Water Sector Training
Introduction to the Incident Command System (ICS)

Student Manual

EPA
United States
Environmental Protection
Agency

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Incident Command System (IS-100.C)

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Incident Command System (ICS) Training for the Water Sector

Incident Command System

Adapted from FEMA IS-100.C

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Course Welcome

This course will introduce students to the Incident Command System (ICS). This system is used nationwide to manage incidents regardless of size or type.

This is the first in a series of ICS courses for all personnel involved in incident management. Descriptions and details about the other ICS courses in the series may be found on our web site: http://training.fema.gov.

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Course Logistics

- Course agenda
- Sign-in sheet
- Housekeeping:
  - Breaks
  - Cell phone policy
  - Facilities
  - Other concerns

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Successful Course Completion

- Participate in unit activities/exercises.
- Achieve 75% or higher on the final exam.
- Complete the end-of-course evaluation.

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Unit 1:
Course Overview Introduction to ICS

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Overall Course Objectives

- Explain the principles and basic structure of the Incident Command System (ICS).
- Describe the NIMS management characteristics that are the foundation of the ICS.
- Describe the ICS functional areas and the roles of the Incident Commander and Command Staff.
- Describe the General Staff roles within ICS.
- Identify how NIMS management characteristics apply to ICS for a variety of roles and discipline areas.

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Student Introductions

- Name, job title, and organization
- Overall experience with emergency or incident response
- ICS qualifications and most recent ICS experience
- Student expectations

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Instructor Expectations

- Cooperate with the group.
- Be open minded to new ideas.
- Participate actively in all of the training activities and exercises.
- Return to class at the stated time.
- Use what you learn in the course to perform effectively within an ICS organization.

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Unit 1: ICS Overview

Unit 1 provides an overview of the Incident Command System (ICS). At the end of this lesson, you should be able to:

- Describe the Whole Community approach to ICS.
- Identify the basic concept and benefits of ICS.

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Whole Community

Every part of society must be involved in preparing for, protecting against, responding to, recovering from, and mitigating any and all incidents. The Federal Government is only one part of the whole community.

The Whole Community approach ensures solutions that serve the entire community are implemented, while simultaneously making sure that the resources the different members of the community bring to the table are used efficiently. These members include those in all levels of government as well as those in non-governmental and private-sector organizations in fields such as transportation, health care, schools, public works, communications, agriculture, chemical/nuclear, and more.

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What is the ICS?

ICS is a standardized approach to incident management that:

- Is used for all kinds of incidents by all types of organizations and at all levels of government; applicable to small incidents as well as large and complex ones.
- Can be used for emergencies & for planned events.
- Enables a coordinated response among various jurisdictions and agencies.
- Establishes common processes for incident-level planning and resource management.
- Allows for the integration of resources (such as facilities, equipment, personnel) within a common organizational structure.

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When is ICS Used?

- To manage any type of incident, including a planned event (e.g., the Olympics, the Governor's inauguration, state fairs, a local parade, etc.). The use of ICS is applicable to all types of incidents, regardless of their size or cause.
- As a system, ICS provides an organizational structure for incident management, and guides the process for planning, building, and adapting that structure.
- Using ICS for every incident or planned event provides the practice that will help to maintain and improve skills needed to effectively coordinate larger or more complex efforts.

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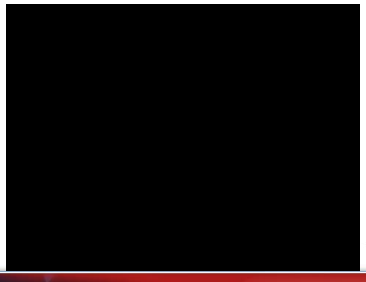
Incident Command System: Promoting Response Partnerships



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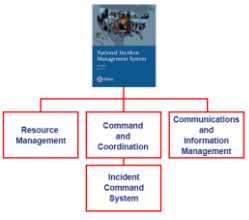
ICS as a Component of the National Incident Management System (NIMS)

NIMS is organized into three major components:

- Resource Management
- Command and Coordination - including the Incident Command System
- Communications and Information Management



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Activity: Management Challenges (1 of 2)

Instructions:

- Working as a team, review the scenario presented on the next visual.
- Identify the top three challenges for managing this incident. Write these challenges on chart paper.
- Using what you have learned so far, describe how ICS could be used to address these challenges.
- Select a spokesperson. Be prepared to present in 5 minutes.

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Activity: Management Challenges (2 of 2)

Scenario: An unexpected flash flood has struck a small community. As a result:

- Homes, schools, and the business district have been evacuated.
- Critical infrastructure has been damaged including contamination of the water supply, flooded wastewater pumping stations, downed power lines, and damaged roads.
- Mutual aid and assistance is arriving from several surrounding utilities.

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How can ICS benefit me, a utility?

1. It is a proven system for managing incidents of any kind or size.
2. It is used for emergency response by all local, state, and federal agencies.
3. Allows personnel from a variety of agencies to meld rapidly into a common management structure.
4. It is flexible enough to manage incidents that only involve utility personnel to incidents that require response by several agencies or jurisdictions.
5. Is cost effective by avoiding duplication of efforts.
6. Using ICS is required for NIMS compliance.

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ICS: Built on Best Practices

ICS helps to ensure:

- The safety of responders, community members, and others.
- The achievement of incident objectives.
- The efficient use of resources.

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Unit 1 Summary

You have completed the Course Welcome and Incident Command System (ICS) Overview unit. This unit presented the following key points:

- ICS is a standardized management tool that allows better coordination and use of resources.
- ICS represents organizational best practices and has become the standard for emergency management.
- ICS can be used to manage the response for all incidents and planned events.

ICS works! It saves lives!

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Course Structure

Unit 1: Welcome and ICS Overview

Unit 2: NIMS Management Characteristics

Unit 3: ICS Functional Areas and Command Staff Roles

Unit 4: General Staff Roles

Unit 5: How ICS Applies to You

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Unit 2: NIMS Management Characteristics

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Unit 2 Overview

This unit presents the NIMS management characteristics. These characteristics are the foundation of all NIMS command and coordination components, including the Incident Command System (ICS).

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Making ICS Work

ICS uses a standardized management approach to ensure that incidents are properly managed and communications are effectively coordinated during an incident.

As an incident occurs, you may be called upon to assist -- making you a part of this organizational structure. To ensure success, you should understand how this structure works.

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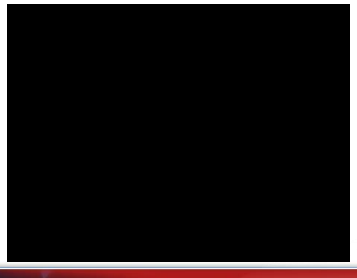
NIMS Management Characteristics: Overview



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NIMS Management Characteristics

ICS is based on the following 14 proven NIMS management characteristics, each of which contributes to the strength and efficiency of the overall system:

- Common Terminology
- Modular Organization
- Management by Objectives
- Incident Action Planning
- Manageable Span of Control
- Incident Facilities and Locations
- Comprehensive Resource Management
- Integrated Communications
- Establishment and Transfer of Command
- Unified Command
- Chain of Command and Unity of Command
- Accountability
- Dispatch/Deployment
- Information and Intelligence Management

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Common Terminology

- **Organizational Functions**
- **Resource Descriptions:**
- **Incident Facilities:**

During an incident:

- **Communications should use common terms.**
- **Organizations should avoid radio codes, agency-specific codes, acronyms, or jargon.**
- **The goal is to promote understanding among all parties involved in managing an incident.**

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Common Terminology Discussion

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Even if you use codes on a daily basis, why should you use common terminology during an incident response?

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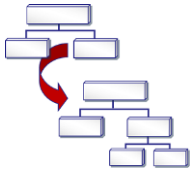
Modular Organization

- ICS organizational structure develops in a modular fashion based on the incidents size and complexity.
- The responsibility for the establishment and expansion of the ICS modular organization rests with the Incident Commander.
- As the incident grows more complex, the ICS organization may expand as functional responsibilities are delegated.



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Management by Objectives

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

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Management by Objectives: Steps

The steps for establishing incident objectives include:

- Step 1: Understand agency policy and direction.
- Step 2: Assess incident situation.
- Step 3: Establish incident objectives.
- Step 4: Select appropriate strategy or strategies to achieve objectives.
- Step 5: Perform tactical direction.
- Step 6: Provide necessary follow-up.

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Overall Priorities

Incident objectives are established based on the following priorities:

#1: Life Safety

#2: Incident Stabilization

#3: Property Preservation

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Effective Incident Objectives

Effective incident objectives must be . . .

Specific and state what's to be accomplished.

Measurable.

Action-oriented.

Realistic.

Timely.

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Sample Incident Objectives

Incident: At noon a 4-foot water main breaks in the city's downtown financial district, flooding roadways and businesses. Traffic is gridlocked and many businesses have no water.

Incident Objectives:

- Notify city fire department by 12:15 p.m. and all critical customers downtown by 12:45 p.m.
- Mitigate downtown flooding by the afternoon rush hour.

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Establish Strategies to Achieve Objectives

- Make good sense (feasible, practical, and suitable)
- Be within acceptable safety norms
- Be cost effective
- Be consistent with sound environmental practices.
- Meet political considerations

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Objectives, Strategies, and Tactics

Incident Objectives	State what will be accomplished.
Strategies	Establish the general plan or direction for accomplishing the incident objectives.
Tactics	Specify how the strategies will be executed.

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Sample Objective, Strategies, Tactics & Resources

Objective: Reduce reservoir level to 35 feet by 0800 tomorrow.

Strategy #1: Reduce/divert inflow.

Strategy #2: Release water from spillways.

Selected Strategy: Pump water from reservoir.

Tactics: Use truck-mounted pumps working from the road to pump water into the spillway, and use portable pumps on the east side of the reservoir to discharge water into Murkey Creek.

Resources: 2 strike teams with (3) 1,500-gpm truck-mounted pumps for one team and (2) 500-gpm portable pumps for the other.

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Incident Action Planning

To be effective, an IAP should:

- Cover a specified timeframe
- Be proactive
- Specify the incident objectives
- State the activities to be completed
- Assign responsibilities
- Identify needed resources
- Specify communication protocols

For smaller/less complex incidents, the IAP may be oral or written, except for hazardous materials incidents, which require a written IAP. FEMA has developed a series of ICS Forms for use in developing a written IAP.

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Activity: Objectives (1 of 2)

Instructions:

- Working as a team, review the scenario presented on the next visual.
- Based on the information provided, identify the top three incident management objectives. Write these objectives on chart paper.
- Select a spokesperson. Be prepared to present in 5 minutes.

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Activity: Objectives (2 of 2)

Scenario: An unexpected flash flood has struck a small community. As a result:

- Homes, schools, and the business district have been evacuated.
- Critical infrastructure has been damaged including contamination of the water supply, flooded wastewater pumping stations, downed power lines, and damaged roads.
- Mutual aid and assistance is arriving from several surrounding utilities.

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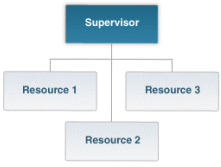
Manageable Span of Control

- Depending on your role within ICS structure, you may be asked to manage the activities of others.
- Span of control refers to the number of individuals or resources that one supervisor can manage effectively during an incident.
- The optimal 1:5
- This ratio is a guideline--incident personnel should use their best judgement to determine the appropriate ratio for an incident.



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Incident Locations & Facilities

Established by the Incident Commander based on the requirements and complexity of the incident.

Incident Command Post

Base

Staging Area

Camp

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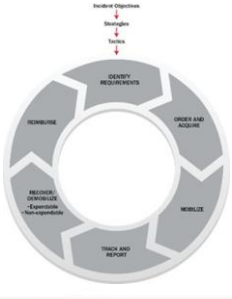
Comprehensive Resource Management

Comprehensive Resource Management describes standard mechanisms to identify requirements, order and acquire, mobilize, track and report, demobilize, and reimburse and restock resources such as personnel, teams, facilities, equipment and supplies.



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Integrated Communications

Incident communications are facilitated through the development and use of a common communications plan and interoperable communication processes and systems that include voice and data links.

Integrated Communications are necessary to:

- Maintain connectivity
- Achieve situational awareness
- Facilitate information sharing

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Transfer of Command (1 of 2)

- Moves the responsibility for incident command from one Incident Commander to another.
- Must include a transfer of command briefing (which may be oral, written, or both).

