

## INTERNAL FLOODING

### SCENARIO

Heavy rains, combined with snow melt due to a recent warm period, have caused significant ground saturation and rapidly rising rivers. A nearby reservoir is overflowing the dam, and there are concerns about the dam maintaining its integrity. The weather forecast calls for steady temperatures above normal and the continued threat of more precipitation over the next seven to ten days.

The hospital grounds are saturated and there is an inflow of water onto the grounds from the street and local creeks, creating large areas of pooled, deep water in low lying areas. These areas have been cordoned off for safety. Water continues to flow onto the grounds.

With the weather report, the water levels are expected to continue to rise and cause more facility/grounds flooding. The main entrance and the entrance to the Emergency Department will soon be flooded, and require these areas to be cordoned off, patient rerouted and the ED to be relocated. Should the water levels continue to rise, there could be major flooding of the first floor of the hospital.



# INTERNAL FLOODING

## INCIDENT PLANNING GUIDE

### **Does your Emergency Management Plan Address the following issues?**

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#### **Mitigation & Preparedness**

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1. Does your hospital have a plan to address flooding on the grounds and measures to prevent water from flowing into the facility (i.e., sandbags, pumps, etc.)?

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2. Does your hospital have a plan to address possible loss of water/pressure, power failure, loss of operations due to area or facility flooding?

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3. Does your hospital have procedures to communicate situation and safety information to staff and patients that are not in the flooded/potentially flooded areas?

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4. Does your hospital have an evacuation plan (partial and complete)?

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5. Does your hospital have an alternate staffing plan and a process to support on-duty staff should they be unable to leave the facility due to flooding?

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6. Does your facility have MOUs with fuel suppliers to ensure a supply of fuel for emergency generators and vehicles?

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7. Does your facility have a plan to maintain water and sanitation systems, including providing personal hygiene/sanitation supplies (i.e., hand wipes, portable toilets, potable water)?

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8. Does your hospital have procedures to maintain communications and activate internal and external auxiliary communications systems, if needed?

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9. Does your hospital have criteria for and a plan to cancel non-essential patient care services (i.e., surgeries, outpatient procedures, etc.)?

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10. Does your hospital have criteria for and a plan to close non-essential hospital services (i.e., gift shop)?

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11. Does your hospital consider relocating hazardous materials/chemical agents to prevent contamination in case of flooding?

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12. Does your hospital regularly monitor pre-event weather forecasts and projections?

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13. Does your hospital participate in pre-event local response planning with emergency management officials?

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14. Does your hospital identify and/or have MOUs with contractors that can perform repairs after the flooding?

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15. Does your hospital have plans to protect or recover lost data or wet/damaged documents?

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#### **Response & Recovery**

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1. Does your hospital have a procedure to regularly update the local EOC of operational status?

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2. Does your hospital have procedures to perform damage assessment (interior and exterior), report damage to the HCC and initiate appropriate repairs during and after the storm(s) and flooding of the facility?

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## **INTERNAL FLOODING**

### **INCIDENT PLANNING GUIDE**

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3. Does your hospital have a plan and procedures to ensure continuation of patient care services?

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  4. Does your hospital have a criteria or triggers to move patients from flooded areas to other locations within the facility?

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  5. Does your facility have a procedure to communicate with area hospitals to determine their capacity to accept transferred patients?

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  6. Does your hospital have procedures for providing regular situation updates and safety recommendations to staff, patients and families?

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  7. Does your hospital have procedures to provide regular media briefings?

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  8. Does your hospital have plans for decontamination and clean-up of the facility including bacteriological surveillance and potable water supply sanitation?

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  9. Does your hospital have plans for restoration of critical infrastructure (e.g. electrical, heating, cooling systems, HVAC, vacuum tube, etc.)?

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  10. Does your hospital have demobilization and system recovery plan?

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  11. Does your hospital have procedures to repatriate evacuated patients/staff/equipment?

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  12. Does your hospital have procedures for documentation and tracking of response expenses?

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  13. Does your hospital have criteria and procedures to return to normal operations?

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  14. Does your hospital have procedures to ensure all necessary equipment is usable and safety checked, equipment and supplies are reordered, and repaired and replaced, as warranted?

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  15. Does your hospital have procedures to complete expense reports and submit to appropriate authorities?

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  16. Does your hospital have procedures to debrief staff, patients, and community partners?

