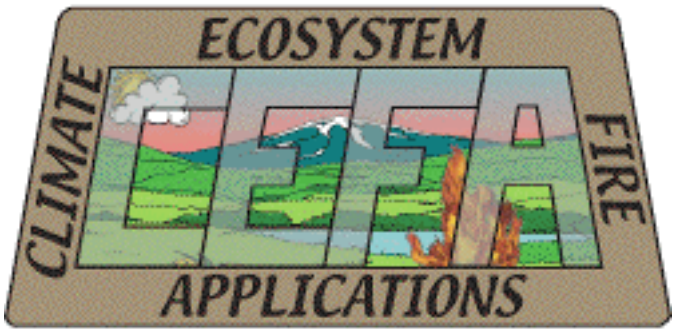
Program for Climate, Ecosystem and Fire Applications



2002 Seasonal Consensus Climate Forecast for Wildland Fire Management

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CEFA Report 02-02 March 2002

2002 Seasonal Consensus Climate Forecast for Wildland Fire Management

by

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Introduction

On March 5, 2002, climate experts from the NOAA/NCEP/NWS Climate Prediction Center (CPC), the International Research Institute for Climate Prediction (IRI), the Scripps Institution of Oceanography Experimental Climate Prediction Center (ECPC), the NOAA/CIRES Climate Diagnostics Center (CDC), and the Desert Research Institute Program for Climate, Ecosystem and Fire Applications (CEFA) met to produce a national seasonal climate forecast for wildland fire management. Specifically, two season (March – May and June – August) probability forecasts of temperature and precipitation anomalies were made for each Geographic Area Coordination Center (GACC). These forecasts are **NOT** "official", and should be considered experimental. Though the forecasts were originally produced for fire management purposes, they may have applicability to other users. This brief report provides the forecasts and describes how they were made.

The forecasts were created as part of the Fire in the West 2002 workshop organized by the Climate Assessment for the Southwest (CLIMAS). CLIMAS (a NOAA-funded Regional Integrated Science Assessment) is housed at the University of Arizona, Tucson, Arizona. Other workshop sponsors included the Institute for the Study of Planet Earth (ISPE), University of Arizona, Tucson, Arizona; The Laboratory of Tree-Ring Research, University of Arizona, Tucson, Arizona; The Program for Climate, Fire, and Ecosystem Applications (CEFA), Desert Research Institute, Reno, Nevada; and the National Weather Service Weather Forecast Office, Tucson, Arizona. Workshop funding organizations included ISPE, the National Oceanic and Atmospheric Administration Office of Global Programs, the Joint Fire Science Program of the U.S. Department of the Interior and USDA Forest Service, and the National Interagency Coordination Center. Web links to all of these agencies and organizations are provided below.

Forecast Description

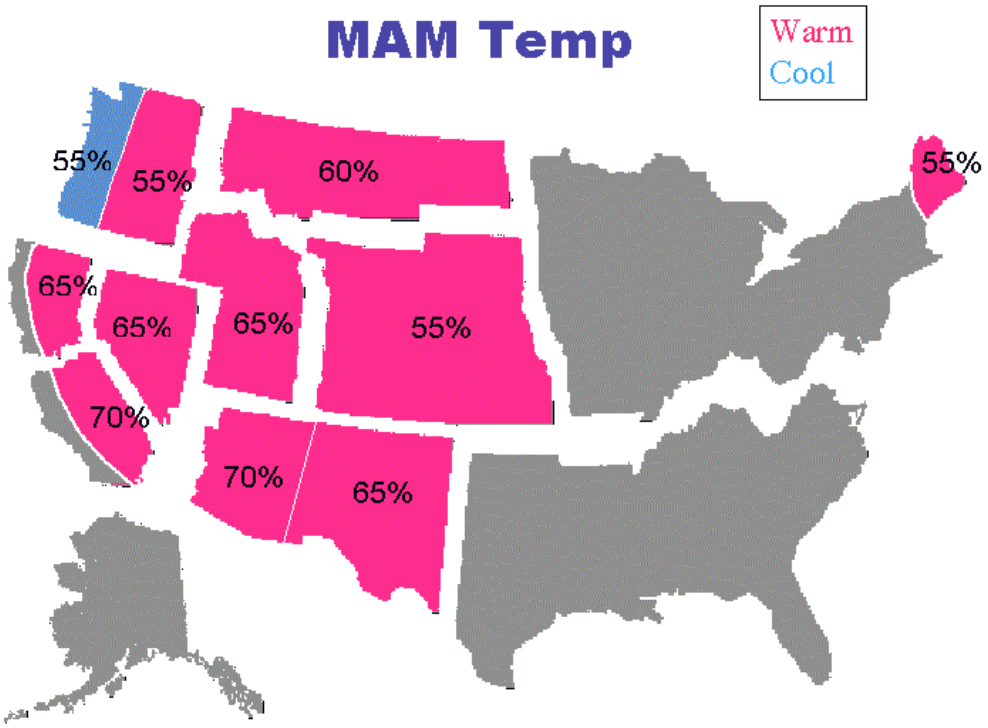
A 2-category (above and below normal) probability outlook for temperature and precipitation was produced for two seasons, including March, April and May (MAM), and June, July and August (JJA). As part of the procedure for producing the outlook, forecasters started with probabilities of 50% (a 50-50 chance) of above or below normal. The forecasters then determined whether or not a particular category (e.g., above normal) is favored. For example, if the forecasters determined a 10% chance of the above normal category occurring, then the probability of the above normal category became 50% + 10%, or 60%. The higher the percent

