**Job Aid: Option 1: Establishing an Incident Complex**

An Incident Complex is two or more individual incidents in the same general proximity that are assigned to a single Incident Commander or Unified Command to manage.

ICS Organizational Strategy

There are several options for managing major or complex incidents. When several incidents occur within the same general proximity and planning, logistics, and finance/administration activities can be adequately and more efficiently provided by a single management team, the incidents might be organized into an Incident Complex.

When several incidents are organized into an Incident Complex, the general guideline is that the individual incidents become Branches within the Operations Section of the Incident Complex structure.

Typically, each separate incident is organized as a Branch, allowing for future expansion if required. Using Branches allows for more flexibility to establish Divisions or Groups if required later. Also, 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.
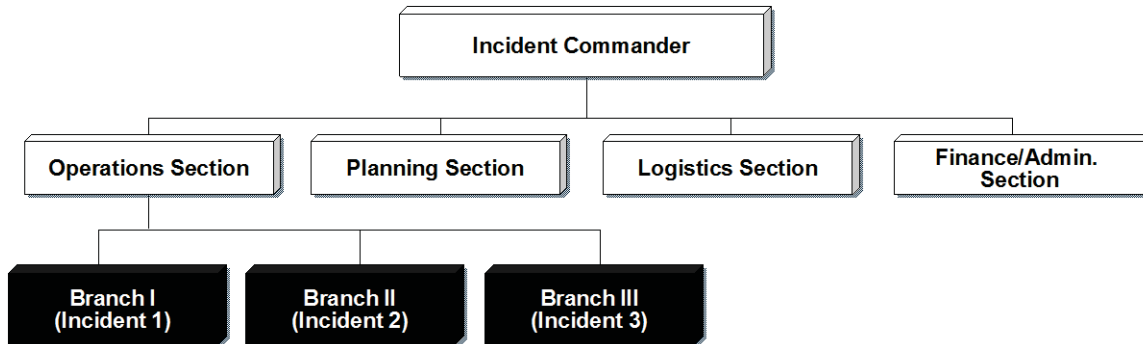
When to Use It

An Incident Complex may be formed when:

- There are many separate incidents occurring close together.
- One incident is underway and other, smaller incidents occur in the same proximity.
- Management efficiencies can be attained by developing an Incident Complex.

Guidelines for Use

- The incidents must be close enough to each other to be managed by the same Incident Management Team.
- Some staff and/or logistics support economies could be achieved through a combined management approach.
- The number of overall incidents within the agency or jurisdiction requires consolidations wherever possible to conserve staff and reduce costs.
- Planning, logistics, and finance/administration activities can be adequately provided by a single management team.

Visuals

ICS Organizational Options

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

FEMA *Major and/or Complex Incident/Event Management* Visual 3.15

Dividing a Single Incident (1 of 2)

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.

County B
River
City
Flood
County A

Divide into two incidents

FEMA *Major and/or Complex Incident/Event Management* Visual 3.16

Your Notes

Dividing a Single Incident (2 of 2)

Incidents may be divided when:

- The Planning and/or Logistics Section can no longer adequately provide support services.
- The Operations Section cannot manage the number of resources required without exceeding span of control.

FEMA *Major and/or Complex Incident/Event Management* Visual 3.17

Dividing an Incident

- Step 1: Determine how best to divide the incident.
- Step 2: Assign Incident Commanders and Command and General Staffs for each incident.
- Step 3: Designate additional supporting organizational facilities, locations, etc.
- Step 4: Designate an appropriate time for establishing two separate incidents (each with a unique name).
- Step 5: Coordinate planning strategies and use of critical resources for at least the next operational period.
- Step 6: Consider the need for Area Command. (Area Command is covered in the next unit.)

FEMA *Major and/or Complex Incident/Event Management* Visual 3.18

Your Notes

Job Aid: Option 2: Dividing a Single Incident

An incident that has become so large that it cannot be managed effectively by a single Unified Command structure or that spreads across multiple jurisdictions may be divided.

ICS Organizational Strategy

A single incident may be divided when it:

- **Spreads into other jurisdiction(s) and Unified Command is not feasible.**

  For example, a flooding situation that continues to expand into low-lying areas downstream may be divided by jurisdiction. Although Unified Command would still be the first choice, it is not always feasible.

- **Is difficult to manage from one location due to terrain and access.**

  For example, an incident such as an earthquake or wildland fire, where terrain and access affect operational or logistical mobility and the ability to manage from one location, may be divided geographically.

Divide into two incidents

- **Has objectives that are naturally separating into two operations.**

  For example, a bioterrorism incident that includes immediate public health objectives and longer-term investigation objectives may be divided into two operations. Again, Unified Command would still be the first choice.

In addition to the characteristics of the incident itself, management issues also may make it advisable to divide an incident. Dividing an incident should be considered if two or more Sections are overtaxed due to the size of the incident. Examples include when:

- The Planning Section, even with additional resources, can no longer adequately provide planning services because of:
  - The size of the incident.
  - The varying objectives and strategies needed.

- 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.
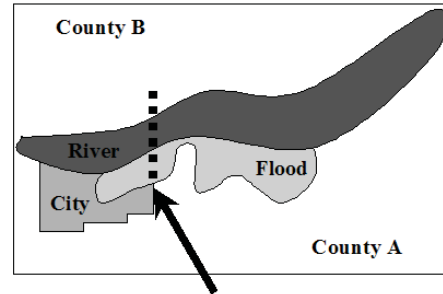
Job Aid: Option 2: Dividing a Single Incident (Continued)

Dividing an Incident

- **Step 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.).

- **Step 2:** Assign Incident Commanders and Command and General Staffs for each incident.

- **Step 3:** Designate additional supporting organizational facilities, locations, etc.

- **Step 4:** Designate an appropriate time for establishing two separate incidents (each with a unique name).

- **Step 5:** Coordinate planning strategies and use of critical resources for at least the next operational period.

- **Step 6:** Consider the need for Area Command.

Visuals

Your Notes

Your Notes

Visuals

Your Notes

View the job aid on the next page.

Your Notes

Job Aid: Option 3: Expanding the Planning Capability at an Incident

Some incidents are so complex that the planning function must be enhanced or expanded. For example, cascading events may make managing the response more difficult. Planning is required to project the risk of cascading events. It may also be difficult to make cost-effective resource management decisions without advanced planning. The consequences of poor resource management decisions could be unnecessary loss of life and property.

Expanding the planning capability at an incident may take several forms, including:
- Branch Tactical Planning.
- Separating advanced incident planning from the day-to-day planning process.

The addition of an Information and Intelligence Function is another option for expanding planning capability for a complex event or incident.

Branch Tactical Planning

Branch Tactical Planning is not a new concept. It means that the Operations Section at the Branch level develops the detailed action plans, and the Planning Section provides support and coordination.

For example, Branch Tactical Planning is often used in search and rescue operations, when detailed tactical assignments are developed at the Branch Director level. In situations like this, the Planning Section provides support to the Branch Director.

Branch Tactical Planning: When to Use It

Tactical planning at the Branch level may be used 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.
- It is not otherwise feasible to prepare and distribute the incident plan within the required timeframe.

The following are examples of when Branch Tactical Planning may be implemented:
- In a mass fatalities incident, when the Medical Examiner/Morgue Operations Branch may be best suited to establish its own incident tactical plans.
- In a structural collapse, when the Search and Rescue Branch typically will include its own planning component.

Job Aid: Option 3: Expanding the Planning Capability at an Incident (Continued)

Branch Tactical Planning: ICS Organizational Strategy

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.

With this information, individual Branches can perform detailed action planning. The Planning Section would have to ensure that necessary inter-Branch coordination took place wherever necessary.

Additional resource requirements over those authorized would have to be made known to the Operations Section Chief.

A modification to this model could be accomplished by limiting Branch Tactical Planning to certain Branches (e.g., those with less complex situations). Other Branches would continue under a central planning structure. In either case, the Planning Section would provide each Branch doing individual Branch planning with the required support in terms of personnel and other support resources to get the planning accomplished.

Separate Advanced Incident Planning

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.

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.

