

GEORGIA DEPARTMENT OF CORRECTIONS Standard Operating Procedures		
Functional Area: SUPPORT SERVICES/FIRE SERVICES	Reference Number: IVN10-0009	Revises Previous Effective Date:
Subject: OCCUPATIONAL SAFETY & HEALTH/REHABILITATION		NEW
Authority: WETHERINGTON/HODGE	Effective Date: 4/01/02	Page 1 of 8

I. POLICY:

This standard applies to all emergency operations and training exercises where strenuous physical activity or exposure to heat or cold creates the need for the rehabilitation of personnel. It was promulgated to:

- A. Prevent injuries, illnesses, and deaths that may result from excessive fatigue.
- B. Establish procedures for medical evaluation and treatment, food and fluid replenishment, and relief from extreme climatic conditions during emergency operations and prolonged training exercises.

II. APPLICABILITY:

All Department of Corrections Certified Firefighters in State and County Fire Departments.

III. RELATED DIRECTIVES:

NFPA 1500

IV. DEFINITIONS:

- A. **Level I rehabilitation:** Situations of short duration. The incident commander may elect to use the rehabilitation supplies from an apparatus on the scene or may special-call the rehab unit to the scene. Typically in Level I rehab, the crews are not rotated and the incident or training exercise has a limited duration.
- B. **Level II rehabilitation:** Situations that require a major time and personnel commitment. Examples include a major

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fire or a lengthy training exercise in which the Firefighter's health and safety must be addressed.

V. ATTACHMENTS:

NONE

VI. PROCEDURE:

A. (General)

1. The Station Chief shall evaluate the circumstances at each incident and shall make early, adequate provisions for the rest and rehab of all Firefighters working at the scene. These provisions include:
 - a. Medical evaluation.
 - b. Treatment and monitoring.
 - c. Food and fluid replenishment.
 - d. Mental rest.
 - e. Relief from extreme climatic conditions and other environmental factors present at the incident.
2. During prolonged incidents, strenuous training sessions, and periods of extreme heat or cold, the Station Chief shall request a rehab. Unit be dispatched to the scene.

B. REHABILITATION SECTOR

1. The Station Chief shall establish a rehabilitation sector when conditions indicate that Firefighters working at an incident or training exercise require rest and rehab.
2. The Station Chief shall appoint a rehab officer who will assume command of the rehabilitation sector. At most incidents, the location of the rehabilitation sector will be designated by the Station Chief. However, if the incident commander

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has not designated a rehab site prior to the appointment of a rehab officer, the rehab officer shall promptly select an appropriate location based on the most desirable site available.

3. The rehab sector should be placed in a location that allows Firefighters to physically and mentally rest and recuperate from the stress, pressure, and demands of the emergency operation or training evolution.
4. The rehab sector should also be located far enough away from the incident scene to allow Firefighters to safely remove their protective clothing and SCBA.
5. The rehab sector should be located in an area that provides suitable protection from the prevailing environmental conditions. If possible, the sector should be in a cool, shaded area during hot weather and in a warm, dry area during cold weather.
6. If the rehab sector is located outdoors, the area should be free of ants and other stinging or biting insects.
7. Firefighters in the rehab sector should not be exposed to exhaust fumes from apparatus, vehicles, and motorized equipment, including those involved in the rehabilitation sector operations.
8. The rehab sector should be large enough to accommodate multiple crews and should allow for expansion or contraction as the size of the incident varies.
9. The rehab sector should be easily accessible by EMS units and other support vehicles.
10. The rehab sector should be located close enough to the incident to allow Firefighters to promptly re-enter the emergency operation site after recuperation.
11. The following areas should be considered when selecting a site for the rehab sector:

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- a. A nearby garage, building lobby, or other structure.
 - b. At least two floors below a fire in a high rise building.
 - c. A large climate-controlled vehicle such as a school or transit bus.
 - d. Fire apparatus, ambulances, or other emergency vehicles at the scene or called to the scene.
 - e. The fire department rehab unit.
 - f. An open area in which a rehab site can be created by using tarps, fans, etc.
 - g. At an industrial site, the rehab sector shall be placed outside the fenced compound area.
12. The rehab officer shall secure all the resources required to adequately staff and supply the rehab sector. The supplies may include the items listed below:
- a. Fluids such as water, Gatorade, and ice.
 - b. Food such as soup, broth, or stew in hot/cold cups.
 - c. Medical equipment such as blood pressure cuffs, stethoscopes, oxygen administration devices, cardiac monitors, intravenous solutions, and thermometers. (Medical Supplies may be furnished by the ambulance assigned to the rehabilitation sector.)
 - d. Other items such as awnings, fans, tarps, smoke ejectors, heaters, dry clothing, extra equipment, floodlights, towels, traffic cones, and fire line tape (to identify the entrance and exit of the rehabilitation area).

