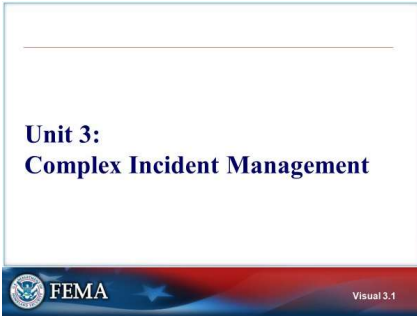

Unit 3: Complex Incident Management

STUDENT MANUAL

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Visual 3.1

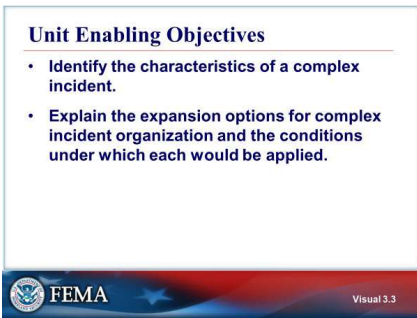
UNIT 3: COMPLEX INCIDENT MANAGEMENT



Visual 3.2

UNIT TERMINAL OBJECTIVE

Apply the appropriate structural option to manage a complex incident.



Visual 3.3

UNIT ENABLING OBJECTIVES

- Identify the characteristics of a complex incident.
- Explain the expansion options for complex incident organization and the conditions under which each would be applied.



Visual 3.4

FACILITATED GROUP ACTIVITY: COMPLEX INCIDENT MANAGEMENT



Visual 3.5

WHAT ARE COMPLEX INCIDENTS?

The term “complex incident” may have different meanings to different agencies depending upon the size of the jurisdiction, number of resources available, and other variables. However, in the context of incident management, complex incidents generally:

- Involve multijurisdictional and/or multidisciplinary efforts of more than one agency and/or political jurisdiction
- May involve whole community efforts to include private industry and non-governmental organizations (NGOs)
- Involve complex incident management and communication issues
- Require experienced, highly qualified supervisory personnel
- Require numerous tactical and support resources normally exceeding the jurisdiction’s internal resource capacity
- Span multiple operational periods (days, weeks, years)

What Are Complex Incidents? (Cont.)

- May involve multiple victims with injuries, fatalities, or illnesses.
- Include widespread damage to property/environment/economy.
- Result in psychological trauma.
- Span multiple operational periods (days, weeks, years).
- Require extensive post-incident recovery efforts. Are costly to control and mitigate.
- Draw national media interest.
- May require coordinated Federal assistance and/or response.

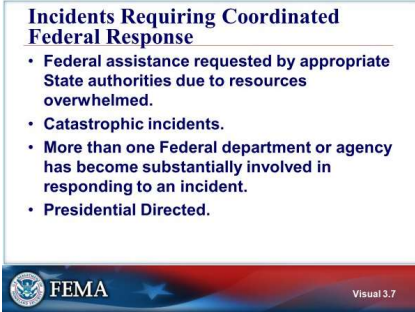


Visual 3.6

WHAT ARE COMPLEX INCIDENTS? (CONT.)

Complex incidents also generally:

- May involve multiple victims with injuries, fatalities, or illnesses
- Include widespread damage to property/environment/economy
- Result in psychological trauma
- Span multiple operational periods (days, weeks, years)
- Require extensive post-incident recovery efforts. Are costly to control and mitigate
- Draw national media interest
- May require coordinated Federal assistance and/or response, including management of donations and activities of nongovernment organizations (NGOs)



Visual 3.7

INCIDENTS REQUIRING COORDINATED FEDERAL RESPONSE

The types of incidents requiring a coordinated Federal response include:

- The resources of State, tribal, and local authorities are overwhelmed (or are expected to be) and Federal assistance has been requested by the appropriate State authorities. Examples include:
 - Major disasters or emergencies as defined under the Stafford Act.
- Catastrophic incidents.
 - A catastrophic incident, as defined by the *National Response Framework (NRF)*, is any natural or manmade incident, including terrorism, that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions. A catastrophic incident could result in sustained nationwide impacts over a prolonged period of time; almost immediately exceeds resources normally available to State, tribal, local, and private-sector authorities in the impacted area; and significantly interrupts governmental operations and emergency services to such an extent that national security could be threatened.
- More than one Federal department or agency has become substantially involved in responding to an incident. Examples include:
 - Credible threats, indications, or warnings of imminent terrorist attack, or acts of terrorism directed domestically against the people, property, environment, or political or legal institutions of the United States or its territories or possessions.
 - Threats or incidents related to high-profile, large-scale events that present high-probability targets such as National Special Security Events (NSSEs) and other special

events as determined by the Secretary of Homeland Security, in coordination with other Federal departments and agencies.

- Public Health emergencies declared under section 319 of the Public Health Service (PHS) Act by the Secretary of the Department of Health and Human Services (HHS) due to a disease or disorder presents a public health emergency; or a public health emergency, including significant outbreaks of infectious disease or bioterrorist attacks.
- A Federal department or agency acting under its own authority has requested the assistance of the Secretary of Homeland Security. An example of this would be the Army Corps of Engineers responding to an infrastructure incident or the US Forestry service responding to a wildland fire.
- Presidential Directed - The President has directed the Secretary of Homeland Security to coordinate the Federal response.



Visual 3.8

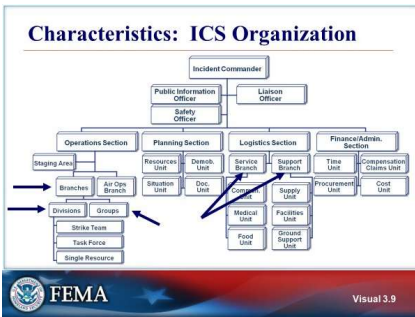
DETERMINING SIZE & STRUCTURE OF THE ICS ORGANIZATION

There are decision making factors that will need to be considered in determining the size of the modular organization structure. The primary factors for determining the size and structure of the ICS organization include:

- Specifics of the incident and identified objectives.
 - The geographical area involved
 - Potential for expansion (time, geographic area, impacted jurisdictions and organizations)
 - The administrative and jurisdictional complexity (multiple jurisdictions or organizations with overlapping or conflicting concerns)
 - Political concerns
 - Public and Media attention
- Number and type of resources that must be managed.
 - Consideration of the span of control
 - Functional specialties required
 - Incident logistical, planning, and other support needs

Some incidents start smaller and become complex incidents – Smaller incidents, such as fires or hazardous materials spills, can become complex as result of wind or surface conditions and also as a result of response time delays, poor initial management, and/or lack of resources or support.

Other incidents start as complex incidents – Earthquakes, hurricanes, floods, major aviation crashes, tanker spills, major hazardous materials situations, simultaneous civil unrest, terrorism, etc., can all produce complex incident management situations.



Visual 3.9

CHARACTERISTICS: ICS ORGANIZATION

In a complex incident, most Command and General Staff positions are filled.

- The Command Staff consists of the Public Information Officer, Safety Officer, and Liaison Officer who report directly to the Incident Commander.
- The General Staff consists of incident management personnel including the Incident Commander, Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance/Administration Section Chief.

In a complex incident-based span of control can be a significant challenge.

The optimal span of control for incident management is one supervisor to five subordinates; however, effective incident management frequently necessitates ratios significantly different from this. The 1:5 ratio is a guideline, and incident personnel use their best judgment to determine the actual distribution of subordinates to supervisors for a given incident.



Visual 3.10


CHARACTERISTICS: LOGISTICS & PLANNING

- Complexity Affects Logistics
 - A large number of tactical and support resources will need to be identified, ordered and acquired, mobilized, tracked, and eventually demobilized.
 - Additional Incident facilities such as multiple staging areas, incident support bases and camps may be required.
 - Some of the resources may be highly specialized and have unique support requirements.
 - Some of these resources will likely not be owned by the affected jurisdiction(s).
- Complexity Affects Planning
 - Plans will have to address multiple operational periods and likely geographically dispersed operations.
 - A Unified Command is likely and will bring multiple different organizations and jurisdictions together in developing the IAP.
 - The use of a more robust planning section (potentially including resources from an Incident Management Team) may be required.
 - Complex incidents require more extensive IAPs.
 - Specialized planning functions may be conducted outside of the planning section. For example, Urban Search and Rescue, Air Operations and Intelligence/ Investigations may produce internal plans for their own operations

ICS Organizational Options

Options for managing a complex incident:

- Combine several incidents into an incident complex.
- Divide an incident into two or more single incidents.
- Expand the planning capability.
- Add a second Operations or Logistics section.
- Establish the Intelligence/Investigations Function.



