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Editor's Notes

By James D. Hessman, Editorial Remarks

Despite insurrections, riots and revolts, civil wars, and other conflicts both within nations and between nations – social media and various other forms of modern communication are bringing the nations closer together. One result of these major advances in communications, and other technologies, is that news – both good and bad – travels fast. A citizens uprising in Syria, for example – followed by a military crackdown – can be seen in real time in Washington, D.C., or in other parts of the world. Next month, literally billions of people will be watching the Olympic Games in London – also in real time. Perhaps the most beneficial result of these and other technological breakthroughs is that, in the United States, for example, cities, states, and entire regions of the country are now talking to one another more often, exchanging ideas, learning to plan together, and working more closely with one another than was ever before possible.

The eleven distinguished authors in this month's printable issue of DPJ discuss these and other changes, both political and practical, that illustrate the unprecedented advances in crisis management that also are taking place in many nations throughout the world. Willy Steenbakkers leads off with an authoritative presentation of the "three principles/three levels" approach used by The Netherlands to cope with sudden disaster or other emergencies. In contrast to Holland's relatively compact geographic area, Canada is huge and more sparsely populated – not quite 35 million citizens distributed throughout ten provinces and three territories. It is also going through some major climatic changes (20 recent tornadoes in just one day), as John Saunders reports.

Christine Thompson also looks at the global weather pattern and notes that the floods that devastated Brazil and Australia in January 2011 were followed less than a month later by: (1) a massive blizzard that shut down Chicago, Illinois; and (2) a no-warning earthquake in Christchurch, New Zealand. (The emergency responders in both cities tweeted numerous helpful suggestions back and forth during those twin crises.)

This issue includes several other closely related articles. Stephen Grainer analyzes the particulars of the U.S. National Incident Management System and points out the similarities (and some differences) with other NIMS-like programs and policies of U.S. allies. Timothy Beres discusses the spectacular and continuing growth of the social media and their impact (usually but not always beneficial) on emergency-response operations. Dennis R. Schrader analyzes the numerous intricacies involved in the public-private partnerships that serve as the political and organizational foundation of the U.S. Homeland Security Enterprise. And Corey Ranslem looks beyond mere land boundaries in an encouraging report on how cruise liners and other ships at sea are improving both their training standards and their ability to respond, quickly and effectively, to emergencies "one thousand miles from nowhere."

Also, Joseph Cahill discusses a few practical realities in the field of international responses – involving passports, for example, some possible legal restrictions, and the need, as always, for advance planning. Christopher Mailliard adds another gleam of sunshine in a "local report" on the decision to add emergency management courses to the high-school curriculum in Arvada, Colorado. Finally, Vernon Herron and Michael Vesely top off the issue with an insiders report – one of importance to all Americans – on the mutual-aid and assistance agreements, followed by practical operations and exercises, between and among the scores of political jurisdictions, and private-sector organizations, that make up the National Capitol Region (NCR – Washington, D.C., and the numerous Maryland and Virginia cities and counties that border the nation's capital).

About the Cover: Dramatic iStock photo of "World Nation" flags blowing in the wind suggests an encouraging spirit of global togetherness. However, there are still numerous political, philosophical, and economic differences between and among nations. When a natural disaster strikes, though, and in other major emergencies – as this issue of DPJ points out – most nations do cooperate and work together by offering generous assistance and helping their neighbors in many other ways.

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Crisis Management: The Netherlands Approach

By Willy Steenbakkers, Emergency Management

The Netherlands' current state of crisis management is the result of several large incidents that occurred during the last decade of the 20th century. These incidents influenced crisis management – disaster relief, response, and recovery – and led to some legislative consequences, including passage of the nation's Safety Regions Act (2010), which distributes the Netherlands' emergency services into 25 territorial units.

Another consequence was that the role of the mayors responsible for the safety regions – i.e., the territorial units of emergency services and public health services – was redefined, as was the role of the safety regions themselves. Professionals now are in charge of the coordination.

Another change was that the coordination previously provided by provincial authorities was replaced by coordination at the national level. The coordination responsibility now falls on the Minister of the Ministry of Security and Justice, who is assigned an executive mandate that keeps him or her in direct contact with the prime minister and other relevant ministers.

Three Key Principles That Guide Crisis Management

Three underlying principles are the key components supporting the National Crisis Management Structure of The Netherlands. First, crisis management is carried out via a bottom-up approach. When a disaster or crisis affects only one municipality, the local mayor is responsible. However, if a disaster extends to more than one municipality, the coordinating mayor of the safety region is also immediately responsible, and is vested with decision-making powers. Because the safety region and police region overlap, the coordinating mayor also serves as head of the police region.

The second principle mandates that the structure be divided into three levels – national, regional, and municipal – that work in close relationships with one another on all aspects of decision making, the sharing of operational information, capacity management, and crisis communications. Only when the five national interests – Physical Security, Economic Security, Environmental Security, Social and Political Security, and Territorial Security – are threatened does the Ministry of Security and Justice – in this case, the National Crisis Center (NCC) – step in to coordinate.

The third principle requires that, on each level, crisis management must be a multidisciplinary effort. This means that ministries on the national level and operational organizations on the regional and municipal levels have a shared responsibility in mastering the crisis and working together in multidisciplinary units.

Three Varying Levels of Responsibility

The "Three Principles" are paralleled, for operational purposes, at three levels of governmental responsibility – Municipal, Safety Region, and National. Following are brief descriptions of the responsibilities assigned to each.

Municipal Level – Action Centers and the LCMS: At the scene of a crisis incident, the operational commanders of fire and rescue brigades remain in charge. The "Commander on Scene" always reports to the Municipal Operational Team, which consists of representatives of the emergency services (fire brigade, ambulance, and police services) and of the municipality, and is headed by the mayor. In addition to the Municipal Operational Team, an information manager and a crisis communications officer are assigned. Representatives from each service are supported by their own action centers when and where specific tasks can be performed: (a) for the police, an action center for mobility; (b) for the fire brigade, an action center for hazardous materials; (c) for the ambulance service, an action

center for the reserving of hospital capacity; and (d) the municipality itself, for the registration of casualties.

During an incident, the information manager is responsible for gathering all necessary information from the organization and entering it into the LCMS (*landelijk crisismanagement systeem* – the Dutch national crisis management system). From this information, a real-time operational picture can be derived to support decision making not only on the ground but also throughout the process. The LCMS is also used on the regional level and, through an interface, with the national information system used at the National Crisis Center. By providing real-time status information to both the municipal and regional levels, the volume of telephone calls is reduced, thereby preventing the system from overloading.

Using the information collected by the information manager, the crisis communications officer is responsible for supplying necessary information – updates about the

National Crisis Management Structure

- National Operations Center
- Ministry of Security & Justice
- National Crisis Center
- Departmental Crisis Center (DCC)
- DCC
- DCC
- Safety Region
- Regional Policy Team
- Regional Operational Team
- Action Centers of Multidisciplinary Partners
- Municipality
- Municipal Policy Team
- Municipal Operational Team
- Commander on Scene
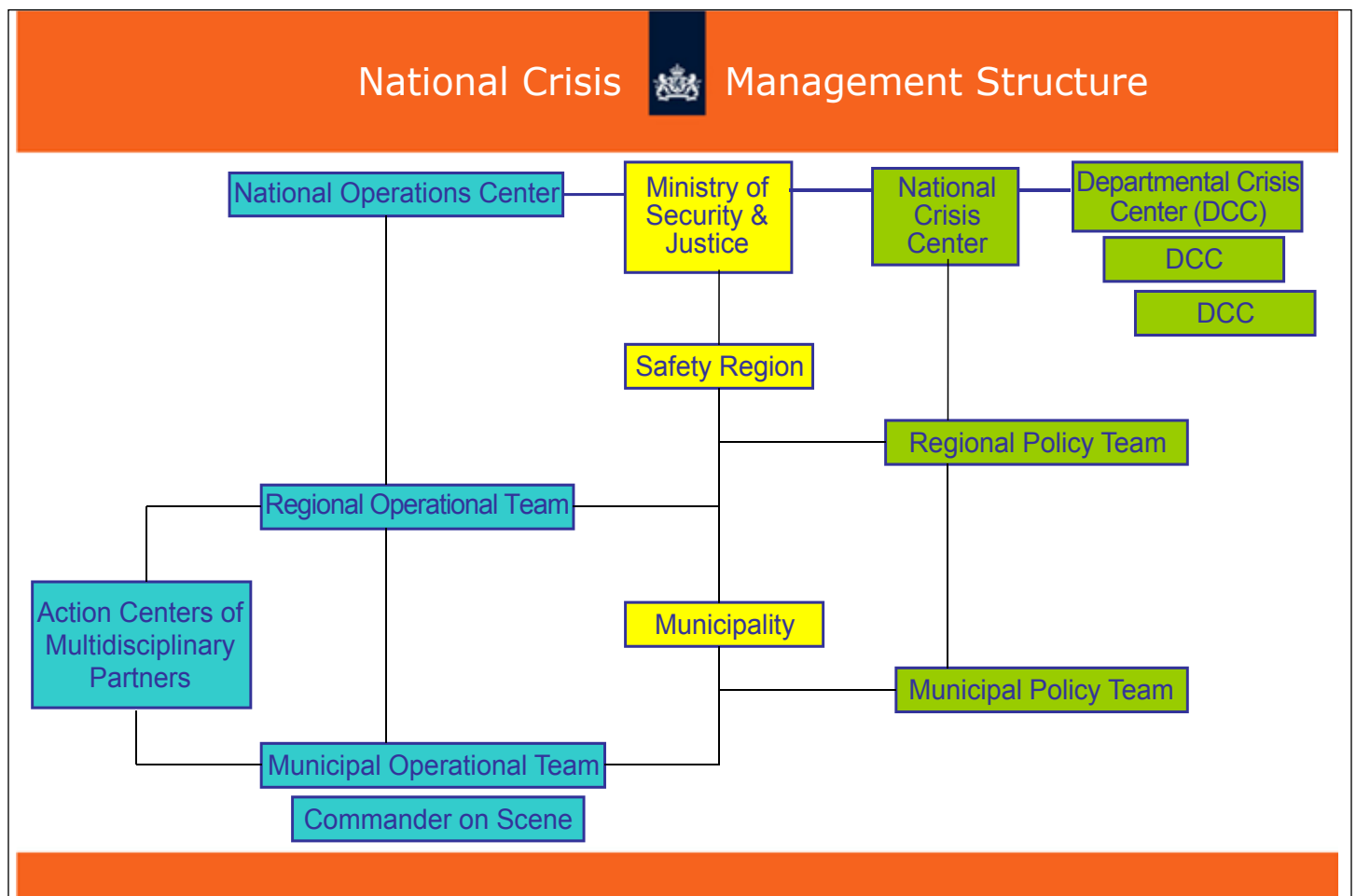
event, advice on what to do next (calls to action) – to the public and to the media. The crisis communications officer is often in direct contact with his or her colleagues at the national and regional levels.

