



Emergency Support Function 9 Search and Rescue

- ESF Coordinator:** Mills County Emergency Management Agency
- Primary Agencies:** Mills County Sheriff's Department / Glenwood Police Department
Mills County Emergency Services Association (MCESA)
- Support Agencies:** Mills County Emergency Management Agency
Mills County Communications Center
Mills County and Municipal Government

I. INTRODUCTION

- A. Purpose
To provide for the effective utilization of search and rescue resources and provide for the control and coordination of various types of search and rescue operations involving persons in distress as a result of an emergency/disaster.
- B. Scope
Emergency Support Function 9 (ESF-9), Search and Rescue, addresses search and rescue operations, suburban and structural search and rescue, and include search and rescue on the ground, in the air, or in the water.
1. This ESF does not apply in situations of missing or lost persons of a routine or criminal nature (i.e., missing/lost children, missing adults or elderly, medical facility walkaways, justice system escapees, etc.)
 - a. In instances as noted above, jurisdictional law enforcement will have jurisdiction and may request activation and implementation of ESF 9 and associated assets for assistance in missing/lost person search and rescues.

II. POLICIES

- A. "Search and Rescue" (SAR) means searching for, rescuing or recovering by ground, water, or air any person who becomes lost, injured, or killed as result of an emergency or disaster. Searches are also conducted when missing or downed aircraft are reported.
- B. The Law Enforcement Official and Fire Chief of each political subdivision shall be jointly responsible for local SAR activities. Often these local activities will work within an established Incident or Unified Command system. Depending on the type of situation encountered, a State or Federal authority may have jurisdiction.
1. The Fire Chief is responsible for local SAR operations in their jurisdiction of authority or areas in which they provide contract services. The Chief may appoint one or more personnel within the agency as SAR Coordinator(s) to work with Mills County Emergency Management and other volunteer organizations that may provide assistance.
 2. The Law Enforcement Official will work in conjunction with the jurisdictional Fire Department to conduct search and rescue operations, unless otherwise noted.

- C. All activities within ESF-9, Search and Rescue, will be conducted in accordance with the National Incident Management System (NIMS) and will utilize the Incident Command System (ICS).
- D. Local jurisdictions have the responsibility to establish criteria and standards for emergency workers whom they register to support this function. Criteria may include the demonstrated proficiency to perform emergency activities as indicated by assignment and personnel class.
- E. Personnel assigned will perform only those operations and techniques regarding any technical search and rescue that is commensurate with their training and qualifications.

III. CONCEPT OF OPERATIONS

- A. The Mills County Emergency Operations Center (EOC) may be activated to provide coordination, technical and administrative support to SAR operations. The State Emergency Operations Center (SEOC) may be activated to support local efforts depending on the scope of the disaster.
- B. Coordination from the incident scene or from the Mills County EOC to the State EOC will be through the normal radio, telephone capabilities, and WebEOC, augmented by back-up direction and control systems. Incident Command utilizes all communications means necessary and available to carry out effective SAR operations.
- C. The county may not be able to provide all necessary equipment or manpower for all types of SAR missions. Mobile support units may be available from neighboring jurisdictions and requested as part of an established MOU or through IMAC. Additionally, Iowa Homeland Security and Emergency Management Division (HSEMD) may ensure and support maximum SAR efforts. All requests for outside resources will be made through the Mills County Emergency Management Agency/EOC.
- D. Ground Search and Rescue
 - 1. Once identified that search and rescue operations must be conducted to account for the public involved in disaster, the assigned SAR Coordinator, in collaboration with response partners will establish a SAR plan. This plan will grid or geographically identify areas of SAR operations and ensure SAR ops are conducted in a systematic manner.
 - 2. Mutual Aid assistance for SAR, including technical support will be identified and requested through the Mills County EOC.
 - 3. Air support or reconnaissance to assist ground teams may be requested through the Mills County EOC.
- E. Water Search and Rescue
 - 1. Local Fire and Rescue will initially establish a field incident command structure. If additional assets or specialty Water SAR resources are required, the Mills County EOC will contact IMAC partners and HSEMD to meet the requirements unless existing agreements for water search and rescue exist. See attachment 9.5.