above 50 indicates a relative increase in forecast confidence. Given the current state of art for climate forecasting, 5% would be considered low confidence, and 20% fairly high confidence. A forecast probability of 50% means no forecast confidence for either category. A combination of dynamical models and statistical models from the respective organizations, and forecaster judgment were incorporated into the forecasts. See the web link list below for more forecast information.

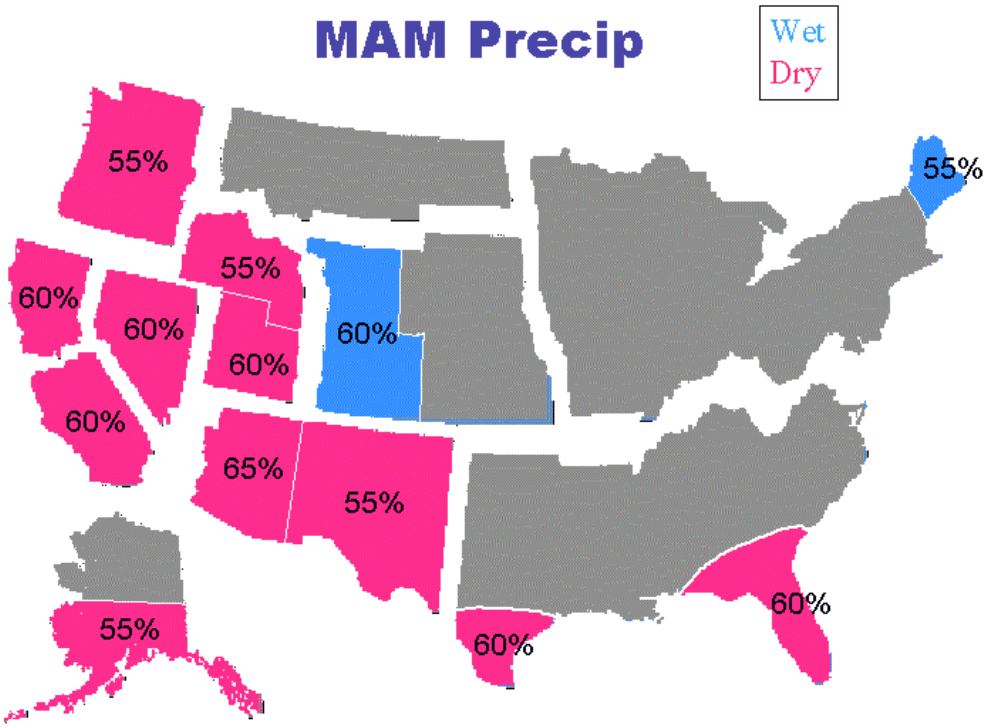
Seasonal Forecasts

The maps below indicate the experimental seasonal consensus forecasts by GACC. Red shaded areas indicate above normal temperature or below normal precipitation; blue shaded areas indicate below normal temperature or above normal precipitation; gray shaded areas indicate a no confidence forecast region. Forecast probabilities are indicated by the percent value; areas without a value imply 50-50 chance.