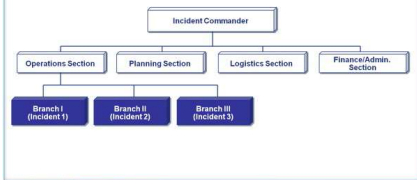

Visual 3.11

ICS ORGANIZATIONAL OPTIONS

While the standard ICS structure is adaptable to meet the needs of most complex incidents, not all situations are alike. Other forms of ICS organization may be needed to meet extraordinary situations.

The management principles that relate to ICS are important. However, it also is important that the system works effectively to meet the needs of the incident. On complex incidents, this may require tailoring the organization to meet the needs of the situation.

Option 1: Combining into an Incident Complex






Visual 3.12

OPTION 1: COMBINING INTO AN INCIDENT COMPLEX

Incident Complex: Definition

An incident complex is an organizational structure that exists when two or more individual incidents located in the same general area are assigned to a single Incident Commander or Unified Command.

Visual 3.13


INCIDENT COMPLEX: DEFINITION

If any of the incidents within an incident complex have the potential to become a large-scale incident, it is best to establish it as a separate incident with its own ICS organization.

Discussion Questions

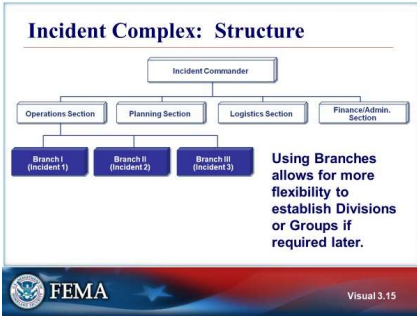
What are examples of when it might be advantageous to establish an Incident Complex?

What is the difference between an Incident Complex and a complex incident?



Visual 3.14

DISCUSSION QUESTIONS



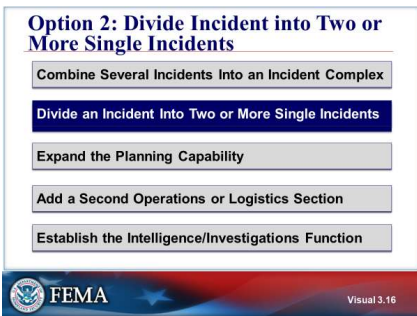
Visual 3.15



INCIDENT COMPLEX: STRUCTURE

- An Incident Complex may be managed under a Unified Command.
- The incident complex is established over several individual incidents and each of the previously identified incidents become branches or divisions within the Operations Section of the incident complex.
- Using Branches allows for more flexibility to establish Divisions or Groups if required later.
- Because Divisions and Groups already may have been established at each of the incidents, the same basic structure can be maintained below the Branch level within the Incident Complex.
- Each branch has the flexibility to establish its own divisions or groups.

Refer to Handout 3-1: Option 1: Establish an Incident Complex by Combining Several Incidents.



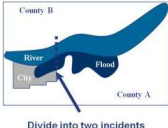
Visual 3.16

OPTION 2: DIVIDE INCIDENT INTO TWO OR MORE SINGLE INCIDENTS

Dividing a Single Incident

A single incident may be divided when it:

- Spreads into other jurisdiction(s) and Unified Command is not feasible.
- Is difficult to manage from one location due to terrain and access.
- Has objectives that are naturally separating into two operations.



