



Drought Information Statement for South Central NE and North Central KS

Valid Dec. 21, 2023

Issued By: NWS Hastings, NE

Contact Information: nws.hastings@noaa.gov

- This product will be updated in January 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.





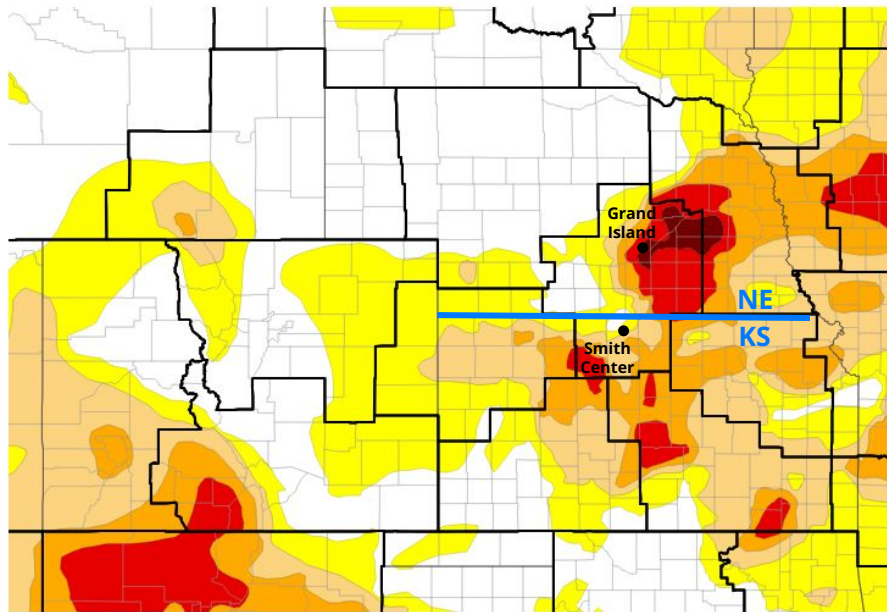
U.S. Drought Monitor

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:
Nance, Merrick, Polk, Hall, Hamilton, York
- **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, Mitchell
- **D2 Severe Drought:**
Includes all or part of the following counties:
Greeley, Nance, Howard, 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, Sherman, Howard, Buffalo, Kearney, Franklin, Webster, Phillips, Smith, Jewell, Rooks, Osborne, Mitchell
- **D0 Abnormally Dry:**
Includes all or part of the following counties:
Valley, Greeley, Sherman, Howard, Dawson, Buffalo, Gosper, Phelps, Kearney, Furnas, Harlan, Franklin, Webster, Phillips, Smith, Jewell

U.S. Drought Monitor



U.S. Drought Monitor



Source(s): NDMC, NOAA, USDA; image courtesy of Drought.gov

Data Valid: 12/19/23



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Hastings, Nebraska



Common Drought Impacts By Category

Link to the [Common Drought Impacts By Category](#)

D0	Abnormally Dry	<u>Going Into Drought:</u> <ul style="list-style-type: none">• Short-term dryness slowing planting, growth of crops and pastures	<u>Coming Out Of Drought:</u> <ul style="list-style-type: none">• Some lingering water deficits• Crops and pastures not fully recovered
D1	Moderate Drought	<ul style="list-style-type: none">• Some damage to crops and pastures• Streams, reservoirs, wells low - some water shortages developing or imminent	
D2	Severe Drought	<ul style="list-style-type: none">• Crop or pasture losses likely• Water shortages common• Water restrictions can be imposed	
D3	Extreme Drought	<ul style="list-style-type: none">• Major crop and pasture losses• Widespread water shortages or restrictions possible	
D4	Exceptional Drought	<ul style="list-style-type: none">• 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” Dec. 13-19:

(NOTE: any rain that fell since 7am TUESDAY “didn’t count” for this week’s Drought Monitor)

The Dec. 13-19 “Drought Monitor Week” featured a **highly-beneficial precipitation event** for roughly the southeastern two-thirds of our coverage area (for most places almost entirely in the form of RAIN). Within much of this area, widespread precip totals of 0.50-1.50” were common, with parts of north central KS even seeing localized slightly higher totals.

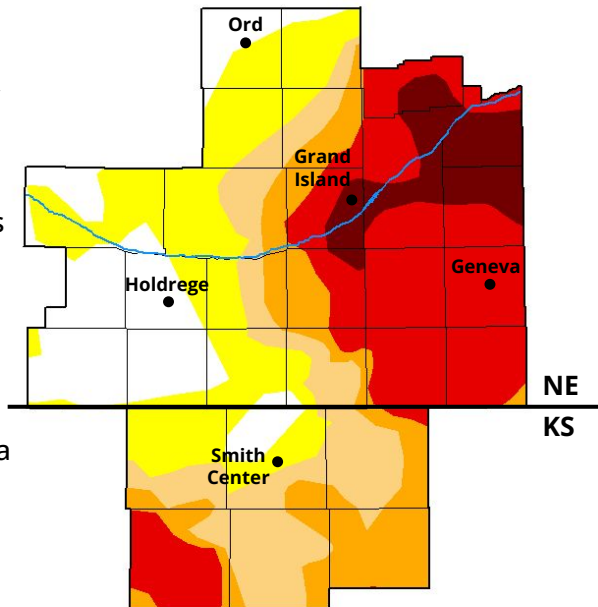
Unfortunately, roughly the northwestern one-third of our area missed out on much of this precipitation, with totals in those areas ranging from almost nothing (including the Ord/Lexington areas) up to around 0.25” (including the Kearney area).