Advanced Incident Planning: Considerations

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

Advanced planning should project ahead at least 36 to 72 hours, and consider:
- Overall goal and incident objectives.
- Adequacy of previous and present plan.
- Future resource availability.
- Strategy assessment and alternatives.
- Environmental factors.
- Organizational assessment and alternatives.
- Political and economic issues.
- Long-term recovery needs.

Visuals

View the enlarged organization chart below.

Visuals

View the enlarged organization chart below.

Visuals

Adding Logistics Section: Considerations

- Ensure that Command and General Staffs can support the expansion.
- Ensure adequate incident action planning.
- Establish the second Logistics Section at the beginning of an operational period.
- Ensure that all incident supervisory personnel are aware of the expanded organization.
- Add a Deputy Incident Commander for Logistics, if necessary.

FEMA   Visual 3.38
Major and/or Complex Incident/Event Management

View the job aid on the next page.

Your Notes

Job Aid: Option 4: Creating Additional Operations or Logistics Sections

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.

When to Add Operations or Logistics Sections

Operations Section. An additional Operations Section should be added in an 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. Examples of situations where two Operations Sections may be established include:

- Earthquake, hurricane, tornado, or flooding that covers several political jurisdictions.
- A major wildland fire that continues to expand.
- A major spill in a waterway.

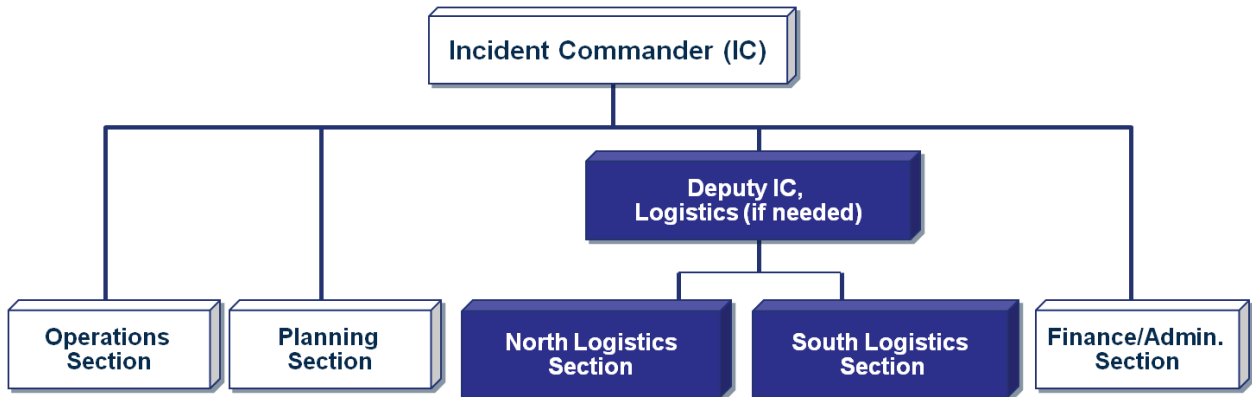**Logistics Section.** If an incident is so geographically dispersed that it is not feasible for the Incident Base to support the incident logistical needs, it may be necessary to establish another Logistics Section.

ICS Organizational Strategy

Operations Organization. If the organization grows so that it is not desirable to expand the Operations Section further, a second Operations Section may be established.

A more commonly used solution is to add Deputy Operations Section Chiefs under the Operations Section Chief to manage respective areas—for example, Investigation and Inspection Deputy Operations Section Chiefs reporting to the Operations Section Chief as shown in the diagram below.
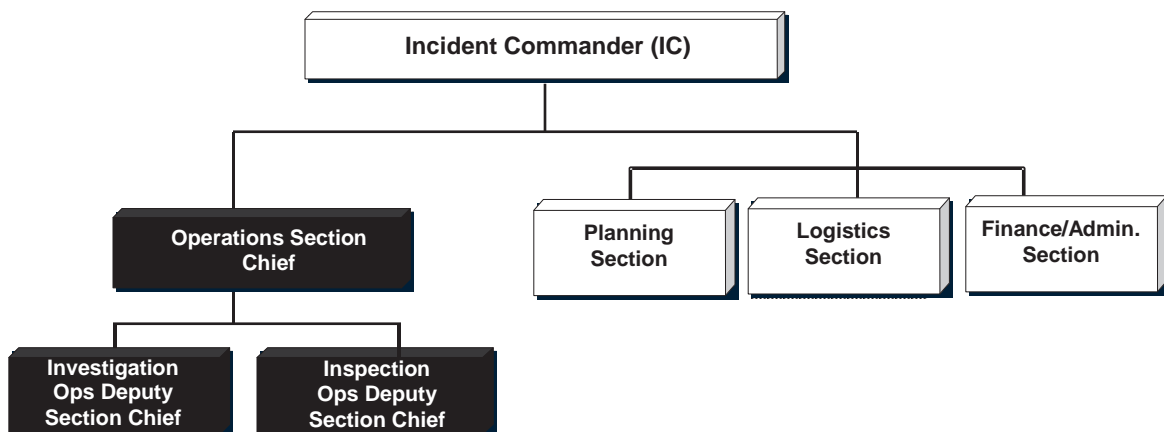
Job Aid: Option 4: Creating Additional Operations or Logistics Sections (Continued)

Another option would be to split the Operations Section into Investigation and Inspection Sections, if needed under a Deputy Incident Commander for Operations, as shown below.

```
                        ┌─────────────────────────┐
                        │ Incident Commander (IC) │
                        └─────────────────────────┘
                                    │
              ┌─────────────────────┴──────────────────────────────────────┐
     ┌──────────────────┐                    ┌───────────┐  ┌───────────┐  ┌──────────────┐
     │   Deputy IC,     │                    │ Planning  │  │ Logistics │  │Finance/Admin.│
     │Operations        │                    │  Section  │  │  Section  │  │   Section    │
     │(if needed)       │                    └───────────┘  └───────────┘  └──────────────┘
     └──────────────────┘
         │
   ┌─────┴──────┐
┌──────────┐ ┌──────────┐
│Investiga-│ │Inspection│
│tion Ops  │ │   Ops    │
│Section   │ │ Section  │
└──────────┘ └──────────┘
```
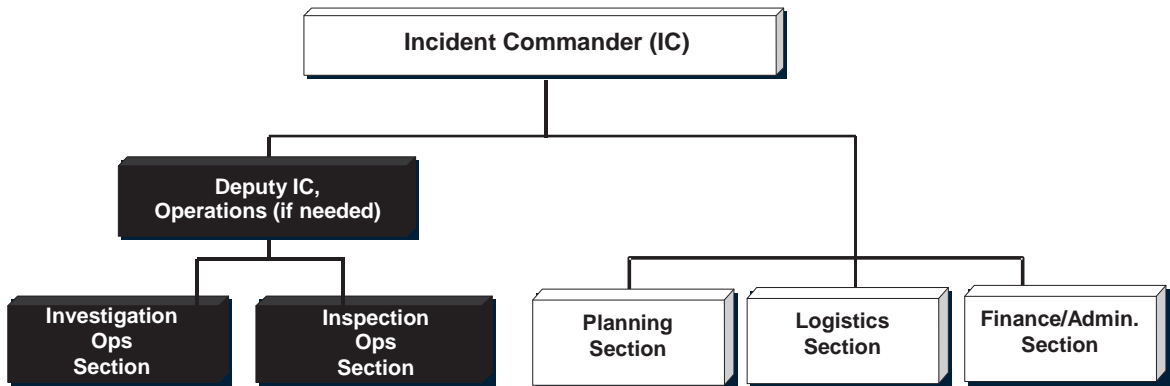
The Deputy Incident Commander for Operations or Deputy Operations Section Chiefs:

- Have 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.
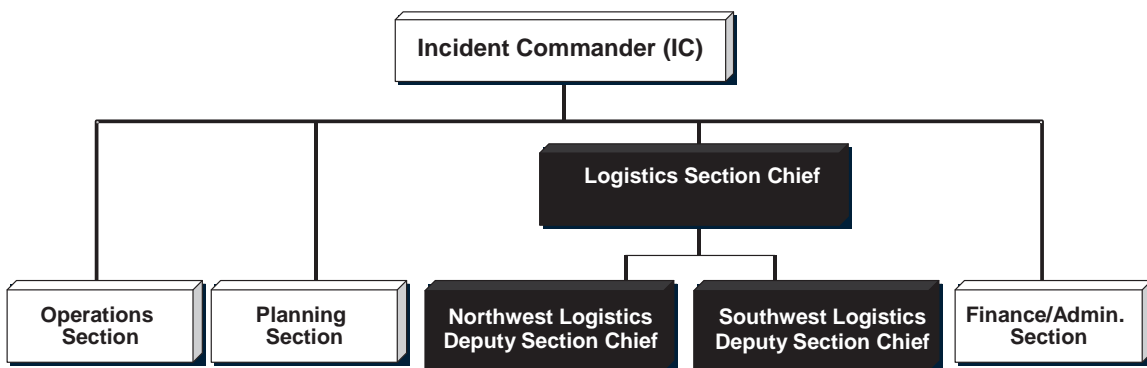- Are normally collocated with the Incident Commander at the Incident Command Post.

