



Scarborough Fire Department

Scarborough, Maine



Standard Operating Guidelines

Book:	Emergency Operations
Chapter:	Firefighting Operations
Subject:	3320 - Rehabilitation Sector
Revision Date:	3/11/2009 revised 9/23/15, 12/21/18
Approved by:	<i>B. Michael Thurlow</i>

PURPOSE

To establish a policy for the medical observation and rehabilitation of personnel at emergency scenes and training operations. To ensure the physical and mental condition of the members operating at the scene of an emergency or training exercise does not deteriorate to a point that affects the safety of any member or that jeopardizes the safety and integrity of the operation.

POLICY

The Incident Commander (IC) will be responsible for establishing, a Rehab Sector and Rehab Station, at incidents where SCBA's are utilized, or there is an activity or situation (i.e. extremes in weather) that causes a significant amount of physical exertion by personnel, or when deemed necessary by the IC, lead Training Instructor, or Safety Officer. Anytime Rehab personnel are assigned to another task, the IC must backfill the Rehab position.

SCOPE

The Incident Commander shall be responsible for considering the circumstances of each incident and for making available adequate provisions for the rest and rehabilitation for all emergency workers. Company officers shall maintain an awareness of the condition of each member operating within their span of control and ensure that adequate measures are taken to provide for their safety and health. The company officer shall request relief and reassignment of fatigued crewmembers from the IC as necessary. The lead instructor will be responsible for anticipating the need for establishing a rehab sector in advance of the actual training evolutions where trainees are under significant physical or emotional conditions.

PROCEDURE

- A. The Incident Commander will determine when and what units will be responsible to establish a Rehab Sector at any incident. Relief or back-up crews will be assigned to replace crews that are going to rehab.
- B. When the All Hands is struck for any box, Biddeford Rescue will be dispatched with the pre-arrival assignment of Rehab town-wide.
- C. The Rehab Station should be set up away from sources of toxic fumes, electrical, structural and environmental hazards of the incident where crews can remove their protective clothing and have their vital signs checked.
- D. The Rehab Station(s) should include a minimum of: a jump kit with O₂, an AED, a long board/straps, spinal immobilization equipment, bottled water, a blanket, and when appropriate, BLS and ALS equipment from the first due ambulance, that can be used by Rehab personnel.
- E. The Rehab Station will also make provisions for the exchange of SCBA bottles no longer available for use with full ones that are. The rule of thumb will be, “Unavailable bottles will have their valves pointed **away** from the scene, full ones valves will point **toward** the scene.”
- F. The selection of an area to establish a Rehab Station should also allow for easy access from the “hot zone” and allow for ease of EMS transport for ill and/or injured members. The Rehab Station should take into consideration sources of lighting, cooling/heating, and protection from the elements. Consider using the fan driven misters that are located on each ladder truck, the cooling chairs that are found on each ladder truck and the squad truck, as well as the Rehab tent which is found on Squad 7. (See Rehab Station Layout Plan.)
- G. After any member consumes two (2) consecutive SCBA tanks worth of air, he/she **must** report to the Rehab Station to have their vital signs taken, have a rest period, be hydrated and be released by the Rehab sector for duty. The IC may assign a Rehab sector as needed at any incident where SCBA is not being used.
- H. Each member operating at an incident, regardless of assignment, shall be responsible to communicate rehab and rest needs to their supervisor.
- I. Vital sign measurements will consist of: pulse rate, blood pressure, respiratory rate, temperature, CO oximeter saturation reading, O₂ pulse oximeter saturation readings and any others as determined by the Rehab Sector personnel. These findings will be recorded on the Rehabilitation Worksheet.
- J. The RPE (Rating of Perceived Exertion) Scale shall be used by the firefighter to help determine their pre and post rehab exertion level. (See attached).
- K. Any person complaining of or found to have the following signs/symptoms at the time they enter the rehab sector will be removed from active duty for further evaluation, treatment and/or transport to the hospital:
 - a. chest pains,
 - b. nausea or vomiting
 - c. headache
 - d. shortness of breath,
 - e. altered mental status,
 - f. elevated CO oximeter saturation reading (>5% for non-smokers, >8% for smokers)
 - g. decreased O₂ pulse oximeter saturation reading (less than 92%)
 - h. extremes in: skin temperature, color, or level of moisture/dryness,
 - i. a rapid (greater than 140 bpm), or irregular heart rate/rhythm,