At this same level, decision making is the responsibility of the Municipal Policy Team, which is composed of the same representative base as the Municipal Operational Team. The LCMS enables the other, more senior, levels to remain informed of the decisions that are being made and to determine if they should provide additional assistance. (If the affected area covers more than one municipality within a safety region, the safety region level steps in to action.)

Safety Region Level – Liaison & Operational Responsibilities: The mayor of what is considered to be the "most important" municipality in the region, and head of the police region, is also the "president" of the safety region and head of the Regional Policy Team. The mayors of all municipalities within a safety region are members of the Team as well. The safety region regroups the emergency services and the public health authorities. Each safety region has liaison officers assigned to work with other operational organizations, such as: (a) the Organization for National Infrastructure (for the highways, major waterways, and large navigation channels); (b) the Water Boards (regional water authorities); and (c) the regional military command.

The Regional Policy Team and the coordinating mayor of the safety region jointly direct the relief operations. On the operational level, a Regional Operational Team is charged with management of the disaster. In effect, the Regional Policy Team and Regional Operational Team carry out the same tasks and are structured in the same multidisciplinary composition as the Municipal Policy Teams and Municipal Operational Teams – but on a regional scale. The transfer of responsibility from the municipal level to the regional is relatively simple because both levels use the same information system (LCMS).

There are three particular situations in which the regional authorities will transfer management of a disaster to the national authorities:

- The Minister of Security and Justice specifically mandates that the management be assumed by the national authorities from the regional authorities;

- Emergency legislation dictates that a competent authority assigned at the national level should assume the management of the disaster response; and/or

- The affected area extends beyond a single safety region.

The National Level – The Linking Pin & An Emphasis on Coordination: On the National level, the NCC of the Ministry of Security and Justice is responsible for national coordination during major disasters and serves as the National Point of Contact for international organizations such as the European Union, the United Nations, and NATO (North Atlantic Treaty Organization). In addition, each of the Netherlands' 11 ministries has its own Departmental Crisis Coordination Centre. During a disaster, the representatives of those ministries convene at the NCC to take their place in one of the three decision making bodies: (a) the directors of the NCC and Departmental Crisis Coordination Centre (DCC); (b) the Director-Generals of the different ministries represented (ICCB); and (c) the Ministers themselves (MCCB). In ways comparable to the modes of operation followed at the regional and municipal levels, all decision-making units are supported by crisis

communications officers and information managers. The decision-making units also can rely on specific advice provided by national expertise organizations – for example, on topics related to nuclear threats, pandemics, flooding, or cyber concerns.

The National Operations Center serves as the linking pin for the national coordination of operational capacity by, among other things:

- Advising the government if and when demands for operational capacity conflict in any important way;

- Organizing the effective and efficient deployment of emergency personnel and services in the event of a disaster, crisis, or large-scale operational incident; and

- Coordinating international assistance – liaison officers of the emergency services and of the Army are based permanently at the National Operations Center.

To briefly summarize: The Netherlands' national authority for crisis management is made up of three major components: (a) the administrative process (decision making and information); (b) the operational process; and (c) crisis communications. On all three levels – municipal, safety region, and national – units are responsible for executing their assigned tasks in close cooperation with one another. These units are the basic fuel, more or less, that makes the system run – both effectively and efficiently.

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For additional information on:
The Netherlands Ministry of Security and Justice, visit
http://www.government.nl/ministries/venj

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International Medical Missions: Preplanning Essentials

By Joseph Cahill, EMS

When a hurricane, tsunami, earthquake, prolonged drought, or other disaster happens halfway around the world, the first question many responders ask is, "How can I get there and help?" That question should in fact be asked before the disaster even happens. There is a huge amount of pre-planning required – involving logistics, equipment, and personnel – for response efforts to be successful. For example, because many individual responders do not possess the financial resources needed to make what might well be an open-ended journey, those who feel drawn to the cause must find other ways to fund their response efforts.

Becoming a member of an organized team or group is perhaps the quickest and most efficient way for medical professionals to lend their skills to international disaster recovery efforts. Well-known international humanitarian organizations such as Doctors Without Borders (headquartered in Geneva, Switzerland) and the International Medical Corps (a privately funded non-government organization based in Los Angeles, California) already accept properly credentialed volunteers for missions of various lengths. The National Disaster Medical Service (NDMS) – an agency of the U.S. Department of Health and Human Services – also uses U.S. medical personnel, and other professional responders, to cope with domestic disaster-response missions.

Each of these agencies possesses the resources and expertise needed to address the logistics and other non-medical aspects of various disasters, which means that individual volunteers can focus their efforts where they are most needed: on the medical care itself.

The Proper Documents & The Right Equipment

When planning for an international medical response, passport and other travel requirements remain in force – even when traveling for a good cause – so passports and visas must be readily available. According to the U.S. State Department website, the full processing time for obtaining a passport is 2-3 weeks (expedited service is available at an additional cost), but might be longer when demand is high. For medical volunteers, it is important not only to possess the proper documents but also to consider potential closures resulting from: (a) government-imposed restrictions to keep outsiders away; and/or (b) functional blockages, such as disrupted train schedules, road closures, and/or heavily damaged piers and airports.

During routine events, there are numerous rules and regulations already in place – designed to protect and ensure the integrity of the responders as well as the health of the patients. Various rules of law, to cite the most obvious example, protect patients from receiving medical care from persons – again, no matter how well motivated – who have not been properly trained to provide such care.

These laws are supplemented by secondary "Scope of Practice" laws that define the minimum training and skill levels required for specific types of treatment. The credentialing of disaster medical staff will help protect both the patient and the community from unqualified practitioners. The truth is, unfortunately, that disasters of all types frequently attract people who may genuinely want to help – and may also be willing to provide care well beyond their own actual skill levels.

Protecting the Supply Chain

To provide an additional layer of protection against those operating outside their own personal skill levels, medical equipment and medications are controlled and can be legally possessed only by certain classes of practitioners. In a nation where the rule of law is still functioning and the legal safeguards needed are still in place, medical equipment, operating tools, and medications are often restricted. Obtaining the right even to possess medications and medical equipment in another country can be a complicated process. Individual volunteers, however well-intentioned, who seek to bring medications into another country may be subject to fines and/or arrest if they have not gone through the legal and administrative steps required.

In the case of an NDMS response within the United States itself, medical licenses have been federalized and thus allow qualified responders to provide medical care and possess medications in any state of the union. Providing for the safety and security of staff and supplies is a significant task. Partnering with law enforcement – either from the host country or from the responder's own country – allows medical staff to concentrate their own efforts primarily on caring for survivors, while other professionals maintain the safe environment needed for that care to be effective.

No medical response is totally without risk – to the patient, to the responder, and to the community. It might be a better world if people who are simply trying to help were shielded, at least partially, by their good intentions – but that is not and probably should not be the case. Therefore, a minimum amount of insurance is needed for: (a) the responder; (b) any significant equipment involved; and (c) liability for the care provided.

An oversight organization can provide many of the legal and practical necessities, including those mentioned above, for the individual provider. The same organization also can provide helpful guidance in carrying out tasks that only the individual volunteer can do – obtaining a passport, for example. Human nature being what it is, each day there are people who are strongly and sympathetically affected by the aftermath of a disaster. Many people feel driven to use their skills and knowledge to help, but organizations are there to ensure that the right help goes through the right channels to reach the survivors in need of their assistance.

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For additional information on:
Passports, visit http://travel.state.gov/passport/passport_1738.html

International Medical Corps, visit http://internationalmedicalcorps.org/Page.aspx?pid=311&gclid=CLWt3rvs0rACFYje4AodDCLtzQ or http://www.charitynavigator.org/index.cfm?bay=search.summary&orgid=8158

NDMS Teams, visit http://www.phe.gov/Preparedness/responders/ndms/teams/Pages/default.aspx

Doctors Without Borders, visit http://www.doctorswithoutborders.org/

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NIMS – Not an American Exclusive

By Stephen Grainer, Fire/HazMat

Some critics of the U.S. Department of Homeland Security (DHS) – and, in particular, of the U.S. government's National Incident Management System (NIMS) – contend that the concepts embodied in the NIMS charter do not and cannot be sustained on a high level or on the broad scale envisioned when Homeland Security Presidential Directive Number 5 (HSPD-5) was issued in 2003. In fact, the idea that the nation's emergency response resources can, or even should, use one standardized system for managing major incidents or events has been challenged several times – and for a variety of reasons.

Many of those challenges have been voiced by individuals who or organizations that do not accept the concept that the management of large and complex situations and difficult problems is still simply management – and not some loftier task. These critics also contend, therefore, that effective management differs considerably when what is being managed is a major and potentially catastrophic situation rather than routine daily operations.