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Transfer of Command (2 of 2)

Transfer of command occurs when:

- A more qualified person assumes command.
- The incident situation changes over time, resulting in a legal requirement to change command.
- There is normal turnover of personnel on extended incidents.
- The incident response is concluded and responsibility is transferred to the home agency.

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Unified Command

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.

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Example: Unified Command

A truck carrying hazardous material in 55-gallon barrels is involved in an accident on the bridge that marks the county line. The barrels ejected from the truck land in both counties and in the raw water source for the water treatment plant.

Why might a Unified Command be used to manage this incident?

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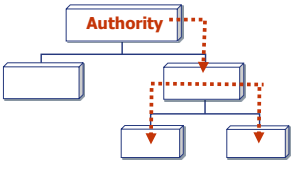
Chain of Command

Chain of command is an orderly line of authority within the ranks of the incident management organization.



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Unity of Command

Under unity of command, personnel:

- Report to only one supervisor.
- Receive work assignments only from their supervisors.

Don't confuse unity of command with Unified Command!

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Accountability

Effective accountability during incident operations is essential. As part of the Incident Command System (ICS) structure, you will need to abide by agency policies and guidelines and any applicable local, tribal, state, or Federal rules and regulations.

There are several principles you will need to adhere to:

- Check-In/Check-Out
- Incident Action Planning
- Unity of Command
- Personal Responsibility
- Span of Control.
- Resource Tracking

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Dispatch/Deployment

Resources should be deployed only when requested or when dispatched by an appropriate authority through established resource management systems.

Resources not requested should refrain from self-dispatching to avoid overburdening the incident command.

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Information and Intelligence Management

Incident management must establish a process for gathering, analyzing, assessing, sharing, and managing incident-related information and intelligence.

In NIMS, "intelligence" refers exclusively to threat-related information developed by law enforcement, medical surveillance, and other investigative organizations.

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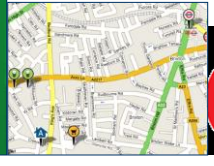
Information & Intelligence Management

Information and intelligence are critical to incident response.



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Unit 2 Summary

You have completed the National Incident Management System (NIMS) Management Characteristics unit.

This unit introduced:

- Common Terminology
- Modular Organization
- Management by Objectives
- Incident Action Planning
- Manageable Span of Control
- Incident Facilities and Locations
- Comprehensive Resource Management
- Integrated Communications
- Establishment and Transfer of Command
- Unified Command
- Chain of Command and Unity of Command
- Accountability
- Dispatch/Deployment
- Information and Intelligence Management

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Unit 3:
Incident Commander and Command Staff Functions

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Unit 3 Overview

This unit introduces you to the Incident Command System (ICS) Functional Areas and roles of the Incident Commander and Command Staff.

- Identify the five major ICS functional areas.
- Describe the role of the Incident Commander.
- Describe the selection of and transfer of command between Incident Commanders.
- Identify the position titles associated with the Command Staff.
- Describe the roles of the Command Staff.
- Differentiate between incident command and incident coordination.

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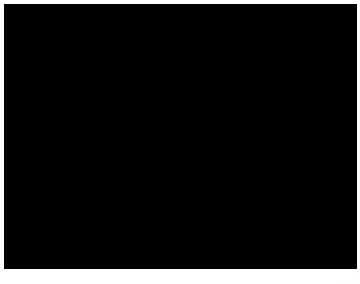
Command Staff Overview - Video



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ICS Functional Areas and Command Staff Roles

Every incident requires that certain functional areas be implemented.

Regardless of the size of the incident, these functional areas are all required.

In case you ever need to assist with an incident, you should understand how the management structure is constructed using ICS.

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Five Major ICS Functional Areas

- There are five major Incident Command System (ICS) functional areas.
- These functions apply to incidents of all sizes and types, including both planned events and ones that occur without warning.
- If you are in an incident and hear these terms, its important for you to know what they mean.

Command
Operations
Planning
Logistics
Finance/Administration

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ICS Functional Area Descriptions

- Incident Command: Sets the incident objectives, strategies, and priorities, and has overall responsibility for the incident.
- Operations: Doers
- Planning: Gathers
- Logistics: Getters
- Finance/Administration: Money

Command
Operations
Planning
Logistics
Finance/Administration

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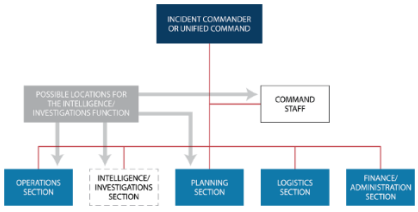
Intelligence/Investigations Function in ICS



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Review of Functional Areas (1 of 5)

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Which ICS Functional Area supports the incident action planning process by tracking resources, collecting/analyzing information, and maintaining documentation?

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Review of Functional Areas (2 of 5)

?

Which ICS Functional Area sets the incident objectives, strategies, and priorities, and has overall responsibility for the incident?

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Review of Functional Areas (3 of 5)

?

Which ICS Functional Area conducts operations to reach the incident objectives, establishes tactics, and directs all operational resources?

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Review of Functional Areas (4 of 5)

?

Which ICS Functional Area monitors costs related to the incident and provides accounting, procurement, time recording, and cost analyses?

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Review of Functional Areas (5 of 5)

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Which ICS Functional Area arranges for resources and needed services to support achievement of the incident objectives?

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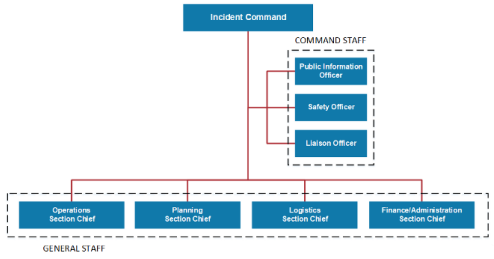
ICS Structure



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Incident Command Definition

- NIMS defines command as the act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.
- The Incident Commander has the authority to establish objectives, make assignments, and order resources.
- The Incident Commander should have the training, experience, and expertise to serve in this capacity.
- Qualifications to serve as an Incident Commander should not be based solely on rank, grade, or technical knowledge.

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Incident Commander

- Responsible for the overall management of the incident
- Makes Command Staff assignments required to support the incident command function
- The only position that is always staffed in ICS applications
- On small incidents and events, one person-the Incident Commander-may accomplish all management functions

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Incident Commander Responsibilities

In addition to having the overall responsibility for managing the entire incident, the Incident Commander is specifically responsible for:

- Ensuring overall incident safety
- Providing information services to internal and external stakeholders, such as disaster survivors, agency executives, and senior officials
- Establishing and maintaining liaisons with other agencies participating in the incident
- The Incident Commander may appoint one or more Deputies. If a Deputy is assigned, he or she should be fully qualified to assume the Incident Commanders position.

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Selecting or Changing Incident Commanders

- The command function should be clearly established at the beginning of an incident.
- The jurisdiction or organization with primary responsibility for an incident designates the individual at the scene who is responsible for establishing command and the protocol for transferring command.
- As an incident becomes more or less complex, command may change to meet the needs of the incident.
- When command is transferred, the process should include a briefing that captures all essential information for continuing safe and effective operations.

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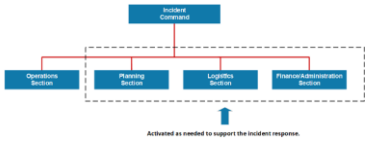
Delegating Incident Management Responsibilities



The Incident Commander only creates those sections that are needed. If a section is not staffed, the Incident Commander will manage those functions.

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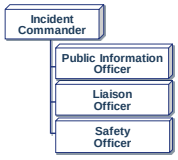
Command Staff



It may be necessary for the Incident Commander to designate a Command Staff who:

- Provide information, liaison, and safety services for the entire organization.
- Report directly to the Incident Commander.

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Public Information Officer (PIO)

Public Information Officer

Advises Incident Commander on information dissemination and media relations. Incident Commander approves information that the PIO releases.

Obtains information from and provides information to Planning Section.

Obtains information from and provides information to community and media.

Incident Commander

Planning Section Chief

Community and Media

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Safety Officer

Safety Officer

Advises Incident Commander on issues regarding incident safety.

Works with Operations to ensure safety of field personnel.

Ensures safety of all incident personnel.

Incident Commander

Operations Section Chief

Incident Resources

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Liaison Officer

Liaison Officer

Assists Incident Commander by serving as point of contact for agency representatives who are helping to support the operation.

Incident Commander

Provides briefings to and answers questions from supporting agencies.

Agency Representative

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Knowledge Review (1 of 3)

Instructions: Identity which member of the Command Staff performs the following tasks.

Tasks:

- Advises Incident Commander on issues related to information dissemination and media relations.
- Serves as primary contact for anyone who wants information about the incident.
- Serves external and internal audiences.
- Obtains information from Planning Section.

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Knowledge Review (2 of 3)

Instructions: Identity which member of the Command Staff performs the following tasks.

Tasks:

- Makes sure everyone does their job safely.
- Advises Incident Commander on issues regarding incident safety.
- Conducts risk analyses and implements safety measures.
- Promotes safe driving habits.
- Eliminates tripping hazards.

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Knowledge Review (3 of 3)

Instructions: Identity which member of the Command Staff performs the following tasks.

Tasks:

- Serves as point of contact for assisting and cooperating agency representatives.
- Identifies problems between supporting agencies.
- Participates in planning meetings by providing the status on current resources, resource limitations, and resource capabilities of other agencies.

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Activity: Command Staff Roles (1 of 2)

Instructions:

- Working as a team, review the scenario presented on the next visual.
- Identify which Command Staff positions would be assigned.
- Next, if you were the Incident Commander, what specific activities would you delegate to each Command Staff member?
- Select a spokesperson. Be prepared to present in 10 minutes.

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Activity: Command Staff Roles (2 of 2)

Scenario: An unexpected flash flood has struck a small community. As a result:

- Homes, schools, and the business district have been evacuated.
- Critical infrastructure has been damaged including contamination of the water supply, flooded wastewater pumping stations, downed power lines, and damaged roads.
- Mutual aid and assistance is arriving from several surrounding utilities.
- Media representatives are arriving at the scene.

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Incident Coordination

Coordination involves the activities that ensure the onsite Incident Command System (ICS) organization receives the information, resources, and support needed to achieve those incident objectives. Coordination takes place in a number of entities and at all levels of government.

Examples of coordination activities include:

- Establishing policy based on interactions with agency executives, other agencies, and stakeholders.
- Collecting, analyzing, and disseminating information to support the establishment of shared situational awareness.
- Establishing priorities among incidents.
- Resolving critical resource issues.
- Facilitating logistics support and resource tracking.
- Synchronizing public information messages to ensure that everyone is speaking with one voice.

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Command and Coordination

Effective incident management consists of four overarching areas of responsibility:

1. Direct tactical response to save lives, stabilize the incident, and protect property and the environment
2. Incident support through resource acquisition, information gathering, and interagency coordination
3. Policy guidance and senior level decision making
4. Outreach and communication with the media and public to keep them informed about the incident

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Emergency Operations Center Role

Jurisdictions and organizations across the Nation use Emergency Operations Centers (EOCs) as an element of their emergency management programs.

Typically, an Emergency Operations Center (EOC) supports the on-scene response by relieving the Incident Commander of the burden of external coordination and the responsibility for securing additional resources.

84

84

Emergency Operations Center Role

An EOC is:

- A physical or virtual location where staff from multiple agencies come together to address imminent threats and hazards
- Staffed with personnel trained for, and authorized to, represent their agency/discipline
- Equipped with mechanisms for communicating with the incident site
- Providing support to the incident by obtaining resources
- Applicable at different levels of government

85

85

Joint Information Center

Another coordination entity is the Joint Information Center (JIC). The JIC:

- May be established to coordinate all incident-related public information activities
- Serves as the central point of contact for all news media-when possible, public information officials from all participating agencies should co-locate at the JIC
- May be established at various levels of government and at incident sites.

86

86

Unit 3 Summary

This unit introduced you to the:

- Five major Incident Command System (ICS) Functional Areas.
- ICS organizational structure.
- Incident Commander roles and responsibilities.
- Selection and transfer of Incident Commanders.
- Command Staff roles and responsibilities.
- Differences between incident command and incident coordination.