Divide into two incidents

FEMA Visual 3.17

Visual 3.17

DIVIDING A SINGLE INCIDENT

Although Unified Command is the first choice, it is not always feasible. A single incident may be divided when it:

- Spreads into other jurisdiction(s) and Unified Command is not feasible. For example, a flooding may be divided by jurisdiction.
- Is difficult to manage from one location due to terrain and access. For example, an incident such as an earthquake, tornadoes, significant flooding, or wildland fire, where terrain and access affect operational or logistical mobility and the ability to manage from one location, may be divided geographically.
- Has objectives that are naturally separating into two functionally separate operations. For example, a bioterrorism incident that includes immediate public health objectives and longer term investigation objectives may be divided into two operations.

Dividing a Single Incident (Cont.)

Incidents may be divided when:

- The Planning Section, even with additional resources, can no longer adequately provide planning services.
- The Logistics Section can no longer, or will soon not be able to, serve the widespread facilities and operations from a single Incident Base.
- The Operations Section cannot manage the number of resources required without exceeding span of control.

FEMA Visual 3.18


Visual 3.18

DIVIDING A SINGLE INCIDENT (CONT.)

Dividing an incident should be considered if two or more Sections are overtaxed due to the size of the incident.

Considerations in Dividing an Incident

1. Determine how best to divide the incident.
2. Assign ICs and C&G Staff for each incident.
3. Designate additional supporting organizational facilities, locations, etc.
4. Designate an appropriate time for establishing two separate incidents (each with a unique name).
5. Coordinate planning strategies and use of critical resources for at least next operational period.
6. Consider the need for Area Command to be established over the incidents.



Visual 3.19




CONSIDERATIONS IN DIVIDING AN INCIDENT

1. Determine how best to divide the incident. This division could be done in several ways, depending upon:
 - Terrain and access considerations
 - Locations of future resource and logistical support
 - Jurisdictional/administrative boundaries
 - Current Operations Section structure (Branches, Divisions, etc.)
2. Assign an Incident Commander and Command and General Staff for each incident.
3. Designate additional supporting organizational facilities, locations, etc.
4. Designate an appropriate time for establishing two separate incidents (each with a unique name).
5. Coordinate planning strategies and use of critical resources between the incidents for at least the next operational period.
6. Consider the need for Area Command to be established over the incidents (covered in the next unit).

Refer to Handout 3-2: Option 2: Divide Incident into Two or More Single Incidents.

Option 3: Expand the Planning Capability

- Combine Several Incidents Into an Incident Complex
- Divide an Incident Into Two or More Single Incidents
- Expand the Planning Capability**
- Add a Second Operations or Logistics Section
- Establish the Intelligence/Investigations Function



Visual 3.20

OPTION 3: EXPAND THE PLANNING CAPABILITY


Expanding the planning capability at an incident take several forms, including:

- Tactical planning within branches
- Separating advanced incident planning from the day-to-day Incident Action Planning Process

Tactical Planning Within Branches

Branch Tactical Planning means:

- Detailed action plans are developed within Operations Section at Branch level.
- Planning Section provides support.
- An element outside of both Planning and Operations has planning responsibilities.



FEMA Visual 3.21

Visual 3.21

TACTICAL PLANNING WITHIN BRANCHES

Branch Tactical Planning normally means that the detailed action plans are developed within the Operations Section at the Branch level, with the Planning Section providing support and coordination.

It can also mean that an element outside of both the Planning and Operations Sections has planning responsibilities. An example of this is when the Intelligence/Investigations function is established as a separate ICS General Staff I/I Section.

Tactical planning at the Branch level may occur when:

- The incident becomes so large that there is no single set of objectives that would logically pertain to the entire incident.
- Special technical expertise is needed for planning.
- Because of the immediacy of the operation, it is not feasible to wait for inclusion in the next IAP timeframe (the planning, approval and execution all occur before the publication of the next IAP).

Branch Planning: Examples



- In mass fatalities incidents, Medical Examiner/Morgue Operations Branch establish incident tactical plans.
- In a structural collapse, the Search and Rescue Branch include planning component.
- Intelligence/Investigations Function develop and implement a plan separate from IAP.