- Looking ahead Dec. 22-28 :

There is a good chance for at least **SOME** measurable precipitation across our entire coverage area mainly between Dec. 23-26 as a slow-moving low pressure system traverses the region and brings a variety of precipitation types. However, current computer models vary significantly regarding just how much might fall.

Officially, cumulative forecast precipitation from WPC for the Dec. 22-28 calls for a widespread 0.50-1.00” across our coverage area.

U.S. Drought Monitor Hastings, NE WFO



December 19, 2023

(Released Thursday, Dec. 21, 2023)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	16.06	83.94	62.04	46.34	32.37	7.85
Last Week 12-12-2023	14.55	85.45	63.58	54.61	36.43	12.05
3 Months Ago 09-19-2023	0.00	100.00	90.90	66.42	39.90	16.26
Start of Calendar Year 01-03-2023	0.00	100.00	95.33	63.60	9.55	0.00
Start of Water Year 09-26-2023	5.23	94.77	78.86	63.84	36.89	15.81
One Year Ago 12-20-2022	0.00	100.00	95.33	63.60	18.19	0.00

Intensity:

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

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Latest Regional Drought Monitor Map + November Precip Extremes For NWS Hastings Area

Link to the [latest U.S. Drought Monitor](#) for High Plains Region

November 2023 Local Precipitation Extremes:

Most Areas At Least Slightly Below Normal (Well-Below Normal Especially Far Northeast and West)...But Above Normal In Several Southeast Counties

NOV. 2023 <u>Highest</u> Precipitation	NOV. 2023 <u>Lowest</u> Precipitation
Some of our WETTEST stations (NWS/CoCoRaHS/NeRAIN)	Some of our DRIEST stations (NWS/CoCoRaHS/NeRAIN)
7NE Beloit KS (CoCoRaHS): 1.87"	5SW Beaver City (NeRAIN): 0.20"
Beloit KS (CoCoRaHS): 1.65"	5NE Osceola (NeRAIN): 0.21"
Superior (NeRAIN): 1.62"	7W Osceola (NeRAIN): 0.23"
7NE Superior (NeRAIN): 1.57"	Beaver City (NeRAIN): 0.28"
6N Riverton (NeRAIN): 1.50"	6N Elwood (NeRAIN): 0.28"
2N Nora (NeRAIN): 1.43"	Osceola (NWS observer): 0.29"
4S Burr Oak KS (NWS observer): 1.38"	8S Elwood (NWS observer): 0.31"

FOR REFERENCE: "normal" November precipitation across MOST of our coverage area ranges from 0.80-1.30" (generally lowest west/highest east)

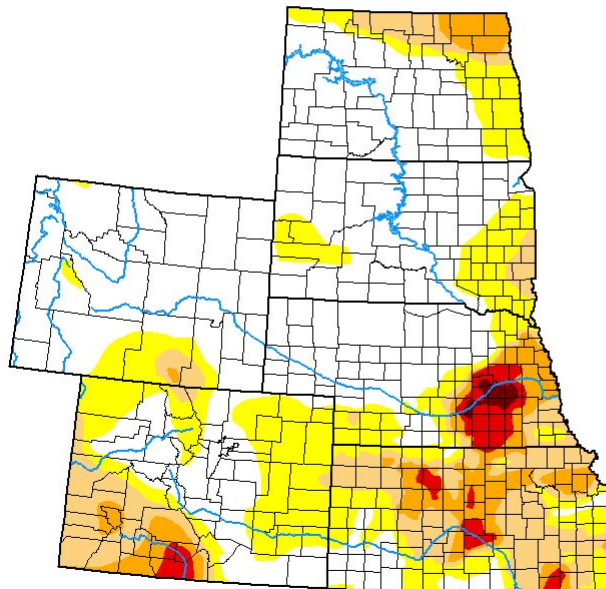
U.S. Drought Monitor

High Plains Climate Region

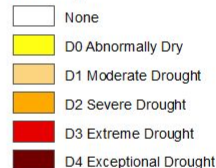
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Intensity:



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Hastings, Nebraska**

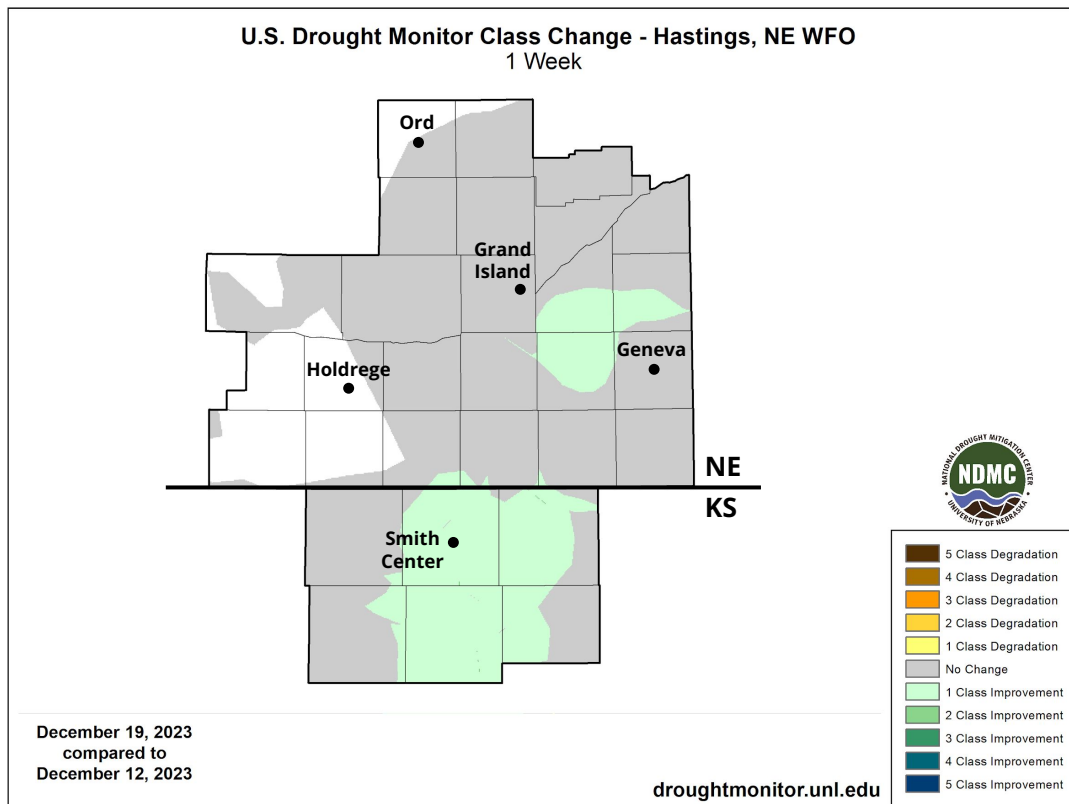


Recent Change in Drought Intensity - 1 Week Change

NWS Hastings [1-Week Drought Class Change...](#) Dec. 19 vs. Dec. 12

- **One Week Drought Monitor Class Change:**

- **Drought Worsened:**
NO AREAS of degradation this week
- **No Change:**
The VAST MAJORITY of the NWS Hastings coverage area featured NO CHANGE this week
- **Drought Improved:**
1-category improvement included parts of the following counties:
 - Hamilton, York, Clay, Fillmore (D4 to D3)
 - Much of mainly north central KS counties (varied mix of D3 to D2...D2 to D1...D1 to D0...D0 to None)





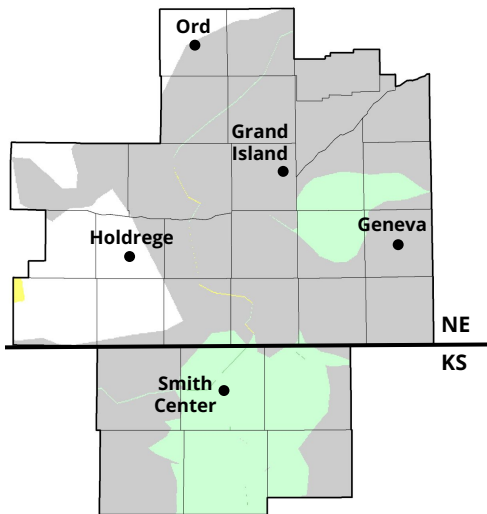
Recent Change in Drought Intensity - 4 and 12 Week Change

NWS Hastings 4-week & 12-week Drought Class Changes...vs. current Dec. 19 maps

4-WEEK CHANGE MAIN TAKEAWAYS: 1-category improvement within much of KS area along with mainly parts of Hamilton, York, Clay counties

12-WEEK CHANGE MAIN TAKEAWAYS: 1 or 2 category improvement across roughly HALF of the area (very little degradation)

U.S. Drought Monitor Class Change - Hastings, NE WFO
4 Week

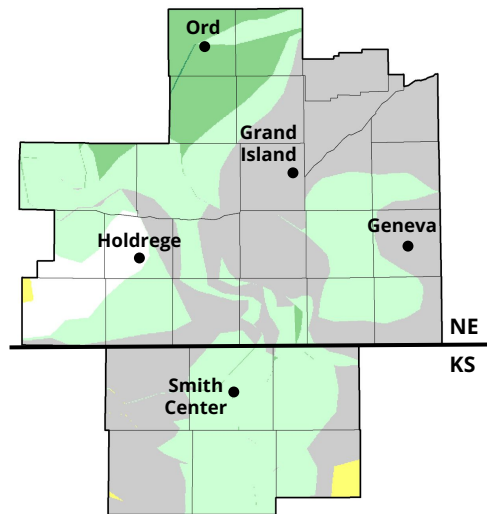


December 19, 2023
compared to
November 21, 2023

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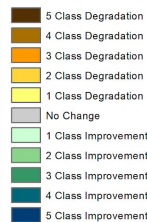


U.S. Drought Monitor Class Change - Hastings, NE WFO
12 Week



December 19, 2023
compared to
September 26, 2023

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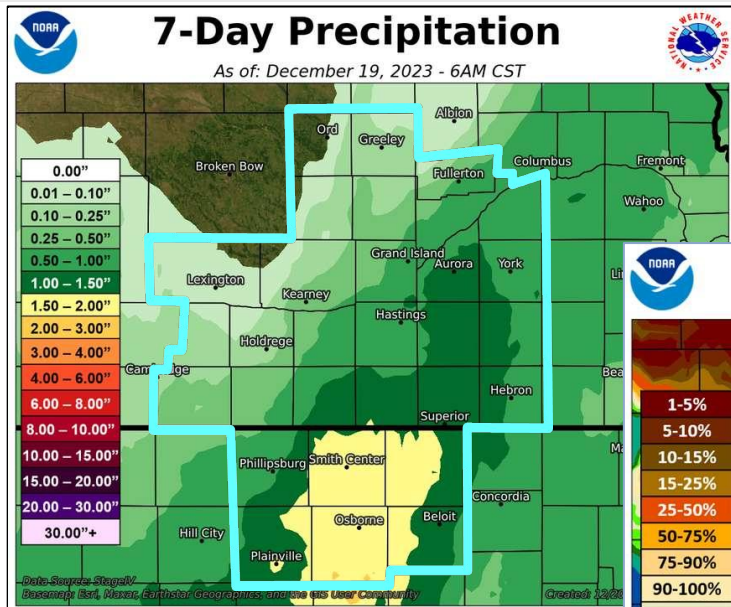
Precipitation (Last 7 Days)