The next unit provides an introduction to the ICS General Staff Roles.

87

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Unit 4:
General Staff Functions

88

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Lesson 4 Overview

In the previous unit, you learned that the Command Staff supports the Incident Commander who is responsible for overall management of the incident.

This unit introduces you to the General Staff.

By the end of this unit, you should be able to:

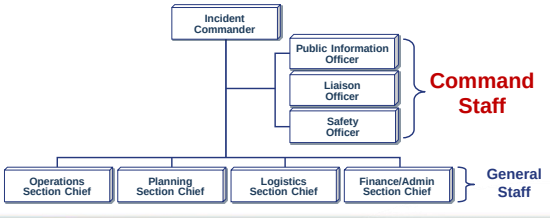
- Identify the Incident Command System (ICS) titles used for General Staff members.
- Describe the major activities of the four general staff sections.

89

89

Incident Commander (2 of 2)

The Incident Commander performs all major ICS command and staff responsibilities unless the ICS functions are delegated and assigned.



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General Staff

To maintain span of control, the Incident Commander may establish any or all of the following four sections: Operations, Planning, Logistics, and Finance/Administration.

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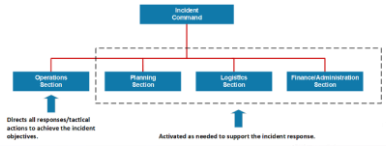
General Staff Overview

In an expanding incident, the Incident Commander first establishes the Operations Section. The remaining sections are established as needed to support the operation.



92

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General Staff Overview Video

93

93

Operations Section Chief

Operations Section Chief

The Operations Section Chief:

- Develops and implements strategy and tactics to carry out the incident objectives.
- Organizes, assigns, and supervises the tactical field resources.
- Supervises air operations and those resources in a Staging Area.

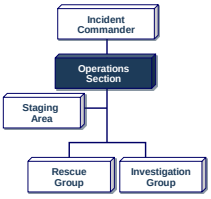
94

94

Operations Section

The Operations Section:

- Directs and coordinates all incident tactical operations.
- Is typically one of the first organizations to be assigned to the incident.
- Expands from the bottom up.
- Has the most incident resources.
- May have Staging Areas and special organizations.



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Unit Objective

Describe the roles and functions of the General Staff including:

- Operations Section
- Planning Section
- Logistics Section
- Finance/ Administration Section

96

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Expanding Incidents

Expanding incidents may add supervisory layers to the organizational structure as needed.

Command

Incident Commander

Sections

Operations Section Chief

Branches

Units

Single Resources

Divisions

Groups

97

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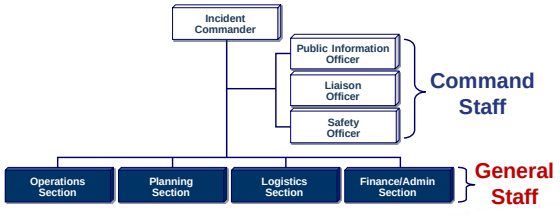
General Staff

This unit focuses on the role of the General Staff in the ICS organizational structure.



98

98

Maintaining Span of Control

The following supervisory levels can be added to help manage span of control:

Divisions

Divide an incident geographically.

Groups

Describe functional areas of operation.

Branches

Are used when the number of Divisions or Groups exceeds the span of control. Can be either geographical or functional.

99

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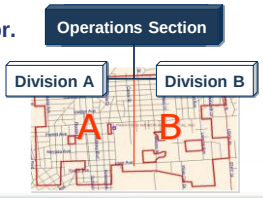
Operations Section: Divisions

- Divided geographically based on the needs of the incident.
- Labeled using alphabet characters (A, B, C, etc.).
- Managed by a Supervisor.



100

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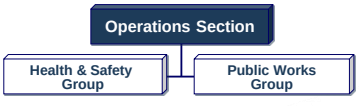
Operations Section: Groups

- Established based on the needs of an incident.
- Labeled according to the job that they are assigned.
- Managed by a Supervisor.
- Work wherever their assigned task is needed and are not limited geographically.



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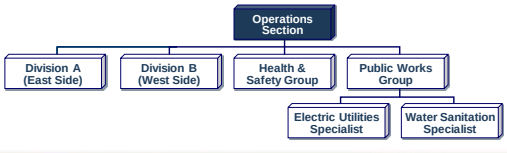
Operations Section: Divisions & Groups

Divisions and Groups:

- Can be used together on an incident.
- Are at an equal level in the organization. One does not supervise the other.



102

102

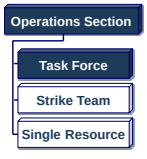
Operations Section: Branches

- Established if the number of Divisions or Groups exceeds the span of control.
- Have functional or geographical responsibility for major parts of incident operations.
- Identified by Roman numerals or functional name.
- Managed by a Branch Director.

103

103

Operations Section: Task Forces

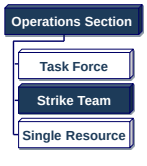


Task Forces are a combination of mixed resources with common communications operating under the direct supervision of a Task Force Leader

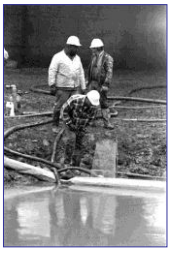
104

104

Operations Section: Strike Teams



Strike Teams are a set number of resources of the same kind and type with common communications operating under the direct supervision of a Strike Team Leader



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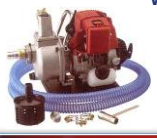
Operations Section: Single Resources

Single Resources may be:

- Individuals
- A piece of equipment and its personnel complement
- A crew or team of individuals with an identified supervisor



106

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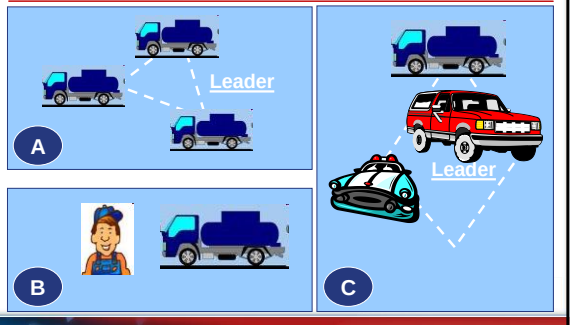
Name That Resource . . .



107

107

Use of Position Titles

Using specific ICS position titles:

- Provides a common standard for performance expectations.
- Helps to ensure that qualified individuals fill positions.
- Standardizes communication.
- Describes the responsibilities of the position.

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Knowledge Review (1 of 5)

Two Supervisors have been dispatched with resources (personnel and equipment) to inspect fire hydrants in the incident area. One Supervisor has responsibility for the east side of the community and the other has responsibility for the west side.

What type of ICS organizational structure is being described?

109

109

Knowledge Review (2 of 5)

Several utility crews have been organized under a single Supervisor in order to coordinate their repairs of pumping stations.

What type of ICS organizational structure is being described?

110

110

Knowledge Review (3 of 5)

Chemical and biological sampling personnel and their respective equipment are grouped together, under the direct supervision of a Leader, to perform water quality testing.

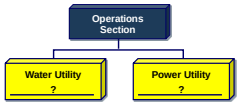
What type of ICS organizational structure is being described?

111

111

Knowledge Review (4 of 5)

As incident objectives and resources expand, the Operations Section Chief begins organizing resources into functional areas that are managed by a Supervisor.



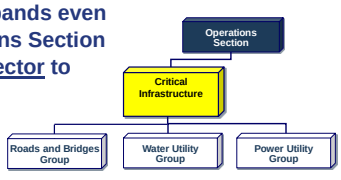
On the organizational chart, the title of each component would be a _____.

112

112

Knowledge Review (5 of 5)

As the operation expands even further, the Operations Section Chief appoints a Director to manage the Groups.



On the organizational chart, the name of the organizational component managed by the Director would be called the Critical Infrastructure _____.

113

113

Planning Section Chief

Planning Section Chief

The Planning Section Chief:

- Gathers, analyzes, and disseminates information and intelligence.
- Manages the planning process.
- Compiles the Incident Action Plan.
- Manages Technical Specialists.

114

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Planning Section

- Maintains resource status.
- Maintains and displays situation status.
- Prepares the Incident Action Plan.
- Develops alternative strategies.
- Provides documentation services.
- Prepares the Demobilization Plan.
- Provides a primary location for Technical Specialists assigned to an incident.

115

115

Planning Section: Resources Unit

- Conducts all check-in activities and maintains the status of all incident resources.
- Plays a significant role in preparing the written Incident Action Plan.

116

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Planning Section: Situation Unit

- Collects and analyzes information on the current situation.
- Prepares situation displays and situation summaries.
- Develops maps and projections.

117

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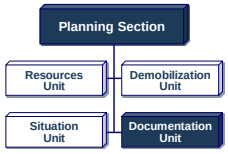
Planning Section: Documentation Unit



- Provides duplication services, including the written Incident Action Plan.
- Maintains and archives all incident-related documentation.

118

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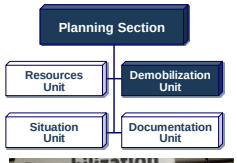
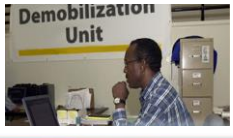
Planning Section: Demobilization Unit



Assists in ensuring that resources are released from the incident in an orderly, safe, and cost-effective manner.



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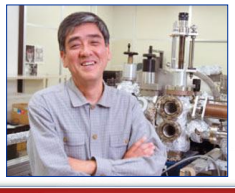
Planning Section: Technical Specialists

- Provide special expertise useful in incident management and response.
- May be assigned to work in the Planning Section or in other Sections.



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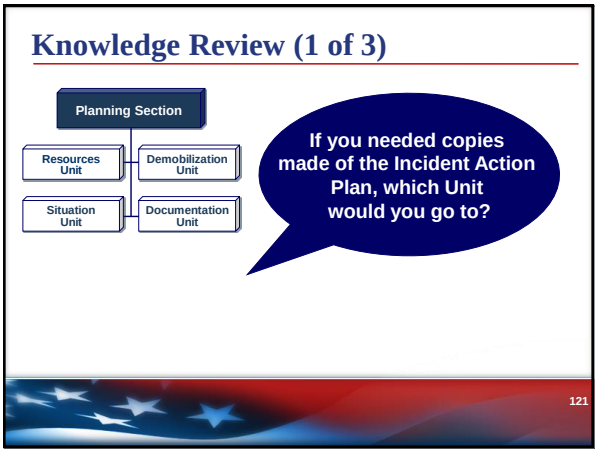
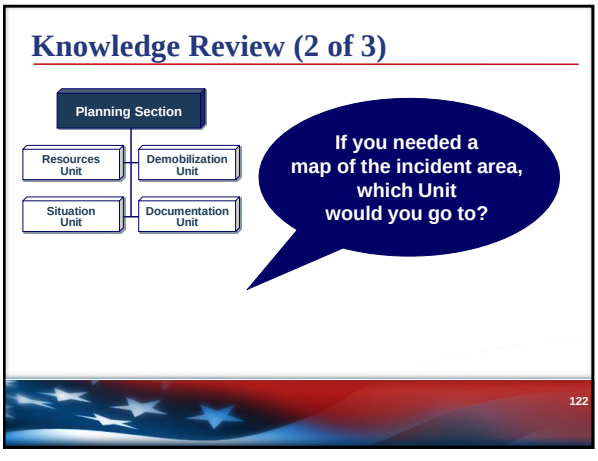
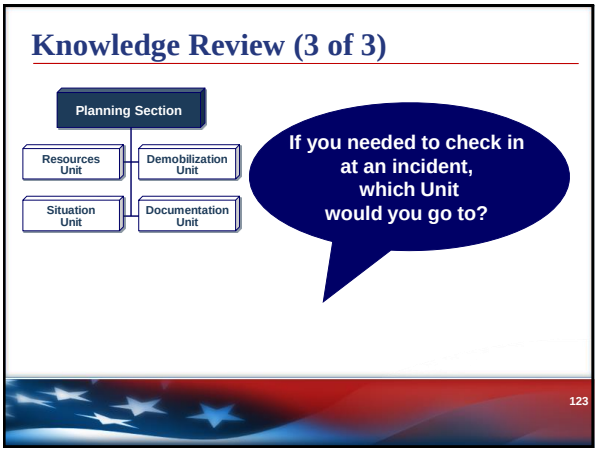

Knowledge Review (1 of 3)
Planning Section
Resources Unit
Demobilization Unit
Situation Unit
Documentation Unit
If you needed copies made of the Incident Action Plan, which Unit would you go to?
121

121


Knowledge Review (2 of 3)
Planning Section
Resources Unit
Demobilization Unit
Situation Unit
Documentation Unit
If you needed a map of the incident area, which Unit would you go to?
122

122


Knowledge Review (3 of 3)
Planning Section
Resources Unit
Demobilization Unit
Situation Unit
Documentation Unit
If you needed to check in at an incident, which Unit would you go to?
123

123

Logistics Section Chief

Logistics Section Chief

The Logistics Section Chief:

- Provides resources and services required to support incident activities.
- Develops portions of Incident Action Plan and forwards them to Planning Section.
- Contracts for and purchases goods and services needed at the incident.