FEMA Visual 3.22

Visual 3.22


BRANCH PLANNING: EXAMPLES

- In a mass fatalities incident, the Medical Examiner/Morgue Operations Branch may be best suited to establish its own incident tactical plans.
- In a structural collapse, the Search and Rescue Branch typically will include its own planning component.
- The Intelligence/Investigations Function is responsible for developing and implementing an intelligence/investigations plan separate from the IAP.

Accomplishing Branch Planning

When Branch Tactical Planning is used, the Planning Section provides:

- General incident objectives.
- Strategy for the Branch for the next operational period.
- Branch resource summary for the next operational period.
- Weather and safety information.
- Changes to logistical support.
- Personnel to support planning.




Visual 3.23

Discussion Questions

Why might you need to separate advanced planning from incident action planning during a complex incident?

What are the challenges you expect to encounter during advanced planning?



Visual 3.24

Separate Advanced Incident Planning

To ensure that advanced planning occurs, the Planning Section Chief may:

- Assign a Deputy Planning Section Chief to manage advanced planning.
- Assign technical specialists to perform advanced planning.
- Establish a special unit within the Planning Section.



Visual 3.25

ACCOMPLISHING BRANCH PLANNING

Both the Planning Section and the Operations Section (and potentially the I/I Section if established) participate in the Branch Tactical Planning.

With this information, individual Branches can perform detailed tactical action planning. The Planning Section must ensure that necessary inter-Branch coordination takes place.

After the general information has been received from the Planning Section, the Branch develops a detailed tactical plan with the information required to complete the ICS Form 215.

DISCUSSION QUESTIONS

Why might you need to separate advanced planning from incident action planning during a complex incident?

What are the challenges you expect to encounter during advanced planning?

SEPARATE ADVANCED INCIDENT PLANNING

Advanced planning can include future planning for things we can anticipate will happen, and contingency planning for things that might happen (what if).

One of the functions of the Planning Section is to assess all available information and to provide periodic predictions on incident potential. The Planning Section is also responsible for developing any contingency plans that may be required.

Advanced Planning Considerations

Advanced planning looks ahead at least 36 to 72 hours for:


- The probable course of the incident.
- Incident overall goal and objectives.
- Adequacy of previous and present plans.
- Future resource requirements and availability.
- Strategy assessment and alternatives.
- Environmental factors.
- Effectiveness of the organizational structure
- Political and economic issues.
- Future demobilization timeline and plan.
- Transition to long-term recovery needs.



Visual 3.26

Option 4: Add a Second Operations or Logistics Section

- Combine Several Incidents Into an Incident Complex
- Divide an Incident Into Two or More Single Incidents
- Expand the Planning Capability
- Add a Second Operations or Logistics Section**
- Establish the Intelligence/Investigations Function



Visual 3.27

ADVANCED PLANNING CONSIDERATIONS

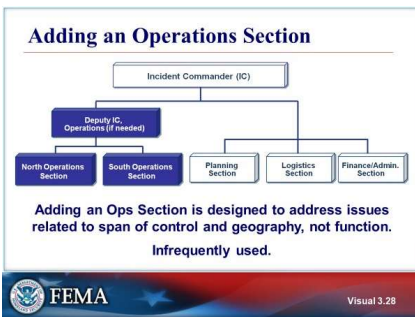
The goal of this advanced planning effort is to provide the Planning Section Chief and the Incident Commander or Unified Command with a range of alternatives related to management of the incident beyond the next operational period.

Advanced planning should project ahead beyond the next operational period. A common practice is to look forward 36 to 72 hours, but the incident may dictate other advanced planning timeframes.

Refer to Handout 3-3: Option 3: Expand the Planning Capability.

OPTION 4: ADD A SECOND OPERATIONS OR LOGISTICS SECTION

While not common, it is possible to establish a second Operations or Logistics Section within a single incident. This situation may arise when the incident is operating under Unified Command; however, Unified Command is not a requirement.



Visual 3.28

ADDING AN OPERATIONS SECTION

This option is infrequently used.

The model shown represents a complex incident in which the sheer volume of resources required means that the Operations Section cannot be further expanded without exceeding ICS span-of-control guidelines and it is not possible to establish separate incidents.

This organizational option is designed to address issues of span of control and geography, not function.


