HIGH RISK/LOW FREQUENCY

HUDSON FIRE DEPARTMENT Standard Operating Guidelines	GUIDELINE NO: 200.09 SUBJECT: REHAB OPERATIONS
APPROVAL: Scott St. Martin, Fire Chief	Effective Date: 5-16-16 Revised Date: n/a

PURPOSE

To ensure that the physical and mental condition of operating at the scene of an emergency or training exercise does not deteriorate to a point that effects the safety of each crew member or jeopardizes the safety and integrity of the operation.

RESPONSIBILITY

1. All Chief and Company Officers have the responsibility to comply with and ensure that the personnel under their command are adequately trained, fully understand, and comply with this guideline.

2. All firefighters have the responsibility to learn and follow this guideline.

GUIDELINE

A. Rehabilitation shall commence when fire/emergency operations and/or training exercises possess a health and safety risk.
B. Rehabilitation shall be established for large scale incidents, long-duration and/or physically demanding incidents/training, and extreme temperatures.
C. The incident commander shall establish rehabilitation according to the circumstances of the incident.
D. The rehabilitation process shall include the following:
   1. Rest
   2. Hydration to replace lost body fluids
   3. Cooling (passive and/or active)
   4. Warming
   5. Medical monitoring (attachment #1)
   6. Emergency medical care if required
   7. Relief from extreme climatic conditions (heat, cold, wind and rain)
   8. Calorie and electrolyte replacement
   9. Accountability (attachments #2 and #3)
   10. Release

E. The Incident Commander shall be responsible for the following:
   1. Include rehabilitation and incident/event size-up.
   2. Establish a rehabilitation group to reduce adverse physical effects on responders while operating during fire/emergencies, training exercises, and extreme weather conditions.
   3. Designate and assign a group supervisor to manage rehabilitation.
   4. Ensure sufficient resources are assigned to rehabilitation.
   5. Ensure EMS personnel are available for emergency medical care of responders as required.

F. The Rehabilitation Group Supervisor shall be responsible for the following:
   1. Don the rehabilitation group supervisor vest (if available).
   2. Whenever possible, select a location for rehabilitation with the following site characteristics.
      a. Large enough to accommodate the number of personnel expected (including EMS personnel for medical monitoring), with a separate area for members to remove personal protective equipment.

b. Accessible for an ambulance and EMS personnel should emergency medical care be required.
c. Removed from hazardous atmospheres including apparatus exhaust fumes, smoke, and toxins often encountered on the incident scene.
d. Shade in summer and protection from inclement weather at other times.
e. Access to a water supply (bottled or running) to provide for hydration and active cooling.
f. Away from spectators and media.

3. Ensure personnel in rehabilitation "dress down" by removing their bunker coats, helmets, hoods, and opening their bunker pants to promote cooling (prior to entering the rehab area).
4. Provide the required resources for rehabilitation including the following:
   a. Potable drinking water for hydration
   b. Sports drinks (to replace electrolytes and calories) for long-duration incidents (working more than one hour)
   c. Active cooling where required
   d. Medical monitoring equipment (chairs to rest on, blood pressure cuffs, stethoscopes, check sheets, etc.)
   e. Food where required and a means to wash or clean hands or face prior to eating
   f. Blankets and warm, dry clothing for winter months
   g. Bathroom facilities where required
5. Time personnel in rehabilitation to ensure they receive a minimum of 15 minutes of rest.
6. Ensure personnel rehydrate themselves.
7. Ensure personnel are provided with a means to be actively cooled where required.
8. Maintain accountability and remain within rehabilitation at all times (attachment # 2 and #3).
9. Document members entering or leaving rehabilitation.
10. Inform the incident commander, accountability officer, and EMS personnel if a member requires transportation to a treatment at a medical facility.
11. Serve as a liaison with EMS personnel.

G. Team Leaders/Company Officer shall be responsible for the following:
1. Be familiar with signs and symptoms of heat stress and cold stress (attachment #4).
2. Monitor team members for signs of heat stress and cold stress.
3. Notify the IC or Operations Chief when stressed members require relief, rotation, or reassignment according to conditions.
4. Provide access to rehabilitation for team/company members as needed.
5. Ensure that the team/company is properly checked in with the rehabilitation group supervisor and accountability officer (resource unit), and that the team/company remains intact.

H. Rest Area Team Members shall be responsible for the following:
1. Be familiar with signs and symptoms of heat and cold stress (attachment #4).
2. Maintain awareness of themselves and team/company members for signs and symptoms heat and cold stress (attachment #4).
3. Promptly inform the team leader/company officer when members require rehabilitation and/or relief from assigned duties.
4. Maintain nit integrity.

I. Rest Area Rehab Entry Criteria
1. Use of two 30 minute SCBA cylinders or one 45-60 min. cylinder.
2. 45 min. of intense physical labor.
3. Use of encapsulating Haz-Mat suit.
4. When directed by officer, paramedic or self.
5. Consider lower threshold for extreme heat/humidity (I.E. one 30 min. cylinder OR 20 min. intense physical labor).