Separate Staging Areas are established to support each Operations Section.

Logistics Organization. A second Logistics Section may be added in a geographically dispersed incident.

In this diagram, Northwest and Southwest Logistics Sections report to the Logistics Section Chief.

```
                        ┌─────────────────────────┐
                        │ Incident Commander (IC) │
                        └─────────────────────────┘
                                    │
          ┌─────────┬───────────────┼──────────────────────────────┐
          │         │      ┌──────────────────────┐                 │
          │         │      │Logistics Section Chief│                 │
          │         │      └──────────────────────┘                 │
   ┌───────────┐┌──────────┐    ┌──────────┴──────────┐      ┌──────────────┐
   │ Operations││ Planning │ ┌──────────────┐ ┌──────────────┐│Finance/Admin.│
   │  Section  ││  Section │ │Northwest     │ │Southwest     ││   Section    │
   └───────────┘└──────────┘ │Logistics     │ │Logistics     │└──────────────┘
                             │Deputy Section│ │Deputy Section│
                             │Chief         │ │Chief         │
                             └──────────────┘ └──────────────┘
```

Job Aid: Option 4: Creating Additional Operations or Logistics Sections (Continued)

In this diagram, Northwest and Southwest Logistics Section Chiefs report to the Deputy IC for Logistics.

```
                           ┌──────────────────────────┐
                           │ Incident Commander (IC)  │
                           └──────────────────────────┘
                                        │
                    ┌──────────┬────────┼────────┬──────────────┐
                    │          │   ┌─────────────────┐           │
                    │          │   │   Deputy IC,    │           │
                    │          │   │Logistics (if    │           │
                    │          │   │    needed)      │           │
                    │          │   └─────────────────┘           │
                    │          │        │                        │
              ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
              │Operations│ │ Planning │ │Northwest │ │Southwest │ │Finance/  │
              │ Section  │ │ Section  │ │Logistics │ │Logistics │ │Admin.    │
              │          │ │          │ │Section   │ │Section   │ │Section   │
              │          │ │          │ │Chief     │ │Chief     │ │          │
              └──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘
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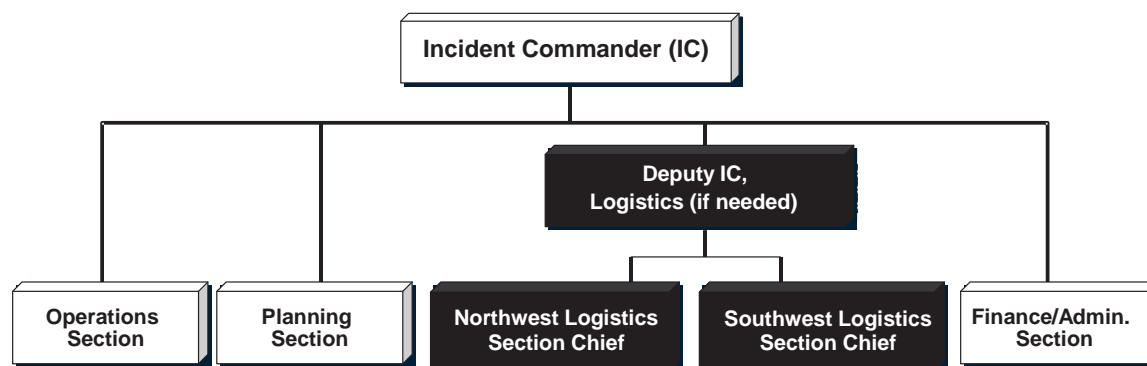
- Similar to the example with the Operations Section, a Deputy Incident Commander for Logistics could be added to the command structure if necessary to ensure coordination of the two Logistics efforts.
- The Deputy Incident Commander for Logistics would normally function from the Incident Command Post, while the two Logistics Section Chiefs could operate from separate Incident Bases. The Deputy Incident Commander would ensure that all necessary coordination was taking place between the two Logistics Sections.
- An Incident Base for each Logistics Section could be established. Also, additional camps supported by each Base could be established.

Considerations

The considerations for adding an Operations or Logistics Section include:

- Ensure that Command and General Staffs can support the expansion.
- Ensure there is adequate incident action planning.
- Ensure there is adequate logistics support for an additional Operations Section.
- Establish the second Operations or Logistics Section at the beginning of an operational period.
- Ensure that all incident supervisory personnel are aware of the expanded organization.
- Add a Deputy Incident Commander for Operations or Logistics or add Deputy Operations or Logistics Section Chiefs if necessary.

Visuals

Applied Exercise

Follow instructions . . .

- Presented by instructors.
- Outlined on handouts.

Visual 3.31
Major and/or Complex Incident/Event Management

Summary

You should now be able to:

- List the principal factors often found in or related to major and/or complex incidents/ events.
- List the four expansion options for incident/ event organization and describe the conditions under which they would be applied.
- Demonstrate, through an exercise, how to apply the various options related to major or complex incident management.

Visual 3.32
Major and/or Complex Incident/Event Management

Your Notes

Your Notes

UNIT 4: AREA COMMAND

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Visuals

Your Notes

Your Notes

Visuals

Your Notes

Your Notes

Visuals

Area Command: Best Practices

Area Command should:

- Receive its authority through a written delegation of authority.
- Notify Incident Commanders of its authorities and roles.
- Be staffed with qualified and experienced personnel.
- Operate under standard ICS principles.
- Be kept small.

Visual 4.9
Area Command

Katrina Area Command Scenario

1. Review the case-study Katrina Area Command scenario in your Student Manuals.
2. Working as a team, answer the following 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?
3. Select a spokesperson and be prepared to present your analysis to the entire group.

Visual 4.10
Area Command

Your Notes

Complete the activity before proceeding.

Activity: Katrina Area Command Scenario

Unified Command and Control

Keeping "pollution catastrophe" off Katrina's resume' of tragic consequences.

by CDR ROGER LAFERRIERE,
U.S. Coast Guard Deputy Sector Commander Honolulu, Hawaii

MR. TRACY LONG,
Security/Emergency Response Advisor, Chevron Pipe Line Company

and MR. GREG GUERRERO,
Incident Commander, Shell Oil Products U.S

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.[1] The amount of oil released was second, in the U.S., only to the tragic grounding of the *Exxon Valdez*, which resulted in the largest oil spill in U.S. history (11 million gallons).[2]

This was a different situation entirely, as this was not the result of human error, but rather resulted from the most powerful natural forces experienced by our nation in the modern era. The logistical challenges from this hurricane were something never envisioned by contingency planners, nor encountered before by oil spill responders. The only way to overcome these immense challenges was for governments and industry organizations to mount an effective and efficient response with absolute unified command and control. Fortunately they employed a process tried and true: the Incident Command System.

