National Seasonal Assessment Workshop

Eastern, Southern & Southwest Geographic Areas

Hosted virtually
January 17-19, 2012

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2012 National Seasonal Assessment Workshop for the Eastern, Southern, & Southwest Geographic Areas

On January 17-19, 2012, wildland fire, weather, and climate met virtually for the tenth annual National Seasonal Assessment Workshop for the eastern and southern United States. Two fire potential forecasts for the Eastern, Southern and Southwest Geographic Areas were produced; one for February through March and another for April through June. This briefing document includes a description of existing climate forecasts, fuels conditions, and potential resource impacts.

Significant Fire Potential Forecasts

(February through March and April through June, 2012)

The left map below shows the significant fire potential forecast for the Eastern, Southern and Southwest Geographic Areas for February through March. Significant fire potential is defined as the likelihood that a wildland fire event will require mobilization of additional resources from outside the area in which the fire situation originates. Areas highlighted as "Above Normal" are likely to require resources mobilized to augment local capability at some point during the forecast period.

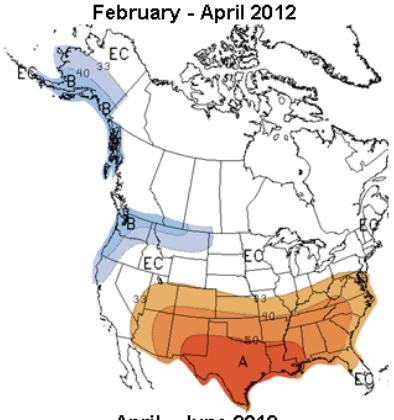
The right map below shows the trend forecast for significant fire potential during April through June for the Eastern, Southern and Southwest Geographic Areas based on the February through March outlook. Significant fire potential areas highlighted in red are expected to persist. The area highlighted in green is expected to continue with below normal significant fire potential during the forecast period.

Note: Outlook map images (jpg files) are embedded and linked in this document.

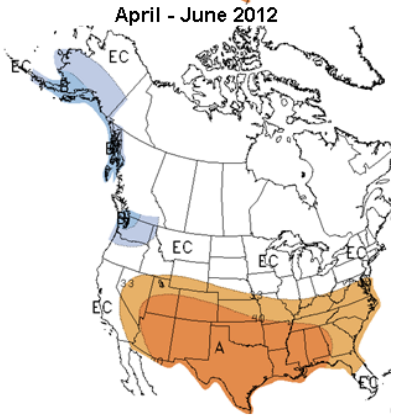
The results of the workshop indicate there will be above normal significant fire potential across Florida and coastal portions of the southeastern states, central and western Texas and Oklahoma, and much of New Mexico and southeast Arizona during February and March. Drought stricken portions of the upper Midwest will also see above normal significant fire potential. All above normal areas are expected to expand during the April through June period. An area of above normal significant fire potential in eastern Texas is expected to develop during in the April through June period. Below normal significant fire potential is expected across a large portion of the east central U.S. for the entire outlook period. Elsewhere, significant fire potential is expected to be normal. The critical factors influencing fire potential for this outlook period are:

- **Precipitation:** Since October precipitation has been above normal in the Ohio Valley, the mid-Mississippi Valley, much of Oklahoma and North Texas. Much below normal conditions continue for most of the Gulf and lower Atlantic coast states, the Southwest and most of the upper Mississippi region.
- **Drought Conditions:** Severe to exceptional drought continues across the south central and far southeastern parts of the U.S.
- **Soil Moisture:** Soil moisture deficits remain across much of the southern U.S. and across the upper Mississippi Valley.
- **Fuels:** Fuels across drought stricken areas of the U.S. remain dry. However, lack of fine fuel growth will reduce volume and continuity of fine fuels in these areas.

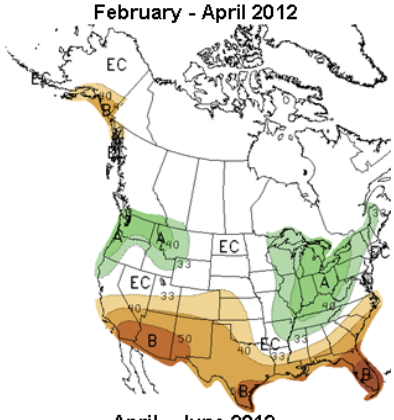
Temperature Forecasts
February - April 2012