- j. a Systolic BP of > 200 mmHg or < 90 mmHg, or a Diastolic BP of > 110 mmHg,
- k. any other abnormal vital signs, or any injury judged by the rehab Sector officer to be cause for the member to be unfit for return to duty.
- l. member's RPE rating should be considered when making this evaluation.
- L. If after a twenty (20) minute rehab period, the evaluation reveals a continued pulse rate greater than 120 bpm, a systolic BP 200 mmHg or more, a diastolic BP of 110, continued signs and symptoms as in section K, consider ALS or transport.
- M. If after a twenty (20) minute rehab period, the evaluations are within a normal range as follows, then the member may be available for reassignment:
 - a. pulse less than 100 bpm,
 - b. systolic BP of less than 160 and greater than 100 mmHg,
 - c. diastolic BP of less than 90 mmHg.
 - d. CO oximeter saturation less than 5% for non-smokers and less than 8% for smokers
 - e. O2 pulse oximeter saturation above 92% on room air (RA)
- N. If at any time the rehab sector personnel feel treatment or transport is warranted regardless of the exact value of the vitals signs, then the member will be transported for further treatment.
- O. Members will not return to duty until cleared by Rehab sector personnel.
- P. All operating sectors should maintain an ongoing awareness of the condition of their personnel and use the Rehab Sector to combat excessive fatigue and exhaustion.
- Q. The flow of personnel into and out of the Rehab sector will need to be coordinated and recorded on the appropriate forms. (See attached)

RESPONSIBILITIES

- A. It is the responsibility of all Scarborough Fire Department members to be familiar with and adhere to this policy.
- B. It is the responsibility of all members operating at the incident scene to be aware of the rehab needs of other members on scene and advise the IC accordingly.
- C. It is the responsibility of the EMS providers assigned to the Rehab sector to thoroughly assess firefighter's fitness before allowing them to return to excersional activities.
- D. It is the responsibility of the IC to establish a rehab sector and to enforce the return to excersional activity decision of the rehab sector personnel.