2. If indicated and needed, underwater evidence searches will be coordinated by the SAR Coordinator under the direction of the jurisdictional law enforcement agency.
- F. Downed Aircraft Search and Rescue
1. Local law enforcement would primarily be the lead agency in search for downed or missing aircraft when there is a reasonable likelihood that the craft is located within their jurisdiction. If the aircraft is confirmed as downed, the incident becomes a ground SAR operation under the direction of a Unified Command structure comprised of the jurisdictional law enforcement and fire-rescue agency.
 2. Emergency Management will be notified of all suspected or confirmed missing aircraft and will activate the Mills County EOC as needed. Contact with HSEMD will be made if external resources are required. State resources assigned will fall within the established local incident command structure.
 3. Emergency Management will serve as the Liaison Officer to State, Federal, and Military Officials in missing or downed aircraft incidents.
 4. Local response agencies will play a support role in response to reports of federal government or military aircraft that are missing, relinquishing command upon notice of the military or federal official assigned.
- G. Air Search & Rescue
1. Some areas may require air support or aircraft may be the primary tool for wide-area or rough-terrain search and rescue operations.
 2. The SAR Coordinator will appoint an Air Operations Branch Director to coordinate air support when multiple aircraft will be used. The Air Ops Branch Director will focus on communications and search pattern coordination.
- H. Technical Search & Rescue
1. As a result of disaster or other incidents, technical search and rescue techniques or equipment may be required. These operations require qualified personnel trained in specialty techniques and equipment. Such responses may include, but are not limited to: confined space entry, rope or high angle rope rescue, trench rescue, building collapse rescue, and swift/floodwater rescue.
 2. Local emergency responders must be trained to identify the situations that require these specialty skill sets in order to obtain appropriate assistance to meet the needs of the citizens as well as to protect emergency responders or well intentioned community volunteers from attempting rescues in situations that poses unique hazards and risks.
 3. Technical SAR Teams may be available from neighboring jurisdictions and requested as part of an established MOU or through IMAC. Additionally, HSEMD may deploy Iowa Task Force 1 USAR when determined appropriate or request a FEMA USAR Task Force(s) when indicated. These requests will be made through the Mills County EOC.

IV. RESPONSIBILITIES

- A. Mills County Sheriff Dept / Glenwood Police Dept. / Mills County ESA
 - 1. Responsible for and commands SAR operations.
 - 2. Identifies the resource requirements.
 - 3. Requests needed resources from Mills County Emergency Management (i.e. communications gear, mobility units, mass casualty supplies, welfare counseling, and sustenance).
 - 4. Coordinates SAR activities and training with volunteer organizations.
 - 5. Provides personnel for SAR activities under the direction and control of the jurisdictional incident commander.
 - 6. Maintains policies and procedures for response to SAR incidents.

- B. Mills County Emergency Management
 - 1. Organizes, trains and administers SAR coordination.
 - 2. Mills County Emergency Management Agency is the administrative and logistical arm of SAR.
 - 3. Registers trained professional and/or volunteers involved in SAR.
 - 4. Requests state and federal assistance as needed.

- C. Mills County Communications Center / Mills County and Municipal Government
Other local and Voluntary Agencies/Organizations
 - 1. Assists and supports SAR operations when requested and as feasible.

V. PHASES OF EMERGENCY MANAGEMENT

- A. Preparedness
 - 1. Mills County Sheriff Dept. / Glenwood Police Dept. / Mills County ESA
 - a. Appoint a SAR Coordinator who is capable of maintaining SAR field operations and serving as advisor to local SAR units.
 - b. Assess equipment and training needs.
 - c. Maintain and distribute call-out list.

 - 2. Mills County Emergency Management
 - a. Perform SAR administrative functions and serve as administrative advisor to local SAR units.
 - b. Maintain an operational Mills County EOC and EOC Operating Procedures.
 - c. Maintain a SAR personnel/resource list, including local / state / federal information.

 - 3. Mills County Communications Center / Mills County and Municipal Government
Other local and Voluntary Agencies/Organizations
 - a. Maintain emergency operating procedures.
 - b. Maintain personnel and equipment resource lists.
 - c. Maintain an updated call-out list with procedures for implementation.
 - d. Assist with the recruiting and training of SAR volunteers.
 - e. Assess equipment and training needs. Ensure that equipment is in proper working order and response personnel retain proper certification to meet state and local requirements.

