CARC Meeting Minutes (Approved 11-17-15)
Wednesday, May 20, 2015
10 a.m. 901 Hardin Hall East Campus
Meeting called to order at 10:04 a.m.

In Attendance:
Committee Members: Bobbie Kriz-Wickham (Chair), Nebraska Department of Agriculture; Barb Cooksley, Rancher; Mary Baker, Nebraska Emergency Management Agency; Dr. Mike Hayes, National Drought Mitigation Center; Ashley Mueller, University of Nebraska Cooperative Extension; Dr. Matt Joekel, UNL Conservation and Survey Division

Staff and Audience: Mark Svoboda, National Drought Mitigation Center; Brian Fuchs, National Drought Mitigation Center; Al Dutcher, State Climatologist; Dean Groskurth, National Agriculture Statistics Service; Steve Roth, Nebraska Department of Agriculture; Eric Zach, Nebraska Game & Parks Commission; Doug Klein, Farm Service Agency; Barb Mayes Boustead, National Weather Service-Omaha; Neil Dominy, USDA-Natural Resources Conservation Service; Marcia Trompke, Central Nebraska Public Power and Irrigation District; Scott Sprague, Department of Health & Human Services-Division of Public Health

Committee Chair, Bobbie Kriz-Wickham, opened the meeting with self-introductions as this isthe first CARC meeting under new Governor Pete Ricketts, and there are several new committee members.

Mark Svoboda, Water Availability and Outlook Report, National Drought Mitigation Center –

At the last CARC meeting, held June 24, 2014, there was a concern of drought starting to take hold in southwest and central Nebraska connecting to already poor conditions in Kansas, Oklahoma and Texas. However, recent rains have mitigated severe drought in a large portion of those areas, and while there is still caution, the outlook is much better than a year ago.

Current Drought Conditions in Nebraska and the region

National summary -Last week's (May 12, 2015) U.S. Drought Monitor Map shows some mild to moderate drought areas beginning in the upper Midwest with a "highway" running through central and southwest Nebraska connecting it to the drought areas that run through parts of Kansas, Oklahoma and into Texas. However, due to recent heavy rains as a result of moisture from the Gulf of Mexico, much of the severe drought areas in that region of the country have shown remarkable recovery.

The severe to extreme drought in California continues to linger and worsen and is extending into Washington and Oregon.

High Plains Region – Currently 7% of the region is in severe drought, with 31% of the region in any type of drought classification. Most of that 31% is in the D1 category, the lowest drought classification. There has been significant improvement over the past few weeks with a drop in overall drought classification in the region of 13% the past week.

Nebraska – In Dec. of 2014, there was a large area of abnormally dry conditions in much of southwest and parts of central Nebraska. Drought conditions crept into the area and extended to the northeast with significant departure from normal precipitation levels dating back to October 2014 in that area of the state. Recent rains helped alleviate the spring drought condition, and there is only 20% of the state in class 1 drought conditions at this time. The drought strip that runs from the southwest corner of the state, through central Nebraska, into the northeast section, still presents a concern but is in the positon for recovery if rains would arrive in the near future.

For the year, precipitation totals in Nebraska range from 6 to 9 inches above normal in some heavy rainfall areas (primarily in the southeast) to below normal precipitation in the past 30 days for that corridor of dry area that runs form the southwest to the northeast of the state.

Soil moisture in most of areas of the state has shown overall improvement, especially in the top 1 meter of the top soil, however there are concerns of drier conditions in the deeper soil columns in the areas of the state that have had drier overall conditions.

The May 1, 2015 Spring and Summer Streamflow Forecasts showed a decrease from the previous year based on snowpack in the Rocky Mountains. Last year the snowpack was very good for the areas that feed the Missouri, North Platte and South Platte river basins, but the outlook is for lower flows this spring and summer. While there is concern, it is not an extreme condition.

*The U.S. Monthly and Seasonal Drought Outloo, r*eleased in April, showed concern for increasing drought in southwest Nebraska with the corridor running through central into northeast Nebraska. However, rains in May are expected to provide a more optimistic outlook when the new maps are released on May 21, 2015.

