



DomPrep Journal

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Preparedness California Style



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Editor's Notes

By James D. Hessman, Editor in Chief



California has long been known not only for the range and diversity of its agricultural products, manufactured goods, and scenic wonders, but also for its innovative political and social initiatives – specifically including those in the fields of domestic preparedness and emergency management.

Which is why *DPJ* decided to devote most (but not quite all) of the articles in its September issues to a guided tour of how the nation's most populous state:

- Deals with mass-fatality incidents ranging from earthquakes and floods to wildfires and agricultural disasters – but also including acts of terrorism;
- Has led the way not only in the development, use, and coordination of military-style SWAT team tactics but also in the standardization of SWAT training, operational guidelines, and equipment;
- Uses GIS (geographic information systems) and other technological innovations to combat crime, protect citizens, and improve the overall quality of life throughout the Golden State; and
- Established the political framework needed to facilitate coordination, cooperation, and collaboration between and among federal, state, city, county, and even private-sector organizations and agencies in such inter-related fields as healthcare, law enforcement, and emergency management.

Appropriately enough, Nancy L. Ward, administrator of the Federal Emergency Management Agency's Region IX, sets the scene with her first-person account, in *A Letter to Domestic Preparedness Readers*, of the October 1989 Loma Prieta earthquake that shook the entire nation, not just the state of California. Jan R. Dunbar and Robert Gerber follow up with their respective reports on: (1) the state's unique "Team Typing" system used, in coordination with California's Master Mutual-Aid Plan, to cope with hazmat incidents; and (2) the extraordinarily complex management – made somewhat less difficult by the state's more specialized *Coroners' Mutual Aid System* – of mass-fatality disasters, both natural and manmade.

Kay Goss completes the opening quartet with her article on the need, as exemplified by California's Ventura and Contra Costa Counties, for continually increasing cooperation between federal, state, and community healthcare, EMS, and emergency-management agencies and organizations. Mary Lilley adds a technology update on how San Diego County has used its GIS systems both to track wildfires in that area of the state and to keep the media, and local residents, better informed about various "hot spots" in the county and surrounding environs. Joseph Cahill switches the spotlight to Los Angeles – more specifically, to the L.A. Police Department, which has been not just a national but a world leader in its development, training, and use of SWAT team tactics and equipment.

Also contributing complementary articles to this month's printable issue are: Kate Rosenblatt, who provides a timely update on the improved and greatly expanded training curriculum now available at the Center for Domestic Preparedness in Anniston, Alabama; Frank Castro-Wehr (assisted by Mark Ghilarducci), whose alarming report on the immense dangers posed by agricultural disasters – a topic of particular importance in California – may surprise many readers; and Ana-Marie Jones, whose PowerPoint presentation uses the example of a small kitchen fire to educate readers about the policy guidelines and operating principles of the Incident Command System.

Adam McLaughlin tops off the issue with four recent updates, including two related to California (the new Los Angeles emergency operations center, and a surprise fire that started on a hidden marijuana farm in a state forest); one about the advanced state of readiness of the Wyoming National Guard; and one on the commissioning of New York City's new "343" fireboat, which is dedicated to the memory of the 343 FDNY firefighters who gave their lives in the line of duty on 11 September 2001.

About the Cover: Close-up of the California state flag (www.istockphoto.com)

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A Letter to Domestic Preparedness Readers

By Nancy Ward, Viewpoint



Dear Domestic Preparedness Readers,

As every Bay Area resident and baseball fan knows, this October marks more than one anniversary for the community.

The 1989 World Series was the first ever cross-bay battle between the Oakland A's and the San Francisco Giants. But during the warm-ups of game three, at 5:15 p.m. on the 17th of October, the shaking started and the Loma Prieta earthquake rumbled across Northern California to write its own destructive page of history.

Two decades later, those 10-15 seconds of shaking and tremors still resonate loudly within the emergency preparedness and management communities. What amounted to a few moments serves as a reminder that emergencies can happen at any time, anywhere, and we can be successful only if our entire emergency-management team is prepared.

As a former state employee working in emergency management during the quake, I saw firsthand the many challenges that confront a state in meeting the response and recovery needs of its citizens, and the tremendous role that preparedness can play in meeting those needs.

But one of the most important lessons I learned is that preparedness not only involves advance collaboration among all levels of government and with the private sector, but also that we must engage the public.

FEMA is not the team. We are only part of a team. After those few harrowing seconds, almost two decades ago, many times the first emergency response you saw was neighbor helping neighbor.

When writing our emergency plans, we have to stop looking at the public as a liability, but instead look at them for what they are – an indispensable component and member of our emergency management team.

Which is why our team will be successful only if the public is prepared.

September is National Preparedness Month, and provided an opportunity for all Americans to take steps to increase personal and family preparedness. But you know as well as I do that the need to get the public to prepare is a year-round effort.

For most Americans, preparedness means taking a few simple steps: developing a family emergency plan, putting together an emergency supply kit, and becoming better informed about the hazards that may exist in their communities. You can always direct people to ready.gov to learn more.

The bottom line is that we can be successful only if we work as a team.

In crafting the National Response Framework (NRF), hundreds of contributors from local, state, and federal agencies – as well as representatives of voluntary agencies, the private sector, and a broad swath of other Non-Governmental Organizations (NGOs) – have provided valuable input to the development of a scalable framework that can be applied across all hazards of varying span and scope.

Under President's Obama's leadership, this spirit of teamwork is echoed throughout the Department of Homeland Security and the Federal Emergency Management Agency as we continue to work aggressively to engage all of our partners in an effort to expand and solidify our national emergency response team, and ensure that as a nation we are prepared for whatever emergency may occur.

The world has changed considerably since that fateful day in October 1989, and so have many of the challenges we face. But our agency and the emergency response team also have changed. We are more prepared, engaged, and robust – and we will continue to improve our capabilities.

But the simple fact remains that we can be only as successful as the public is prepared. Whether it's going to watch a World Series game, or simply taking your children to school, get a plan, get a kit, and stay informed. We can never forget that day 20 years ago, but we must also ensure that we never forget the valuable lessons we learned that day. Working together, we must be prepared.

Sincerely Yours,

Nancy Ward
Regional Administrator
FEMA Region IX

Nancy L. Ward is regional administrator of the U.S. Department of Homeland Security's Federal Emergency Management Agency's Region IX office and prior to that served for six years as director of the region's Response and Recovery Division – which is responsible for coordinating FEMA disaster-response and -recovery activities in Arizona, California, Hawaii, Nevada, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, and the Federated States of Micronesia. She also served as FEMA's senior transition official for the presidential transition earlier this year and – from 21 January to 16 May – as acting administrator for FEMA. Before joining FEMA, Ms. Ward was chief of the Disaster Assistance Branch and deputy state coordinating officer for the California Office of Emergency Services.



Team Typing and Other Innovations: The California Way

By Jan R. Dunbar, Fire/HazMat

The Fire & Rescue Branch of the California Emergency Management Agency (CAL EMA), formerly the California Office of Emergency Services, has been actively working – along with California FIREScope (Firefighting Resources of California Organized for Potential Emergencies) – on a long-range program of certifying the response competency of metropolitan hazmat teams throughout the state. The basic intent of the program is to ensure that the state’s metropolitan hazmat response teams can be brought into the state *Master Mutual Aid Plan* for California in accordance with accepted FIREScope mutual-aid response standards. Another program goal is to ensure that there is a mechanism available for local authorities to access in the event of any major incident requiring numerous additional resources when local and operational (i.e., county) hazardous-materials resources have been exhausted. The program has four (4) significant objectives, as follows:

1. The establishment of training requirements, standardized and certified;
2. The development of a hazardous-materials Standardized Equipment List (SEL) – which should be based on performance;
3. The development of a hazmat-team “typing” concept; which should be based on the intervention capability of individual teams; and
4. The institution of on-site inspections of the teams – to ensure the standardization of rules throughout the state and their compliance with those standards.

Following are brief status reports on each of those objectives:

Training Requirements: The first objective was achieved by 1989, when the California Specialized Training Institute (CSTI – a branch of CAL EMA), and the California State Fire Marshal’s Office adopted standardized training criteria for a four-week/160-hour *Hazardous Materials Technician* (HMT) course, and a six-week/240-hour *Hazardous Materials Specialist* (HMS) course. The lesson plans for the courses were developed gradually over a five-year period; a driving criterion was to ensure that they met or exceeded the NFPA (National Fire Protection Association) Standard #472: *Standard for Professional Competence of Responders to Hazardous Materials Incidents*.

Standardized Equipment List: It was considered particularly important to ensure the standardization of the equipment normally carried by a hazmat response team. But there were two complications: (1) There was a significant variance from team to team in regards to certain intervention capabilities; and (2) There was a parallel variance in the adherence to industry and safety standards or requirements with regard to the purchase of specific items. Nonetheless, the development of a Standardized Equipment List was essential to standardize the equipment inventory of all hazmat teams throughout the state. The SEL was divided into 13 different sections – based on anticipated use and/or performance of the tools and equipment – as follows: 1. Field Testing and Detection; 2. Air Monitoring; 3. Sampling; 4. Radiation Monitoring and Detection; 5. Chemical Protective Clothing; 6. Ancillary Protective Equipment; 7. Technical Reference; 8. Special Capabilities; 9. Intervention (Mechanical, Chemical, and Environmental); 10. Decontamination; 11. Communications; 12. Respiratory Protection; and 13. Tools, General Purpose and Hand.

Each SEL criteria section is carefully defined. Within each section the appropriate tools or equipment are listed numerically and are further defined individually. Minimum units or quantities are specified. If there is an appropriate standard that applies to a specific tool, it is indicated in a separate column (in the accompanying table) marked “Certification or Standard.” For example, many of the individual items listed in the Chemical Protective Clothing section must meet specified certifications. Vapor protective clothing, for example, must meet NFPA Standard #1991, liquid splash-protective clothing must meet NFPA Standard #1992, and safety helmets must meet ASTM (American Society for Testing and Materials) standards.

Adoption of the SEL was achieved by 2003; the latest (2009) edition is now posted on the FIREScope web site. An example of how inventory items are listed is shown in the table below.