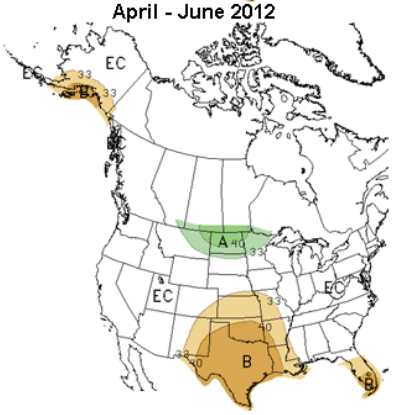
April - June 2012



Precipitation Forecasts
February - April 2012



April - June 2012



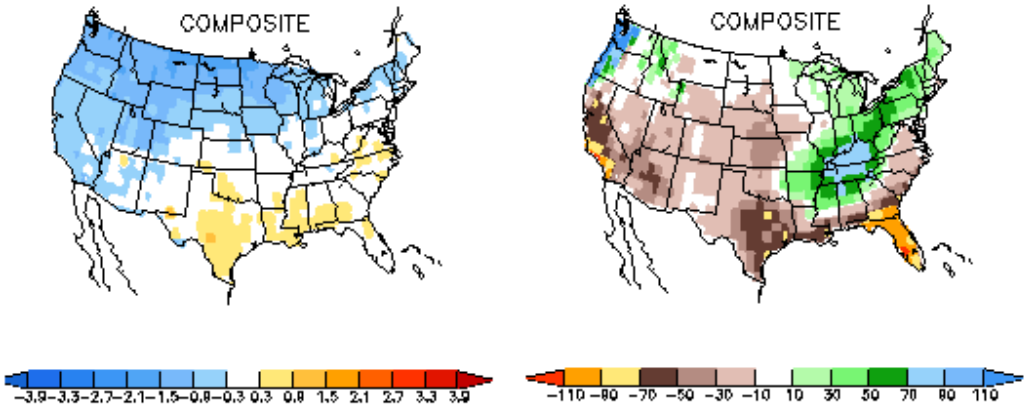
A = Above Normal
B = Below Normal
EC = Equal Chances of Above or Below or Normal Conditions

Numbers represent the probability of occurrence

http://www.cpc.ncep.noaa.gov

Climate Conditions and Forecasts

After a brief weakening in the fall, La Niña has strengthened to moderate levels. Historically, La Niña is associated with below normal precipitation anomalies from the Southwest across the southern and central Plains and into the Southeast and Florida, with above normal precipitation anomalies in the Northwest, the Ohio and Tennessee Valleys and the Northeast. Above normal temperatures typically occur across much of the South and Southeast while cooler temperatures occur overmost of the West, the northern Plains and the Great Lakes region. The figures below show typical spring temperature (left) and precipitation (right) anomaly patterns associated with La Niña. During the 2011-12 winter, an atypical weather pattern has been observed. Other atmospheric factors have disrupted the expected La Niña cycle, producing a wetter than expected Florida and southwestern U.S. while the Northwest remained largely dry. Temperatures were generally much warmer than normal across the north central and northeastern U.S. while the southern states were near or slightly below normal.



Temperature and Precipitation

Temperature and precipitation outlooks (graphics at left) through April are heavily influenced by the characteristic weather patterns of historic La Niña episodes. An increased probability of above average temperatures is predicted across most of the southern half of the U.S. while below average temperatures are more likely across the Northwest. From April to June, the probability of above average temperatures continues across of the southern half of the country. For precipitation, increased chances of above average are present through April across the Northwest, the Ohio Valley and the Northeast while below average precipitation is more likely across the Southwest, Texas and along the Gulf and lower Atlantic coasts. The dry pattern is forecast to continue across the south central Plains and Florida with a small area of above normal precipitation over the far northern Plains.

Fuels Assessment

Eastern Area: Well below normal precipitation amounts and snow depths were in place across portions of the western and north central Great Lakes towards the end of January 2012. Drought conditions developed across the western Great Lakes through the fall and early winter months of 2011-12. Grass and peat fires affected portions of western Minnesota through December of 2011 and into early January 2012 due to the drier than normal conditions and lack of snow cover. Until snowfall increases across the Upper Mississippi Valley, above normal fire potential is forecast to persist into the late winter months of 2012.

While snowfall may increase across the Great Lakes as winter progresses, drought conditions in place over the western and parts of the north central Great Lakes entering the winter months will likely create above normal fire potential leading into the spring fire season. In addition, windstorms on July 1 and July 19 swept across portions of eastern Minnesota and northwest Wisconsin, impacting 185,000 acres in Minnesota and 130,000 acres in Wisconsin. This will increase the risk of large fire growth over these blow down areas due to the substantial increase in surface fuel loading across this area.

Well above normal precipitation and soil moisture anomalies were in place at the end of 2011 across much of the southern and eastern tiers of the Eastern Area. Snow depths were well below normal across much of the northern tier states towards the end of January 2012. However, near to above normal soil moisture anomalies in place at the end of the 2011 fall season across the eastern Great Lakes and the Northeast should keep fire potential normal. If snowfall does not increase through the remainder of the winter of 2012, an earlier than normal start to the spring fire season is anticipated over these areas, along with the aforementioned western Great Lakes.

