

Incident Command System (ICS) & National Incident Management System (NIMS) Training for the Water Sector

National Incident Management System



(Adapted from FEMA IS-700)

- On February 28, 2003, President Bush issued Homeland Security Presidential Directive-5. HSPD-5 directed the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS). NIMS provides a consistent nationwide template to enable all government, private-sector, and nongovernmental organizations to work together during domestic incidents. This course introduces NIMS and explains the purpose, principles, key components and benefits of NIMS. Where possible and appropriate, the U.S. Environmental Protection Agency (EPA) has modified the basic FEMA training materials in this course to be more reflective of the water sector and to provide water sector examples of NIMS concepts and recommendations.
- You must be qualified to instruct the Water Sector NIMS IS-700 training. EPA recommends that the NIMS IS-700 Lead Instructor should have successfully completed ICS-100, ICS-200, IS-700 (NIMS, An Introduction), and IS-800a (The National Response Plan), and should have training and experience in adult education.
- The entire NIMS document can be downloaded from the following FEMA webpage: http://www.fema.gov/pdf/emergency/nims/nims_doc_full.pdf.

Unit Objectives

- Introduce NIMS
- Describe NIMS preparedness measures.
- Explain NIMS communications & information management.
- Describe NIMS resource management.
 - Explain NIMS command and management.
 - Explain how the NIMS will be managed and maintained into the future.
 - Become certified in IS 700 – NIMS, An Introduction

- Self-explanatory.
- The entire NIMS document can be downloaded from the following FEMA webpage:
http://www.fema.gov/pdf/emergency/nims/nims_doc_full.pdf

What is NIMS?

- A comprehensive, national approach to incident management
- Applicable at all jurisdictional levels and across disciplines
- Promotes mutual aid and assistance



- NIMS is a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines. The intent of NIMS is to:
 - o Be applicable across a full spectrum of potential incidents and hazard scenarios, regardless of size or complexity.
 - o Improve coordination and cooperation between public and private entities in a variety of domestic incident management activities.
- State and local organizations must adopt NIMS in order to receive federal preparedness assistance funding! For more details on NIMS compliance, please see http://www.fema.gov/emergency/nims/nims_compliance.shtm or the NIMS Compliance document at the back of the student coursebook.
- NIMS is currently under review and revision. Find out more about the potential changes in NIMS and learn how to comment at <http://www.fema.gov/emergency/nims/index.shtm>

Background

- Developed after 9/11
- Takes existing best practices in emergency management (such as ICS) and makes them national standards
- NIMS implementation required for FY 2007 federal preparedness funding



Why Do We Need NIMS?

Lessons learned have shown the need for:

- A coordinated response (e.g., ICS)
- Standardization (e.g., training)
- Interoperability (e.g., radios)



- Lessons learned from previous large-scale disasters point to a need for a National Incident Management System.
- Emergencies occur every day somewhere in the United States. These emergencies are large and small and range from fires to hazardous materials incidents to natural and technological disasters. Each incident requires a response.
- Whether from different departments within the same jurisdiction, from mutual aid partners, or from State and Federal agencies, responders need to be able to work together, communicate with each other and depend on each other.
- Until now, there have been no standards for domestic incident response that reach across all levels of government and all response agencies. The events of September 11 have underscored the need for and importance of national standards for incident operations, incident communications, personnel qualifications, resource management, and information management and supporting technology.
- To provide standards for domestic incident response, President Bush signed Homeland Security Presidential Directive 5. HSPD-5 authorized the Secretary of Homeland Security to develop the NIMS. NIMS provides for interoperability and compatibility among all responders.
- Bottom line: You need NIMS to give & receive mutual aid and assistance. NIMS is also the basis for providing interoperability and compatibility among all responders.

NIMS Quick Quiz

Can you:

- Involve police, fire, public health, etc. in your planning, training, and exercises?
- Integrate ICS into your ERP?
- Communicate with other first responders?
- Tap into a mutual aid network?
- Identify, mobilize, track, and recover resources?
- Effectively communicate with the public during times of crisis?

- This quick quiz is intended to stimulate a discussion with the students in regards to what their jurisdiction(s) / agency(ies) is (are) able to do. The instructor may wish to point out how each of the items in the quiz contributes to a coordinated response.
- Essentially, jurisdictions that can't do all of the items contained within the quiz can benefit from NIMS.

What does NIMS compliance mean to you?

- Community adoption
- Preparedness planning
- Training
- Exercises
- Communication and information management
- Resource management
- Command



The slide features a dark blue background with a white title and a list of seven bullet points. To the right of the list is a photograph of three American flags waving in the wind against a clear blue sky. The bottom of the slide has a decorative border with a pattern of white stars and arrows.

- This slide is a brief summary of all incident management components that fall under NIMS compliance requirement. It is important for the students to realize that NIMS compliance is more than just taking a few training courses. To comply with NIMS local jurisdictions must:
 - o Adopt NIMS by executive order
 - o Institutionalize ICS
 - o Use multi-agency coordination systems (EOC)
 - o Use Joint Information Systems (JIS)
 - o Revise and update Plans, SOPs, etc.
 - o Participate in and promote intrastate and interagency mutual aid and assistance agreements
 - o Complete IS-700, IS-800, ICS-100, and ICS-200 training as appropriate
 - o Incorporate NIMS/ICS into all exercises
 - o Participate in exercises
 - o Inventory community response assets for typing conformance
 - o Use common terminology across the public safety sector

NIMS Concepts and Principles

NIMS is:

Flexible to enable all responding organizations to work together

Standardized to improve overall response and interoperability

Applicable across jurisdictions and functions.



- Tell the students that NIMS provides a framework for interoperability and compatibility by balancing flexibility and standardization.
- NIMS provides a flexible framework that facilitates government and private entities at all levels working together to manage domestic incidents. This flexibility applies to all phases of incident management, regardless of cause, size, location, or complexity.
- NIMS provides a set of standardized organizational structures, as well as requirements for processes, procedures, and systems designed to improve interoperability (for example, typing resources).

NIMS Components

- 1. Preparedness**
- 2. Communications and Information Management**
- 3. Resource Management**
- 4. Command and Management**
- 5. Ongoing Management and Maintenance**

- These are the five major components of NIMS (previously 6, but two have been combined). Explain to the students that the following slides will look at each of the components in more detail.
- Note: Under the revised NIMS, there are only 5 components. Supporting technologies falls under the ongoing management and maintenance, along with the National Integration Center (NIC).

1. Preparedness

Preparedness Elements:

- Planning
- Continuity of Operations
- Procedures and Protocols
- Training and Exercises
- Personal Qualifications and Certifications
- Equipment Certification
- Mutual Aid and Assistance Agreements



- A continuous process that involves the integration of planning, training, exercising, personnel qualification and certification standards, and equipment certification standards in an effort to build, sustain, and improve operational capabilities. Preparedness facilitates efficient and effective emergency management and response activities.
- Preparedness is usually maintained through a continual cycle of planning, training, equipping, exercising, evaluating, and taking action to correct and mitigate. NIMS places the responsibility of preparedness on each individual jurisdiction. NIMS, however, will provide tools to aid jurisdictions in their preparedness efforts. Some of these tools will be discussed in later slides.
- Specific examples of efforts to support water sector preparedness under NIMS include emergency response guidance put forth by U.S. EPA (e.g., Emergency Response Plan Guidance for Small and Medium Systems, available at http://www.epa.gov/safewater/watersecurity/pubs/small_medium_ERP_guidance040704.pdf), training and exercises (e.g., the Water Sector ICS and National Incident Management System courses and the Emergency Response Tabletop Exercises for Drinking Water and Wastewater Systems).
- FEMA products available to the water sector include the on-line independent study courses as well as guidance documents such as Integrating the NIMS into Local and Tribal Emergency Operations Plans and Standard Operating Procedures. An on-line tool called NIMCAST is also available to help jurisdictions and agencies to evaluate themselves in terms of NIMS compliance and preparedness.

Responsibilities of Preparedness Organizations

1. Establishing/coordinating plans and protocols.
2. Integrating/coordinating activities.
3. Establishing guidelines and protocols to promote interoperability.
4. Adopting guidelines for resource management.
5. Establishing response priorities.
6. Establishing/maintaining multiagency coordination mechanisms.

- Preparedness organizations at all levels should follow NIMS standards and undertake the following tasks:
 - o Establishing and coordinating emergency plans and protocols.
 - o Integrating and coordinating the activities and jurisdictions within their purview.
 - o Establishing guidelines and protocols to promote interoperability among jurisdictions and agencies.
 - o Adopting guidelines and protocols for resource management.
 - o Establishing priorities for resources and other response requirements.
 - o Establishing and maintaining multi-agency coordination mechanisms.
- An example of a preparedness organization is a Local Emergency Planning Committee or LEPC.

Roles of the Private Sector and NGOs

- **The private sector (e.g., utilities) plays a vital role in emergency management and incident response, and should:**
 - **Be included in local preparedness planning**
 - **Prepare for events affecting their ability to provide water and wastewater services**
- **Nongovernmental Organizations (NGOs) capable and willing to assist in emergency management (e.g., RCAP) should be included in preparedness efforts.**

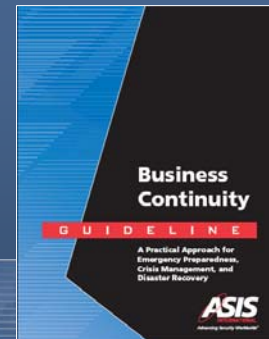
- The private sector can be a good source for best practices in many areas of preparedness, emergency management, and incident response.
- Both the private sector and NGOs should be incorporated in preparedness efforts such as planning, training, and exercises, as appropriate.
- It is also recommended that key executives and administrators of NGOs use NIMS for scheduled events or incidents to improve their ability to integrate NIMS into incident management.
- Examples of such participants for the water sector include the American Water Works Association (AWWA), and the National Rural Water Associations (NWRA).