I/I can include its own Investigative Operations Group, which can function somewhat like a second operations section, but it is not a second operations section within this definition because it is functional, not geographic and not normally established due to span of control.

Examples of situations where two Operations Sections may be established:

- Earthquake, hurricane, tornado, or flooding that covers several political jurisdictions
- Major wildland fire that continues to expand
- Major spill in a waterway
- Public health crisis/epidemic
- Domestic terrorist incident

Adding Ops Section: Considerations

- Add a Deputy IC for Operations, if necessary.
- Establish second Ops Section at beginning of operational period.
- Ensure:
 - C & G Staff can support the expansion.
 - Adequate incident action planning.
 - Adequate logistics support.
 - All incident supervisory personnel are aware of the expanded organization.



Visual 3.29

ADDING OPERATIONS SECTION: CONSIDERATIONS

Considerations for adding an Operations Section include:

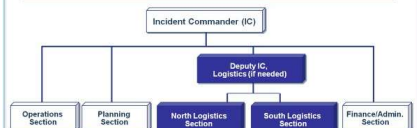
- Add a Deputy Incident Commander for Operations, if necessary.
- Establish the second Operations Section at the beginning of an operational period.
- Ensure that:
 - Command and General Staff can support the expansion (enough personnel to support two separate Operations Sections)
 - You have addressed how the two Operations sections will participate in development of a common Incident Action Plan
 - Adequate logistics support and deconflict resources between the two operations sections
 - All incident supervisory personnel are aware of how they will interact with the separate Operations Sections

If established, the Deputy Incident Commander for Operations:


- Has the responsibility to ensure that all aspects of both the original and the additional Operations Sections are fully coordinated with each other and with other Sections.
- Is normally collocated with the Incident Commander at the Incident Command Post.

Separate Staging Areas are normally established to support each Operations Section.

Adding a Logistics Section



If an incident is so geographically dispersed that it is not feasible for the Incident Base to support the incident logistical needs, it may be necessary to establish another Logistics Section. Again, infrequently used.

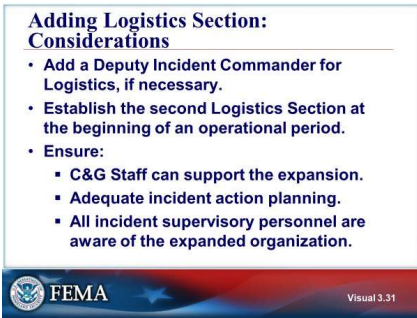


Visual 3.30

ADDING A LOGISTICS SECTION

This option is also infrequently used.

If an incident is so geographically dispersed that it is not feasible for the Incident Base to support the incident logistical needs, it may be necessary to establish another Logistics Section.



Visual 3.31

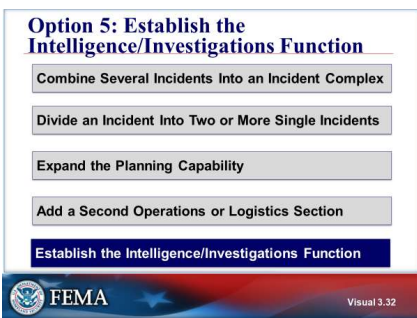
ADDING LOGISTICS SECTION: CONSIDERATIONS

Considerations for adding an Logistics Section include:

- Add a Deputy Incident Commander for Logistics, if necessary.
- Establish the second Logistics Section at the beginning of an operational period.
- Ensure that:
 - Command and General Staffs can support the expansion.
 - You have addressed how the two Logistics Sections will participate in development of a common Incident Action Plan.
 - All incident supervisory personnel are aware of how they will interact with the separate Logistics Sections.

Similar to the example with the Operations Section, a Deputy Incident Commander for Logistics could be added to the command structure if necessary to ensure coordination of the two Logistics efforts.

Refer to Handout 3-4: Option 4: Add a Second Operations or Logistics Section.