In fact, there is abundant evidence showing that the management of critical incidents differs primarily in scope and intensity, rather than in the basic management concepts involved, from the "routine" management of daily tasks. The management of a major emergency, particularly as it is taught in fundamental ICS (Incident Command System) training, differs only slightly from the management of most daily office or business functions. The most significant differences usually involve the quantities and types of resources (including personnel) that might be needed. In itself, those minor differences serve as further justification for the creation and operational implementation of today's National Incident Management System.

A Closer Look &
Some Obvious Conclusions

Nonetheless, it seems reasonable to suggest that an effort should be made to determine if the core concepts serving as the foundation of NIMS might indeed have application beyond those envisioned in HSPD-5 – and established within DHS protocols. It also might be useful to determine, among other things, if any other nations use the same or substantially similar concepts as those embodied in the U.S. NIMS and ICS policy statements.

A query was initiated among the international members of the U.S.-based All-Hazards Incident Management Teams Association (principally as a matter of curiosity) to determine if there were any such similarities to NIMS outside the United States. Almost immediately, from one Australian member came a response that, indeed, the Australasian Inter-service Incident Management System (AIIMS) could be compared to the U.S. NIMS. That person, Peter J. O'Keefe, Operations Manager-Regional Commander of the Hume Region, Country Fire Authority provided anecdotal information and website links that provided marked similarities between AIIMS and NIMS. Mr. O'Keefe is one member, among many in various working groups, who are currently reviewing the AIIMS with an eye toward maintaining the system at optimal effectiveness.

This so-called "Australian Version" of NIMS was developed and promulgated by the Australasian Fire and Emergency Services Authorities Council (AFAC). The Council is composed of more than 35 Australian agencies and organizations at all levels of government, and of various private-sector and non-government organizations in that nation. Among the more important findings in the Association's review of the AFAC's organizational structure are that: (a) unlike the U.S. Department of Homeland Security, AFAC is *not* a government agency per se; and (b) its organizational composition consists largely of non-governmental entities.

Obviously, AFAC does not have "regulatory" or governmental authority itself but, rather, represents the combined wisdom of a fairly broad range of organizations. In addition, it is worth noting, the AIIMS was created as a product of collaborative efforts between and among not only Australian organizations but also with their counterpart agencies across the Tasmanian Sea in New Zealand.

More specifically, according to the AFAC website, the AIIMS is primarily "an Incident Management System that enables the seamless integration of activities and

resources from multiple agencies for the resolution of any emergency situation. It operates effectively for any type of incident, imminent or actual, natural, industrial or civil, and many other situations in which emergency management organizations are involved."

The Wildfire Beginnings Of an Ingenious Initiative

Somewhat ironically, AIIMS was created in 1989, some 14 years prior to creation of the U.S. NIMS. Thus, one could speculate that the American NIMS might be a mirror image of the AIIMS, rather than the opposite. Moreover, there are certain other relationships that also should be recognized. Notably, one important linkage between NIMS and AIIMS is their common heritage as doctrinal relatives of the U.S. National Interagency Incident Management System (NIIMS), usually considered to be a product of American "ingenuity." The NIIMS itself, though, is an organizational offshoot of the National Wildfire Coordinating Group (NWCG), an organization – much in the news recently because of the wildfires in Colorado and other states – composed principally of U.S. government land-management agencies and the National Association of State Foresters (NASF). Moreover, the NWCG itself is a quasi-government entity that works closely with the U.S. Federal Emergency Management Agency (FEMA), particularly since the creation of NIMS by HSPD-5.

From a historical perspective, the principal motive for the creation of both NIIMS and, later, AIIMS was to improve the management of wildfire emergency incidents. The need for NWCG and NIIMS became obvious four decades ago after the tragic series of wildfires that resulted in the calamitous losses of life, property, and natural resources in the 1970s. Many of those losses could be traced back to the inefficient management of resources – with "ineffective management" often cited as the key concern. The creation of NIIMS resulted from a collaborative effort by NWCG

Although incident management systems in the U.S. and Australia have different names, they have many similarities and share the same operational principles. The "management" of incidents is the goal, and both countries seem to have a firm grasp on how to do it.

agencies to improve the effectiveness of its member agencies in their individual and collective efforts to fight major wildfires. Not surprisingly, the creation of AIIMS was initially intended to result in the same type of outcome.

More recently, the NIMS has been adopted to expand the principles of effective management for use in "all-hazards" incident management circumstances. Once again, the key operational goal for all three systems is to provide effective "management." Although tactical operations often differ between types of incidents, the fundamental principles of management used in coping with such incidents do not change in any significant way.

Common Operational Principles With Relatively Minor Differences

In review of the core guidelines of all three incident management systems, three common operational principles are evident: (a) Management by Objectives; (b) Functional Management; and (c) Span of Control. Of course, there are some minimal differences in wording and nomenclature between the three systems when referring to these commonalities. However, these relatively minor differences can be readily reconciled. For example, in the AIIMS policy statement, Management by Objectives is described as being intended to ensure all incident personnel are working toward one set of objectives that "the *Incident Controller* [emphasis added], in consultation with the Incident Management Team, determines the desired outcomes of the incident. These outcomes, or incident objectives, are then communicated to everyone involved.… At any point in time, each incident can only have one set of objectives and one Incident Action Plan for achieving these." Except for the nominal distinction in terminology between "Incident Controller" (as used in AIIMS) and "Incident Commander" (as used in NIIMS and NIMS), the mission statements of all three organizations are virtually identical.

In addition, Functional Management as codified in the AIIMS consists of five elements: Control, Planning, Public Information, Operations, and Logistics. Once again, a nominal distinction in terminology or nomenclature is reflected in the reference to "Control" vs. "Command" (as identified in NIIMS and NIMS). Another minor difference is that a "Finance and Administration" function – specifically identified in the NIMS-ICS doctrine – is missing from the AIIMS Functional Management framework. However, in the U.S. construct of tactical incident command, the Finance and Administration function is often deferred until later (i.e., in the initial operational phases of an incident).

Finally, similar to the American NIMS and ICS doctrinal foundation, the AIIMS doctrine addresses Span of Control as "a concept that relates to the number of groups or individuals that can be successfully supervised by one person. During emergency incidents, the environment in which supervision is required can rapidly change and become dangerous if not managed effectively." NIMS doctrine also stresses the importance, though, of establishing and maintaining an effective span of control. Obviously, when supervisors are unable to maintain a reasonable span of control, their ability to supervise the use of resources in tactical performance – and, more important, to safely accomplish their assigned tasks – is often severely compromised. The similarities here between the American NIMS and the Australasian AIIMS cannot be easily discounted.

Fundamental Principles & The Overarching Need for Flexibility

In a final comparative, the AIIMS Doctrine defines AIIMS itself as "a building block." As such, the Doctrine continues, "AIIMS is the building block necessary for the establishment of effective protocols for liaison and coordination across agencies having different jurisdictional roles through all stages of pre-planning, preparedness, response, and recovery." Clearly, the core concepts and principles as spelled out in NIMS and the virtually identical AIIMS concepts and principles are closely aligned.

Although some skeptics might still point out other differences in nomenclature or terminology between AIIMS and NIMS, it should be noted that another key principle of effective incident management is the elusive leadership quality known as "flexibility." Certainly, the reconciling of nominal differences in "common terminology" can more readily be accomplished if – and/or when – circumstances should ever necessitate the combined efforts of international resources.

In short, the management of emergency resources (and/or non-emergency resources) is still, and always will be, management in a very fundamental way. Whether in NIMS, NIIMS, AIIMS, or any other system, the fundamental principles and processes of management do not and will not significantly change. The so-called "American NIMS" is, therefore, not exclusively "an American thing."

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For additional information on:
AFAC, visit http://www.afac.com.au/

AIIMS, visit http://training.fema.gov/EMIWeb/edu/docs/ cem/Comparative%20EM%20-%20Session%2021%20-%20 Handout%2021-1%20AIIMS%20Manual.pdf

NIIMS, visit http://www.nwcg.gov/pms/pubs/PMS700-1.pdf

NIMS, visit http://training.fema.gov/EMIWeb/edu/docs/ cem/Comparative%20EM%20-%20Session%2021%20-%20 Handout%2021-1%20AIIMS%20Manual.pdf

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Stephen Grainer is the chief of IMS programs for the Virginia Department of Fire Programs (VDFP). He has served in Virginia fire and emergency services and emergency management coordination programs since 1972 in assignments ranging from firefighter to chief officer. He has been a curriculum developer, content evaluator, and instructor, and currently is developing and managing the VDFP programs needed to enable emergency responders and others to meet the NIMS compliance requirements established for incident management. In 2010, he was elected President of the newly established All-Hazards Incident Management Teams Association.

Canada Emergency Management – The Same, But Different

By John Saunders, Emergency Management

As one of the largest countries in the world in terms of its land area, Canada creates a geographic challenge for emergency managers. Its ten provinces and three territories encompass dense urban areas such as the City of Toronto (nearly three million residents) and remote rural areas including many "fly-in" or "ice-road accessible" communities. Most of the population lives along the nation's southern border, which is shared with the United States.

However, there are still thousands of municipalities, outside of this narrow ribbon of border, that range in size from less than a thousand residents – e.g., Greenwood, British Columbia – to densely populated cities such as Edmonton (capital of the Alberta Province), with a population of more than 800,000. Developing and providing effective and consistent emergency management services for all of these various communities is a difficult task.

Municipalities, Regions & Other Complexities

The complexity of Canada's political structure creates additional challenges. In the most basic terms, the nation's municipalities have the primary legal responsibility for emergency management. Within a region, a collection of individual municipalities work collectively to provide some common services (policing, utilities) while the individual municipality still maintains official responsibility for the town. In areas where regions are officially established, senior regional authorities are usually responsible for providing emergency social services – mass care, for example – during and after a large-scale incident, and municipal authorities are responsible for dealing with the incident itself. In other areas, regional authorities automatically step in when an incident reaches a certain level of danger.