124

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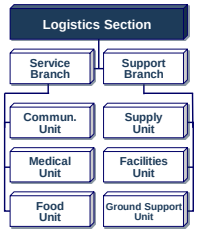
Logistics Section

Responsible for:

- Communications.
- Medical support to incident personnel.
- Food for incident personnel.
- Supplies.
- Facilities.
- Ground support.



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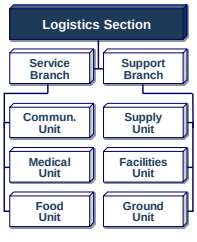
Knowledge Review (1 of 4)

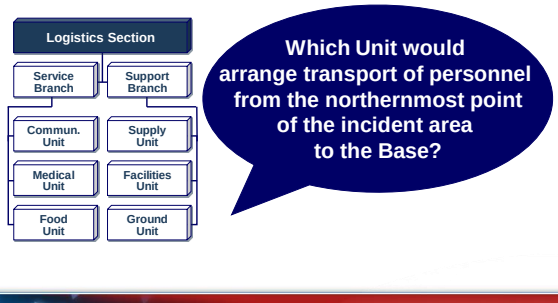


If the lighting at the Incident Command Post was not operating properly, which Unit would do the repairs?

126

126

Knowledge Review (2 of 4)

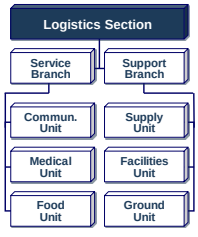


Which Unit would arrange transport of personnel from the northernmost point of the incident area to the Base?

127

127

Knowledge Review (3 of 4)



If your radio was not working properly, which Unit would you go to?

128

128

Knowledge Review (4 of 4)

If you needed to place an order for additional sampling equipment, which Logistics Section Unit would you go to?

129

129

Finance/Administration Section Chief

Finance/Administration Section Chief

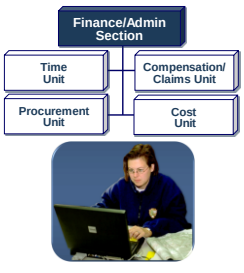
The Finance/Admin Section Chief:

- Is responsible for financial and cost analysis.
- Oversees contract negotiations.
- Tracks personnel and equipment time.
- Processes claims for accidents and injuries.
- Works with Logistics to ensure resources are procured.

130

130

Finance/Administration Section



- Contract negotiation and monitoring
- Timekeeping
- Cost analysis
- Compensation for injury or damage to property

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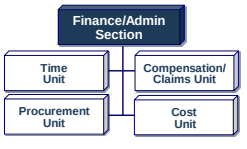
Knowledge Review (1 of 3)



If you wanted to confirm that your pay was correct, which Unit would you go to?

132

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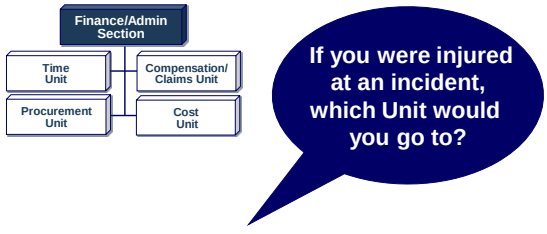
Knowledge Review (2 of 3)



If you were injured at an incident, which Unit would you go to?

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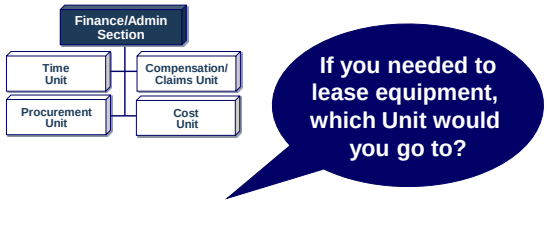
Knowledge Review (3 of 3)



If you needed to lease equipment, which Unit would you go to?

134

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Unit 4 Summary

This unit introduced you to:

- The Incident Command System (ICS) roles of the General Staff.
- The major activities of the four ICS General Staff sections.

The next unit focuses on how the ICS applies to you and your agency or organization.

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Unit 5:
How ICS Applies to You

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Unit 5 Overview

In this unit, you will be given an opportunity to apply information presented in the previous units.

You will be given a scenario involving a water main break and you will be asked to select which NIMS Management Characteristics are demonstrated throughout the scenario.

By the end of this unit, you should be able to:

- **Identify how the National Incident Management System (NIMS) Management Characteristics apply in specific roles.**
- **Identify how the National Incident Management System (NIMS) Management Characteristics apply in specific situations.**

137

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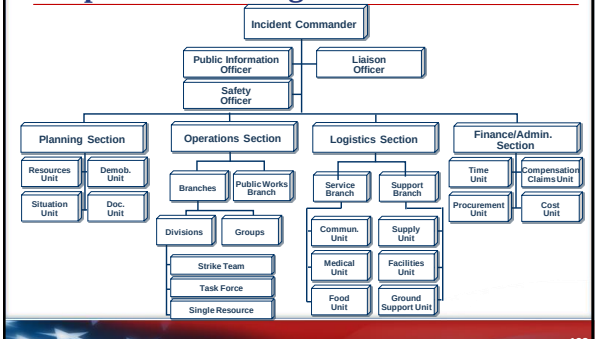
Expanded ICS Organization



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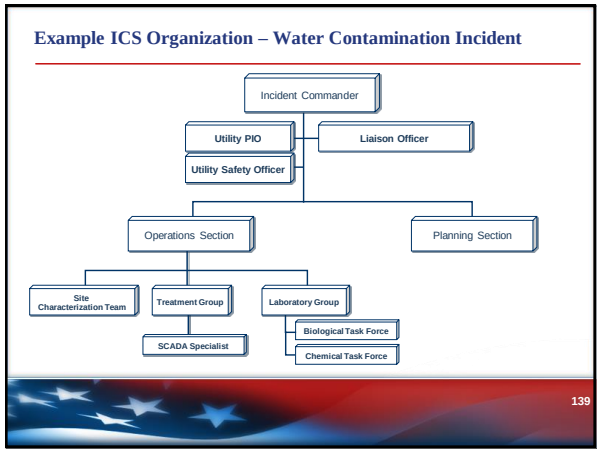
Example ICS Organization – Water Contamination Incident
Incident Commander
Utility PIO
Liaison Officer
Utility Safety Officer
Operations Section
Planning Section
Site Characterization Team
Treatment Group
Laboratory Group
SCADA Specialist
Biological Task Force
Chemical Task Force
139

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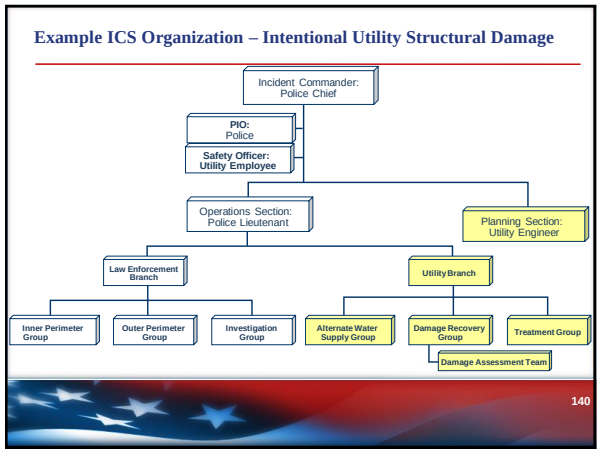
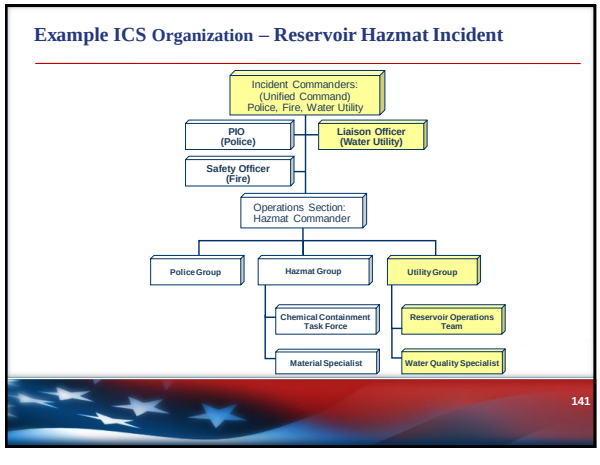
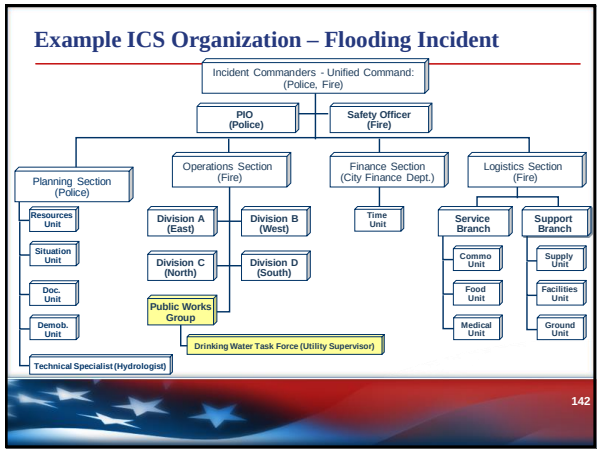

Example ICS Organization – Intentional Utility Structural Damage
Incident Commander: Police Chief
PIO: Police
Safety Officer: Utility Employee
Operations Section: Police Lieutenant
Planning Section: Utility Engineer
Law Enforcement Branch
Utility Branch
Inner Perimeter Group
Outer Perimeter Group
Investigation Group
Alternate Water Supply Group
Damage Recovery Group
Treatment Group
Damage Assessment Team
140

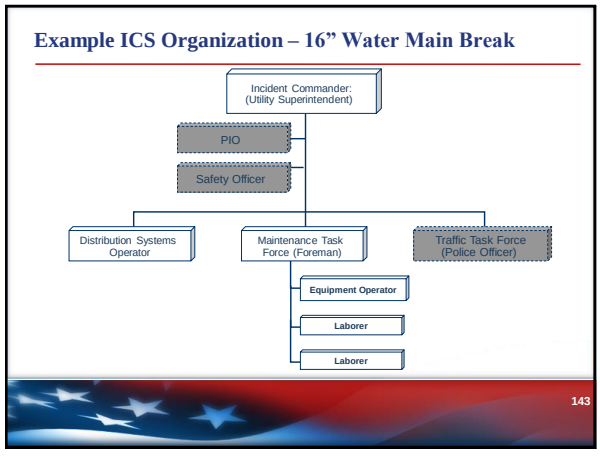
140


Example ICS Organization – Reservoir Hazmat Incident
Incident Commanders: (Unified Command) Police, Fire, Water Utility
PIO (Police)
Liaison Officer (Water Utility)
Safety Officer (Fire)
Operations Section: Hazmat Commander
Police Group
Hazmat Group
Utility Group
Chemical Containment Task Force
Reservoir Operations Team
Material Specialist
Water Quality Specialist
141

