

CARC Meeting Minutes

Monday, Nov. 19, 2018

901 Hardin Hall, UNL East Campus

Meeting called to order at 9:34 a.m.

In Attendance:

Committee members or representatives: Amelia Breinig (chair), Nebraska Department of Agriculture; Mark Svoboda, National Drought Mitigation Center; Dr. Shuhai Zheng, Nebraska Department of Natural Resources; Matt Joeckel, UNL Conservation and Survey Division; Rick Rasby, UNL Extension; Carl Sousek, crops farmer; Judy Martin, Nebraska Department of Health and Human Services; Bryan Tuma, Nebraska Emergency Management Agency and Barb Cooksley, rancher.

Staff and Audience: Brian Fuchs, National Drought Mitigation Center; Martha Shulski, Nebraska State Climatologist; Steve Roth, Nebraska Department of Agriculture; Dean Groskurth, USDA-NASS (National Agricultural Statistics Service); Aaron Hird, USDA-NRCS (Natural Resources Conservation Service); Eric Zach, Nebraska Game and Parks; Ed Holbrook, Nebraska Energy Office; Rezaul Mahood, High Plains Regional Climate Center; Ginger Willson, Nebraska Senator Ben Sasse's office; Tyler Williams, UNL Extension; Donny Christensen, Nebraska Emergency Management Agency; Ashton Tennis, Nebraska Emergency Management Agency; Doug Klein, USDA-Farm Service Agency; Marcia Trompke, Central Nebraska Public Power and Irrigation District; Brian Barjenbruch, National Weather Service; Hallie Bova, National Weather Service and Suzanne Fortin, National Weather Service.

Committee Chair Amelia Breinig opened the meeting stating that CARC follows provisions in Nebraska's Open Meetings Act and a copy of the act was available for review. She also had copies available of the affidavits of the public notices published in the Lincoln Journal Star and Kearney Hub newspapers on November 12, 2018.

Breinig is the new assistant director at the Nebraska Department of Agriculture and was designated by Director Steve Wellman to chair CARC on behalf of the department.

Minutes from the June 4, 2018 CARC meeting were accepted by the committee as presented.

Reports were provided as follows:

Nebraska Drought Conditions and Water Supply Update

Presented by Brian Fuchs, National Drought Mitigation Center

Past/Current Climate & Drought Report

In reviewing U.S. Drought Monitor maps for Nebraska, Fuchs pointed out that there was a small area of abnormally dry conditions in the panhandle a year ago (November 21, 2017). On May 29, 2018, the map showed a portion of southeast Nebraska had developed abnormally dry to D1 conditions, but the most recent map (November 13, 2018) shows Nebraska as being drought free. In fact, the state has been drought free since early September of this year.

In looking at the High Plains Region (North Dakota, South Dakota, Wyoming, Nebraska, Colorado and Kansas) there has been a three to four drought-class improvement in Missouri and Kansas the past three months.

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The current maps indicate that 20 percent of the region remains in drought, most of that in Wyoming and Colorado. Parts of Colorado have extreme to exceptional drought conditions.

From 2016 to present, Nebraska had just a small area of severe drought in 2017. Otherwise, there has not been any severe, widespread drought since the extreme drought conditions in 2012 into 2013.

Fuchs mentioned that Nebraska has gone into a wetter than normal pattern the past six years, but there have always been droughts in Nebraska. Droughts tend to come in cycles and he expects a drought will be coming at some point.

Nebraska has experienced below normal temperatures over the past 30 and 60 days, as well as since the beginning of the calendar year. It is not something the state has experienced in recent years as temperatures had been trending warmer.

In the last 30 days, much of the High Plains Region has seen below normal precipitation. However, the previous 30 days was much above normal, which made up for the current dry conditions in the region.

For the calendar year, most of Nebraska has had above normal precipitation. There have been some pockets of dryness in the far west panhandle.

The Soil Moisture Model indicates that much of Nebraska has surpluses in many areas of the state. This is for the first one meter of top soil.

The U.S. Seasonal Drought Outlook from the National Weather Service indicates that Nebraska is not expected to develop any drought conditions in the state from now through February.

The Drought Outlook does expect drought conditions to develop or continue in northcentral North Dakota, central South Dakota, the southern border of Wyoming and most of Colorado.

Fuchs provided this climate/drought summary:

- Cooler than normal conditions have dominated the state and region so far in 2018 with Nebraska averaging about 1-2°F below normal.
- Almost the entire state of Nebraska has recorded above normal precipitation for this year so far, with areas of northcentral Nebraska 8-12 inches above normal.
- Over the last 60 days, the entire region has been below normal for temperatures with the northern portions of the Plains 4-6°F degrees below normal and the southern portions 2-4°F below normal.
- Nebraska is drought free and has been since early September. The last time Nebraska was drought free was at the end of June 2017.
- Drought has not been a widespread issue in Nebraska for the last several years with very little severe drought since the summer of 2014.
- The seasonal drought outlooks do not show drought conditions developing in Nebraska through the end of February 2019.