Canada employs many of the same emergency management techniques common to other developed countries, but with the added complexity of diverse geographical and political environments. Nonetheless, through collaboration and communication, Canada continues to expand and improve its response capabilities.

Adding to these geographical and political difficulties is the fact that each province is governed in accordance with the responsibilities spelled out in its own Emergency Management Act. In some areas of the country, therefore, provincial authorities are engaged immediately in sudden times of crisis and have strong influence on how emergencies are managed. In other areas, though, the provinces become involved only when requested to do so by municipal or regional authorities.

In addition, the approach to the actual profession of "emergency management" differs from one province to another. In some provinces such as Ontario, each municipality is required by law to have a specific person – preferably a specialist in emergency management – designated as the Community Emergency Management Coordinator (or similar title). In other provinces, senior fire or police department officials serve as the on-scene managers and community emergency management professionals who run the emergency operations centers and are responsible for most other aspects of planning, preparation, and mitigation.

At the national level, Public Safety Canada is the Department with primary responsibility for all major emergencies throughout the country. During the past six months, the Department not only has been in transition but also has recently announced cuts in funding for: (a) the Canadian Emergency Management College, an Ottawa-based government-focused training facility that offers a broad spectrum of basic emergency management and high-level CBRN (chemical, biological, radiological, nuclear) courses; (b) the five highly trained Canadian HUSAR (Heavy Urban Search & Rescue) teams; and (c) the nation's Joint Emergency Preparedness Program (JEPP), which was designed to help municipalities throughout the nation prepare more effectively for local responses.

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It is still uncertain how, and how much, those funding reductions will affect response capabilities. Nonetheless, because the Public Safety Canada Department itself is still in a period of restructuring, the possibility of additional changes and/or budget reductions is somewhat uncertain – but would not be surprising.

Risks, Hazards & Vulnerable Populations

Another complication the nation faces is a broad range of natural hazards and sudden changes in temperature. Along the provinces and territories on its Atlantic coast, for example, the nation annually copes with a number of flooding incidents, and occasional hurricanes. Major cities and most municipalities in that area also must deal with severe winter weather conditions for several months each year.

Yet another difficulty that must be taken into consideration is that tornadoes, hot and cold weather extremes, and forest fires have become increasingly more common across the nation in recent years. The potential for earthquakes in western Canada is another growing concern; British Columbia authorities are using proactive mitigation and response planning to address this latter risk. Also, because neither meteorological nor geological hazards respect man-made borders, Canadian officials must collaborate with other nations – for example, their U.S. neighbors – to develop and carry out joint response plans. British Columbia officials have made the effort to learn from the expertise of New Zealand Emergency Managers, following the multiple Christchurch earthquakes. The expertise available from other nations helps Canadians avoid insular thinking, a "We have to do it all by ourselves" mentality.

As evidenced by the more extreme temperatures and significant meteorological events that the nation has experienced in recent years, it seems clear that Canada's climate is changing – how much, and for how long, has yet to be determined. However, in Ontario prior to 2009, to consider but one example, there had been for some time an average of 20-30 tornadoes each year – but on 20 August 2009 more than 20 tornadoes struck in a single day.

The potential for global climate changes is another recent concern. Research is now underway by various emergency

management students and environmental experts studying areas of drought where there was no history of it before. The potential impact on floodplains and urban development, and on animal/insect as well as human populations, caused by rising sea levels and other climate changes obviously could be calamitous. In large part for that reason, efforts are already underway to map potential climate changes in all areas of the country. The results of that effort will be used to assist municipalities across the nation in creating mitigation plans to cope with the impact of such changes.

Canadian officials also must cope with growing social and economic concerns. The nation's aging and other vulnerable populations have for that reason been receiving additional attention over the past few years. Many provincial and municipal government agencies – e.g., Emergency Management Ontario – have developed and are already issuing preparedness materials focused on at-risk residents. The necessity of responding to large-scale incidents and events that impact the poor, the homeless, and those living on social assistance has of course added an extra complexity to emergency-response plans. In addition, protecting today's larger community housing complexes during a fire requires greater resources than were available just a few years ago, and some additional planning as well.

Lessons Learned & Future Plans

Among the key lessons observed and hopefully learned from recent incident responses is the need for improved communications. Other lessons also were learned, though – some of them involving such intangibles as erroneous perceptions and personal ego. For example, during an apartment fire in 2011, more than 1,000 residents had to be evacuated. Many of them were not self-sufficient and/or were suffering from various health issues. Finding alternate housing was a difficult task, primarily because the City's social housing system was already overwhelmed. Miscommunications and a degree of paranoia led to some impoverished or mentally ill evacuees having to fend for themselves. One of the most important lessons learned from this situation was the need for responders to communicate better and more effectively not only with the residents, both during and after the incident, but also with one another.

This response also clearly demonstrated the need for an ICS/IMS (Incident Command System/Incident Management System) structure to be clearly in place and respected. Having multiple Incident Commanders (ICs) – or having each city department following its own procedures without informing or consulting with the senior IC – simply does not work. In other words, there is no place for ego during an emergency response. A clear chain-of-command process must be in place beforehand – and adhered to by all responders involved.

At present, the temptation of slipping into a "nanny-state" mode in making decisions for evacuees, particularly those already vulnerable in various ways, is evident. Although well intentioned, this mentality not only fails to build resiliency, but also inhibits the regular flow of information and further increases dependence on the government. To more effectively communicate and engage residents in the decision-making process, emergency managers can and should provide the options needed to encourage greater self-sufficiency and self-determination. A small example is when faced with limited shower space within a shelter, allowing people to schedule themselves rather than being assigned a time may help to boost the self-esteem and to preserve the human dignity of all evacuees.

Canada faces many of the same challenges as other emergency managers around the world. Building and constantly improving robust first-response capabilities throughout the country and charting a rapid evolutionary path for the profession of emergency management has adequately prepared Canadian responders to cope with most day-to-day and medium-size incidents. However, that is not the case should an unpredicted high-impact event occur. In any case, much additional work is still required to, among other things:

- Determine how the response to a multi-province emergency should be structured and managed;

- Address certain previously neglected licensing issues, to ensure that medical staff and other professionals licensed in one province will be able to provide services in other jurisdictions;

- Expedite the cross-border process with the United States to build the capability needed to move emergency personnel and equipment into Canada (or vice versa) in support of an emergency on either side of the border;

- Develop the processes needed to accept (or reject) the self-deployed teams from other nations that typically can be expected to volunteer assistance during large-scale disasters; and

- Accept and report the results from financial donations received from around the world.

Despite the numerous difficulties involved, Canada's emergency managers continue to move forward, not only embracing the "best practices" followed in other nations but also achieving numerous technological advances. Members of IAEM (the International Association of Emergency Managers) hope to soon begin professional exchanges in which emergency managers throughout North America can partner with sister communities elsewhere in the world to share their operational knowledge and experiences. This type of exchange will further expand and improve Canada's own abilities and capabilities as well as those of all participating nations.

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For additional information on:
Public Safety Canada, visit
http://www.publicsafety.gc.ca/index-eng.aspx

Emergency Management Ontario's "Emergency Preparedness Guide for People with Disabilities/Special Needs," visit
http://www.mcss.gov.on.ca/documents/en/mcss/publications/
accessibility/6453EMO_ENG_LP.pdf

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John Saunders is a private-sector Emergency Management Consultant in the Toronto area and the current President of IAEM-Canada. He recently finished a seven-year term as Provincial Director of Disaster Management and International Response for the Canadian Red Cross. Prior to assuming that position he was owner of Saunders Enterprises, where he provided business-continuity planning and health and safety training/consulting services. He can be reached at saunders2472@cogeco.ca or on Twitter @JohnMSaunders.

