SE TX Heat Related Illness Prevention Overview (v1 Mar 2022)

During the summer of 2021 the Houston Area Offices received one heat related fatality report versus one during the summer of 2020. There were 14 suspected heat related hospitalizations reported last summer compared to 13 the previous summer. Heat illness incidents are preventable. Let us work together to ensure water, rest, and shade for the workers so everyone makes it home at the end of the day.

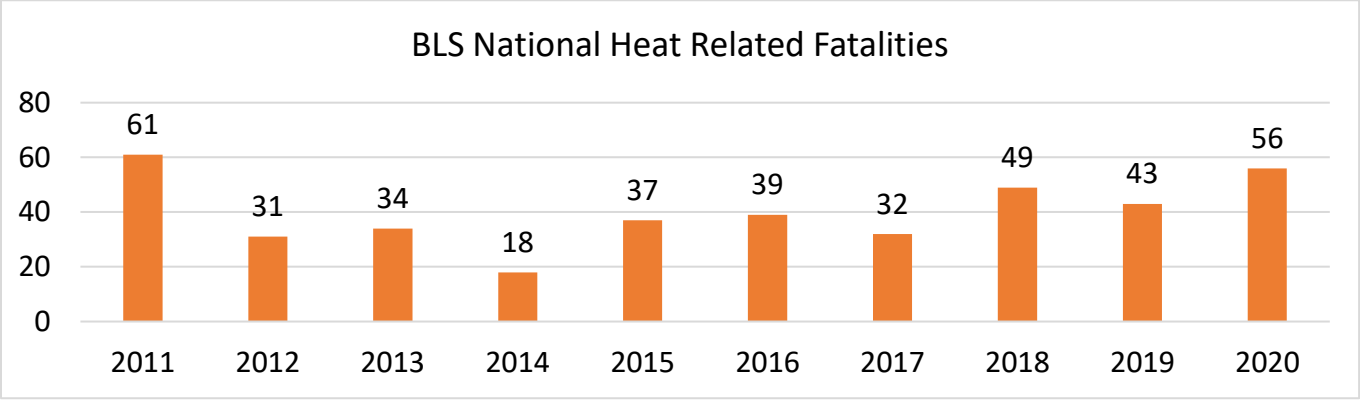
National Heat Related Initiatives and Information to Watch For:

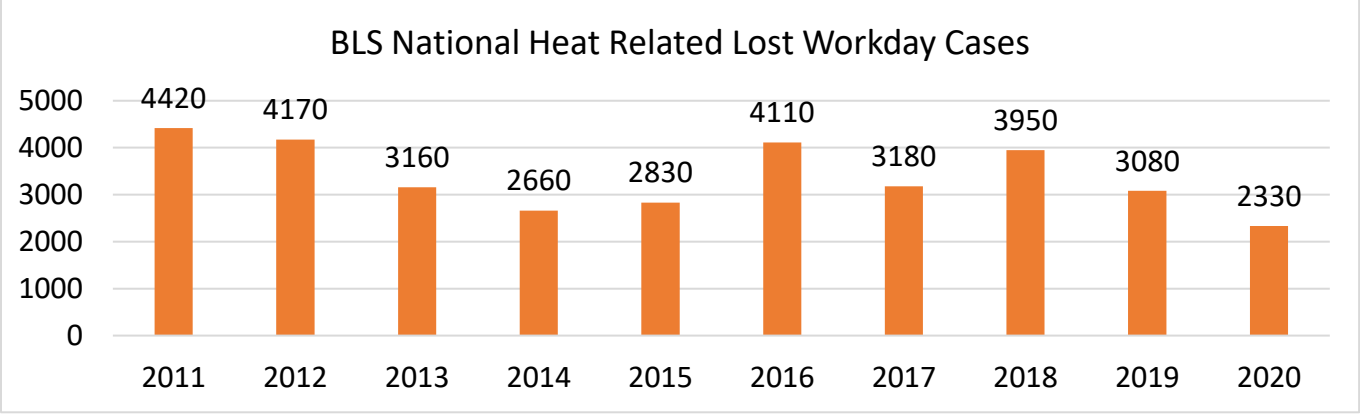
ANPRM Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings
https://www.osha.gov/sites/default/files/laws-regs/federalregister/2021-10-27.pdf