Preparedness Planning

Types of Plans:

- Big-picture, strategic plans
- Emergency Response Plan (ERP)
- Procedures (e.g., rip-and-run guides)
- Continuity of Operations Plans (COOP)
- Corrective action and mitigation plans
- Recovery plans

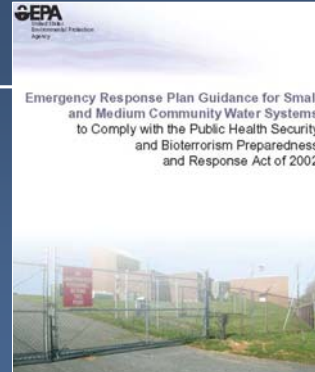
www.asisonline.org



- The NIMS document is an example of a big picture, strategic planning document.
- Jurisdictions must develop several types of plans, including:
 - Procedures, which may include standard operating procedures, field operations guides, job aids, or other critical information needed for a response.
 - Preparedness Plans, which describe how training needs will be identified and met, how resources will be obtained through mutual aid agreements, and the equipment required for the hazards faced by the jurisdiction.
 - Corrective Action and Mitigation Plans, which include activities required to implement procedures based on lessons learned from actual incidents or training and exercises.
 - Recovery Plans, which describe the actions to be taken to facilitate long-term recovery.
- At a water utility, an Emergency Response Plan (ERP) would be prepared. It is up to utility management to share the ERP or aspects of the ERP as appropriate with other local first responder agencies to ensure that the utility's ERP is not in conflict with any other local emergency plans or procedures. This is particularly important when the utility's ERP assumes a certain response or assistance from another local agency such as law enforcement of public health during a particular emergency.
- Continuity of Operations is the "capability of maintaining a business' core capabilities under all eventualities. It ensures the availability of critical infrastructure and resources. Water utilities probably already address some aspects of it, to make sure customers have service during / after emergencies.

Keys to a Good Plan

- Realistic, scalable, applicable to all hazards
- Basis for training and should be exercised
- Updated periodically
- Describe how personnel, equipment and other resources support incident operations
- Provide a mechanism for setting priorities
- Integrate multiple jurisdictions/disciplines
- Establish collaborative relationships



- A Plan should be applicable to all types of incident / hazard, from daily occurrences to catastrophic incidents, and should be exercised periodically to make sure that all individuals potentially involved in the response are trained and able execute their task.
- A Plan should also incorporate elements from after-action reviews or lessons learned, if applicable, and be updated regularly. Updating it may mean including a corrective action plan following a major incidents or exercise.
- Integrating multiple jurisdictions and agencies in the plan, such as water and wastewater utilities with local government (e.g., police, fire) will facilitate future coordinated emergency management and incident response activities.

Training and Exercises

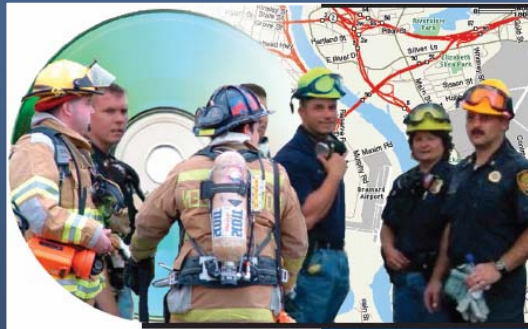
- Ensure personnel can function effectively together across jurisdictions and disciplines
- Types of Training
 - Incident Command System
 - Discipline or Agency Specific
 - Plan Specific
- Exercise the plan to help execute it more effectively
- Incorporate corrective actions from exercises
- Exercise with other agencies and jurisdictions



- Training and exercises are an integral part of preparedness planning, and should be conducted on a regular basis across multiple agencies and jurisdictions for utility and agency personnel to learn to provide a coordinated and effective response.
- To help jurisdictions prepare, the NIMS Integration Center (NIC) is responsible for the following training-related activities:
 - o Facilitating the definition of general training requirements and the development of national-level training standards and course curricula associated with the NIMS.
 - o Facilitating the development of national standards, guidelines, and protocols for incident management training and exercises.
- Another example of standardized exercise policies comes from the Department of Homeland Security. The Homeland Security Exercise and Evaluation Program (HSEEP) provides standardized exercise policies and makes funding available for backfill and overtime.

Emergency Response Tabletop Exercises for Drinking Water and Wastewater Systems

- EPA has a CD product entitled *Emergency Response Tabletop Exercises for Drinking Water and Wastewater Systems* (EPA 817-C-05-001)
- The CD can be viewed on-line at:
<http://cfpub.epa.gov/safewater/watersecurity/trainingcd.cfm>



- This is an example of exercises applicable to water/wastewater utilities.
- These 12 tabletop exercises were developed to help train utility workers in applying their emergency response plans. These exercises are based on the following five potential event types:
 - o Intentional contamination.
 - o Security breach.
 - o Cyber security.
 - o Physical attack.
 - o Interdependency.

Personnel Qualifications & Certification

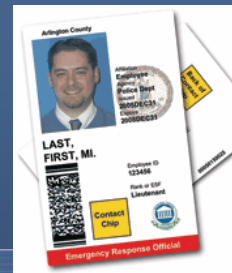
- Ensures that personnel possess the minimum skills, knowledge and experience to execute actions effectively and safely
- Typically includes:
 - Training and Experience
 - Currency requirements
 - Physical and medical fitness
 - Credentialing



- Under NIMS, preparedness is partially based on voluntary national standards for qualification and certification of emergency response personnel. Managed by the NIMS Integration Center (NIC), standards will help ensure that the participating agencies' and organizations' field personnel possess the minimum knowledge, skills, and experience necessary to perform activities safely and effectively.
- Personnel who are certified to support interstate incidents will be required to meet national qualification and certification standards.
- Please note that “credentialing” is not the same as “certification.” The NIC will work with existing state, territorial or discipline-specific credentialing bodies toward national recognition for multi-jurisdictional response under mutual aid agreements. States will be required, as part of their FY 07 NIMS compliance activities, to support, adopt, and carry out the actual credentialing.

Personnel Qualifications & Certification (cont.)

- For access to a site (especially outside your jurisdiction) be prepared to show:
 - Proof of Identity (2 forms of photo ID)
 - Qualifications
 - Deployment authorization
- Once this information has been verified/ approved, a credentials badge may be issued to you by the authorized authority for access to the site/incident.



- NIMS Credentialing is the administrative process for validating the qualifications of personnel and assessing their background for authorization and permitting/granting access to an incident involving interstate mutual aid and assistance.
- An example of NIMS Credentialing:
 - o At least one of the photo identification cards needs to be issued by a governmental authority.
 - o Proof of qualifications / certifications be issued by the proper authority as authorized by the State.
 - o Verification of deployment authorization may include a letter of invitation, deployment orders, or EMAC verification.
 - o The deployment authorization will show an individual is not self-dispatching.

NIMS Credentialing System

Verify Certification of Emergency Responders.

- Ensures that personnel resources requested from one jurisdiction to assist in response are adequately trained.
- Prevents self-dispatching.
- National recognition for multi-jurisdictional response under mutual aid.
- Job titles with minimum qualifications for Fire, HazMat, Law Enforcement, Public Works, etc.

- To support the credentialing initiative, the NIMS Public Works Working Group is currently identifying job titles that should be credentialed as well as the minimum qualification/certification, training, education, licensing & physical fitness requirements for each position.
- Participate/Comment by calling the NIC at 202-646-3850, or e-mail: NIMS-Integration-Center@dhs.gov, or web: www.fema.gov/emergency/nims
- NOTE: Credentialing does not always include the issuance of badges and identification materials for access to an incident site. ID badges are mandated for federal personnel by HSPD 12; however, the implementation of this directive has just begun.

Equipment Certifications

- Acquisition of equipment that meets standards, guidelines, and protocols.
- Interoperability (e.g. fire hydrants and radios)



- In addition to personnel certifications, equipment will also be certified under NIMS.
- Incident managers and emergency responders rely on various types of equipment to perform mission-essential tasks. A critical component of operational preparedness is that equipment performs to certain standards, including the capability to be interoperable with equipment used by other jurisdictions.
- To facilitate national equipment certification, the NIMS Integration Center will:
 - o Facilitate the development and or publication of national equipment standards, guidelines, and protocols.
 - o Review and approve lists of emergency responder equipment that meet national requirements.
- A lingering problem at many large incidents (e.g., 9/11 and Katrina) is the incompatibility of radio equipment between first responders.
- Look towards standard organizations: NIST, NFPA, AWWA

2. Communications & Information Management

Concepts and Principles:

- Common operating picture
- Interoperability
- Reliability, Scalability, and Portability
- Resiliency and Redundancy



- Communications and information management are critical to ensuring that a common operating picture is accessible to all jurisdictions and agencies to maintain consistency among all who respond to or manage an incident response. It follows that common communications and data standards are fundamental to effective communications from both within and outside of the incident response structure. Examples are Situation reports (SITREPS) and Pollution reports (POLREPS).
- At the national level, handheld radio standards will greatly aid interoperability in the future. SAFECOM is a communications program within the Office for Interoperability and Compatibility (OIC) of DHS that provides research, development, testing and evaluation, guidance, tools, and templates on communications-related issues to local, tribal, state, and federal emergency response agencies working to improve emergency response through more effective and efficient interoperable wireless communications.
- Locally, utilities may wish to consider checking with their neighboring utilities to ensure that handheld radios they are purchasing will be compatible with their neighbors. This will greatly aid communications in a mutual aid and assistance situation.

Communications Management

Standardized communication types:

- Strategic
- Tactical
- Emergency Management
- Support
- Public Address



- Standardized communication types include following:
 - o Strategic Communications: high-level directions from the Incident Commander, including resource priority decisions.
 - o Tactical Communications: from the Incident Commander to the ICS branches, and to and among operating resources.
 - o Emergency Management Communications: multiagency coordination among EOCs at the same level of government, or between different levels of government.
 - o Support Communications: offsite coordination (e.g., among hospitals, dispatching).
 - o Public Address Communications: emergency alerts and warnings, press conferences.
- Information flow between all stakeholders is essential to effective emergency management, but is dependent on interoperability of information systems (Standardization), and inclusion of relevant stakeholders in planning, procedures and protocols (Policy and Planning). Technology & equipment standards should be shared with stakeholders and connected through common interfaces if possible (Equipment Standards), and critical communication systems and platforms should be specified in agreements with relevant parties (Agreements).