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## INCIDENT RESPONSE GUIDE

**Mission:** To safely manage an internal flooding incident within a hospital.

### Directions

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- Read this entire response guide and review incident management team chart
  - Use this response guide as a checklist to ensure all tasks are addressed and completed
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### Objectives

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- Prevent facility flooding
  - Protect patients, staff and facility
  - Ensure safe patient care and medical management
  - Evacuate the facility (partial or complete) as needed
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### Immediate (Operational Period 0-2 Hours)

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#### COMMAND

(Incident Commander):

- Activate the facility Emergency Operations Plan
- Activate Command Staff and Section Chiefs, as appropriate

(Liaison Officer):

- Notify local emergency management of situation and immediate actions
- Communicate with other healthcare facilities to determine:
  - Situation status
  - Surge capacity
  - Patient transfer/bed availability
  - Ability to loan needed equipment, supplies, medications, personnel, etc.

(Public Information Officer):

- Inform staff, patients and families of situation and actions underway to prevent/limit flooding
- Prepare media staging area in a safe locations
- Conduct regular media briefings, in collaboration with the local EOC/Joint Information Center

(Safety Officer):

- Conduct safety assessment of low lying flooded areas and assess risks and impacts to patients, staff and facility
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## INCIDENT RESPONSE GUIDE

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### OPERATIONS

- Activate the hospital's Internal Flooding Plan
- Ensure continuation of patient care and essential services
- Consider partial or complete evacuation of the facility, or relocation of patients and services into safe areas of the facility
- Ensure the operations of alternate power supplies (i.e., back up generators)
- Maintain communications systems, activate alternate communications systems, as needed
- Evaluate the flooded area(s) and identifying safety issues
- Institute measures to prevent flooding and protect facility resources, as appropriate
- Secure the facility and limit access and egress
- Implement business continuity planning and protection of patient records

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### PLANNING

- Establish operational periods, incident objectives and develop the Incident Action Plan, in collaboration with the Incident Commander
- Implement patient and staff tracking, as appropriate

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### LOGISTICS

- Assess facility damage and project impacts of rising flood waters on the facility
- Maintain utilities and activate alternate systems as needed

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### Intermediate (Operational Period 2-12 Hours)

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#### COMMAND

(PIO):

- Establish a patient information center in coordination with the Liaison Officer to notify patient families of situation and patient locations

(Liaison Officer):

- Notify local emergency management and EOC of situation status, critical needs and plans for evacuation, if appropriate
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# INTERNAL FLOODING

## INCIDENT RESPONSE GUIDE

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### OPERATIONS

- Continue essential patient care management and services
  - Initiate clean up operations, as appropriate
  - Reassess need for or prepare for evacuation
  - Continue to maintain utilities
  - Provide mental health support to patients and families, as needed
  - Continue to secure the facility, including unsafe areas
  - Activate business continuity plans, including protection of records and possible relocation of business functions
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### PLANNING

- Continue patient and personnel tracking, as needed
  - Update and revise the Incident Action Plan and distribute to Command Staff and Section Chiefs
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### LOGISTICS

- Continue to evaluate facility integrity and safety of flooded areas
  - Initiate clean up as appropriate
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### FINANCE/ADMINISTRATION

- Track costs and expenditures and estimate cost of facility damage and lost revenue
  - Initiate documentation of any injuries or facility damage
  - Facilitate the procurement of supplies, equipment and medications and contracting for facility clean up or repair
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## INCIDENT RESPONSE GUIDE

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### Extended (Operations/EOC Activation Beyond 12 Hours)

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#### COMMAND

(Incident Commander):

- Update and revise the Incident Action Plan and prepare for demobilization
- Continue to update internal leaders on the situation status

(PIO):

- Continue with briefings and situation updates with staff, patients and families
- Continue patient information center operations, in collaboration with Liaison Officer

(Liaison Officer):

- Continue to notify local EOC of situation status
- Continue patient information center operations, in collaboration with PIO

(Safety):

- Continue to evaluate flooded areas and facility integrity for safety and take immediate corrective actions
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#### OPERATIONS

- Continue essential patient care management and services
  - Continue repair and clean up operations, as appropriate
  - Continue evacuation of the facility, if implemented
  - Ensure the transfer of patient's belongings, medications and records, when evacuated
  - Continue to maintain utilities
  - Continue to secure the facility, including unsafe areas
  - Continue business continuity activities and relocation of business services, if appropriate
  - Prepare for demobilization and system recovery
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#### PLANNING

- Revise and update the incident action plan
  - Initiate demobilization plan and plan for system recovery
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# INTERNAL FLOODING

## INCIDENT RESPONSE GUIDE

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**LOGISTICS**

- Provide supplemental staffing as needed
- Continue to evaluate facility damage and integrity and initiate clean up and repair activities