OSHA National Emphasis Program for Heat
Under Development

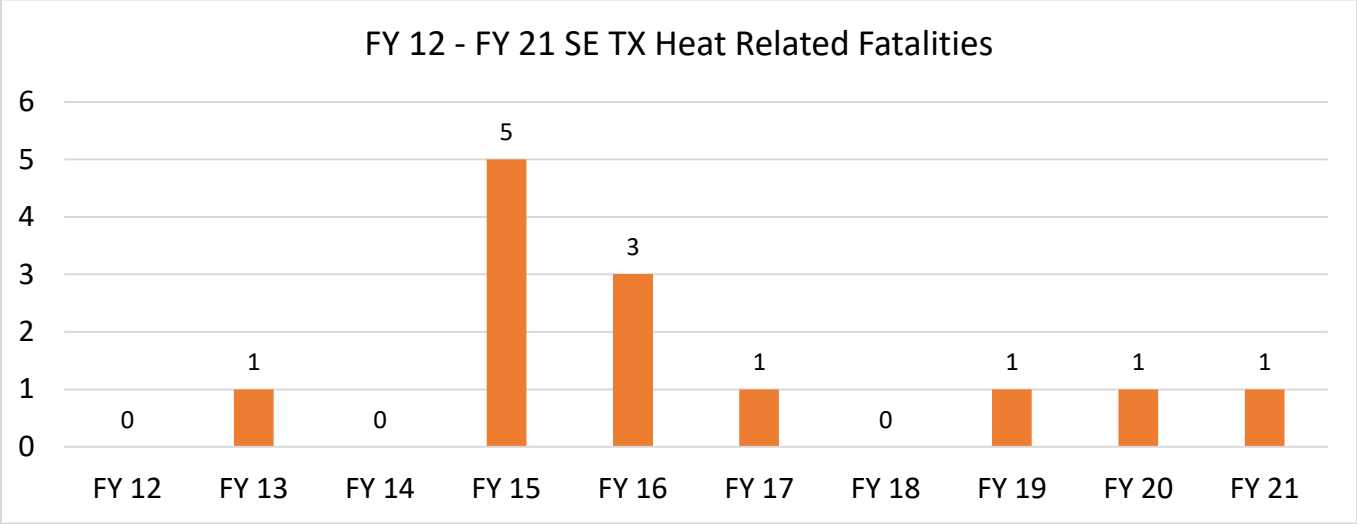
Inspection Guidance for Heat-Related Hazards
https://www.osha.gov/laws-regs/standardinterpretations/2021-09-01

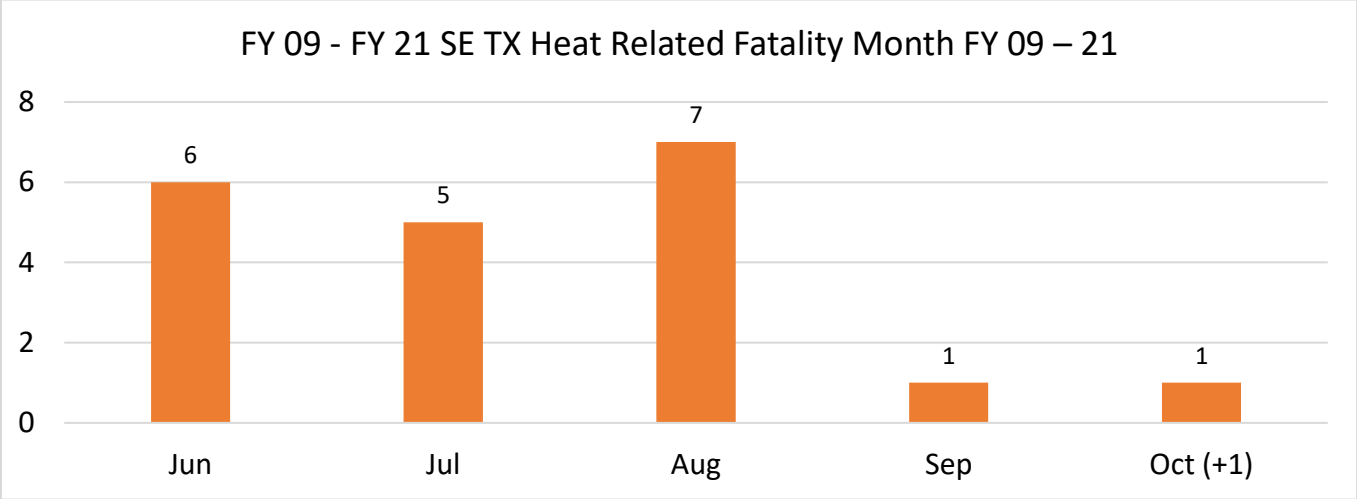
BLS Event 'Exposure to Environmental Heat 531XXX'