- B. Response
1. SAR Coordinator
 - a. Reports to an incident site integrating into the existing incident command structure, assume supervision of SAR operations or establish incident command, as appropriate.
 - b. Notifies appropriate SAR units of activation. May request emergency management to assist with this function.
 - c. Requests additional resources, as needed. Resource requests should be made through the normal emergency management channels.
 - d. Responsible for maintaining a log of SAR activities during the mission.
 2. Mills County Sheriff's Department and Glenwood Police Department
 - a. Provide requested assistance to SAR Operations.
 - b. May command and conduct SAR operations under appropriate conditions.
 3. Mills County Emergency Management
 - a. Activates the Mills County EOC, if appropriate, and/or establishes necessary communications support.
 - b. Coordinates local SAR resources, as necessary.
 - c. Submits requests to HSEMD for additional resources when local capabilities are exceeded.
 - d. Supports SAR operations as needed.
 4. Fire Departments
 - a. Provides for rescue operations commensurate with the availability of equipment and the degree of specialized training.
- C. Recovery
1. SAR Coordinator
 - a. Ensures mission is complete and all personnel are accounted for.
 - b. Ensures that equipment is returned to good working order and all personnel are accounted for.
 - c. Provides appropriate data to ensure after action review of SAR Operations.
 2. All Organizations
 - a. Continues SAR mission until subject(s) has been located or the SAR Coordinator terminates the search.
 - b. Restores equipment, vehicles, etc., to a state of operational readiness.
 - c. Attends critique of SAR mission, as requested by the SAR Coordinator.

VI. ATTACHMENTS

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|--------------------|-----------------------------------------|
| ESF Attachment 9a. | Emergency Response Checklist |
| ESF Attachment 9b. | Basic SAR Field Operations Guide |
| ESF Attachment 9c. | Structural Triage Marking System |
| ESF Attachment 9d. | Search Assessment Marking System |
| ESF Attachment 9e. | MOUs with Water Search and Rescue Teams |
| ESF Attachment 9f. | SAR Forms and Logs |

VI. ESF REFERENCE DOCUMENTS (FOUND IN BASIC PLAN)

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| ESF Reference Doc 7.1 | Resource Lists (Address, Phone, Email, etc) |
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**ESF Attachment 9a.
Emergency Response Checklist – Search and Rescue**

Emergency Response Checklist – Search and Rescue	
Emergency Management Phase	Actions
<p><u>Mitigation</u> Activities designed to prevent or lessen the effects of a hazard.</p>	<ul style="list-style-type: none"> ___ Review the hazards most likely to affect the County and identify potential vulnerabilities in the search and rescue function. ___ Develop plans to overcome these deficiencies (i.e., new equipment, training, mutual aid procedures).
<p><u>Preparedness</u> Activities designed to improve Readiness capabilities.</p>	<ul style="list-style-type: none"> ___ Maintain this ESF as well as supporting operating procedures and guidelines. ___ Ensure personnel receive appropriate emergency operations training. ___ Ensure mutual aid agreements are in place with surrounding jurisdictions with needed SAR resources. ___ Develop and maintain mutual aid agreements with private area resources that could be useful during search and rescue operations. ___ Participate in Emergency Management training and exercises.
<p><u>Response</u> Activities designed to save lives, protect property and contain the effects of an event.</p>	<ul style="list-style-type: none"> ___ Respond as required on a priority basis. ___ Activate mutual aid if needed. ___ Coordinate activities with other responding agencies. ___ Coordinate with search and rescue elements responding from outside the jurisdiction. ___ Alert or activate off-duty and auxiliary personnel as required by the emergency. ___ Conduct other specific response actions as dictated by the situation.
<p><u>Recovery</u> Activities designed to ensure continued public safety and return the community to pre-disaster levels.</p>	<ul style="list-style-type: none"> ___ Replenish supplies and repair damaged equipment. ___ Continue all activities in coordination with the EOC based on the requirements of the incident. ___ Participate in after-action briefings and develop after-action reports. ___ Make necessary changes in this ESF and supporting plans and procedures.

**ESF Attachment 9b.
Basic SAR Field Operations Guide (FOG)**

Attachment 9b. is intended for use by trained personnel and as an operational/planning tool. Responders shall not perform any skills beyond their training qualification(s).

COLLAPSE**ON ARRIVAL:**

Determine structural stability prior to ANY entry.
Assess type of collapse and void area potentials.
Check for or control damaged utilities, gas flow, and electrical lines.
Triage and treat any visible surface victims.
Use FEMA marking system for assessment.
Determine shoring and expertise needed.
Assess hazards: overhead (hanging floors, walls, wires, poles), surface (lines down, flooding, holes), below grade (shafts, electric, gas, etc.).

Contact Technical Rescue Team and Structural Engineer as appropriate.

INITIAL VICTIM LOCATING:

Interview survivors.
Check position of offices, bedrooms, collection points.
Shut off any heavy equipment to aid “tap & listen” searches.
Call technical teams for specialized devices (vibration, sound, and video).
Start mapping area and incident (drawing of scene, estimate victim locations, identify hazards & utilities on map).
Check obvious voids.