7-Day Precipitation/Percent-of-Normal (Dec. 13-19)...Map Links [HERE](#)

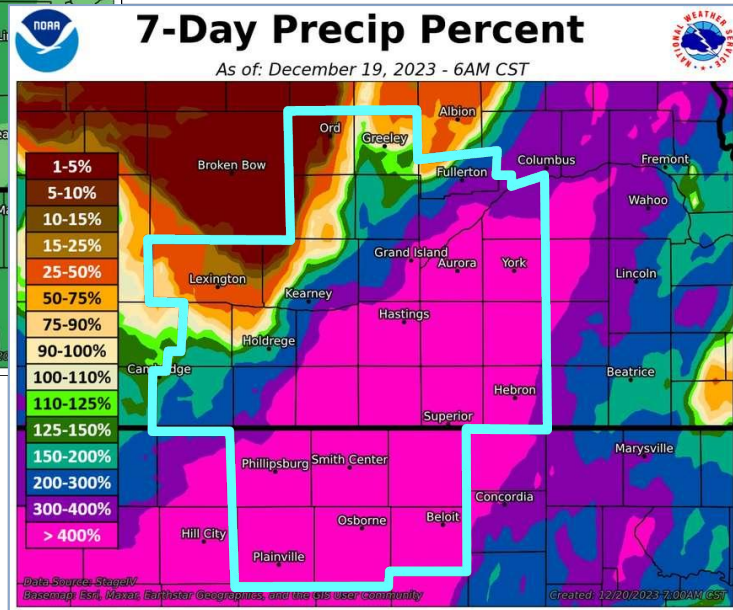
Main Takeaways:

The Dec. 13-19 “Drought Monitor Week” featured a **highly-beneficial precipitation event** for roughly the southeastern two-thirds of our coverage area (for most areas almost entirely in the form of RAIN). Within much of this area, widespread precip totals of 0.50-1.50” were common, with parts of north central KS even seeing localized slightly higher totals.

Unfortunately, roughly the northwestern one-third of our area missed out on much of this precipitation, with totals in those areas ranging from almost nothing (including the Ord/Lexington areas) up to around 0.25” (including the Kearney area).



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



PLEASE NOTE:

Any precipitation that fell AFTER 7am Tuesday, Dec. 19 is not reflected here as it fell after the weekly Drought Monitor “data cutoff”.



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Precipitation (Last 30 Days)

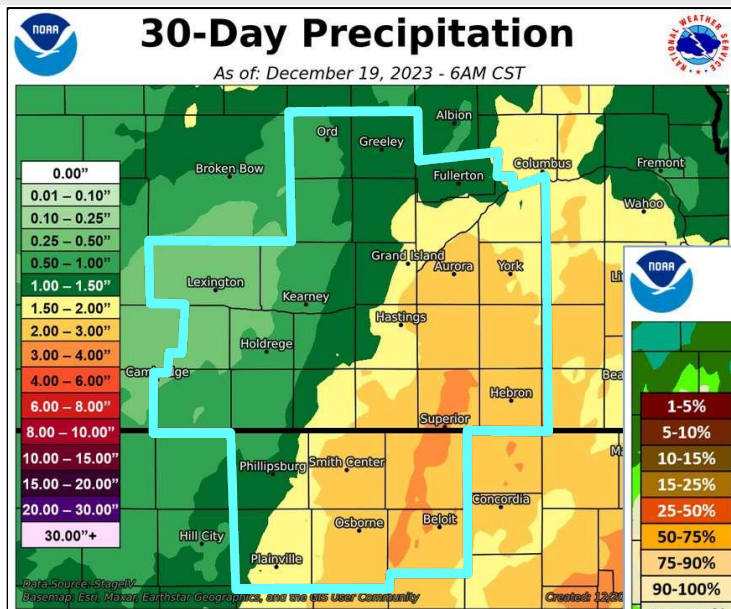
30-Day Precipitation/Percent-of-Normal (Nov. 20-Dec. 19)...Map Links [HERE](#)

Main Takeaways:

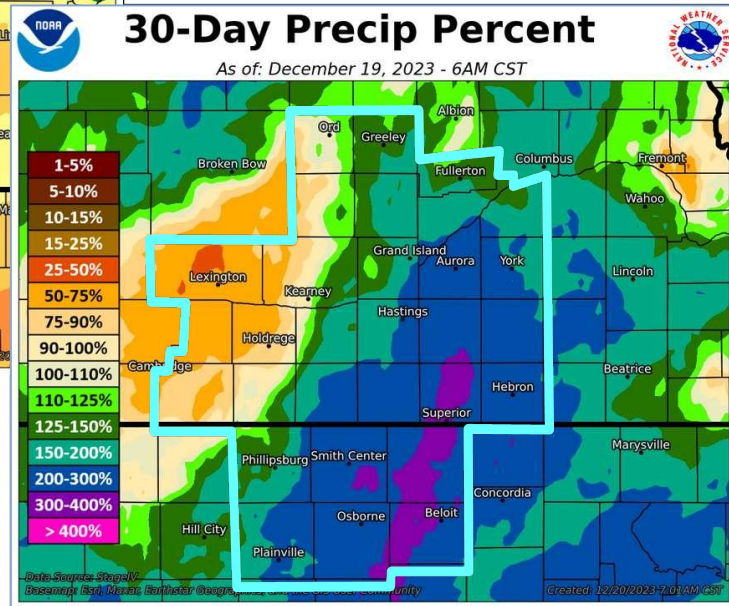
The latest 30-day period was a “split story across our coverage area.