J. Rest Area Procedure
1. Check in with rehab division officer
   a. Obtain tracking card (if applicable)
2. Remove turn-out gear/SCBA
3. Sector officer assesses pulse/mental status/symptoms
a. Immediate EMS assessment if pulse > 220-age (nearest 10) OR chest pain, fainting, altered mental status, vomiting, severe shortness of breath.
4. Rest/rehydrate for 15 min.
   a. Drink 8-12 oz of fluid
5. Active cooling/warming (per weather conditions)---{can be further clarified}.
6. Sector officer monitors mental status, speech, gait, skin color/temp, respiratory effort.
   a. Any lack of gradual improvement or worsening conditions warrants EMS evaluation
   b. Injury/burns and officer discretion may also prompt EMS evaluation

K. Rest Area Exit Assessment (must meet all requirements below)
1. HR<110
2. RR≤20
3. Skin temperature normal (or near normal for conditions)
4. Normal gait/speech/mental status
5. No shortness of breath, C/P, lightheadedness

L. Rest Area Failed Criteria
1. Additional 15 min. rest/rehydration
2. If exit criteria not met after 30 minutes, EMS assessment

M. Medical Evaluation Treatment Area Personnel shall be responsible for the following:
1. Report to the incident commander or Operations Chief and obtain the rehabilitation requirements.
2. Coordinate with the rehabilitation group supervisor
3. Identify EMS personnel requirements
4. Check vital signs, monitor for heat stress and signs of medical issues
5. Document medical monitoring (attachment #2)
6. Provide emergency medical care and transportation to medical facilities as required (Reference Medical Monitoring, Incident Rehabilitation – Attachment #1).
7. Inform the incident commander and/or the rehabilitation group supervisor when personnel require transportation to and treatment at a medical facility.
8. Document emergency medical care provided.

N. Medical Evaluation and Treatment Area EMS Guidelines
Note: The guidelines below are written for ALS services. All EMS agencies must obtain approval from their medical director before implementing any medical protocols. The key point of these protocols are to allow EMS crews the option to monitor a firefighter or responder (when medically appropriate) rather than be limited to a typical treatment and transport protocol.

1. Establish communication with IC or rehab division officer.
2. Stage ambulance near rehab.
   a. Consider egress and potential for additional incoming fire apparatus.
3. Perform focused assessment including complete set of vital signs and temperature (applicable).
   a. Consider 12-lead ECG
   b. Consider Blood Glucose check
   c. Consider transcutaneous CO measurement if available (see attachment protocol)
   d. Administer high flow 02 immediately if concern for CO toxicity regardless of level or ability to measure.

4. Immediate Transport for:
   a. Symptoms of C/P, severe SOB, altered mental status and syncope
   b. HR>220 – age; SBP<100; RR>30; Sa02 < 85%
   c. Treatment for immediate transport
      1. IV, 02, monitor, 12-lead ECG
      2. Consider hydroxocobalamin (Cyanokit) administration (separate protocol)
5. Begin active cooling/warming based on weather conditions.
6. Provide oral rehydration 8-12 oz/10 min.
7. Reassess after 10 minutes
   a. Vital Signs
   b. Symptoms to assess for include
      a. C/P, dizziness, shortness of breath, weakness, nausea/vomiting, headache, cramps, change in behavior/speech, unsteady gait.
   c. If improving and asymptomatic, monitor until exit criteria met (see below)
      a. Minimum 20 minutes rest/rehydration time
      b. Offer transportation, if refused, document per service specific guidelines
   d. If worsening or symptomatic, transport
      a. IV, 02 Monitor, 12-lead, BG-check
      b. Consider hydroxocobalamin (Cyanokit) administration (per service specific guidelines)
8. "May return to work" criteria (must meet/document all below).
   a. Transport offer declined
   b. Normal speech/mental status, stead gait
   c. Normal vital signs
      a. HR<110, RR≤20, SBP>100, DBP<100, Sa02>95%, skin temp-normal (or measured <101.5degrees), CO<10 (if applicable)
   d. Asymptomatic
      a. Paramedic discretion (see Fire Department Rehab Protocol-Flow Chart)

O. Procedures

1. All personnel shall maintain hydration on an ongoing basis (pre-incident, incident, post incident).
2. Members shall be sent to rehabilitation as required.
3. All members shall be sent to rehabilitation following the use of two 30-minute SCBA cylinders or one 45-to 60-minute SCBA cylinder. Shorter times might be considered during extreme weather conditions.
4. Active cooling (e.g., wet towels, forearm immersion, misting fans) shall be applied where temperatures, conditions, and/or workload create the potential for heat stress.
5. In hot, humid conditions, a minimum of 5 minutes of active cooling shall be applied following the use of the second and each subsequent SCBA cylinder.
6. Personnel in rehabilitation shall rest for at least 15 minutes prior to being reassigned or released.
7. Members should drink water during rehabilitation. After the first hour, a sport drink containing electrolytes should be provided. Soda and caffeinated and carbonated beverages should be avoided.
8. Nutritional snacks or meals shall be provided as required during longer duration incidents.
9. No tobacco use shall be permitted in or near the rehabilitation area.
10. EMS personnel shall provide medical monitoring and emergency medical care as per medical protocol (Reference Medical Monitoring, Incident Rehabilitation - Attachment #1).
11. Personnel transported to a medical facility for treatment shall be accompanied and attended to by a department representative if possible.
12. EMS personnel may be designated by an Incident Commander to function as a Rehab Group. The need for a Rehab Group will be based upon duration of operations, physical demands, tactical requirements and environmental conditions.
13. EMS personnel will follow orders and protocols of their Medical Director.