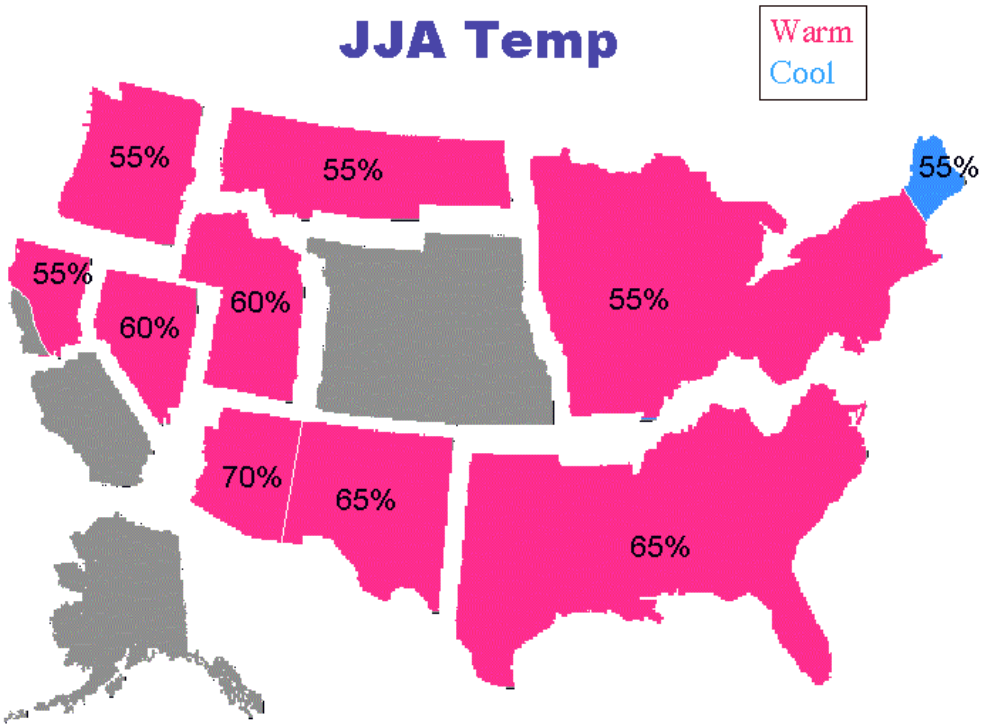
March – May Temperature



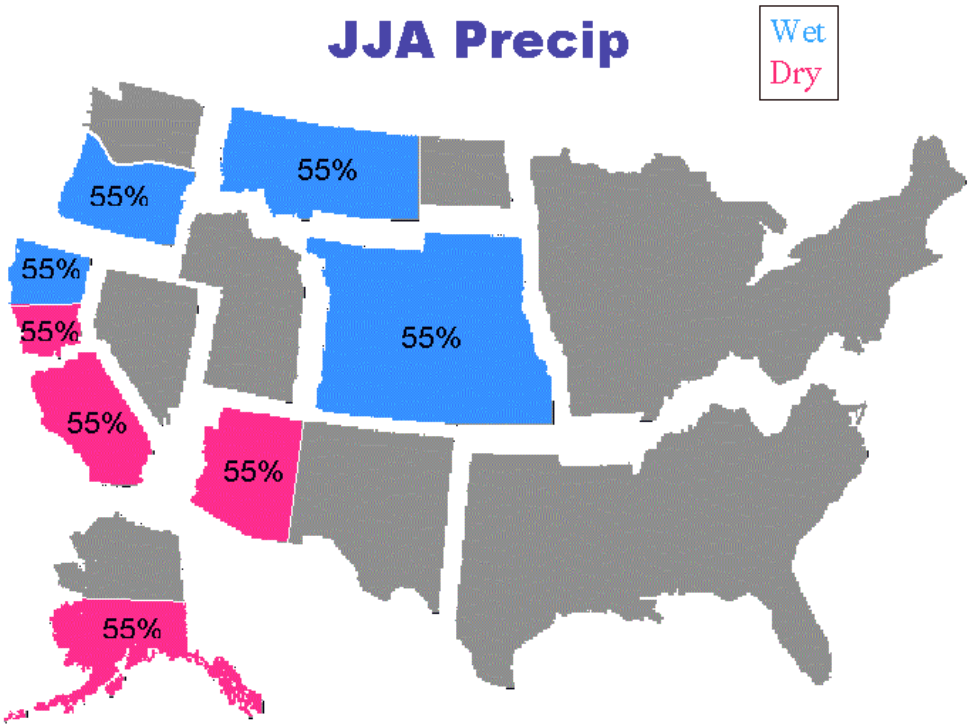
March – May Precipitation



June – August Temperature



June – August Precipitation



Forecast Team

The forecast team members included the following:

Tony Barnston, International Research Institute for Climate Prediction
Dr. John Roads, Scripps Institution of Oceanography Experimental Climate Prediction Center
Rich Tinker, NOAA/NCEP/NWS Climate Prediction Center
Dr. Klaus Wolter, NOAA/CIRES Climate Diagnostics Center
Dr. Timothy Brown, DRI/CEFA (facilitator)

A grateful acknowledgement goes to Dr. Narasimhan Larkin (USDA-FS/PNW/FERA) for helping produce the map graphics during the workshop.

Related Web Links

The list below provides web links related to the workshop and the respective organizations involved in producing the forecasts.

Workshop

http://www.ispe.arizona.edu/climas/
http://cefa.dri.edu/
http://www.ispe.arizona.edu/index.shtml/
http://www.ltrr.arizona.edu/
http://www.wrh.noaa.gov/tucson/
http://www.ogp.noaa.gov/
http://www.nifc.gov/joint_fire_sci/jointfiresci.html/
http://www.nifc.gov/news/nicc.html/

Forecasts

http://www.cpc.ncep.noaa.gov/
http://iri.columbia.edu/
http://ecpc.ucsd.edu/
http://www.cdc.noaa.gov/

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