The Challenges
Hurricane Katrina ravaged the robust oil and gas infrastructure system in Southeastern Louisiana, causing oil to be discharged from more than 140 sources, 10 of which were high-volume oil pipelines, refineries, and storage facilities.[3] The marine facilities stretched more than 130 miles along the Mississippi River. Many were inland and around the sensitive Mississippi delta region. But the industry was as ready as it could be.

Figure 1: Oil leaks from hurricane-damaged oil tanks. USCG photo.

For example, Chevron Pipe Line (CPL), two days prior to Hurricane Katrina's landfall, activated its emergency response team and set up an incident command post in Houston, Texas. CPL has two major facilities in the region that were damaged, one near Empire, La. and a second at Fourchon, La. These terminals are where oil pipelines from the Gulf of Mexico come onshore and oil is stored and redirected to refineries and other petrochemical facilities along the gulf coast. All CPL's Southern Louisiana facilities were shut down, in anticipation of the storm. Other oil companies also took similar actions.

High winds and massive flooding caused damage to the oil infrastructure. Fortunately, these same forces helped to disperse and evaporate a large portion of the oil. The remaining oil settled into depressions—natural culverts and canals—or into dikes and containments already in place in the event of a catastrophic infrastructure release. However, the devastating Katrina moved a large volume of oil onto private property and into sensitive environments adjoining the oil facilities. In one neighborhood, oil contamination could be measured in square miles (Figure 1). This oil contaminated the exterior and interior areas and contents of private property, as it flowed through broken windows on vehicles, boats, sheds, and garages. Flood waters moved far inland and contaminated streets, playgrounds, businesses, and public service buildings.

On the environmental side, oil pollution removal was complicated by inaccessibility caused by massive quantities of obstructive debris. In one site, oil was pushed into highly sensitive forested wetlands and deposited into natural depressions. These forested wetlands were teeming with wildlife, including alligators and poisonous snakes. The vegetation in these wetlands was so dense, that vehicle access was not possible (Figure 2). Additionally, oil settled into miles of canals, culverts, and "cuts" on the backside of the Mississippi River levee that were only accessible by shallow water boats. At another location, oil migrated into a swamp grass region that was loaded with shellfish and shellfish spawning sites. Manual recovery was not an option here, due to the likely intrusive damage from the use of mechanical equipment and tools.

The normal infrastructure that would support a major oil spill operation was destroyed or damaged beyond immediate repair. More than 85 percent of the naviga-

Figure 2: Oil from damaged tanks was moved by hurricane forces into impassable forested wetlands. USCG photo.

tional aids along the Mississippi and its tributaries were destroyed.[3] Sunken vessels and floating debris made water operations highly risky. Communications beyond line of sight for handheld radios was non-existent. Lodging, food, medical care, fuel, and transportation resources were not available.

Local oil spill responders and support workers were scattered by the storm, many having lost their homes and livelihood. The magnitude of impact is best summed up by oil company representatives who were there on the ground trying to assemble forces to combat the spill. For Chevron Pipe Line, for instance, many of their employees who lived in southern Louisiana returned to lost or damaged homes. This was CPL's and the other oil company's first priority: Locate and ensure the safety of employees and their families. Chevron Pipe Line designated an incident management team (IMT) whose sole function was to address this priority, in addition to having an IMT that dealt with the oil spill. A third IMT was used to conduct a complete operational and safety site assessment for all their facilities in the region. As Chevron Pipe Line moved to respond on all these fronts, it experienced massive difficulty in even contacting emergency response contractors. Marine traffic was at a standstill, due to hidden dangers, and roads were closed and impassable.

Emergency resources brought in for the disaster

response were rightfully focused on the harrowing search and rescue effort throughout the southeast Louisiana region. It was clear that these resources could not be counted on by the oil spill responders. They were forced to scrounge what little resources that survived the storm and obtain resources from outside the region, hundreds of miles away.

The Coast Guard federal on-scene coordinator, CAPT Frank Paskewich, required a quick plan to attack the oil spills. He approved a plan proposed by his Coast Guard incident management team to implement an area command construct for the spill.

Area Command Construct

Historically, oil spill responses involved the formation of a unified command (UC) composed of the federal on-scene coordinator, state responders, and vessel/facility owners. During Katrina, most of the oil released was from six major oil spill companies.[5] Using a single unified command with six industry representatives as unified commanders was problem-

Figure 3: Area Command Organization. USCG graphic.

atic for several reasons. First, the geography of the impacted area was vast and would remove many of the industry unified commanders far from their incidents. Second, each company had its own incident management teams and incident command posts, some established prior to the hurricane. Third, it would have been a challenge, to absorb all these teams and resources into a single efficient and effective UC. Finally, each senior spill response manager from each company was rightfully concerned for its individual oil response, and therefore would have competing priorities with other industry counterparts.

