

INTRODUCTION TO ICS

INTRODUCTION TO THE INCIDENT COMMAND SYSTEM

PURPOSE AND SCOPE

This section will introduce you to and define ICS. The section will provide you with a brief history of ICS and its evolution into an effective system for emergency management. This section will also introduce the ICS organization and describe each ICS function and its responsibilities during an incident. This section will include the key concepts and principles of ICS and introduce important terms that you will need to know to function in an ICS structure. Because many of the terms, concepts, and principles presented in this section will be new to you, be sure to spend enough time on them to ensure that you thoroughly understand the material.

WHAT IS ICS?

ICS is the model tool for *command*, *control*, and *coordination* of a response and provides a means to coordinate the efforts of individual agencies as they work toward the common goal of stabilizing the incident and protecting life, property, and the environment. ICS uses principles that have been proven to improve efficiency and effectiveness in a business setting and applies the principles to emergency response. Why do you need to know about ICS? We live in a complex world in which responding to emergencies, from single-car accidents to large-scale disasters, often requires cooperation among several agencies. In an emergency, you and other personnel from your agency may be called upon to help with the response. Given the current movement toward using an ICS structure for emergency response, it is likely, therefore, that you will function in an ICS environment. In an emergency, you may not be working for your day-to-day supervisor, or you may be working in a different location. Thus, emergency response operations are *not* “business as usual.”

This section will provide you with information that you will need to work in an ICS environment, including the rationale for using ICS and how ICS can be used to manage all types of incidents. It also will describe the basic ICS organization, how ICS can form the basis for an effective emergency management system, and how ICS can enhance EOC operations.

When Is ICS Used?

ICS has been proven effective for responding to all types of incidents, including:

- ◆ Hazardous materials (HazMat) incidents.
- ◆ Planned events (e.g., celebrations, parades, concerts, official visits, etc.)
- ◆ Response to natural hazards
- ◆ Single and multi-agency law enforcement incidents
- ◆ Lack of comprehensive *resource management strategy*
- ◆ Fires
- ◆ Incidents involving multiple casualties
- ◆ Multi-jurisdictional and multi-agency incidents
- ◆ Air, rail, water, or ground transportation accidents
- ◆ Wide-area search and rescue missions
- ◆ Pest eradication programs
- ◆ Private sector emergency management programs

Federal law requires the use of ICS for response to HazMat incidents. Many States are adopting ICS as their standard for responding to all types of incidents. ICS has been endorsed by the American Public Works Association and the International Association of Chiefs of Police and has been adopted by the National Fire Academy as its standard for incident response. ICS is included in the National Fire Protection Association (NFPA) “Recommended Practice for Disaster Management” (NFPA1600). ICS is also part of the National Interagency Incident Management System (NIIMS).

ICS History

ICS was developed in the 1970s in response to a series of major wild-land fires in southern California. At that time, municipal, county, State, and Federal fire authorities collaborated to form the Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE). FIRESCOPE identified several recurring problems involving multi-agency responses, such as:

- ◆ *Nonstandard terminology* among responding agencies
- ◆ Lack of capability to *expand and contract* as required by the situation
- ◆ *Nonstandard and nonintegrated communications*
- ◆ Lack of *consolidated action plans*
- ◆ Lack of *designated facilities*.

Efforts to address these difficulties resulted in the development of the original ICS model for effective incident management. Although originally developed in response to wildfires, ICS has evolved into an all-risk system that is appropriate for all types of fire and non-fire emergencies. Much of the success of ICS has resulted directly from applying:

- ◆ A common organizational structure
- ◆ Key management principles in a standardized way

ICS ORGANIZATION

Many incidents, whether major accidents (such as HazMat spills), minor incidents (such as house fires and utility outages), or emergencies and major disasters (such as tornadoes, hurricanes, and earthquakes), require a response from a number of different agencies. Regardless of the size of the incident or the number of agencies involved in the response, all incidents require a coordinated effort to ensure an effective response and the efficient, safe use of resources.