On the “good news” side of things, roughly the southeast two-thirds of our coverage area measured a widespread 1-2” (localized higher), which was near-normal to roughly twice normal.

Unfortunately, roughly the northwest one-third of our coverage area did not fare as well, with below-normal totals of mainly 0.25-0.75” more common.



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Precipitation (Last 90 Days)

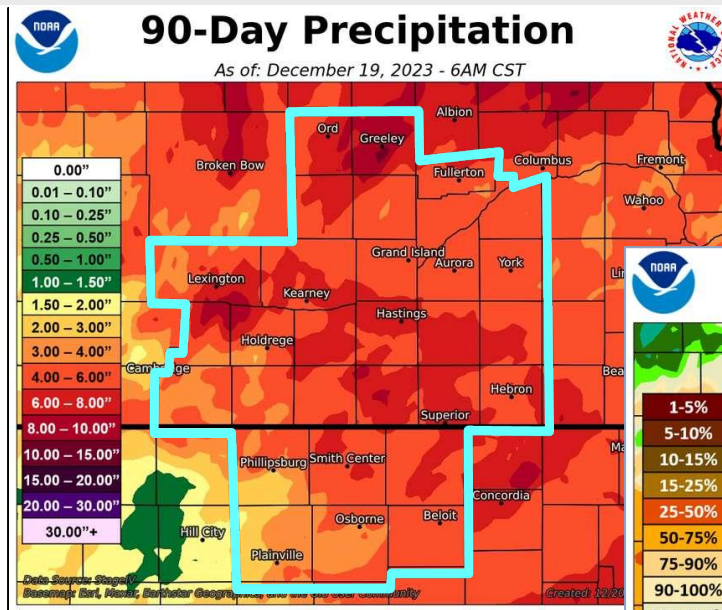
90-Day Precipitation/Percent-of-Normal (Sep. 21-Dec. 19)...Map Links [HERE](#)

Main Takeaways:

The latest 90-day period was certainly a “mixed bag” across our coverage area.

On the best-of side of things, a roughly “C-shaped” swath through our coverage area...including at least the majority of several northern, west-central and south central counties...picked up near-to-above normal totals mainly in the 4-6” range (localized higher around 7”).

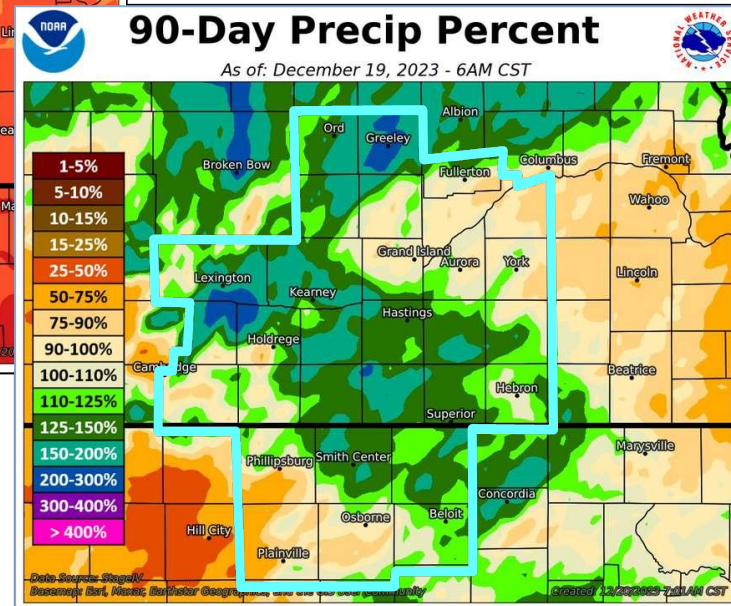
Meanwhile, the majority of especially some far northeastern counties (such as Polk/Merrick) and also far southwestern counties (such as Furnas/Phillips/Rooks) received at least modestly-below normal precipitation mainly only in the 2.00-3.50” range.



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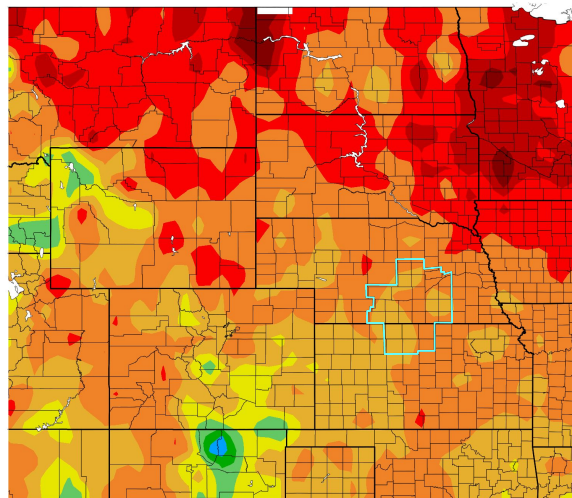
Temperature Trends (Last 7 and 30 Days)

High Plains Regional Climate Center [7-Day](#) & [30-Day](#) Temperature Departures From Normal

Main Takeaways (Last 30 Days):

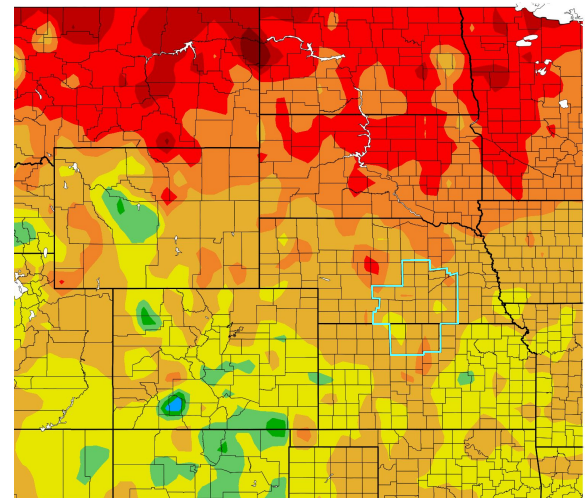
Temperatures over the last 30 days have averaged out modestly ABOVE-NORMAL across our entire coverage area, with most places mainly between 1-3° above normal.