Emergency Responses – With No Geographic Limits

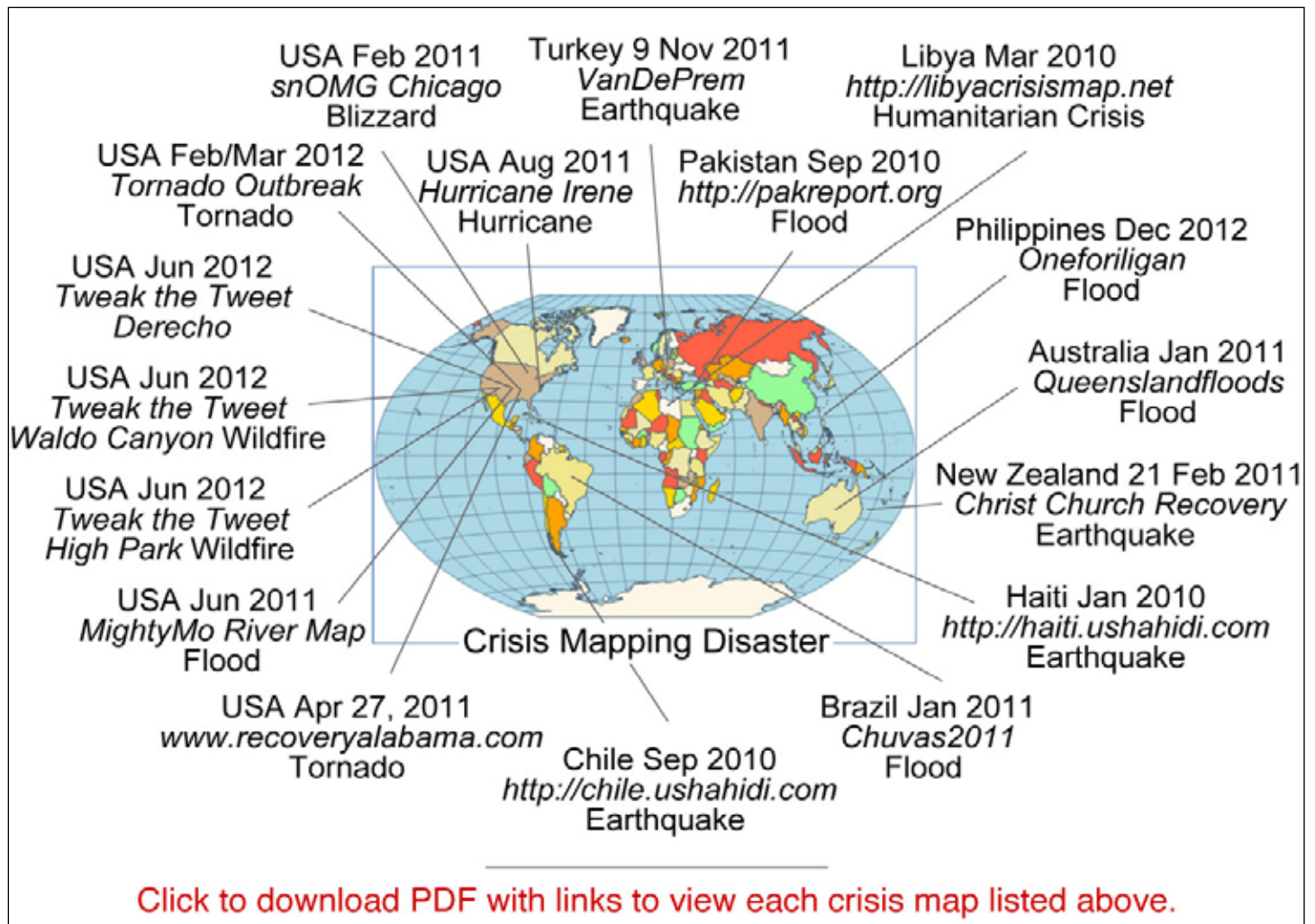*By Christine Thompson, Exercises*

During a large-scale disaster, crisis communications are critical to ensuring a fast and effective response, rescue, and recovery operation. In today's age of frequent advances in technology, organizations and individual volunteers are leveraging social media as a particularly efficient vehicle to connect those in need with those who can help. Volunteer crisis-response organizations around the globe are already acting as the conduits to connect vulnerable populations in the wake of natural or man-made disasters.

Volunteers from around the world work "virtually" together for countless hours on crisis responses and exercises. These online "virtual" teams are formed to help improve crisis communications globally. For example, in February 2011, the Midwest area (including Chicago, Illinois) of the United States was battling a relentless blizzard (nicknamed #snOMG on Twitter). Because local emergency services were overwhelmed,

volunteers from CrisisCommons (a global community of volunteers who build and use technology tools to help respond to disasters and improve resiliency and response to a crisis) and Humanity Road (a nonprofit organization – headquartered in Boydton, Virginia – of volunteers who help educate the public with critical recovery information before, during, and after a catastrophic disaster) worked online with the *Chicago Tribune*. Together they were able to: (a) Read reports submitted to a "crowd map" created, in effect, by local residents; (b) Triage the information developed; and (c) Forward that information to local Community Emergency Response Teams (CERTs) that respond to high-risk incidents.

Most of the people affected by the blizzard needed only a few simple items – shovels, for example. The key to an effective response was to connect those who already possessed shovels (and/or the other items needed) with those who needed

USA Feb 2011
snOMG Chicago
Blizzard

Turkey 9 Nov 2011
VanDePrem
Earthquake

Libya Mar 2010
http://libyacrisismap.net
Humanitarian Crisis

USA Feb/Mar 2012
Tornado Outbreak
Tornado

USA Aug 2011
Hurricane Irene
Hurricane

Pakistan Sep 2010
http://pakreport.org
Flood

Philippines Dec 2012
Oneforiligan
Flood

USA Jun 2012
Tweak the Tweet
Derecho

USA Jun 2012
Tweak the Tweet
Waldo Canyon Wildfire

Australia Jan 2011
Queenslandfloods
Flood

USA Jun 2012
Tweak the Tweet
High Park Wildfire

New Zealand 21 Feb 2011
Christ Church Recovery
Earthquake

USA Jun 2011
MightyMo River Map
Flood

Haiti Jan 2010
http://haiti.ushahidi.com
Earthquake

Crisis Mapping Disaster

USA Apr 27, 2011
www.recoveryalabama.com
Tornado

Chile Sep 2010
http://chile.ushahidi.com
Earthquake

Brazil Jan 2011
Chuvas2011
Flood

Click to download PDF with links to view each crisis map listed above.
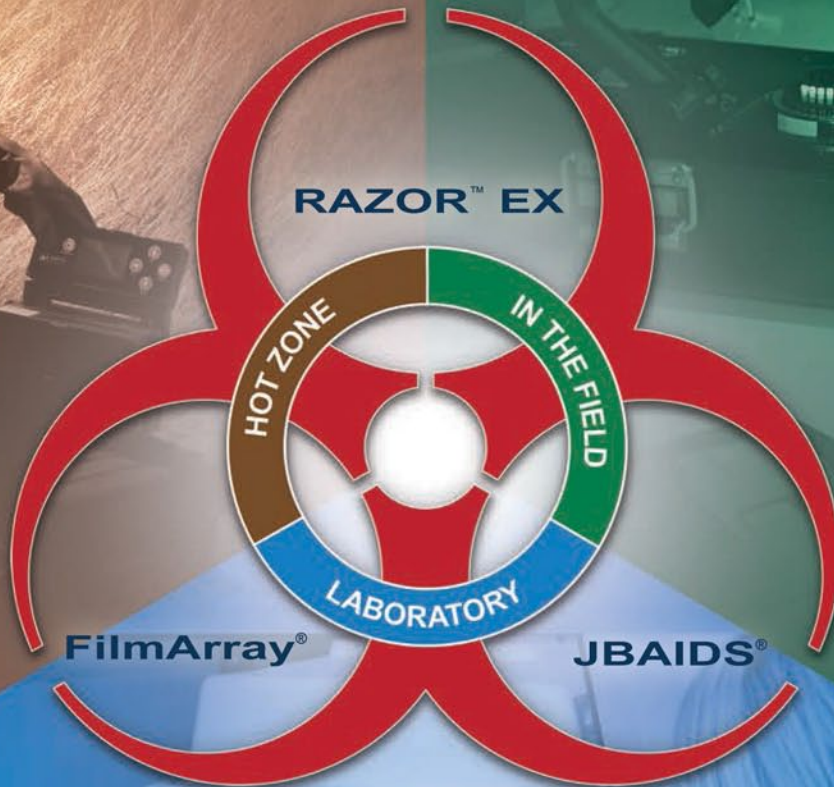
them. By facilitating that effort, the online response teams empowered members of the community to help one another. Similarly, urgent health-related messages – involving wellness checks, for example, and/or the need for transportation to local hospitals for people requiring medical procedures – were relayed to CERT members to provide assistance.

Polar Opposites (Almost) – Only a Mouse-Click Away

Coincidentally, as the onsite and online volunteers were helping those battered by the Chicago snowstorm, a 6.3-magnitude earthquake hit Christchurch, New Zealand – 8,500 miles away. A different type of shovel team was suddenly born: the Student Volunteer Army of Christchurch, New Zealand, whose motto was aptly crafted as, "We dig CHCH. You should too."

#CHCH is the short term, or "hashtag," used in Twitter to identify tweets that pertain to Christchurch, New Zealand. By using an online crisis map to prioritize their response, the Christchurch students helped to move mountains of debris into safe off-road locations and to help in numerous other ways. The online support provided by creating the crisis map and assisting the community's professional responders in many other ways helped to disseminate information faster, enabling the professionals as well as the volunteers to respond more quickly, and more effectively, to the many cries for help.

Catherine Graham, Vice President of Humanity Road, summarized in one sentence what happened in the two simultaneous events: "We had two large active events in progress and literally at both ends of the world." In a large-scale event, she continued, "This kind of digital volunteer support is key to improving the disaster response chain of care. When done effectively, digital volunteer systems help local populations by fostering a neighbor-helping-neighbor system, reducing demands on local emergency services, providing a portal to help guide the public to solutions, and helping to speed the recovery process – all with just a click of a mouse."

RIMPAC & Pacific Endeavor – Planning for Future Crises

Planning for and participating in exercises that include the use of new communications techniques such as social media and crisis mapping is already an important step forward in reducing the steep learning curve typical of most traditional disaster response operations. Additional advances already are being made – this year, for example, in the biennial Rim of the

Pacific (RIMPAC) multinational military exercise that started on 10 July and is scheduled to end on 1 August. For the first time in the history of RIMPAC, held in the sea and airspace in and around the Hawaiian Islands, a Humanitarian Aid/Disaster Response (HA/DR) event, running from 15 July to 21 July, was included in the exercises.

The growing process will continue next month, when a multinational communications interoperability exercise, codenamed Pacific Endeavor, will be hosted by Singapore and carried out in cooperation with the U.S. Pacific Command (USPACOM). The aim of that exercise is to enhance interoperability between participating nations, non-governmental organizations (NGOs), and the international humanitarian community to enable greater collaboration on communication systems in humanitarian assistance and disaster relief operations.

Establishing common operational datasets for the transportability of key disaster information is important for improving recovery efforts and mitigating losses. Through the use of technology and digital volunteers, these exercises will help improve the processes used for sharing data among the many response organizations likely to be involved. By assisting in the creation and population of data on crisis maps – filtering, categorizing, and geo-locating incidents – organizations such as Humanity Road are responding to modern disaster situations with the most modern means of communication now available.