Southern Area: Much of the Southern Area will experience above normal significant fire potential through the winter and spring of 2012, especially in the western portions of the Area, as well as coastal regions of the southeastern states. Grass fuels in west Texas are a major concern with any wind and/or low relative humidity events. There has been some reduction in fine fuel loading due to the ongoing drought across the region. Along the central Gulf Coast drought indexes are abnormally high for this time of year. Recent fires have burned deep into the duff and completely consumed one to three inch diameter fuels. If little or no improvement in drought conditions is seen expect a spike in fire activity in the spring months. North Carolina fire danger stations monitoring organic soils are indicating a severe water table deficit with soil moisture levels both at the surface and the lower level dry enough to sustain ignition. Smoke and particulate emissions would be significant with any significant fires. In addition to the existing rain deficits and below average rain fall, mild winter temperatures have fostered continued evapotranspiration by the evergreen brush, causing additional water loss in the wetlands. In Florida, this winter's freezes have produced damage deep into southern Florida, resulting in earlier than average fire activity and unusual fire behavior. In Georgia, smoldering activity is still occurring in the Okefenokee Swamp from last year's fires. There has been enough fine fuel regrowth on the refuge to carry fire should an ignition occur, though fuel reduction from last year's fires, overall, would indicate less intense fire behavior this season. Swamp water level is at 118.96 inches, which is lower than the 119 inch level recorded at the time of the start of last year's Sweat Farm Road Again fire. A new record minimum of 117.40 inches was set last year. Unusual and very early fire activity has been occurring just outside the refuge.

East Texas from May through June could become a concern due to extensive tree mortality from last year's extreme drought. The Carolina Coastal Plain may also become an area of interest in the April through May time frame if little rainfall occurs. In Florida, expect the return of Atlantic moisture around mid-June to provide a traditional end to the fire season. Below normal significant fire potential is expected to occur from Kentucky and Tennessee northeast to Virginia.

Southwest Area: Above Normal significant fire potential is likely across much of the western 1/2 of New Mexico as well as the southeastern 2/3 of Arizona into May. Normal fire potential is expected across northwestern Arizona as well as northeastern New Mexico and the eastern plains of the region.

Severe drought is ongoing and is expected to expand westward across the remainder of New Mexico and Arizona through April. Fine fuels overall are not as heavy or continuous as 2011 due to a lack of additional growth resulting from the drought of the past year. Some areas are also seeing compaction of fine fuels from periods of snowfall the last 2 months. Overall, La Nina will influence the trend toward abnormally warm and dry conditions through winter and spring 2012. This trend will initially be focused over the southern sections of the region, but is expected to gradually expand north/west by later in the spring. This also tends to indicate abating wind and westward expansion in abnormal warmth and dryness from May through June. The expected pattern through the spring months is likely one of less significant winds compared to 2011 and a more likely active spring thunderstorm season via the dryline in the eastern plains of the region.

2012 National Seasonal Assessment Workshop Summary

The main objective of the tenth annual National Seasonal Assessment Workshop for the Eastern, Southern and Southwest United States is to improve information available to fire management decision makers. Other objectives include:

- Improving communication and cooperation between fire professionals and climate scientists.
- Improving interagency and inter-government (state, federal) information flow.
- Fostering the exchange of ideas and techniques for assessing fire potential and applying climate forecasts and products to meet fire management needs.

These annual assessments are designed to inform decision makers for proactive wildland and prescribed fire management, thus better protecting lives and property, reducing firefighting costs and improving firefighting efficiency.

Workshop participants, in consultation with other specialists unable to attend the workshop, considered a variety of factors when making their assessments. Significant fire potential outlooks are primarily based on interactions between climate factors, fuel types and conditions, long-range predictions for climate and fire, and the persistence of disturbance factors, such as drought and insect-induced forest mortality. The main products of the workshop are maps forecasting significant fire potential for the eastern, southern and southwestern United States.

The 2012 workshop was part of the tenth national assessment organized by the National Predictive Services Subcommittee (NSPS), the Climate Assessment for the Southwest (CLIMAS) at the University of Arizona, the Program for Climate, Ecosystem and Fire Applications (CEFA) at the Desert Research Institute and the California Applications Program (CAP) at the Scripps Institution of Oceanography. Other participating agencies are as listed.

An assessment workshop for the western United States and Alaska will be held in April 2012. For more information, contact the workshop organizers.

Participating Agencies

National Interagency Coordination Center
Eastern Area Coordination Center
Southern Area Coordination Center
Southwest Area Coordination Center
CLIMAS/University of Arizona
Desert Research Institute
CAP/Scripps Institution of Oceanography
Bureau of Land Management
National Parks Service
Bureau of Indian Affairs
US Fish and Wildlife Service
USDA Forest Service
National Oceanic and Atmospheric Administration
National Association of State Foresters
State of Minnesota
State of Indiana
State of New Jersey
State of Wisconsin
State of Michigan
State of Maine
State of New Hampshire
State of Vermont
State of Virginia
State of North Carolina
State of South Carolina
State of Georgia
State of Florida
State of Texas