

MUTUAL AID INFORMATION REQUIREMENTS

Summary Report

January 23, 2017



Developed in cooperation with the US Department of Homeland Security (DHS) Science and
Technology Directorate (S&T) under agreement 2016-ST-108-FRG009

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I. Background

Mutual aid is critical for unified response to and recovery from emergencies and planned events. It facilitates rapid activation, deployment, and employment of resources in affected areas. Many mutual aid, public safety, and non-governmental organizations that engage in mutual aid operations have information management systems that support identifying, deploying, and managing mutual aid resources. Diversity of information management systems is critical to supporting existing mutual aid workflows. However, there is consensus among many public safety organizations that real-time/near real-time information exchange is a critical requirement for a national mutual aid system operating environment (a system of systems) that supports unity of effort. Unity of effort requires a curated environment that operates from integrated common operational information, interoperable data exchange to support sharing of information across existing and emerging platforms, and the ability to automate unique views based on operational roles.

A persistent challenge to achieving this environment is identifying what common operational information needs to be shared among all organizations involved in mutual aid operations. Common operational information refers to timely, reliable, and accessible sources of current operational and preparedness information to support decision making during operations.

To address this challenge, leading state and local stakeholders in mutual aid operations and technology convened for a one-day work session. The summary below captures preliminary results and information identified that can inform establishing a unified and curated mutual aid operating environment. Work session participants are listed in the table below. Participants spanned a broad range of local, state, and national stakeholders representing an expansive perspective, including participation by the national associations that own and operate mutual aid technology systems.

Name	Position	Agency	Perspective
Michael Barakey	Fire District Chief	VA Beach Fire Department - VA USAR Task Force II	Local / National
Danjel Bout	Assistant Director, Response	California Governor's Office of Emergency Services	State
Richard Butgereit	Chief Information Officer	Florida Division of Emergency Management	State / National
Jeff Dulin	Director, Research Center	International Association of Fire Chiefs (IAFC)	Local / National
Justin Kates	Emergency Manager	City of Nashua, NH	Local
Kim Ketterhagan	Advisor	Emergency Management Assistance Compact/National Emergency Managers Association	State / National
TJ Lyon	Advisor	Florida State Fire Chiefs Association & International Association of Fire Chiefs (IAFC)	Local / National
Lee Schnell	Section Administrator	Texas Division of Emergency Management	State
Jill Saligoe-Simmel	Advisor	National States Geographic Information Council	State / National
Kim Zagaris	State Fire & Rescue Chief	California Governor's Office of Emergency Services	State

II. Summary of Findings: Information Requirements for Effective Decision Making

The first part of the work session provided a series of mutual aid governance briefs and incident rewinds examining outcomes from recent use and management of mutual aid. This provided participants with a common understanding of the breadth of mutual aid. It also provided operational context around more recent events that relied upon all levels of mutual aid. This was followed by a facilitated discussion focusing on the following question:

- What information do you need for effective decision making in an event requiring mutual aid?

Through the dialogue and exchange about recent incidents, the participants developed a list of more than 30 discrete information requirements that were identified as being common and critical when making decisions during any type or scale of incident. The dialogue and identification process involved the following steps:

- Participants documented decisions needed during an incident regardless of type, scale, or timing.
- Each participant captured his/her decision points on sticky notes.
- Decision points were then aggregated by the participants into logical groupings of like items.

This discussion was followed by a prioritization activity where participants reached consensus on the top five (5) information needs in two categories defined below. The delineation of information against these two categories is important since the origin, governance, structure, and management of these information points are different between categories, and as such they have different information sharing and exchange considerations that must be accounted for in this effort.

- **Situational Awareness Information:** Information requirements necessary for general decision making throughout the lifecycle of an event. For events requiring mutual aid, event specific information should be shared by affected communities to entities providing (or considering providing) resources/capabilities in support of response and/or recovery efforts.
- **Resource Information:** Information requirements about resources or capabilities being requested or offered during an event requiring mutual aid support. This information may be needed prior to, during, or after an event.

Provided below is a summary of the highest priority common operational information results for situational awareness information specifically. The list below is not ranked in order of priority.

Situational Awareness Information Point	Description
1. Event scale	This point refers to event complexity, extent, and general location. It is an initial information point needed as soon as available, even if it is a preliminary determination of event location and extent based on best available data or just-in-time/predetermined planning assumptions immediately following an incident.
2. Event forecast/prediction	For notice events, such as hurricanes and planned events, assumptions and predictions are commonly used to assess event magnitude and severity. This includes forecasting consequences to areas directly affected and potential cascading consequences to/from neighboring communities.
3. Event magnitude	For both notice and no-notice events, magnitude is generally assessed within 0-12 hours of initial incident. By about 24 hours, the magnitude of the event has typically been ground-truthed and decision makers are provided with updated consequence analysis.
4. Demographic trends	Key demographic indicators within affected areas are critical information points for both notice and no-notice events. Demographic information for aiding decision making is not just basic population and number of households data. This information must go deeper to include trends and other factors such as primary languages spoken, socio-economic/income brackets, populations with access or functional needs, transportation dependencies, and analysis of commodity and support service requirements based on demographic trends.
5. Critical Infrastructure Impact	No later than 24 hours post incident, decision makers need to be provided with information regarding effects on critical infrastructure. This specifically relates to impacts on community lifelines such as: transportation infrastructure, electricity, communications, health systems, potable water, sewer/sanitation, and others. Updates to this information should be provided on a regular basis, but updated once a day minimally or as additional information becomes available.