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For additional information on:
The Chicago, Illinois, crowd map, visit https://chicagosnow.crowdmap.com/main

The Christchurch, New Zealand, crowd map, visit http://wiki.crisiscommons.org/wiki/Christchurch_NZ_Earthquake_21.02.2011

The Student Volunteer Army in Christchurch, visit http://www.stuff.co.nz/the-press/news/christchurch-earthquake-2011/6774917/Student-army-wins-Anzac-award

Humanity Road, visit http://www.humanityroad.org/

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Christine Thompson is President and co-founder of Humanity Road Inc., a U.S.-based Public Charity global disaster response organization. A seasoned leader and entrepreneur whose first career was in the communications industry, she also is an experienced Red Cross volunteer who has merged her professional skills and disaster response experience to improve public communications. A member of the Department of Homeland Security Virtual Social Media Working Group, she is a frequent guest speaker and panelist at industry forums. She is also active in her Southern Virginia local community Emergency Planning Committee and local fire department auxiliary.

Shipboard Emergencies – 1000 Miles From Nowhere

By Corey Ranslem, Coast Guard

Shipboard emergencies can happen anywhere at any time, and immediate crew response is critical to a successful response. When deployed, crew members of various types do not have the same response capabilities or backup as land-based fire and police departments. There are thousands of vessels of all types on the waterways and oceans of the world. Crew members need to be prepared to handle all types of dangers that can threaten their type of vessel – including fires, floods, hazmat incidents, or medical emergencies – regardless of the vessel's location. Because of a ship's changing and often remote location, shipboard emergencies require a quick response that must usually be handled exclusively by crew members.

Crew members of cargo vessels, large yachts, and cruise ships are required to complete a number of safety-related training classes based on their own responsibilities on the vessel. Crew members, regardless of vessel type, are required to attend STCW (Standards of Training, Certification, and Watchkeeping) training sessions and refresher training. The International Convention on STCW sets the training standards (through the International Maritime Organization – IMO) for crew members worldwide.

The convention standards were originally adopted in 1978, put into force in 1984, and updated in 1995. Before the major changes incorporated in 1995, fire or flood problems on vessels could rapidly escalate into major disasters, and even small fires could spread quickly through large cargo and cruise ships – frequently causing major damage and the loss of numerous lives.

The newest revision of the convention standards (Manila Amendments) went into effect in January 2012. The new standards expand into areas beyond shipboard safety per se and include work and rest restrictions, security-related training, changes to refresher training and medical training, and new blood alcohol limits. The basic training required for all vessels is typically the same, but there are a number of additional training requirements depending on such variables as the type of vessel, company procedures, and/or union rules and requirements.

Cruise Line & Shore-Side Responses

In many respects, cruise lines are much like floating cities, and are "governed" in accordance with a plethora of crew certification and training requirements – including a number of additional safety and security trainings for cruise-ship personnel. Some of these requirements are mandated exclusively by the U.S. government, while a number of others are designated by foreign governments and the IMO. As a general rule, cruise lines do more non-required training and have more cutting-edge capabilities "than most other types of vessels," according to Ted Morley, the Chief Operations Officer at Maritime Professional Training (based in Fort Lauderdale, Florida) and a Master Unlimited Mariner himself. The ship's personnel "often receive advanced training in medical emergencies, and most ships carry a doctor and a number of nurses. Moreover, the ship's security teams receive advanced training from the Coast Guard, the FBI [Federal Bureau of Investigation], the CBP [U.S. Customs and Border Patrol], local law enforcement, and security specialists. Moreover, the ships carry some of the most advanced medical equipment – and firefighting equipment as well," Morley continued. Finally, he said, "Cruise lines are moving toward mirroring their response operations to an ICS-related model similar to [those used by] shore-side emergency response agencies."

The adaptation of the federally mandated Incident Command Systems (ICS) into shipboard operations also

helps facilitate a coordinated shore-side response if an incident on a cruise ship occurs while the ship is in port. "Shore-side response agencies need help from shipboard personnel when they respond to emergencies onboard ship," Morley pointed out, "because the [ship's] personnel know their ship better than the shore-side response agency [does]." Local agencies and shipboard response personnel should coordinate their training to deal more effectively with dangerous emergencies.

Shipboard training requirements have also changed since the major overhaul of the STCW in 1995, according to Amy Beavers, the Managing Director and Vice President of Regulatory Compliance at Maritime Professional Training. "There is more accountability with the training since the changes in 1995," she said. Crew members must now demonstrate the basic skills needed to deal with dangerous incidents. "They had classroom time and exams before 1995. Now they are also required to demonstrate [that] they understand the concepts. For example, they actually have to don the firefighting equipment in a simulator and fight a fire; they have to don their life jackets and get into the life raft in the [training] pool, which was not required before 1995."

"There are a number of skills they must now demonstrate, whereas before they just sat through lectures," she added. "That was the major change with STCW of 1995 and also a major turning point in ship design and construction."

All evidence suggests that, through improved training requirements and improved ship design and construction standards, the number of fatal ship incidents and major disasters worldwide has decreased significantly since 1995. In short, partially because of better construction, but also because of improved training, modern cargo and cruise ships are more capable than ever before of preventing catastrophic damage and/or a major loss of life due to fires and floods.

An encouraging side effect also worth mentioning is that the number of life-threatening medical emergencies involving crew members has also decreased – on both cargo and cruise ships – partly because of the advanced level of

training now available, and required, but also because of the more rigorous screening of potential crew members. "Crew members on cargo vessels receive much better medical screening to determine their level of fitness for sea duty," Beavers commented. By improving the screening methods, and being much more aware of possible medical problems, there are fewer medical issues while a ship is at sea.

Despite several recent groundings and other disasters, shipboard emergencies are not as common today as they were in the early days of maritime operations. Today's ships are better designed, and are built to survive major at-sea disasters that in years past might well have been fatal to all hands and to the ship itself. However, accidents and disasters can still happen. Being able to deal with an emergency situation before it escalates out of control requires that crew members be ready to respond to all potential hazards both quickly and effectively. As equipment and personnel change, all crew members must be trained to ensure that they not only possess the right equipment but also know how to use it. When there is no backup, and/or if the backup response is days away, a well-trained crew that responds quickly is the best and often only way to mitigate the damage and minimize the loss of life.

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For additional information on:
STCW, click on http://www.stcw.org/

The Manila Amendments to the STCW Convention, click on http://www.marisec.org/quickguide.htm.pdf

Maritime Professional Training, click on http://www.mptusa.com/

> *New revisions of the International Convention prepare maritime crews for onboard fire and flood emergencies and help mitigate the disastrous effects of such incidents. Whether in port or in the middle of "nowhere," crew members must be prepared for all possible hazard events.*

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Corey D. Ranslem, chief executive officer of Secure Waters Security Group Inc. – a maritime-security and consulting firm heavily involved in maritime training, maritime security, and a broad spectrum of other security programs in the maritime field – is the former regional manager of Federal Government Operations for Smiths Detection. He has received numerous awards and citations from the U.S. Coast Guard and other agencies and organizations active in the field of maritime security. He holds a Bachelor's Degree in Communication and Political Science from the University of Northern Iowa and an MBA in International Business from Georgetown University; he has almost 18 years of experience in maritime law enforcement and security.

U.S. Citizens: The First Line of Defense

By Vernon Herron & Michael Vesely, State Homeland News

Following the terrorist attacks of 11 September 2001, the U.S. government made numerous political, economic, and structural changes to provide greater protection for the nation as a whole. Among the most important of those changes were the actions taken to: (a) establish the new U.S. Department of Homeland Security (DHS) – and that department's Transportation Security Administration (TSA); and (b) reorganize the Federal Bureau of Investigation (FBI) as part of a broader program to better protect the U.S. homeland from additional and possibly even more damaging attacks in the foreseeable future.

Of almost equal importance is the fact that billions of dollars allocated by Congress have been invested in interoperable communications, alternate care facilities, and fusion centers. In addition, state and local police departments across the nation have created their own homeland security departments to combat terrorism within their communities. Obviously, considerable progress has been made, but all of those actions combined and billions of dollars spent still may not be enough.

Changing Criticism Into Action

The numerous post-9/11 initiatives taken over the last decade have significantly altered the daily routines of most Americans – particularly those who have gone through the much enhanced security screening at U.S. airports and numerous sports arenas. However, Hurricanes Katrina and Rita in 2005 and Hurricane Irene in 2011, as well as numerous other disasters, served as sharp reminders that increased security checks and greater vigilance by the nation's first responders will probably provide greater protection for the nation as a whole.

Recent history has amply demonstrated that: (a) various political entities can improve security significantly; but (b) government actions alone are not enough. Regardless of improved surveillance, enhanced communications, and other technological advances, individual citizens – particularly those living or working in or near a disaster site – are the real first line of response and should, in practice as well as in policy, be an integral part of effective preparedness planning.

All citizens – not only those who volunteer to serve in a local Community Emergency Response Team (CERT) and/or who have already prepared and have quick access to three-day family emergency-supply kits – have enormous responsibilities in building domestic preparedness and for that reason must stay fully informed of their potential roles on the front line of preparedness, response, and recovery. As was learned during Hurricane Katrina, total reliance on government agencies during major emergencies is not always the most effective approach.

The nation's federal, state, and local governments have a responsibility to be ready at all times to cope with both manmade and natural disasters. It is sometimes forgotten, though, that part of that responsibility consists of preparing the American people at large for situations when first responders are unable to reach and/or rescue everyone during or immediately following a catastrophe.

Those who have carefully stored enough provisions and emergency kits to care for their own families, neighbors who are willing and are accustomed to helping one another in times of crisis, everyday citizens who report suspicious activity – all are or should be powerful components of a "whole-community" approach that would substantially enhance domestic security and free up valuable resources for use elsewhere. Although some nations have a more widespread response system, the type of activities and plans that individual citizens should understand and implement is fairly universal. Personal preparedness has many commonalities that exist across different political, economic, and social divides. However, if local residents do not understand their individual roles in helping to build local preparedness – and/or fail to plan for disastrous contingencies within their own communities – no sudden outpouring of government-controlled resources will be sufficient when a major catastrophe does occur.