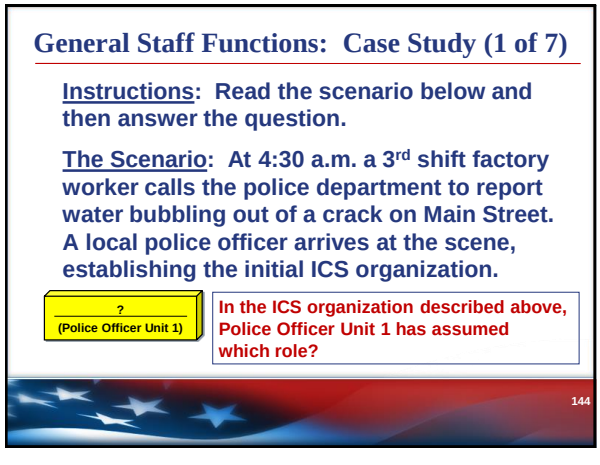
141


Example ICS Organization – Flooding Incident
Incident Commanders - Unified Command: (Police, Fire)
PIO (Police)
Safety Officer (Fire)
Planning Section (Police)
Operations Section (Fire)
Finance Section (City Finance Dept.)
Logistics Section (Fire)
Resources Unit
Situation Unit
Doc. Unit
Demob. Unit
Technical Specialist (Hydrologist)
Division A (East)
Division B (West)
Division C (North)
Division D (South)
Public Works Group
Drinking Water Task Force (Utility Supervisor)
Time Unit
Service Branch
Support Branch
Commo Unit
Food Unit
Medical Unit
Supply Unit
Facilities Unit
Ground Unit
142

142


Example ICS Organization – 16" Water Main Break
Incident Commander: (Utility Superintendent)
PIO
Safety Officer
Distribution Systems Operator
Maintenance Task Force (Foreman)
Traffic Task Force (Police Officer)
Equipment Operator
Laborer
Laborer
143

143


General Staff Functions: Case Study (1 of 7)
Instructions: Read the scenario below and then answer the question.
The Scenario: At 4:30 a.m. a 3rd shift factory worker calls the police department to report water bubbling out of a crack on Main Street. A local police officer arrives at the scene, establishing the initial ICS organization.
?
(Police Officer Unit 1)
In the ICS organization described above, Police Officer Unit 1 has assumed which role?
144

144

General Staff Functions: Case Study (2 of 7)

The Scenario Continues:

A water department foreman arrives at the scene, along with news crews and numerous on-lookers.

What must happen before the foreman assumes the Incident Commander role?

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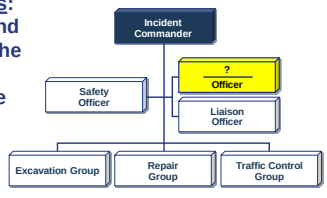
145

General Staff Functions: Case Study (3 of 7)

The Scenario Continues:

A transfer of command briefing occurs and the water department foreman assumes the Incident Commander role. All Command Staff positions are filled.



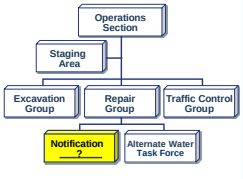
What is the correct title of the Command Staff member who will manage the media and ensure that the correct messages are communicated?

146

146

General Staff Functions: Case Study (4 of 7)

The Scenario Continues: The Incident Commander establishes an Operations Section. Within the Repair Group, four direct notification teams are assigned to inform customers of the service interruption. The teams have identical resources. The teams are using common communications and are operating under the direct supervision of a Leader.



What is the correct title of this organization? If the resources continue to expand, what might the Operations Section Chief do?

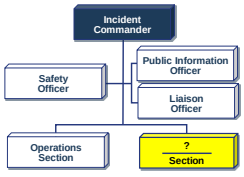
147

147

General Staff Functions: Case Study (5 of 7)

The Scenario Continues:

After the first hour, the Incident Commander establishes a second Section that will develop the Incident Action Plan and track the status of resources on the scene.



What is the correct title of this Section?

148

148

General Staff Functions: Case Study (6 of 7)

The Scenario Continues:

As night falls, more than 50 personnel are on the scene to help repair the water main break. Given the number of personnel on the scene, there is a need to provide meals, food, first aid, and rest areas for responders.

Which Section is responsible for providing these support resources?

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General Staff Functions: Case Study (7 of 7)

The Scenario Continues:

Just before morning rush hour the water main is repaired and a temporary road surface is in place.

Which resources would you demobilize first? Why?

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Activity #1: ICS Structure

Instructions:

1. This activity will help you to create your own draft ICS structure within your organization.
2. Within your group, you will each now have 10 minutes to diagram your utility's basic ICS structure.
3. Select one group member to present his or her utility's ICS structure to the class.

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Activity #1

Incident Commander

Instructions: Diagram your utility's potential ICS structure in response to a specific incident, such as a water main break or a flood. If you prefer, you may diagram your utility's potential ICS structure based on the job positions at your utility that best match the ICS components/positions. If you are from a small utility, you may need to think of who can help you during an incident. For example, your utility may not have a Public Information Officer (PIO). However, your community may have a PIO or spokesperson who can assist you with media relations during an incident, if necessary. If you are working as part of a group, you may elect to diagram an ICS structure for just one of the utilities represented in your group.

152

Unit 5 Summary

You have now completed Unit 5.

In this unit you have:

- Identified how the National Incident Management System (NIMS) Management Characteristics apply in specific roles
- Identified how the National Incident Management System (NIMS) Management Characteristics apply in specific situations

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Course Summary

You have now completed this course.

You should now be able to:

- Explain the principles and basic structure of the Incident Command System (ICS).
- Describe the NIMS Management Characteristics that are the foundation of ICS.
- Describe the ICS functional areas and the roles of the Incident Commander and Command Staff.
- Describe the General Staff roles within ICS.
- Identify how NIMS management characteristics apply to ICS for a variety of roles and discipline areas.

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IS-100.c Final Exam Instructions

When the review is completed, follow these Final Exam instructions:

1. Take a few moments to review your Student Manual and identify any questions.
2. Make sure that you get all of your questions answered prior to beginning the final test.
3. When taking the test online
    - Go to http://training.fema.gov/IS/crslist.asp and click on the link for IS-0100.c.
    - Click on "Take Final Exam."
    - Read each item carefully.
    - Check your work before submitting your answers.

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Certificate of Completion

To receive a certificate of completion, you must take the multiple-choice Final Exam and score at least 75 percent on the test.

Upon successful completion of the Final Exam, you will receive an e-mail message with a link to your electronic certification.

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Course Evaluation

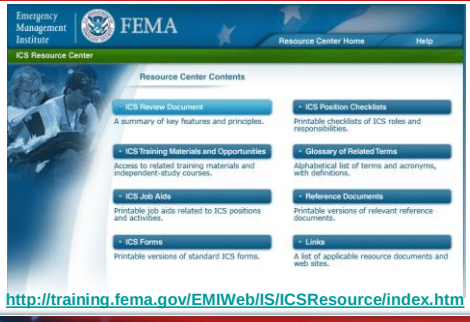
Completing the course evaluation form is important. Your comments will be used to evaluate the effectiveness of this course and make changes for future versions.

Please use the course evaluation forms provided by the organization sponsoring the course.

157

157

For Additional ICS Resources:



http://training.fema.gov/EMIWeb/IS/ICSResource/index.htm

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FEMA Student Identification (SID) number

How do I obtain my FEMA Student Identification (SID) number?

Step 1: To register, go to https://cdp.dhs.gov/femasid

Step 2: Click on the "Register for a FEMA SID" box.

Step 3: Follow the instructions and provide the necessary information to create your account.

Step 4: You will receive an email with your SID number.

(You should save this number in a secure location.)

When you begin the exam process you will be asked to enter your SID.

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On-Line Exam Instructions

1. Paste the below link into your web browser: https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c
2. On right hand side, click on "Take Final Exam Online".
3. Fill in the appropriate letters for each corresponding exam question number based on your hard copy test. Remember that test questions and answer may be scrambled online.
4. Follow the online directions.
5. Once submitted, your exam will be graded. If you pass EMI will send you an electronic completion certificate.

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Please fill out your course evaluation

162

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National Incident Management System (IS-700.B)

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

Adapted from FEMA IS-700

1

1

Course Logistics

- Course agenda
- Sign-in sheet
- Housekeeping:
  - Breaks
  - Cell phone policy
  - Facilities
  - Other concerns

2

Successful Course Completion

- Participate in unit discussions
- Achieve 75% or higher on the final exam
- Complete the end-of-course evaluation

3

3

Participant Introductions

- Name, job title, and organization
- Overall experience with emergency or incident response
- ICS qualifications and most recent ICS experience
- Participant Expectations

4

Instructor Expectations

- Cooperate with the group.
- Be open minded to new ideas.
- Participate actively in all of the training activities and exercises.
- Return to class at the stated time.
- Use what you learn in the course to perform effectively within an ICS organization.

5

Course Objectives

Describe:

- The intent of NIMS.
- The key concepts and principles underlying NIMS.
- The purpose of the NIMS components.
- NIMS implementation for the Water Sector.

6

6

Course Overview – Lessons List

- NIMS Introduction
- Lesson 1: Fundamentals and Concepts of NIMS
- Lesson 2: NIMS Resource Management
- Lesson 3: NIMS Management Characteristics
- Lesson 4: Incident Command System (ICS)
- Lesson 5: Emergency Operations Centers (EOC)
- Lesson 6: Other NIMS Structures and Interconnectivity
- Lesson 7: Communications and Information Management
- Lesson 8: Course Summary

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Fundamentals and Concepts of NIMS

Lesson 1 Objectives:

- Describe applicability and scope of NIMS.
- Describe the key concepts and principles underlying NIMS.

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NIMS Synopsis

WHAT? The National Incident Management System (NIMS) defines the comprehensive approach guiding…

WHO? …the whole community

WHY? …to prevent, protect against, mitigate, respond to, and recover from the effects of incidents.

WHEN? NIMS applies to all incidents, regardless of cause, size, location, or complexity, from planned events to traffic accidents and to major disasters.

HOW? NIMS provides the shared vocabulary, systems, and processes to successfully deliver the National Preparedness System capabilities.

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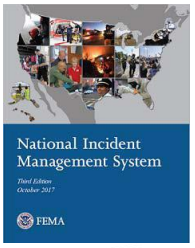
History of NIMS?

- Builds on best practices from more than 40 years of improving interoperability in incident management.
- In 1982 NIMS was developed through government collaboration with incident management practitioners, NGOs and the private sector based on California firefighting system (FIRESCOPE).



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Water Sector: NIMS Implementation Objectives

- Incorporate NIMS/ICS into ERPs
- WARN membership
- Complete appropriate level ICS training
- Participate in all-hazards training with response partners
- Inventory and type resources
- Credentialing
- Use ICS, JIS, & local EOC

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NIMS Overview (1 of 2)

NIMS Is	NIMS Is Not
• A comprehensive, nationwide, systematic approach to incident management, including: o Command and Coordination of Incidents o Resource Management, o Information Management	• Only the Incident Command System • Only applicable to certain emergency/incident response personnel • A static system
• A set of concepts and principles for all threats, hazards, and events across all mission areas	• A response plan
• Scalable, flexible, and adaptable; used for all incidents, from day-to-day to large-scale	• Used only during large-scale incidents

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NIMS Overview (2 of 2)

NIMS Is	NIMS Is Not
• Standard resource management procedures that enable coordination among different jurisdictions or organizations	• A resource ordering system
• Essential principles for communications and information management	• A communications plan

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NIMS Concepts and Guiding Principles

- Flexibility
- Standardization
- Unity of Effort

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Flexibility

NIMS components scalable and applicable to any incident or event.

Planned Events

Forecasted Events

No-Notice Events

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Standardization

- The NIMS guiding principle of standardization supports interoperability among multiple organizations in incident response.
- NIMS defines **standard organizational structures** that improve integration and connectivity among organizations.
- NIMS defines **standard practices** that allow incident personnel and organizations to work together effectively.
- NIMS includes **common terminology**, which enables effective communication.

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Unity of Effort

The NIMS guiding principle of Unity of Effort means coordinating activities among various organizational representatives to achieve common objectives.

Unity of effort enables organizations with jurisdictional authority or functional responsibilities to support each other while allowing each participating agency to maintain its own authority and accountability.

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NIMS Major Components

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Fundamentals and Concepts of NIMS

Lesson 1 Summary

The lesson specifically discussed:

- An Introduction and Background to NIMS
- NIMS Applicability and Scope
- NIMS Guiding Principles
- An Overview of the NIMS components

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NIMS Resource Management

Lesson 2 Objectives:

- Describe the four key activities of NIMS Resource Management Preparedness.
- Identify the methods for Managing Resources during an Incident.
- Describe features of Mutual Aid.

