



# THERMAL HAZARD STANDARD

## SUMMARY

New Jersey's climate is already changing – the five warmest years on record have occurred since 1998 and nine of the fifteen hottest summers have occurred since 1999. With global climate change causing more extreme temperature fluctuations throughout the year, employees who work in outdoor environments or indoors with no efficient temperature control are at risk for temperature related illness and injury. According to a 2017 New Jersey Climate and Health Profile Report, produced by Rutgers University, within 50 years the number of days exceeding 90°F will increase 30-40 days in high elevation areas and 60-70 days in lower elevations, including the southern part of the state.

In excessively hot temperatures, workers may experience heat exhaustion, cramps, or heat stroke. Cold temperature can cause low body temperature, decreased blood flow, or hypothermia. High temperatures can also be linked to decreased worker productivity. Implementing a thermal safety standard protects workers from occupational exposure to extreme temperatures for a prolonged amount of time.

California, Washington, and Minnesota have already implemented thermal safety standards that New Jersey could look to as a model. In California, all outdoor employees must be provided with shade, water, and have knowledge of a high heat procedure. Washington's standard applies to outdoor workers between May 1st and September 30th, and has procedures based on the expected clothing and personal protection equipment worn by workers. The thermal safety standards in Minnesota apply to indoor workers and include both heat and cold exposure procedures.

The increased temperatures in New Jersey pose a threat to workers without access to proper shelter or a controlled environment. New Jersey needs to act now to protect the workers of New Jersey from the extreme temperatures we will increasingly experience as a result of climate change.

# POLICY RECOMMENDATIONS

## 1. ESTABLISH A STATEWIDE THERMAL SAFETY STANDARD

A thermal safety standard in New Jersey should protect all workers from prolonged exposure to extreme temperatures, as well as create a standard for training employers for proper implementation and employees to know their rights. Both indoor and outdoor workers need year-round protection from extreme temperatures. In 85° and hotter, the employer is responsible for providing ample shade and water to employees. In environments 9° and above, workers must have access to an air-conditioned indoor break area and be able to take a 15-minute break every 90 minutes. Working in direct sun can increase the heat index by 15° and strenuous work or wearing protective clothing can also increase heat risk.

## 2. REQUIRE EMPLOYERS TO CREATE EXTREME TEMPERATURE PROCEDURES

Procedures must include access to potable water between 55°- 64° near the work site, individual drinking vessels, and encouragement for workers to stay hydrated. For work that induces sweating lasting more than 3 hours, drinks containing electrolytes must be made available to workers. Procedures must allow for and encourage workers to take rest and hydration breaks, modify work, and rest periods to allow the body to cool down. Workers should increase the frequency and duration of rest periods when the temperature and humidity increase, direct sun exposure, if there is no air movement, or if they are wearing protective clothing due to the increased exertion of working in these conditions. Employers must post prominent, legible signs, in all relevant languages, warning of the dangers of heat and cold stress. Employers must provide protective clothing for both extreme cold and extreme heat to workers at no cost.

## 3. IMPLEMENT ANNUAL TRAINING

Prior to beginning work, all employees must be trained in the recognition of signs and symptoms of heat-related illnesses and first aid, causes of heat-related illnesses and mitigation of risks, care and use of heat-protective clothing and equipment, added heat load caused by exertion and equipment, effects of non-occupational factors on tolerance to occupational heat stress, and the procedures for responding to symptoms of possible heat-related illnesses. Supervisors should be trained on the implementation of acclimatization procedures, how to monitor weather reports, respond to weather advisories, and the importance of fluid intake and rest breaks. This training must be renewed annually.

## 4. DEVELOP A THERMAL ACCLIMATIZATION PLAN

All workers beginning work in high- heat environments must be gradually acclimated to the work over a period of at least 7-14 days. This includes a period of close supervision of new workers to ensure prevention or early detection of heat stress symptoms to prevent injury. New workers should start at 20% or less of the usual work duration on the first day, increasing no more than 20% on each additional day. Workers with experience in similar extreme temperature environments should start at no more than 50% of the usual work duration on day one and gradually increase to a full work day over five days.

## 5. EXPOSURE MONITORING

Employers must be responsible for monitoring the environment for heat exposure and employee workloads to ensure that no worker is exposed to heat stress. Employers must also monitor workers exposed to heat stress and collect data on heat stress-related injuries and deaths, and maintain an accurate record of heat stress cases, medical surveillance data, and heat-related injuries, illnesses, and deaths.