Inv. #	Item Name and Description	Requirement	Certification or Standard	Type I	Type II	Type III
5.2.1	LIQUID SPLASH PROTECTIVE, NFPA 1992: Industrial Chemicals for liquid contact and splash protection (no vapor protection), can be jumpsuit style or multi-piece ensemble depending on manufacturer design.	6 – Type I Company 4 – Type II Company	NFPA 1992	R	R	R
5.2.2	LIQUID SPLASH PROTECTIVE, with NFPA 1994 Class 3 WMD Chemical/Biological Protection: A separate NFPA 1994 Class 3 WMD Chemical/Biological Protection Ensemble which provides for liquid splash protection, and provides a lesser level of physical property protection than NFPA 1992 garments. If selected to be in inventory, meets requirement for item 5.2.1.	Of either type	NFPA 1994, Class 3	R	Opt	NA

Team Typing: FIREScope provides the criteria by which all of the state’s fire, rescue, and hazardous-materials resources are typed. This is an important factor during operations in which any of the state’s emergency-response agencies participates within the California Mutual Aid Plan. The request by CAL EMA for the mobilization of specific apparatus from metropolitan agencies varies: (a) first, in accordance with the specific apparatus (pumper, grass units, hazmat teams, etc.); and then (b) by type (types 1, 2, 3, etc.). The typing itself is dependent on the “intervention capability” of individual teams. The development of a tiered-typing scheme for hazardous-materials units permitted a three-tier system to be created, after which the intervention-capability standards were developed for each of the 13 “criteria” sections (paralleling the SEL). (Not incidentally, the California team-typing concept has been modeled by the federal government’s National Incident Management System (NIMS) and the National Mutual Aid Resource Typing Group.) The intervention capabilities required for each team in each tier are as follows:

- **Type 3 Haz-Mat Team:** This team basically meets the minimum training criteria established for a hazardous materials technician, and is equipped to intervene in any incident involving liquids and/or powders, but the intervention is limited to known chemicals only. The team’s equipment inventory is therefore noted accordingly (to match its minimum intervention capabilities). Team staffing for statewide-activated mutual-aid purposes is five members.
- **Type 2 Haz-Mat Team:** This team, an upgrade from Type 3, must meet the minimum training criteria established for a hazardous materials specialist. The equipment inventory required of a Type 2 team is based upon a higher level of intervention capability, including: (1) any incident situation involving gases or vapors; and (2) encompassing any and all unknown chemicals. Team staffing for statewide-activated mutual-aid purposes is five members.
- **Type 1 Haz-Mat Team:** This team, an upgrade from Type 2, must meet the minimum training criteria established for a hazardous materials specialist, but also must have a minimum of 16 additional hours of specialized WMD/CBRN (weapons of mass destruction/chemical, biological, radiological, nuclear) training. The equipment inventory required of a Type 1 team is based on the highest level of intervention – which now includes WMD/CBRN chemicals.

Team staffing for statewide-activated mutual-aid purposes is seven members.

As is evident in the previous table, the SEL also indicates, in separate columns, whether a specified equipment item is required for each of the three types of teams. A separate Team Typing Chart categorizes all 13 criteria components. A portion of one section, “Field Testing,” of those criteria is shown below.

Components	Type I	Type II	Type III
Field Testing	Known Chemicals	Known Chemicals	Known Chemicals
	Unknown Chemicals	Unknown Chemicals	
	WMD Chem/Bio		

On-Site Inspections: Participation in the California Mutual Aid System by all emergency-response organizations is voluntary. However, during times of major emergencies or declarations of disasters, if an agency is asked if it can provide apparatus, it must conform to the criteria and team-typing status spelled out above.

To ensure that hazmat teams in California do meet the team-typing requirements, metropolitan fire departments and other participating agencies are encouraged to submit “Letters of Request” for an inspection. The Hazardous Materials Section of the Fire & Rescue Branch then arranges for an inspection date. On that date, a team of four inspectors visits the agency and inspects all equipment that should be on hand for the team-typing level requested; there are 252 inventory items required for a Type 1, 223 items for a Type 2, and 179 items for a type 3.

Adherence to federal NFPA, ASTM, OSHA (Occupational Safety and Health Administration), and/or EPA (Environmental Protection Agency) industry standards is also verified. If the unit (and agency) passes the inspection, a congratulatory letter is sent to the chief of the department. The specified unit is then noted as meeting the minimum requirements of hazmat team typing, and various databases within CAL EMA are amended. When these units are added to the databases, they are considered to be voluntarily making themselves available to respond to a potential request for mobilization statewide.

Now that the Haz-Mat Team Typing inspection process is under way, a total of 17 hazmat teams have achieved a team-typing certification. They are shown in the table on page 9. It is estimated that there are approximately 90 hazardous-materials response-team programs operational in California. The goal

is to ensure that as many as possible of these teams are brought up to speed with a standardized equipment list, inspected, their typing status certified, and the teams become operational components of the CAL EMA Fire & Rescue Mutual Aid System. The Mutual Aid System itself will benefit, of course, by having these metropolitan hazardous materials resources available for state activation and mobilization in the event of disasters, declared emergencies, and/or at any other time when all local hazmat resources are exhausted.

If and when – through local mutual-aid support – all local hazmat resources are exhausted but additional resources are still needed, the State Mutual Aid System can be activated by the on-scene Incident Commander (IC), who would issue a request through normal dispatch procedures – and in accordance with the guidelines set forth in the California Mutual Aid Plan – for the specific number and types of hazardous-materials resources required. There is general agreement that the gradual expansion of the state’s Mutual Aid System in recent years will not only significantly augment California’s resource-mobilization capabilities but also might serve as a useful model that other emergency-response

organizations and agencies throughout the United States may want to emulate.

Notes: The FIRESCOPE SEL can be accessed and printed from: <http://www.firescope.org/ics-hazmat/pos-manuals/haz-equipulist.pdf>

The complete Hazardous Materials Team Typing Chart can be found on pages 101 and 102 of the SEL.

Jan Dunbar, a former division chief of Special Operations of the Sacramento City Fire Department, retired from the department in 1999. During his 33-year career he was instrumental in developing the first hazmat response team concept for Sacramento, one of the first on the west coast. He was an original member of the National Fire Protection Association’s Standards Committee on Chemical Protective Clothing. He also was a member, for over 25 years, of the International Association of Fire Chiefs’ Hazardous Materials Committee. Immediately after the terrorist attacks of 11 September 2001, the then-California Office of Emergency Services brought him on board as a consultant on issues involving hazardous materials and terrorism preparedness. He has been working on the Haz-Mat Team Typing project for the past five years.

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Certified HazMat Teams, by Type - as of 9/2/09						
	Agency	Operational and Local Identifier	Region	Unit Designation	Attained	Zip Code
Type I	Roseville City Fire	XPL-RSV	IV	HM-1	10-26-06	95678
	Sacramento City Fire	XSA-SCR	IV	HMRT-7	12-27-06	95823
	Sacramento City Fire	XSA-SCR	IV	HMRT-30	12-28-06	95835
	Sacramento Metro F.P.D.	XSA-SAC	IV	HM-109	7-13-06	95608
	Alameda County Fire	XAL-ACF	II	HM-12	3-10-08	94546
	Glendale City Fire	XLC-GLN	I	HM-24	2-26-08	91204
	Vernon City Fire	XLE-VER	I	HM-151	5-14-09	90058
	U.S. Marin Corp Camp Pendleton	XSD-MCP	VI	HazMat 1	3-13-08	92055
	Fresno City Fire	XFR-FRN	V	HMRT-16	11-20-07	93722
	Fresno City Fire	XFR-FRN	V	HMRT-1	11-4-08	93703
	Clovis City Fire	XFR-CLV	V	HM-40	5-1-09	93611
Type II	Contra Costa County JPA	XCC-CCH	II		11-1-07	94553
	San Ramon Fire Prot. Dist	XCC-SRM	II	HM-35	6-19-09	94506
	Truckee Fire Prot. District	XTB-TRK	IV	HM-1	10-6-08	96161
	Marin County Fire Haz-Mat JPA	XMR-MRN	II	HM-1	7-22-09	94945
	Merced County F.D.	XMD-MRD	V	HM-62	5-9-09	95301
Type III	Long Beach Fire	XLF-LOB	I	HM-24	2-26-08	90802

California Focuses on Mass-Fatality Management Planning

By Robert Gerber, Law Enforcement



Two fairly recent natural disasters have produced clarion calls for greater emphasis on planning, training, exercising, and funding for the management of mass-fatality incidents and events.

The 24 December 2005 Indian Ocean tsunami – which resulted in over 250,000 dead – and the earlier Hurricane Katrina catastrophe along the U.S. Gulf Coast, which killed over 1,500, proved once again the need to incorporate mass-fatality planning in the nation’s local, state, and federal emergency-management efforts. In addition, the United States is: (1) still applying the lessons learned from the mass fatalities caused by the terrorist attacks of 11 September 2001; and (2) now preparing for the potential worst-case scenario of a virulent pandemic influenza caused by the H1N1 virus.

The federal government has primary responsibility for national preparedness, but all 50 states and hundreds of cities are preparing to meet their own response and recovery responsibilities. The State of California, for example, has taken several measures to strengthen its mass-fatality management system while at the same time establishing a new organization to increase mass-fatality management awareness and readiness at the state and local levels.

Unlike other states, California does not have an elected (or appointed) state coroner or medical examiner. Primary responsibility for the investigation, recovery, and management of the dead resides within the authority of local coroners or medical examiners. Most counties in California have assigned the county sheriff with coroner responsibilities, which would be carried out concurrently with their law-enforcement duties.

A Master Plan for A Diverse Mix of Jurisdictions

California has 58 counties. In 47 of them, the coroner function is assigned to the county sheriff. Eight counties have separate coroners’ offices; the remaining three counties employ medical examiners. Because there is no state coroner or state medical examiner per se, the counties must rely on what is called the Coroners’ Mutual Aid System to meet their resource needs in incidents that overwhelm their individual capacities to respond.