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Resource Management Key Activities

Resource management preparedness involves four key activities:

- Qualifying, certifying, and credentialing personnel
- Resource Planning and Management
- Identifying and Typing Resources
- Acquiring, storing, and inventorying resources

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24

Qualifying, Certifying and Credentialing Personnel

- The **Authority Having Jurisdiction (AHJ)** has the authority and responsibility for qualification, certification, and credentialing within its organization or jurisdiction.
- Qualification, certification, and credentialing are the essential steps to help ensure that personnel deploying under mutual aid agreements can perform their assigned roles.

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Resource Planning and Management

Resource management planning should consider resources needed to support all mission areas:

- Prevention
- Protection
- Mitigation
- Response
- Recovery

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Resource Management Strategies

- Stockpiling resources
- Establishing mutual aid agreements to obtain resources from neighboring jurisdictions
- Determining how and where to reassign resources performing non-essential tasks
- Developing contracts to acquire resources from vendors

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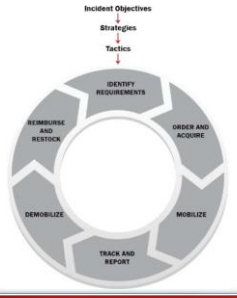
Resource Planning and Management Overview



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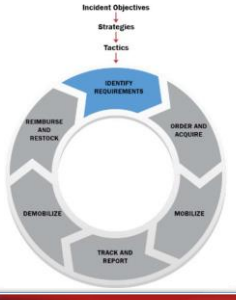
Identify Requirements



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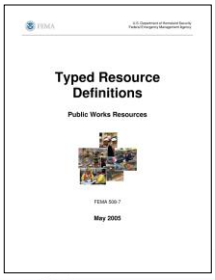
Resource Identifying and Typing

- **Standardize identification.**
- **Classify by capability / performance:**
  - ➔ Kind (what is this?) and;
  - ➔ Type (what can it do?)



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Resource Typing

When is a

an

?

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Water Sector Resource Typing Example

RESOURCE: WATER DISTRIBUTION SYSTEM DAMAGE ASSESSMENT AND REPAIR TEAM
AWWA April 2008
Category: Public Works and Engineering (ESF 3) Subcategory: Water and Wastewater Kind: _X_ Team

Component	Metric	Type I	Type II	Type III	Type IV
Capability	Diameter (in.) of mains repaired	24"+	10"-22"	2"- 8", including services and small meters	Portion of Type I – III Teams
Ideal Team Size	Total persons	6 - 8	5 - 7	4 - 5	1 - 3
Team Composition	Team member capabilities for assessments and repairs indicated	1 Team leader 1 Backhoe-loader operator 1 - 2 Tandem dump truck drivers 1 Lead repair technician 1 - 2 Utility workers 1 Welder if steel mains indicated	1 Team leader 1 Backhoe operator 1 - 2 Dump truck drivers 1 Lead repair technician 1 - 2 Utility workers 1 Welder if steel mains	1 Team leader 1 Backhoe operator 1 Dump truck driver 1 - 2 Utility workers 1 Welder (if steel)	Any portion of Type III that can be provided
Vehicles and Heavy Equipment	Number and type of vehicles and heavy equipment	1 Medium track excavator 1 Backhoe-loader 1 - 2 Tandem Dump trucks 1 Team / equipment tk. w/ boom	1 Medium track excavator 1 Backhoe-loader 1 - 2 Tandem Dump trucks 1 Team / equip. tk. w/ boom	1 Backhoe-loader 1 - 2 Tandem Dump trucks 1 Team / equip. tk.	Any portion of Type III that can be provided
Other Equipment	Other specific equipment	Air compressor, mud pump, welder (if steel) and necessary pneumatic, small power tools and hand tools for repairs indicated	Air compressor, mud pump, welder (if steel) and necessary pneumatic, small power tools and hand tools for repairs indicated	Air cmprssr., mud pump, welder (if steel) and needed pneumatic, small power tools and hand tools for repairs	Any portion of Type III that can be provided
Materials	As needed for repairs indicated	Repair couplings, sleeves and associated materials and expendable supplies for 60 assorted main repairs	Repair couplings, sleeves and associated materials and expendable supplies for 60 assorted main repairs	Repair couplings, sleeves and asscts. mtrls. & expendable supplies for 60 asscrted main repairs	NA

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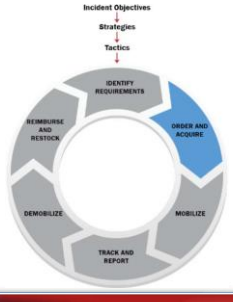
Order & Acquire



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RESOURCE: WATER DISTRIBUTION SYSTEM DAMAGE ASSESSMENT AND REPAIR TEAM AWWA April 2008					
Category: Public Works and Engineering (ESF 3) Subcategory: Water and Wastewater Kind: _X_ Team					
Component	**Metric**	**Type I**	**Type II**	**Type III**	**Type IV**
Capability	Diameter (in.) of mains repaired	24"+	10"-22"	2"- 8", including services and small meters	Portion of Type I – III Teams
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Team Composition	Team member capabilities for assessments and repairs indicated	1 Team leader 1 Backhoe-loader operator 1 - 2 Tandem dump truck drivers 1 Lead repair technician 1 - 2 Utility workers 1 Welder if steel mains indicated	1 Team leader 1 Backhoe operator 1 - 2 Dump truck drivers 1 Lead repair technician 1 - 2 Utility workers 1 Welder if steel mains	1 Team leader 1 Backhoe operator 1 Dump truck driver 1 - 2 Utility workers 1 Welder (if steel)	Any portion of Type III that can be provided
Vehicles and Heavy Equipment	Number and type of vehicles and heavy equipment	1 Medium track excavator 1 Backhoe-loader 1 - 2 Tandem Dump trucks 1 Team / equipment tk. w/ boom	1 Medium track excavator 1 Backhoe-loader 1 - 2 Tandem Dump trucks 1 Team / equip. tk. w/ boom	1 Backhoe-loader 1 - 2 Tandem Dump trucks 1 Team / equip. tk.	Any portion of Type III that can be provided
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Materials	As needed for repairs indicated	Repair couplings, sleeves and associated materials and expendable supplies for 60 assorted main repairs	Repair couplings, sleeves and associated materials and expendable supplies for 60 assorted main repairs	Repair couplings, sleeves and assctd. mtrls. & expendable supplies for 60 assorted main repairs	NA

Acquiring, Storing and Inventorying Resources

Accurate resource inventories:

- Enable organizations to resource incidents promptly when needed
- Support day-to-day resource management

In NIMS, resource inventorying refers to preparedness activities conducted **outside** of incident response; resource tracking occurs during an incident.

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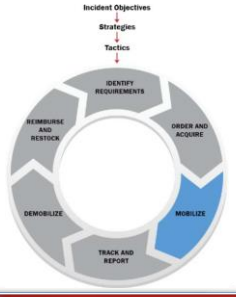
Mobilize



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Upon receiving notification, deploying personnel receive information to include:

Mobilize

- Date, time, and place of departure
- Mode of transportation to the incident
- Estimated date and time of arrival
- Reporting location and assigned supervisor
- Anticipated incident assignment
- Anticipated duration of deployment
- Resource order number
- Incident number
- Applicable cost and funding codes

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Unrequested Resources

During incidents responders sometimes arrive at the incident site without being requested.

Responders should wait for official deployment notification from established channels rather than self-deploying to an incident.

Why you should avoid self deployment ?

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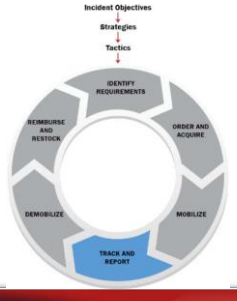
38

Track and Report



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Track and Report

Incident personnel should track resources from mobilization through demobilization using established resource tracking procedures to:

- Tracks the location of resources
- Helps staff prepare to receive and use resources
- Protects the safety and security of personnel, equipment, teams and facilities
- Enables resource coordination and movement

How does your utility track resources?

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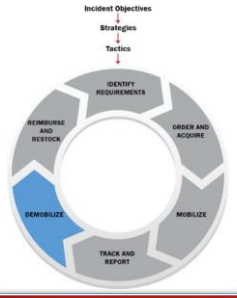
Demobilize



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Demobilize

- Managers begin planning and preparation for the demobilization process at the same time they begin mobilizing resources.
- Those responsible for resources in an incident should either reassign or demobilize resources as soon as they are no longer needed.

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Reimburse and Restock

Reimbursement processes:

- Establish and maintain the readiness of resources
- Collect bills and validate costs
- Ensure that resource providers are paid in a timely manner
- Restock through replacement or repair of damaged equipment

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Mutual Aid Agreements and Compacts

Mutual aid agreements establish the legal basis for two or more entities to share resources.

Agreements may authorize mutual aid:

- Between two or more neighboring communities
- Among all jurisdictions within an state
- Between States, Territories and Tribal Governments
- Between Federal agencies
- Internationally
- Between government and NGOs and/or the private sector
- Among NGOs and/or private sector entities

45

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Discussion Questions

What agreements does your organization have in place?

What actions has your organization taken to strengthen those agreements?

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Benefits of Having an Agreement

- Increases planning & coordination
- Provides an emergency contact list
- Enhances access to specialized resources
- Expedites arrival of aid
  - FEMA is muscular and provides support, but is not agile
- Reduces administrative conflict
  - Signed agreement in place
  - Workman's comp, indemnification, etc. identified
- Increases community and customer hope
  - The right resources with the right skills are available

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Intrastate Mutual Aid Agreements:
Water/Wastewater Agency Response Networks

- 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
- Includes public AND private utilities
- Operates utility-to-utility for small, local or large events
- Reduces the response "gap" for large emergencies

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Interstate Mutual Aid Agreements:
Emergency Management Assistance Compact (EMAC)

EMAC is a congressionally ratified mutual aid compact that defines a non-Federal, state-to state system for sharing resources across state lines during an emergency or disaster. Signatories include all 50 states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands. EMAC enables the movement of a wide variety of resources to meet the needs of impacted jurisdictions.

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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.

50

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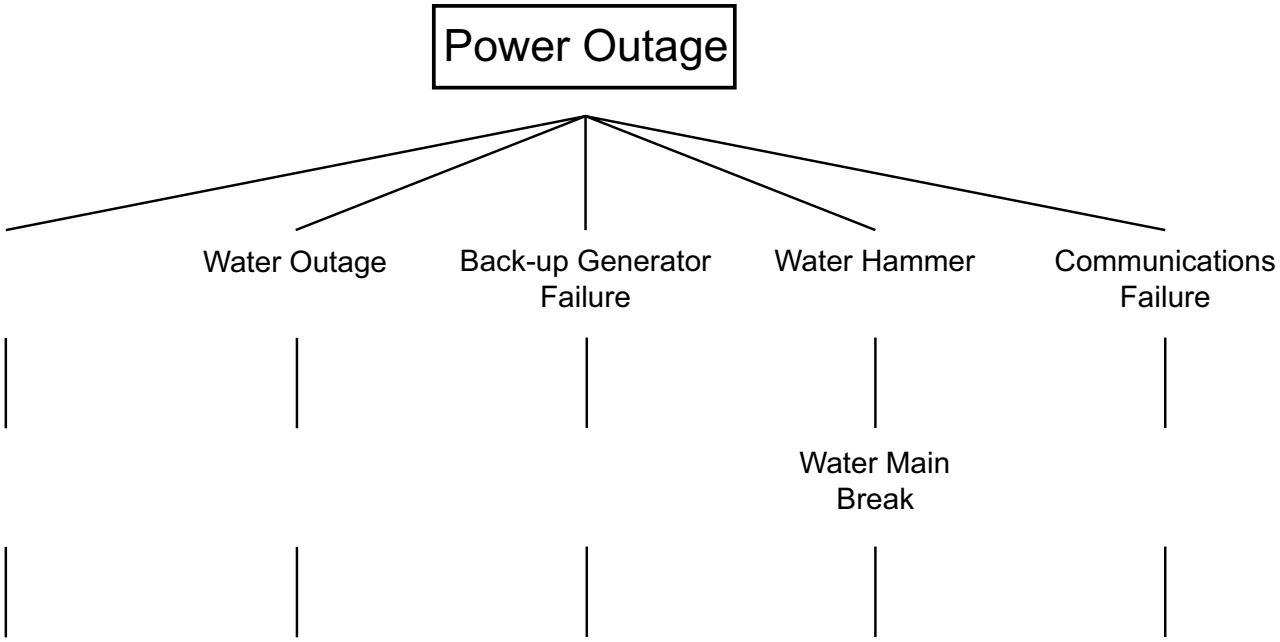
Activity: Incident Analysis for Resource Management

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



Resource Analysis Worksheet: Personnel, Equipment, Supplies

Resource Requirements based on Hazard/Vulnerability/Consequence Analysis

Type:	
Population Affected:	
Likely Areas of Occurance:	

Personnel and Services		Quantity*		On-hand?		**Equipment/Supplies**			On-hand?	
Position/Service Description	Role, Function, Service	1st Shift	2nd Shift	Yes	No (Source:)	Item Description	Type, Function	Quantity*	Yes	No (Source:)

* Quantity may vary significantly, especially during a catastrophic incident such as Hurricane Katrina

NIMS Resource Management

Lesson 2 Summary

The lesson specifically discussed:

- Resource Management Preparedness
- Resource Management During an Incident
- Mutual Aid

The next lesson will introduce you to NIMS Management Characteristics.

