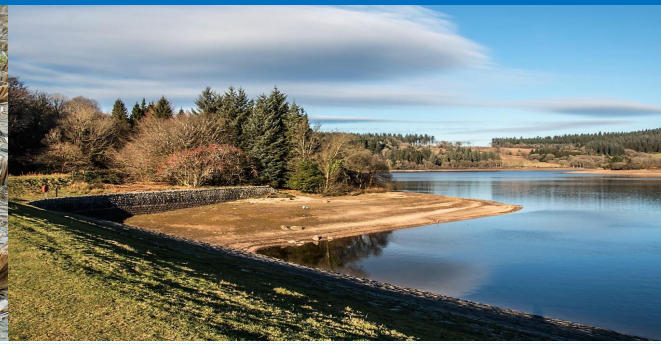
Drought Information Statement for South Central NE and North Central KS

Valid Jan. 19, 2024

Issued By: NWS Hastings, NE

Contact Information: nws.hastings@noaa.gov

- This product will be updated in February 2024 or sooner if drought conditions change significantly.
- Please see all currently available products at https://drought.gov/drought-information-statements.
- Please visit https://www.weather.gov/gid/DroughtInformationStatement for previous statements.

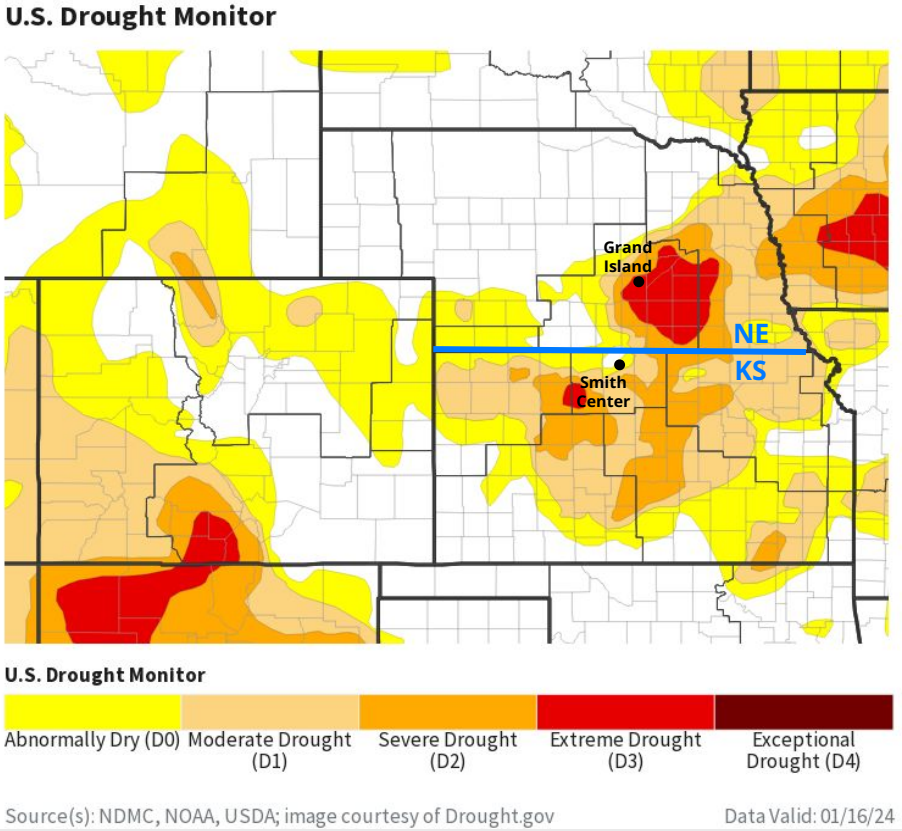


U.S. Drought Monitor

Link to the latest U.S. Drought Monitor for High Plains Region

Drought Intensity and Extent:

- **D4 Exceptional Drought:**
  Includes all or part of the following counties:
  ** *D4 removed from NWS Hastings area as of Dec. 28th USDM !* **
- **D3 Extreme Drought:**
  Includes all or part of the following counties:
  Nance, Howard, Merrick, Polk, Buffalo, Hall, Hamilton, York, Adams, Clay, Fillmore, Webster, Nuckolls, Thayer, Rooks
- **D2 Severe Drought:**
  Includes all or part of the following counties:
  Nance, Howard, Merrick, Polk, Buffalo, Hall, Kearney, Adams, Franklin, Webster, Nuckolls, Thayer, Phillips, Smith, Jewell, Rooks, Osborne, Mitchell
- **D1 Moderate Drought:**
  Includes all or part of the following counties:
  Greeley, Nance, Sherman, Howard, Buffalo, Kearney, Franklin, Webster, Phillips, Smith, Jewell, Rooks, Osborne, Mitchell
- **D0 Abnormally Dry:**
  Includes all or part of the following counties:
  Greeley, Sherman, Howard, Dawson, Buffalo, Gosper, Phelps, Kearney, Furnas, Harlan, Franklin, Webster, Phillips, Smith, Jewell



Common Drought Impacts By Category

Link to the Common Drought Impacts By Category

D0	**Abnormally Dry**	**Going Into Drought:** • Short-term dryness slowing planting, growth of crops and pastures	**Coming Out Of Drought:** • Some lingering water deficits • Crops and pastures not fully recovered
D1	**Moderate Drought**	• Some damage to crops and pastures • Streams, reservoirs, wells low - some water shortages developing or imminent	
D2	**Severe Drought**	• Crop or pasture losses likely • Water shortages common • Water restrictions can be imposed	
D3	**Extreme Drought**	• Major crop and pasture losses • Widespread water shortages or restrictions possible	
D4	**Exceptional Drought**	• Exceptional and widespread crop and pasture losses • Water shortages in reservoirs, streams, and wells can create water emergencies	

Short-Term Precipitation Recap (the last week) and Forecast (the next week)

Link to the latest U.S. Drought Monitor for High Plains Region

- Recap of U.S. Drought Monitor "data week" Jan. 10-16:

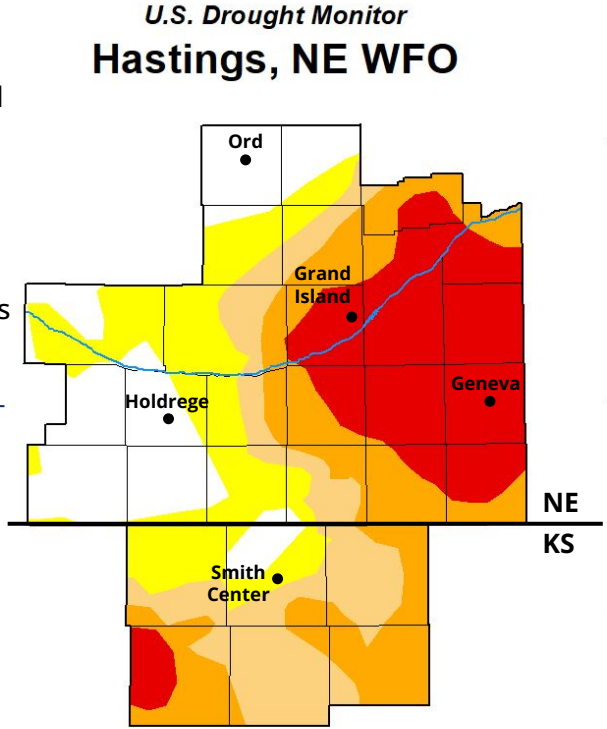
(NOTE: any precipitation that fell since 7am TUESDAY "didn't count" for this week's Drought Monitor)