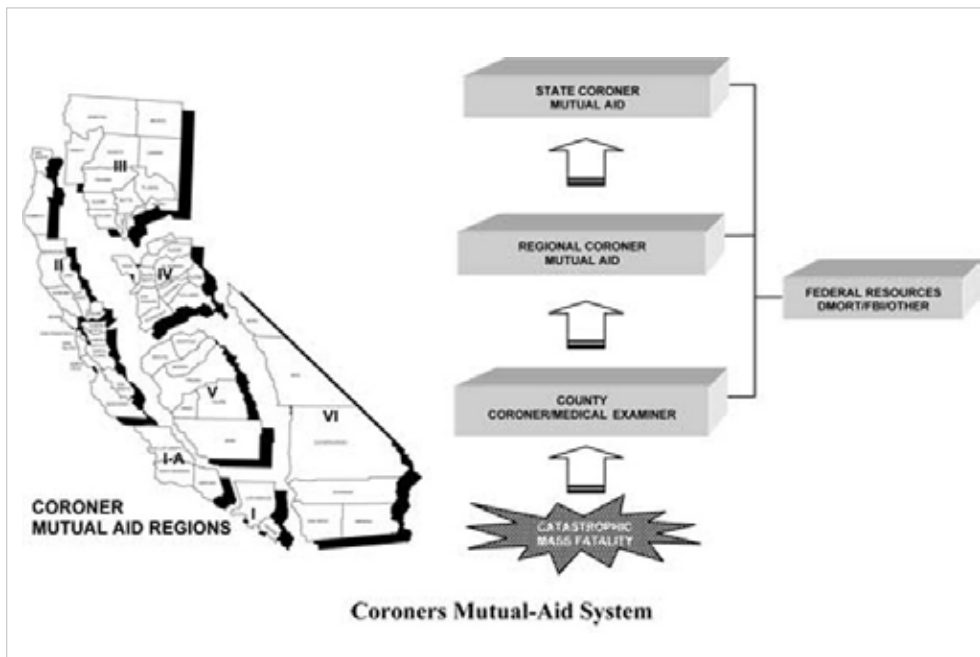
The California Master Mutual Aid System, which was established in 1950, has been used on a number of occasions to

meet the extraordinary demands caused by major catastrophes (many of which caused a large number of casualties). Surprisingly, perhaps, although the state’s fire-service and law-enforcement agencies have often used their respective mutual-aid systems over the years, the Coroners’ Mutual Aid System has been in place but has been rarely used. The Law Enforcement Branch of the California Emergency Management Agency, formerly the State Office of Emergency Services, administers the Coroners’ Mutual Aid program and its official plan, while maintaining an active association with all coroners’ and medical examiners’ offices throughout the state.

Despite the thus-far-limited need for actual mutual-aid responses, the coroners and medical examiners remain resolute in preparing for catastrophic mass-fatality events. The “State of California Coroners’ Mutual Aid Plan,” formally established in 1981, has provided the standard framework for how the state’s local coroners and medical examiners should request (and/or provide) mutual aid. (The Mutual Aid graphic accompanying this article shows both the mutual-aid organization and the channels available for requesting coroner resources.)

Notwithstanding the state’s establishment of its own mutual-aid system, any catastrophe in California that produces an overwhelming number of fatalities will undoubtedly require the participation and coordination of *several* state agencies – as well as the federal government, usually, and even private-sector organizations – to support the local coroners or medical examiners directly affected.

The specific assistance provided to local jurisdictions in the aftermath of a catastrophic mass-fatality incident may well encompass any or all of the following material resources and/or operational activities: coroners’ mutual-aid personnel and equipment; the recovery, transportation, and temporary storage of human remains; the availability and operation of a portable morgue facility; victim-identification assistance; personal-effects management; the establishment and staffing of a family assistance/information center; family/responder/community grief and stress counseling; the burial and final disposition of human remains; the implementation of legal remedies governing coroners, funeral directors, and cemeteries; the repatriation to their home countries of deceased foreigners; and the planning of certain types of “memorial” events.



state forum to deliberate on fatality-management issues and activities that, for too long, had been absent in emergency-management discussions and planning. In that context the committee also serves as a multi-discipline organization the tasks of which are guided by the coroners' and death-care industry's principle that the recovery, identification, and final disposition of the dead be carried out at all times "with dignity and respect."

In 2009, the Cal EMA Law Enforcement Branch launched an ambitious training campaign to introduce and orient public-safety, emergency-management, EMS, and death-care departments and

Dignity, Respect, And a Much-Needed Planning Guide

Recognizing the need, at the state level, to identify the important and necessary roles that would be played by state agencies in supporting local coroners and medical examiners performing their essential duties, the Cal EMA Law Enforcement Branch prepared *The Mass Fatality Management Planning Guide: A Supplement to the California Coroners' Mutual Aid Plan*. The guide essentially describes mass-fatality roles, issues, and how the state is organized to assist local governments in their fatality-management operations following a catastrophic mass-fatality event. The guide represents the collaboration of a representative number of state, local, federal, private, and volunteer organizations that recognized the compelling need to distinguish the State of California's role in fatality management.

In October 2006, the Cal EMA Law Enforcement Branch also established, in its role as the State Coroners' Mutual Aid Coordinator, a State Mass Fatality Management Planning Committee. A primary task assigned to the committee was to improve and further refine the mass-fatality guide while at the same time ensuring that it conforms not only to California's own Standardized Emergency Management System (SEMS) but also to the U.S. government's National Incident Management System (NIMS).

Although primarily focusing on the task of producing the fatality-management guide, the committee also provides a

agencies – and other organizations throughout the state that are involved in fatality management – to: (a) the roles played by coroners and medical examiners; (b) the Coroner's Mutual Aid System; and (c) the often complex planning guidelines required for management of a catastrophic mass-fatality event. The timing of this campaign probably could not be more critical, especially when one considers the potentially catastrophic nature of the current influenza pandemic.

To briefly summarize: The State of California is determined to establish and maintain an effective mass-fatality management plan as an essential element of the state's overall emergency-management and planning responsibilities. Louisiana's fatality-management experience in the aftermath of Hurricane Katrina serves as a clear and sober reminder that the deceased victims of disaster deserve proficient, organized, and caring attention. Government organizations should now be on notice that a fundamental and critical component of the overall response and recovery of a disaster includes proper fatality management. California intends to meet that challenge.

Robert Gerber is a deputy chief in the Law Enforcement Branch of the California Emergency Management Agency. In addition to his responsibility as the State Coroner's Mutual-Aid Coordinator; he is the chairman of the State Mass Fatality Management Committee. In 2005, Chief Gerber served two tours (as a private contractor) in Thailand, supporting victim identification in the aftermath of the Indian Ocean tsunami. He also deployed to Louisiana that same year in support of law-enforcement mutual-aid operations in the wake of Hurricane Katrina. Chief Gerber holds B.S. and M.A. degrees, and is a graduate of the FBI National Academy.

Public Health, EMS, Emergency Management: Partners in Preparedness

By Kay C. Goss, *Emergency Management*



The H1N1 pandemic-flu virus is already a prime topic of the day in the nation's public-health, EMS (emergency medical services), and emergency-management communities, and is likely to be even more so in the very near future as the

virus continues to spread both in the United States and throughout the world. One immediate result of the publicity given to this lethal and rapidly spreading virus has been increased collaboration and cooperation between and among those communities – which is, of course, very good for all three of those professional groups.

The steadily increasing integration of efforts, procedures, and processes not only enhances community safety and security but also creates the foundation for future such collaborative efforts that should bring the three communities even closer as they become true partnerships in preparedness. The partnerships should not and will not be limited, though, to the prevention of and/or response to pandemic flu outbreaks but will also encompass a broad spectrum of other mass-casualty incidents and events – including, but not limited to: bioterrorism attacks; chemical emergencies and other hazardous-materials incidents; salmonella outbreaks; and weather-related disasters – e.g., hurricanes, earthquakes, and tornadoes.

In short and in fact, these partnerships are and will be increasingly needed in today's all-hazards context of emergencies, disasters, and other mass-casualty events. In the United States, most emergency-management situations come under the jurisdictional umbrella of the Department of Homeland Security (DHS) and, more specifically, that department's Federal Emergency Management Agency (FEMA) – which works in close cooperation with and through numerous state, county, and local emergency-management departments and agencies.

A Vertical Distribution of Responsibilities

Public Health per se is under the jurisdiction of the U.S.

Department of Health and Human Services (HHS) and its Atlanta-based Centers for Disease Control and Prevention (CDC) – which, like FEMA, carries out its responsibilities by working with and through state and local departments of health. The EMS distribution of responsibilities is similar: The U.S. Department of Transportation (DOT) has been assigned the national responsibilities, but it carries out most of those responsibilities through state departments of health, local – i.e., city and county – fire and police departments, and/or, in some areas, private-sector companies and organizations as well.

In short, the collaborative efforts required are generally intergovernmental, interagency, and interdisciplinary. By definition, though, the challenges involved in almost any mass-casualty event are significant and the cooperative efforts required to overcome those challenges are definitely worth the effort.

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Joint planning, joint training, and joint exercises are the “magic keys” required to move the cooperative process forward. FEMA's National Exercises Program and Homeland Security Exercise and Evaluation Program serve as excellent models for the partnerships required – and

also, not incidentally, provide an ideal framework under which the numerous professionals provided by the several levels of government participating will get to know one another and test and evaluate their individual and collective plans and training. Tabletop exercises (which are essentially closely controlled seminars) allow open and free-flowing discussions that frequently lead to judicious and workable decisions and to the additional refinement of plans and training needed before these multijurisdictional partnerships can progress to the next level of preparedness.

JEMS CONNECT (a preparedness journal geared to the needs of the nation's EMS community and its professional partners) summarizes the current situation as follows: “As

many of our older generation have seen, Emergency Medical Services (EMS) has moved from a service provided by funeral homes to fixed and rotor-wing aircraft services along with advance ground services. With that transition many people have misunderstood the role which EMS has within our society. Some may see this transition as both good and bad. These views come from both non-health and healthcare-related fields alike. But how can a profession that has been around since the time of Napoleon and one that is just now entering into the mainstream of public and professional viewpoints work successfully together? Both of these fields are related to the well-being of others, yet one focuses on the well-being of a few of the population while the other looks at the well-being of the whole population.”