In looking at sea surface temperature anomalies for the Pacific and Indian Oceans, the water temperatures have been running 1 to 3 degrees warmer than normal which is considered significant. These types of anomalies do have a big impact on weather in the United States. Forecasters continue to be bullish on the outlook for El Nino persisting into the summer through the end of this year.

It is rare to have an El Nino event in the summer months. Because of the lack of historical data, it is very difficult to predict what effect the event will have on weather conditions in the next several months. We do know that Nebraska typically sits “on the bubble” during El Nino, meaning it will tend to have an equal chance of above or below temperatures and above or below normal precipitation.

Summary

We have had a good/great late spring rainfall-wise across most of the region:

- 150-200% of normal precipitation over the past 30 days and slightly cooler;
- Too much moisture in some places…leading to flooding along with recent severe weather outbreaks;
- 34.6% of the contiguous U.S. is currently in drought (D1 or worse) as of 5/12/2015
    - This time last year it was at 38.1%
    - Down nearly 6% Year-to-Date (28.7% on Dec. 30, 2014);
- Current Drought Monitor for Nebraska shows 20% of the state in drought (D1 only) up from 0% in January 1, 2015;
- The Climate Prediction Center's Seasonal Drought Outlook calls for improvement or removal of drought across the Central and Southern Plains by the end of July with some exceptions in south central Nebraska;
- Large fetch of moisture from the Pacific region and Gulf of Mexico has led to the recent favorable rains;
- Despite early-period wetness, precipitation for the upcoming season is enough of a question mark that drought persistence is forecast in southern Nebraska and eastern Kansas; and
- There is an approximately 90% chance that El Niño will continue through the Northern Hemisphere in summer 2015 and a greater than 80% chance it will last through 2015.

Brian Fuchs, National Drought Mitigation Center Report

Nebraska Water Supply Update

Lake McConaughy has 1.359 million acre-feet in storage (77.9% of capacity). Inflows have increased recently and ranged from 1,100 cubic feet per second to 3,251 cubic feet per second, which is above normal for historical inflows for this time of year.

Snowpack in the upper North Platte River Basin is 62 percent of normal and 39 percent of normal in the lower basin with declining values, a few weeks ahead of normal. Snowpack in the South Platte River Basin is at 90 percent of normal.

Nebraska has been taking advantage of the large amounts of water coming into the Platte River and pushing it into irrigation canals and storage facilities. Being able to store the water is occurring earlier than normal and that is a good sign. Look for another month of this good push of water, but it will be based on rains in the foothills of Colorado.

The spring and summer streamflow forecasts as of May 1, 2015, show moderate to good flows from the northern to eastern range of the Colorado Rockies. However, flows from western range are expected to be very poor, further adding to the extreme drought conditions in the western United States.

The USGS 14-day average national streamflow map shows that conditions are much improved in Texas, Oklahoma, Kansas and eastern Nebraska. In looking at the 14-day streamflow for Nebraska, the Republican River continues to have low stream flows and is showing signs of stress. However, the rest of the stream flows around the state are normal to above normal.

Conservation pools of the Republican River Basin reservoirs have improved the past 11 months. Hugh Butler is at 28.6% compared to 10.7%, Enders is up to 24.2% from 21%, Harry Strunk is at 100% compared to 62.7% and Swanson Reservoir has increased to 40.8% compared to 27.8%.

The conservation pool at Harlan County Reservoir is currently at 60.3% full, up from 52.7% last June. There is 189,484 acre-feet of storage at Harlan County compared to 156,838 a year ago. Historical storage for this time of year is 299,153 acre-feet.

Summary

Hydrologic conditions across the state are in good shape going into summer:

- Lake McConaughy is 8.6 feet higher from last June. The inflows at the lake have increased over the past few weeks as the influx of good rains and earlier runoff have combined for more available water going into the system;

- The overall storage of water in the Republican River Basin and Harlan County Reservoir has improved in the past 11 months; and

- The overall water supply situation for Nebraska is not problematic at this time, except for some flooding in isolated portions of the state.

Current Weather Conditions for Nebraska

Temperatures in Nebraska have been above normal for the last 60 days, however if you break that down and look at just the last 30 days, temperatures have been 2 to 3 degrees below normal in the southeastern and Panhandle portions of the state, but continuing slightly warmer in the areas that have had dry to near drought conditions.