An increased focus on personal preparedness will help emergency managers significantly. For example, an unattended bag is found at an airport terminal. The passenger who (unintentionally, in most situations) left the bag has by his or her negligence undermined local security initiatives, and used up valuable resources. Clearing the area, sequestering and examining the bag, and ensuring that it does not contain an explosive or infectious substance, not only wastes the valuable time and material resources of law enforcement responders but can also desensitize those who witness the scene. Such false alarms could quickly lead to a general indifference the next time unattended luggage is found, and that indifference could have deadly results.

The lesson is clear. Fear and paranoia are counterproductive, and for that reason alone situational awareness should be exercised by all citizens rather than being the exclusive responsibility of professional responders. Slogans such as DHS's "If You See Something, Say Something" campaign and the clever "Zombie Preparedness" program promoted by the Centers for Disease Control and Prevention are more than mere gimmicks but, rather, calls to action – on the part of all citizens.

Personal Continuity Of Operations

One fundamental requirement assigned to U.S. government organizations by presidential directive is that they develop and promulgate their own Continuity of Operations (COOP) plans to ensure that all departments and agencies will be able to continue their essential functions regardless of the type of event or incident that occurs. Such plans would be used to respond to all types of hazards across the full spectrum of potential disasters: natural, man-made, technological, and national-security emergencies.

Similar plans do not have to be developed by individual citizens, but there are certain aspects of such plans that translate easily into the personal preparedness domain. The most important aspect is ensuring that each person takes at least some degree of responsibility for his/her own preparedness – and, by doing so, helps reduce the overall burden on first responders (who can then focus more attention on those who are unable and/or unwilling to help themselves).

Similar to COOP plans, proactive government efforts like the FEMA (Federal Emergency Management Agency) "Ready" campaign persuade American citizens at large to help in determining: (a) the essential functions assigned to each family member in times of disaster; (b) ways to ensure the continuance of those essential functions and necessities (food, shelter, power, education, healthcare, etc.) during an emergency; and (c) various contingency plans (e.g.,

designating alternate sites that can be used for housing when homes are temporarily inhabitable). By promoting concise, yet flexible, emergency plans spelling out a few basic procedures with which all family members should be comfortable, maintaining order will be easier and compliance will be greater during and after a disaster.

Throughout the United States, the emergency services systems available are, for the most part, both effective and efficient. Somewhat surprisingly, though, that efficiency raises additional

concerns. For many Americans, it is almost unthinkable that they might someday have to call for help and no one would be able to reach them (or even to hear the call in the first place). The assumption that the help needed will somehow, some way, almost automatically, be quickly available not only leads to complacency but also creates yet another daunting challenge for emergency managers. Proactive measures should be taken well ahead of time to ensure that families, individual citizens, and entire communities are as prepared as possible to take action, to protect both themselves and their families, in the immediate aftermath of a sudden emergency.

Brochures and other information literature about personal preparedness kits should be written, promoted and publicized, and made readily available, in both print and broadcast form, covering such essential topics as: potential hazards; the location of local police and fire departments; local shelter information (for pets as well as humans); the assistance available to meet the medical needs of all family members; and even provide advice and assistance on a number of legal and financial matters. The distribution and use of such plans would not only benefit the "properly prepared" families during and after a disaster, but also would enhance the reach and effectiveness of the community's trained first responders.

The National Capital Region Approach

The National Capital Region (NCR) – comprised of Washington, D.C., and the surrounding counties and cities in Maryland and Virginia – has undertaken numerous initiatives in order to enhance citizen preparedness. By using a series of focus groups representing the numerous jurisdictions involved, the NCR leadership started by defining the risks faced by constituents of the various locales and communities within the Region. The findings and information developed were then used to create a series of public service announcements that are released each year during National Preparedness Month (since September 2006).

The NCR's website now provides a wealth of information to enhance personal preparedness. One example is the "Be Ready, Make a Plan" project, which contains a helpful template for developing a preparedness plan at home, as well as a link that allows residents to sign up for Capitalert, which transmits emergency alerts (via text or email) and can also be accessed through Twitter. The FEMA Office of National Capital Region Coordination has also developed resources to assist federal employees in the development of their at-home preparedness measures. These and other materials provide

detailed in-depth information on the types of issues that employees should consider in protecting their homes. The materials were written specifically for federal employees, but anyone else who lives or works in the NCR or nearby areas would find the content useful.

Many other jurisdictions have taken at least some steps to improve the "home preparedness" of local residents, but there are several unique aspects of the NCR's approach that are still worth studying. First, the NCR used focus groups to target the risks and threats faced by all residents of the various communities in and around the nation's capital. Second, although the materials included on the NCR website are based on the use of an all-hazards approach, they also identify specific risks particularly relevant to the NCR community at large – incidents or attacks involving the greater Washington, D.C., Metro system, for example; severe winter storms; and chemical or biological attacks. Finally, the alert mechanism now in place allows users not only to access the information available through myriad avenues but also, if and when necessary, to limit the overall volume and types of information received. The concept of using multiple outlets for information – while at the same time preventing the user from being overwhelmed with too much information too fast – makes the NCR system uniquely effective, particularly in and around the nation's capital.

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For additional information on:
"The Be Ready, Make a Plan" project, visit http://www.makeaplan.org/getAlerts.htm

FEMA Office of National Capital Region Coordination, visit http://www.fema.gov/library/viewRecord.do?id=6018

FEMA's Ready campaign, visit http://www.Ready.gov

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Vernon Herron (pictured) has more than 35 years of experience in public safety and law enforcement. For the past seven years, he served as Deputy Chief Administrative Officer for Public Safety and Director of Homeland Security in Prince George's County, Maryland. Prior to assuming that post he served for more than 27 years in the Maryland Department of State Police, where he commanded the Violent Crime Strike Force before retiring in the rank of Major. He holds an M.S. in Management from Johns Hopkins University and a B.S. in Criminal Justice from the University of Maryland, University College. He also graduated from the FBI's National Academy.

Michael Vesely is a certified instructor of COOP, Incident Command Systems (ICS), and other DHS homeland security courses. He led the team responsible for rewriting the Homeland Security Strategic Plan for the NCR, and also worked as a planner for the Mid-Atlantic Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research. He holds a J.D. degree from the University of Maryland School of Law and now plays a leading role on economic security issues in the University of Maryland's Center for Health & Homeland Security.

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Lightweight Networks –
Enabling the Homeland Security Enterprise

By Dennis R. Schrader, CIP-R

Since 11 September 2001, there have been attempts to use analogous systems from the Department of Defense (DOD) to build the national Homeland Security Enterprise. Unfortunately, a pure systems approach has not produced a cost-effective national enterprise for domestic security. According to Dr. David H. McIntyre, Director of the Integrative Center for Homeland Security at Texas A&M University, the term "system" implies a central design, with someone in charge, and centrally directed toward common goals.

The Homeland Security Enterprise within a federalist model, by its nature, requires a distributed network. However, a distributed network does not lend itself well to a centrally directed systems approach.

Building Capabilities With Limited Resources

Taking this rationale one step further, the resources available to the network elements outside the federal government require that the network be low in cost, nimble, and limited in overhead, yet still capable of linking resource nodes within the network – in other words, a "lightweight network."

The advantage of fielding a lightweight network is that it avoids replicating existing resources and allows for a governance process that encourages collaboration and innovation. For example, cost-effective networks are very different from centrally directed systems – but essential to form some of the teams needed to organize and manage special-event security, large-scale celebrations, and major sporting events. As grants decline, there is a need for new strategies to continue enhancing preparedness capabilities within a resource-constrained environment.

Fortunately, these ideas are not new and have been applied over the past 25 years in the business world. They are, in effect, a specialized application of what Robert E. Quinn, Professor at the University of Michigan's Stephen M. Ross School of Business, calls an "open systems model" and "human relations model" (AMG Consulting Workshop sponsored by University of Maryland Medical System [UMMS], Ann-Michelle Gundlach and Sharon O'Keefe, Baltimore, Maryland, December 1992).

Today, most governments tend toward a control orientation that reflects the prevailing 20th-century management theory summarized as "plan, organize, control, and direct." These principles of scientific management – which came out of the industrial revolution and were developed by Frank Galbraith, an architect and builder, and Frederick Taylor, an American mechanical engineer – evolved in several ways throughout the last century. The linkage of organizational theory and classic industrial engineering, combined with the infusion of technology, has undoubtedly improved government processes.

However, the culture of control is still at work. Quinn's work demonstrates the context of the control orientation and how it can be re-framed through the use of open-system approaches to support more innovation and greater flexibility. This topic is beyond the scope of this article, but suffice it to say that the application of lightweight networks is neither theoretical nor new.

There undoubtedly should be more focus on practitioner awareness, understanding, and the sharing of trade-craft in the network collaboration model. Academic network analysis theory may inform, but will not totally solve the problems created by and evolving from the interface between governance and resources. What seems to be needed is more empirical testing of models. The "art" of building these networks requires not only patience and skill but also a determined yet flexible mindset that embraces collaboration.

One of the early reports that discussed this notion of networks was produced in 2008 by the Naval Post Graduate School. That report documented the emerging concept of "leadership through networked collaboration" and the critical success factors that seemed to underlie the formation and sustainment of such networks.

Public-Private Partnerships

There has been considerable discussion – in leadership as well as academic circles – about creating public-private partnerships as one approach to making the nation more resilient. Some of the most effective public-private partnerships – as defined by the PADRES (Publicly Accessible, Dedicated, Resourced, Engaged, and Sustainable state/territory led or supported public-private Partnership) criteria in the Federal Emergency Management Agency's (FEMA) IS-660 training course – are in effect lightweight, low-cost networks.

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According to INFOGRAM 9-12 of 1 March 2012 – issued by the Emergency Management and Response Information Sharing and Analysis Center (EMR-ISAC) – "the best government programs follow PADRES." More specifically, those programs are:

- Publicly Accessible – The general public can easily recognize and access the contacts, leadership, skills, information, resources, and capabilities of the collaborative partnership;

- Dedicated – A full-time liaison official manages the public-private partnership and implements the partnership's strategic plan;

- Resourced – Funding, facilities, tools, and staffing adequately support all partnership efforts;

- Engaged – Public- and private-sector leaders and other members provide active support, participation, and two-way communication; and

- Sustainable – Strategic plans, funds, and resources maintain long-term viability throughout the emergency management cycle.