FY 21 SE TX OSHA Related Heat Fatality Overview





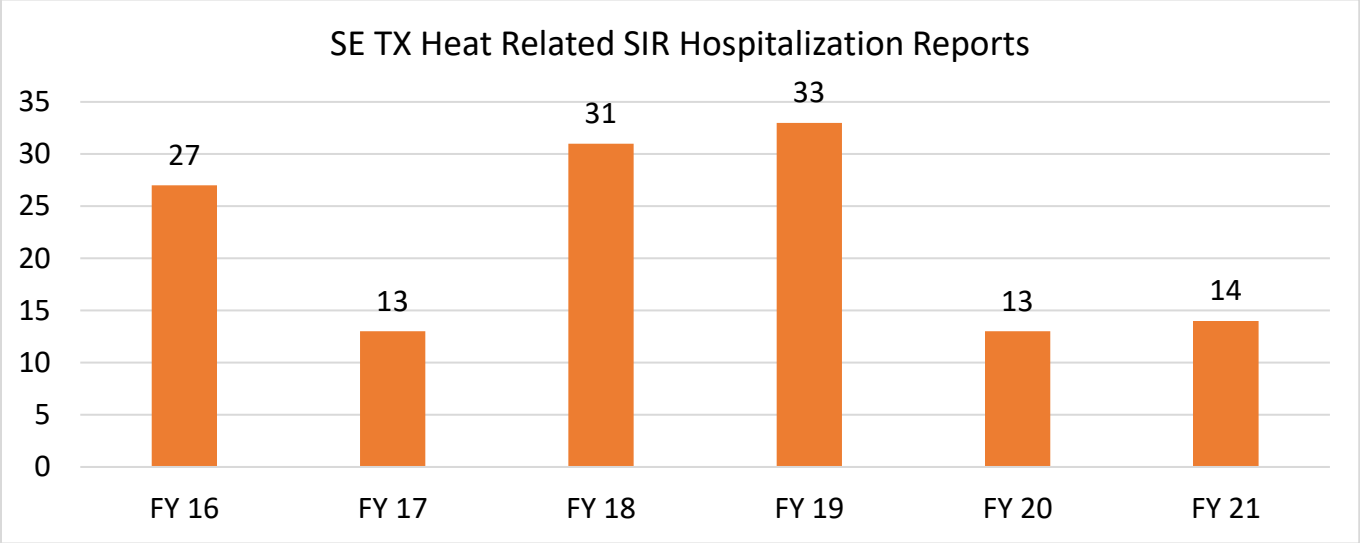
FY 21 SE TX Heat Related Fatalities by NAICS

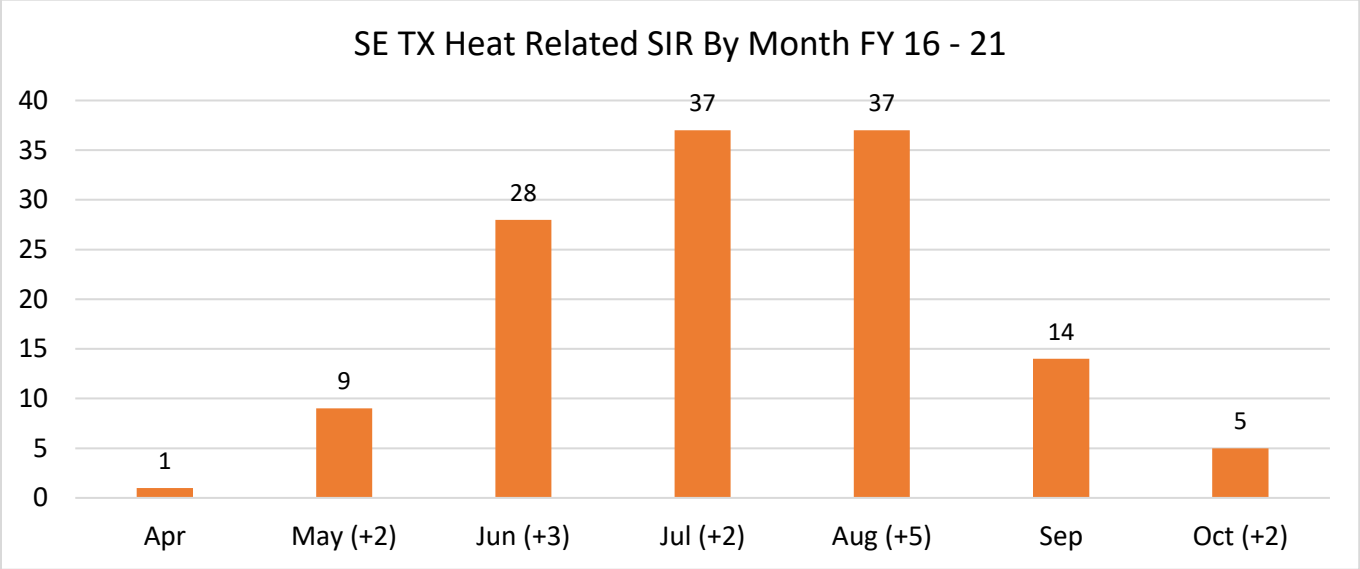
NAICS	Description	Fatals
811310	Commercial and Industrial Machinery and Equipment Repair and Maintenance	1

