Rocky Mountain Area 120 Day Significant Fire Potential Outlook Through July 2022



Routt County Wildfire Mitigation Conference 30 April 2022

NFDRSV4 Transition Update - Housekeeping

2022 Rocky Mountain Area Predictive Service Areas (PSAs)





120 Day Fire Potential Outlook Considerations and Summary

Antecedent Considerations

- Weather Patterns (seasonal)
- Temperature Anomalies
- Precipitation and Drought Comparisons
- Fuel Moisture and Fuel Loading
- Large Fire History

Prediction Considerations

- Recent Climate Trends
- **Sea Surface Temperature Anomalies and Predictions (El Nino, La Nina, MJO)**
- Short Term and Long-Term Model Forecast Charts
- **Climate Prediction Center Forecasts and Predictive Services Temperature/Precipitation Anomaly Forecasts**
- **Final Thoughts and Considerations for Spring and Early Summer 2022.**

Outlook Summary

Above normal significant wildland fire potential is expected to develop across portions of the Rocky Mountain Area (RMA) through July 2022 due to the persistence and expansion of above normal temperatures and below normal precipitation during the outlook period. In conjunction with long-term precipitation deficits and ongoing drought, this will promote the availability of receptive fuels as well as rapid fire spread potential during wind events.



90-Day Temperature Anomalies





Recent Temperature Anomalies



90-Day Percent of Normal Precipitation



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Recent Percent of Normal Precipitation





Snow Depth and Snow Water Equivalent (SWE) Percent of Average





Dry and Windy





Soil Moisture Calculations





Long Term Drought Analysis from the National Drought Mitigation Center

Drought Classification D3 (Extreme Drought) None D0 (Abnormally Dry) D4 (Exceptional Drought) D1 (Moderate Drought) No Data D2 (Severe Drought) 1 Year Ago Current





Evaporative Demand Drought Index "EDDI" "the thirst of the atmosphere"



Images provided by the NOAA/ESRL Physical Sciences Laboratory, Boulder, Colorado https://psl.noaa.gov/eddi/



El-Nino/La-Nina Forecast (El-Nino Southern Oscillation (ENSO)

CPC/IRI objective outlook La Niña is favored to continue through the Northern Hemisphere summer (59% chance during June-August 2022), with a 50-55% chance through the fall.



Neutral ENSO: -0.5 °C to 0.5 °C

Analog Years 2002, 2008?

Interesting Trends

- 2011/2012 A Two-year La Niña
- 2021/2022 A Two-year La Niña





Climate Prediction Center (CPC) Week 3-4 Temperature and Precipitation Outlooks





Climate Prediction Center (CPC) Temperature and Precipitation Anomaly Forecasts





Monsoon Resources

RESEARCH ARTICLE Accepted: 14 October 2018 Published on: 21 November 2018 Impact of the North American monsoon on wildfire activity in the southwest United States Nicholas J. Nauslar1,2 John F. Mejia1





One of the four recurring synoptic weather patterns that facilitates increased wildfire activity related to the North American Monsoon is a Zonal (west-to-east) or southwest flow transition to a ridge of high pressure.

https://www.spc.noaa.gov/publications/nauslar/Nauslar_et_al-2019-International_Journal_of_Climatology.pdf

PREDICTIVE SERVICES

150 140

Rocky Mountain Area Fire History



Rocky Mountain Area 1994-2012





Significant Fire Potential Outlook – New 28 PSA's for 2022







Rocky Mountain Area 120 Day Significant Fire Potential Ou**t**look