Departure from Normal Temperature (F)
12/13/2023 – 12/19/2023



NWS Hastings area outlined in light blue

Departure from Normal Temperature (F)
11/20/2023 – 12/19/2023



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:

- Of all river basins in our coverage area, the Little Blue and Big Blue basins in south central/eastern portions of our Nebraska coverage area currently exhibit the lowest streamflows (versus normal) and are considered to be in moderate to severe hydrologic drought.

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, but given that most vegetation is dry/dormant and given ongoing drought conditions, any afternoons with low relative humidity (especially 20% or lower) and strong winds (especially gusts of 25+ MPH) will feature potentially critical fire danger and possible Red Flag Warnings

Other Impacts:

- There are no known impacts at this time

Mitigation Actions:

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





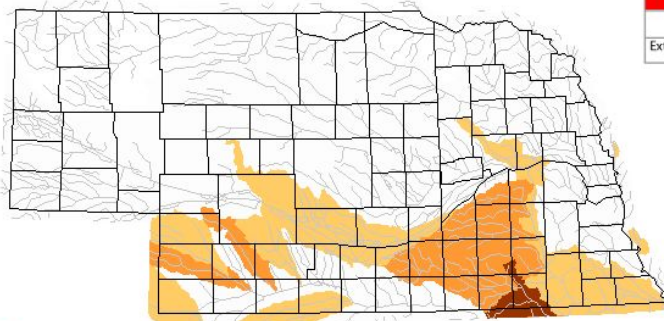
Hydrologic Conditions and Impacts

[USGS Streamflow Information](#)...Maps Shaded Only For Areas With BELOW NORMAL Flows

Main Takeaways:

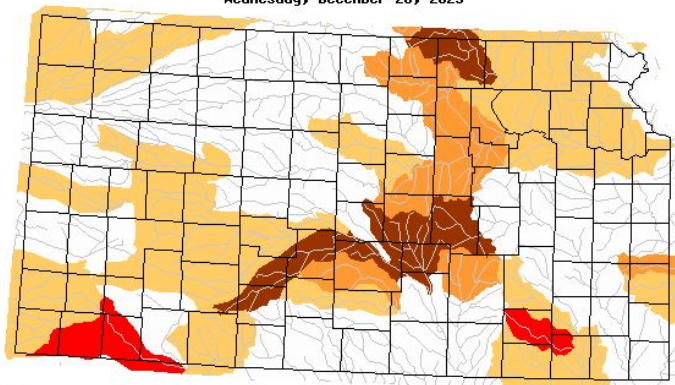
- Of all river basins in our coverage area, the Little Blue and Big Blue basins in south central/eastern portions of our Nebraska coverage area currently exhibit the lowest streamflows (versus normal) and are considered to be in moderate to severe hydrologic drought.

Wednesday, December 20, 2023



USGS

Wednesday, December 20, 2023



USGS

Explanation - Percentile classes

Low	<=5	6-9	10-24
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal

Image Captions:

Top - [Nebraska Below Normal 7-Day Average Streamflow Compared To Historical Streamflow For The Day Of The Year](#) , from USGS, valid Nov. 15

Bottom - [Kansas Below Normal 7-Day Average Streamflow Compared To Historical Streamflow For The Day Of The Year](#) , from USGS, valid Nov. 15



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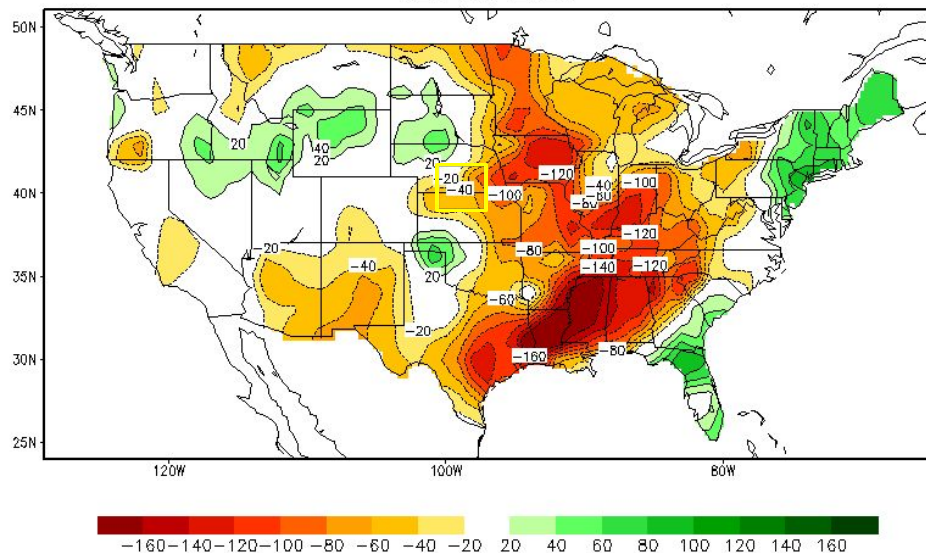