The Golden Examples Of Two California Counties

There have been numerous notable best-practices examples observed around the nation in integration – two California jurisdictions, Ventura County and Contra Costa County, are among the very best. In each of those counties (and, of course,

many other jurisdictions), there is and has been a continuing emphasis on long-term joint planning, training, and exercises, interspersed with many interim meetings and conferences, and culminating in virtually seamless operations. The constant threats in that state posed by earthquakes, out-of-control wildfires, and sometimes floods, California officials say, serve to focus the group’s, and individual participant’s, attention “like a laser.”

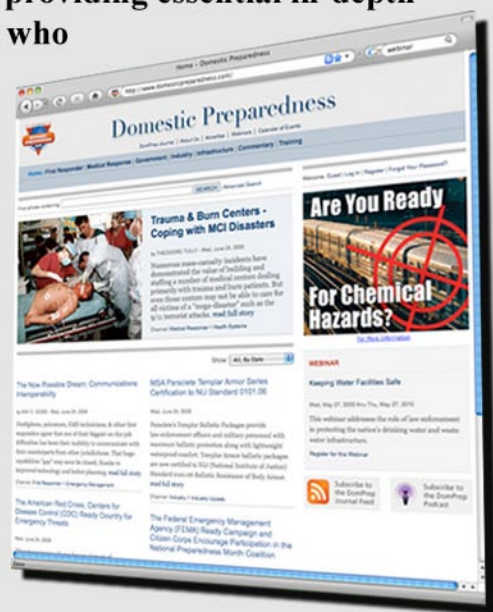
That is good news, of course; the bad news, though, is one heard in many other jurisdictions – state, local, and federal – throughout the county: namely, that funding is a common, persistent, and exceptionally difficult problem adversely affecting all of the departments and agencies involved, and probably will continue to be a problem for the foreseeable future.

Kay C. Goss, CEM, possesses more than 30 years of experience – as a federal and state administrator and in the private sector – in the fields of emergency management, homeland security, and both public finance and intergovernmental operations. A former associate FEMA director in charge of national preparedness training and exercises, she is a noted lecturer as well as the author of several books and numerous articles and reports in the fields of homeland defense and emergency management.

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GIS Use During San Diego's Wildfires

By Mary Lilley, Fire/HazMat

In recent years, wildfires have become a perennial threat to northern and southern parts of California. In 2003 and 2007, San Diego County and surrounding areas experienced their worst fires on record. The Cedar Fire of 2003 was the largest fire in California's history at that time, but the wildfires that occurred in October 2007 far surpassed it in intensity and duration. San Diego County responded to these incidents using its well-established geographic information systems (GIS) capabilities and discovered new applications for GIS technology along the way.

GIS Technology Applications in 2003

During the 2003 wildfires, the San Diego County Operational Area Emergency Operations Center (OAEOC) created maps using GIS technology that showed the fires' changing geographic boundaries and damage assessment results. GIS personnel provided these maps directly to the incident commander and OAEOC personnel as an additional resource to aid in decision-making. Despite the success of GIS during this response, GIS personnel faced staffing and technological challenges that resulted in the delayed release of some maps. The staffing problem stemmed from the lack of permanent GIS and information technology (IT) positions in the OAEOC. This meant that there was an inadequate number of personnel with GIS knowledge to devote solely to GIS operations and that IT personnel were not consistently available to address the numerous technological issues faced by GIS analysts.

Lessons Learned

As a result of lessons learned from the 2003 response, the San Diego County OAEOC established a dedicated room for GIS personnel and equipment. The San Diego County Office of Emergency Services also established permanent positions for GIS personnel in day-to-day operations and for incident response at the OAEOC. With these improvements in place, the OAEOC was able to expand its use of GIS during the 2007 fires. In addition to tracking the movement of fire perimeters and recording damage assessments, GIS personnel created maps that combined evacuation information with demographic data for the area to assist with evacuation decisions. GIS analysts also created maps that showed evacuation shelters and local assistance centers. Additionally, other government agency personnel used GIS maps to identify the location of hazardous materials in danger of being impacted by the fires.

Continued Innovation in 2007

In 2007, San Diego County went beyond traditional GIS applications to use GIS technology for public information purposes. During both the 2003 and 2007 incidents, residents were constantly in search of the most up-to-date information regarding the location of the fires, how rapidly the fires were spreading, and who should evacuate. Although GIS analysts were producing new maps every few hours, public information officers (PIOs) struggled to communicate this information to the public and the media in a timely manner without the use of visual aids. OAEOC personnel learned during the 2007 fires that residents were turning to various online sources in search of the most up-to-date information. However, these sources often provided incorrect or outdated information. As a result, the OAEOC director, county PIO, and GIS unit leader made the decision to release GIS maps to the public as a way to address residents' concerns and to dispel rumors.

The decision to share GIS maps with the public and media resulted in more timely, accurate, and comprehensive information releases. PIOs communicated the latest developments in evacuation zones, fire perimeters, road closures, areas open for repopulation, and shelter locations. In addition to sharing these maps with news agencies, PIOs also posted them on San Diego County's emergency Web site, where GIS analysts could update them every 3 to 4 hours. Following the event, OAEOC personnel received fewer complaints than in 2003 about the availability of information.

More Information

Maps released to the public during the 2007 fires are still available at <http://maps.sdsu.edu>. Additionally, San Diego County continues to provide no-cost public access to non-sensitive GIS maps through SanGIS, an organization dedicated to maintaining a regional geographic data warehouse for the area. For more information about GIS use in San Diego County as well as jurisdictions across the country, please visit the Geographical Information Systems page on LLIS.gov (www.llis.gov).

Mary Lilley is a researcher for the Department of Homeland Security/Federal Emergency Management Agency's Lessons Learned Information Sharing (LLIS.gov) system. In this role, she manages LLIS.gov's public health discipline, collects information from subject-matter experts to develop content for the system, and attends conferences for research and outreach purposes. In addition, Ms. Lilley has conducted research on the 2008 Iowa summer storms after-action effort and the 2007 San Diego firestorms. Prior to joining the LLIS.gov Team in March 2008, she served as a research assistant at the Hudson Institute's Center for Future Security Strategies.

Expanded Duty for EMS Techs: Tactical Decisions

By Joseph J. Cahill, EMS



SWAT (Special Weapons and Tactics) teams are specialized police units that use weapons and tactics that typical line officers do not usually have at their disposal. They work primarily in high-risk situations where their additional resources may

improve the chances for a successful resolution. The SWAT-team concept was first implemented in California by Los Angeles Police Department Chief Darryl F. Gates. In the years since then his concept of bringing military-style offensive tactics to police work has been expanded into using SWAT teams during “special” and non-routine missions – hostage negotiations, for example – and other less publicized but equally difficult situations.

Such assignments are frequently very dangerous, but also clearly the responsibility of law-enforcement agencies. However, anywhere there is high risk of injury to responders and/or other citizens – hostage “events” are the most prominent example – EMS (Emergency Medical Services) specialists are needed to support the operation. However, “Tactical EMS” means more than just being available on-scene – to provide care for injuries, for example. Today, the Tactical EMS member goes beyond the “safe zone” and travels with the SWAT team members, taking his or her special ER (Emergency Room) skills directly to the stricken.

Tactical EMS training typically starts with learning the basics of tactical operations. In order to support the tactical team effectively, EMTs (Emergency Medical Technicians) must now be able to move out, and with, the other members of the team. At the actual scene of an incident, though, Tactical EMS staff often operates as an island – i.e., in an advance position, but preferably in locations where they can stay in place and treat patients/victims while awaiting the opportunity to evacuate them to safety. At the risk of sounding overly dramatic, they are literally operating behind enemy lines.

Knowledge, Experience, and Deadly Force

The medical component of the EMS training provided to SWAT team EMTs builds on the existing medical knowledge and experience of the individual members, while providing

them both didactic training in advanced trauma care and practical experience during live scenarios. Because of the increased use of dogs in many law-enforcement situations, additional training in the treatment of canine injuries is now included in many tactical EMS training programs.

Many programs also provide training in threats such as those posed by IEDs (improvised explosive devices), chemical weapons, and other high-tech hazards becoming increasingly common in the modern environment. This component of the training syllabus is intended to: (a) give the SWAT team

another set of experienced and well trained eyes to detect threats before they become reality; and (b) familiarize the Tactical EMS member with the potential damage that can result from these previously rare but now much more “routine” threats.

Training programs also include weapons training – which focuses on both the safe handling of firearms and the use of deadly force. With the increased presence of tactical EMS members on SWAT teams one of the more substantive issues to be decided is whether to train SWAT officers, who are first and primarily *police* officers, to be EMTs or to train EMS staff to be members

of a SWAT team. California has answered that question by requiring that tactical EMS training be integrated into the training curriculum required for standard EMS units. That decision allows the state’s EMS structure to oversee the medical training and operational assignments of the tactical EMS team members.

In both Yuba City and Sacramento, to take but two examples, the city’s Police Department and the city’s principal EMS provider have partnered to add medical support directly to the tactical team. However a jurisdiction chooses to add them, the presence of tactical EMS members on SWAT teams today is often a matter of life-or-death importance – literally.

Joseph Cahill, a medicolegal investigator for the Massachusetts Office of the Chief Medical Examiner, previously served as exercise and training coordinator for the Massachusetts Department of Public Health, and prior to that was an emergency planner in the Westchester County (N.Y.) Office of Emergency Management. He also served for five years as the citywide advanced life support (ALS) coordinator for the FDNY - Bureau of EMS, and prior to that was the department’s Division 6 ALS coordinator, covering the South Bronx and Harlem.

Today, the Tactical EMS member goes beyond the “safe zone” and travels with the SWAT team members, taking his or her special ER (Emergency Room) skills directly to the stricken

'Train As You Will Respond': CDP Hits Half Million Milestone

By Kate Rosenblatt, Exercises



The possibility of terrorists using chemical, biological, and/or other hazardous materials in an attack is an ever-growing and international concern. When the United Kingdom laid out its anti-terrorism policies last spring, it acknowledged that advances in technology could lead to more lethal chemical, biological, and radiological attacks; and in August, India's National Disaster Management Authority issued a response report in the event that terrorists use chemical-warfare agents in future attacks against that country.

In the United States, the federal government – as well as such nonpartisan institutions as the Henry L. Stimson Center – continue to make advances in research and analysis, and to pursue preventive measures. Dr. Amy Smithson, director of the Stimson Center's Chemical and Biological Weapons Nonproliferation Project, found that reports that terrorist organizations such as Al Qaeda have been investigating the possibility of using chemical and biological weapons are accurate. "The terrorist group headed by Osama bin Laden may well have acquired a rudimentary chemical weapons capability," she wrote.

