North Kingstown Fire Department

Standard Operating Guidelines		4000 Series
Effective Date:	FIREFIGHTER / REHAB	EMS Operations
12/2022		4110
Revision Date:		
12/2022		Page 1 of 6

I. PURPOSE

To ensure that the physical and mental condition of personnel operating at the scene of an emergency or training exercise does not deteriorate to a point that impacts the safety of any member or the safety and integrity of the overall operation.

II. REFERENCES

NFPA 1584
National Weather Service
Rhode Island Statewide Emergency Medical Services Protocols
US Fire Administration_Emergency Incident Rehabilitation Manual
US Dept. Of Homeland Security "DHS-Wide BLS and ALS protocols"
Broward County; "EMS Medical Evaluation of Emergency Workers on Emergency Incidents or Training Evolution"

III. POLICY

The Incident Commander shall consider the circumstances of each incident or training exercise and make adequate provisions early in the incident for the rest and rehabilitation for all members operating at the scene. These provisions shall include medical evaluation, treatment, and monitoring; food and fluid replenishment; mental rest; and relief from extreme climatic conditions and the other environmental parameters of the incident. The rehabilitation shall include the provision of Emergency Medical Services (EMS) at the Advanced Life Support (ALS) level.

IV. PROCEDURE

A. The Incident Commander (IC) will establish a Rehabilitation Sector or Group when conditions indicate that rest and rehabilitation is needed for personnel operating at an incident scene or training evolution.
    1. The IC shall assign a member in charge of the sector/group and shall be known as the Rehab Officer.
    2. In most incidents, the Rehab Officer shall report to the IC.
    3. In large scale incidents the Rehab Officer may report to the Logistics Officer within the framework of the incident management system.

B. Rehab is MANDATORY when:
    1. Heat Index >90°F

2. Wind Chill <10°F
3. Personnel have expended two (2) thirty-minute SCBA bottles or one (1) one-hour SCBA bottle.
    i. Personnel are encouraged to drink water between the first and second thirty-minute (30 minute) SCBA bottle.
4. After doffing Level-A suits.
5. After 40 minutes of work without an SCBA.
6. When the IC or Safety Officer deems rehab necessary.
7. When a company officer or other supervisor deems rehab necessary.
8. Any time personnel feel that they have reached the limit of their own physical, mental, or psychological endurance.

C. REHAB Location
1. The Incident Commander will normally designate a location for REHAB.
    i. If a specific location has not been designated, the Rehab Officer or Safety Officer shall select an appropriate location.
2. Short-Duration Incidents (0-4 hours)
    i. Patient compartment of transport rescue/ambulance
    ii. Shaded area
    iii. Open area utilizing tarps and/or tents, etc.
3. Medium-Duration Incidents (4-8 hours)
    i. School or Municipal Bus
    ii. Appropriate nearby structure (garage, building lobby, gymnasium, etc.)
4. Long-Duration Incidents (8+ hours)
    i. Consider RIEMA resources

D. Logistics
1. The Rehab Officer shall secure or request all necessary resources to adequately staff and supply the REHAB area. This may include:
    i. Water and electrolyte drinks
    ii. Food
    iii. Medical supplies and equipment:
        a. Cardiac monitors
        b. Oxygen
        c. Blood Pressure Monitoring
        d. Thermometers
    iv. Fans, Heaters, Towels, DECON Wipes

E. Accountability
1. When personnel enter the REHAB area, they shall check-in with the REHAB Officer or his/her designee by:
    i. Physically checking-in, ***and***

ii. Passing of accountability tag to the REHAB Officer for accountability purposes.

F. Personnel Entering REHAB
   1. All personnel in REHAB shall:
      i. Doff PPE and check-in with the REHAB Officer
      ii. Be provided with supplemental colling or warming devices as appropriate, fluid and electrolyte replacement, and the proper amount of nourishment.
      iii. Any personnel who reports injuries, shortness of breath, chest pain, burns, vomiting, dizziness, etc. will immediately be considered a medical patient and the following shall be initiated:
         a. PCR
         b. Administer medical care as appropriate
         c. Notify the IC
         d. Request additional rescue through IC (if transport seems likely)
         e. Follow all RI Pre-Hospital care protocols.

A patient who refuses medical care in Rehab should <u>NOT</u> be allowed to return to active work. The IC shall be notified immediately if any personnel refuse medical care.

G. All personnel entering REHAB shall undergo an initial medical screening consisting of:
   1. Mental Status
   2. Skin color / temp / condition
   3. Vital signs as indicated on Incident Rehabilitation Sheet

H. Personnel with vital signs OUTSIDE of the limits set forth below [Vital Signs Screening Limits]:
   1. Implement active cooling/warming
   2. Continue oral hydration
   3. Rest for 20 minutes
   4. Personnel with positive COHb above the normal limit are to be treated as medical patients and the appropriate protocol followed.
   5. Reassess vital signs every five (5) minutes.

   Personnel with vital signs WITHIN the limits set forth below [Rhode Island Statewide Emergency Medical Services Protocols 8.00 Fire Ground and Extended Operations Rehabilitation]:
   6. Orally hydrate
   7. Rest 10-20 minutes
   8. Reassess vitals
   9. Be released from REHAB following adequate time
   10. ***No personnel may exit REHAB and re-acquire their accountability tag unless cleared by the REHAB Officer.***

I. Personnel whose vital signs that remain outside of the normal limits and do not show improvement following 20 minutes of REHAB shall continue to rest, rehydrate, be actively warmed/cooled, and be reassessed for an additional 10 minutes.

J. If there is no improvement following an additional 10 minutes of continued REHAB the member shall be considered a medical patient and should be transported to an appropriate ED for further care.

K. All vital signs and other relevant information shall be recorded on the Incident Rehabilitation sheet.
   1. The Incident Rehabilitation sheet shall be submitted to the IC upon conclusion of the incident.
   2. The IC shall forward to the Fire Marshall's Office as part of the official record of the incident.
   3. The Incident ***Rehabilitation sheet contains HIPAA-protected information.***

08.00 Fire Ground and Extended Operation Rehabilitation

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NWS Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution | Extreme Caution | Danger | Extreme Danger

Wind Chill Chart

Temperature (°F)

Wind (mph)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01