C. GUIDELINES

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1. The establishment of a rehab sector shall be considered during the initial planning stages of an emergency response. The climatic or environmental conditions of the emergency scene should not be the sole justification for establishing a rehab sector. Any activity or incident, whether emergency or nonemergency, that is large in size, long in duration, and labor intensive will rapidly deplete the energy and strength of personnel.
2. Climatic or environmental conditions that indicate the need to establish a Rehabilitation Sector include a heat index above 95 degrees.
3. A critical factor in the prevention of heat stress injury is the intake of water and electrolytes during periods of intense physical activity.
 - a. During these periods, an individual should drink at least one quart of water or Gatorade per hour.
 - b. Adequate fluid intake is important even during cold weather operations. Despite outside temperatures, heat stress injuries may occur during firefighting or other strenuous activity anytime that protective clothing and equipment are worn.
 - c. Individuals should avoid caffeinated and carbonated beverages because both interfere with the body's water conservation mechanisms.
 - d. Certain drugs also impair the body's ability to sweat. Use caution if a Firefighter has taken antihistamines, diuretics, or stimulants.
4. If the duration of an incident extends through regular mealtimes, the Department of Corrections shall provide food to the Firefighters at the scene whenever it is possible to do so.
5. Forty-five minutes of work time is generally recommended as an acceptable level of work prior to mandatory rehabilitation.

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- a. Members having worked through two full 30-minute-rated SCBA cylinders, or for 45 minutes, shall be rotated to the rehabilitation sector for rest and evaluation.
 - b. In all cases, an objective evaluation of a member's fatigue level is the appropriate criterion for determining if rest is required. Rest periods for Firefighters in the rehab sector shall be at least 10 minutes or greater.
 - c. Crews sent to rehab should be replaced by fresh crews from the staging sector. Crews released from the rehab sector should be rotated to the staging sector prior to returning to work. This procedure ensures that fatigued individuals do not return to work before they are rehabilitated.
6. Firefighters should not be removed from a hot environment and placed directly into an air-conditioned environment because the body's cooling system may shut down in response to the external cooling. An air-conditioned environment is acceptable only after a cool down period at ambient temperature with sufficient air movement.
 7. EMS at the advanced life support level will be provided at each incident. EMS personnel (paramedics) will evaluate the vital signs and the physical condition of Firefighters as they are rotated through the rehab sector.
 - a. EMS personnel will determine whether a Firefighter will be allowed to return to work, remain in rehab, or receive further medical treatment and be transported to a medical facility for further evaluation.
 - b. Continued rehabilitation consists of the ongoing monitoring of vital signs, rest, and fluid intake. Medical treatment for a Firefighter whose signs and symptoms indicate potential problems will be provided in accordance with local medical control

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procedures. EMS personnel will be aggressive in determining that potential medical problems exist.

8. When working crews arrive at the rehab sector, each Firefighter's vital signs shall be taken and recorded. The following criteria are used in the evaluation of fireground personnel during a fire or EM incident.
 - a. Transportation to the hospital is required when the diastolic blood pressure is greater than or equal to 130.
 - b. Transportation to the hospital is also required when the diastolic blood pressure is greater than or equal to 110 and the individual is symptomatic.
 - c. An individual may be transported to the hospital for further evaluation when the diastolic blood pressure is less than or equal to 110 and the individual is symptomatic.
 - d. The individual may be transported when the systolic blood pressure is greater than or equal to 200 and after further evaluation and rest the systolic blood pressure is still greater than or equal to 200.
 - e. When a pulse rate of greater than or equal to 140 is found, administer oxygen and fluids, rest for a minimum of 10 minutes, and reassess the individual. If the heart rate is less than 140, the individual may return to work.
 - f. If after 10 minutes the heart rate still remains above 140, the individual must rest for an additional 30 minutes. Administer fluids and oxygen, and record the heart rate and rhythm on a cardiac monitor and obtain an EKG printout.
 - g. If after 30 minutes the pulse rate remains above 140, transport the Firefighter to a medical facility for further evaluation.

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h. In the above cases, Medical Control will be contacted in every situation and treatment or transport will be determined in conjunction with Medical Control.

9. All medical evaluations shall be properly recorded by the paramedic, along with the individual's name and chief complaints. The form must list the date, time, and incident number and be signed by the rehab officer.
10. Firefighters sent to rehab shall enter and exit the rehab sector as a crew. The crew designation, number of crew members, and times of entry to and exit from the rehab sector shall be documented by the rehab officer. Crews shall not leave the rehab sector until released by the rehab officer.

D. RESPONSIBILITIES

1. All Station Chiefs shall monitor the condition of each Firefighter working under their command and shall ensure that adequate steps are taken to provide for each Firefighter's safety and health. The incident command system is to be used to request that a crew be relieved and for the reassignment of fatigued crews.
2. During periods of hot weather, Firefighters are encouraged to use their individual water bottles and drink water or Gatorade throughout the workday. During any emergency incident or training evolution, all Firefighters shall advise their supervisor when they believe their level of fatigue or exposure to heat or cold is approaching a point that could affect them, their crew, or the operation in which they are involved. Each Firefighter shall also monitor the health and safety of the other Firefighters of his crew.

(Heat Stress Index)

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TEMPERATURE	DANGER	INJURY THREAT CATEGORY
Below 80 degrees F	None	Little or no danger under normal circumstances
80 to 90 degrees F	Caution	Fatigue possible if exposure is prolonged and there is physical activity
90 to 105 degrees F	High	Heat cramps and heat exhaustion possible if exposure is prolonged and there is physical activity.
105 to 130 degrees F	Extreme	Heat cramps or exhaustion likely heat stroke possible if exposure is prolonged and there is physical activity
Above 130 degrees F	Mortal	Heat stroke imminent

Add 10 degrees F when protective clothing is worn and add 10 degrees F when in direct sunlight.

(Windchill Index)

Windchill Temperature (degrees F)	Danger
Above 25 degrees F	little danger for properly clothed person
25 to 75 degrees F	Increasing danger, flesh may freeze
Below 75 degrees F	Great danger, flesh may freeze in 30 seconds