A Grim Reminder of Toxic Dangers

That this past March marked the fourteenth anniversary of the Sarin subway attack in Tokyo makes Smithson's comment even more relevant. In 1995, members of the terrorist organization Aum Shinrikyo released liquid Sarin on Tokyo's Chiyoda, Marunouchi, and Hibiya subway lines, killing twelve persons and exposing thousands of others to the toxic nerve agent.

The attack on the Tokyo subway did more than shock the United States; it also inspired action. The Center for Domestic Preparedness (CDP) cites the Sarin subway attacks as the catalyst for the center's creation. Soon after the attack in Tokyo, requests for toxic-agent training came from local safety officials up the chain of command to the U.S. Department of Defense (DOD). Public safety officials from New York requested training at the Chemical Defense Training Facility (CDTF) at Fort McClellan in Anniston, Alabama, which was then the home of the U.S. Army Chemical School. The first civilian emergency

responders finished from CDTF later that year, and continued to do so until 1998, when the CDTF closed and the CDP was established in its place.

Since its inception, the CDP has been training first responders from small towns to big cities, and even from some cities overseas. The CDP is currently under the authority of the Federal Emergency Management Agency (FEMA), a major branch of the Department of Homeland Security (DHS), which covers the bill for all state, local, and tribal emergency responders who participate in the CDP training in Anniston. Attendees coming from other federal agencies, private-sector organizations, and international partners have to pay their own way.



The CDP offers 42 courses addressing such topics as WMD (Weapons of Mass Destruction) Response Training and Crime-Scene Management, Managing Civil Actions in Threat Incidents (MCATI), Incident Command, Healthcare, and Radiology. With that range of choices it should be no surprise that the CDP has trained students in Emergency Management, Emergency Medical Services, Fire Service, Hazardous Materials,

Healthcare, Law Enforcement, Public Health, Public Safety Communications, Public Works, Governmental Administrative, and other professions. The multi-disciplinary concept is a reflection of the reality of emergency and disaster situations, when emergency providers from all divisions and different units respond together.

High-Level Partnerships For Cutting-Edge Realism

With partners such as the FBI's Hazardous Devices School, the Federal Law Enforcement Training Center, the U.S. Department of Agriculture, the National Domestic Preparedness Consortium, the Centers for Disease Control and Prevention, and the U.S. Army's Research, Development, and Engineering Command, the CDP strives to keep its courses cutting-edge. CDP Deputy Superintendent Michael King says that one of the CDP's primary goals is to provide "even greater realism in the hands-on aspect of the training we provide."

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The DuoDote™ Auto-Injector (atropine 2.1 mg/0.7 mL and pralidoxime chloride 600 mg/2 mL) is indicated for the treatment of poisoning by organophosphorus nerve agents as well as organophosphorus insecticides.

Important Safety Information

The DuoDote Auto-Injector is intended as an initial treatment of the symptoms of organophosphorus insecticide or nerve agent poisonings; definitive medical care should be sought immediately. The DuoDote Auto-Injector should be administered by Emergency Medical Services personnel who have had adequate training in the recognition and treatment of nerve agent or insecticide intoxication.

Individuals should not rely solely upon agents such as atropine and pralidoxime to provide complete protection from chemical nerve agents and insecticide poisoning. Primary protection against exposure to chemical nerve agents and insecticide poisoning is the wearing of protective garments including masks designed specifically for this use. Evacuation and decontamination procedures should be undertaken as soon as possible. Medical personnel assisting evacuated victims of nerve agent poisoning should avoid contaminating themselves by exposure to the victim's clothing.

In the presence of life-threatening poisoning by organophosphorus nerve agents or insecticides, there are no absolute contraindications to the use of the DuoDote Auto-Injector. When symptoms of poisoning are not severe, DuoDote Auto-Injector should be used with extreme caution in people with heart disease, arrhythmias, recent myocardial infarction, severe narrow angle glaucoma, pyloric stenosis, prostatic hypertrophy, significant renal insufficiency, chronic pulmonary disease, or hypersensitivity to any component of the product.

Please see brief summary of full Prescribing Information on adjacent page.

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References: 1. DuoDote™ (atropine and pralidoxime chloride injection) Auto-Injector (package insert). Columbia, MD: Meridian Medical Technologies™, Inc.; 2007. 2. Agency for Toxic Substances and Disease Registry. Medical Management Guidelines (MMGL) for nerve agents: tabun (GA), sarin (GB), soman (GD), and VX. Available at: <http://www.atsdr.cdc.gov/MMGL/mmgl166.html>. Accessed February 21, 2007. 3. Holstoga CP, Dobmeier GG. Nerve agent toxicity and treatment. *Curr Treat Options Neurol*. 2005;7:91-98. 4. Data on file. Columbia, MD: Meridian Medical Technologies™, Inc.



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Pralidoxime Chloride 600 mg/2 mL

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FOR USE IN NERVE AGENT AND INSECTICIDE POISONING ONLY

THE DUODOTE™ AUTO-INJECTOR SHOULD BE ADMINISTERED BY EMERGENCY MEDICAL SERVICES PERSONNEL WHO HAVE HAD ADEQUATE TRAINING IN THE RECOGNITION AND TREATMENT OF NERVE AGENT OR INSECTICIDE INTOXICATION.

INDICATIONS AND USAGE

DuoDote™ Auto-Injector is indicated for the treatment of poisoning by organophosphorus nerve agents as well as organophosphorus insecticides.

DuoDote™ Auto-Injector should be administered by emergency medical services personnel who have had adequate training in the recognition and treatment of nerve agent or insecticide intoxication.

DuoDote™ Auto-Injector is intended as an initial treatment of the symptoms of organophosphorus insecticide or nerve agent poisonings; definitive medical care should be sought immediately.

DuoDote™ Auto-Injector should be administered as soon as symptoms of organophosphorus poisoning appear (eg, usually tearing, excessive oral secretions, sneezing, muscle fasciculations).

CONTRAINDICATIONS

In the presence of life-threatening poisoning by organophosphorus nerve agents or insecticides, there are no absolute contraindications to the use of DuoDote™ Auto-Injector.

WARNINGS

CAUTION! INDIVIDUALS SHOULD NOT RELY SOLELY UPON ATROPINE AND PRALIDOXIME TO PROVIDE COMPLETE PROTECTION FROM CHEMICAL NERVE AGENTS AND INSECTICIDE POISONING.

PRIMARY PROTECTION AGAINST EXPOSURE TO CHEMICAL NERVE AGENTS AND INSECTICIDE POISONING IS THE WEARING OF PROTECTIVE GARMENTS INCLUDING MASKS DESIGNED SPECIFICALLY FOR THIS USE.

EVAUACUATION AND DECONTAMINATION PROCEDURES SHOULD BE UNDERTAKEN AS SOON AS POSSIBLE. MEDICAL PERSONNEL ASSISTING EVACUATED VICTIMS OF NERVE AGENT POISONING SHOULD AVOID CONTAMINATING THEMSELVES BY EXPOSURE TO THE VICTIM'S CLOTHING.

When symptoms of poisoning are not severe, DuoDote™ Auto-Injector should be used with extreme caution in people with heart disease, arrhythmias, recent myocardial infarction, severe narrow angle glaucoma, pyloric stenosis, prostatic hypertrophy, significant renal insufficiency, chronic pulmonary disease, or hypersensitivity to any component of the product. Organophosphorus nerve agent poisoning often causes bradycardia but can be associated with a heart rate in the low, high, or normal range. Atropine increases heart rate and alleviates the bradycardia. In patients with a recent myocardial infarction and/or severe coronary artery disease, there is a possibility that atropine-induced tachycardia may cause ischemia, extend or initiate myocardial infarcts, and stimulate ventricular ectopy and fibrillation. In patients without cardiac disease, atropine administration is associated with the rare occurrence of ventricular ectopy or ventricular tachycardia. Conventional systemic doses may precipitate acute glaucoma in susceptible individuals, convert partial pyloric stenosis into complete pyloric obstruction, precipitate urinary retention in individuals with prostatic hypertrophy, or cause inspiration of bronchial secretions and formation of dangerous viscid plugs in individuals with chronic lung disease.

More than 1 dose of DuoDote™ Auto-Injector, to a maximum of 3 doses, may be necessary initially when symptoms are severe. **No more than 3 doses should be administered unless definitive medical care (eg, hospitalization, respiratory support) is available.**

Severe difficulty in breathing after organophosphorus poisoning requires artificial respiration in addition to the use of DuoDote™ Auto-Injector.

A potential hazardous effect of atropine is inhibition of sweating, which in a warm environment or with exercise, can lead to hyperthermia and heat injury.

The elderly and children may be more susceptible to the effects of atropine.

PRECAUTIONS

General: The desperate condition of the organophosphorus-poisoned individual will generally mask such minor signs and symptoms of atropine and pralidoxime treatment as have been noted in normal subjects.

Because pralidoxime is excreted in the urine, a decrease in renal function will result in increased blood levels of the drug.

DuoDote™ Auto-Injector temporarily increases blood pressure, a known effect of pralidoxime. In a study of 24 healthy young adults administered a single dose of atropine and pralidoxime auto-injector intramuscularly (approximately 9 mg/kg pralidoxime chloride), diastolic blood pressure increased from baseline by 11 ± 14 mmHg (mean \pm SD), and systolic

blood pressure increased by 16 ± 19 mmHg, at 15 minutes post-dose. Blood pressures remained elevated at these approximate levels through 1 hour post-dose, began to decrease at 2 hours post-dose and were near pre-dose baseline at 4 hours post-dose. Intravenous pralidoxime doses of 30-45 mg/kg can produce moderate to marked increases in diastolic and systolic blood pressure.

Laboratory Tests: If organophosphorus poisoning is known or suspected, treatment should be instituted without waiting for confirmation of the diagnosis by laboratory tests. Red blood cell and plasma cholinesterase, and urinary parathionophenol measurements (in the case of parathion exposure) may be helpful in confirming the diagnosis and following the course of the illness. However, miosis, rhinorrhea, and/or airway symptoms due to nerve agent vapor exposure may occur with normal cholinesterase levels. Also, normal red blood cell and plasma cholinesterase values vary widely by ethnic group, age, and whether the person is pregnant. A reduction in red blood cell cholinesterase concentration to below 50% of normal is strongly suggestive of organophosphorus ester poisoning.