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**FINANCE/ADMINISTRATION**

- Continue to track costs and expenditures
- Continue to facilitate contracting for facility repair and clean up

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**Demobilization/System Recovery**

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**COMMAND**

(Incident Commander):

- Determine hospital status and declare termination of the incident

(Liaison Officer):

- Communicate final hospital status and termination of the incident to local EOC, area hospital and officials

- Assist with the repatriation of patients transferred

(PIO):

- Conduct final media briefing and assist with updating staff, patients, families and others of the termination of the event

(Safety Officer):

- Ensure facility safety and restoration of normal operations
- Ensure facility repairs are completed, in conjunction with the Operations and Logistics Sections

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**OPERATIONS**

- Restore normal patient care operations
  - Ensure restoration of utilities and communications
  - Complete a facility damage report, progress of repairs and estimated timelines for restoration of facility to pre-event condition
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## INCIDENT RESPONSE GUIDE

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### PLANNING

- Complete a summary of operations, status, and current census
- Conduct after-action reviews and debriefings
- Develop the after-action report and improvement plan for approval by the Incident Commander

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### LOGISTICS

- Restock supplies, equipment, medications, food and water
- Ensure communication and IT/IS operations return to normal
- Provide stress management and mental health support to staff

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### FINANCE/ADMINISTRATION

- Compile a final report of response and facility repair costs for approval by the Incident Commander
- Work with local, state, and federal emergency management to begin reimbursement procedures for cost expenditures related to the event
- Contact insurance carriers to assist in documentation of structural and infrastructure damage and initiate reimbursement and claims procedures

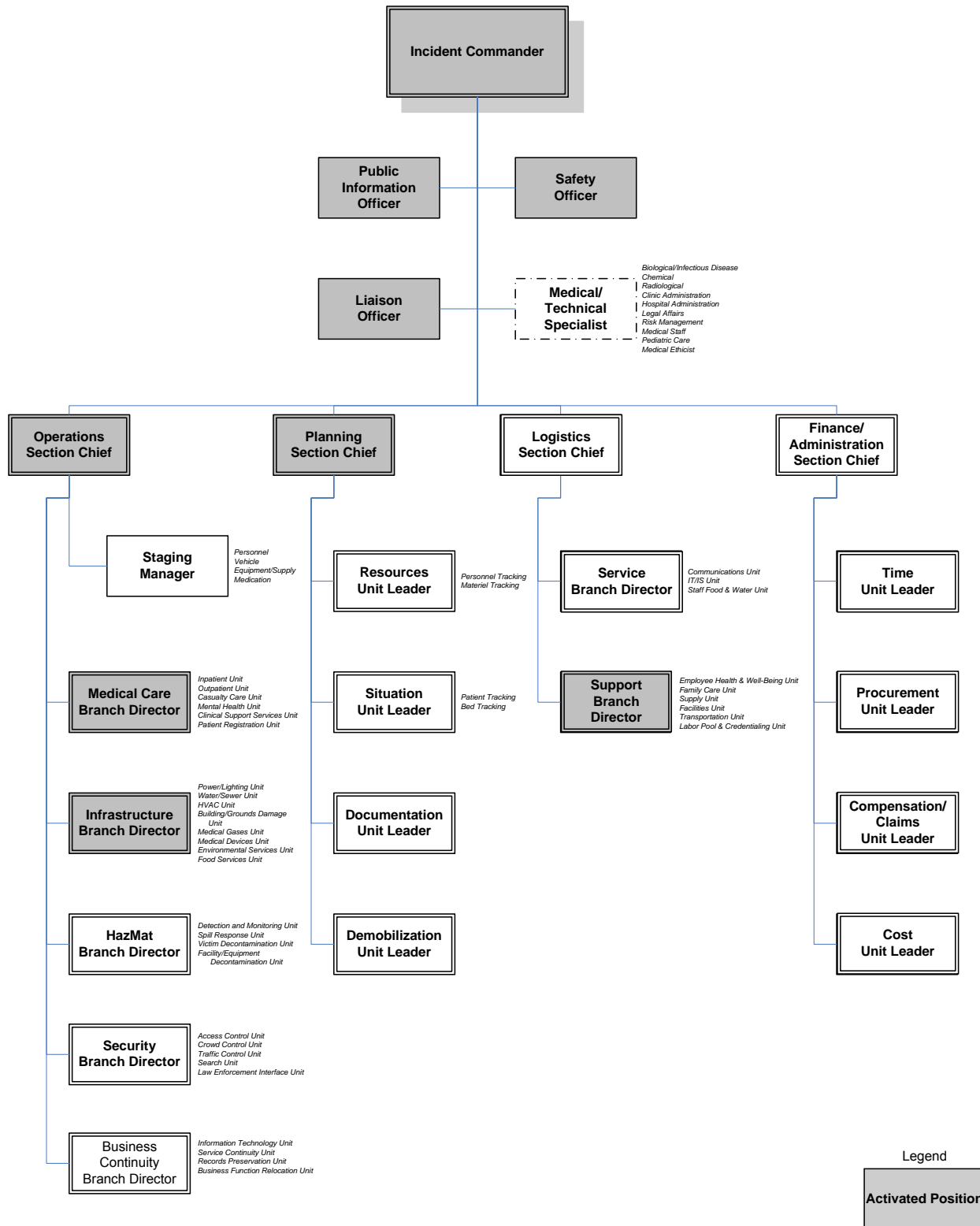
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### Documents and Tools

