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Rehabilitation

P-234.1 Purpose & Scope

To provide a rehabilitation process to ensure the safety of all personnel operating at the scene of a fire, other emergency, or training exercise. To ensure compliance with NFPA 1584 *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*, and CCR Title 8, Section 3395 *Heat Illness Prevention*, and CCR Title 8, Section 3363 *General Industry Safety Orders, Water Supply*.

P-234.2 Policy

The Incident Commander shall establish a rehabilitation process for any emergency or training exercise that is large scale, long in duration, physically demanding, and/or where weather poses a threat to health and/or safety. It is the responsibility of the agency having jurisdiction (AHJ) to supply rehabilitation provisions.

P-234.3 References

California Code of Regulations Title 8, Section 3395 *Heat Illness Prevention*

California Code of Regulations Title 8, 3363 *General Industry Safety Orders, Water Supply*

Fahy, R., LeBlanc, P., Molis, J. (2015) *Firefighter Fatalities in the United States – 2014*: NFPA research/reports, downloaded April 4, 2016 from <http://www.nfpa.org/research/reports-and-statistics/the-fire-service/fatalities-and-injuries/firefighter-fatalities-in-the-united-states>

NFPA Technical Committee on Fire Service Occupational Safety and Health (2008) *NFPA 1584, Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises* (2008 Ed.) NFPA: Quincy, MA.

P-234.4 Procedures

1. The Incident Commander shall establish rehabilitation in accordance with this Policy and as the demands of the incident and/or activity require.
2. The rehabilitation process shall include the following:

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- Ensure gross decontamination of personnel prior to entering rehab
 - Rest

 - Hydration with calorie and electrolyte replacement
 - Cooling
 - Warming
 - Relief from extreme climate conditions (heat, cold, wind, rain, excessive noise)
 - Medical monitoring by ALS personnel
 - EMS care and transport
 - Accountability
 - Reassignment or release
3. Supervisors shall maintain accountability for the health and safety of their assigned crew(s). The chain of command shall be used to report Firefighter fatigue and request relief and/or rehabilitation.
 4. Personnel shall maintain awareness of their level of exertion, exposure to the environment, and the need for relief/rehabilitation. Personnel shall also maintain awareness of their co-workers and their need for relief/rehabilitation. Personnel shall report all rehabilitation needs to their immediate supervisor.
 5. During training and/or non-emergency activities when the temperature is expected to reach or exceed 85 F, access to shade and hydration shall be provided. If work load dictates, a full rehabilitation site shall be established.
 6. Where access to unlimited drinking water is not available, a minimum of one quart of water per hour shall be provided for each employee on site. Hydration with an electrolyte replacement fluid is preferred.

Establishing Rehabilitation

Once the Incident Commander has determined the need for rehabilitation he/she will assign a Rehabilitation Unit Leader.

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The Rehabilitation Unit Leader shall:

- Select a suitable location for the set-up of the rehabilitation site(outside of any potential IDLH)
- Request and ensure that the appropriate equipment, supplies, and staff are provided.
- Ensure that personnel go through gross decontamination and remove PPE prior to entering rehabilitation area. This will reduce exposure to contaminants and promote cooling.
- Maintain accountability
- Document personnel entering and exiting the rehabilitation site.
- Time personnel in the rehabilitation site to ensure 10 to 20 minutes of rest.
- Ensure that personnel are provided with the means to be actively cooled or warmed where required.
- Ensure that personnel hydrate themselves with an electrolyte fluid
- Ensure that personnel are medically monitored by ALS personnel
- Advise the Incident Commander in the event that personnel need medical treatment/transport.
- Serve as a liaison with EMS personnel
- Coordinate personnel release / reassignment through chain of command.

The Company Officers shall:

- Be trained in recognition of the signs/symptoms of overexertion, cardiac events, and heat/cold stress to an EMT level or higher.
- Continually monitor their crew members for overexertion, cardiac distress, and heat/cold stress.
- When rehabilitation and/or evaluation by EMS is required, notify the IC through the chain of command.
- Maintain crew accountability during rehabilitation check in, processing, and check out/reassignment.

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Crew members shall:

- Be trained to recognize the signs/symptoms of overexertion, cardiac events, and heat/cold stress to an EMT level or higher.
- Maintain self-awareness and be observant of coworkers for overexertion, cardiac distress, and heat/cold stress.
- Notify their immediate supervisor when rehabilitation and/or evaluation by EMS is required.
- Maintain crew accountability by staying together.

Standard

1. Pre-incident, incident, and post-incident hydration shall be maintained.
2. All members should be sent to rehabilitation after the use of two bottles. Agencies with 45 or 60 minute bottles should consider rehabilitation rotation after one bottle. Rehabilitation rotations may be more frequent in extreme weather conditions or when workloads are exceptionally arduous.
3. Personnel shall rest for 10 to 20 minutes prior to reassignment or release.
4. Members should drink an electrolyte replacement fluid during rehabilitation. Caffeine and/or tobacco should be avoided.
5. Nutritional calorie replacement should be provided during long duration events.
6. Medical base line assessments shall be completed prior to reassignment. Personnel with vital signs outside of the established parameters shall be given addition rehabilitation time with monitoring. Re-evaluation shall be completed prior to reassignment. If in the best judgement of the medical group supervisor an individual has exhibited signs and symptoms that require a physician's medical evaluation, transport to the appropriate medical facility will be arranged.

Medical Baseline Parameters

- Heart Rate: Less than 100 bpm
- Respiratory Rate: 12 to 20 per minute

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- Pulse Oximetry: 95 to 100%
- Assess for signs and/or symptoms of; heat stress, cold stress, cardiac event, injury.
- Monitor for carbon monoxide poisoning. Refer to chart below for carbon monoxide percentages and possible effects:

% HbCO	Signs and Symptoms
<2	None
2% - 5%	Mild mental impairment
5% - 10%	Mild dyspnea
10% - 20%	Moderate dyspnea, headache
20% - 30%	Irritability, confusion, memory/judgement loss
30% - 40%	Headache, visual and hearing changes, nausea
40% - 50%	Syncope, loss of balance, respiratory depression
50% - 60%	Resp. collapse, vascular collapse, seizures, coma
>60%	Shock, cardiopulmonary arrest, death