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Nebraska Water Supply Update

When looking at the state water supply, Fuchs said he likes to start with Lake McConaughy since it is the largest reservoir in Nebraska.

Lake levels were at or near normal for this time of year, according to the Central Nebraska Public Power and Irrigation District (CNPPID). In the past few months, Lake McConaughy has gained some water supply.

Inflows to the lake are slightly below the mean in average for this time of year, but Fuchs said it was nothing to be concerned with at the present time.

He mentioned that some water from the lake had been pushed down the Platte River as part of the allocation for the Nebraska environmental account needed for the whooping crane migration.

Fuchs presented news releases from CNPPID regarding conditions at Lake McConaughy. Those releases will be posted as part of Fuchs' PowerPoint presentation on the CARC website.

In areas of the U.S. where dry or drought conditions have existed, streamflows have been below or much below normal. This includes the four corners area (Utah, Arizona, Colorado and New Mexico), as well as parts of Kansas, Oklahoma and Texas. Streamflows in Nebraska have been mostly normal or slightly above normal. The Republican River Basin in the southwest part of the state typically runs lower this time of year but actually is currently above typical levels.

The conservation pool and storage at the Harlan County Reservoir were higher than this time a year ago.

Fuchs provided this water supply summary:

- Lake McConaughy is currently 80.2 percent of capacity, which is lower than in June 2018 (last CARC meeting) and slightly higher compared to levels in November 2017.
- The Republican River basin reservoirs are lower than in June as water levels dropped due to the irrigation season and are stabilizing with fall diversions into the systems.
- Harlan County Reservoir is holding about 22,450 acre-feet less water now than in June 2018.
- Harlan County is holding about 16,000 acre-feet more water now than at this time last year and is about 21,000 AB above average for this time of year.
- All reservoir levels and storage should hold steady until the spring run-off.

Fuchs' PowerPoint presentation will be posted on the CARC website.

Nebraska Climate Update

Presented by Martha Shulski, Nebraska State Climatologist

In recapping the spring conditions for Nebraska, Shulski noted that Nebraska had its second coldest April on record, followed by its fourth warmest May. Dry conditions were seen in portions of southeastern and southcentral Nebraska, while a mid-April blizzard intensified planting delays in northeastern and northcentral portions of the state.

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The warm May that continued into June, allowed for crops to catch up from delayed planting as growing-degree days accumulated during the two-to-three-month period.

The rest of the summer saw varying conditions throughout the state, which included heavy rains at times but also heat stress in some areas. Timely rains in the middle to late part of the growing season provided relief to heat-stressed crops.

Meanwhile, irrigation demand was well below normal in Nebraska due to overall above normal rainfall.

September started off warm and dry, but cooler and wetter conditions set in as the month came to an end. This did inhibit harvest to some degree.

October was a month of wet and dry cycles including some significant snow events in some parts of the state. The conditions lent itself to delays in harvest but activity did take place during the dry periods.

November kicked off with similar wet and dry cycles as was seen in October. Harvest continued to lag behind but was still making progress.

Shulski noted that even with the wet conditions this fall in Nebraska, the state experienced minimal compaction and rutting issues during harvest. That was not the case in the Eastern Corn Belt where much more precipitation had fallen.

Dry conditions have been slowly building across the western half of Nebraska the past three months. There had been concerns over the condition of the winter wheat crop in the southern half of the panhandle beginning in October. However, mid-October snowfall improved the crop conditions significantly.

The climate outlook for Nebraska for the rest of November was for greater chances of above normal precipitation and below normal temperatures. The National Weather Service winter (December, January, February) outlook for Nebraska is calling for a greater chance of above normal temperatures for the period, while there are equal chances for above or below normal precipitation.

The U.S. is currently in what is defined as neutral conditions. However, with warmer temperatures in the Pacific Ocean, there is an 84 percent chance of an El Niño event developing. The current prediction is for the El Niño to develop over the winter and continue through spring. This El Niño is expected to be a weak event.

Shulski pointed out that classic El Niño trends can be heavily impacted by other patterns, and that each El Niño is unique.

There is no clear evidence at this time how the El Niño will impact Nebraska weather in the coming months.

There was discussion in the meeting on how upcoming winter weather patterns may affect snowpack in the Rocky Mountains. This is important to Nebraska since several river basins in the state depend on mountain runoff for adequate surface water supply.

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It appears the snow pack in the mountains is off to a good start but too early to predict how much snow pack will occur this winter. Much will depend if snowfall occurs higher in the mountains where it can accumulate or at lower elevations where it could melt and runoff immediately.