The Jan. 10-16 "Drought Monitor Week" was highlighted by the **2nd fairly significant winter storm in a 4-day period** (which occurred Jan. 11-12). This storm dumped 2-10" of snow on most of our coverage area, (highest concentration of 6+" near and east of Highway 281 in Nebraska), and also caused significant blowing/drifting snow. Total liquid equivalent precipitation for the week *generally* ranged from as little as 0.10-0.30" in most of north central KS along with Nebraska counties west of Highway 281, to as much as 0.30-0.70" within the majority of local Nebraska counties along/east of Highway 281.

- Looking ahead Jan. 20-26:

Our forecast is "guaranteed" dry through at least Sun night/early Mon AM (Jan. 22). However, between Monday daytime and Friday (Jan. 22-26) there are various, low probability/low confidence chances for intermittent precipitation…which could take various forms (rain, snow, possible wintry mix).

However, the latest forecast model data is in good agreement that the cumulative AMOUNT of precipitation during this time should remain fairly light…likely no more than 0.10-0.20" for most of our coverage area *(in other words, no MAJOR storm systems anticipated).*



January 16, 2024
(Released Thursday, Jan. 18, 2024)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	19.19	80.81	61.68	44.96	23.52	0.00
Last Week 01-09-2024	19.19	80.81	61.68	44.96	23.52	0.00
3 Months Ago 10-17-2023	5.22	94.78	76.84	58.50	36.40	15.81
Start of Calendar Year 01-02-2024	16.14	83.86	62.04	46.34	25.12	0.00
Start of Water Year 09-26-2023	5.23	94.77	78.86	63.84	36.89	15.81
One Year Ago 01-17-2023	0.00	100.00	95.33	63.60	9.58	0.00

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Adam Hartman
NOAA/NWS/NCEP/CPC

droughtmonitor.unl.edu

Latest Regional Drought Monitor Map + Dec. 2023 Precip Extremes For NWS Hastings Area

Link to the latest U.S. Drought Monitor for High Plains Region

December 2023 Local Precipitation Extremes:
Most of Our Area Totaled Between 0.50-1.75" (60-200% of normal), BUT A Big Difference Between Drier West/Wetter Central+East

DEC. 2023 Highest Precipitation *Some* of our WETTEST stations *(NWS/CoCoRaHS/NeRAIN)*		DEC. 2023 Lowest Precipitation *Some* of our DRIEST stations *(NWS/CoCoRaHS/NeRAIN)*	
2WSW Tobias (NeRAIN):	2.68"	**Cambridge** (NWS observer):	0.33"
7NE Central City (CoCoRaHS):	2.33"	**5SW Beaver City** (NeRAIN):	0.35"
2S Hordville (NeRAIN):	2.26"	**Lexington** (NeRAIN):	0.37"
7NNE Natoma KS (CoCoRaHS):	2.26"	**Arapahoe** (NeRAIN):	0.39"
2NNW Hunter KS (CoCoRaHS):	2.25"	**Edison** (NWS observer):	0.51"
Alexandria (NeRAIN):	2.23"	**Wilsonville** (NWS observer):	0.58"
5SSE Deweese (NeRAIN):	2.15"	**8S Elwood** (NWS observer):	0.61"

FOR REFERENCE: "normal" December precipitation across MOST of our coverage area ranges from 0.65-1.05" (generally lowest west/highest east)

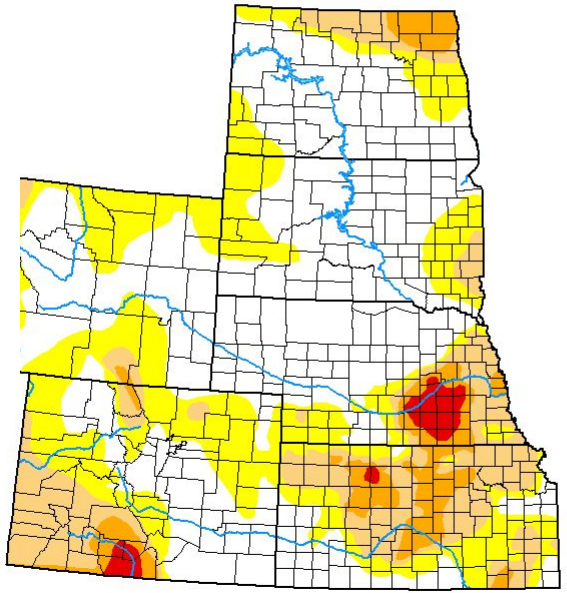
U.S. Drought Monitor

High Plains Climate Region

January 16, 2024

(Released Thursday, Jan. 18, 2024)

Valid 7 a.m. EST



Intensity:

- None
- D0 Abnormally Dry
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- D4 Exceptional Drought

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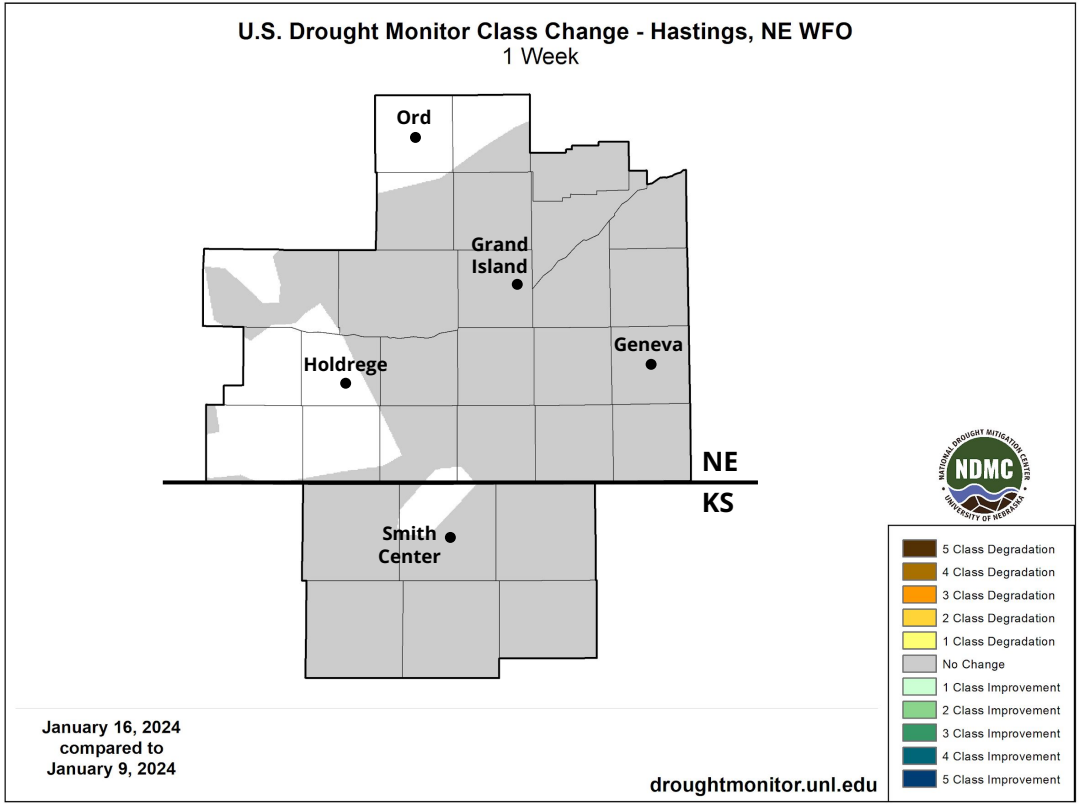
Recent Change in Drought Intensity - 1 Week Change

