

# Climate Projections: Homer



## Background:

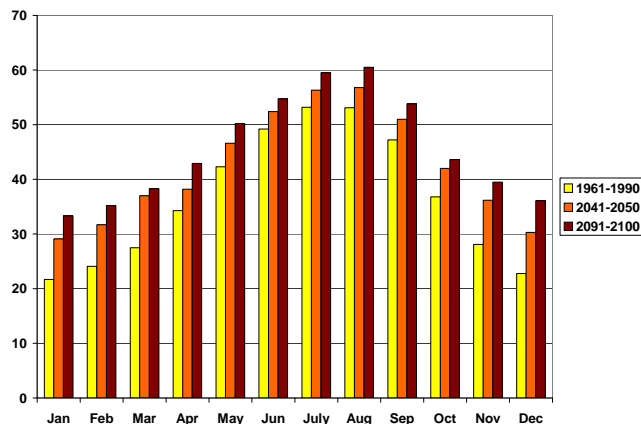
The Scenarios Network for Alaska Planning (SNAP) is a network linking University of Alaska researchers with stakeholders involved in land and resource management. Through collaborative partnerships involving data sharing, research, modeling, and interpretation of model results, SNAP addresses some of the complex questions and challenges of adapting to future conditions.

As a starting point, SNAP offers statewide maps of temperature and precipitation projections, and basic data for 353 communities statewide, including Homer.

These projections are based on global models used by the International Panel on Climate Change, using a moderate (A1B) emissions scenario. Results from the five models that perform most accurately in Alaska and other northern regions were downscaled using data from Alaska's weather stations.

## Temperature

This graph shows mean monthly temperatures (°F) for three periods: 1961-1990 (actual historical data), 2040-2049, and 2090-2099 (projections).

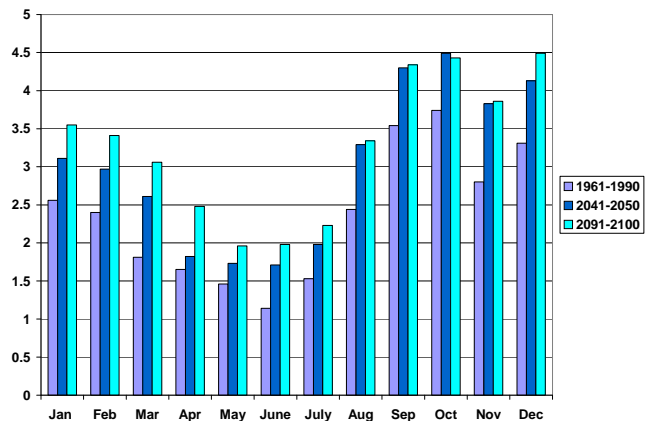


Temperature increases are predicted for every month, and increases are expected to continue throughout the century. The growing season is likely to increase. Note that greater change is projected in winter than in summer, spring, and fall, and that mean temperatures for all winter months (November through March) are expected to rise from below freezing to above freezing.

## Precipitation

Mean total monthly precipitation (inches) is shown for 1961-1990, 2040-2049, and 2090-2099. Increases are predicted for all months. However, it is important to note that precipitation alone does not predict ecosystem moisture limitations.

Increased plant growth and increased evaporation due to higher temperatures may more than offset the additional precipitation, resulting in overall drying of



soils. Also note that much of the extra precipitation is likely to occur in winter, whereas drought stress in plants is most likely to occur during hot weather.

## Additional Information

Changes in temperature and moisture can trigger profound landscape-level changes such as deglaciation, shifts in plant communities, insect pest outbreaks, new patterns of fire, and different animal migration routes or breeding patterns. Some of these changes can be predicted through further modeling.

To learn more about how your agency or community can become a SNAP collaborator, contact:

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