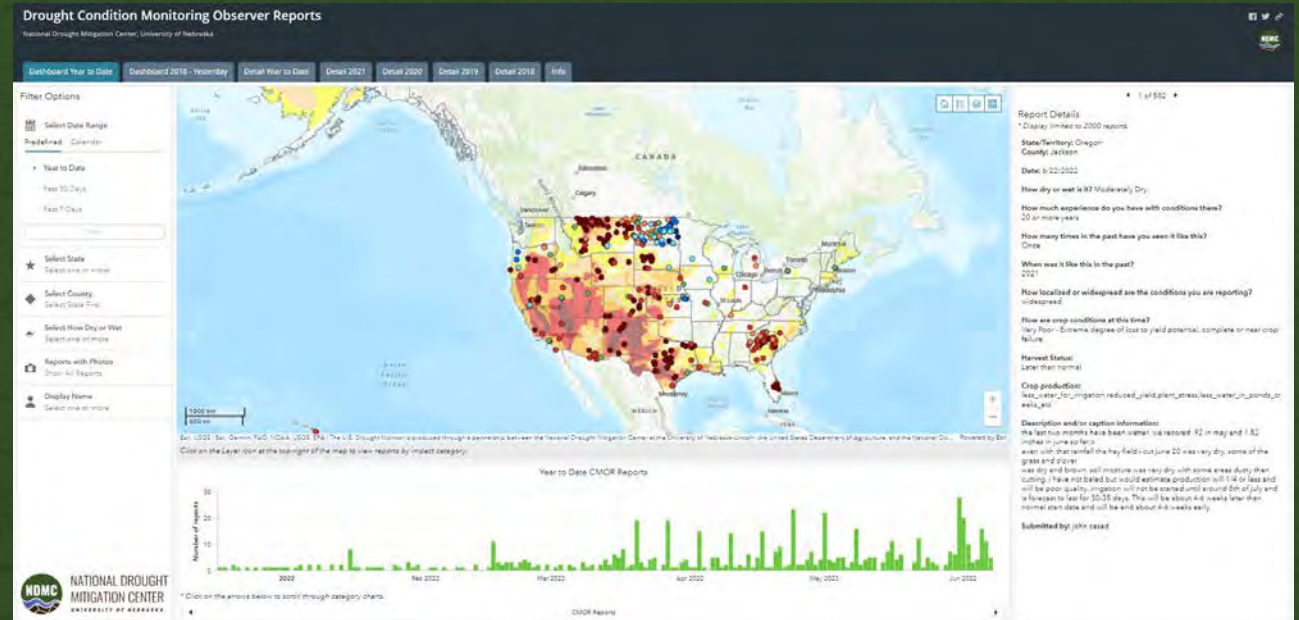
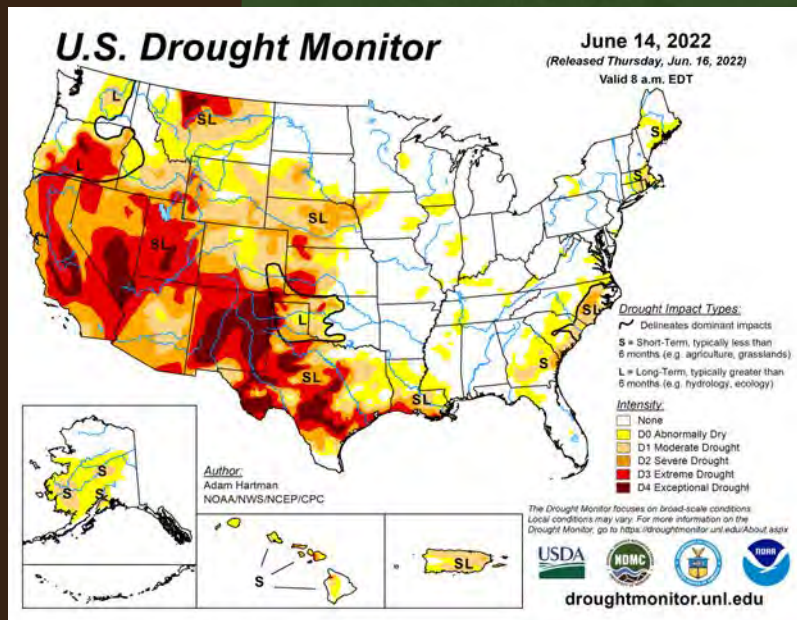


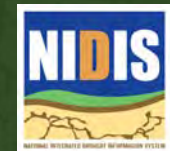
# Condition Monitoring Observer Reports (CMOR) help us “see more” drought

[go.unl.edu/cmor\\_drought](http://go.unl.edu/cmor_drought)

