Utah and Our Changing Climate

Utah's climate is changing; over the past century, the state has warmed about 2° F. In Utah and throughout the western U.S., heat waves are becoming more common, snow is melting earlier in the spring, flash floods occur more frequently, and tinder-dry conditions contribute to more-frequent and more-severe wildfires.

CO_2 is a naturally occurring, essential element for life on Earth. CO_2 also has many industrial and commercial uses, and it's the build-up of CO_2 and other GHGs like methane in the atmosphere that contributes to the warming of the Earth's surface. Over the last 50 years, heat-trapping gases have warmed Earth's surface and lower reaches of the atmosphere by about 1° F; since the early 1900s, the planet's average temperature is up about 1.8° F. While these small changes may seem inconsequential, climatologists in Utah and elsewhere warn that the impacts are profound, ranging from extreme weather events to increased health risks.

Source: Compiled by the Kem C. Gardner Policy Institute from National Weather Service, Environmental Protection Agency data

Effects of a Changing Climate on Utah

Health

- Impacts disproportionately affect children, the elderly, and those with chronic health conditions.
- Higher levels of dust, allergens, and other pollutants worsen respiratory diseases like asthma.
- Higher temperatures increase the range of disease-carrying insects and raise the rates of heat stroke and cardiovascular, respiratory, and kidney diseases.
- Water-borne infections can rise as temperatures rise.

Declining snowpack

- Snowpack in some places decreased nearly 80% between 1955 and 2013.
- Decreasing snowpack levels, combined with warmer spring weather, compromises Utah's water supply, 80% of which come from melting snowpack.
- Warmer winters cause shorter ski seasons, greater utilization of snow-making equipment at Utah resorts, and increased avalanche risk.

Warmer, drier conditions

- Forests are more susceptible to disease and pests, such as bark beetles, as drought reduces the ability of trees to defend themselves.
- Wildfires are more frequent, more intense and larger, affecting land, property, and human health.
- Heat stroke and dehydration are amplified in urban settings where paved surfaces store and reflect heat.
- Algae blooms are common.

Extreme weather events

- Flash floods are increasing, up six-fold over the past 20 years.
- Smoke from wildfires worsens air quality throughout the state.
- Winter storms are becoming less frequent, but more intense.
- Extreme events can damage public infrastructure, interrupt business, and affect agricultural production.

Sources: NOAA, Utah Rivers Council, EPA, Ski Utah