

## Monsoon Awareness Week June 12-17, 2022

## What is the North American Monsoon?

### Change in Seasonal Winds

For much of the year, low level winds in dry subtropical regions tend to blow from the land toward the sea. However by late spring, strong solar heating causes temperatures to soar over these land areas. This intense heating causes surface air pressure to fall, forming an area of low pressure known as a thermal low. Nearby large bodies of water are also warmed, but not as quickly. So air pressures remain higher relative to the land.



Eventually, the pressure difference increases to the point that the cooler and more humid air over the ocean is drawn toward the hot, dry air over land. This moist air moving inland eventually becomes unstable and develops into thunderstorms. Once this occurs and rain begins to fall, humidity levels increase over land, which only triggers more thunderstorms. This cycle will continue until land areas begin to cool in the early fall, and water temperatures reach their peak in early fall. This reduces the pressure difference, which in turn causes the moist onshore flow to lessen and the monsoon gradually ends.



#### Monsoon Hazards

Monsoon Hazards include Heat, Fire Weather, Downburst Winds, Dust Storms, Lightning, and Flash Flooding.

In North America, the Monsoon impacts Arizona, New Mexico, Nevada, Utah, Colorado, Texas, and California.



# Monsoon Awareness Week HEAT AWARENESS

### What is heat related illness?

Heat-related illness, also called hyperthermia, is a condition resulting from exposure to extreme heat where the body becomes unable to properly cool, resulting in a rapid rise in body temperature. The evaporation of sweat is the normal way to remove body heat, but, when the humidity is high, sweat does not evaporate as quickly. This, in turn, prevents the body from releasing heat quickly. Prompt treatment of heat-related illnesses with aggressive fluid replacement and cooling of core body temperature is critical to reducing illness and preventing death.

### Heatstroke Signs and Symptoms



- Headache. Your head may throb.
- Altered mental state or behavior. Confusion, agitation, slurred speech, irritability, delirium, seizures and coma can all result from heatstroke.
- **High body temperature.** A core body temperature of 104° F (40 °C) or higher, obtained with a rectal thermometer, is the main sign of heatstroke.
- **Alteration in sweating.** In heatstroke brought on by hot weather, your skin will feel hot and dry to the touch. However, in heatstroke brought on by strenuous exercise, your skin may feel dry or slightly moist.
- Nausea and vomiting. You may feel sick to your stomach or vomit.
- **Rapid breathing.** Your breathing may become rapid and shallow.
- Racing heart rate. Your pulse may significantly increase because heat stress places a tremendous burden on your heart to help cool your body.
- Flushed skin. Your skin may turn red as your body temperature increases.

### Heatstroke is an EMERGENCY, CALL 911!