SE TX FY 21 Heat Related Fatality Narrative

Employee was to clean the interior of a concrete mixer at a remote roadway construction site. He was working alone and was blasting the interior of the mixer off and on throughout the day. He was observed by another contractor exiting the mixer between 2-3 pm wearing a head sock, rubber rain jacket and rain pants. They said he was sweating profusely. He was last observed around 4 pm, resting on the passenger side of his work vehicle. After failing to reach the employee by cell phone, the employer proceeded to the site and found him unresponsive in the vehicle around 8:30 pm. Suspected heat related illness.

SE TX OSHA Heat Related Serious Incident Report Overview





FY 21 SE TX Heat Related SIRs by NAICS

NAICS	Description	SIRs
424410	General Line Grocery Merchant Wholesalers	2
561612	Security Guards and Patrol Services	2
221122	Electric Power Distribution	1
237310	Highway, Street, and Bridge Construction	1
238210	Electrical Contractors and Other Wiring Installation Contractors	1
238220	Plumbing, Heating, and Air-Conditioning Contractors	1
311212	Rice Milling	1
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	1
332996	Fabricated Pipe and Pipe Fitting Manufacturing	1
423860	Transportation Equipment and Supplies Merchant Wholesalers	1
493110	General Warehousing and Storage	1
722310	Food Service Contractors	1

FY 21 SE TX Heat Related Serious Incident Report Narratives

Construction

- Employee began vomiting and was taken to the hospital with a possible heat related illness.
- The employee was installing a nipple on a pipe and was hospitalized for a heat related illness.
- Employee was installing a tankless water heater and repairing pipes in an attic at in the morning for about 4-5 hours. He told his supervisor he was not feeling well after the morning work, but was advised to continue to afternoon job location. In the afternoon, he installed an outdoor sewage line at a second location for about 3 hours. He felt very ill finishing work at the site at about 4:45pm. While departing the location he lost consciousness and his vehicle was stopped by a curb. He awoke to a passerby knocking on his vehicle window to check to see if he was OK. He went to the hospital and was admitted and was treated for heat stroke and a minor heart attack.

General Industry

- Employee was working in an elevated bucket truck repairing an electric cable when he told his coworkers that he didn't feel well. As he was being lowered, he passed out. Emergency medical services were called and he was admitted to the hospital for severe dehydration.
- Employee was operating equipment in a rice mill and was found face down on the floor and unresponsive by a fellow operator. Possible heat related illness.
- An extrusion operator started sweating profusely. He tried to cool off by proceeding to an air-conditioned area where he began feeling lightheaded and experienced muscle cramps. Dehydration
- An employee was welding outside and completed his work at approximately 2:30 PM. He reported to supervision that he wasn't feeling well and was allowed to go home. At approximately 9:30 PM, he contacted supervision and informed them that he was going to go to the local hospital since he was still not feeling well. He was admitted to the hospital and treated for dehydration and blood pressure.
- Employee had finished unloading the trailer when they started experiencing tingling in their legs. He was transported to the hospital for heat exhaustion.
- Employee was conducting food deliveries and got over heated and nauseated. He suffered from heat exhaustion/dehydration that resulted in hospitalization.
- Driver passed out on a customer the dock while standing and talking to another employee. Dehydration
- Employee was performing maintenance outside when he began feeling lightheaded and disoriented. He sat down for a period of time and as he got up from the chair, he collapsed from a heat related injury.
- Employee was performing duties such as baggage and thermal checks when they began feeling lightheaded and dizzy. He reported feeling weak to the supervisor who in turn called onsite first aid. He collapsed before first aid could arrive and struck his head when he fell. He was for heat exhaustion and dehydration.
- Employee was working outside for about three hours screening bags at a security gate and lost consciousness and was unresponsive for about 90 seconds. The employee was transported to the hospital and admitted for a heat-related illness.
- During his route delivering merchandise an employee was unloading food products and began feeling light-headed and disoriented. Dehydration

HEAT STRESS
Risk Factors

Workers should be aware of the many factors that can impact the risk of heat illness.