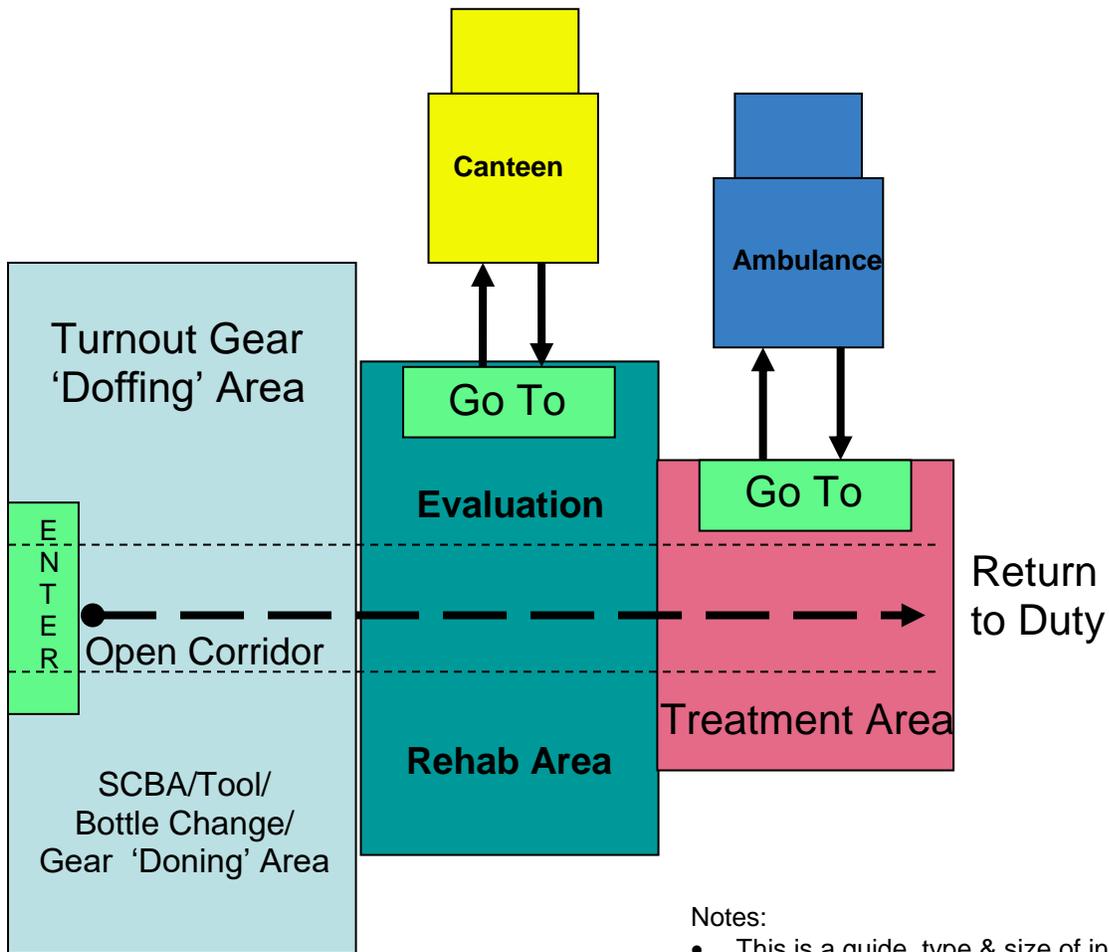
DEFINITIONS

- A. RPE is the Rate of Perceived Exertion which is a member's evaluation of how much energy they have exerted while performing a task.

REFERENCES

- A. NFPA 1584

Rehab Station Layout Plan



Notes:

- This is a guide, type & size of incident will dictate exact set up.
- Tarps should be used in SCBA/Turnout Gear Area.
- Evaluation/Rehab Areas should include shelter from extreme elements. (Buses, buildings, Gorham Rehab Bus) and climate controlled (misting fans, cooling chairs, vehicles, etc.)
- Rescue unit (s) may be needed to become treatment areas.
- Caution: Aim exhaust pipes on running vehicles away from rehab areas.

Rating of Perceived Exertion (RPE)

Rating of Perceived Exertion or RPE is a tool that can be used to help evaluate the level of work a firefighter had been doing before he/she entered the rehab sector. This is related to the pain scale used to judge an individual's pain level.

The RPE can also give the approximate expected pulse rate for that level of work.

Ask the firefighter "On a scale of 1 to 10, 1 being no exertion and 10 being the hardest you have ever worked, what number, would you give the task you were doing?"

#.	Descript of work.	Approximate expected pulse
1.		
2.	None to light work	60 to 110
3.		
4.		
5.		
6.	Somewhat hard to hard	120- 150
7.		
8.		
9.		
10.	Very hard to maximum exertion (Hardest Ever)	160 to 200

*Remember this is only one tool to be used in evaluating a firefighter in the rehab sector. Do not go on this number alone. Other vital signs and physical assessment are needed to completely assess his or her current condition.

		Scarborough Fire Department							
Standard Operating Procedure		Rehabilitation Worksheet							
Fire Site:		Name:							
Date:		Unit:							
Evaluation Time:									
Initial Evaluation	Pulse Rate								
	O2 Sat								
	CO Level								
	Injuries?		Y N	Y N	Y N	Y N	Y N	Y N	Y N
	Feeling Ill?		Y N	Y N	Y N	Y N	Y N	Y N	Y N
	BP: S/D		/	/	/	/	/	/	/
	RPE Scale								
To Hospital if one or more of the following: (Or otherwise if EMS deems necessary)									
Symptoms of heat stroke			Irregular pulse			BP >200 S		O2 % < 92 % after O2 (20 mins)	
Short of Breath			Persistent pulse over 140			BP >110 D			
Abnormal lung sounds			Significant injury			BP < 90 S unless known reason			
Altered mental status			Chest pain or severe headache			CO% > 8% after O2 (20 mins)			
After 20 Minutes and All Workers Have Been Hydrated w / 8-16 oz Water or Electrolyte Solution									
Examination Time									
Second Evaluation	Pulse Rate								
	O2 Sat								
	CO Level								
	Injuries?		Y N	Y N	Y N	Y N	Y N	Y N	Y N
	Feeling Ill?		Y N	Y N	Y N	Y N	Y N	Y N	Y N
	BP: S/D		/	/	/	/	/	/	/
	RPE Scale								
After 20 Minutes and All Workers Have Been Hydrated w / 8-16 oz Water or Electrolyte Solution									
Examination Time									
Third Evaluation	Pulse Rate								
	O2 Sat								
	CO Level								
	Injuries?		Y N	Y N	Y N	Y N	Y N	Y N	Y N
	Feeling Ill?		Y N	Y N	Y N	Y N	Y N	Y N	Y N
	BP: S/D		/	/	/	/	/	/	/
	RPE Scale								
Deny Return to Duty If:									
Vomiting, diarrhea, heat exhaustion last 72 hours			Wheezing or congested lungs						
Large open skin wounds or rash			Pulse over 120 or irregular						
Insulin-using diabetic has not eaten in past four hours			CO level over 5 (non-smokers) - 8% (smokers)						
			O2 % under 92% on RA						