RESOURCES:

Deploy local SAR Teams or those identified in Mills County EOP.
Consider using public works personnel and equipment for assistance.
If necessary, request activation of State and/or FEMA USAR Teams.
Obtain list of private contractors for heavy equipment, shoring materials, structural engineers, etc.
Strictly maintain site security and tight perimeters.
Key EMS personnel into review of crush injury guidelines and ready appropriate equipment.
An approved credentialing / controlled entry system shall be used for all personnel.

**ESF Attachment 9b. (continued)
Basic SAR Field Operations Guide (FOG)**

Attachment 9b. is intended for use by trained personnel and as an operational/planning tool. Responders shall not perform any skills beyond their training qualification(s).

CONFINED SPACE**ON ARRIVAL:**

NO ONE INTO CONFINED SPACE UNTIL ASSESSMENTS COMPLETE

Secure scene – no unauthorized entry through perimeter.

Identify any immediate outer hazards.

Secure the competent person on scene, if possible (person with location knowledge/information).

Determine number of victims and probable location.

Deploy or request qualified confined space entry personnel and secure entry permit, as applicable.

Determine: hazardous products in the space, type of hazards (mechanical, depth, electric, pneumatic), size and depth of area where victims are, structural stability of space and entry area.

Diagram the space and exits.

Secure appropriate resources for rescue (monitoring equipment, accountability system, communications, ventilation, PPE/respiratory protection, retrieval equipment).

PRE-ENTRY:

Establish safe perimeter.

Ensure accountability system is understood.

Test atmosphere (flammable, toxic, oxygen level).

Perform proper ventilation.

Secure all hazards, use lockouts and guards.

Review action plan and emergency plan.

RESCUE:

Review primary and back-up plan.

Ensure entry team is ready:

- proper PPE
- personnel accountability
- explosion proof lighting/communications
- test communications
- respiratory systems in place/functional
- air monitoring in place/functional
- retrieval harness on, secure
- retrieval and back-up systems functional

Ensure back-up team is ready (with all above steps checked).

Conduct victim location/triage-assessment/packaging/extrication.

FOLLOW OSHA AND DEPARTMENT/TEAM GUIDELINES AT ALL TIMES

**ESF Attachment 9b. (continued)
Basic SAR Field Operations Guide (FOG)**

Attachment 9b. is intended for use by trained personnel and as an operational/planning tool. Responders shall not perform any skills beyond their training qualification(s).

TRENCH RESCUE**ON ARRIVAL:**

Stage apparatus a minimum 500 feet away.
Turn off heavy equipment in the vicinity of the trench.
Stop all traffic and trains in immediate area.
Establish a safety perimeter and keep everyone out.
Control crowd, utilize law enforcement for perimeter security.
Stay out of trench unless properly qualified.
If no local personnel available, contact closest SAR team with trench rescue qualifications.
Determine shoring and additional expertise needed.
Consider using available contractors/equipment assistance if deemed reliable.

DETERMINE THE FOLLOWING:

How long victim has been trapped.
Who the competent person is on scene.
Depth of trench at time of collapse.
Width of trench and any equipment inside with the victim.
Approximate location of victim (when not visible).
Soil type, shoring being used (if any).

ASSESS THE FOLLOWING HAZARDS:

Weather and time of day (expect rain, consider heavy traffic, lighting needs, worker rehab).
Water entering trench from below grade sources – need for pumps.
Water runoff entering trench – need for dike & divert.
Gas, hazmat, electrical or mechanical hazards present.
Size and proximity of spoil pile (plan on moving it).
Equipment in trench with victim.
Consider medical needs of victim: hypothermia, crush injury, etc.).

Command and Safety responsible for ensuring that shoring used for rescue is engineered to provide greatest safety for rescuers.

ESF Attachment 9b. (continued)
Basic SAR Field Operations Guide (FOG)

WATER RESCUE / SUBMERSION

Attachment 9b. is intended for use by trained personnel and as an operational/planning tool. Responders shall not perform any skills beyond their training qualification(s).

DO NOT ATTEMPT RESCUE UNLESS PROPERLY TRAINED / EQUIPPED

INITIAL RESPONSE CREWS: PUT ALL PERSONNEL OPERATING NEAR WATER IN PERSONAL FLOTATION DEVICES

SUBMERGED VICTIMS - call qualified water rescue personnel and:

Immediately interview potential witnesses.

Determine last seen point, and attempt to establish: victim location in reference to objects on shore, victim distance from shore.

