WERA 102 - Climate Data and Analyses for Applications in Agriculture and Natural Resources

Annual Meeting - September 24, 2020

1:00 – 4:00 PM (Pacific Time)

Agenda

1:00 Brief Introductions

1:30 WERA 102 Proposal – the next five years

2:15 Break

2:30 Written State Reports

Oral Reports

4:00 Adjourn

Zoom Information

Join Zoom Meeting

<https://arizona.zoom.us/j/92045547338> Password: 112465

Meeting Minutes:

Attendees: Emile Elias, Chris Daly, Russ Qualls, Jeremy Weiss, Zach Schwalbe, Mike Crimmins, Nancy Selover, Russ Schumacher, Lauren Parker, Michael Anderson, David Yates, Dannele Peck, Megan O’Rouke, Ed Martin

Ed Martin welcomed everyone to the meeting and went over the procedure for submitting state reports. He also led a discussion for the renewal of WERA 102, which is due January 2021. Emile Elias mentioned that there was a new committee, WDC 42 (Western Development Committee): **Climate** Change, Weather Variability and Resiliency for Ranching, Farming, and Rural Communities. Ed agreed to reach out to this committee to see if there can be some synergy with WERA 102. The committee also discussed any changes that might be needed to the present WERA 102 Outline for the renewal. It was agreed that issues such as drought, navigating extremes, and data sampling may need to be revisited. Michael Anderson graciously agreed to wordsmith the current outline and address the issues identified by the committee members.

We then moved onto state reports:

Chris Daly (Oregon): Oregon State is still working from home and has been since March. For the last ten years, OSU has been working with USDA-RMA and the Federal Crop insurance program. Their data is used to determine and decide on agricultural claims, as well as rating the risks for regions throughout the country. In this work, quality is of the utmost concern. There is a public website where they report climate data. The next big project is the determination of the “new normal.” The new normal will be based on data from 1991 – 2020.

Jeremy Weiss (Arizona): Jeremy discussed his work with perennial crops over the past year, including wine grapes, pistachios, and pecans. Last October, the first frost came early. Although most thought this was an unusual occurrence, a review of older data showed that it has happened in the past – just not the recent past. The effect of the early frost impacted spring and yield. They are continuing to work with growers on how to incorporate climate data into their decision management.

Dave DuBois (New Mexico): Dave has spent the last year working on Drought webinars, drought updates, and impacts of agriculture on air quality. He has been working with climates hubs to develop various sensors and worked on maintaining the statewide Mesonet network. This past year, he worked with the New Mexico Dept of Transportation on wind erosion issues, identifying areas where wind erosion is prevalent.

Nancy Selover (Arizona): Nancy has been addressing drought and extreme temperatures this year. She is concerned that the “New Normals” will raise normal temperatures and mask increases in temperatures. The same concern with drought (rainfall) as well.

Michael Anderson (California): Michael has been addressing navigating extremes this past year, in addition to all of the issues associated with the fires in California. He has also been addressing the subtle impacts of increasing temperatures. He has been working with Lauren at the CA Climate hub. There have been significant collaborations occurring. He is also looking at the development of a program, *Flood After Fire.*

Lauren Parker (California Climate Hub): Lauren has worked on a paper that evaluates the effect of extreme heat on perennial crops. They are also developing a climate change reforestation tool kit. The Climate Hub worked with the NRCS staff is developing workshops on the impact of climate change for California growers. They are also working on a web-based decision support tool for growers as well.

Emile Elias (Southwest Climate Hub): Over the past year, the hub has been looking at snowpack and the timing of runoff in a warming environment. They have developed a drought learning network, linking climate providers to managers who can use decision-making data. They have also worked on their quarterly bulletins and a lot of webinars. Another tool they are working on is an Ag. Risk Viewer, which provides data on recent crop losses and the reason for the losses (e.g., drought, hail, disease, etc.). They are also working on an “After the Fire” tool kit.

Dannele Peck (Northern Plains Climate Hub): Dannele talked and Grass-Cast, grassland productivity forecast. Drought has affected the northern plains, although some areas to the East were dealing with flooding. The past year has been a story of extremes. She also talked about the new WDC 42 committee. Ed and Dannele will talk next week about how WDC 42 might interact and collaborate with WERA 102. She has also been working on email alerts in cooperation with Extension. Wyoming is experiencing an extensive drought, the first in over ten years.

Megan O’Rourke (National Program Leader): Megan joined to introduce herself as the NIFA representative for WERA 102. Her background is in climate science, and has worked on sustainable agricultural systems.

Russ Schumacher (Colorado): Russ has been working with the climate hub, address the climate extremes the region has been experiencing – new record hailstorm, new record high temperatures, and a more intensive drought. They are also dealing with fires. CoAgMET has expanded a bit, mostly offering new tools and web access. CoCoRaHS has seen an increase in data since many people have been restricted in traveling during the pandemic. He is also working on a national interactive drought Information system.

Russ Qualls (Idaho): Idaho has not been hit as hard as others in terms of fires, although there have been many conversations and discussions concerning climate change and fires. They are looking at other factors that contribute to fires. Over the last year, they have been investigating the use of remote sensing to quantify areas that have snow cover to help model runoff. This work is looking at melting patterns and how that information can inform water management. They are also looking at using climate data to develop actual evaporation estimates.

Mike Crimmins (Arizona): It appears that we are working ion drought all-the-time. This is definitely on the minds of our people in Arizona. There has been an increase in the use of rain gauges in rangeland. Clients are requesting more and more gauges, as they better appreciate the importance of keeping records for range management. The My RAINge Log program has been growing with clients replacing old rain gauges and requesting new ones.