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Environment

- High temperatures, especially with high humidity, which makes sweating less effective
- Direct sun exposure
- Lack of wind or breeze to cool the body; however, when ambient conditions are higher than body temperature, warm airflow can actually *increase* heat gain
- Proximity to engines or other hot equipment

Activities

- High exertion
- Not enough rest breaks
- Repeated strenuous days in the heat
- High motivation to push through discomfort from heat strain

Medications

Heat tolerance can be affected by medications taken for

- cold, allergies, and congestion
- muscle spasms
- blood pressure
- urine production (diuretics)
- high blood pressure
- diarrhea
- dizziness/vertigo
- psychosis
- depression

No Acclimatization

- New employees
- Experienced employees returning from time away from the heat
- Acclimatized workers who experience a sudden change in worksite temperature, such as heat waves or mining in a new area

Dehydration

- One of the most important risk factors

Health Conditions

- Short-term illnesses, such as diarrhea, vomiting, or respiratory infections
- Chronic conditions, such as diabetes and heart disease
- Being overweight or obese
- Poor physical fitness

Prior Heat Illness

- Increases the risk of heat illness in the future

Other Factors

- Age over 60
- Non-breathable clothing or personal protective equipment
- Alcohol use in the past 24 hours

A worker may be affected by many risk factors at the same time. Talk to a healthcare provider about your personal risk factors.

https://www.cdc.gov/niosh/mining/UserFiles/works/pdfs/2017-125.pdf

DAILY PLANNING CHECKLIST FOR HOT WEATHER

Date:_____ Job Site:_____ Expected Heat Index:_____

Supervisor:_____ Note:_____

WATER	• Is there plenty of fresh, cool drinking water located as close as possible to the workers?	Y / N
	• Are water coolers refilled throughout the day?	Y / N
	• Has someone been designated to check and make sure water is not running low? o *Person Responsible:*_____ o *Phone/Contact:*_____	Y / N
SHADE	• Is shade or air conditioning available for breaks and if workers need to recover? o *What and where:*_____	Y / N
TRAINING	• Do workers know the:	Y / N
	• Common signs and symptoms of heat-related illness?	Y / N
	• Proper precautions to prevent heat-related illness?	Y / N
	• Importance of acclimatization?	Y / N
	• Any new or un-acclimatized workers that need monitored or are on a modified work schedule? o *Name:*_____ o *Name:*_____	Y / N
	• Importance of drinking water frequently even when not thirsty?	Y / N
	• Steps to take if someone is having symptoms?	Y / N
EMERGENCIES	• Does everyone know who to notify if there is an emergency? o *Person Responsible:*_____ o *Phone/Contact:*_____	Y / N
	• Can workers explain their location if they need to call an ambulance? o *Location Description:*_____	Y / N
	• Does everyone know who will provide first aid? o *Person Responsible:*_____ o *Phone/Contact:*_____	Y / N
KNOWLEDGEABLE PERSON	• For high and very high/extreme heat index risk levels, is there a knowledgeable person at the worksite who is well informed about heat-related illness and able to determine appropriate work/rest schedules and can conduct physiological monitoring as necessary? o *Knowledgeable Person:*_____ o *Phone/Contact:*_____	Y / N
PHYSIOLOGICAL MONITORING	• Are workers in a high or very high/extreme heat index risk levels being physiologically monitored as necessary? o *Physiological Method Use:*_____	Y / N
WORKER REMINDERS	• Drink water often	Y / N
	• Rest in shade	Y / N
	• Report heat-related symptoms early	Y / N

_____

_____

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This table is adapted from checklist (page 18) in OSHA's Heat-related Illness Prevention Training Guide

OSHA Heat Illness webpage has lots of resources for developing your heat illness prevention plan and employee training

https://www.osha.gov/SLTC/heatillness/index.html

Heat Safety Tool Smartphone App

The OSHA Heat Safety Tool App can help monitor heat index conditions and recommend safe practices

https://www.osha.gov/heat

Other Resources

- OSHA Safety and Health Topics Page Heat
  https://www.osha.gov/heat-exposure
- CDC/NIOSH Heat Stress Page
  http://www.cdc.gov/niosh/topics/heatstress/
- TX OSHCON Heat (Listed under 'Environmental Exposure')
  http://www.tdi.texas.gov/wc/safety/videoresources/index.html
- Cal OSHA eTool (State-Planned OSHA State)
  http://www.dir.ca.gov/dosh/etools/08-006/index.htm
- Call OSHA Heat Campaign (State-Planned OSHA State)
  http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html
- CPWR Working in Hot Weather
  https://www.cpwr.com/research/research-to-practice-r2p/r2p-library/other-resources-for-stakeholders/working-in-hot-weather/