NWS Hastings 1-Week Drought Class Change...Jan. 16 vs. Jan. 9

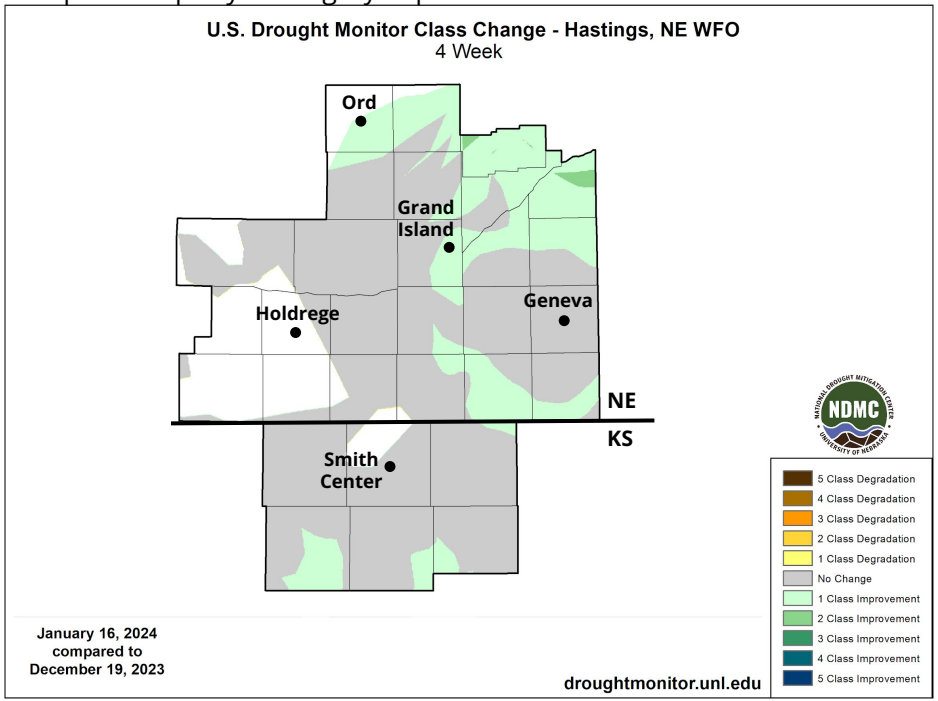
- **One Week Drought Monitor Class Change:**
  - **Drought Worsened:**
    NO AREAS of degradation this week
  - **No Change:**
    There was NO CHANGE in drought categories within the entire NWS Hastings coverage area this week
  - **Drought Improved:**
    NO AREAS of improvement this week



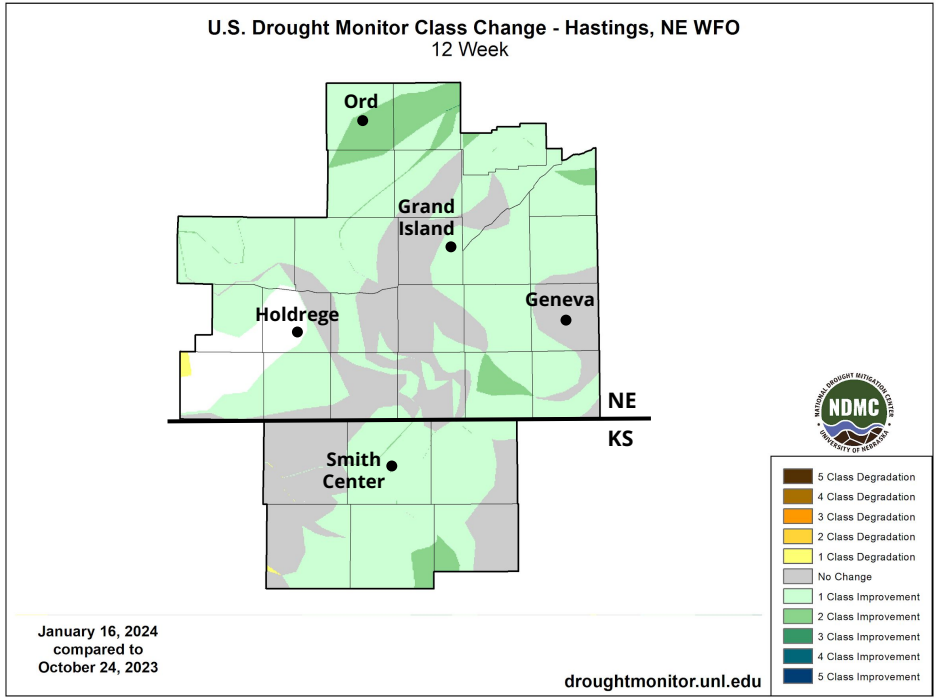
Recent Change in Drought Intensity - 4 and 12 Week Change

NWS Hastings 4-week & 12-week Drought Class Changes...vs. current Jan. 16 maps

4-WEEK CHANGE MAIN TAKEAWAYS: 1-category improvement various places...spotty 2-category improvement in Polk/Nance counties



12-WEEK CHANGE MAIN TAKEAWAYS: *widespread* 1 category improvement...isolated 2-category improvement (hardly any degradation!)