Communication Standards and Formats

- Radio Usage Procedures
- Common Terminology, Plain Language, Compatibility
- Encryption or Tactical Language
- Joint Information System (JIS) and Joint Information Center (JIC)
- Information Security
- Internet/Web procedures

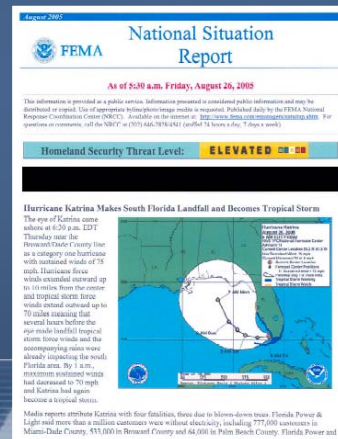
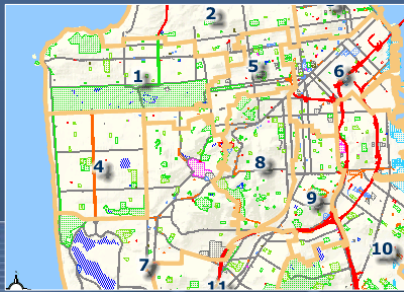


- Radio traffic should be restricted to messages necessary for an effective emergency response. The receiving center should acknowledge receipt of the emergency information, and disseminate the information as appropriate.
- Plain language avoids confusion, and ensures it is understood by all relevant parties. Encryption of some messages may be required for security reasons. In that case, use of specialized encryption or tactical language should be part of a comprehensive IAP or incident management communications plan.
- Individuals granted access to, and contributing to incident information, should be properly authenticated and certified for security purposes.
- The JIS integrates incident information and public affairs to provide consistent and timely information, and the JIC provides a structure for developing and/or delivering coordinated messages.

Information Management

Incident Information

- Incident Notifications and Situation Report
- Status Reporting
- Analytical Data
- Geospatial Data



- Updated Incident information is key to:
 - o The Incident Commander's decision process.
 - o Developing the Incident Action Plan.
 - o EOCs for critical resource (re)allocation.
 - o Identifying potential safety issues, etc.
- Efficient and understandable status reports provide emergency response providers with easy access to critical information.
- Analytical data may include information on public health or environmental monitoring.
- Geospatial information for the incident includes geographic location, characteristics of natural and constructed features and boundaries, that may be included in situation reports. Use of geospatial data must be tied to consistent standards.

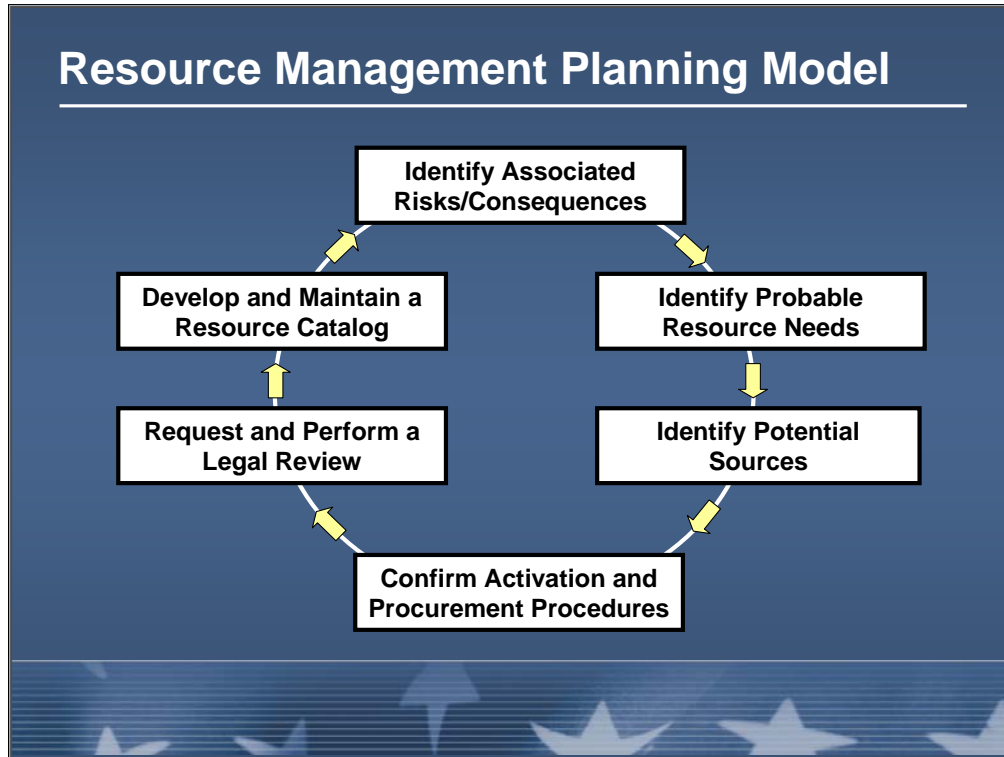
3. Resource Management

Concepts and Principles

- Advance planning
- Resource identification and ordering
- Resource categorization
- Use of agreements



- These key principles underlie effective resource management:
 - Advance planning: Preparedness organizations need to work together before an incident to develop plans for managing and using resources.
 - Resource identification and ordering: Using standard processes and methods to identify, order, mobilize, dispatch, and track resources.
 - Resource categorization: Categorizing by size, capacity, capability, skill, or other characteristics to make resource ordering and dispatch more efficient.
 - Use of agreements: Developing pre-incident mutual aid agreements (for example, Water/Wastewater Agency Response Network – WARN agreements) for providing or requesting resources.
- For the water sector, AWWA is beginning to type water sector resources at the national level to help ensure that mutual aid and assistance flows smoothly in a crisis. This effort should be completed by the end of 2007. At the local level, all utilities should inventory their resources so that they know what they have on hand at all times, and, what resources may be available to help other utilities in need. To learn about NIMS resource management, utilities can take FEMA's on-line IS-703 course. Another tool for the water sector is the Water/Wastewater Agency Response Network (WARN) program. This program enables utilities within a state to effectively share resources with one another through a standardized agreement contained in the AWWA white paper, *Utilities Helping Utilities*, which can be downloaded at: http://www.awwa.org/Advocacy/Govtaff/Documents/Utilities_Helping_Utilities.pdf



- This graphic is from the FEMA IS-703 course entitled “NIMS Resource Management”.
- Identify Risks: Consider thoroughly the related risks and consequences of a specific disaster scenario. Most disasters spawn a variety of cascading events or related emergencies. For example, an earthquake may cause building and bridge collapses, hazardous materials spills, utility outages.
- Identify Resource Needs: For example., following a hurricane, urban search and rescue resources would likely be needed only for building collapses, but resources associated with traffic control would be needed to assist with debris removal, security, and damage to bridges and roads.
- Identify Sources: Variety of sources are available within their agencies or jurisdictions such as, mutual aid, other levels of government, volunteer organizations, commercial sources, and donations (e.g., WARN).
- Confirm Procedures: Ask questions...
 - o How can that resource be obtained in the middle of the night, on a weekend, etc.?
 - o Will the jurisdiction have to pay for this resource?
 - o Has purchasing authority been delegated to the appropriate personnel to meet emergency needs?
 - o What emergency declarations or legal frameworks must be activated or invoked?
- Request Legal Review: For example, ordinances to prevent price gouging necessary? Have purchasing authorities changed? Liability Measures?
- Develop Catalog: For example, “Yellow Pages.” The type of resource, its owner, location, procedures for obtaining the resource.

Resource Management Tasks

- Identify, type, and inventory resources
- Verify personnel qualifications & credentialing
- Identify resource requirements (Who or what, when, where and how?)
- Order / acquire
- Mobilize / dispatch
- Track and report
- Demobilize / recover
- Initiate reimbursement process for mobilized resources



- Resource availability and requirements will constantly change as the incident evolves, and coordination is required among responders.
- The process of ordering resources generally starts locally, and is gradually forwarded to adjacent localities, counties, before reaching the State. It is best to avoid bypassing the established systems, as that may lead to inefficient mobilization of resources or redundancy.
- There are established channels for mobilization, including notification, check-in and tracking. All resources must be checked in upon arrival. Resources managers should plan for demobilization at the same time the plan the resource mobilization process. Early planning facilitates accountability and improves efficiency.
- Non expendable resources will be recovered by the issuing organization, and can be re-mobilized for a later event. Expendable resources, however, must be accounted for so that restocking can occur as appropriate.

Resource Typing

When is a



an

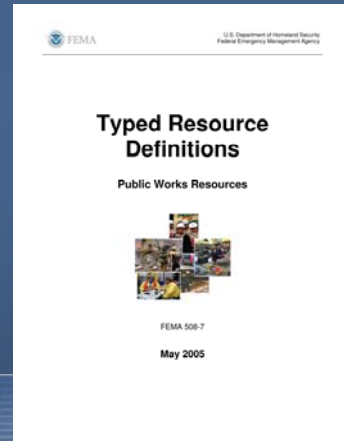


?

- In New York City, NY, ambulances are called buses, and during 9/11, New York City realized they would need additional resources to evacuate the injured. They asked New Jersey to send some “buses”, but really meant ambulances. New Jersey sent them school buses instead of ambulances, because they thought that was what they asked for.
- This example stresses the importance of resource typing, or cataloging, to avoid confusion.
- As another example, on the west coast a “tanker” is a type of plane that is used to fight wild fires, and on the east coast a “tanker” is a 3,000-gallon truck used to transport water.

Resource Identification & Categorizing

- Standardize identification.
- Classify by capability / performance:
 - Kind (what is this?) and;
 - Type (what can it do?)
- Implement credentialing system.
- Incorporate resources from private sector and NGOs.