Participants also discussed differences in situational awareness information needs for notice versus no-notice events. For notice events, situational awareness can begin to be established in advance and decision makers properly informed based on incident forecasts and predictive analysis. For notice events that are forecasted to have consequences requiring support beyond a community’s own resources, this information should be shared with mutual aid partners prior to an event. Additionally, this information should be routinely updated and briefed on a designated cycle throughout events extending over multiple days to ensure decision makers maintain an accurate perspective on the event as it evolves. The group discussed the importance of being able to share situational awareness information with neighboring communities outside of affected areas, as well as with agencies that may

provide mutual aid. The timing for sharing situational awareness and other information with mutual aid partners varies depending on whether it's a notice versus no-notice event.

Additionally, participants discussed information needs about resources and capabilities when preparing for and making a mutual aid request. For this discussion, participants were asked to focus first on the perspective of being the decision maker requesting resources and second on the perspective of the resource provider. The list below is not ranked in order of priority.

Resource Information Point	Description
1. Resource kind/type	The most critical information point resource requestors need to know when assessing if a resource can fulfill the necessary capability is the resource kind & type. This information should be consistent with NIMS resource typing definitions. Additionally, this information should be maintained by resource owners as an integral component of their preparedness efforts, which facilitates readiness. This information should be available prior to an event and is required within 0-12 hours from initial incident.
2. Resource response availability	The next most important information point for resource requestors is the response availability of a given resource. This relates to determining if the resource is fully available now and for what type/level of mutual aid.
3. Deployment time	This information point is critical for resource requestor to select/accept a given resource. The requestor needs to know how long (or how fast) it will be until the resource arrives at staging and can be employed in operations. This point includes variables associated with time to deployment and travel time to the assigned area.
4. Resource cost	The estimated cost of a resource and identification of "responsible party" with fiscal obligation to pay for the resource is also a key information point requestors need prior to accepting a resource.
5. Resource readiness	Status of a resource and its readiness to deploy is also a critical information point for requestors. They need to know if a resource is already deployed, available for request, in-service, out of service, etc. This is information needed in the first 0-12 hour operational period in order to determine which resources to request and/or offer for potential deployment. In the case of forecasted noticed events, resource readiness information should be pre-determined.

Below is a simplified breakdown of the primary resource information needs commonly used when making mutual aid resource requests.

- C - Capability (what you need it to do)
- S - Size (physical size descriptor)
- A - Amount (how many you need)
- L - Location (where it will be delivered)
- T - Type (NIMS Type or what it is)

- T - Time (when do you need it and for how long)

After identifying and categorizing decisions needed for mutual aid operations, participants engaged in a discussion regarding time-thresholds for resource information points and for different levels of mutual aid. There was consensus that these top five (5) resource information points would follow consistent time thresholds at each level as follows:

- Intrastate Mutual Aid: 0-12 hours
- Interstate Mutual Aid: 24+ hours
- National Mutual Aid: 48+ hours

It should be noted that International mutual aid was also discussed, and associated time thresholds for mutual aid supported by existing routine agreements, such as with Canada, follows time thresholds similar to that of interstate mutual aid (and in some cases among intrastate in border communities).

III. Conclusion and Next Steps

This work session successfully identified common operational information requirements needed to support decision making for requesting, providing, and managing mutual aid during both notice and no-notice events. There was discussion by some participants regarding the potential to look at information points for specific types of incidents, however the work session was intentionally designed to take an all-hazards approach. NAPSG Foundation will be conducting a series of regional workshops around flood-specific decision making, and the findings will be cross-walked with results outlined above.

An initial next step is to map specific operational data sets (at the attribute level) to each of the top 10 information points presented above. This mapping and alignment effort is currently underway and is critical in defining more specific guidance on priority common operational information required to support a unified effort in increasing preparedness and operational readiness for all types and levels of mutual aid nationwide.

Findings contained in this preliminary report, as well as next steps defined above, will be used by NAPSG Foundation and partner organizations in follow-up and concurrent activities focused on mutual aid technology interoperability and information exchange.

Activity	Timeframe
Participants to review and provide input on Summary Report	01/15/2017
Finalize Summary Report	01/31/2017
Selected participants will be requested to participate in Resource Management Dashboard project	January-March 2017
Participate as active members on the Planning Team for the full-scale Mutual Aid Technology demonstration/exercise	February-June 2017