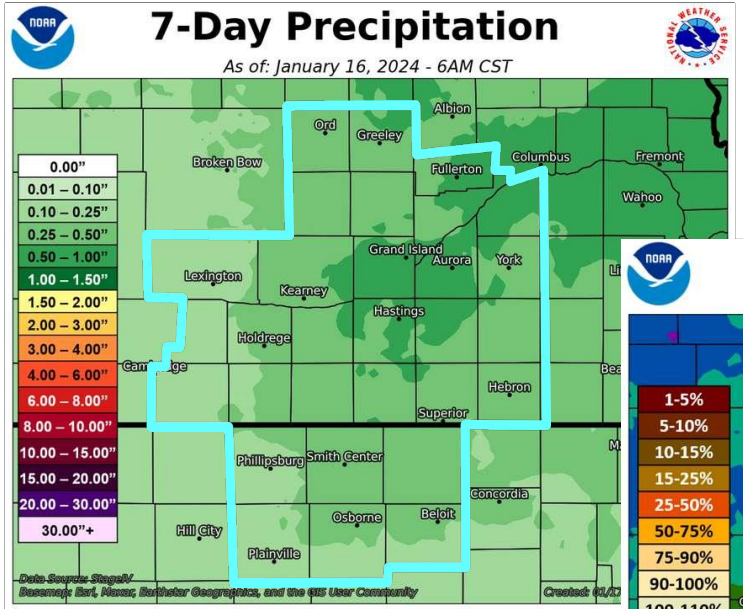
Precipitation (Last 7-Day Drought Monitor Period)

7-Day Precipitation/Percent-of-Normal (Jan. 10-16)...Map Links HERE

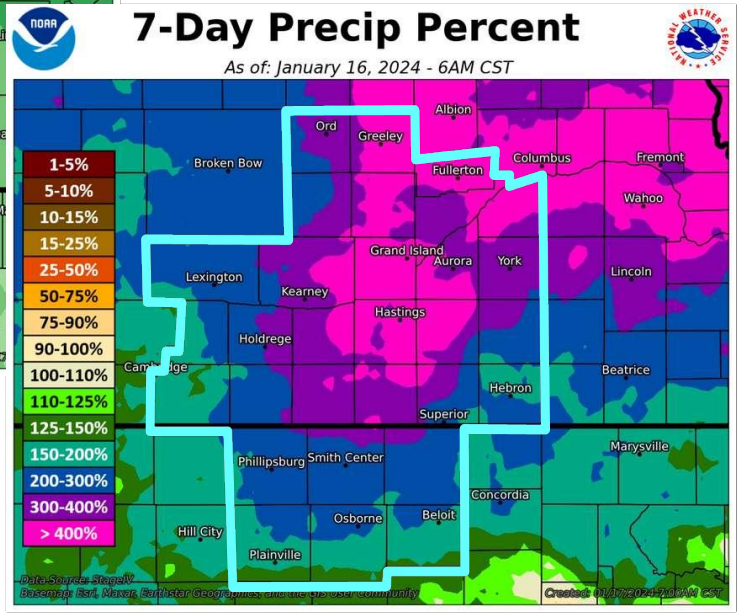
Main Takeaways:

The Jan. 10-16 "Drought Monitor Week" was highlighted by the **2nd fairly significant winter storm in a 4-day period** (which occurred Jan. 11-12).

This storm dumped 2-10" of snow on most of our coverage area, (highest concentration of 6+" near and east of Highway 281 in Nebraska), and also caused significant blowing/drifting snow. Total liquid equivalent precipitation for the week *generally* ranged from as little as 0.10-0.30" in most of north central KS along with Nebraska counties west of Highway 281, to as much as 0.30-0.70" within the majority of local Nebraska counties along/east of Highway 281.



NWS Hastings area outlined in light blue (24 NE counties, 6 KS counties)



PLEASE NOTE:

Any precipitation that fell AFTER 7am Tuesday, Jan. 16 is not reflected here as it fell after the weekly Drought Monitor "data cutoff".

Precipitation (Last 30-Day Drought Monitor Period)

30-Day Precipitation/Percent-of-Normal (Dec. 18-Jan. 16)...Map Links HERE

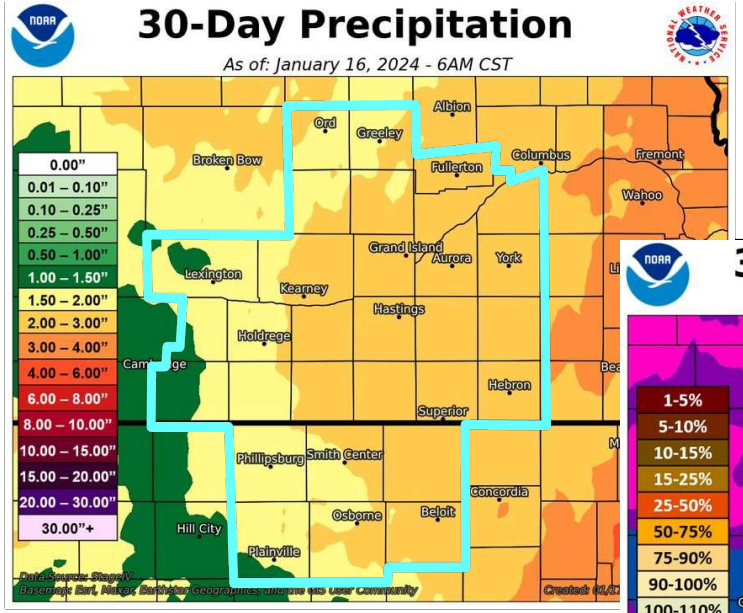
Main Takeaways:

The latest 30-day period featured **WELL ABOVE NORMAL** precipitation across most all of our coverage area!

The majority of our area received between 0.75-2.00” of total liquid equivalent...or roughly 100-285% of normal.

Some of the very-wettest counties (including some totals at least 2.00-2.50”) focused along Highway 81 in our far eastern coverage area.

The overall-driest county in our coverage area was Furnas, but even there totals of at least 0.50” were common.



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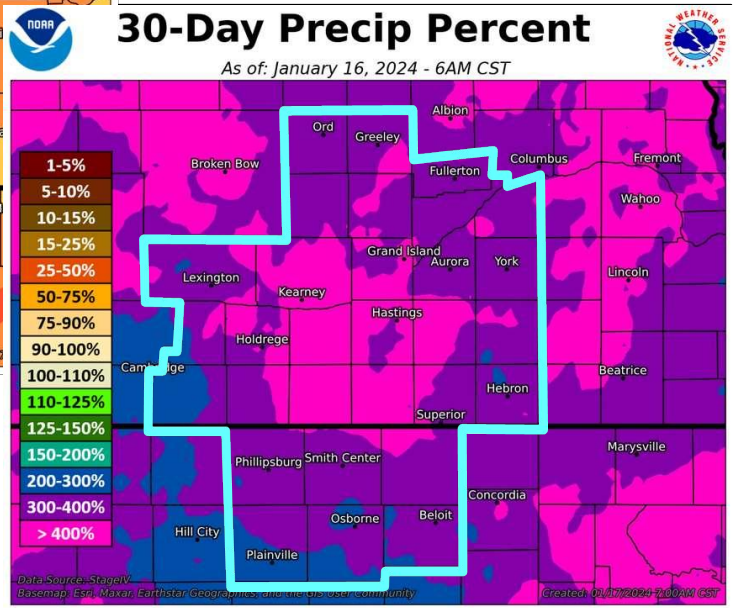

