

	<b>TRAVIS COUNTY ESD #5</b> <b>MANCHACA FIRE RESCUE</b> <b>Department Policy</b>	<b>B106</b>
	Authorized by:  Fire Chief Chris Barron	<b>Effective:</b> 2/24/2021 <b>Rescinds:</b> <b>Reference:</b> <b>Application:</b> Operations Members
<b>Heat Stress Management</b>		

## I. Purpose

This policy is intended to reduce the impact of heat stress on firefighters operating at incidents.

## II. Background

There are many factors that contribute to heat stress injury in firefighters. We have little to no control of factors such as weather conditions, incident time, use of PPE, level of exertion, and heat exposure from the fire environment. We do have control of the maintenance of our hydration. Maintaining proper hydration is a key factor in the prevention of heat exhaustion and heat stroke. Any firefighter that suffers a heat injury at an incident is a lost resource for the duration of that incident. Additionally, unmanaged heat stress can be fatal.

## III. Policy

- A. **Prehydration.** Individual members shall maintain proper fluid intake throughout the shift to maintain proper hydration. Officers shall monitor their crews to ensure they are maintaining proper hydration.
- B. **Avoiding prestressors.** In the performance of regular non-emergency duties such as training, workouts, lawn maintenance, and similar activities, members should avoid overexertion that would make them susceptible to heat injury at an incident. Assigned duties should be performed, but moderated in a manner that ensures member safety.
- C. **Monitoring for heat stress.** Incident Commanders, Division/Group Supervisors, Officers and individuals shall monitor themselves and their personnel for signs of heat stress and take actions to prevent or mitigate its effects.

## IV. Procedure

- A. **Prevention measures.** Members shall take the following steps to prevent heat stress events.
  - 1. **Water intake.** Members should drink water throughout the shift. It should be consumed in smaller amounts over a longer period of time instead of large amounts at one time. Consumption rates should not typically exceed 8-12 ounces every 15 to 20 minutes (approximately 1 liter per hour).

- a. **Drinks to avoid.** Members should avoid beverages with sugar and/or caffeine. Alcohol should be avoided within 8 hours of a duty shift due to its diuretic characteristics.
  - b. **Thirst.** Thirst is not an effective indicator of hydration. The perception of thirst occurs when a person is 2% dehydrated. At 5% dehydration, a person becomes non-functional.
2. **Rehab availability.** Members shall make sure that the first out engine, tender, and brush truck have fresh drinking water on ice every 24 hours. Drinking water on other apparatus should be changed as part of the weekly apparatus check. Drinking water coolers shall be filled directly from a faucet, not a garden hose.
3. **Strenuous activity.** During high temperature days, members should limit non-emergency activity during the heat of the day or pace the activity to prevent overexertion.
4. **PPE removal.** Members should remove as much PPE as possible when taking a break to maximize evaporative cooling and dissipation of body heat.
5. **Active cooling.** Consider the use of active cooling techniques such as drinking chilled fluids, forearm emersion, placing wet/chilled towels over the neck, head, wrists/forearms, or groin to facilitate core temperature reduction.
6. **Recognize signs and symptoms.** All members should be familiar with and monitor themselves for signs and symptoms of heat stress.
  - a. Cramps, aches, pains, headache, dizziness
  - b. Weakness
  - c. Nausea
  - d. Shortness of breath
  - e. Chest pain
  - f. Change in level of consciousness, behavioral changes, change in speech or gait
7. **Officer responsibility.** Company officers shall monitor their personnel for proper fluid intake and effects of heat stress.