	COMMERCE FIRE DEPARTMENT Standard Operating Guidelines
	Subject: Firefighter Rehabilitation (Re-Hab)
	Reference Number: 3.05
	Effective Date: 2/12/2014 **Last Date Revised:** 7/9/2015
	Approved By: Chief Kevin Dean

Purpose: The purpose of this guideline is to establish procedures and guidelines for firefighter rehabilitation at the scene of fires and other emergencies in order to ensure the member's physical and mental state does not deteriorate to a point that affects the safety and/or integrity of the operation.

To provide personnel with adequate rest, re-hydration, and medical evaluation during emergencies of extended duration, where exposure to extreme heat or cold exists, or where physical stress exists.

Policy: Guidelines shall be in accordance with *NFPA 1584 Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises.*

Scope: These Guidelines shall apply at all operations where firefighter rehabilitation is required as determined by the Incident Commander or Incident Safety Officer.

Responsibilities:

Firefighters:

1. Pre-hydration is particularly helpful, where firefighters drink at least 8 ounces of water or diluted electrolyte replacement fluid before entering a high-heat environment, if possible. Firefighters should maintain hydration during the day.
2. Firefighters must recognize the signs and symptoms of heat and physical stress and dehydration, in themselves and other team members. They must rotate out of their assigned task, along with other members of their team, before symptoms become severe.
3. Orders to report to Rehab will be obeyed promptly, even though the individual may not feel that rotation is necessary.

Officers:

1. Officers will evaluate the working environment in terms of heat and physical stress and decide on appropriate rotation intervals.
2. Consumption of two SCBA cylinders during continuous work time will be the maximum work period. If the work environment is particularly stressful then

consumption of only one cylinder, or a fixed period of time, may be the optimum work cycle.
3. Officers should schedule task assignments so that firefighters rotated out of the high-stress environment spend as much time outside as they did inside. Outside time may be spent in Rehab if necessary, or in support tasks that are less physically demanding.
4. Officers should closely monitor anyone working in a high stress environment and order teams to rehab as needed, even though the full work period has not been worked.

Medical Personnel:

1. If the EMT or Paramedic in Rehab determines that the firefighter's physical condition is a potential health threat, then the firefighter may not re-enter the high-stress environment.

2. Firefighter vital signs and health-risk criteria are used as follows:

A. Pulse Rate - If the pulse rate exceeds 75% of the Age Adjusted Maximum Heart Rate (220 minus age) then the firefighter must remain in Rehab until the pulse is no greater than 110 beats per minute. In any case, the minimum stay in Rehab is 10 minutes.
B. Pulse rates will be taken at ten-minute intervals, or until acceptable pulse rate is reached.
C. Temperature - If the heart rate is over 110 beats per minute then take the firefighter's temperature, before re-hydration begins.
D. If the temperature is over 100.6 F then remove the firefighter's protective clothing and take a full set of vitals: blood pressure, respiration rate, pulse, and temperature. Begin re-hydration using cool dilute fluids (50% water and 50% electrolyte replacement fluid, such as Gatorade), taken at a rate of 8 ounces per ten minutes, or 1.5 liters per hour.
E. If the firefighter appears semi-conscious, or has difficulty, drinking or swallowing ALS will be dispatched to administer fluids by IV.
F. Blood Pressure - Measure orthostatic blood pressure by taking BPs and pulse while lying down, then sitting up. An increase of 10 pulse beats per minute or a decrease in systolic BP of 10 mm Hg is indicative of orthostatic dehydration and aggressive re-hydration must begin immediately.

3. Pulse rates, blood pressures, and temperatures must be taken until the firefighter's heart rate is less than 110 beats per minute, the temperature is at or below 99 F, and orthostatically measured blood pressures are equal, indicating that re-hydration has been successful. Firefighters may not reenter the work environment until these temperatures, pulse rates, and blood pressures have been reached.

4. Firefighters released from Rehab will report to Staging area for reassignment.

5. Paramedics/EMTs will communicate with officers or the appropriate level in the Incident Command System if the condition of firefighters coming into Rehab indicates that work periods in the high-stress environment are too long.

6. Paramedics/EMTs will maintain written records of vital signs on any firefighter whose condition suggests that further medical treatment and follow-up may be required. These records will be given to the Incident Commander at the end of the incident.

Procedure:

1. Location of the Rehabilitation Sector.

Location of the rehabilitation sector will be designated by the IC. If a specific location has not been designated, the Rehab Officer shall select an appropriate location based on the site characteristics as follows:

- Remote from the demands and hazards of the emergency or training evolution.
- Provide suitable protection from the prevailing environmental conditions.
- Free of exhaust fumes from apparatus, vehicles, or equipment.
- Large enough to accommodate multiple crews.
- Easily accessible by EMS crews.
- Allow prompt re-entry to the emergency operation upon complete recuperation.

2. Recovery/Medical Evaluation

A. Recovery - After establishing a rehabilitation sector away from the fire ground, it shall be required that all fire-ground crews rotate out of the fire ground after using not more than two bottles or 90 minutes of rated air supply or when determined by a commander.

B. Medical Evaluation - Emergency Medical Service shall be provided and staffed by the most highly trained and qualified EMS personnel on the scene (at a minimum of EMT level). EMS personnel shall examine members and make proper determination of their fitness (return to duty, continued rehabilitation, or medical treatment and transport to a medical facility).

1) EMS personnel will check vital signs after 10 minutes and document findings on the Rehabilitation Form. If there are no physical complaints, firefighters can be sent to a canteen area for re-hydration and to relax.

2) After 15 minutes, the Incident Commander is notified that the crew is ready to return to the fire-ground. Work/rest cycles should not exceed 45 minutes.

3. Rehabilitation sector equipment should include:

A. Fluids - Water, activity beverages, oral electrolyte solutions.

B. Food - Soup, broth, stew in hot/cold cups.

C. Medical - BP cuffs, stethoscopes, oxygen administration devices, cardiac monitors, IV solutions, and thermometers.

D. Other - Awnings, fans, tarps, smoke ejectors, dry clothing, heaters, flashlights, blankets, towels, traffic cones, and fire-line tape.

4. When the heart rates exceed 120 beats per minute or an orthostatic change in blood pressure greater than or equal to 15 mm mercury occurs, indicating dehydration, an oral temperature should be taken. In addition, if the individual is symptomatic in any way or if a member's temperature exceeds 100.6 degrees F, he/she should not be permitted to wear protective equipment and rehabilitation time should be increased until normal body temperature and/or mentation is attained.