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Precipitation (Last 90-Day Drought Monitor Period)

90-Day Precipitation/Percent-of-Normal (Oct. 19-Jan. 16)...Map Links HERE

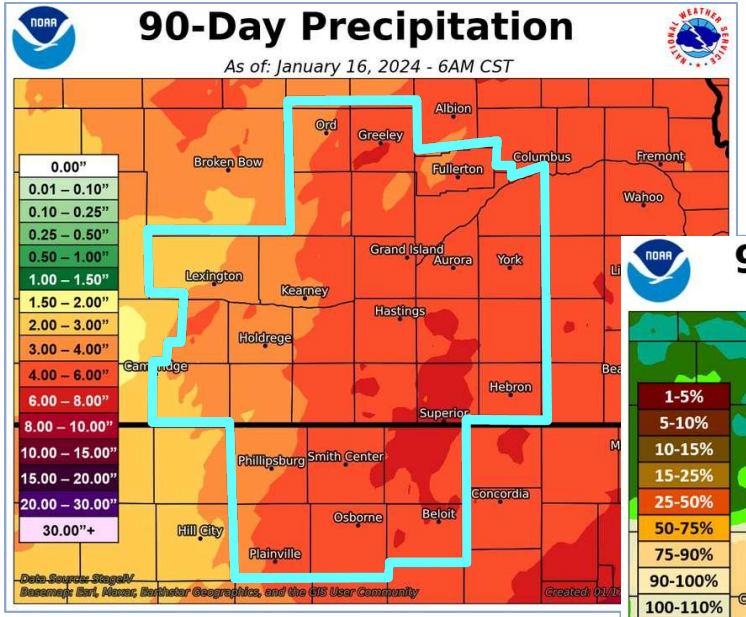
Main Takeaways:

The latest 90-day period featured somewhat of a "mixed bag", across our coverage area, but with an overall lean toward the positive side of things.

The majority of our area received between 2.00-4.50" of total liquid equivalent...or roughly 55-125% of normal. In other words, most places at least had "somewhat near to slightly above normal" precipitation

Some of the very-wettest counties (including some totals at least 4.50-5.00") focused within KS, along with various Nebraska counties mainly along/east of Highway 281.

The overall-driest counties (highest concentration of around 2" or less) were in our far western coverage area (parts of Dawson/Gosper/Furnas)



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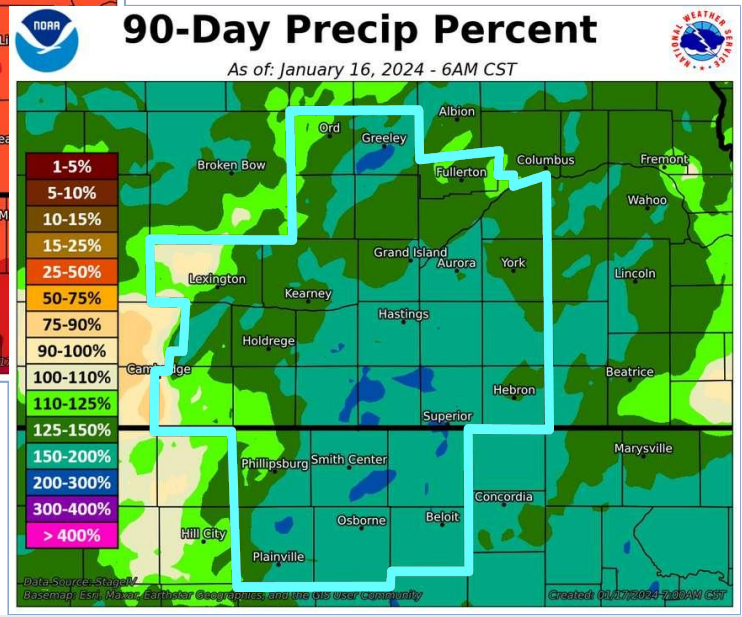

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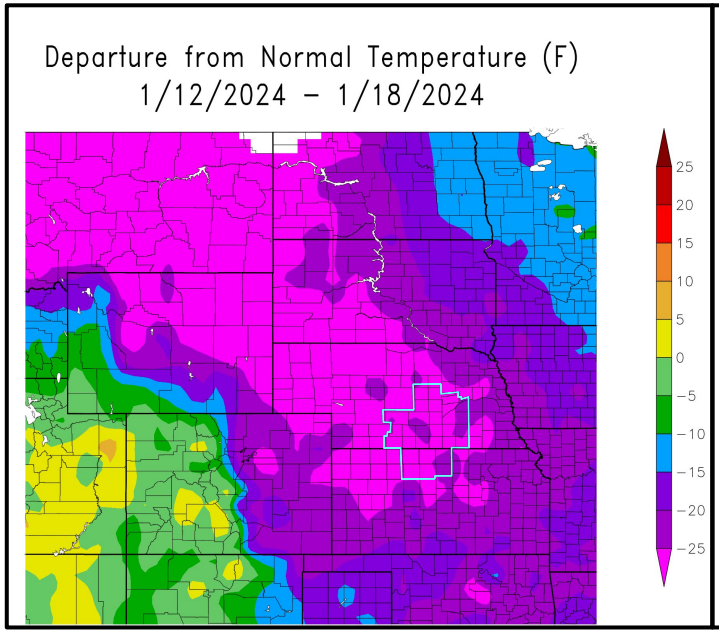
Temperature Trends (Last 7 and 30 Days)

High Plains Regional Climate Center 7-Day & 30-Day Temperature Departures From Normal

Main Takeaways (Last 7 Days):

The last week has been INCREDIBLY-COLD across our entire coverage area, with most places averaging around 25° below normal!

Not only have several daily cold temperature records been set (for both cold low temps and high temps), but the ground has become significantly and deeply frozen for the first time this winter, with the reported Jan. 18th frost depth at the NWS Hastings down to 24" !