To understand this concept better, review the examples of incidents that are listed and record the agencies that probably would be involved in each incident and the resources that each agency would offer.

Example 1: A multi-car traffic accident has occurred, in which two people have been injured. There is potential damage to a bridge abutment.

Potential Response Agencies:

Potential Resources:

Example 2: A water main break has disrupted all major utilities. The break has caused local flooding of a major road and several local businesses.

Potential Response Agencies:

Potential Resources:

Example 3: High winds from a coastal storm have caused widespread loss of electricity and have left debris cluttering most of the roads in a 50 square-mile area. Several electric wires have been knocked down and are lying across the roadway. Damage is so widespread that the electric company expects that it will take several days to repair the damage. The wind chill for the area is expected to be below zero degrees during that timeframe.

Potential Response Agencies:

Potential Resources:

Example 1: A multi-car traffic accident has occurred, in which two people have been injured. There is potential damage to a bridge abutment.

Potential Response Agencies:

Law Enforcement

EMS Paramedics

Public Works/Highway Dept.

Fire Department

Potential Resources:

Police officers, Communications equipment Flares, blockades, etc.

Ambulance(s), Emergency medical equipment
Communications equipment

Structural engineer(s), HazMat cleanup equipment, Road signs, blockades, etc.

Firefighters, Fire apparatus, Communications equipment

Example 2: A water main break has disrupted all major utilities. The break has caused local flooding of a major road and several local businesses.

Potential Response Agencies:

Law Enforcement

Fire Firefighters

Public Works/Highway Dept.

Utility Companies

Emergency Management EOC

Potential Resources:

Police officers, Communications equipment

Fire Apparatus, Communications equipment

Repair equipment, Flares, blockades, etc, Trucks, Repair personnel

Repair personnel, Trucks, Repair equipment, Natural gas detection equipment

Communications equipment

Example 3: High winds from a coastal storm have caused widespread loss of electricity and have left debris cluttering most of the roads in a 50 square-mile area. Several electric wires have been knocked down and are lying across the roadway. Damage is so widespread that the electric company expects that it will take several days to repair the damage. The wind chill for the area is expected to be below zero degrees during that timeframe.

Potential Response Agencies:

Emergency Management EOC

Law Enforcement

Fire Firefighters

Electric Company

Public Works/Highway Dept.

The American Red Cross

Potential Resources:

Communications equipment

Police officers, Communications equipment
Flares, blockades, etc.

Fire apparatus, Communications equipment

Repair personnel, Repair equipment, Trucks

Repair personnel, Road signs, blockades, etc.

Shelter facilities, Shelter personnel, Feeding stations

NOTE: This incident may be large enough to require activation of the EOC. Other agencies (Department of Transportation (DOT), schools, and National Guard) also may respond in these examples. The agencies and equipment in this example are for illustration only.

As you can see from reviewing the examples, no single agency or department can handle an emergency situation of any scale alone. Everyone must work together to manage the emergency. To coordinate the effective use of all of the available resources, agencies need a formalized management structure that lends consistency, fosters efficiency, and provides direction during a response.

The ICS organization is built around five major components:

- ◆ Command
- ◆ Planning
- ◆ Operations
- ◆ Logistics
- ◆ Finance/Administration

These five major components are the foundation upon which the ICS organization develops. They apply during a routine emergency, when preparing for a major event, or when managing a response to a major disaster. In small-scale incidents, all of the components may be managed by one person, the *Incident Commander*. Large-scale incidents usually require that each component, or *section*, is set up separately. As you will see later, each of the primary ICS sections may be divided into smaller functions as needed.

The ICS organization has the capability to expand or contract to meet the needs of the incident, but **all incidents, regardless of size or complexity, will have an Incident Commander**. A basic ICS operating guideline is that the Incident Commander is responsible for on-scene management until command authority is transferred to another person, who then becomes the Incident Commander.