Agricultural Impacts / Soil Moisture

Climate Prediction Center (CPC) [Soil Moisture Status](#)

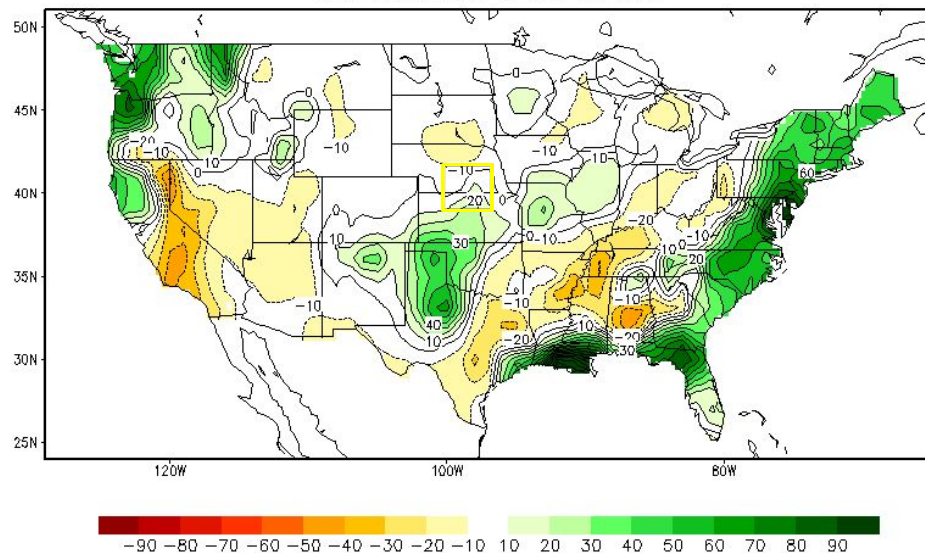
Soil Moisture Departure From Normal (mm)

Calculated Soil Moisture Anomaly (mm)
DEC 20, 2023



Soil Moisture Change Since End Of Previous Month (mm)

Calculated Soil Moisture Anomaly Change
DEC 20, 2023 from NOV.30





7-Day Precipitation Forecast

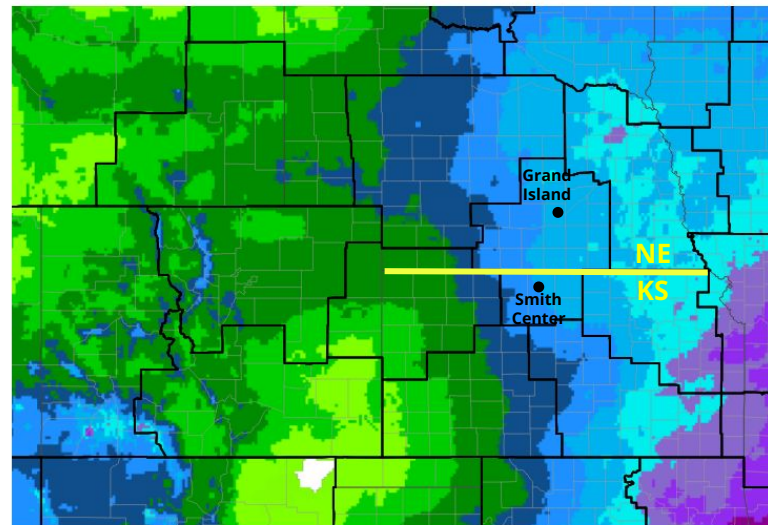
From [Weather Prediction Center \(WPC\)](#)...Valid Dec. 22-28

Main Takeaways:

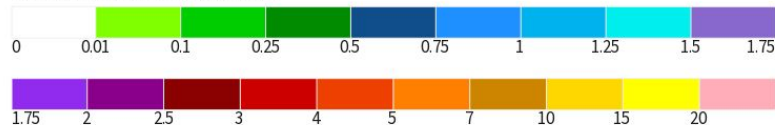
There is a good chance for at least **SOME** measurable precipitation across our entire coverage area mainly between Dec. 23-26 as a slow-moving low pressure system traverses the region and brings a variety of precipitation types. However, current computer models vary significantly regarding just how much might fall.

Officially, cumulative forecast precipitation from WPC for the Dec. 22-28 calls for a widespread 0.50-1.00" across our coverage area.

7-Day Quantitative Precipitation Forecast



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center; image courtesy of Drought.gov

Data Valid: 12/21/23



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Atmospheric Administration

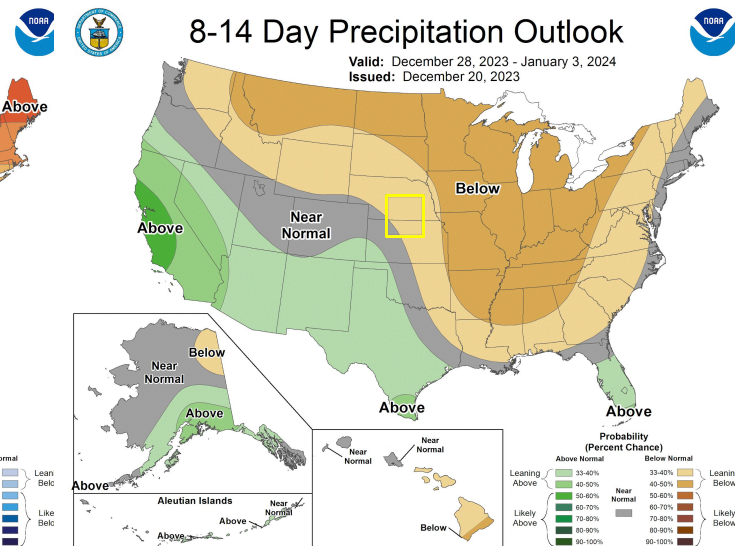
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Main Takeaways:

- **Temperatures:** Our entire coverage area features a slight lean toward above normal temperatures
- **Precipitation:** Nearly our entire coverage area features a slight lean toward below normal precipitation.