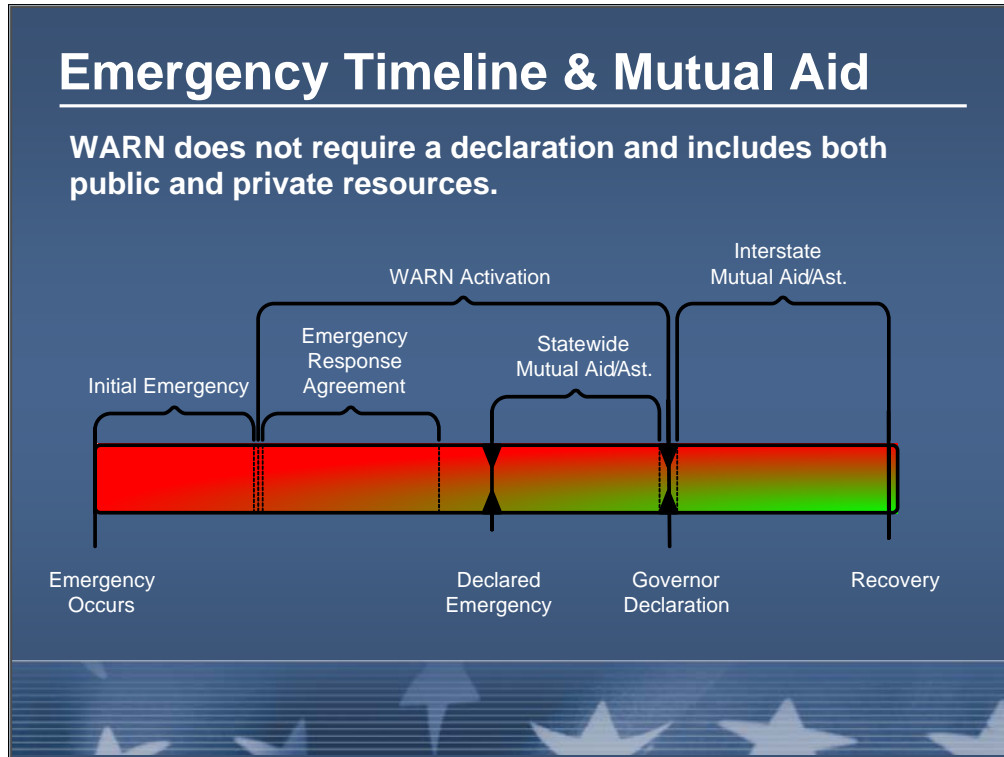
- Resource typing involves categorizing resources by capability based on measurable standards of capability and performance (e.g., 500-kilowatt generator). The NIC has started to “type” public works resources as can be seen in the graphic entitled “Typed Resource Definitions, Public Works Resources” dated May 2005.
- These typed public works resources are not water sector specific, however. As mentioned earlier, there is a project underway to “type” water sector resources at the national level. This effort is being led by the American Water Works Association (AWWA) working in conjunction with the Department of Homeland Security’s NIMS Integration Center. The water resource typing project is scheduled to be completed by the end of 2007, and will ensure a national, consistent standard for water sector resource nomenclature that will enable mutual aid to function better. It can be very frustrating to receive the wrong resource and this effort will help to minimize this problem at larger incidents requiring resources from around the country.
- Students may also wish to investigate the FEMA Independent Study Course entitled “IS-703 NIMS Resource Management” to learn more about resource management under NIMS.

Mutual Aid and Assistance Agreements

- Provide the means for one utility to provide resources or other support to another utility during an incident
- The overall goal is to ensure timely assistance during incidents
- Examples include:
 - FlaWARN
 - CalWARN



- A Water and Wastewater Agency Response Network (WARN) is a network of utilities helping other utilities to respond to and recover from emergencies. The purpose of a WARN is to provide a method whereby water/wastewater utilities that have sustained or anticipate damages from natural or human-caused incidents can provide and receive emergency aid and assistance in the form of personnel, equipment, materials, and other associated services as necessary from other water/wastewater utilities. The mission of a WARN is to provide expedited access to specialized resources needed to respond to and recovery from natural and human caused events that disrupt public and private drinking water and wastewater utilities.
- AWWA has published a white paper entitled “Utilities helping Utilities.” In the paper are listed the 10 key steps to form a mutual aid and assistance network, a sample mutual aid and assistance agreement that is NIMS compliant, and a comparative assessment of existing WARNs. The paper can be downloaded at no charge from AWWA’s website at the following location:
http://www.awwa.org/Advocacy/Govtaff/Documents/Utilities_Helping_Utilities.pdf
- We will be covering mutual aid and assistance later in more detail, as NIMS is the key to making mutual aid and assistance work.



- WARNs can greatly speed the arrival of resources at a utility in need. During a major disaster, local utilities and local EOCs may not be available or able to help, and a utility's request for resources may take some time to be fulfilled as it moves from the local level, to the state level, and potentially up to the federal level. Having a signed mutual aid and assistance agreement (such as a WARN) in place ahead of time greatly accelerates the arrival of aid (e.g., it may just be one phone call away) and avoids many bureaucratic hurdles.
- Timely access to resources is particularly important for water utilities, as they may need to restore water for other emergency assistance providers (e.g., fire-fighting, hospitals) to be functional.

Emergency Management Assistance Compact (EMAC)

- Congressionally approved mechanism for interstate mutual aid.
- Covers all states.
- Offers state-to-state assistance during Governor declared state of emergencies.



- The EMAC system is a state-to-state program that offers assistance to states during a declared state emergency. It offers a responsive and straightforward system for states to send personnel and equipment to help disaster relief efforts in other states. EMAC helped to deploy water and wastewater resources into Louisiana and Mississippi following Hurricane Katrina.
- EMAC relies on the states to develop internal assistance procedures because state approval of resource allocation is critical to the EMAC process. The EMAC agreement specifies reimbursement procedures where the sending state assumes the financial costs of sending the aid, and then is reimbursed by the requesting state after the disaster. The EMAC legislation also solves the problems of liability and allows for credentials to be honored across state lines.
- Currently, the EMAC planning process utilizes an Advisory Group that includes representatives from law, fire, search and rescue, and public works. Due to the number of issues public works encompasses, water/wastewater issues are sometimes overlooked; therefore, the water sector will be represented by AWWA on the EMAC Advisory Group. This should help to ensure a smooth flow of water sector mutual aid resources across state lines at future incidents. See <http://www.emacweb.org/> for more information regarding EMAC.

Mutual Aid & Assistance Agreements

Benefits:

- Increased planning & coordination for disaster response.
- Reduced administrative conflict in times of response & recovery.
- Standardized procedures for the response.
- Enhanced access to specialized resources.
- Improvements in the speed and effectiveness of response (no waiting for federal aid).

- Again, mutual aid and assistance agreements, such as the WARN or EMAC can greatly assist utilities in getting the resources they need. Looking outward to other utilities covers steps 3-5 of the NIMS Resource Management Planning Model (these steps are identifying potential sources, confirming procedures, and sometimes also receiving legal review).

What Should My Agreement Contain? (1 of 2)

- Definitions of key terms used in the Agreement.
- Roles and responsibilities of individual parties.
- Procedures for requesting and providing assistance.
- Procedures for payment, reimbursement & costs.
- Notification procedures.
- Protocols for interoperable communications.



- AWWA has provided a sample mutual aid agreement for water and wastewater utilities that is based on existing water and wastewater utility mutual aid and assistance agreements implemented in California, Florida, and Texas.
- This slide includes the list of NIMS requirements for Mutual Aid and Assistance Agreements.
- Components to a mutual aid and assistance agreement should include:
 - o Definitions: Only the definition for emergency is noteworthy. The request for aid does NOT require a declaration of an emergency by the local or state agencies, and the aid may be provided during the emergency response or recovery phases.
 - o Administration: Administering the program through regional or “local” committees that could promote coordination and help resolve program issues.
 - o Procedures: Operational and planning procedures for the Mutual Aid and Assistance Program.
 - o Request for Assistance: Includes member responsibilities and organizational requirements, procedures for requesting aid, and procedures for members responding to a request for assistance.
 - o Responding Member Personnel: Promotes “home” supervisory control over personnel. This approach recognizes that personnel will likely work better with their regular supervisors. In addition, requires the requesting member to supply food and shelter to responding member personnel. Includes a provision that allows the responding member to withdraw some or all of its resources at any time.
 - o Cost Reimbursement: specific reimbursement procedures for personnel, materials & supplies, & equipment. Also spells-out payment procedures.
 - o (Continued on next slide)

What Should My Agreement Contain? (2 of 2)

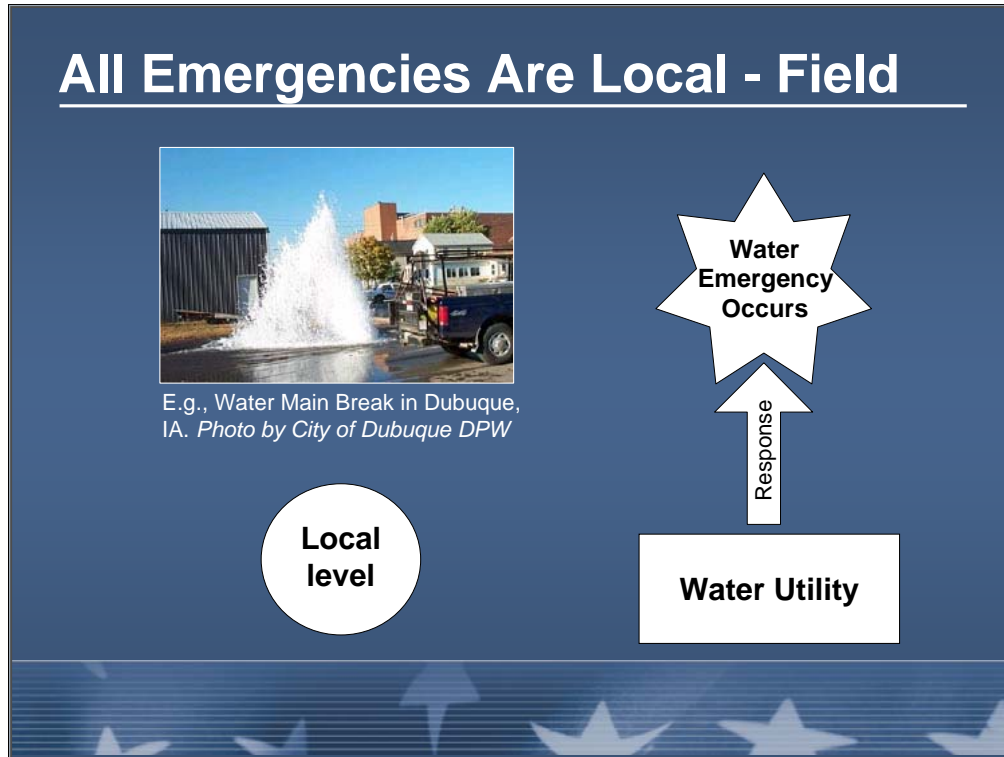
- Relationships with other agreements.
- Workers Compensation.
- Treatment of Liability and Immunity.
- Recognition of Qualifications & Certifications.
- Sharing Agreements.