Each of the major components of the ICS organization is described in the sections that follow.

The Command Function

The command function is directed by the Incident Commander, who is the person in charge at the incident, and who must be fully qualified to manage the response. Major responsibilities for the Incident Commander include:

- ◆ Performing command activities, such as establishing command and establishing the ICP
- ◆ Protecting life and property
- ◆ Controlling personnel and equipment re-sources
- ◆ Maintaining accountability for responder and public safety, as well as for task accomplishment
- ◆ Establishing and maintaining an effective liaison with outside agencies and organizations, including the EOC, when it is activated.

Incident management encompasses:

- ◆ Establishing command
- ◆ Ensuring responder safety
- ◆ Assessing incident priorities
- ◆ Determining operational objectives
- ◆ Developing and implementing the Incident Action Plan (IAP)
- ◆ Developing an appropriate organizational structure
- ◆ Maintaining a manageable span of control
- ◆ Managing incident resources
- ◆ Coordinating overall emergency activities
- ◆ Coordinating the activities of outside agencies
- ◆ Authorizing the release of information to the media
- ◆ Keeping track of costs

An effective Incident Commander must be assertive, decisive, objective, calm, and a quick thinker. To handle all of the responsibilities of this role, the Incident Commander also needs to be adaptable, flexible, and realistic about his or her limitations. The Incident Commander also needs to have the capability to delegate positions appropriately as needed for an incident. **Initially, the Incident Commander will be the senior first-responder to arrive at the scene.** As additional responders arrive, command will transfer on the basis of who has primary authority for overall control of the incident. As incidents grow in size or become more complex, the responsible jurisdiction or agency may assign a more highly qualified Incident Commander. At transfer of command, the outgoing Incident Commander must give the incoming Incident Commander a full briefing and notify all staff of the change in command.

As incidents grow, the Incident Commander may delegate authority for performing certain activities to others, as required. When expansion is required, the Incident Commander will establish the other *Command Staff* positions.

- ◆ The *Information Officer* handles all media inquiries and coordinates the release of information to the media with the Public Affairs Officer at the EOC.
- ◆ The *Safety Officer* monitors safety conditions and develops measures for ensuring the safety of all assigned personnel.
- ◆ The *Liaison Officer* is the on-scene contact for other agencies assigned to the incident.

The Incident Commander will base the decision to expand (or contract) the ICS organization on three major incident priorities:

- ◆ **Life safety.** The Incident Commander's first priority is *always* the life safety of the emergency responders and the public.
- ◆ **Incident stability.** The Incident Commander is responsible for determining the strategy that will:
 - Minimize the effect that the incident may have on the surrounding area
 - Maximize the response effort while using resources efficiently.

The size and complexity of the command system that the Incident Commander develops should be in keeping with the *complexity* (i.e., level of difficulty in the response) of the incident, not the size (which is based on geo-graphic area or number of resources).

Property conservation. The Incident Commander is responsible for minimizing damage to property while achieving the incident objectives. As incidents become more involved, the Incident Commander can activate additional *General Staff* sections (that is, Planning, Operations, Logistics, and/or Finance/Administration), as necessary. Each Section Chief, in turn, has the authority to expand internally to meet the needs of the situation.

The Planning Section

In smaller events, the Incident Commander is responsible for planning, but when the incident is of larger scale, the Incident Commander establishes the *Planning Section*. The Planning Section's function includes the collection, evaluation, dissemination, and use of information about the development of the incident and status of re-sources. This section's responsibilities can also include creation of the Incident Action Plan (IAP), which defines the response activities and resource utilization for a specified time period. (IAPs will be described in more detail later in this course.)

The Operations Section

The *Operations Section* is responsible for carrying out the response activities described in the IAP. The Operations Section Chief coordinates Operations Section activities and has primary responsibility for receiving and implementing the IAP. The Operations Section Chief reports to the Incident Commander and determines the required resources and organizational structure within the Operations Section.