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NIMS Management Characteristics

Lesson 3 Objective:

- Differentiate among the fourteen NIMS Management Characteristics

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NIMS Management Characteristics

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Common Terminology

Common Terminology covers:

- **Organizational Functions**: Major functions and units are named and defined using standardized terms
- **Resource Descriptions**: Resources (personnel, equipment, teams and facilities) have common naming based on their type and capabilities
- **Incident Facilities**: Facilities in an incident area are designated using common terms

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Modular Organization

- Organizational structures for incident management (ICS and EOCs) are modular, meaning that they are each building blocks that are put in place as needed based on an incident's size, complexity and hazards.
- The number of management, supervisory, and support positions expand as needed to meet the needs of the incident.

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Management by Objectives

Management by objectives includes:

- Establishing specific, measurable objectives
- Identifying strategies, tactics, tasks, and activities to achieve the objectives
- Developing and issuing assignments, plans, procedures and protocols to accomplish tasks
- Documenting results against objectives to measure performance, facilitate corrective actions, and inform development of objectives for the next operational period

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Incident Action Planning

Incident Action Plans:

- Record and communicate incident objectives, tactics, and assignments for operations and support
- Are recommended for all incidents
- Are not always written, but a written IAP is increasingly important when an incident or activation:
  - Is likely to extend beyond one operational period
  - Becomes more complex
  - Involves multiple jurisdictions or agencies

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Manageable Span of Control

- Span of control refers to the number of subordinates that directly report to a supervisor.
- The optimal span of control for incident management is one supervisor to five subordinates; however, the 1:5 ratio is only a guideline and effective incident management often calls for different ratios.

What could necessitate a change in span of control?

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Incident Facilities and Locations

Typical designated facilities include:

- Incident Command Post (ICP)
- Incident base
- Staging Areas
- Camps
- Mass casualty triage areas
- Points-of-distribution
- Emergency shelters

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Comprehensive Resource Management

- Maintaining accurate and up-to-date resource inventories and resource tracking are essential components of incident management.
- Resources include personnel, equipment, teams, supplies, and facilities available or potentially available for assignment or allocation.

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Integrated Communications

Integrated communications allow units from diverse agencies to connect, share information and achieve situational awareness.

What can help facilitate communications between agencies?

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Establishment and Transfer of Command

When an incident is anticipated or occurs the organization with primary responsibility for the incident establishes command by designating the Incident Commander (IC) or Unified Command (UC).

Why might there need to be a transfer of command?

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Unified Command

In some incidents the Incident Command function is performed by a Unified Command (UC).

UC is typically used for incidents involving:

- Multiple jurisdictions
- A single jurisdiction with multiagency involvement
- Multiple jurisdictions with multiagency involvement

UC allows agencies with different authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability.

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Chain of Command and Unity of Command

Chain of command refers to the orderly command hierarchy within an incident management Organization.

Unity of command means that each individual reports to only one designated supervisor.

These principles:

- Clarify reporting relationships
- Eliminate confusion caused by conflicting instructions
- Enable incident managers at all levels to direct the actions of all personnel under their supervision

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Accountability

Accountability for all resources during an incident is essential. Incident management personnel should adhere to principles of accountability, including:

- Check-in/checkout
- Incident action planning
- Unity of command
- Personal responsibility
- Span of control
- Resource tracking

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Dispatch/Deployment

- Resources should deploy only when requested and dispatched through established procedures by appropriate authorities.
- Resources that authorities do not request should not deploy spontaneously - unrequested resources can overburden the IC/UC and increase accountability challenges.

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Information and Intelligence Management

Incident-related information and intelligence is managed by the incident management organization through established processes for:

- Gathering
- Analyzing
- Assessing
- Sharing
- Managing

How do you gather and share information during an incident?

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NIMS Management Characteristics

Lesson 3 Summary

This lesson presented an overview of the fourteen NIMS Management Characteristics

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Incident Command System (ICS)

Lesson 4 Objectives:

- Describe the Incident Command System (ICS) Organizational Structure

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NIMS Major Components Review

1. Resource Management
2. Command and Coordination
3. Communications and Information Management

Together these NIMS components provide a framework for effective management during incident response.

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Understanding Command & Coordination

Command

The act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.

Coordination

The process of providing support to the command structure, and may include incident prioritization, critical resource allocation, communications systems integration, and information exchange.

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NIMS Command and Coordination

The four NIMS Structure are:

- The Incident Command System (ICS)
- Emergency Operations Centers (EOCs)
- Multi-Agency Coordination Group (MACs)
- The Joint Information System (JIS)

These four elements comprise the NIMS Command and Coordination structures.

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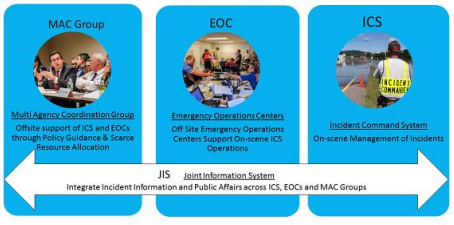
NIMS Command and Coordination Structures



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ICS Overview

The Incident Command System (ICS) provides:

- A standardized approach to the command, control, and coordination of on-scene emergency management
- A common structure within which personnel from different organizations can work together
- A structure for incident management that integrates and coordinates procedures, personnel, equipment, facilities, and communications
- ICS is used by all levels of government and many NGOs and private sector organizations.

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Incident Command Concept

The ICS term Incident Command refers to the person or group responsible for overall on-scene management of an incident.

There are two general forms of the incident command function:

- A single Incident Commander
- A Unified Command

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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.

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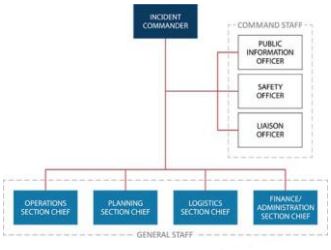
Incident Command Concept

Command and General Staff support the incident command in management of the incident.



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Unified Command

As a team effort, Unified Command allows all agencies with jurisdictional authority or functional responsibility for an incident to jointly provide management direction to the incident.

In Unified Command, no agency's legal authorities will be compromised or neglected.

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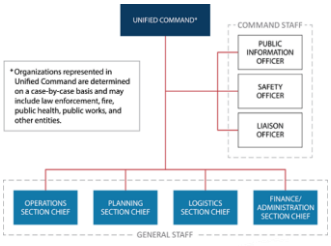
Unified Command Concept

Command and General Staff support the unified command in management of the incident.



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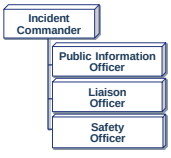
Command Staff

It may be necessary for the Incident Commander to designate a Command Staff that:

- Provides information, liaison, and safety services for the entire organization.
- Reports directly to the Incident Commander.



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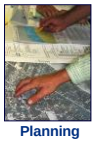
General Staff

Incident Command

Operations


Planning

Logistics

Finance/Admin

- **Intelligence/Investigations may be added as a function, if required, to meet incident management needs.**
- **An Environmental Unit may also be added to the Planning Section to coordinate and manage large volumes of environmental sampling/analytical data from multiple sources.**

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Area Command

- Provide agency or jurisdictional authority for assigned incidents.
- Ensure a clear understanding of agency expectations, intentions, and constraints.
- Establish critical resource use priorities between various incidents.
- Ensure that Incident Management Team personnel assignments and organizations are appropriate.
- Maintain contact with officials in charge, and other agencies and groups.
- Coordinate the demobilization or reassignment of resources between assigned incidents.

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Incident Management Assistance Teams

- Some IMTs are referred to as Incident Management Assistance Teams (IMAT) to clarify that they **support** on-scene personnel and/or the affected jurisdiction(s).
- IMATs ensure that federal activities align with local priorities through participation in Unified Command or a Unified Coordination Group with representatives from local, state, and/or tribal government.
- IMATs exist at various levels of government and within the private sector.
- Regardless of who owns particular IMATs or their specific missions, IMATs operate using the principles and practices of ICS.

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Incident Command System (ICS)

Lesson 4 Summary

The lesson specifically discussed:

- Incident Command
- Command Staff
- General Staff
- Incident Management Teams
- Incident Management Assistance Teams
- Area Command

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Emergency Operations Centers

Lesson 5 Objectives:

At the end of this lesson, you will be able to describe basic:

- Emergency Operations Center (EOC) Functions
- EOC Staff Organization Models
- EOC Activation Levels

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EOC Overview (1 of 2)

- Emergency Operations Centers are one of four NIMS Command and Coordination structures.
- ICS is used to manage on-scene, tactical-level response; EOCs are off site locations where staff from multiple agencies come together to:
  - Address imminent threats and hazards
  - Provide coordinated support to incident command, on-scene personnel and/or other EOCs

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EOC Overview (2 of 2)

EOCs generally perform the following primary functions:

- Collecting, analyzing and sharing information
- Supporting resource needs and requests, including allocation and tracking
- Coordinating plans and determining current and future needs

EOCs can be fixed locations, temporary facilities or virtual structures with staff participating remotely.

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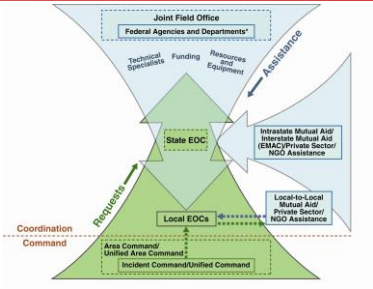
Flow of Requests and Assistance



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EOC Configuration (1 of 2)

EOC teams vary widely. Organization of the EOC staff can vary based on:

- Jurisdictional/organizational authorities
- Staffing
- Partner and stakeholder agencies represented
- EOC facilities
- EOC communications capabilities
- Political considerations
- The mission

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EOC Configuration (2 of 2)

NIMS identifies three common ways of organizing EOC Teams:

1. ICS or ICS-like structure
2. Incident Support Model structure
3. Departmental structure

Like ICS, EOCs utilize the NIMS management characteristic **modular organization**.

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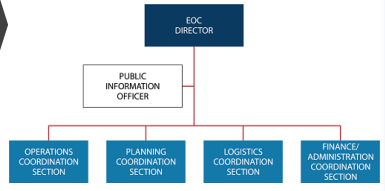
ICS or ICS-like EOC Structure



The structure is familiar and it aligns with the on-scene incident organization.