A 2011 collection of articles on *Business Continuity and Homeland Security*, written by David H. McIntyre, included a chapter by William (Bill) Eggers titled "A networked model for emergency planning and response: The lessons of Katrina." That chapter outlined four categories of networks – Formal-Hierarchical, Contractual, Relational, and Spontaneous. Perhaps the most intriguing point mentioned in the article is that such networks already exist. The key to action, therefore, is to not only recognize them but also use them in a network strategy for governance.

Mutual Aid Networks

Various states already have formed the networks needed to provide interstate and intrastate mutual aid. The Emergency Management Assistance Compact is recognized as one of the most successful, but there are numerous examples of other networks across the nation testing new and different approaches. Following are some of the better known and/or most active:

- All Hazards Consortium
- American Logistics Aid Network
- Bay Area Regional Disaster Resilience Initiative
- California Resiliency Alliance
- Chicago First
- Colorado Emergency Preparedness Partnership
- DomPrep40
- Great Lakes Hazards Coalition

- IAEM Public Private Partnership Caucus
- InfraGard Chapters
- MESH Inc.
- NEDRIX
- Network
- Pacific Northwest Economic Region
- Safe America Foundation
- Safeguard Iowa Partnership
- Southeast Emergency Response
- Southeast Region Resilience Initiative
- The Infrastructure Security Partnership
- Utah Partnership

Many of the leaders of these networks are generally aware of the other networks, and their leaders – and are also, in some instances, beginning to connect and collaborate with their counterparts. Finding ways to productively link these networks could leverage more resources from the private sector and significantly improve intergovernmental collaboration. This is a major leadership challenge for those involved in the networks because, by their very nature, such networks are not usually resource-intense.

It is unclear whether these networks will ultimately be successful, but they are trying hard to provide practical approaches that, if successful, could contribute significantly to a resilient nation. If government leaders can overcome their current "control" orientation and perspective, at least some of these networks will be able to make significant contributions. Achieving that goal, though, will require a willingness not only to empower networks to play a more active role but also for government to engage more effectively – on a continuing basis. Today, there seems to be only one undeniable conclusion: The current economic environment will continue to make the operation and success of these networks an imperative that can no longer be avoided.

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For additional information on:
The Naval Post Graduate School's August 2008 report, "Multi-Jurisdictional, Networked Alliances, and Emergency Preparedness, Center for Homeland Defense and Security," visit http://drs-international.com/uploads/Bach%20OKC%20Report%20FINAL%20formatted.pdf

David H. McIntyre and William I. Hancock's 2011 book "Business Continuity and Homeland Security, Volume I, The Challenge of the New Age." Cheltenham, UK: Edward Elgar Publishing Limited.

Dennis R. Schrader is President of DRS International LLC and former deputy administrator of the Federal Emergency Management Agency's National Preparedness Directorate. Prior to assuming his NPD post he served as the State of Maryland's first director of homeland security, and before that served for 16 years in various leadership posts at the University of Maryland's Medical System Corporation.

Social Media & Public Safety

By Timothy Beres, Viewpoint

The new education must teach the individual how to classify and reclassify information, how to evaluate its veracity, how to change categories when necessary, how to move from the concrete to the abstract and back, how to look at problems from a new direction – how to teach himself. "Tomorrow's illiterate will not be the man who can't read; he will be the man who has not learned how to learn." – Alvin Toffler

The rise of Facebook and Twitter as common forms of communication has led to discussions in the public safety community – particularly in emergency management and law enforcement circles – about whether agencies and departments can use social media operationally to support emergency response.

As the world has seen, social media are effective tools for dispersing information quickly, mobilizing large groups of people, and calling these groups to action; they also have been used to support and implement protests, mass demonstrations, and political revolutions. (They have not, however, been effective in helping fill leadership voids or in rebuilding and establishing governance after these revolutions.)

For emergency responders, the value of social media hinges on whether they can help pinpoint where actions should be taken and if they can effectively support command-and-control operations.

In response to large-scale incidents such as hurricanes, or to scenarios examined in National Level Exercises, command-and-control problems often make it difficult to get the right information (from a trusted, verified source) to the right people (who have decision-making authority) quickly. Decision making is also hampered as information travels up a chain of command and back down before action can be taken – action that often occurs too late because of slow decision making.

Social networking may provide a solution to the challenges of maintaining command and control and speeding decision making, one that can be leveraged during large-scale events. If social media channels can provide data for situation analysis and for action at the lowest level in an incident's chain of command, missteps and problems can be avoided.

However, before decision-makers can use social media in such a way, several key questions must be addressed:

- What types of information, and how much of each, are needed to inform operational actions?

- What types of data would be available during an incident?

- Who are trusted data sources, and how are they identified before an incident occurs?

- Who will organize and analyze the data?

- Who has authority to take action quickly, and at what levels?

These are not theoretical questions to be answered at some point in the distant future. They must be addressed now. Facebook and Twitter are no longer social novelties; they are fundamental technological changes in communication with the power to dramatically alter how safety and security challenges are addressed within communities. Public safety planners must tackle these issues head-on and look to truly harness the potential of these media.

Similar to the public's expectation of an instant response to email, there is a growing expectation that a tweet or Facebook posting will be read immediately. Public safety disciplines will have to catch up to that expectation by adapting to these new forms of communication and responding to messages through new media. Otherwise, responders might be exposed to increased liability by not acting on information that was readily available – no matter the channel of its delivery, and the public could be exposed to increased risks because their calls for help went unheard.

Timothy Beres is Vice President and Director of the Safety and Security Division of CNA, a not-for-profit research organization. Prior to joining CNA, he held senior leadership positions in the Department of Homeland Security and the Department of Justice. He received a Bachelor of Arts degree from Virginia Tech, is a public speaker, and has authored numerous articles in the field of homeland security. In 2005, he received the National Grants Management Association's Distinguished Service Award.
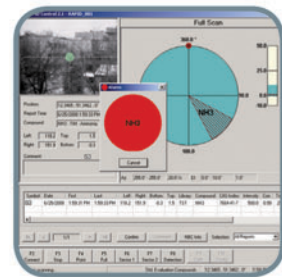
Colorado Builds a New Generation of Emergency Managers

By Christopher Mailliard, State Homeland News

Although a distant memory for many, high school is now a new "place to start" acquiring the knowledge and skills required of emergency managers. More specifically, the 2012-2013 school year at Warren Tech North in Arvada, Colorado, marks the first year that instruction in Emergency Management will be offered to students in the Jefferson County Public School District.

This new program has been developed as a hybrid course – with much of the course work taking place online by using the Federal Emergency Management Agency/Emergency Management Institute (FEMA/EMI) Independent Study program. In addition to the online course, students also will: (a) be engaged in hands-on activities in the classroom; (b) participate in a broad spectrum of exercises with local, state, and federal agencies; and (c) complete 100 hours of internships with various course partners.

The two-semester course has been designed specifically to provide participating students with multi-discipline exposure to all aspects of emergency management. This approach is intended to give the students a better overall "feel" for Emergency Management in general, which helps them focus their time in college on a specific area of interest within the field of Emergency Management. Among the specific subjects that will be covered are such interrelated topics as: Incident Command; Military Support; Resource Management; Information Management; Critical Infrastructure and Key Resources; Continuity of Operations; and Natural and Man-Made Disasters.

Supporting the Next Generation of Professionals

To support the next generation of Emergency Managers, course organizers have partnered with various operational groups and agencies, including: the State of Colorado Office of Emergency Management; Jefferson County Emergency Management; the JeffCo Type III Incident Management Team; Centura Health St. Anthony Central Hospital; and The Blue Cell. A significant part of the learning will be carried out through these partner organizations, which will provide hands-on application of the knowledge gained and skills learned in the classroom to prepare the students for college and beyond. The overall field of Emergency Management – federal, state, and local – also will benefit from these partnerships by ensuring that graduates not only have the "book education" they need, but also some real-life experience before, during, and after college.

To further enhance the program, the Colorado Office of Emergency Management (OEM) is allowing high school students to be stationed in the State Emergency Operations Center (EOC) during select exercises, working side by side with OEM staff. Students also will work on individual EOC Task Books and, in February, will be assigned to apprentice-level supporting roles during the State Emergency Managers Conference.

In addition to gaining the knowledge and skills they will need in the Emergency Management field, students have the opportunity to take advantage of something else – "free money," in effect – by receiving college credits for their training. Students at Warren Tech and Warren Tech North are concurrently enrolled in the Red Rocks Community College and will receive college credit with completion of the high school course. For the Emergency Management course, students will be able to earn as much as 15 college credits by achieving a "C" or higher grade at Warren Tech North. Because there is no cost to the students to receive this credit, in effect, Warren Tech students collectively received the equivalent of more than eight hundred thousand dollars in college credits through their concurrent enrollments last year.

These classes and internships also serve as extended job interviews. Many students now have the possibility of graduating from high school with excellent recommendations from some of the top professionals in their chosen field of work. Not incidentally, the Emergency Management students will be actively engaged in social media throughout the school year and, in that respect, will gain additional skills that some current professionals lack. (As the students progress, follow them on Twitter @WarrenTechEM.)

Christopher Mailliard, a teacher in Colorado's Jefferson County Public Schools, is in his third year of teaching after leaving the public safety career field. He has more than 15 years of experience as a firefighter/ paramedic and as a tactical paramedic. He also has served as an Emergency Planning Analyst in both the U.S. Department of Health and Human Services and the U.S. Department of Homeland Security.
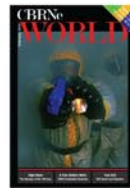
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