The Operations Section Chief's main responsibilities are to:

- ◆ Direct and coordinate all operations, ensuring the safety of Operations Section personnel
- ◆ Assist the Incident Commander in developing response goals and objectives for the incident
- ◆ Implement the IAP
- ◆ Request (or release) resources through the Incident Commander
- ◆ Keep the Incident Commander informed of situation and resource status within operations.

The Logistics Section

The *Logistics Section* is responsible for providing facilities, services, and materials, including personnel to operate the requested equipment for the incident. This section takes on great significance in long-term or extended operations. It is important to note that the Logistics Section functions are geared to support the incident responders. For example, the Medical Unit in the Logistics Section provides care for the incident responders not civilian victims.

The Finance/Administration Section

Though sometimes overlooked, the *Finance/Administration Section* is critical for tracking incident costs and reimbursement accounting. Unless costs and financial operations are carefully recorded and justified, reimbursement of costs is difficult, if not impossible. The Finance/Administration Section is especially important when the incident is of a magnitude that may result in a Presidential Declaration. Each of these functional areas can be expanded into additional organizational units with further delegation of authority. They also may be contracted as the incident deescalates.

ICS CONCEPTS AND PRINCIPLES

The adaptable ICS structure is composed of major components to ensure quick and effective resource commitment and to minimize disruption to the normal operating policies and procedures of responding organizations. Remember that ICS concepts and principles have been tested and proven over time in business and industry and by response agencies at all governmental levels.

ICS training is required to ensure that all who may become involved in an incident are familiar with ICS principles. In this section you will find how the application of these concepts and principles makes ICS work.

An ICS structure should include:

- ◆ Common terminology
- ◆ A modular organization
- ◆ Integrated communications
- ◆ Unity of command
- ◆ A unified command structure
- ◆ Consolidated IAPs
- ◆ A manageable span of control
- ◆ Designated incident facilities
- ◆ Comprehensive resource management

Common terminology is essential in any emergency management system, especially when diverse or other than first-response agencies are involved in the response. When agencies have slightly different meanings for terms, confusion and inefficiency can result. Do you know what a Staging Area is? Will all responders understand what a Staging Area is? In ICS, major organizational functions, facilities, and units are pre-designated and given titles. ICS terminology is standard and consistent among all of the agencies involved.

To prevent confusion when multiple incidents occur at the same time within the same jurisdiction, or when the same radio frequency must be used for multiple incidents, the Incident Commander will specifically name his or her incident. For example, an incident that occurs at 14th and Flower might be called "Flower Street Command." One that occurs at 14th and Penn could be called "Penn Street Command."

Other guidelines for establishing common terminology include:

- ◆ Response personnel should use common names for all personnel and equipment re-sources, as well as for all facilities in and around the incident area
- ◆ Radio transmissions should use clear text (that is, plain English, without "ten" codes or agency-specific codes)

All common terminology applies to all organizational elements, position titles, and resources. A *modular organization* develops from the top-down organizational structure at any incident. "Top-down" means that, at the very least, the Command function is established by the first-arriving officer who becomes the Incident Commander. As the incident warrants, the

Incident Commander activates other functional areas (i.e., sections). In approximately 95 percent of all incidents, the organizational structure for operations consists of command and single resources (e.g., one fire truck, an ambulance, or a tow truck). If needed, however, the ICS structure can consist of several layers. In this unit, we have described the two top layers: Command and General Staff. Other layers may be activated as warranted.

Integrated communications is a system that uses a common communications plan, standard operating procedures, clear text, common frequencies, and common terminology. Several communication networks may be established, depending on the size and complexity of the incident.