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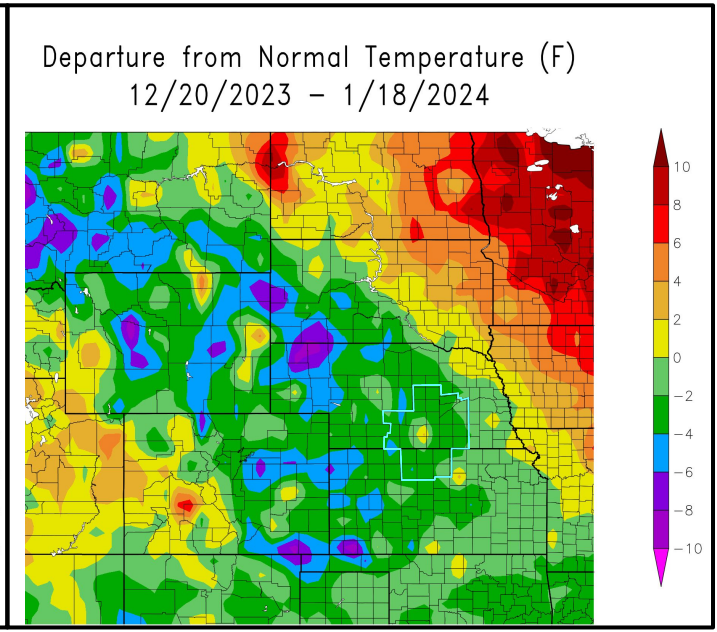


NWS Hastings area outlined in light blue

Summary of Impacts

Links: See/submit Condition Monitoring Observer Reports (CMOR) and view the Drought Impacts Reporter

Hydrologic Impacts:

- There are no known impacts at this time

Agricultural Impacts:

- USDA Nebraska Crop Progress and Condition Reports can be found here
- USDA Kansas Crop Progress and Condition Reports can be found here

Fire Hazard Impacts:

- There are no known significant impacts at this time, as recent very cold weather and widespread snow cover across nearly our entire coverage area has significantly limited any fire weather threat.

Other Impacts:

- There are no known impacts at this time

Mitigation Actions:

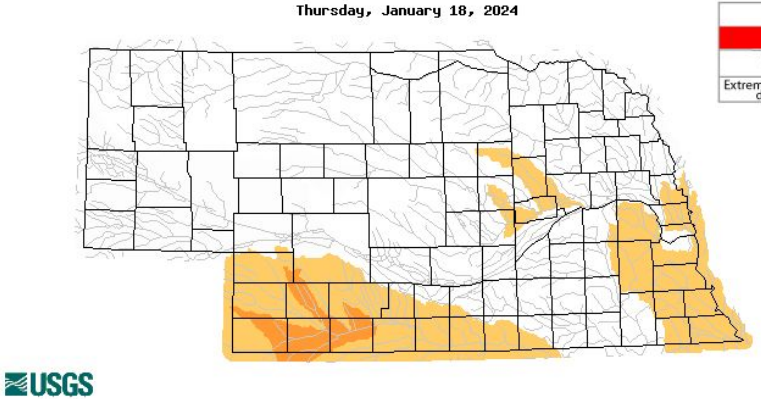
- Please refer to your municipality and/or water provider for mitigation information.

Hydrologic Conditions and Impacts

USGS Streamflow Information...Maps Shaded Only For Areas With BELOW NORMAL Flows

Main Takeaways:

- Now that we are in the heart of winter and plentiful ice has formed on area streams/rivers, it is more difficult to assess streamflows given that many automated gauges are being affected by ice.
- That being said, at least slightly below normal flows are currently indicated in various parts of our coverage area.



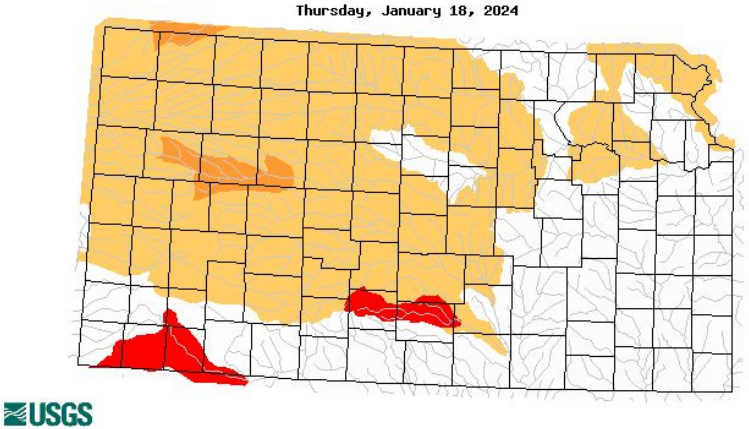


Image Captions:

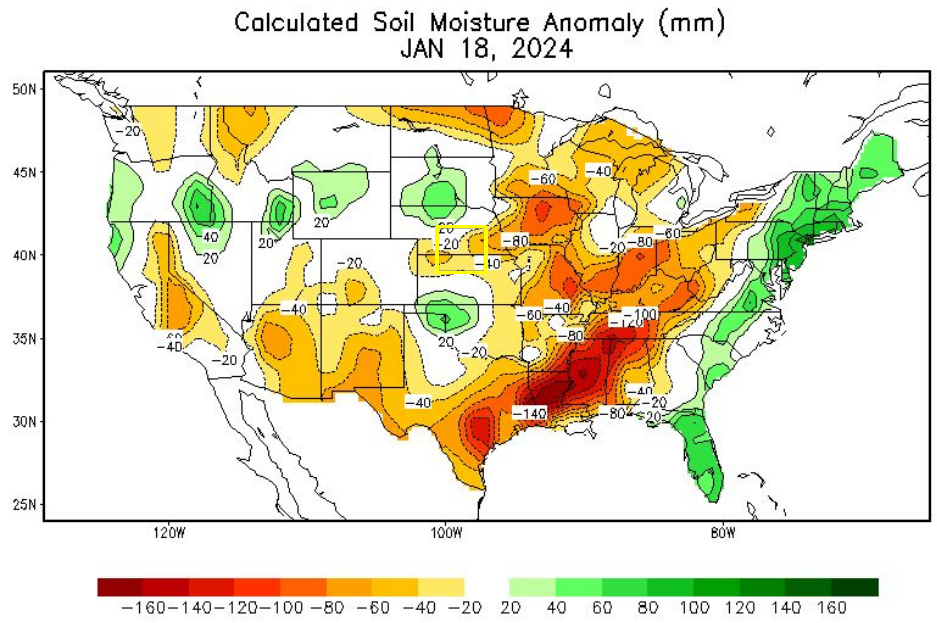
Top - Nebraska Below Normal 7-Day Average Streamflow Compared To Historical Streamflow For The Day Of The Year , from USGS, valid Jan. 18

Bottom - Kansas Below Normal 7-Day Average Streamflow Compared To Historical Streamflow For The Day Of The Year , from USGS, valid Jan. 18