Whenever there are multiple incidents having competing priorities, such as the Katrina oil spills, an Incident Command System area command is the model of choice. An area command is an organization above incident commanders that sets the priorities for all incidents and ensures that competing demands are resolved for the benefit of the entire response effort.
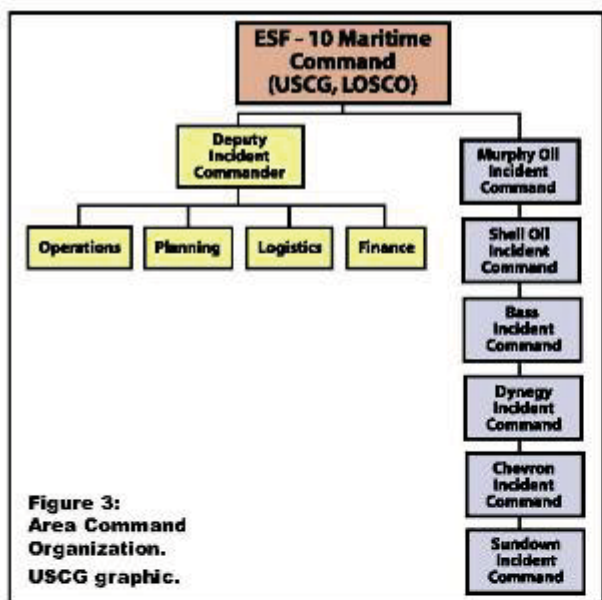
A quick meeting was held by government and industry oil spill responders to discuss CAPT Paskewich's proposed option. The collective industry, federal, and state representatives settled on the formation of a unified area command, staffed by U.S. Coast Guard and Louisiana Oil Spill Coordinator's Office (LOSCO) spill response managers. This unified area command would oversee the six major oil companies who would act as incident commanders for each of their own spills. The organization chart for the response is illustrated in figure 3.

The unified area command was called the "Emergency Support Function-10 Maritime Command" initially. ESF-10 is a term used in the National Response Plan for designating a response to an oil or hazardous materials incident. The word "area" was omitted from the title purposefully, to avoid confusion with other National Response Plan entities already in place. The word "maritime" was necessary to distinguish the operation from the Environmental Protection Agency's ESF-10 inland command. Since there was one Coast Guard incident command post in Alexandria, La. already, the ESF-10 maritime command's command post was termed forward operating base Baton Rouge.

The organization chart in figure 3 is consistent with the ICS area command concept, with one notable difference: There is an operations section and a deputy incident commander to lead operations, planning, logistics, and finance sections. This was to ensure that an organization existed among the regulators to verify that industry activities were monitored for compliance with state and federal environmental regulations. Additionally, the maritime command's operation section was tasked with managing the investigation and response to hundreds of smaller spills.

Incident Action Planning

It was important to develop a process for ensuring good communications and coordinated operations between the unified maritime command (MC) and the industry incident commanders (ICs). The MC used the operational planning cycle (Figure 4) for developing its own incident action plans and to communicate incident priorities and objectives to the industry ICs. These were shared with the industry

ICs, who developed their own incident action plans for their specific incidents. These were forwarded to the maritime command for review and approval. The maritime command employed a second-shift incident management team, responsible for reviewing the industry incident action plans for consistency with maritime command priorities and objectives.

The timing in coordinating this process was critical. Figure 5 provides an illustration of the processes. It is very similar to figure 4, however a line is drawn in some of the blocks to show the segregated, but nearly parallel activities undertaken by the maritime command and incident commanders. One caveat for figure 5: The industry planning cycle and MC planning cycle may not have matched up as perfectly as the figure suggests. The diagram has been simplified to provide the reader with a user-friendly illustration to explain the process.

Starting at the left corner of figure 5, at the "Maritime Command Objectives Meeting" block, the maritime command would develop priorities and objectives for the entire operation and for their own unique activities. At the MC/incident commander brief, the priorities and objectives for the entire operation were discussed via teleconference. Any additional issues or concerns involving the entire group were also discussed. After the briefing, the planning process splits, as the maritime command and industry incident commanders start developing their own incident action plans to execute the identified priorities and objectives. If necessary, the industry incident commanders could expand or supplement the priorities and objectives developed by the maritime command to address concerns unique to their operation.

As required by the Incident Command System, the ICS command and general staff members are briefed on priorities and objectives at the tactics meeting, and then develop strategies and tactics for the operation. The maritime command and IC entities do not all converge until after conferences between the MC and individual ICs. The one-on-one conversations enabled the industry incident commanders to address their unique concerns privately with the MC, without tying up the other industry incident commanders.

The planning meeting is where the IC or unified commanders all hear and approve/reject the proposed plan for the next operational period. Following the planning meeting, incident action plans were developed and forwarded on to the maritime command for review and approval. This was the responsibility of second shift in the maritime command forward oper-

ating base. Once all plans were approved, they were sent back to the respective ICs and MC operations sections for briefing and execution. The cycle begins again at the start of a new operational planning period.

To ensure close coordination between MC and IC planning efforts, the maritime command provided assistant liaison officers in the industry incident command posts. These assistants all worked for the maritime command main liaison officer. Their job was to ensure consistent planning efforts between the MC and ICs and to assist the incident commanders with other liaison officer duties as necessary. Later in the response, these assistant liaison officers were removed, due to lack of resources, and routine calls between the maritime command and incident commanders were reduced. A later, informal lessons-learned discussion between the MC and ICs revealed it was more preferable to maintain the daily MC/IC calls and keep the assistant liaison officers located within the industry incident command posts for a longer period.

Chevron Pipe Line Facilities' Perspective