Drug Interactions: When atropine and pralidoxime are used together, pralidoxime may potentiate the effect of atropine. When used in combination, signs of atropinization (flushing, mydriasis, tachycardia, dryness of the mouth and nose) may occur earlier than might be expected when atropine is used alone.

The following precautions should be kept in mind in the treatment of anticholinesterase poisoning, although they do not bear directly on the use of atropine and pralidoxime.

- Barbiturates are potentiated by the anticholinesterases; therefore, barbiturates should be used cautiously in the treatment of convulsions.
- Morphine, theophylline, aminophylline, succinylcholine, reserpine, and phenothiazine-type tranquilizers should be avoided in treating personnel with organophosphorus poisoning.
- Succinylcholine and mivacurium are metabolized by cholinesterases. Since pralidoxime reactivates cholinesterases, use of pralidoxime in organophosphorus poisoning may accelerate reversal of the neuromuscular blocking effects of succinylcholine and mivacurium.

Drug-drug interaction potential involving cytochrome P450 isozymes has not been studied.

Carcinogenesis, Mutagenesis, Impairment of Fertility: DuoDote™ Auto-Injector is indicated for short-term emergency use only, and no adequate studies regarding the potential of atropine or pralidoxime chloride for carcinogenesis or mutagenesis have been conducted.

Impairment of Fertility: In studies in which male rats were orally administered atropine (62.5 to 125 mg/kg) for one week prior to mating and throughout a 5-day mating period with untreated females, a dose-related decrease in fertility was observed. A no-effect dose for male reproductive toxicity was not established. The low-effect dose was 290 times (on a mg/m² basis) the dose of atropine in a single application of DuoDote™ Auto-Injector (2.1 mg).

Fertility studies of atropine in females or of pralidoxime in males or females have not been conducted.

Pregnancy:

Pregnancy Category C: Adequate animal reproduction studies have not been conducted with atropine, pralidoxime, or the combination. It is not known whether pralidoxime or atropine can cause fetal harm when administered to a pregnant woman or if they can affect reproductive capacity. Atropine readily crosses the placental barrier and enters the fetal circulation.

DuoDote™ Auto-Injector should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Atropine has been reported to be excreted in human milk. It is not known whether pralidoxime is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when DuoDote™ Auto-Injector is administered to a nursing woman.

Pediatric Use: Safety and effectiveness of DuoDote™ Auto-Injector in pediatric patients have not been established.

ADVERSE REACTIONS

Muscle tightness and sometimes pain may occur at the injection site.

Atropine

The most common side effects of atropine can be attributed to its antimuscarinic action. These include dryness of the mouth, blurred vision, dry eyes, photophobia, confusion, headache, dizziness, tachycardia, palpitations, flushing, urinary hesitancy or retention, constipation, abdominal pain, abdominal distention, nausea and vomiting, loss of libido, and impotence. Anhidrosis may produce heat intolerance and impairment of temperature regulation in a hot environment. Dysphagia, paralytic ileus, and acute angle closure glaucoma, maculopapular rash, petechial rash, and scarletiform rash have also been reported.

Larger or toxic doses may produce such central effects as restlessness, tremor, fatigue, locomotor difficulties, delirium followed by hallucinations, depression, and, ultimately medullary paralysis and death. Large doses can also lead to circulatory collapse. In such cases, blood pressure declines and death due to respiratory failure may ensue following paralysis and coma.

Cardiovascular adverse events reported in the literature for atropine include, but are not limited to, sinus tachycardia, palpitations, premature ventricular contractions, atrial flutter, atrial fibrillation, ventricular flutter, ventricular fibrillation, cardiac syncope, asystole, and myocardial infarction. (See **PRECAUTIONS**.)

Hypersensitivity reactions will occasionally occur, are usually seen as skin rashes, and may progress to exfoliation. Anaphylactic reaction and laryngospasm are rare.

Pralidoxime Chloride

Pralidoxime can cause blurred vision, diplopia and impaired accommodation, dizziness, headache, drowsiness, nausea, tachycardia, increased systolic and diastolic blood pressure, muscular weakness, dry mouth, emesis, rash, dry skin, hyperventilation, decreased renal function, and decreased sweating when given parenterally to normal volunteers who have not been exposed to anticholinesterase poisons.

In several cases of organophosphorus poisoning, excitement and manic behavior have occurred immediately following recovery of consciousness, in either the presence or absence of pralidoxime administration. However, similar behavior has not been reported in subjects given pralidoxime in the absence of organophosphorus poisoning.

Elevations in SGOT and/or SGPT enzyme levels were observed in 1 of 6 normal volunteers given 1200 mg of pralidoxime intramuscularly, and in 4 of 6 volunteers given 1800 mg intramuscularly. Levels returned to normal in about 2 weeks. Transient elevations in creatine kinase were observed in all normal volunteers given the drug.

Atropine and Pralidoxime Chloride

When atropine and pralidoxime are used together, the signs of atropinization may occur earlier than might be expected when atropine is used alone.

OVERDOSAGE

Symptoms:

Atropine

Manifestations of atropine overdose are dose-related and include flushing, dry skin and mucous membranes, tachycardia, widely dilated pupils that are poorly responsive to light, blurred vision, and fever (which can sometimes be dangerously elevated). Locomotor difficulties, disorientation, hallucinations, delirium, confusion, agitation, coma, and central depression can occur and may last 48 hours or longer. In instances of severe atropine intoxication, respiratory depression, coma, circulatory collapse, and death may occur.

The fatal dose of atropine is unknown. In the treatment of organophosphorus poisoning, doses as high as 1000 mg have been given. The few deaths in adults reported in the literature were generally seen using typical clinical doses of atropine often in the setting of bradycardia associated with an acute myocardial infarction, or with larger doses, due to overheating in a setting of vigorous physical activity in a hot environment.

Pralidoxime

It may be difficult to differentiate some of the side effects due to pralidoxime from those due to organophosphorus poisoning. Symptoms of pralidoxime overdose may include: dizziness, blurred vision, diplopia, headache, impaired accommodation, nausea, and slight tachycardia. Transient hypertension due to pralidoxime may last several hours.

Treatment: For atropine overdose, supportive treatment should be administered. If respiration is depressed, artificial respiration with oxygen is necessary. Ice bags, a hypothermia blanket, or other methods of cooling may be required to reduce atropine-induced fever, especially in children. Catheterization may be necessary if urinary retention occurs. Since atropine elimination takes place through the kidney, urinary output must be maintained and increased if possible; intravenous fluids may be indicated. Because of atropine-induced photophobia, the room should be darkened.

A short-acting barbiturate or diazepam may be needed to control marked excitement and convulsions. However, large doses for sedation should be avoided because central depressant action may coincide with the depression occurring late in severe atropine poisoning. Central stimulants are not recommended.

Physostigmine, given as an atropine antidote by slow intravenous injection of 1 to 4 mg (0.5 to 1.0 mg in children) rapidly abolishes delirium and coma caused by large doses of atropine. Since physostigmine has a short duration of action, the patient may again lapse into coma after 1 or 2 hours, and require repeated doses. Neostigmine, pilocarpine, and methacholine are of little benefit, since they do not penetrate the blood-brain barrier.

Pralidoxime-induced hypertension has been treated by administering phentolamine 5 mg intravenously, repeated if necessary due to phentolamine's short duration of action. In the absence of substantial clinical data regarding use of phentolamine to treat pralidoxime-induced hypertension, consider slow infusion to avoid precipitous corrections in blood pressure.

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One area in which the CDP excels at real-life training is in its Chemical, Ordnance, Biological, and Radiological (COBRA) training courses. According to DHS, the Center's Chemical, Ordnance, Biological, and Radiological Training Facility (COBRATF) is the only toxic-chemical training facility of its kind in the United States. Dedicated to giving first responders the opportunity to experience a COBRA disaster in a controlled environment, the classes expose – literally and figuratively – willing and wanting civilian responders to serious toxins.

The COBRATF courses – e.g., the WMD Technical Emergency Response Training course – offer training that features an overview of the terrorist threat as well as a list of the most likely targets and the types of hazards that may be faced in a WMD incident. The course also includes hands-on training in decontamination, mass-casualty triage, surveying and monitoring, and the recognition of explosive devices. Realistic mockups of clandestine labs enable responders to recognize paraphernalia and equipment that might indicate a chemical or biological threat, including such toxins as Sarin, Anthrax, Ricin, and various infectious diseases. Mock methamphetamine laboratories also are used for training purposes.

The 32-hour course ends with engaging the chemical agents GB and VX. These noxious substances are deadly nerve agents, but – as prescribed by the United Nations Chemical Weapons Convention – are allowed to be used for defensive training in a controlled environment.

Knowledge + Experience = Confidence

The rationale for exposing civilian personnel – properly outfitted with gas masks and protective clothing, it should be emphasized – to live agents is straightforward enough. Through increased knowledge, fear is decreased. The CDP cites findings by the Walter Reed Army Institute of Research and the Army Research Laboratory that support the use of infectious agents as the surest if not only method of providing high levels of confidence in equipment, procedures, and – of particular importance – the individual student. The Institute of Research reports that “Measures of confidence were clearly higher for subjects trained with toxic agents than for subjects without such training.”

There is no better teacher than experience. As Robert Burns of the Office of the Attending Physician of the U.S. Congress has pointed out, “If you have not trained in live agent, you are not prepared for a WMD incident.” In addition to building self-assurance in an individual's personal and operational skills and fine-tuning operational procedures, the CDP has found that training with VX and GB creates “responder veterans” – who then share their own experiences and education with other emergency responders, resulting in a ripple effect of knowledge and security.