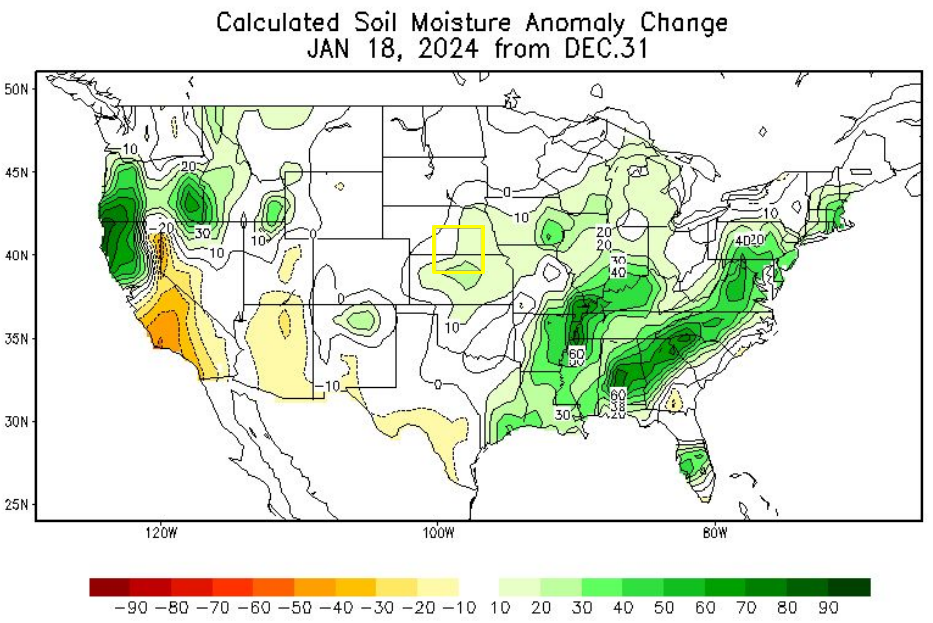
Agricultural Impacts / Soil Moisture

Climate Prediction Center (CPC) Soil Moisture Status

Soil Moisture Departure From Normal (mm)



Soil Moisture Change Since End Of Previous Month (mm)



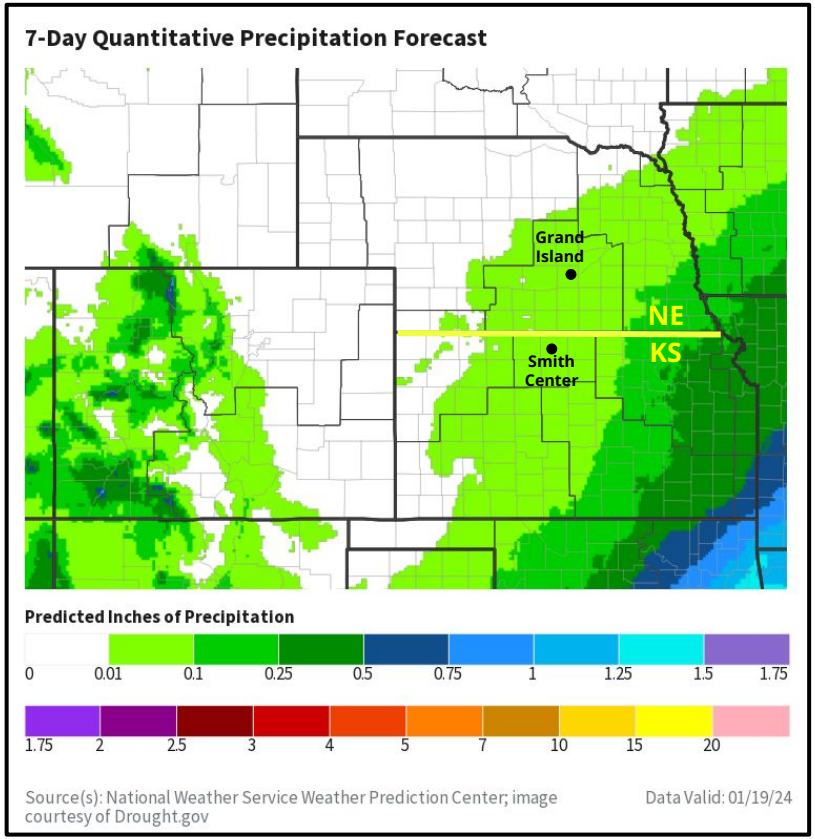
7-Day Precipitation Forecast

From Weather Prediction Center (WPC)...Valid Jan. 20-26

Main Takeaways:

Our forecast is “guaranteed” dry through at least Sun night/early Mon AM (Jan. 22). However, between Monday daytime and Friday (Jan. 22-26) there are various, low probability/low confidence chances for intermittent precipitation...which could take various forms (rain, snow, possible wintry mix).

However, the latest forecast model data is in good agreement that the cumulative AMOUNT of precipitation during this time should remain fairly light...likely no more than 0.10-0.20” for most of our coverage area *(in other words, no MAJOR storm systems anticipated).*

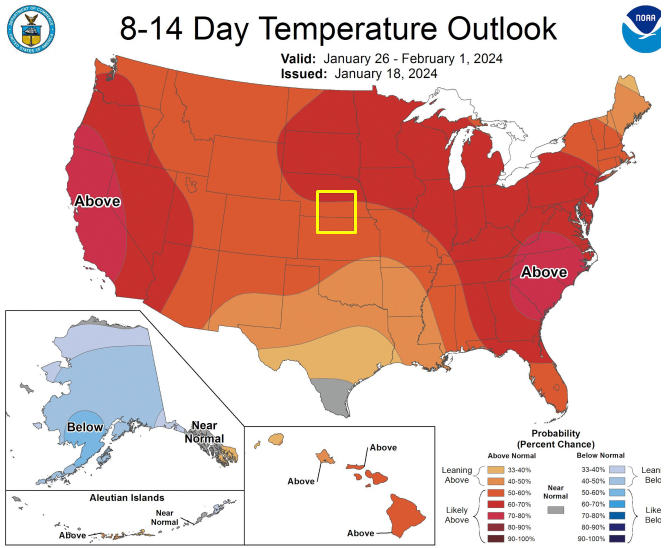


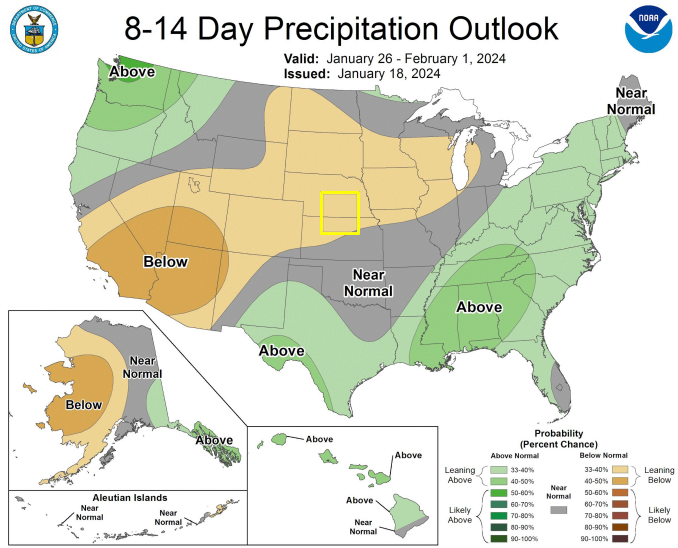
8-14 Day Outlooks - Climate Prediction Center (CPC)