As Chevron Pipe Line Facilities began its response, CPL command staff implemented the Incident Command System (planning cycle), using the incident action plan software supported by the Response Group Inc. This helped frame the response objectives and primary/alternate strategies and tactics to be implemented in the field to accomplish objectives.
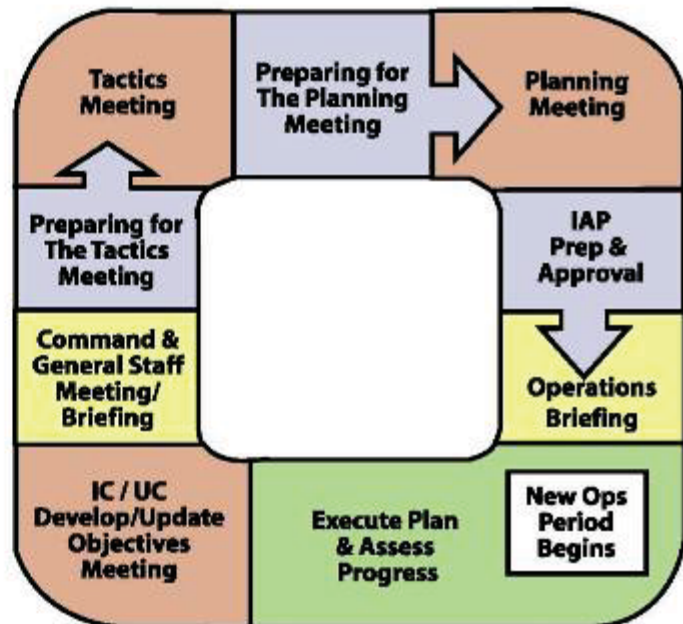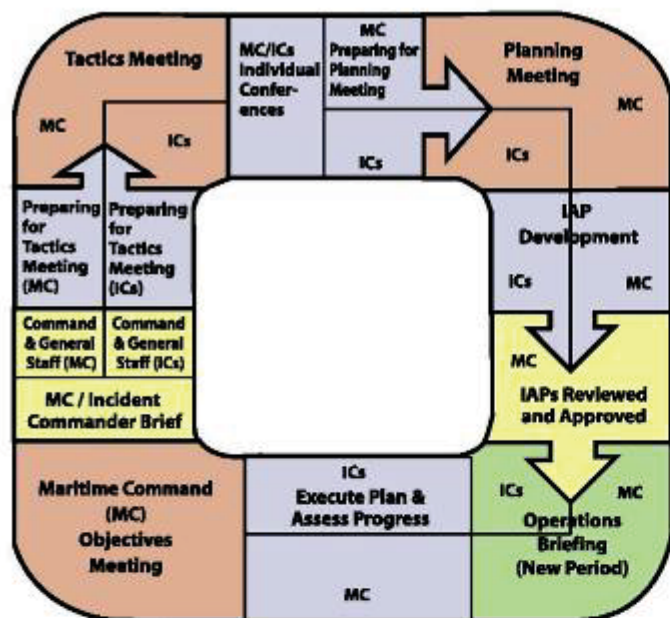

Figure 4: ICS operational planning cycle.

Figure 5: The industry planning cycle and maritime command planning cycle.

The MC monitoring teams were dispatched by helicopter from forward operating base Baton Rouge to their respective industry cleanup sites initially on a daily basis. They carried the MC incident action plan for their specific assignment and a copy of the industry IAP for the site they were responsible for. This enabled them to ensure resources were committed and operations occurred at the site as outlined in the industry IAPs, provided the night before. Additionally, the maritime command monitoring teams, while in the field, worked closely with industry field supervisors on developing strategies and tactics for the next operational period, which was fed back to the incident command posts for inclusion in the next day's incident action plans.

After sundown, the MC monitoring teams returned to the maritime command and assisted the second shift in reviewing the industry IAPs. Any discrepancies and last-minute changes were discussed and resolved in unison with industry counterparts. The result was the completion of high-quality and accurate incident action plans for the next operational period.

Utilization of the Incident Command System, by industry and agencies, allowed seamless integration and information flow between the CPL command post and the maritime command. Clear expectations were identified early in the response by the incident specific federal on-scene coordinator regarding U.S. Coast Guard MC objectives (i.e. safe and aggressive removal of all loose gross oil).

Meeting schedules were set in place to allow industry and maritime command to share information utilizing three key ICS forms—ICS 202 general response objectives, ICS 204 field assignment and ICS 209 incident status summary. To further assist CPL during the response, USCG placed a Coast Guard liaison in the Chevron Pipe Line facilities incident command post. This ensured open communication between federal and state agencies within the unified command, transferred key information for media releases, and worked through access issues involving restricted areas.

Coordinated Field Operations
The maritime command set up several monitoring teams within its operations section. These teams were responsible for ensuring cleanup operations were conducted consistent with regulations such as the National Contingency Plan (Title 40 Code of Federal Regulations, Part 300). The maritime command incident action plan provided detailed specifics on their work assignments.

Command Support
The ESF-10 maritime command not only communicated direction to the industry incident commanders, it also provided support for their operations whenever possible. For example, because no lodging was available for oil spill workers, maritime command was able to obtain berthing vessels from the Katrina joint field office. In one instance, when water and ice

"The Incident Command System worked as designed and CPL believes the results speak for themselves. We reached our objectives by safely responding and removing the loose oil in a relatively short period of time."

Mr. Tracy Long, Chevron Pipe Line

were in short supply, emergency airlift assets were deployed to remedy the shortage. Maritime command also established radio towers to improve communications in places where the infrastructure was destroyed. Maritime command coordinated wildlife surveys and rehabilitation services for all the industry partners and worked with concerned agencies and local governments to obtain permits to allow industry ICs to burn oil and oily debris (Figure 6).

MC also responded to all other sources of oil pollution, including booming and deployment of oil absorbent material forward of the massive pumping stations used to remove water from New Orleans, to prevent pollution from entering sensitive waters in and around the Mississippi watershed. Perhaps the most important support provided by the maritime command to the field incident commanders was helping them ensure their operations were consistent with the overall objectives for an effective and efficient response.

The ICS/Area Command Advantage

In the midst of Katrina oil spill operations, Hurricane Rita loomed, and eventually impacted the cleanup area. The area command ICS approach was again highly useful, as maritime command and incident commanders began to design uniform hurricane evacuation and reconstitution IAPs. Critical resources were concentrated in priority areas to quickly remove all spilled oil before hurricane landfall, and work assignments drawn up to conduct a rapid assessment upon return to the cleanup area. This enabled the collective response organization to greatly minimize additional Rita environmental impact.

The use of the Incident Command System and area commands maximized information flow, enabling the collective ICs and MC to put together accurate and consistent spill response reports and statistics. This kept the Katrina/Rita response upper echelons such as the joint field office, area field offices and principal federal official fully apprised of the cleanup efforts. Additionally, a joint information center was created that ensured any press releases and interviews from the maritime command were vetted through all the incident commanders in the field. However, it also gave the individual incident commanders the autonomy to complete their own press interviews and press releases for their specific operations.

The operation was not without its glitches. Sometimes communication between monitoring teams and industry group supervisors in the field did not align with proposed incident action plans for the following days. However, the system had enough flexibility built in to ensure these issues were worked out either by teleconferencing or by personal visits to the forward operating base by industry incident commanders.

Figure 6: Oil burning operations for the removal of oil from a forested wetland. USCG photo.

