

North/East Texas

Current scientific research concludes that climate variability and change pose significant risks to the Dallas/Ft. Worth area.

Water

Water is becoming increasingly scarce and expensive independent of climate change. Texas water demands are growing with population, incomes, and an appreciation for the values of ecological and recreational uses. The US EPA estimates that statewide warmer, drier climate would lead to greater evaporation, as much as 35% decrease in streamflow, and less water for recharging groundwater aquifers. A study for the Trinity River projects that in a period of severe drought like the 1950's, climate change could drop municipal reservoir levels to 22 percent capacity. This climate change-aggravated drought could drop power reservoir levels to 40 percent capacity.

Human Health

Mortality from heat waves has been predicted to increase under most scenarios of climate change. The degree to which heat-related mortality rates increase will be determined by the ability to implement early warning systems and other interventions that focus on at-risk populations, as well as by the frequency of extreme heat waves and the changes in daytime temperature variation under future climate regimes. One study projects that by 2050 heat-related deaths during a typical summer could triple, from about 35 heat-related deaths per summer to over 100.

Global climate change may affect human respiratory health by changing levels of air pollutants and pollens. For urban areas in Texas, impacts of climate

Region Profile -East Central-



Population (2000) – 6,413,288

This region is the most heavily populated in the state.

Most of this region is marked by intense agricultural activities outside major urban areas.

Significant global warming-related industries:

- Electric Utilities
- Livestock
- Landfills



change on tropospheric, i.e., ground-level, ozone are both more certain and likely to be more important than impacts on other air pollutants. This is due to the importance of temperature in the formation of ozone as well as the large areas of the country currently affected by ozone levels exceeding national standards. Increasing temperatures will also increase the demand for air conditioning, which will increase the use of electricity, with consequent increases in emissions of smog-forming gases from fossil fuel power plants.

Brown shrimp catch in the US Gulf Coast could fall 25% with only a 10-inch rise in sea level. Possible responses to sea level rise include building walls to hold back the sea, allowing the sea to advance and adapting to it, and raising the land. Each of these responses will be costly, either in out-of-pocket costs or in lost land and structures. For example, the cumulative cost of sand replenishment to protect the coast of Texas from a 20 inch sea level rise by 2100 is estimated at \$4.2-\$12.8 billion.