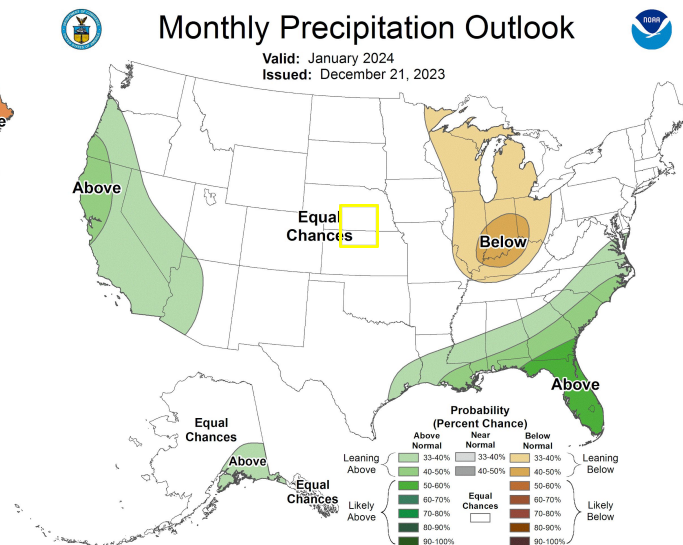
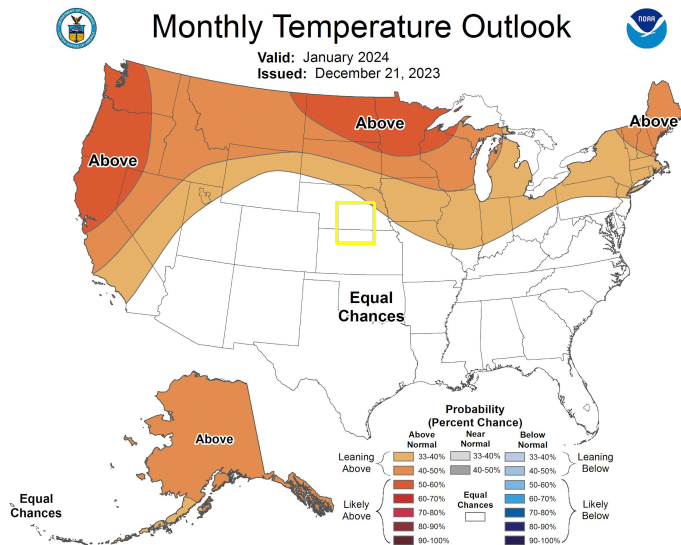


Monthly Outlooks - Climate Prediction Center (CPC)

CPC [Monthly Temperature and Precipitation Outlooks](#)...Valid For JANUARY 2024

Main Takeaways

- **Temperatures:** Nearly our entire coverage area is indicated to have “equal chances” of having above, below or near-normal temperatures.
- **Precipitation:** Our entire area is indicated to have “equal chances” of having above, below or near-normal precipitation



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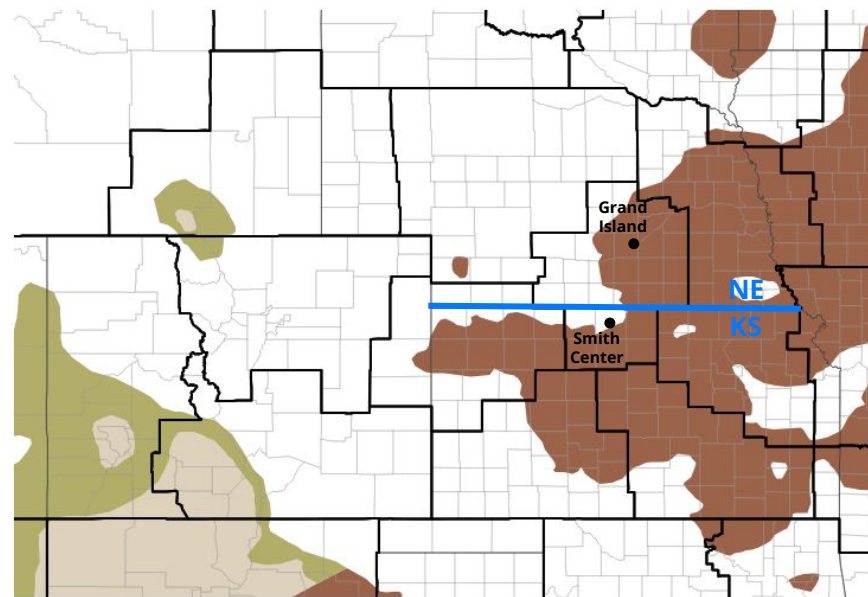
Drought Outlook (Seasonal)

CPC [Seasonal Drought Outlook](#)...Valid Through MARCH 2024

Main Takeaways:

- Based on current longer-range forecasts, unfortunately all portions of our coverage area that are currently in a drought category (at least D1/Moderate) are expected to remain in some category of drought (meaning drought will persist).

Seasonal (3-Month) Drought Outlook



Drought Is Predicted To...



Source(s): Climate Prediction Center; image courtesy of Drought.gov

Data Valid: 12/21/23





Contact Information & References

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

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Assistant State Climatologist
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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!