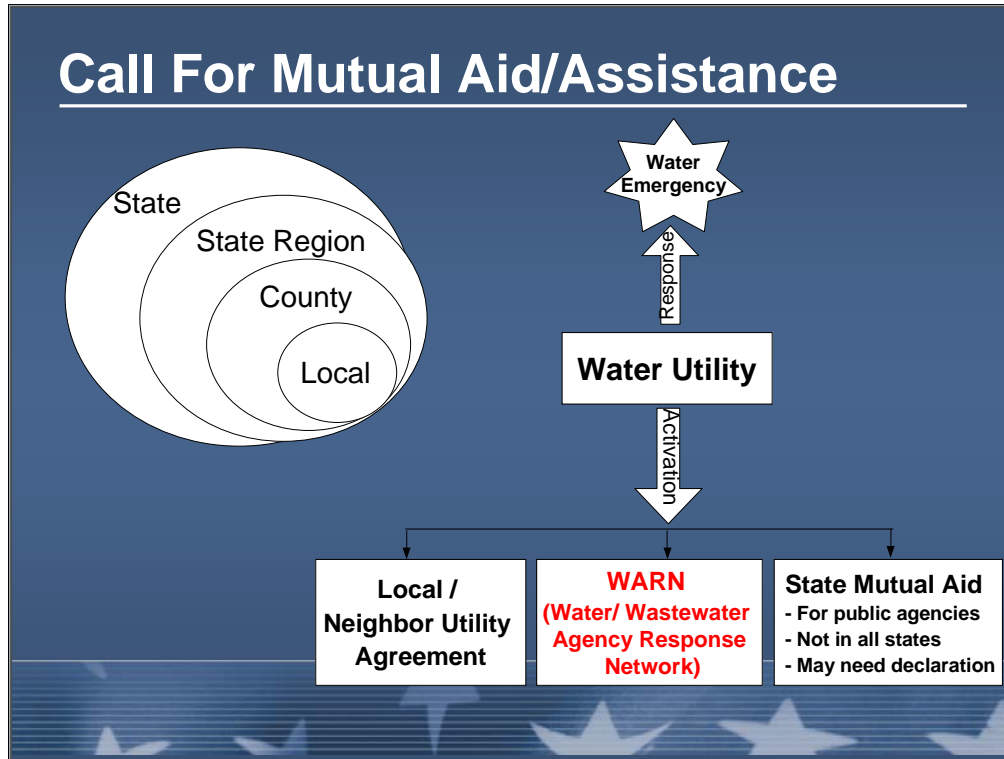
A wastewater treatment facility in St. Bernard Parish, Louisiana. Photo by Louisiana DEQ

(continued from previous slide)

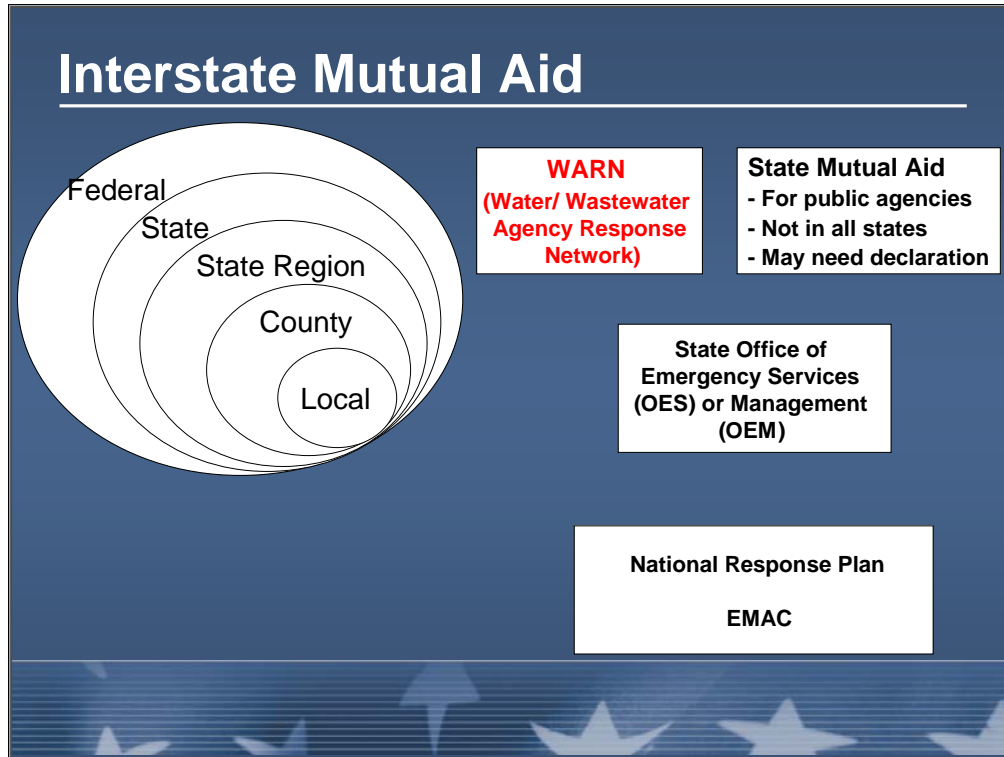
- Additional components to a mutual aid and assistance agreement should include:
 - o Disputes: How to settle disputes (i.e., he took our generator and did not return it!). Model calls for arbitration.
 - o Indemnification: A promise, usually as a contract provision, protecting one party from financial loss. Responder is asked to be covered for loss, damage, injury, and liability.
 - o Workers Compensation Claims: Responsibility of the responding member to provide worker's compensation benefits.
 - o Notice: Preserves the right of a Member to defend itself in any claim or suit that affects its interests
 - o Insurance: Members must maintain an insurance policy covering the activities that it may undertake via a Mutual Aid and Assistance Program.



- This slide shows the immediate steps a utility would take when an emergency occurs. This is also the first step in the mutual aid activation process - realizing that you will need outside assistance and resources to effectively manage the incident.
- After the emergency occurs, the water utility:
 - o Assesses the impact of the emergency
 - o Determines if resources are sufficient to respond
 - o Deploys available resources
 - o Identifies need for mutual aid/assistance



- The emergency may have escalated, or resulted in additional cascading events, and the water utility may not have all the resources on-hand.
- How will the utility get that outside assistance and resources?
 - Mutual Response Agreement (formal, or handshake): There may be agreements between one or more utilities that will allow for an immediate response
 - Statewide Mutual Aid/Assistance Agreement: This type of assistance is usually managed by state emergency management agency, restricted to public agencies, and typically requires a declaration of emergency.
 - WARN: This agreement / assistance is managed by utilities for utilities, where both public and private utilities are involved, and it can be used prior to any emergency declaration
- When using WARN or a State Mutual Aid/Assistance Program:
 - The Local Utility will communicate with county emergency management, and provide information on emergency impact and resource needs.
 - A County Utility Representative/Coordinator (could be a WARN representative) will receive information, identify the ability to assist, identify resources that could be available from utilities within the county, and provide information of utility needs to the state.
 - The State Utility Representative/Coordinator: (could be a WARN representative) will receive information of utility needs within the impacted county, determine the resources available through the WARN program, and coordinate the deployment to the area of need.



- For interstate aid, it is important to coordinate with State emergency management agencies (EMAs), and to design mutual aid agreements to be consistent with EMAC agreements.
- Emergency Management Assistance Compact procedures:
 - o Contact for the assistance is through the State
 - o Only federally endorsed interstate assistance program
 - o Managed by the National Emergency Management Agency
 - o Coordinated by designated representatives in each of the 50 State Offices of Emergency Management
 - o Access to mutual aid/assistance resources with any state
- National Response Plan:
 - o Emergency Support Function 3 – Public Works & Engineering
 - o US Army Corp of Engineers lead; US EPA support

Group Activity: Determining the Resource Requirements To Manage an Incident

- 1. View the cascading effects diagram to choose a potential consequence resulting from a power outage at a water utility.**
- 2. Use the Personnel, Equipment, and Supplies Worksheet to identify resource requirements for your chosen event under catastrophic conditions.**
- 3. Determine where those resources would come from.**
- 4. Be prepared to discuss your worksheets with the class.**

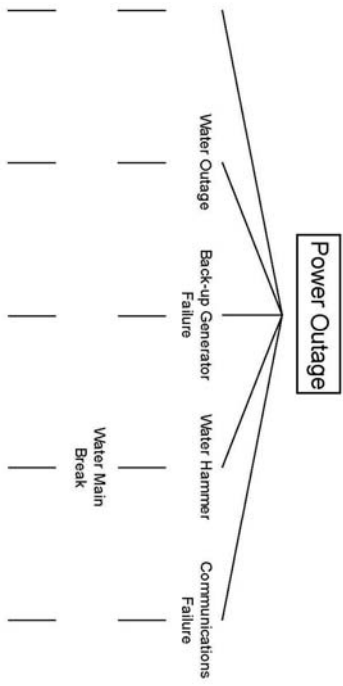
- All the materials needed to complete this activity are contained in the following two slides. Be sure to have enough hard copies of these slides on hand to distribute to the students. The point of the activity is to let the students realize that mutual aid and assistance agreements are fast, efficient ways to obtain needed resources from neighboring utilities when a catastrophic disaster strikes.

Activity 3: Incident Analysis for Resource Management

Instructions: The diagram below shows some of the potential consequences of an extended power outage. Choose one of the consequences, then, on the worksheet that follows, determine the likely resource requirements for responding to that consequence. Assume that the consequences are catastrophic.

Don't forget to list the sources (providers) for the resources you identify. If you prefer, you may consider a different disaster (e.g., hurricane, tornado) as you complete this activity.

Consequences from One Triggering Incident



4. COMMAND and MANAGEMENT

- **Use the Incident Command System - a proven on-scene, all-hazard management concept based on best practices.**
 - Interdisciplinary and organizationally flexible
 - Appropriate for all types of incidents
- **Multiagency Coordination Systems (MACS)**
- **Public Information Systems**



- Analysis of past responses indicates that the most common cause of response failure is poor management.
- Confusion about who's in charge of what and when, together with unclear lines of authority, have been the greatest contributors to poor response.
- The Incident Command System (ICS) is the first of three standard structures included under the command and management component of NIMS. The other two are Multiagency Coordination Systems and Public Information Systems.
- ICS allows users to adopt an integrated organizational structure that is "customized" to best match the needs of single or multiple incidents.
- NIMS requires that all domestic incidents, regardless of size or complexity, be managed by ICS.
- For many jurisdictions, adopting ICS was their first step towards NIMS compliance.
- ICS is not new and has been in use for over 30 years.

*NOTE: If you are facilitating this course immediately following the Water Sector ICS course, explain to the students that ICS is a major element of the Command and Management component of NIMS. Therefore, some of these slides will be familiar to them and serve as a review. Also inform the students that they will learn more about ICS, such as what are Unified Command and Area Command.