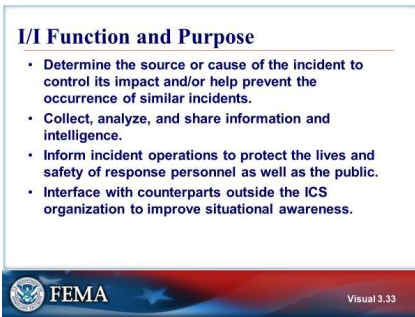


Visual 3.32

OPTION 5: ESTABLISH THE INTELLIGENCE/INVESTIGATIONS FUNCTION

Unlike other ICS functions, the I/I function is only established when needed.

Because the I/I Function can be implemented in a variety of ways, and can include its internal capability to manage internal I/I operations, planning and resources, it can be an effective method to address complexity in some types of incidents.



Visual 3.33

I/I FUNCTION AND PURPOSE

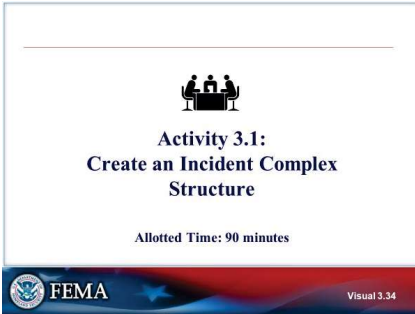
Establishing the I/I Function with ICS can address complex incidents by allowing an IC/UC to initiate intelligence/investigations activities while ensuring that life safety operations remain the primary incident objective. The I/I Function operates concurrently with, and in support of, life safety operations to protect evidence at crime and investigative scenes.

Many domestic incidents, such as natural disasters or industrial accidents, have an obvious cause and origin. However, other domestic incidents, such as large-scale fires, public health emergencies, explosions, transportation incidents (e.g., train derailments, airplane crashes, bridge collapses), active shooters, terrorist attacks, or other incidents causing mass injuries or fatalities require an intelligence or investigative component to determine the cause and origin of the incident and/or support incident/disaster operations.

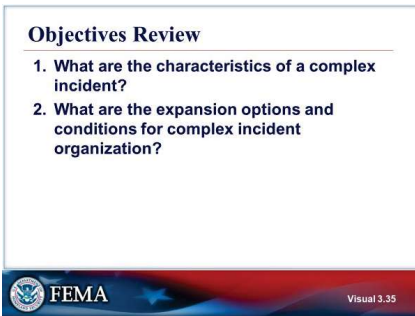
Although, in many cases, law enforcement departments/agencies fulfill intelligence/investigations duties, the I/I Function has aspects that cross disciplines and levels of government. “Nontraditional” forms of intelligence/investigations activities (i.e., non-law enforcement) might include:

- Epidemiology
- Mass fatality management
- Fire, explosion, or arson cause and origin (regardless of likelihood of criminal activity)
- Real-time research and analysis intended to protect against, respond, and/or recover from a specific incident (e.g., critical infrastructure vulnerability and consequence analysis; hurricane forecast regarding strength and estimated point of landfall; post-earthquake technical clearinghouse; or post-alert volcanic monitoring)
- Transportation accidents

Refer students to Handout 3-5: Option 5: Placement of the Intelligence/Investigations Function.



Visual 3.34



Visual 3.35

ACTIVITY 3.1: CREATE AN INCIDENT COMPLEX STRUCTURE

Introduce

The instructor will explain Activity 3.1.

You will have 60 minutes to complete the activity and 30 minutes for feedback/debrief.

OBJECTIVES REVIEW

Unit Enabling Objectives

- Identify the characteristics of a complex incident.
- Explain the expansion options for complex incident organization and the conditions under which each would be applied.

HOMEWORK: To prepare for a group activity in Unit 4 (Area Command), read Handout 4-1: Katrina Area Command Scenario (located in Unit 4's Supplemental Materials) prior to coming to class tomorrow.

Article Summary: In the aftermath of the devastating winds and flooding from Hurricane Katrina, more than 8.1 million gallons of oil escaped from numerous damaged oil infrastructure sources. This article analyzes how the U.S. Coast Guard adapted Area Command to manage the response efforts.

Focus on answering three questions:

- Why did the Coast Guard choose to use Area Command?
- How did the Coast Guard adapt the Area Command structure? Why?
- What are the lessons learned for your agency or jurisdiction?