14. EMS personnel may only provide care for predefined service's members in this manner. Any other persons presenting for care or any service member who presents with an acute medical issues are to be considered patients. Such care will then be provided in accordance with the service's protocols or on-line medical control.

P. For events, including drills, fire ground operations, hazardous materials incidents, lengthy extrications, and any other event where a Rehab Group is established:

1. When a person arrives in the Rehab Area:
    a. Perform a visual evaluation for signs of cold stress or heat exhaustion/fatigue (Attachment #4)
2. An "*Incident Rehab – Individual Rehabilitation Report* (Attachment #2) is to be initiated. Recorded information for each person evaluation should include:
    a. Name
    b. In/Out times
    c. # of SCBA Cylinders
    d. Vital signs (BP, Pulse, Resp., Temp, Skin signs, SpCO if equipment available)
    e. Cooling/heating measures used
    f. Hydration/Nourishment taken
    g. Medical Complaints
    h. Transported to hospital (yes or no)
3. If any vital sign is out of the range listed below, protective gear should be removed, and the person should rest for at least 15 minutes, with monitored oral hydration.
    a. Blood Pressure: Systolic > 160 or < 100 mm Hg or Diastolic > 100 mm Hg.
    b. Respirations: > 24 per minute
    c. Pulse: > 110 per minute, or significantly irregular
    d. Temperature: > 100.6 orally (If monitoring equipment available)
    e. Pulse Ox: < 95%
4. The person may be released after 15 minutes if vital signs return within limits and he/she is asymptomatic.
5. If vital signs are still beyond the limits or he/she is symptomatic, then continue observation for another 15 minutes and determine if further intervention may be needed.
6. If after the 2nd 15 minute observation period (30 minutes total), the vital signs are outside the limits, or he/she continues to be symptomatic, then he/she should be transported to the nearest hospital.
7. If the person arrives at the rehab area with complaints of chest pain, shortness of breath or an altered mental status, follow the appropriate medical protocol. **The person may not return to duty and should be transported to the nearest hospital.**
8. The "*Incident Rehab - Company Level Check In/Out Document*" (Attachment #3) is to be used when multiple agencies are represented at an Incident Command or Operations Chief for attachment to the primary incident report.

Medical Monitoring
Incident Rehabilitation
Attachment #1

EMS personnel may be designated by an Incident Commander to function as a Rehab Group. The need for a Rehab Group will be based upon duration of operations, physical demands, tactical requirements and environmental conditions.

EMS personnel will follow orders and protocols of their Medical Director.

EMS personnel may only provide care for predefined service's members in this manner. Any other persons presenting for care or any service member who presents with an acute medical issues are to be considered patients. Such care will then be provided in accordance with the service's protocols or on-line medical control.

For events, including drills, fire ground operations, hazardous materials incidents, lengthy extrications, and any other event where a Rehab Group is established:

When a person arrives in the Rehab Area:

1. Perform a visual evaluation for signs of cold stress or heat exhaustion / fatigue (Attachment #4).
2. An "*Incident Rehab - Individual Rehabilitation Report*" (Attachment #2) is to be initiated. Recorded information for each person evaluated should include:
    a. Name
    b. In/out times
    c. # of SCBA Cylinders
    d. Vital signs (BP, Pulse, Resp., Temp, Skin signs, SpCO if equipment available)
    e. Cooling/heating measures used
    f. Hydration/Nourishment taken
    g. Medical Complaints
    h. Transported to a hospital (yes or no)
3. If any vital sign is out of the range listed below, protective gear should be removed, and the person should rest for at least 15 minutes, with monitored oral hydration.
    a. Blood Pressure: Systolic >160 or < 100 mm Hg or Diastolic > 100 mm Hg.
    b. Respirations: > 24 per minute
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5. If vital signs are still beyond the limits or he/she is symptomatic, then continue observation for another 15 minutes and determine if further intervention may be needed.
6. If after the 2nd 15 minute observation period (30 minutes total), the vital signs are outside the limits, or he/she continues to be symptomatic, then he/she should be transported to the nearest hospital.
7. If the person arrives at the rehab area with complaints of chest pain, shortness of breath or an altered mental status, follow the appropriate medical protocol. **The person may not return to duty and should be transported to the nearest hospital.**
8. The "*Incident Rehab - Company Level Check In/Out Document*"(Attachment #3) is to be used when multiple agencies are represented at an incident.
9. Upon completion, copies of this document shall be forwarded to the Incident Command or Operations Chief for attachment to the primary incident report.

Fire Dept Rehab Protocol – Flow Chart