

Agricultural and forestry enterprises and public land management of natural resources are strongly influenced by weather and climate. Foresters, farmers, and ranchers make short-term, operational decisions affecting near-term management actions (day to plant, wildfire suppression activities) in part based on current weather and near-term forecasts. Tactical or strategic decisions (crop and livestock selection, drought management, wildfire management, equipment and land purchases) analyze financial and economic information as well as some climatological information. Private landowners and public land managers also rely on their experiential knowledge about weather and climate in short-term and longer-term decisions.

Climate information used in agriculture, forestry and ranching enterprises includes historical climate data, as well as short-term weather forecasts – 6, 12, and 18 month forecasts. Farmers and ranchers also use alerts for extreme events such as flash flooding, intense rainfall, wind events, ice storms, and winter blizzards. There has been and continues to be much interest in increased capability to predict extreme events that require a management response. Agricultural and forestry uses of climate change projections are minimal, for a variety of reasons. Strategic planning involve the analysis of economic tradeoffs typically over a time period where the greenhouse gas effect on climate coincides with near-term decadal variability.

The talk will focus on linking climate, and agricultural and forestry communities further in the discussion of what is/what could be known about: 1) Changes in extreme events as linked to changes in atmospheric-ocean processes under climate change – increased understanding of these linkages to improve current management responses to such events; 2) Short-term meteorological forecasts and near-term risk assessment – such as multi-year drought ; 3) Framing risk in the context of climate projections – adaptation.