- Hospital Emergency Operations Plan
  - Hospital Evacuation Plan
  - Flood Response Plan
  - Utility Failure Plans
  - Facility and Departmental Business Continuity Plans
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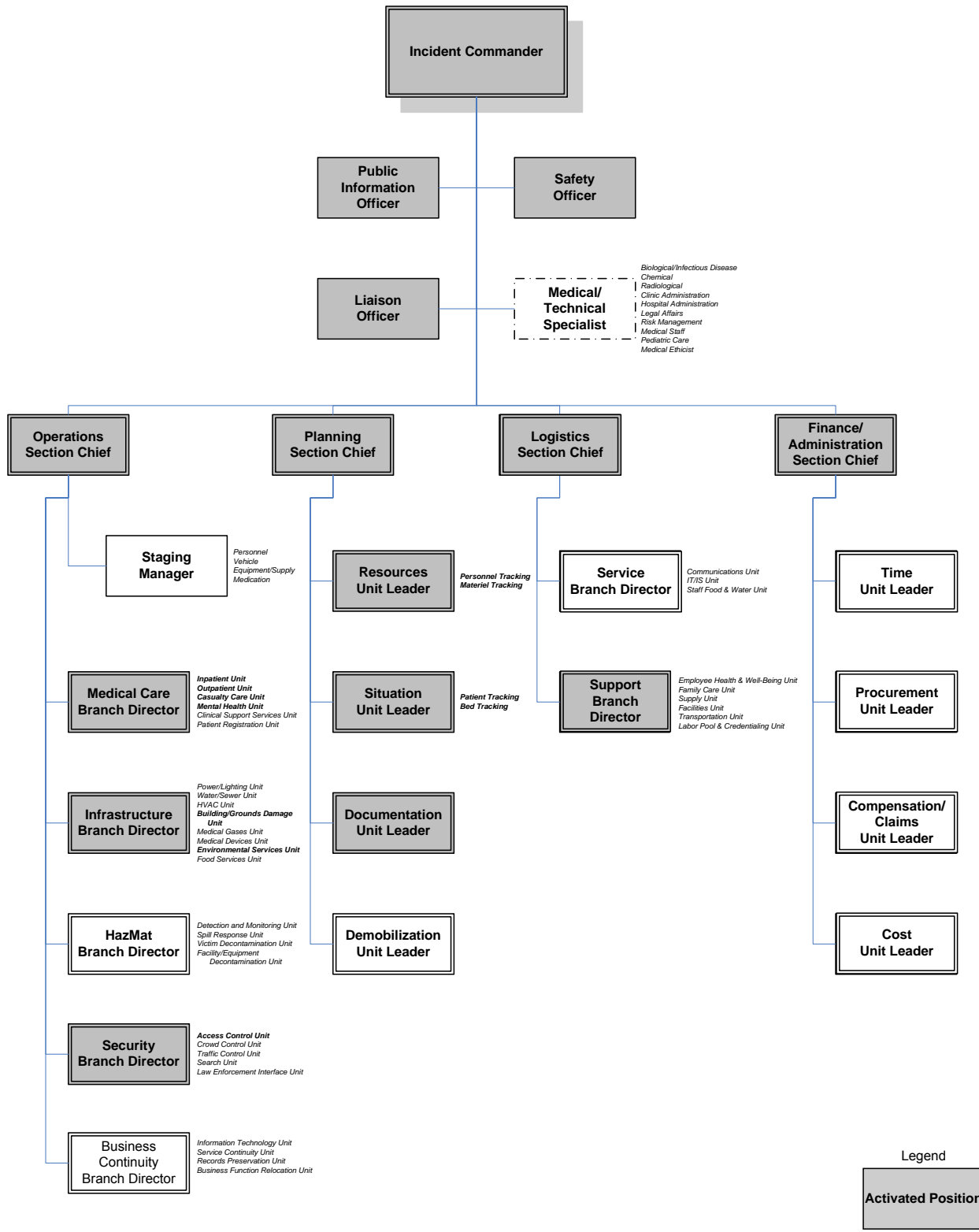
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## INCIDENT MANAGEMENT TEAM CHART -- IMMEDIATE