In 1995, members of the terrorist organization Aum Shinrikyo released liquid Sarin on the Chiyoda, Marunouchi, and Hibiya subway lines, killing twelve and exposing thousands to the toxic nerve agent; the attacks did more than shock the United States, it inspired action

It is the mission of the CDP not only to identify, develop, test, and deliver effective training to state, local, and tribal emergency-response providers but also to direct some of that training at the performance, management, and planning levels. The access to current information and commitment to real-life teachable scenarios is something the CDP takes seriously as it strives for a total Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) response. “There is a lot of interest and energy by the various response agencies to integrate training at all levels of response, because that is how an actual response will take place,” says King. “The military calls this ‘Train as you fight.’ For us it is ‘Train as you will respond.’”

That brief mission summary has proved to be extremely successful. As of late September, 500,000 students – 114,000 of them last year alone – will have passed the CDP's tests. “This milestone is particularly noteworthy,” King said, “considering [that] the original expectation and infrastructure of the CDP was based on training about 10,000 students annually.” With its intense instruction and gratifying results, the CDP itself inspires a high degree of confidence in the training it offers.

Kate Rosenblatt is a writer based in the Washington, D.C., metropolitan area. She has a background in education reform, communications, and business development, and has written for a number of publications on a broad range of subjects ranging from finance to fashion to public safety and related topics.

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Agricultural Incidents and Effective Multi-Agency Coordination

By Frank Castro-Wehr with Mark Ghilarducci, Public Health



Responses to agricultural emergencies such as food contamination, animal diseases, or pest infestation are similar to other types of responses in many respects – but in several important ways quite different from the responses to traditional fires, hazardous-materials releases, or natural-disaster emergencies. For that reason, some National Incident Management System (NIMS) functions, such as Multi-Agency Coordination (MAC), are required in addition to the ICS (Incident Command System) structure and certain adapted ICS positions to support the uniqueness of an agricultural response.

Emergencies precipitated by fires, the release of hazardous materials, or natural disasters are typically bound by a geographic area, and other incident parameters, such as when and how it was initiated, can be defined and usually understood – as is the realization that a tactical field incident command is rapidly needed. That logical, common-sense cause-and-effect process is not always quite so obvious with an agricultural emergency. For example, contaminated food discovered in one state may have had its origin several states away – or in another country (e.g., the melamine-contaminated products imported from China). Also, it may not be known, until days or weeks of trace-back work and surveillance has been completed, if sicknesses were related to food poisoning, what specific food caused the illness, and/or where the food came from. Such incidents involve many agencies and at times other governments, multiple authorities, and a wide array of resources coordinated over numerous locations.

To coordinate these efforts, it is not an incident command post that may be needed initially, but rather a MAC Group. The MAC Group would activate to share initial surveillance data and case studies, for example – as well as media information, research data, intelligence, policy decisions, investigation details, agency authorities, and regulatory policies – with partnering agencies and industry. While the MAC Group does not direct tactical operations, its members will carry out objectives-based action plans to coordinate priorities and allocate resources.

Specialized Tools, Responsibilities, And Operational Guidelines

To be successful in these efforts, MAC Group members will need various specialized tools and training – involving but not limited to the following: MAC Group functional responsibilities;

individual position guides; a comprehensive organizational structure and activation triggers; a spectrum of communications pathways (to tactical command posts, other MAC Groups, and other agencies); detailed information related to jurisdictional authorities and responsibilities; and prioritization matrices.

A MAC Group must be both flexible and willing to adapt quickly when an emergency situation is better understood. The MAC Group will collaborate and coordinate with emergency operations centers (EOCs) and joint information centers (JICs) – but it should be remembered that the policy, regulatory, and data-sharing functions may be designed into MAC Groups established outside of those structures.

A helpful example of the challenges involved in such situations is the recent U.S. Food and Drug Administration's investigative response to melamine-contaminated animal foods that involved multi-agency and even international interagency coordination across a wide geographic area. Consumer-call and complaint lines were established; local, state, and FDA inspections and “sampling” events were conducted throughout the country; media outreach was achieved via press releases and web site information; meetings and calls were conducted between national regulatory partners; and a team was dispatched to China. Probably the greatest strength of this multi-agency, multi-jurisdictional response was its adherence to the multi-agency coordination principles of ICS as outlined by the NIMS guidelines.

Variations on the Theme: A Distinct Approach Needed

An agricultural response Incident Command System looks much the same as others – but with a number of variations. Fires and natural disasters usually entail an acute phase of response during which the threat must be mitigated as quickly as possible, and the recovery phase immediately follows. In contrast, agricultural responses may entail a much longer response phase involving, but not necessarily limited to, any or all of the following: food or animal testing; facility or field sampling; surveillance, recall, and/or quarantine actions; the disposal of contaminated foods or animal carcasses; and a disinfection program. These tasks often require a longer-term approach to the response. In fact, agricultural responses *are* typically longer; in addition, the incident-planning cycles also are longer, response staff may shift out more frequently, larger databases of information must be established, and ongoing coordination with

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an essential MAC Group is needed to funnel the information intended for statewide or national distribution.

Also, ICS Operations Sections responding to an agricultural incident must be flexible enough to allow for their unique focus. A surveillance branch might be needed, for example, made up of epidemiologists, scientists, laboratory experts, and/or other subject-matter specialists and technicians. A separate food-contamination branch may be composed of a product-recall unit, a food-disposal unit, cleaning and disinfection teams, and field or facility inspectors from various departments with oversight and regulatory authorities over food. Disease-related incidents may require the euthanasia of infected animals as well as the establishment of vaccination and/or vector-control units.

In addition, a number of subject-unique plans may need to be developed – e.g., for food disposal, carcass disposal, and disinfection. Site-safety and site-sampling plans also would be required, as always, but when they involve agricultural incidents they must include bio-security considerations. All of these agricultural and human-health types of issues, of course, must be: (1) reflected in the composition of the EOCs and MAC Group activated in response to the incident; and (2) incorporated into the command structure of incidents that not only require traditional responses but also include an agricultural-related component.

There are several other ways in which agricultural responses vary from the norm. Although agricultural and health departments may have ERT (emergency response team) staff specifically trained for time-critical responses, non-ERT staff from other departments may be tasked during extended responses to provide additional support. The latter will usually have two sets of commitments – to the response team, and to their day-to-day duties – which means that a hybrid management structure may be established that allows them to meet both sets of responsibilities.

Indeed, many agriculture-related responses do not actually close and demobilize, but instead evolve into long-term programs, such as with a plant-pest eradication event that may take years to resolve. In such cases the incident command lines of authority could be replaced during the period when the response phase evolves into a program – a transition that may cause tension between ICS authority and agency program authority. The tension can be lessened significantly, though, if basic ICS terminology, tools, and authorities become ingrained into the overall program culture. In this way, ICS

training supports staff with response *and* program work. Also, management tools such as incident action plans, situation status reports, safety plans, and media release processes become working and effective *habits*.

There is a long-term benefit from using this approach: As the ICS tools and terms are used more commonly in program work, staff members become more effective in responding to time-critical emergencies, coordinating with multi-agency groups, and understanding the response roles. Staff training efforts are also then streamlined into a common system, using the ICS principles and guidelines as a base.

To briefly summarize, best-practice suggestions for agriculture responses are to:

- Establish and train an effective multi-agency coordination capability as a primary response organization – taking special care to include the tools, procedures, communications links, and strategies needed;
- Develop operational positions that are focused on the work of agriculture and human health staff, so they can work comfortably in a traditional ICS structure; and
- Use ICS tools and terms as part of the common lexicon among staff that often work in both response and program cultures.

For additional information about the FDA's investigation of the melamine-contamination incident, click on <http://www.fda.gov/AboutFDA/CentersOffices/OC/OfficeofOperations/ucm120948.htm>.

Mark Ghilarducci (pictured) is vice president and director of the Western States Regional Office of James Lee Witt Associates, providing technical expertise and consultation services to government and private-sector clients in the fields of Crisis and Consequence Management, Emergency Services, Homeland Security, and Government Affairs. A 1987 graduate of the University of California at Davis and a 1998 graduate of Harvard University's Kennedy School of Government fellowship program for senior executives in state and local government, he has over 25 years of diversified service in the fields of emergency management, fire, and emergency medical services. A former deputy director of the California Governor's Office of Emergency Services (OES), he also chaired the Technical Committee of the state's Standardized Emergency Management System.

Frank Castro-Wehr, a James Lee Witt Associates program specialist, has over 19 years experience in emergency-management projects, including several in the field of CBRNE (chemical, biological, radiological, nuclear, explosives) incidents. He holds a degree in chemical engineering from the University of Arkansas and an MA in philosophy and theology from the Graduate Theological Union in Berkeley, California. Among his other accomplishments, he has developed plans and response tools for state and local agricultural departments and health departments, and local emergency management departments. He also has conducted a number of bi-national hazmat and counter-terror exercises along the U.S.-Mexico border, and has worked with U.S. and Mexican agencies during exercise planning meetings. Witt Associates is a part of GlobalOptions Group.

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CARD's Incident Command System for Community Responders

By Ana-Marie Jones, Emergency Management



The Incident Command System (ICS) for Community Responders is a rewritten and reframed version of ICS, created by CARD (Collaborating Agencies Responding to Disasters – a nonprofit organization headquartered in Alameda County, California) to empower and serve the preparedness and response needs of nonprofits, faith agencies, and other organizations existing and operating outside the traditional emergency-management infrastructure.

The attached PowerPoint presentation walks the audience through a short bit of history, then explains ICS fundamentals by using the scenario of one person dealing with a simple kitchen fire. The presentation ends with a list of helpful suggestions on how to use what has been presented, and how to apply the concept of “deliberate practice” to build specific ICS skills and capabilities.

When delivered as part of a CARD training curriculum, the on-screen actions depicted in this shortened version are supplemented with real-life stories and



examples, some recommended exercises, a variety of printed materials, and the opportunity for audience interaction. Stripped of both acronyms and insiders' jargon – and of the bureaucracy needed for a more sophisticated response – the presentation allows virtually anyone without formal emergency training to understand: (a) how the Incident Command System can be beneficially applied to all (or almost all) emergencies and disasters; and

(b) how it can be particularly helpful in almost any other situation in which the mobilization of both human and physical resources is needed.

Many professional emergency managers throughout the United States – overseas as well – have found the CARD approach to be invaluable in socializing an often intimidating topic, decreasing the anxiety of civilian audiences, and shortening the overall learning curve for sometimes reluctant participants.