Unity of command is the concept by which each person within an organization reports to only one designated person. A *unified command* allows all agencies with responsibility for the incident, either geographic or functional, to manage an incident by establishing a common set of incident objectives and strategies. Unified command does *not* mean losing or giving up agency authority, responsibility, or accountability.

The concept of unified command means that all involved agencies contribute to the command process by:

- ◆ Determining overall objectives
- ◆ Planning jointly for operational activities while conducting integrated operations
- ◆ Maximizing the use of all assigned resources
- ◆ Under unified command, the following always apply:
 - The incident functions under a single, coordinated IAP
 - One Operations Section Chief has responsibility for implementing the IAP
 - One ICP is established.

Consolidated IAPs describe response goals, operational objectives, and support activities. The decision to have a written IAP is made by the Incident Commander.

ICS requires written plans whenever:

- ◆ Resources from multiple agencies are used
- ◆ Several jurisdictions are involved
- ◆ The incident is complex (e.g., changes in shifts of personnel or equipment are required)

IAPs should cover all objectives and support activities that are needed during the entire operational period. A written plan is preferable to an oral plan because it clearly demonstrates responsibility, helps protect the community from liability suits, and provides documentation when requesting State and Federal assistance. IAPs that include the measurable goals and objectives to be achieved are always prepared around a timeframe called an *operational period*.

Operational periods can be of various lengths, but should be no longer than 24 hours. Twelve-hour operational periods are common for large-scale incidents. The Incident Commander determines the length of the operational period based on the complexity and size of the incident.

A *manageable span of control* is defined as the number of individuals one supervisor can manage effectively. **In ICS, the span of control for any supervisor falls within a range of three to seven resources, with five being the optimum.** If those numbers increase or decrease, the Incident Commander should reexamine the organizational structure.

Designated incident facilities include:

- ◆ An *Incident Command Post* at which the Incident Commander, the Command Staff, and the General Staff oversee all incident operations
- ◆ *Staging Areas* at which resources are kept while awaiting incident assignment

Other incident facilities may be designated for incidents that are geographically dispersed, require large numbers of resources, or require highly specialized resources.

Comprehensive resource management:

- ◆ Maximizes resource use
- ◆ Consolidates control of single resources
- ◆ Reduces the communications load
- ◆ Provides accountability
- ◆ Reduces freelancing
- ◆ Ensures personnel safety
- ◆ All resources are assigned to a status condition
- ◆ *Assigned* resources are performing active functions
- ◆ *Available* resources are ready for assignment
- ◆ *Out-of-service* resources are not ready for assigned or available status

Any changes in resource location and status must be reported promptly to the Resource Unit by the person making the change. Personnel accountability is provided throughout all of ICS. All personnel must check in as soon as they arrive at an incident. Resource units, assignment lists, and unit logs are all ways for personnel to be accounted for. When personnel are no longer required for the response, they must check out so that they can be removed from the resource lists.

The ICS principles can and should be used for all types of incidents, both small and large from a warrant execution to a hostage situation or a search for a missing child. Because ICS can be used at virtually any type of incident of any size, it is important that all responders use the ICS approach.

ICS AND THE EMERGENCY OPERATIONS CENTER

Most jurisdictions maintain an EOC as part of their community's emergency preparedness program. An EOC is where department heads, government officers and officials, and volunteer agencies gather to coordinate their response to an emergency event.

The proper interface between the EOC and the on-scene management should be worked out in advance, if possible. In the following scenario, you will see how having people work together during an emergency saves time and lives.

Scenario: A train derailment has caused a hazardous materials spill along a railroad track in a community of 10,000. Fire, law enforcement, and public works authorities have responded to the incident. An ICS Incident Command Post is established with the fire Battalion Chief as Incident Commander.

As the situation deteriorates, the Incident Commander orders a limited evacuation of 150 people in the immediate area, which is within the Incident Commander's statutory authority. Recognizing the threat of an explosion, the Incident Commander wants a larger area cleared as a precautionary measure and transmits this concern to the Fire Chief at the main station. The Fire Chief asks the Mayor to issue an evacuation order for over half the city. The Mayor does so under the State statutes and directs that the EOC be activated.

