Board of County Commissioners
Leon County, Florida

Policy No. _____

Title:	Heat Stress Prevention
Date Adopted:	December 8, 2009
Effective Date:	January 1, 2010
Reference:	Occupational Health and Safety Administration, Section 5(a) 1 & 2, General Industry
Policy Superseded:	N/A

It is the policy of the Board of County Commissioners of Leon County, Florida, to establish procedures to address and minimize the detrimental effects of excessive heat on Leon County employees and/or volunteers who are required to work in high heat environments during periods of elevated temperatures.

1. PURPOSE

As a part of the County's commitment to safeguard the health of its employees and to provide a safe place for its employees to work, the Board of County Commissioners has established this policy to reduce the risk of illness, injury, or fatality of Leon County employees and volunteers related to heat stress. This policy is set up pursuant to the **Occupational Safety and Health Administration** (Attachment #1).

Methods to prevent heat stress include:

- Providing employees with periodic rest breaks;
- Scheduling physically demanding activities for cooler parts of the day;
- Provide employees with sufficient fluids;
- Rotation of employees;
- Providing shielding and insulation:
- Allowing workers to acclimatize to the weather conditions;
- Training of supervisors and employees to identify the onset of heat stress symptoms and prevention measures; and
- Proper application of personal protective equipment.

2. APPLICABILITY

All Board employees and volunteers covered under the County's Worker's Compensation coverage shall comply with this policy.

3. RESPONSIBLITIES

Role	Responsible for:
Departments/Divisions	Have the primary responsibility for training, sources of drinking water, and supporting supervisors in adjusting working schedules to reduce employee exposure to heat in hot climate environments.
Supervisors	Have the primary responsibility for the implementation of the heat Stress Prevention Policy in the work area. The supervisor has ultimate responsibility for the safety of the employees. This includes evaluation of the work to be performed, providing ready access to fluids, for example electrolyte replacement drinks and/or water, ensuring workers are familiar with the signs and symptoms of heat related disorders, allowing employees to become acclimatized to hot climate environments by scheduling light duty labor during the first few initial weeks at the beginning of hot climate temperatures, promote work rest regimes, schedule strenuous jobs during early mornings to reduce heat stresses as appropriate and provide training.
Employees	Have the primary responsibility for working in accordance with the provisions of this policy. They are also responsible for monitoring themselves for the onset of heat related illnesses and symptoms and immediately report any heat related incidents to their supervisor.
Risk Management	Has the primary responsibility for assisting departments/divisions in implementing the Heat Stress Prevention Policy through training and informal discussions.

4. HEAT INDEX GUIDELINES

NOAA's National Weather Service
Heat Index
Temperature (F)

RH%	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	82	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	83	85	89	93	98	103	108	114	121	128	136					
70	84	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	85	89	94	100	106	113	121	129								
85	86	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
90	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Directions: Locate the current temperature on the left column and then locate the relative humidity on the top row. Follow the temperature across and the humidity down until they meet; this measurement is the heat index. The heat index will increase 15 degrees in direct sunlight.

Category	Heat Index (F)	Dangers
Extreme danger	Greater than 120	Heat stroke imminent
Danger	105-120	Heat exhaustion likely
Extreme caution	90-105	Heat cramps, exhaustion possible
Caution	80-90	Exercise more fatiguing than normal

5. CONTROL OF HEAT STRESS

a. **Engineering controls:** Heat may be controlled through general ventilation and spot cooling by local exhaust ventilation at the point of high heat production. Shielding may be needed for protection against radiant heat sources. Other control measures include opening windows or using fans to create airflow. Outdoor work areas need to have a shaded area accessible to the employees. Shaded areas can be crated by suing tarps or canopies or equipping tractors with canopies or cabs.

b. **Acclimatization:** Employees need to adapt to new temperature. This adaptation period may take a few days. This period should begin with 50% of the normal workload the first day and gradually building up to 100%.

c. **Weather conditions:** Check weather conditions frequently during the day and adjust the work schedule. It might be appropriate to change the actual hours of work to minimize working during the heat of the summer months. Heavy work should b scheduled for the cooler hours of the day.

d. **Work/Rest Cycles:** Heavy and minimal work activities should be alternated. Tasks should be rotated among workers. Employees should be allowed sufficient breaks in a cool area to avoid heat strain and prompt recovery. Shade or an air—conditioned break room should be provided.

e. **Personal Protective Equipment:** During work in hot environments, workers should use the lightest weight or "breatheable" protective garments that give adequate protection. For work in extremely hot environments, cool vests are available from several manufacturers. These vests typically provide 1-2 hours of cooling, recharge in 20 minutes, and maintain a constant temperature of 55 degrees F.

f. **Fluid Intake:** Fluids, such as water or electrolyte replacement drinks need to be conveniently available to workers so they can drink about 8 oz. of liquids every 20 minutes. The ideal temper for liquids should be 50 – 60 degrees F. For remote outdoor work locations, this means providing a cooler of liquids and ice that the workers can transport with them to the location.

g. **Training:** Employees should be trained prior to working in a high heat area to be aware of the hazards of working in the heat, how to recognize heat-related illnesses and procedures for first aid and medical attention. They should also be aware of the methods used to avoid heat-related illnesses, including how some things which happen off the job can increase the risk of heat illnesses at work.

6. Heat Stress Health Effects, Signs, & Symptoms and First Aid

DISORDER	SIGNS	SYMPTOMS	TREATMENT
Dehydration	• Loss of work capacity • Delayed response to stimuli	• Fatigue • Weakness • Dry mouth	• Rest • Drink cool fluids such as water or sports beverages
Heat Cramp	• Incapacitating pain in muscle	• Muscle crams (abdominal & lower extremities) • Fatigued muscles	• Drink water • Massage cramped area • Rest
Heat Exhaustion	• High pulse rate, confusion, anxiety • Profuse sweating • Low blood pressure • Pale face, or flushing • Body temperature increased but below 104 degrees F • Excessive thirst, decreased urine output	• Fatigue, malaise • Weakness • Blurred vision • Dizziness • Headache • Nausea • Loss of appetite	• Move to shade or air conditioned space • Rest, lying down, legs elevated • Loosen clothing • Drink water • Get medical treatment if symptoms worsen or last longer than 1 hour
Heat Stroke	• Red face • Mental status changes, such as disorientation, confusion or irritability • Hot, dry, skin • Erratic behavior • Collapse • Shivering • Body temperature greater than 104 degrees F	• May be same as those for heat exhaustion (see above)	• **MEDICAL EMERGENCY!!** • Immediately call for emergency help • Get victim to shady area • Place victim in cool water • Massage body with ice