The largest rainfall amounts have taken place in parts of southeast Nebraska and in portions of the Panhandle. The areas of the state that have been dry are still lacking rains and continue to have warmer temperatures.

In the Panhandle and north central Nebraska, wet snow has continued to fall this past week following up the heavier snows in early May. The moisture has been welcomed.

For the year, the drier areas of the state are running 2 to 3 inches below normal precipitation due to the dry winter, especially in March.

There are growing concerns in northeast Nebraska regarding soil moisture. Some areas are 6 to 7 inches below normal in soil moisture, especially in the deeper column of the soil profile. The topsoil has enough moisture for good planting conditions, according to some producer reports.

Looking ahead to the rest of May, June and July, Nebraska has equal chances for lower or higher than normal temperatures and precipitation, which is typical in an El Nino period, which currently exists.

El Nino has a high probability of extending into June, July and August and possibly beyond. Because it is rare to have a summer El Nino, there is a small sample of historical data to provide trends. However, the trends that have been recorded would give some indication that Nebraska may have below normal temperatures and above normal precipitation in the western portion of the state, and above normal temperatures and below normal precipitation in the eastern portions of the state.

Additional Discussion

Al Dutcher, State Climatologist, commented that much of the state's corn crop could now use some warmer and drier weather in order to begin to emerge and mature properly. There is concern in some parts of the state that the soybeans that have been planted may be damaged due to sitting in very moist soil for a long period of time.

Dutcher mentioned, that in his travels around eastern Nebraska, he witnessed some significant erosion damage with large crevasses appearing in some fields. He also mentioned that there were some fields that have extremely large pieces of debris (primarily trees) that had been carried onto the area by heavy rain and subsequent flooding.

Dutcher added it is difficult to gauge how much of the flooded corn ground could still be replanted this spring. It will depend on current weather conditions. He is concerned that farmers may get in a rush to finish planting which could create compaction problems.

Dutcher also expressed concern about harvest season. With some corn being planted very early, and some still to be planted, one portion of the crop will need hot dry weather for harvest and the other portion will require more moisture to finish growing.

In conclusion Dutcher said that it would be typical to get some continued wet weather for a few more weeks but that can also be followed by very hot and dry conditions which will take up the subsoil moisture very quickly.

Dean Groskurth with the National Agriculture Statistics Service reported that the May 1 USDA wheat forecast for Nebraska was for a statewide average of 40 bushels an acre, which would be 9 bushels an acre or 10 percent below last year. However, he pointed out the forecast does not account for the recent snow in a large portion of Nebraska's wheat-growing areas, the impact of which is yet unknown. Meanwhile the May 1 haystock figures for Nebraska showed a 9% increase over the haystock figures a year ago.

Groskurth reported that while the number of acres of planted corn (85%) in Nebraska was close to normal for this time of year, the number of planted soybean acres (41%) was far below last year's 61% at this time of year.

Doug Klein, Nebraska Farm Service Agency, reported that while there had been some damage to crops in Nebraska due to recent flooding (2-3% in any one county) that amount was far below the level required (30% in one crop per county) to request a disaster declaration from the U.S. Secretary of Agriculture.

Bobbie Kriz-Wickham, CARC Chair, Nebraska Department of Agriculture, told the Committee she would be providing a report of the meeting to Governor Pete Ricketts. The report would include an overview of the climatic conditions and water supplies in the state. She said she would use the latest maps and statistics that were to be released on May 21.

Mike Hayes, National Drought Mitigation Center, mentioned that Don Wilhite from the University of Nebraska School of Natural Resources is organizing roundtable discussions around the state to discuss climate change issues. The discussion will cover six different topics including food and water, forestry and fire, urban systems and rural communities, wildlife and eco systems and energy. The roundtables will take place in September, October and November. Mike will share details with CARC once they are finalized.

Committee Member Barb Cooksley suggested CARC consider reviewing and updating the current drought plan which was last revised in 2000.

Chair Kriz-Wickham mentioned that subcommittee volunteers would be needed in order to undertake such a project. She will solicit for volunteers soon.

No future meeting date was set but tentative plans would be for a meeting to be held this fall. However, changing climatic conditions may warrant the need for a meeting sooner.

Meeting adjourned at 11:43 a.m.