Another advantage of using ICS is that it works well with existing contingency plans developed by government and industry. It was clear that both had very strong contingency plans that enabled them to reconstitute quickly and marshal resources to begin cleanup operations. Contingency plans allow government and industry to get to the starting point of an incident. They cannot account for all of the variable types of situations, especially a Katrina/Rita complex incident. This is where incident action planning can be a great help; to account for these complex and numerous variables posed before the response organization.

from senior management to cleanup personnel were left homeless; had no place of work to go to; no means of transportation; and their lives completely turned upside-down. Yet, despite this incredible impact, they came together and provided the resources and effort needed to successfully combat the oil spills.

The Incident Command System provided the necessary framework to help focus this remarkable human effort. It enabled government and industry to execute an effective and efficient unified command and control system, keeping "pollution catastrophe" off Katrina's resume of tragic consequences.

"Traditionally the pre-incident infrastructure exists to support both the oil spill response as well as the responder. In this case, neither was available in the affected areas. This unique situation challenged Shell to develop and employ innovative strategies that proved demanding for the field responders, who did the real work to accomplish the daily tactical objectives. In the larger picture, working in conjunction with the agencies at the federal, state, and local parish levels; guided by the tenants of NIMS ICS; and anchored by the hard work and dedication of all the responders (internal/external to Shell) proved to be the right strategy to deal with this unprecedented situation."

Mr. Gregg Guerreiro, Shell Oil Products U.S.

About the authors:
Mr. Tracy Long attended college at Western Texas College, earning a degree in Applied Science (Law Enforcement) in 1982. He began his career with Chevron Pipe Line Company in 1982 and worked in various operational and maintenance positions in West Texas before transferring to New Orleans as the construction representative for technical services. Mr. Long currently serves as the security/emergency response advisor for all CPL facilities located in the U.S. and Canada.

In summary, when governments and industry are faced with the daunting challenge of responding to multiple major events as a result of a natural or human-made disaster, it is best they work from a common operational framework. It is imperative that all players—government, industry, and other nongovernmental organizations—have extensive knowledge in and use the system mandated by presidential order for emergencies: the Incident Command System.

It is a credit to both industry and government that this was indeed demonstrated superbly during the Hurricane Katrina/Rita oil spill response effort. ICS, however, cannot be credited for all the success of the response effort. The efforts of the oil industry incident commanders and their cleanup workforce is an untold story of heroism in itself. Like many residents impacted by the hurricanes, many of these people,

Mr. Greg Guerriero has been a responder for Shell for many years. He has participated in numerous exercises with the Coast Guard and the Environmental Protection Agency serving in a variety of ICS positions. He was one of several incident commanders for Shell during the Katrina oil spill response.

CDR Laferriere was designated the initial incident specific federal on-scene coordinator for the Hurricane Katrina oil spills. He has 18 years of service with the Coast Guard and at the time was commanding officer of the Atlantic Strike Team at Fort Dix, N.J. He currently serves as deputy sector commander Honolulu, Hawaii.

Endnotes:
1 "NOAA's Office of Response and Restoration Responds to Hurricane Katrina," available at http://response.restoration.noaa.gov/index.php.
2 "Prince William's Oily Mess: A Tale of Recovery," available at http://response.restoration.noaa.gov/index.php.
3 "NOAA's Office of Response and Restoration Responds to Hurricane Katrina," available at http://response.restoration.noaa.gov/index.php.
4 "NOAA's Office of Response and Restoration Responds to Hurricane Katrina," available at http://response.restoration.noaa.gov/index.php.
5 "NOAA's Office of Response and Restoration Responds to Hurricane Katrina," available at http://response.restoration.noaa.gov/index.php.
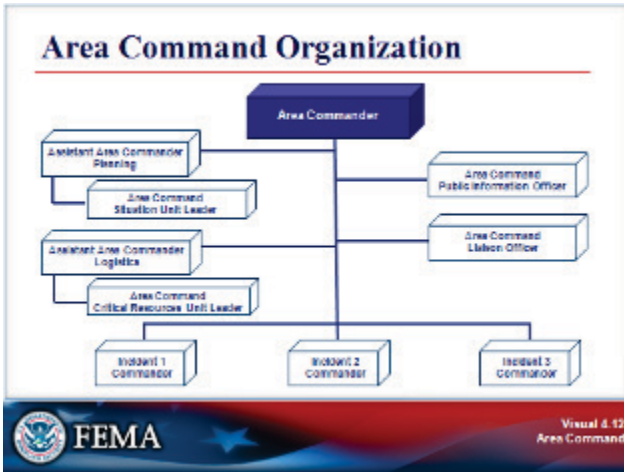
Visuals

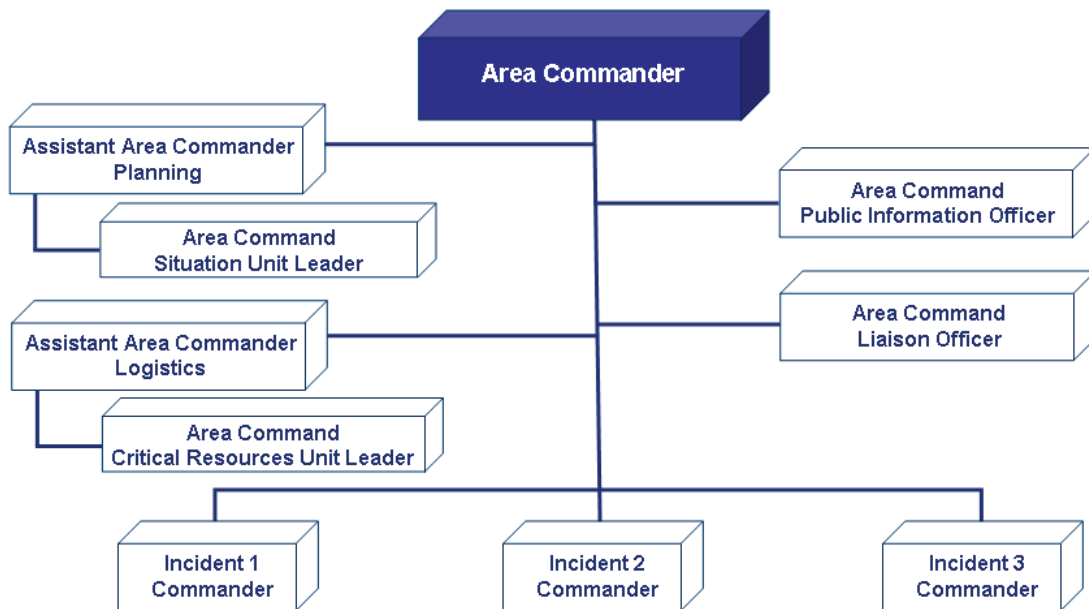View the job aid on the next page.

Your Notes

Job Aid: Location of Area Command

- **Existing facilities and communications.** It may take some hours to establish the Area Command. If there are existing facilities and communication systems that can be used (e.g., at a jurisdictional EOC), then the time needed to set up the Area Command may be reduced.

- **Close to incidents.** The Area Command should, to the extent possible, be located in close proximity to the incidents under its authority. The location should make it easy to have meetings and direct contact between the Area Commander and Incident Commanders.

- **Not collocated with an Incident Command Post**. Area Command should NOT be collocated with one of the incidents. Doing so might cause confusion with that incident's operations, and it also could be seen by other incidents as adding status to that one incident. Area Command, however, could be collocated with a multiagency coordination center such as an EOC. Note that an ICP should not be collocated with an EOC.

- **Sufficient size.** The facility used to house the Area Command organization should be large enough to accommodate a full Area Command staff and have the capability to accommodate meetings between the Area Command staff, Incident Commanders, and agency officials, and with news media representatives.

- **Capable of continuous operation.** The facility used to house the Area Command organization should allow for continuous operations and 24-hour-a-day access.