For more information on CARD, click on www.CARDcanhelp.org

Ana-Marie Jones is the executive director of CARD, which was created by local community agencies after the October 1989 Loma Prieta earthquake in California. CARD trains and supports nonprofits and their special needs' consumers in disaster preparedness, response, and recovery activities. During Ms. Jones's tenure she has re-written and redefined CARD's services and curriculum to ensure they are based on community building, economic empowerment, and leadership-development philosophies. Before joining CARD in April 2000, she worked for the California Governor's Office of Emergency Services Coastal Region on projects supporting community organizations and people with special needs. She also served as the acting executive director of the Northern California Disaster Preparedness Network, a five-year funding initiative dedicated to creating emergency preparedness and response resources for vulnerable and underserved communities.

The PowerPoint presentation walks the audience through a short bit of history, then explains the Incident Command System fundamentals by using the scenario of one person dealing with a simple kitchen fire

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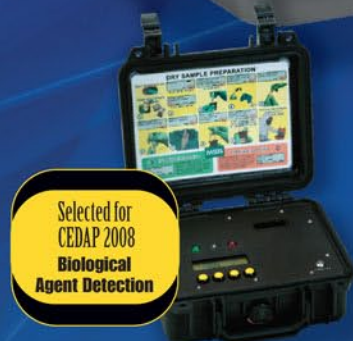
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California, Wyoming, and New York

By Adam McLaughlin, *State Homeland News*



California

Los Angeles Opens State-of-the-Art Emergency Operations Center

Los Angeles city officials have opened a new \$107 million state-of-the-art Emergency Operations Center (EOC), fulfilling part of the promise included in a 2002 bond measure. The two-story, 84,000-square-foot facility, just east of City Hall, was funded through a \$600 million bond measure that provided funds for 14 new police and fire facilities, including a new police headquarters scheduled for completion next month.

“We are making sure our priority is public safety,” Mayor Antonio Villaraigosa said at the 13 August EOC ribbon-cutting ceremony attended by numerous county, state, and federal law-enforcement and emergency-management officials. “Los Angeles has to be prepared for any emergency. On the [federal government’s] list of 15 potential emergencies, Los Angeles fails in nine of the categories. An incident could happen here any time.”

In addition to being aboveground, where natural sunlight will improve working conditions, the new facility will be able to withstand an 8.0-magnitude earthquake and most types of terrorist attacks, said Gary Moore, head of the city’s Bureau of Engineering. Various “pods” have been set aside in the building for specific functions ranging from transportation and police services to fire and emergency health needs. Numerous televisions connect to the network of cameras around the city; the facility also possesses wireless network capabilities so that other agencies can bring in and operate their own laptop computers.

Craig Fugate, administrator of the Federal Emergency Management Agency (FEMA), offered high praise not only for the facility but also for the city personnel who will be working in it. “What I have seen in talking with the people here is the emphasis on teamwork,” Fugate said. “FEMA is there to back you up,” he promised, “so it is important that you recognize the need to work together.”

Coincident with the opening of the new center, the city also unveiled a new Web site, www.readyla.org, which is configured to provide breaking news headlines and alerts on any major problems that occur almost anywhere in the city; it also offers

expert advice on how to prepare for and respond to any difficult situation likely to develop that could challenge the capabilities of the city employees working at the center.

Marijuana Farm Fire Reveals Troubling Trend in State Forests

In late August, narcotics agents said they had little doubt that the nearly 90,000-acre La Brea fire that started earlier in the month was caused by Mexican drug traffickers who were tending a large marijuana farm planted on the side of a mountain.

The growers apparently fled as firefighters approached the source of the fire, Santa Barbara County Sheriff William Brown said. Their abandoned site was similar to other illicit plots planted by Mexican nationals and discovered by drug agents in recent years.

Investigators found 30,000 top-grade cannabis plants ranging in height from two feet to six feet. Stacks of propane tanks, melted irrigation tubing, empty fertilizer canisters, mounds of trash, a torched cooking stove, and a semiautomatic rifle also were found at the Los Padres National Forest location, the agents said.

U.S. Forest Service fire investigators believe that a propane-fed camp stove sparked the fire. “This is the trend,” Russ Arthur, a special agent for the U.S. Forest Service, said at a Santa Barbara news conference. “I have been involved in hundreds of [similar] arrests and all of the suspects have been Mexican nationals.”

Drug rings south of the border often send workers to plant in densely forested areas of the United States in early spring. The workers care for the plants for four to five months, camping out until it is time to harvest, the agents said.

California’s state and national forests are favored locations because of the state’s good weather and fertile soil. The remote pot farm where the La Brea fire started is in a steep, overgrown canyon more than a mile from the nearest road, investigators said. Growers terraced the plants up a mountain-side, diverting a nearby stream to provide drip irrigation to the plants, they said.



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The fire burned some distance away from the farm and it appeared that the growers stayed in place until the firefighters were fairly close to their position. Authorities cautioned rural residents not to approach any persons leaving the forest because they might be armed.

It has been a record year of pot seizures for the state and federal agents who work with the Santa Barbara County narcotics unit each summer to eradicate the illicit farms. As of late August the agents had pulled more than 225,000 plants, worth an estimated street value of \$675 million. Many of the illegal farms were not far from where the La Brea fire started. In late July, agents pulled 113,000 plants from one site, a record for the multi-agency team.

Brown said that it is virtually impossible to get rid of all of the marijuana grown in the state's forests. He said that he thinks that there are many more undetected pot farms throughout the state. "The reality is," he said, "[that] we could have an army [of investigators] out there and not be able to cover all of that ground."

Wyoming **National Guard Ready For Action in Future Disasters**

A special unit of the Wyoming National Guard stands vigilant to support the state's emergency responders. The 22 members of the 84th Civil Support Team are ready to roll out of their Cheyenne headquarters within 90 minutes and proceed at top speed to the scene of any terrorist attack or natural disaster that may occur within the state.

"The Guard is a huge asset, not only to Cheyenne, but to all of Wyoming," said Robert Cleveland, director of the Cheyenne-Laramie County Emergency Management Agency. The Guard members bring well trained expertise as well as top-of-the-line specialized equipment to enhance the safety of both first responders and residents, he said.

"You have to train like you fight, as they say," said Senior Master Sgt. Kyle R. Higgins. Higgins commands the unit, which is composed of both Army and Air Guard members, but emphasizes that local authorities remain in charge. "We are a tool. We do not take over a scene," Higgins said.

The U.S. Department of Energy (DOE) was helping the unit last week, and first responders from throughout the state,

"train like they fight" during a DOE-developed "radiological assistance program" carried out at the Big Country Speedway on South Greeley Highway. Small amounts of some dangerous materials were hidden around the site to give the Guard unit and other participants an opportunity to practice the operations required for sweeping large areas such as a stadium and/or parking lot; the participants were challenged primarily to see what they could find – and then determine what they should do with it.

The 84th brings with it the best civilian and military equipment available for the rapid detection and analysis of chemical, radiological, and biological agents. "It is a full-blown lab," Higgins said of a vehicle packed with about \$4 million in equipment inside the vehicle, which resembles an armored car on the outside. The equipment can provide a "presumptive" diagnosis within an hour to an hour-and-a-half at the scene of a major incident.

A similar Guard vehicle is packed with communications equipment. "We can pretty much do anything in the world with communications," Higgins said. "Our main job," Master Sgt. Anthony Ramirez added, "is integrating with local first responders." Ramirez is the communications team chief. "We can talk to anybody," he said. The comm. equipment carried in the van also can be used to back up the 911 grid should it fail – as it did when Hurricane Katrina hit the Gulf Coast.

The 84th also boasts a rolling medical unit as well as the equipment needed for the decontamination and safe handling of dangerous materials. The unit not only "watches out for the crowds," a spokesman said, at events such as Cheyenne's famous Frontier Days but also responds to disasters anywhere else in Wyoming – and sometimes in other states. The unit was deployed last year, for example, to provide additional security at the Democratic National Convention in Denver and to the Gulf Coast when Hurricane Ike made landfall.

New York **NYPD Commissions New Fireboat on 9/11 Anniversary**

On the anniversary of its darkest day, the New York City Fire Department (FDNY) launched a new state-of-the-art fireboat designed to quickly respond should the unthinkable happen again.

The new boat – named “343,” after the number of FDNY members who died during or in the aftermath of the 11 September 2001 terrorist attacks on the two World Trade Center towers in downtown Manhattan – was christened in Florida last Friday, the eighth anniversary of the attacks. It is scheduled to move north in the near future and soon after that take its place at the forefront of a fleet of boats charged with patrolling the 562 miles of the city’s coastline.

The primary mission of the \$27-million fireboat was born eight years ago, when the older FDNY Marine 1 - the *John D. McKean* - raced to a rescue area near the Trade Center and evacuated more than 200 people to New Jersey. After the hydrants across lower Manhattan were rendered useless by the collapse of the two towers, use of the *McKean*, which was able to draw water from the Hudson River, was one of the FDNY’s few ways of battling the raging fire.

“The 343 will significantly improve our ability to respond to emergencies in and around New York Harbor,” said Fire Commissioner Nicholas Scoppetta, “while also reminding us all of the incredible sacrifices so many of our members made eight years ago.”

The new fireboat, which was funded by a grant from the U.S. Department of Homeland Security, is 140 feet long and can pump 50,000 gallons of water a minute, which is more than double the capacity of the *McKean*, officials said. The fireboat’s name is emblazoned on the hull in steel retrieved from the World Trade Center. The 343, which is equipped with a military-design pressurized air system to protect firefighters from smoke and radiation, was christened by a group of FDNY officials in a ceremony at the Eastern Shipbuilding Group yard in Panama City, Florida, and is expected to be on patrol in the NYC waterways sometime in December. Its sister ship, the *Firefighter II*, is scheduled to go into service next spring.

“Every man working on the 343 knows it is a special project,” said Michael Yriondo of Eastern Shipbuilding. “They know what this boat means to your city,” he told the visiting FDNY officials.

Adam McLaughlin is with the Port Authority of NY & NJ, and is the Preparedness Manager of Training and Exercises, Operations & Emergency Management, where he develops and implements agency-wide emergency response and recovery plans, business continuity plans, and training and exercise programs. He designs and facilitates emergency response drills/exercises for agency responders, state and federal partners, and senior Port Authority executives.

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