
</tr>
<tr>
<td>2</td>
<td>Engine 02</td>
<td>Engine Fire Pump</td>
<td>Type 1</td>
<td>In Route</td>
</tr>
<tr>
<td>3</td>
<td>Engine 03</td>
<td>Engine Fire Pump</td>
<td>Type 1</td>
<td>In Route</td>
</tr>
<tr>
<td>4</td>
<td>Engine 04</td>
<td>Engine Fire Pump</td>
<td>Type 1</td>
<td>In Route</td>
</tr>
</tbody>
</table>

Mission Description:
- Deployment Duration: 72 hours
- Special PPE or Other Required Capabilities:
- Additional Deployment Details or Limitations:
- Alternate Request Number:
### Resources Checked On Scene and Released

<table>
<thead>
<tr>
<th>Resource Identifier</th>
<th>Resource Name</th>
<th>Type</th>
<th>Resource Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine-01</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>On Scene</td>
</tr>
<tr>
<td>Engine-02</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>On Scene</td>
</tr>
<tr>
<td>Engine-03</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>On Scene</td>
</tr>
<tr>
<td>Engine-04</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>On Scene</td>
</tr>
</tbody>
</table>

### Resources

<table>
<thead>
<tr>
<th>Resource Identifier</th>
<th>Resource Name</th>
<th>Type</th>
<th>Resource Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine-01</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>Released</td>
</tr>
<tr>
<td>Engine-02</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>Released</td>
</tr>
<tr>
<td>Engine-03</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>Released</td>
</tr>
<tr>
<td>Engine-04</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>Released</td>
</tr>
</tbody>
</table>
## Resources Returned Home & Call Completed

### Resources

<table>
<thead>
<tr>
<th>Resource Identifier</th>
<th>Resource Name</th>
<th>Type</th>
<th>Resource Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine 01</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>All Home</td>
</tr>
<tr>
<td>Engine 02</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>All Home</td>
</tr>
<tr>
<td>Engine 03</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>All Home</td>
</tr>
<tr>
<td>Engine 04</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>All Home</td>
</tr>
</tbody>
</table>

### Request Details

<table>
<thead>
<tr>
<th>Request Id</th>
<th>Incident Name</th>
<th>Requested #</th>
<th>Offered #</th>
<th>Resource Name</th>
<th>Type</th>
<th>Date/Time</th>
<th>Request Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD-CPM - 197</td>
<td>Shekston Way</td>
<td>4</td>
<td>4</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>05/13/2019 10:27:57</td>
<td>Completed</td>
</tr>
<tr>
<td>CD-CEM - 193</td>
<td>Shekston Way</td>
<td>2</td>
<td>2</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>01/06/2019 11:12:42</td>
<td>Completed</td>
</tr>
<tr>
<td>CD-CBM - 181</td>
<td>Winter Wrath 2018</td>
<td>4</td>
<td>4</td>
<td>Engine, Fire (Pumper)</td>
<td>Type 1</td>
<td>12/06/2018 08:17:25</td>
<td>Completed</td>
</tr>
</tbody>
</table>
Resources are approved to deploy, with driving directions provided by NMAS and ESRI Workforce App.
ESRI Tools
Situational Awareness and Data Analytics
Mutual Aid Resource Planning Tool - Turning Plans into Operations
ORANGE COUNTY FIRE AUTHORITY

1 FIRE AUTHORITY, IRVINE, CA, 92602

This is a group of 6 buildings built on a 13.341 acre 581,135 square foot lot with primary FIRE DEPARTMENT and owned by ORANGE COUNTY FIRE AUTHORITY. Beware of potential COMBUSTIBLE LIQUIDS HAZMAT AND HIGH PILED COMBUST STORAGE.
Logistics Support through the power of GIS
Contact:

Jeff Dulin  IAFC Strategic Adviser
jdulin@iafc.org
704-619-2714
1. How would you apply NIMS principles and concepts in the GCC?

2. Do you know what response resources neighboring companies and agencies have to request in an emergency?

3. Would a system like NMAS help you to achieve a more efficient and effective response?