- **Adequate communications capabilities.** Adequate communications facilities (telephones, fax, computer connections) are critical. If radios are a primary means of communication, the Area Command facility should have line-of-sight coverage to Incident Command Posts or to repeaters serving those incident facilities. The facility should allow for suitable locations to temporarily install rooftop radio antennas.

- **Availability of backup power.** Backup power may be required in order to maintain a continuous operation.

- **Adequate and secure parking.** Transportation and parking issues should be considered when selecting the location.

- **Near commercial sources of support for food and lodging.** A location with access to food and lodging for staff members can help reduce the logistics requirement for providing support services.
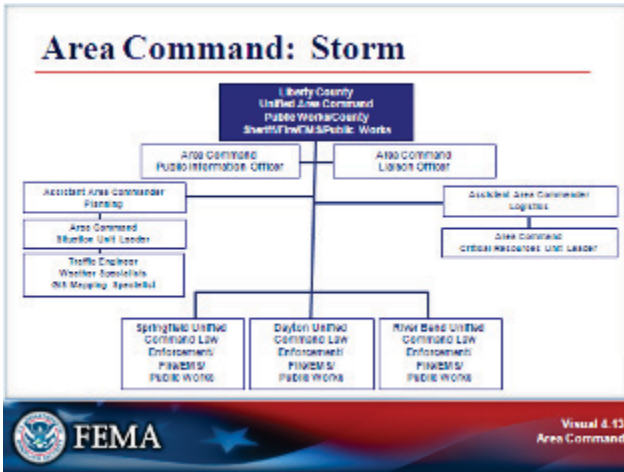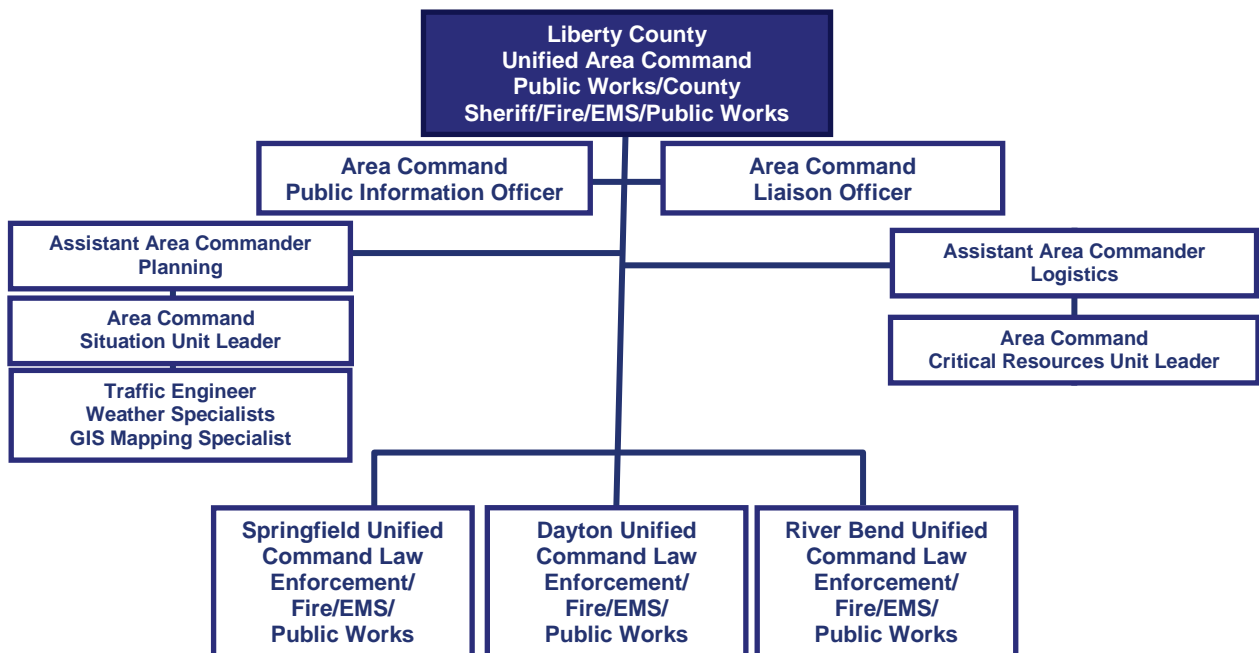
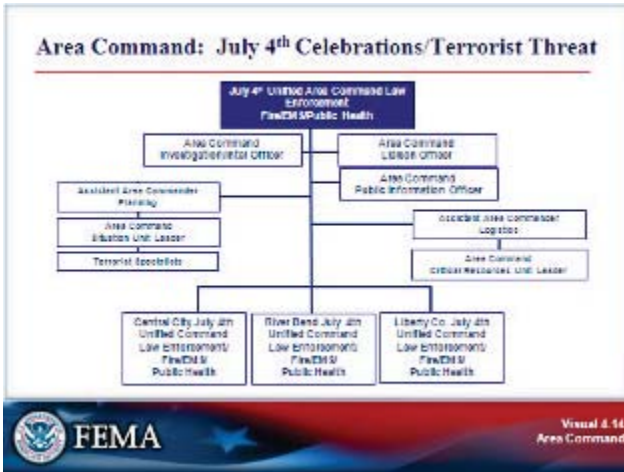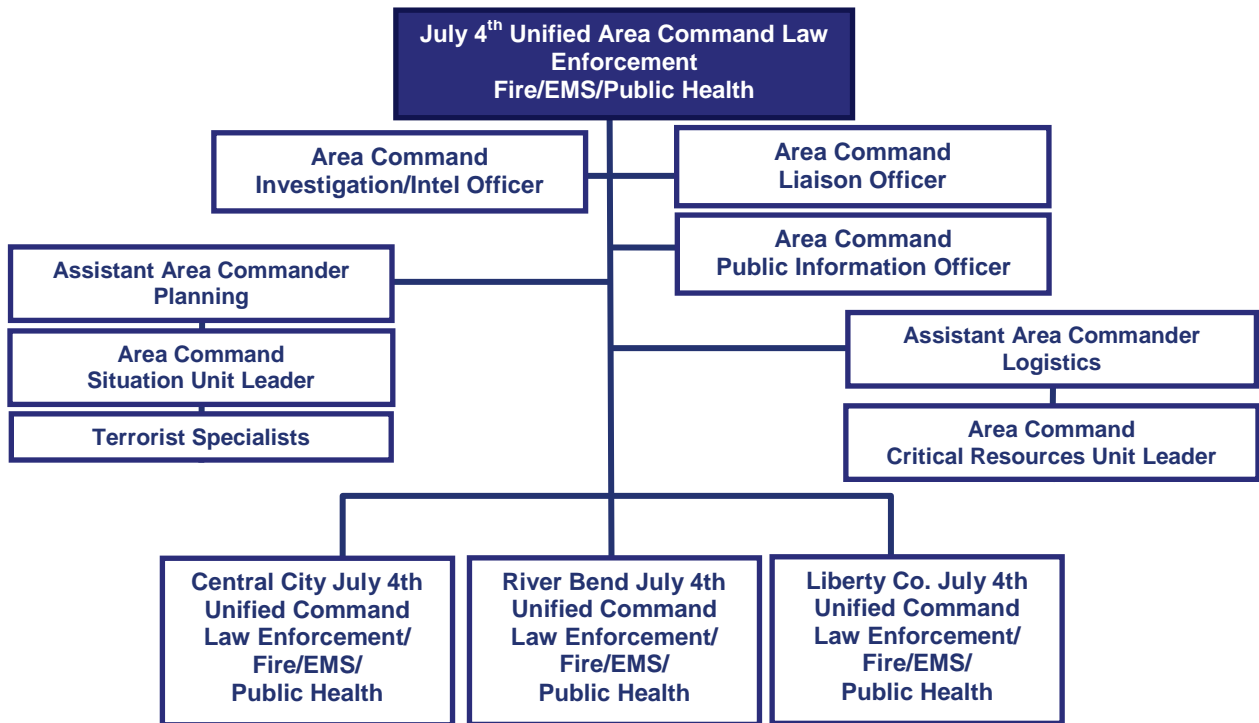**Visuals**

View the enlarged organization chart below.

Visuals

View the enlarged organization chart below.

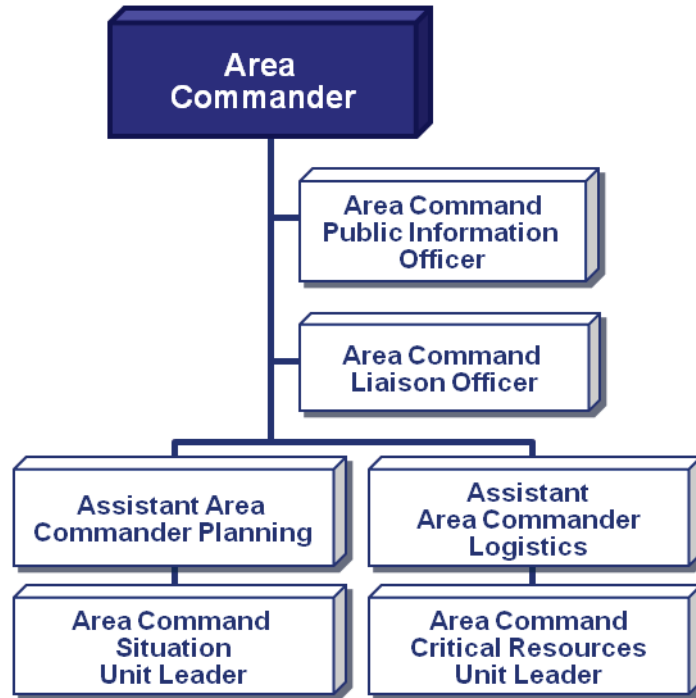**Visuals**

View the enlarged organization chart below.

Visuals

View the enlarged organization chart below, and the job aid on the next page.

Job Aid: Area Commander: Checklist of Actions

These actions will generally be conducted in the order listed:

_____ Obtain briefing from agency officials on agency expectations, concerns, and constraints.

_____ Obtain and carry out delegation of authority from agency officials for overall management and direction of the incidents within the designated Area Command.

_____ If operating as a Unified Area Command, develop working agreement for how Area Commanders will function together.

_____ Delegate authority to Incident Commanders based on agency expectations, concerns, and constraints.

_____ Establish an Area Command schedule and timeline.

_____ Resolve conflicts between incident "realities" and agency officials "wants."

_____ Establish appropriate location for the Area Command facilities.

_____ Determine and assign an appropriate Area Command organization. Keep it manageable.

_____ Determine need for and assign technical specialists to support Area Command.

_____ Obtain incident briefing and IAPs from Incident Commanders (as appropriate).

_____ Assess incident situations prior to strategy meetings.

_____ Conduct a joint meeting with all Incident Commanders.

_____ Review objectives and strategies for each incident.

_____ Periodically review critical resource needs.

_____ Maintain close coordination with agency officials, cooperating and assisting agencies, and other entities, including EOCs.

_____ Establish priorities for critical resources.

_____ Review procedures for interaction with the Area Command.

_____ Approve Incident Commanders' requests for and release of critical resources.

_____ Coordinate and approve demobilization plans.

_____ Maintain log of major actions/decisions.

Visuals
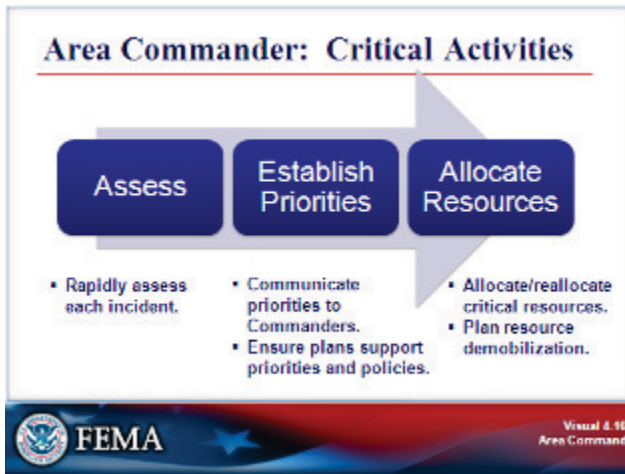
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Your Notes

Job Aid: Area Commander's Role

The Area Commander is responsible for the overall direction of Incident Management Teams assigned to the same incident or to incidents in close proximity. This responsibility includes ensuring that conflicts are resolved, incident objectives are established, and strategies are selected for the use of critical resources. Area Command also has the responsibility to coordinate with local, tribal, State, Federal, and volunteer assisting and/or cooperating organizations.

The Area Commander:

* Must rapidly assess the situation for each incident and ensure that incident action planning is addressing the priorities and direction set by the agency officials.
* Should establish, in writing, priorities related to assigned incidents, based upon the priorities and directions set by agency officials. The agency priorities and direction may be part of the written delegation of authority.

Establishing priorities is one of the most important functions an Area Commander performs. When two or more incidents are competing for critical resources and services, someone must make quick decisions based on an objective analysis of the total situation. The intent is to establish critical priorities for the common good of the total situation.

The different types of priorities that Area Command may need to establish relate to:

* Life safety.
* Property values at risk.
* Assigning critical resources.
* Demobilization.

Incident Commanders must acknowledge the Area Command's requirement to establish critical priorities. Incident Commanders may not always concur with Area Command decisions on priorities and critical resource allocations. Therefore, it is essential that each Incident Commander understand that the ability to obtain critical resources and services is balanced with the priorities established for that incident.

It also is essential that Incident Commanders understand that they may have to adjust incident strategies, tactical objectives, and resource assignments due to the lack of critical resources during a given operational period.

Job Aid: Area Commander's Role (Continued)

The Area Commander has the following overall responsibilities:

- Set overall objectives.
- Ensure that incident objectives are met and do not conflict with each other or agency policy.
- Establish incident-related priorities.
- Assign/reassign critical resources based on incident priorities.
- Ensure that Incident Management Teams are qualified and incidents are properly managed.
- Coordinate demobilization of assigned resources.
- Coordinate with agency administrator, EOC, other MAC entities, and the media.

The Area Commander should develop procedures to be followed. These procedures should be reviewed with the respective Incident Commanders.
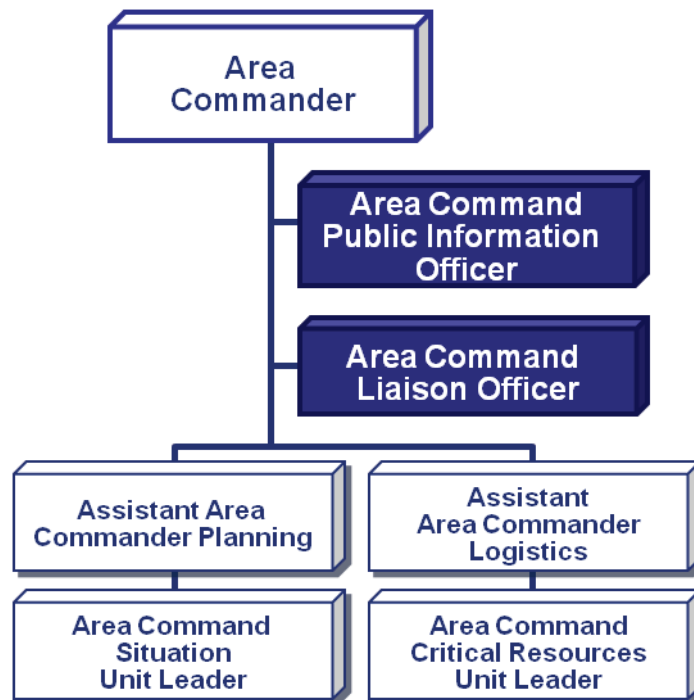
The Area Commander establishes:

- Incident and agency/jurisdictional priorities.
- Priorities for assignments of critical resources.
- Schedules of meetings and briefings.
- Requirements for Reports and Incident Action Plans.
- Points of contact with agency officials.
- Media relations and contact procedures.
- Unusual situation or emergency procedures reporting.
- Demobilization procedures.

Visuals

View the enlarged organization chart below.

Visuals

View the enlarged organization chart below.