Reliance on an Incident Action Plan

- ICS is managed by objectives.
- Objectives are communicated throughout the entire ICS organization through the incident planning process.

Example: Inspect all fire hydrants on Main Street by 1800 hours.



Management by objectives includes:

- Establishing overarching objectives (usually done at the community level, such as through an Emergency Operations Plan maintained at the local Emergency Operations Center). An example is to evacuate low-lying areas of a community during a flood.
- Developing and issuing assignments, plans, procedures, and protocols (usually done as a part of preparedness planning in advance of an incident). An example is to identify evacuation routes from low-lying areas.
- Establishing specific, measurable objectives for various incident management functional activities (established by the Incident Commander at the start of the incident and each successive operational period). An example would be to evacuate a nursing home in a low-lying area by a specified date and time.
- Directing efforts to attain them, in support of defined strategies (strategies are usually developed by the Operations and Planning Sections, and the strategies are used to accomplish the Incident Commander's objectives). An example would be to have rescue units and ambulances evacuate the nursing home.
- Documenting results to measure performance and facilitate corrective action. An example would be a status report at the specified date and time to measure progress of the nursing home evacuation. Is the evacuation complete? If not, how many residents remain? What can be done to speed the evacuation process?

ICS Expansion and Contraction

Although there are no hard-and-fast rules, remember that:

- Only functions/positions that are necessary are filled.
- Each activated element must have a person in charge.
- An effective span of control must be maintained.



- Span of control is what drives the expansion or contraction of the ICS organization.
- Span of control refers to how many people any individual can successfully manage. Three to seven individuals is the ideal range and FEMA recommends a ration of 1:5.
- For example, a Type 1 incident will have a large ICS structure or organizational chart with many activated organizational components and associated supervisors, while a Type 5 incident may only require an Incident Commander with one or two individuals assisting.

Unified Command

- Enables all responsible agencies to manage an incident together by establishing a common set of incident objectives and strategies.
- Allows Incident Commanders to make joint decisions by establishing a single command structure.
- Maintains unity of command. Each employee only reports to one supervisor.

The diagram illustrates the Unified Command structure. At the top is the Incident Command Post, which oversees three participating agencies: Agency 1, Agency 2, and Agency 3. Each agency has its own Incident Commander, who reports to the Incident Command Post. The Incident Command Post is responsible for establishing a common set of incident objectives and strategies, allowing Incident Commanders to make joint decisions while maintaining unity of command. Each employee only reports to one supervisor.

- Unified Command is an application of ICS used when:
 - There is more than one responding agency with incident jurisdiction.
 - Incidents cross political jurisdictions.
- For example, a Unified Command may be used for:
 - A traffic accident resulting in a hazardous materials spill that contaminates a nearby reservoir. In this incident, the fire department, the water utility, and the local police may each participate in a Unified Command.
 - A flood that devastates multiple communities. In this incident, incident management personnel from key response agencies from each community may participate in a Unified Command.
- The Unified Command organization consists of the Incident Commanders from the various jurisdictions or agencies operating together to form a single command structure.
- Remind the participants that Unified Command:
 - Enables all responsible agencies to manage an incident together by establishing a common set of incident objectives and strategies.
 - Allows Incident Commanders to make joint decisions by establishing a single command structure.
 - Allows agencies and jurisdictions to retain their organizational independence.

Applying Unified Command

Unified Command is:

- A collaborative team-effort process.
- Not a new process.



For years, the U.S. military has used a similar concept to integrate military services in joint operations.

- Under a Unified Command, agencies work together through the designated members of the Unified Command to:
 - o Analyze intelligence information.
 - o Establish a common set of objectives and strategies for a single Incident Action Plan.
- Unified Command does not change any of the other features of ICS. It merely allows all agencies with responsibility for the incident to participate in the decision-making process.
- Therefore, Unified Command is a collaborative team-effort process that is accomplished without losing or abdicating agency authority, responsibility, or accountability.
- The Incident Commanders within the Unified Command make joint decisions and speak with one voice.
- If there is a disagreement, it is worked out among the Incident Commanders within the Unified Command.
- The exact composition of the Unified Command structure will depend on the location(s) of the incident (i.e., which geographical administrative jurisdictions are involved) and the type of incident (i.e., which functional agencies of the involved jurisdiction(s) are required).
- The U.S. military has used a similar concept for integrating military services in joint operations for years.

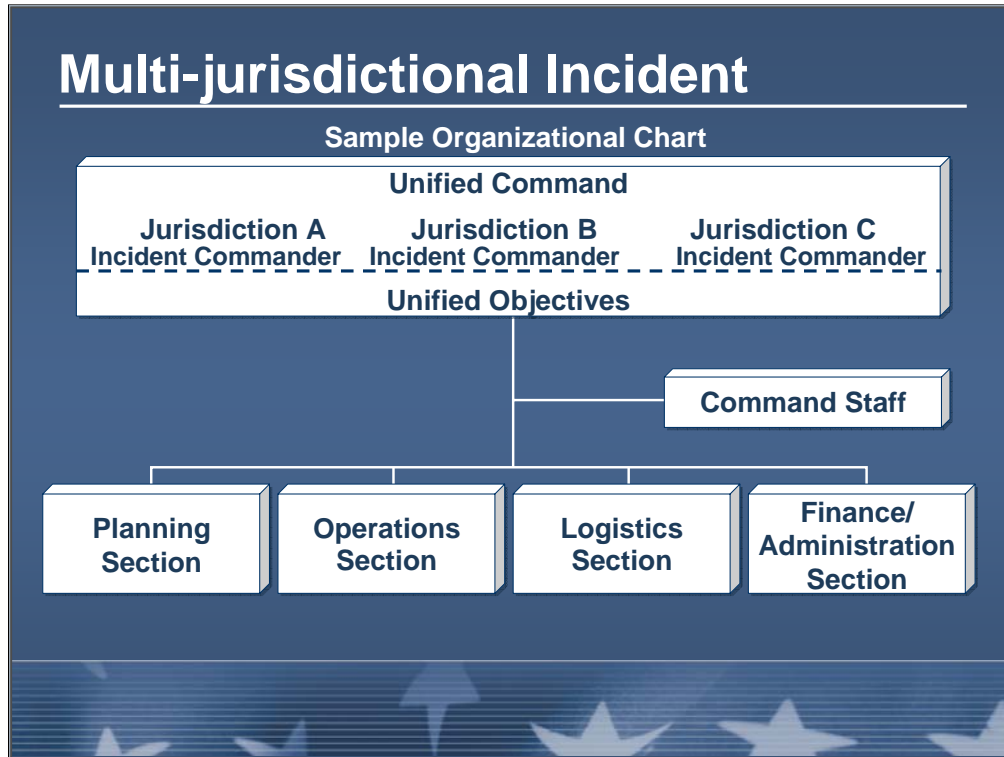
Unified Command: Multiple Jurisdictions

Incidents That Impact More Than One Political Jurisdiction

Example: A hurricane touches down in one jurisdiction and continues into another, flooding water supplies and damaging distribution systems in both areas. Responding utilities from each jurisdiction have the same mission (providing clean drinking water and water for fire suppression), and it is the political and/or geographical boundaries that mandate multi-agency cooperation and involvement.



- In this example, the Incident Commanders from each utility may wish to form a Unified Command to better manage the full extent of this incident at their facilities.
- This would be particularly true if the water systems are in series.
- Mutual Aid and Assistance Agreements between utilities in different political jurisdictions would also be extremely helpful in a situation such as this.



- This visual presents an example of a Unified Command organization chart for a multi-jurisdictional incident based on the preceding example.
- The chart includes the following elements:
 - **Unified Command:** The Unified Command is composed of the Incident Commanders from the three jurisdictions. The Unified Command establishes a single set of unified objectives.
 - **Integrated Command and General Staff:** The organization has integrated (meaning comprised of individuals from all three jurisdictions) Command Staff and Planning, Operations, Logistics, and Finance/Administration Sections.
- One way to help integrate the Command and General Staff is to provide Deputies and Assistants from other jurisdictions. For example, if the Operations Section Chief is from Jurisdiction A, his or her Deputy could be from either Jurisdiction B or C.

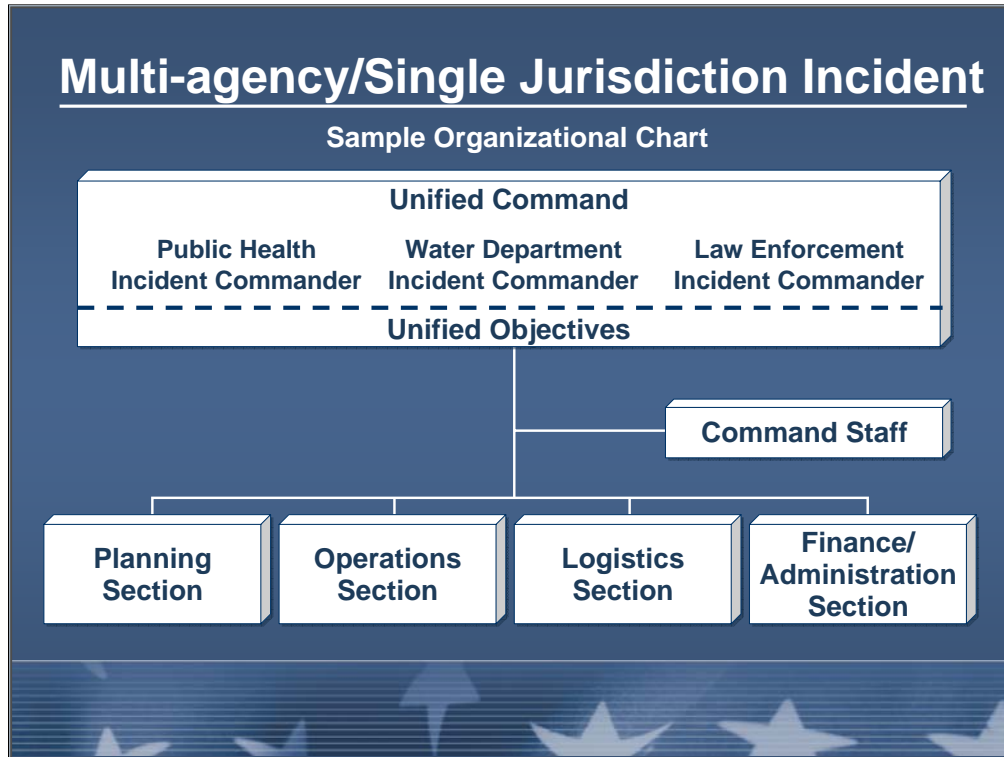
Unified Command: Multiple Agencies/Single Jurisdiction

Incidents Involving Multiple Agencies/Departments Within the Same Political Jurisdiction

Example: During an intentional water contamination event, the water department has responsibility for determining the location and repairing the system, public health agencies have responsibility for ensuring public safety, and local and federal law enforcement have the responsibility for leading the criminal investigation.