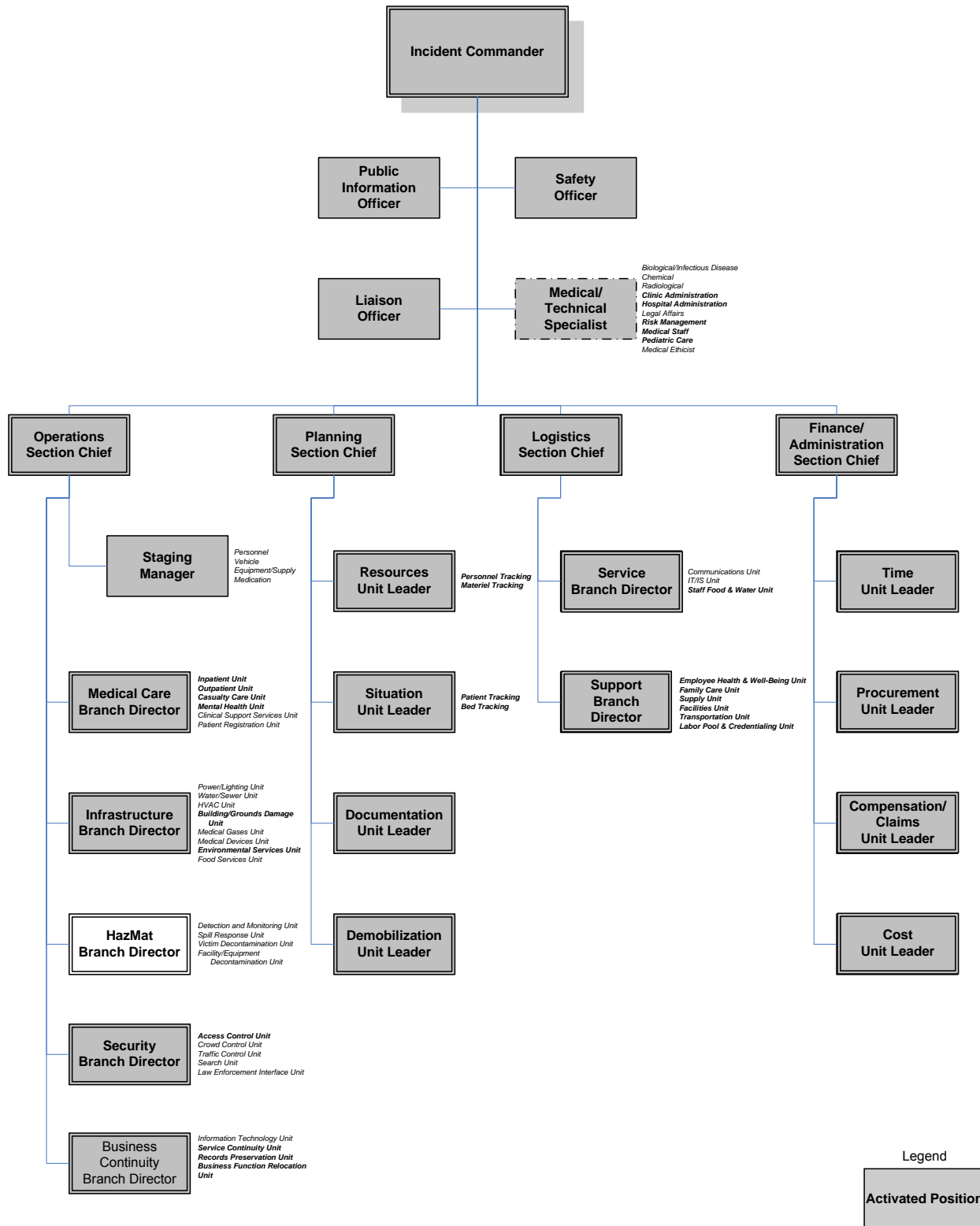
# INTERNAL FLOODING

## INCIDENT MANAGEMENT TEAM CHART -- INTERMEDIATE



# INTERNAL FLOODING

## INCIDENT MANAGEMENT TEAM CHART -- EXTENDED



# INTERNAL FLOODING

## INCIDENT MANAGEMENT TEAM CHART -- DEMOBILIZATION