CPC Temperature and Precipitation Outlooks...Valid Jan. 26-Feb. 1

Main Takeaways:

- **Temperatures:** Our entire coverage area features a “likely” lean toward above normal temperatures. Daily highs look to be mainly in the 30s/40s and lows mainly in the 20s.
- **Precipitation:** Our entire coverage area features a slight lean toward below normal precipitation



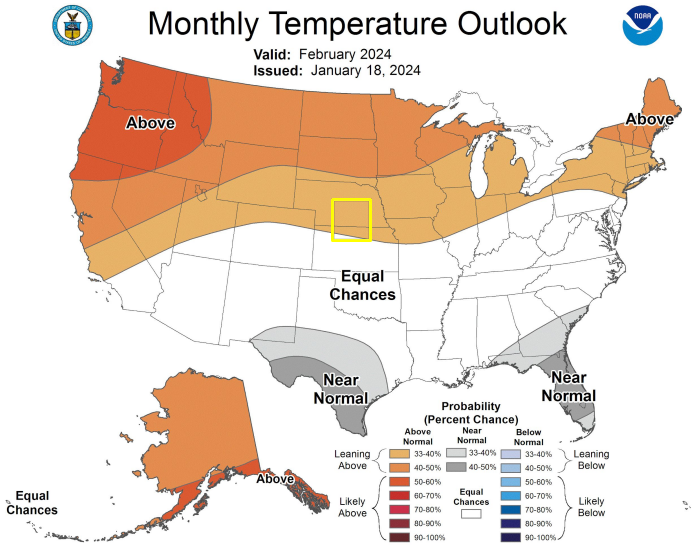


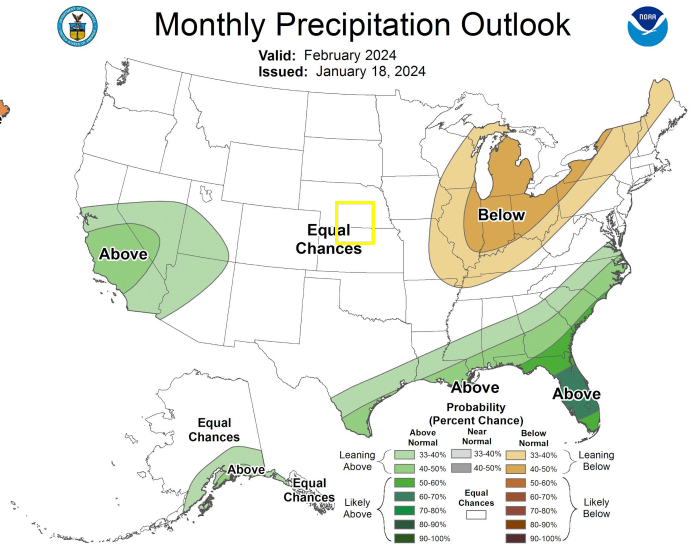
Monthly Outlooks - Climate Prediction Center (CPC)

CPC Monthly Temperature and Precipitation Outlooks...Valid For FEBRUARY 2024

Main Takeaways:

- **Temperatures:** Nearly our entire coverage area features a slight lean toward above normal temperatures
- **Precipitation:** Our entire coverage area (and well beyond it in all directions) is indicated to have “equal chances” of having above, below or near-normal precipitation



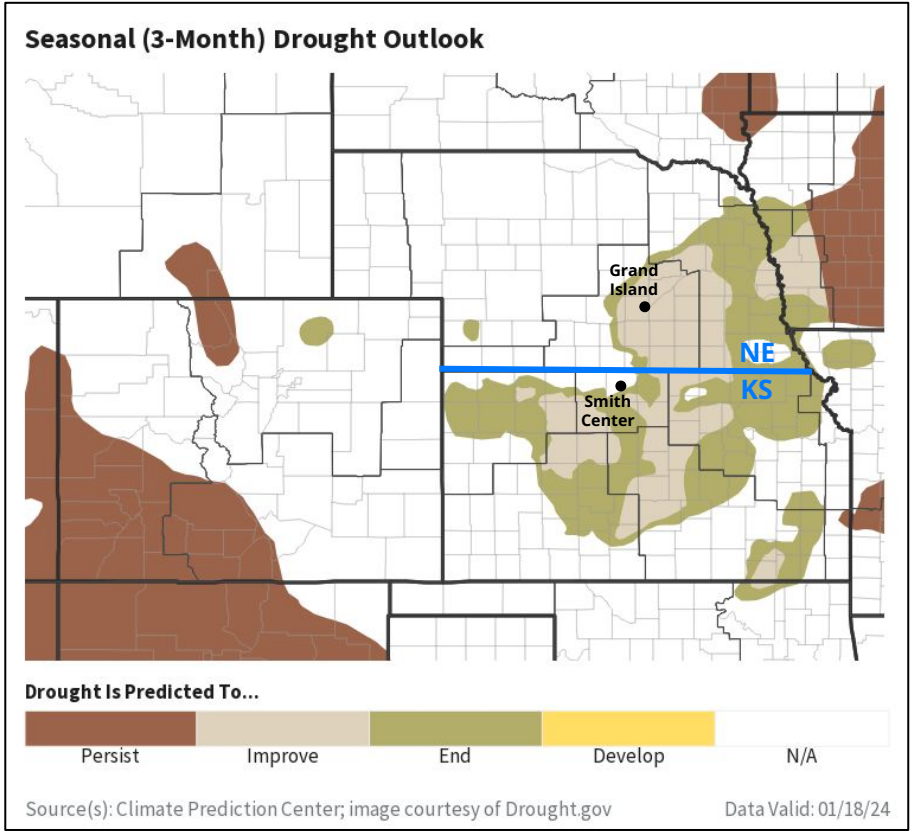


Drought Outlook (Seasonal)

CPC Seasonal Drought Outlook...Valid Through APRIL 2024

Main Takeaways:

- Based on current longer-range forecasts, the expectation of overall above-normal precipitation during the February-April time frame is expected to at least improve remaining drought conditions within our coverage area, if not remove it entirely.



Contact Information & References

For feedback, comments, questions specific to THIS INFO PACKET:

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Other contacts for NE/KS drought input:

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  (402) 617-4190
- Kansas State University
  Assistant State Climatologist
  Matthew Sittel
  msittel@ksu.edu
  (785) 532-1087

The U.S. Drought Monitor is produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture and the National Oceanic and Atmospheric Administration.

Additional Information Sources:

- U.S. Drought Monitor
- National Integrated Drought Information System
- High Plains Regional Climate Center
- USGS River Information
- NWS River Stages & Forecasts
- NWS Hastings LOCAL Temperature & Precipitation Data

Monitor our webpage for forecast information out to 7 days HERE

Social media: Follow us on **Facebook (US National Weather Service Hastings)** and **X (@NWSHastings)** for more information!