The Incident Commander is in overall command of the incident scene, with the committed resources under his command and direction. The large-scale evacuation, which is beyond the capabilities of the ICS ICP to manage effectively, will be managed by the EOC.

The EOC manages the community-wide resources necessary to complete the evacuation. The EOC requests resources through mutual aid and establishes traffic control points at key evacuation junctions. The EOC establishes shelters with the cooperation of the city's social services agency and the American Red Cross. The EOC transmits regular public service messages with evacuation directions over the Emergency Alert System (EAS). Meanwhile, the ICS Information Officer briefs reporters at the scene of the emergency on the current events surrounding the incident. After a period of time, the Incident Commander sends a request to the EOC for personnel to relieve incident scene teams. The EOC locates the resources, directs them to staging areas established by the ICS operation, and releases them to the Incident Commander's control. Meanwhile, the EOC requires status updates from the Incident Commander to determine how long the shelters must remain open. The EOC determines resource distribution of food and sanitation facilities among the shelters operating under the ICS network.

As you can see from the scenario, the Incident Command structure and the EOC function together with the same goals, but function at different levels of responsibility. The Incident Command operation is responsible for on-scene response activities, and the EOC is responsible for the entire community-wide response to the event. (Note that the EOC also can function under an ICS structure.)

If the EOC does operate under the ICS structure, it must be careful not to confuse personnel at the EOC with the same personnel on site. As you can see, ICS is a management system that works both for the responding agencies and for the community.

SUMMARY

This section has covered the main components of an ICS structure:

- ◆ Command
- ◆ Planning
- ◆ Operations
- ◆ Logistics
- ◆ Finance/Administration
- ◆

The *Incident Commander* has overall control over the incident. In a small incident, he or she may assume the responsibilities of all components. In larger or more complex incidents, the Incident Commander may assign other members of the *Command Staff*, including an *Information Officer*, a *Safety Officer*, and/or a *Liaison Officer*. The Incident Commander also may assign *General Staff*, who serve as *Section Chiefs* for the Planning, Operations, Logistics, and Finance/Administration Sections. The Section Chiefs have the authority to expand or contract their operations as the demands of the incident increase or decrease.

ICS operates according to basic principles to ensure quick and effective resource commitment and to minimize disruption of usual operating policies and procedures of responding organizations.

These principles include:

- ◆ *Common terminology*, which ensures that all responders use terms that are standard and consistent
- ◆ *A modular organization*, which enables the ICS structure to expand or contract to meet the needs of the incident
- ◆ *Integrated communications*, which establishes a common communications plan, standard operating procedures, clear text, common frequencies, and common terminology
- ◆ *Unity of command*, where each person within an organization reports to only one designated person
- ◆ *A unified command structure*, which allows all agencies with responsibility for the incident, either geographic or functional, to manage an incident by establishing a common set of incident objectives and strategies
- ◆ *Consolidated IAPs*, which describe response goals, operational objectives, and support activities
- ◆ *A manageable span of control*, which limits the number of resources that any supervisor may control to between three and seven, with five being optimal
- ◆ *Designated incident facilities*, which include an ICP and may include Staging Areas
- ◆ Other incident facilities may be designated depending on the requirements of the incident
- ◆ *Comprehensive resource management*, which maximizes resource use, consolidates control of single resources, reduces the communications load, provides accountability, reduces freelancing, and ensures personnel safety.

These principles should be used for all types of incidents, both small and large. At larger or more complex incidents, the ICS structure in the field will work with personnel in the EOC (which also may be organized under ICS principles). The Incident Command and the EOC function together and work toward the same goals, but their responsibilities are at different levels. The Incident Command operation is responsible for on-scene response activities, and the EOC is responsible for community-wide resource management.