- The map is from an actual intentional water contamination event that occurred in Pittsburgh in the 1980s.
- In this incident, pesticide was injected into the distribution system.
- This crime was never solved, but it is believed that a disgruntled insider was responsible.
- Another example is a hazardous materials incident within a single jurisdiction, in which the fire department has responsibility for fire suppression and rescue, the police department has responsibility for evacuation and area security, and the public health agencies and others have responsibility for site cleanup.



- This visual presents an example of a Unified Command organization chart for a Multi-agency/Single Jurisdiction incident based on the preceding example. The Pittsburgh contamination incident shown on the previous slide would have been well suited for a Unified Command structure such as this.
- The chart includes the following elements:
 - o **Unified Command:** The Unified Command is composed of the Incident Commanders from the three departments of the single jurisdiction (public health, water department, and law enforcement). The Unified Command establishes a single set of unified objectives.
 - o **Integrated Command and General Staff:** The organization has integrated (personnel from all the involved agencies) Command Staff and Planning, Operations, Logistics, and Finance/Administration Sections.

Unified Command: Multi-agency/Multi-jurisdiction

Incidents That Impact (or Involve) Several Political and Functional Agencies

Example: Severe weather, earthquakes, National Special Security Events, and terrorist threats involve large numbers of local, State, and Federal agencies. These incidents of national significance cross political boundaries and involve multiple functional authorities.



- Hurricane Katrina is a good example of an incident that would be managed using this type of Unified Command.
- In certain circumstances the initial Incident Commander will be the water treatment facility operator/manager until preliminary damage assessment impacts determine a more appropriate Incident Commander(s).
- Even then, the water treatment facility operator/manager may be a deputy Incident Commander, member of the Unified Command team, or serve as a Technical Specialist because of his/her knowledge of and experience with the facility.

Incident Commander Responsibilities

Each designated agency Incident Commander functioning in a Unified Command must:

- Act within his/her jurisdictional or agency limitations.
- Inform the other Commanders of any legal, political, jurisdictional, or safety restrictions.
- Be authorized to perform certain activities and actions on behalf of the jurisdiction or agency he/she represents.
- Manage the incident to the best of his/her abilities.

- These are some of the responsibilities of each incident commander within a Unified Command.
- It is essential that the Incident Commander can commit his or her agency's resources/funds without having to check with someone back at the agency.

Advantages of Unified Command

- One set of incident objectives
- Collective approach to strategies
- Improved information flow
- Mutual understanding of priorities and restrictions
- Agency authority not compromised
- Awareness of others' tactics
- Combined efforts are optimized
- Duplicate efforts/resources reduced or eliminated

- Unified Command works well when the people comprising the Unified Command work well together.
- Some ways to help ensure that people will work well together are to:
 - o Plan together.
 - o Train together.
 - o Conduct exercises together.



- An Area Command is an organization established to:
 - Oversee the management of multiple incidents that are each being managed by an ICS organization.
 - Oversee the management of large incidents that cross jurisdictional boundaries.
- Area Commands are particularly relevant to public health emergencies because these incidents are typically:
 - Non-site specific.
 - Not immediately identifiable.
 - Geographically dispersed and evolve over time.
- These types of incidents call for a coordinated response, with large-scale coordination typically found at a higher jurisdictional level.
- Ask the participants: Do you notice anything different about this organizational chart, when compared with Incident Command and Unified Command structures?
 - The Area Command has no operations section, because operations are conducted on-scene.
- The role of Area Command is primarily one of coordination and prioritization of resources between the various Incident Command Posts.
- Another example of when Area Command could be utilized, as demonstrated on the slide could be: simultaneous explosions that have occurred in Boston, New York and Washington, D.C.
- In this example, an ICS organization would be established in each city to deal with on-scene management, and an Area Command has been formed to set overall priorities and strategies for handling the multiple incidents and for ensuring an equitable distribution of resources between the three incidents.

What Does Area Command Do?

- Coordinates resource management
- Sets overall strategy and priorities
- Allocates resources
- Ensures objectives are met
- Ensures strategies are followed



- An Area Command may become a Unified Area Command when incidents are multi-jurisdictional or involve multiple agencies.
- Allocation of resources is an important responsibility of the Area Command as competition for resources would be intense in either multiple or geographically dispersed incidents.

Multi-Agency Coordination Challenges

Coordination challenges between different agencies responding to an incident may include:

- Different policies and procedures
- Unfamiliarity with other agencies
- Complex incidents
- Lack of resource information
- Intense media and public scrutiny
- Lack of interagency coordination



➔ **Need for a Multi-Agency Coordination System**

- The information on this slide was taken from ICS 400: Advanced ICS.
- Some of these issues have been solved, while other challenges remain.
- Some of the continuing challenges include:
 - Increasing incident complexity.
 - Complex and confusing legal authorities.
 - Increasing litigation.
 - Increasing response costs.
 - Life, health, safety issues.
 - Deteriorating public view of government.

Multi-Agency Coordination Systems (MACS)

A Multi-Agency Coordination System is a combination of:

- Facilities
- Equipment
- Personnel
- Procedures
- Communications



integrated into a common system with responsibility for coordinating and supporting domestic incident management activities.

- The second standard structure under the command and management component of NIMS are Multi-Agency Coordination Systems (MACS).
- Multi-agency coordination is a process that allows all levels of government and all disciplines to work together more efficiently and effectively.
- Multi-agency coordination occurs across:
 - o Different disciplines involved in incident management.
 - o Jurisdictional lines.
 - o Levels of government.
- MACS are one of the key elements within the process.

Coordination, not Command

A Multi-Agency Coordination System will:

- Support incident management
- Make resource allocation decisions based on incident priorities
- Support logistics and resource tracking
- Coordinate interagency and intergovernmental issues



But it does NOT have direct tactical and operational incident management responsibility.

- Remember, MACS play a supportive and coordinating role during an incident; however, they do not play a role in on-scene management.
- Direct tactical and operational responsibility for the conduct of incident management activities rests with the Incident Commander.
- To learn more about this topic, students should take IS-701, Multiagency Coordination System (MACS), a course which is administered by FEMA.

Multiagency Coordination System Elements

- A MACS is a system, not just a facility.
- Example multi-agency coordination elements:
 - An Emergency Operations Center (EOC)
 - A state Emergency Management Agency (EMA).



- MACS include Emergency Operations Centers (EOCs) and, in certain multijurisdictional or complex incidents, Multiagency Coordination Entities.
- EOCs are the locations from which the coordination of information and resources to support incident activities takes place.
- EOCs are typically established by the emergency management agency at the local and State levels.
- Multiagency Coordination Entities typically consist of principals (people) from organizations with direct incident management responsibilities or with significant incident management support or resource responsibilities.
- These entities may be used to facilitate incident management and policy coordination.
- If the Incident Commander cannot obtain certain resources locally he or she must submit a request for them through the Multiagency Coordination Entity at the EOC.
- Also, incident command is not typically accomplished by or from the EOC; rather, Incident Command is accomplished by an Incident Commander located at the field Incident Command Post, and the EOC supports this Incident Commander.
- One key responsibility of MACS is to make resource allocation decisions based on incident priorities.
- Other Multiagency Coordination Entities include state emergency management agencies.

Public Information Systems

- The Public Information Officer (PIO) advises the Incident Commander
- Establishes and operates within the Joint Information System (JIS)
- Ensures that decision makers and the public are informed



- Under ICS, the PIO is a member of the command staff.
- The PIO advises the Incident Command on all public information matters, including media and public inquiries, emergency public information and warnings, rumor monitoring and control, media monitoring, and other functions required to coordinate, clear, and disseminate accurate and timely information related to the incident.
- The PIO establishes and operates within the parameters established for the Joint Information System, or JIS.
- The JIS provides an organized, integrated, and coordinated mechanism for providing information to the public during an emergency.
- The JIS includes plans, protocols, and structures used to provide information to the public, and it encompasses all public information related to the incident.
- Key elements of a JIS include interagency coordination and integration, developing and delivering coordinated messages, and support for decisionmakers.
- The PIO, using the JIS, ensures that decisionmakers and the public are fully informed throughout a domestic incident response.
- Public Information Systems is the final standard structure under the Command and Management component of NIMS, of which a Joint Information System (JIS) is an element.

The Joint Information Center (JIC)

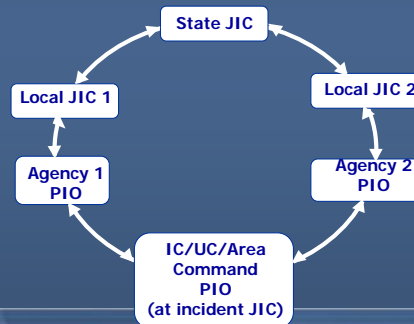
- Physical location where public information staff collocate.
- Provides the place for coordinating and disseminating critical information in accordance with the protocols of the Joint Information System (JIS).



- A JIC is the physical location where public information staff involved in incident management activities can collocate to perform critical emergency information, crisis communications, and public affairs functions.
- JICs provide the organizational structure for coordinating and disseminating critical information.
- Having agency and jurisdiction PIOs gather at a JIC or make use of a “virtual” web-based JIC ensures that public notifications can be coordinated effectively across agency and jurisdictional lines.
- For example, water use notices may vary jurisdiction-by-jurisdiction depending on the extent of damage in each jurisdiction during an incident such as a hurricane. By coordinating through the JIC, appropriate notices (boil, conserve, etc.) can go to each community and PIOs can ensure that notifications include language to the effect that notices may vary by community, and that the public needs to ensure that they react to the notice provided for their community only.
- Based on lessons learned during Hurricane Isabel, PIOs in the Washington, D.C. capital area established a virtual JIC on the internet to help coordinate consistent public messages.