Compare witness statements for probable victim location accuracy.

Recon for rope anchor points and launch points for water craft / divers.

STRANDED VICTIMS – call qualified water rescue personnel and:

Provide flotation device to victim if possible.

Recon area for rope anchors and launch points.

Consider deploying resources downstream.

Consider calling for helicopter rescue (if available).

REACH - THROW - ROW - TOW - GO - HELO

WATER RESCUE TEAM CONSIDERATIONS

Consider Response Mode: Rescue or Recovery

- Time victim in the water (submerses)
- Water temperature (>40F for >15 minutes = diminished chance of survival)
- Circumstances (entrapment, treading water, trauma)
- Resources and personnel qualifications/experience
- Availability of back-up divers
- Patient age and health profile

Physical (scene) evaluation:

- Potential underwater obstructions
- Suitability of shore for operations
- Water velocity (CFM)
- Depth and visibility
- Dangers (low-head dams, cables, hydraulics, etc)

**ESF Attachment 9c.
Structural Triage Marking System**

When at all possible and feasible, structures should be assessed for their integrity and safety before continued search and rescue operations are conducted. The use of SAR personnel trained to evaluate a structure or in cooperation with structural engineers, assessed structures should be marked using a common system throughout the county as follows.

If structural triage is conducted prior to full-scale search and rescue operations, structures shall be marked in the following manner.

- Draw a 2' x 2' box at the entrance (or draw an arrow to indicate the entrance) of the compromised structure. Use orange spray paint or lumber crayon.
- Mark hazards and condition of building inside the box.



Structure is safe for SAR (minor damage, or structure is fully collapsed)



Structure is significantly damaged with some safe areas, but other areas which need to be shored up, or braced. Falling and collapse hazards need to be removed.



Structure is unsafe for SAR. May collapse suddenly.



Entrance is located in the direction of the arrow.

HM

Hazardous material present (note type of material). Consult HazMat Team and co-operate at this location.

Write *time, date, specialist ID* outside the upper right portion of the box.

The example below illustrates a triaged structure with the following findings: Assessment conducted on April 16, 2010 at 1pm by Special Rescue Team 21. An arrow shows the location of the entrance to structure and that the structure may need shoring or bracing before continuing operations at this location.



4/16/10 1300
HM-GASOLINE
SPC RESC 21

**ESF Attachment 9d.
Search and Rescue Assessment Markings**

When search and rescue operations are conducted in response to an emergency or disaster, it is vital to efficiently utilize critical assets such as trained search and rescue personnel. Without a coordinated effort and common methodology, duplication of effort can lead to inefficient use of resources, ultimately delaying the ability to locate and treat victims of disaster.

When conducting search and rescue operations involving structures, all rescue teams deployed shall be briefed and instructed to utilize the following assessment markings.



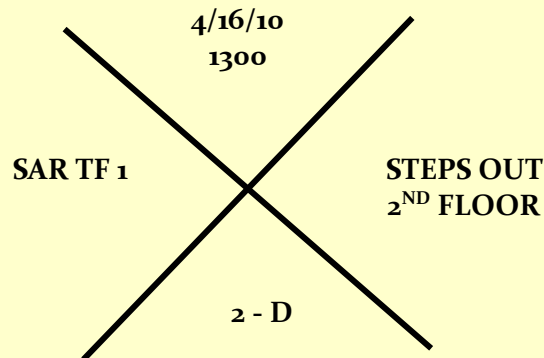
Single slash (2' long) indicates that a SAR Team is currently in the structure conducting operations.



Cross/slash (2' x 2') indicates the SAR Team has left the structure/area.

The following information shall be placed in the four quadrants of the cross/slash.

Team ID.....Left Quadrant
 Time & Date Team left structure.....Upper Quadrant
 Personnel Hazards.....Right Quadrant
 # Victims still inside the structure.....Lower Quadrant
(draw an "x" or zero if there are no victims remaining)



The example above indicates that SAR Task Force 1 left this property at 1pm on the 13th finding 2 deceased victims left in the building and noted that the steps to the 2nd floor were out. It is recommended to use "D" for deceased on markings and "L" for live as opposed to writing it out in the interest of the community and media attention.

SAR Teams should avoid using orange spray paint as that will be reserved for structural triage operations (if conducted) and it would be recommended to utilize a different color for each operational period where active SAR operations will be conducted.

**ESF Attachment 9e.
MOUs with Water Search and Rescue Teams**

None at this time.

**ESF Attachment 9f.
Search and Rescue Forms**

In process....