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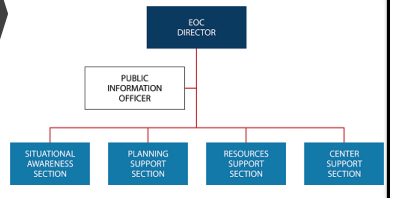
Incident Support Model (ISM) EOC Structure



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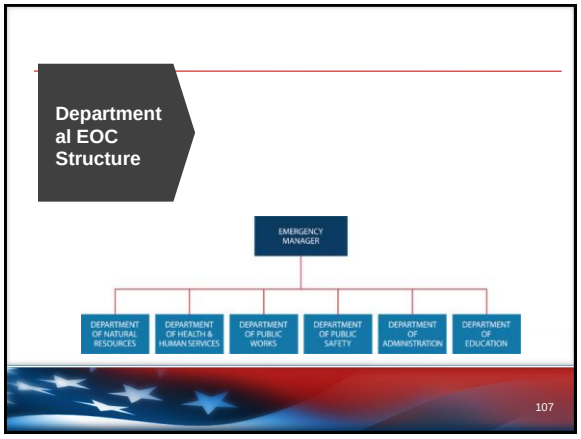

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EOC Activation (1 of 2)

Some circumstances that might trigger center activation include:

- Multiple jurisdictions or agencies involved in an incident.
- The Incident Commander or Unified Command indicates an incident could expand rapidly, involve cascading effects or require additional resources.
- A similar incident in the past led to EOC activation.

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EOC Activation (2 of 2)

- The EOC Director or an appointed or elected official directs EOC activation.
- An incident is imminent such as predicted hurricane, flooding, hazardous weather, or elevated threat levels.
- Threshold events described in an emergency operations plan occur.
- Significant impacts to the population are anticipated.

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EOC Activation Levels

Emergency Operations Centers frequently have multiple activation levels to allow for:
- Response scaled to the incident
- Delivery of the exact resources needed
- A level of coordination appropriate to the incident

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EOC Activation Levels

Activation Level	Description
3 Normal Operations/ Steady State	• Activities that are normal for the EOC when no incident or specific risk or hazard has been identified • Routine watch and warning activities if the EOC normally houses this function
2 Enhanced Steady-State/ Partial Activation	• Certain EOC team members/organizations are activated to monitor a credible threat, risk, or hazard and/or to support the response to a new and potentially evolving incident
1 Full Activation	• EOC team is activated, including personnel from all assisting agencies, to support the response to a major incident or credible threat

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Emergency Operation Centers

Lesson 5 Summary

The lesson specifically discussed:
- EOC Functions
- EOC Staff Organization Models
- EOC Activation Levels

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Other NIMS Structures and Interconnectivity

Lesson 6 Objectives:

At the end of this lesson, you will be able to describe basic:

- Identify the roles and responsibilities of the Multiagency Coordination Group (MAC Group)
- Describe the Joint Information System (JIS)
- Describe Interconnectivity of NIMS Command and Coordination Structures

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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

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MAC Group Definition and Composition (1 of 2)

- Multiagency Coordination Groups (MAC Group) are part of the off-site incident management structure of NIMS.
- MAC Group members are typically agency administrators, executives or their designees from stakeholder agencies or organizations impacted by and with resources committed to the incident.
- MAC Group may also include representatives from non-governmental organizations such as businesses and volunteer organizations.

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MAC Group Definition and Composition (2 of 2)

During incidents, MAC Groups:

- Act as a policy-level body
- Support resource prioritization and allocation
- Make cooperative multi-agency decisions
- Enable decision making among elected and appointed officials and the Incident Commander responsible for managing the incident.

The MAC Group does not perform incident command functions, nor does it replace the primary functions of EOCs or other operations, coordination, or dispatch organizations.

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Elected and Appointed Officials

Elected and appointed officials operate at the policy level of incident management. The MAC Group provides a way for these policy-level officials to work together, enhancing unity of effort at the senior level.

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Joint Information System (JIS)

JIS integrates incident information and public affairs into a unified organization that provides consistent, coordinated, accurate, accessible, timely and complete information to the public and stakeholders during incident operations.

What are some functions of the PIO?

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JIS Description and Components: JIC

- **The JIC** is a central location that houses JIS operations and where public information staff perform essential information and public affairs functions.
- Normally, an incident should have a single JIC, but the JIS is flexible and can accommodate multiple

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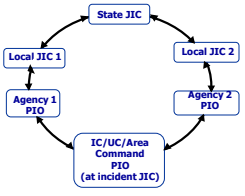
JIC Characteristics

- 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



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Public and Stakeholder Information

Getting information to the public and stakeholders during an incident requires an ongoing information cycle:

- **Gathering** complete information for the public and other stakeholders
- **Verifying** information to ensure accuracy
- **Coordinating** information with other public information personnel who are part of the JIS to ensure consistency
- **Disseminating** consistent, coordinated, accurate, accessible, timely and complete information to the public and stakeholders

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Public Information Communications Planning

The information communications plan can include:

- Draft news releases
- Media lists
- Contact information for elected/appointed officials, community leaders, private sector organizations, and public service organizations

Public information communications plans should be included in training and exercises in order to prepare for actual incidents.

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Interconnectivity of NIMS Command and Coordination Structures (1 of 3)

- NIMS structures enable incident managers to manage incidents in a unified, consistent manner.
- Interconnectivity of NIMS structures is important to allow personnel in diverse geographic areas, with differing roles and responsibilities, and operating within various functions of ICS and/or EOCs to integrate their efforts through common organizational structures, terminology, and processes.

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Interconnectivity of NIMS Command and Coordination Structures (2 of 3)

- When an incident occurs or threatens, local emergency personnel manage response using NIMS principles and **ICS**.
- If the incident is or becomes large or complex, local **EOCs** activate.
- EOCs receive senior level guidance from **MAC Groups**.

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Interconnectivity of NIMS Command and Coordination Structures (3 of 3)

- A Joint Information Center (JIC) manages the Joint Information System **(JIS)** operations to ensure coordinated and accurate public messaging among all levels: ICS, EOC and MAC Group.
- If required resources are not available locally, they can be obtained under **mutual aid agreements** from neighboring jurisdictions, or State, tribal, territorial, and interstate sources and assigned to the control of the Incident Commander or Unified Command.

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Federal Support to Response Activities

The Federal Government only becomes involved with a response:

- When state governors or tribal leaders request Federal assistance and their requests are approved
- When Federal interests are involved
- As statute or regulation authorizes or requires

In most cases the Federal Government plays a supporting role to state, tribal, or territorial governments by providing Federal assistance to the affected jurisdictions.

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Other NIMS Structures and Interconnectivity

Lesson 6 Summary

The lesson specifically discussed:

- Multiagency Coordination Group (MAC Group)
- Joint Information System (JIS)
- Interconnectivity of NIMS Command and Coordination Structures

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Communications and Information Management

Lesson 7 Objectives:

At the end of this lesson, you will be able to:

- Identify the four key principles of communications and information management.
- Describe the communications management practices and considerations.
- Identify how incident information is used.
- Identify the three concepts related to Communications Standards and Formats.

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Communications and Information Management Principles

Four key communications and information systems principles support the ability of incident managers to maintain this constant flow of information during an incident:

- Interoperability
- Reliability, Scalability, and Portability
- Resilience and Redundancy
- Security

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Principle: Interoperability

Interoperable communications systems enable personnel and organizations to communicate:

- Within and across jurisdictions and organizations
- Via voice, data, and video systems
- In real time

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Principle: Reliability, Portability, and Scalability

Communications and information systems should be designed to be:

- **Reliable** - familiar to users, adaptable to new technology and dependable in any situation
- **Portable** - can effectively be transported, deployed, and integrated to enable support of incidents across jurisdictions
- **Scalable** - able to expand to support situations, from small to large scale, and support the rapid increase in the number of system users

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Principle: Resiliency and Redundancy

Resilient and redundant communications ensure the uninterrupted flow of information.

- **Resiliency** - systems can withstand and continue to perform after damage or loss of infrastructure
- **Redundancy** - when primary communication methods fail, duplicate systems enable continuity through alternate communication methods

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Principle: Security

Because some incident information is sensitive, voice, data, networks, and systems should be secure to the appropriate level to control access to sensitive or restricted information.

In addition, incident communications and information sharing should comply with data protection and privacy laws.

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Communications Management Characteristics

- Incident management personnel must manage incident communications and information effectively using a variety of communications methods.
- Management procedures should change to use new technologies and improved methods of exchanging information.

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Standardized Communications Types

- Strategic Communications
- Tactical Communications
- Support Communications
- Public Communications

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Communications and Information Management: Policy and Planning

Communications planning determines:

- What communications systems and platforms are used
- Who can use the communications systems
- What information is essential
- What the technical requirements are for communications equipment and systems

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Communications and Information Management: Agreements

Agreements should be in place between all parties in a jurisdiction's emergency operations plan to ensure that the communications elements within plans and procedures are in effect at the time of an incident. Agreements typically specify:

- Communication systems and platforms that the parties will use to share information
- Connection of networks, data format standards, and cybersecurity agreements.

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Communications and Information Management: Equipment Standards

When developing communications systems, personnel should consider:

- The range of conditions under which personnel will use the systems.
- The range of potential system users.
- The current nationally recognized communications standards.
- The need for durable equipment.

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Communications and Information Management: Communication Standards

During an incident, all incident personnel are linked by common communications standards and formats:

- Common Terminology, Plain Language and Compatibility
- Technology Use and Procedures
- Information Security/Operational Security

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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
- Employ interoperable communication systems and equipment

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Tabletop Exercise Tool for Drinking Water and Wastewater Systems

TTX Tool contains 12 all-hazards scenarios with:

- Fully-customizable situation manuals and after action reports
- Discussion questions
- PowerPoint presentations

The tool is available at:
https://www.epa.gov/waterresiliencetraining/develop-and-conduct-water-resilience-tabletop-exercise-water-utilities

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Communications and Information Management: Information Sharing

Information is used for many functions within ICS, EOCs, MAC Groups, and JIS, including:

- Aiding in planning
- Communicating with the public, including emergency protective measures
- Determining incident cost
- Assessing the need for additional involvement of non-governmental organizations or private sector resources
- Identifying safety issues
- Resolving information requests

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Communications and Information Management

Lesson 7 Summary

Lesson 7 specifically discussed:

- Key Principles of Communications and Information Management
- Communications and Information Management Characteristics
- Elements of Incident Information
- Communication Standards and Format

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Course Summary and Exam

Lesson 8 Review

Congratulations! You should now be able to demonstrate a basic understanding of NIMS concepts, principles, and components.

- NIMS Overview
- Fundamentals and Concepts of NIMS
- NIMS Resource Management
- NIMS Management Characteristics
- Incident Command System (ICS)
- Emergency Operations Centers (EOC)
- Other NIMS Structures and Interconnectivity
- Communications and Information Management

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Additional Resources

For more information on NIMS:
https://www.fema.gov/national-incident-management-system
To contact the NIC:
202-646-3850
NIMS-Integration-Center@dhs.gov
Additional FEMA online courses:
https://training.fema.gov/nims/

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FEMA Student Identification (SID) Number

How do I obtain my FEMA Student Identification (SID) number?

Step 1: To register, go to https://cdp.dhs.gov/femasid
Step 2: Click on the "Register for a FEMA SID" box.
Step 3: Follow the instructions and provide the necessary information to create your account.
Step 4: You will receive an email with your SID number.
(You should save this number in a secure location.)

When you begin the exam process you will be asked to enter your SID.

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On-Line Exam Instructions

1. **Paste the below link into your web browser: https://training.fema.gov/is/courseoverview.aspx?code=IS-700.b**
2. **On right hand side, click on "Take Final Exam Online".**
3. **Fill in the appropriate letters for each corresponding exam question number based on your hard copy test. Remember that test questions and answer may be scrambled online.**
4. **Click "Continue" at the end of the exam webpage and complete your student information (e.g., SID).**
5. **Click "Send".**

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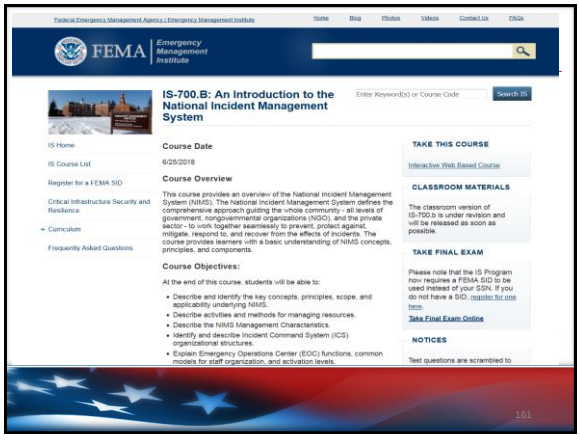

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