Shulski also discussed soil moisture in Nebraska going into the winter. She said while overall the state is starting off with a pretty good profile, soil moisture amounts tend to be very localized due to differences in soil and local precipitation amounts.

Shulski's PowerPoint presentation will be posted on the CARC website. It includes additional weather resources that can be accessed on the internet.

Nebraska Hay Stocks and Crop Condition Report

Presented by Dean Groskurth, USDA-NASS (National Agricultural Statistics Service)

Groskurth said that while corn production estimates nationally were down slightly in the USDA-NASS November report, overall U.S production is still expected to be the second largest on record. The estimate for national average yield of 178.9 bushels per acre would be a new record.

The estimates for corn production in Nebraska continue to call for record highs in both production and per acre yield.

Soybean production in Nebraska also remains on target to set records for total production and average per acre yield.

Final production results will be released in January 2019.

Groskurth said that the November report continues to show that soybean and corn harvest in the state continues to lag behind last year and the 5-year average. He did say he felt farmers were catching up on the harvest the past week.

Alfalfa hay production was up 10 percent from last year, and all other hay production was up 28 percent from the previous year, giving the state a lot of hay on hand. The hay stocks report will be released in December.

Pasture and range conditions continue to be very good.

Groskurth said the results of the 2017 Census of Agriculture will be released February 21, 2019. He also mentioned that this would be his last CARC meeting as he is retiring from USDA-NASS on January 5, 2019.

Groskurth's PowerPoint presentation will be posted on the CARC website.

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Nebraska Emergency Management Update

Provided by Brian Tuma, Assistant Director

Tuma discussed the stress on resources that both the Federal Emergency Management Agency (FEMA) and the Nebraska Emergency Management Agency (NEMA) have been experiencing due to the horrific hurricane season in 2017 and additional disasters that have occurred in 2018.

He said that states have been called upon to help in national disasters, stretching both human and financial resources to the limit. He said he feels that going forth states are going to be called upon to bear more of the brunt of their own natural disasters, and that organizations such as the Emergency Management Assistance Compact will play a key role.

Other points that Tuma discussed included:

- Two weather disasters were experienced in Nebraska in 2018. One was the snowstorm that hit central Nebraska in April of this year. The other was a period of strong thunderstorms, tornadoes and straight winds that occurred in June and covered 11 counties in northeast Nebraska.
- There has been some lowland flooding along the Missouri River as a result of additional releases upstream by the Army Corps of Engineers. This is due to heavy snowfall runoff from last year and additional heavy rains during the spring and summer along the river. They are hoping levels will subside prior to this winter's runoff.
- The last serious wildfires in Nebraska occurred in 2006 and 2012. There are mounting concerns that parts of Nebraska could be vulnerable to major wildfire breakouts again due to the recent favorable conditions. Excessive pasture and range growth has created a lot of fuel if a fire were to start. There are also concerns about the continuing proliferation of red cedar trees that create a real fire danger.
- Due to recent vacancies at NEMA, the state's five-year strategic hazard mitigation plan had been delayed. Tuma said they now have a person working on the plan full time, and it should be completed prior to the May 2019 deadline.
- Tuma mentioned that the UNL Medical Center has received a \$3 million grant to build a regional public health response network. He said this will have a major positive impact on being able to respond more quickly and efficiently to public health concerns.

Other Comments

State Climatologist Martha Shulski, talked about a group made up of several state and federal agencies, as well as other interested organizations and individuals who are seeking ways to combine climate information into one easy to interpret communication. Shulski said she developed an initial model that is designed to congregate the information into one graph and communication piece. Committee member Mark Svoboda, director, National Drought Mitigation Center, said the group plans to continue to fine tune this process and recommended that the outcomes from this joint effort could serve as deliverables from CARC's Water Availability and Outlook Committee (WAOC) . He said that ideally, sometime in the future, they will inquire to see if CARC is interested in having this information come from the WAOC and to help in aiding the dissemination of the information.

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CARC's ranch representative, Barb Cooksley, reported that her area of the Sandhills has had excessive rain this year. The average rain for Custer County is about 22 inches, and it has already recorded 27 inches of annual precipitation. Most of the rains this summer were not more than an inch and a half at a time so there was little runoff. She said the result has been a very good haying season. She also mentioned that there has been exceptional growth in the pastures and rangeland, meaning there is a heavy fuel load, and the potential for wildfires is growing.

Department of Natural Resources CARC representative Shuhai Zheng, mentioned his department has a contingency plan for possible flooding along the Missouri both at the northeast and southeast ends of the border. They are hoping that flooding will subside as flows are reduced, but the winter releases will continue to be higher than normal due to runoff from heavy rainfall this summer.

CARC's crops representative Carl Sousek, mentioned the challenges many Nebraska farmers faced this fall due to the constant stop and start again harvest season that was the result of significant rain and snowfall.

The meeting was adjourned 11:20 a.m.