JIC Characteristics

- Includes representatives of all players in the response (each retains their organizational independence)
- Has procedures and protocols for communicating and coordinating with other JICs via the JIS



- A single JIC location is preferable, but the JIS should be flexible enough to accommodate multiple JICs when the circumstances of the incident require.
- In the graphic, which is a pictorial representation of a JIS, information between state and local JICs is two-way. Local JICs also have two-way communication with their agency PIOs. Agency PIOs have constant two-way communications with the PIO for Incident/Unified/Area Command.
- When a JIC is established as part of a Unified Command, agencies contributing to joint public information management clear all information with Unified Command.

5. ONGOING MGMT. & MAINTENANCE

Ongoing management and maintenance of the NIMS relies heavily on lessons learned and is provided by:

- The NIMS Integration Center (NIC)- now called the “Incident Management Support Division”
- Supporting technologies through ongoing strategic and scientific research and development

- The last component of NIMS is Ongoing Management & Maintenance.
- The two main elements involved with Ongoing Management & Maintenance relative to the NIMS are the NIC and other supporting technologies.
- The NIC is now known as the “Incident Management Support Division.” However, the previous name is used here as the term, “NIC,” is used in the FEMA IS-700 exam.

NIMS Integration Center (NIC)

The NIMS Integration Center (NIC) is responsible for:

- Strategic direction and oversight of the NIMS
- A process for ongoing maintenance, revisions and updates to the NIMS
- National-level preparedness standards
- General training requirements and approved courses
- Lists of equipment meeting national standards.

nims-integration-center@dhs.gov

202-646-3850

- The NIC has primary responsibility for managing and maintaining the NIMS.
- In the current draft revised version of NIMS (dated February 1, 2007), the NIC recommends that state and local governments voluntarily adopt the following National Fire Protection Association (NFPA) preparedness standards:
 - o NFPA 1600: Standard on Disaster/Emergency Management and Business Continuity Programs,” 2004 Edition.
 - o “NFPA 1561: Standard on Emergency Services Incident Management System,” 2005 Edition.
- Standards such as these are regularly reviewed and updated to maintain currency.
- These standards cover many of the NIMS components that local agencies need to be sure they are maintaining.

SUPPORTING TECHNOLOGIES

Principles:

1. Interoperability and compatibilities
2. Technology support
3. Technology standards
4. Broad-based requirements
5. Strategic planning and Research & Development



- NIMS will leverage science and technology to improve capabilities at a lower cost.
- To accomplish this, NIMS will base its supporting technology standards on five key principles:
 - **Interoperability and compatibility:** Systems must be able to work together (e.g., radios).
 - **Technology support:** All organizations using NIMS will be able to enhance all aspects of incident management and emergency response.
 - **Technology standards:** National standards will facilitate interoperability and compatibility of major systems.
 - **Broad-based requirements:** NIMS provides a mechanism for aggregating and prioritizing new technologies, procedures, protocols, and standards.
 - **Strategic planning and R&D:** The NIMS Integration Center will coordinate with DHS to create a national R&D agenda.
- The NIMS Integration Center is responsible for:
 - Coordinating the establishment of technical and technology standards for NIMS users.
 - Integrating into the national R&D agenda.

NIMS Summary (1 of 5)

- **Broad applicability**
- **Improve coordination and cooperation among all response organizations**
- **Flexible to enable all responding organizations to work together**
- **Standardized to improve overall response and interoperability**
- **Makes mutual aid and assistance work**

- Use the next five visuals to summarize and review the NIMS prior to administering the FEMA IS-700 exam.

NIMS Summary (2 of 5)

1. Preparedness

- **Actions involved to establish and maintain prescribed capability**
- **NIMS focuses on guidelines, protocols, and standards**

2. Communications and Information Management

- **Incident management communications**
- **Information management**
- **Interoperability standards**

- Preparedness involves the actions required to establish and sustain prescribed levels of capability for a range of incident management operations. Preparedness is implemented through a continual cycle of:
 - o Planning.
 - o Training and equipping.
 - o Exercising.
 - o Evaluating and taking corrective or mitigating action.
- NIMS focuses on guidelines, protocols, and standards necessary to facilitate preparedness.
- NIMS communications and information systems enable the essential functions needed to provide a common operating picture and interoperability for:
 - o Incident management communications.
 - o Information management.
 - o Interoperability standards.
- The NIMS Integration Center will also develop a national database for incident reports.

NIMS Summary (3 of 5)

3. Resource Management

- **Establish systems for:**
 - **Describing**
 - **Inventorying**
 - **Requesting**
 - **Tracking**
- **Activating systems**
- **Dispatching resources**
- **Deactivating/recalling resources**

- NIMS includes standard procedures, methods, and functions that reflect functional considerations, geographic factors, and validated practices, including:
 - o Identifying and typing resources.
 - o Certifying and credentialing personnel.
 - o Inventorying resources.
 - o Identifying resource requirements.
 - o Ordering and acquiring resources.
 - o Tracking and reporting resources.
 - o Mobilizing resources.
 - o Recovering resources.
 - o Reimbursement.

NIMS Summary (4 of 5)

4. Command and Management

- Incident Command System (ICS)
- Multi-Agency Coordination Systems
- Public Information Systems

5. Ongoing Management and Maintenance

- The NIMS Integration Center (NIC)
 - Responsibilities
 - Requires input from you!
- Supporting Technologies

- NIMS employs two levels of incident management structures, depending on the nature of the incident:
 - o The **Incident Command System (ICS)** is a standard, on-scene, all-hazard incident management system. ICS allows users to adopt an integrated organizational structure to match the needs of single or multiple incidents.
 - o **Multiagency Coordination Systems (MACS)** are a combination of facilities, equipment, personnel, procedures, and communications integrated into a common framework for coordinating and supporting incident management.
- During emergencies, the public may receive information from a variety of sources.
- The mechanism established by NIMS for ensuring that information the public receives is accurate, coordinated, timely, and easy to understand is through the use of a Public Information Officer (PIO).
- The PIO coordinates public information via a Joint Information Center (JIC) established via the JIS as necessary.
- Using the JIC as a central location, information can be coordinated and integrated via the JIS across jurisdictions and agencies and among all government partners, the private sector, and nongovernmental agencies.

NIMS Summary (5 of 5)

For more information on NIMS:

www.fema.gov/emergency/nims/index.shtm

To contact the NIC:

202-646-3850

nims-integration-center@dhs.gov

Additional FEMA online courses:

<http://training.fema.gov/NIMS/>

- The NIMS is continually being revised and comments are welcome.

On-Line Exam Instructions

1. Go to the following website to download final exam questions. <http://training.fema.gov/EMIWeb/IS/is700.asp>
2. Scroll down webpage and click on “Download Final Exam Questions”. Print the exam questions.
3. Read through the exam questions and mark the appropriate answers on the exam.
4. Hit the “Back” button on your browser to the first webpage.
5. Scroll down webpage and click on “Take Final Exam”.
6. Fill in the appropriate letters for each corresponding exam question number.
7. Fill in your student information at the bottom of the exam webpage and click the “Send” button when done.

- If you will administer the exam to the students, be sure and print/copy enough hard copies of the exam for everyone in the class. Use the graphic on the next slide to inform the students as to where on-line they can submit their exam answers.

Emergency Management Institute

EMI Courses & Schedule | Programs & Activities | How to Apply | **IS-700** | Student Information | Contact Us

FEMA Independent Study

Course Brochures
Our Courses
How to Take IS Courses
College Credits
Military Reserve Retirement Points
IS Transcript Request
OpScan Form Request
Frequently Asked Questions
Technical Information
Independent Study Inquiries

NIMS INFORMATION

- [ICS Resource Center](#)
- [NIMS Integration Center](#)
- [NIMS ICS Training Information](#)
- [NIMS FAQ](#)

SPECIAL NOTICES

**FEMA Independent Study Program:
IS-700 National Incident Management System (NIMS), An Introduction**

Please note:
Spanish version of the course is available for download.
[Please click here to download Spanish version of the course.](#)

COURSE OVERVIEW

On February 20, 2003, President Bush issued Homeland Security Presidential Directive 5, HSPD-5 directed the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS). NIMS provides a consistent nationwide template to enable all government, private sector, and non-governmental organizations to work together during domestic incidents. You can also find information about NIMS at <http://www.fema.gov/nims/>.

This course introduces NIMS and takes approximately three hours to complete. It explains the purpose, principles, key components and benefits of NIMS. The course also contains "Planning Activity" screens giving you an opportunity to complete some planning tasks during this course. The planning activity screens are printable so that you can use them after you complete the course.

What will I be able to do when I finish this course?

- Describe the key concepts and principles underlying NIMS.
- Identify the benefits of using ICS as the national incident management model.
- Describe when it is appropriate to institute an Area Command.
- Describe when it is appropriate to institute a Multiagency Coordination System.
- Describe the benefits of using a Joint Information System (JIS) for public information.
- Identify the ways in which NIMS affects preparedness.
- Describe how NIMS affects how resources are managed.
- Describe the advantages of common communication and information management systems.
- Explain how NIMS influences technology and technology systems.
- Describe the purpose of the NIMS Integration Center.

Please Note:

- [Return You Here: Click here for Technical Information](#)
- **How to take the course and receive credits:**
 - Review course materials by choosing any one of the options below.
 - You will enroll in this course when you complete the online answer sheet for the final exam and will be notified by Independent Study Office via email.
 - For any questions related to the course materials, please send an e-mail to trainemaster@dhs.gov and for all other questions please send an email to independent.study@dhs.gov.
- **Option 1: Interactive Web-based Course - *EMI Learning v10***
- **Option 2: Interactive Web-based Course - *Next Step***
- **Option 3: Interactive Web-based Course - *Training Site***
- **Option 4: Printable version of IS-700 (Self-Study Guide, Summary Only) - PDF**
- **Lesson Summary - A complete IS-700 Lesson Summary - PDF**
- **Facilitator notes**
- **Facilitator's Guide for IS-700 - PDF**
- **Facilitator's Manual (Power Point Presentation) - Win zip 343KB**
- **Download Final Exam Questions - PDF**
- **Take Final Exam**

Last Updated: March 21, 2007

<http://training.fema.gov/EMIWeb/IS/is700.asp>

- This is the webpage address where students will need to go to individually submit there IS-700 exam answers to FEMA. FEMA usually grades the exam within 24 hours and let's the student know, via e-mail, whether they have passed or failed (a 75% is needed to pass). If the student has passed, FEMA will attach that student's PDF certificate to the e-mail.

Contact for additional information

US EPA:

John Whitley – whitley.john@epa.gov
(202) 564-1929

- For more information regarding EPA's Water Sector NIMS course, please contact Mr. John Whitley of the U.S. EPA.