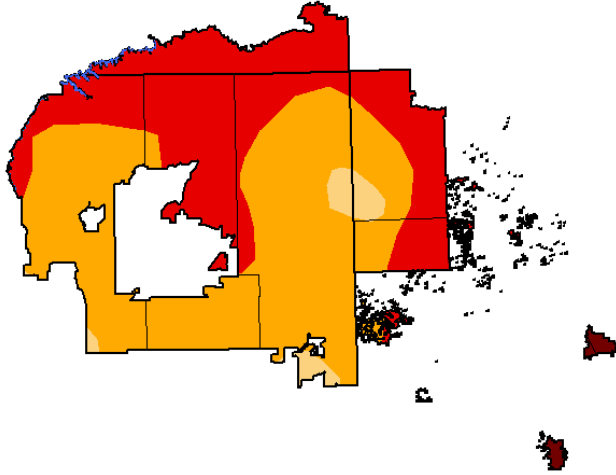


NATIONAL DROUGHT  
MITIGATION CENTER  
UNIVERSITY OF NEBRASKA

Navajo Nation Drought Monitoring Webinar Series  
June 22, 2022

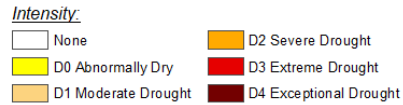


# U.S. Drought Monitor Navajo Nation Reservation



**June 14, 2022**  
(Released Thursday, Jun. 16, 2022)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.00	100.00	100.00	96.77	42.91	0.99
<b>Last Week</b> 06-07-2022	0.00	100.00	100.00	96.77	42.91	0.37
<b>3 Months Ago</b> 03-15-2022	0.00	100.00	100.00	90.22	38.59	0.00
<b>Start of Calendar Year</b> 01-04-2022	0.00	100.00	100.00	91.77	38.27	0.00
<b>Start of Water Year</b> 09-28-2021	0.00	100.00	100.00	95.15	66.89	0.00
<b>One Year Ago</b> 06-15-2021	0.00	100.00	100.00	100.00	95.84	64.38



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information, visit the Drought Monitor website.

Author:  
Adam Hartman  
NOAA/NWS/NCEP



### Drought Condition Monitoring Observer Reports

National Drought Mitigation Center, University of Nebraska

Author: Adam Hartman, NOAA/NWS/NCEP

Dashboard Year to Date | Dashboard 2018 - Yesterday | Detail Year to Date | Detail 2021 | Detail 2020 | Detail 2019 | Detail 2018 | Info

Filter Options

- Select Date Range: Predefined Calendar, Year to Date (Past 30 Days, Past 7 Days)
- Select State: Arizona, Colorado, New Mexico
- Select County: Select one or more
- Select How Dry or Wet: Select one or more
- Reports with Photos: Show All Reports
- Display Name: Select one or more

300 km / 100 mi

Year to Date CMOR Reports

Date	Number of reports
Feb 2022	0
Feb 14	0
Feb 21	1
Feb 28	0
Mar 2022	1
Mar 14	0
Mar 21	0
Mar 28	0
Apr 2022	0
Apr 11	1
Apr 18	2
Apr 25	1
May 2022	0
May 9	1
May 16	4
May 23	2
May 30	1
Jun 2022	0
Jun 13	7

Report Details

Forestry impact - Other: Forest fruit and mast production has been way down for the past 2.5 years. Pine nut, juniper berry and acorn production is at an all-time low. Fir trees died en masse in 2019 and Pinon and Juniper trees continue to dry out and die at an alarming rate.

Wildlife habitat impact: less\_food, less\_water, change\_in\_animal\_migration, wildlife\_foraging\_near\_people, water\_quality\_reduced, change\_in\_wetland, bog, swamp, muskeg, other

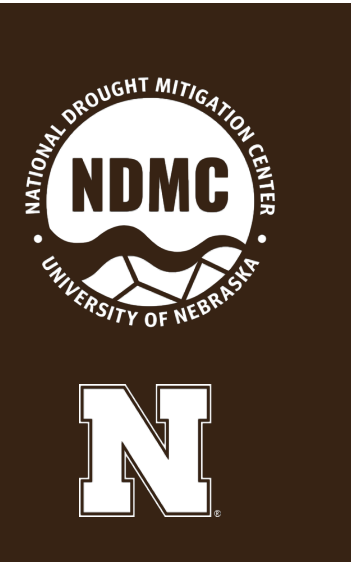
Wildlife habitat impact - Other: Many springs have dried up or become unusable. Stream flow is way down and doesn't go so far, the one perennial creek in the area goes underground much further up the mountain, so surface flow has disappeared.

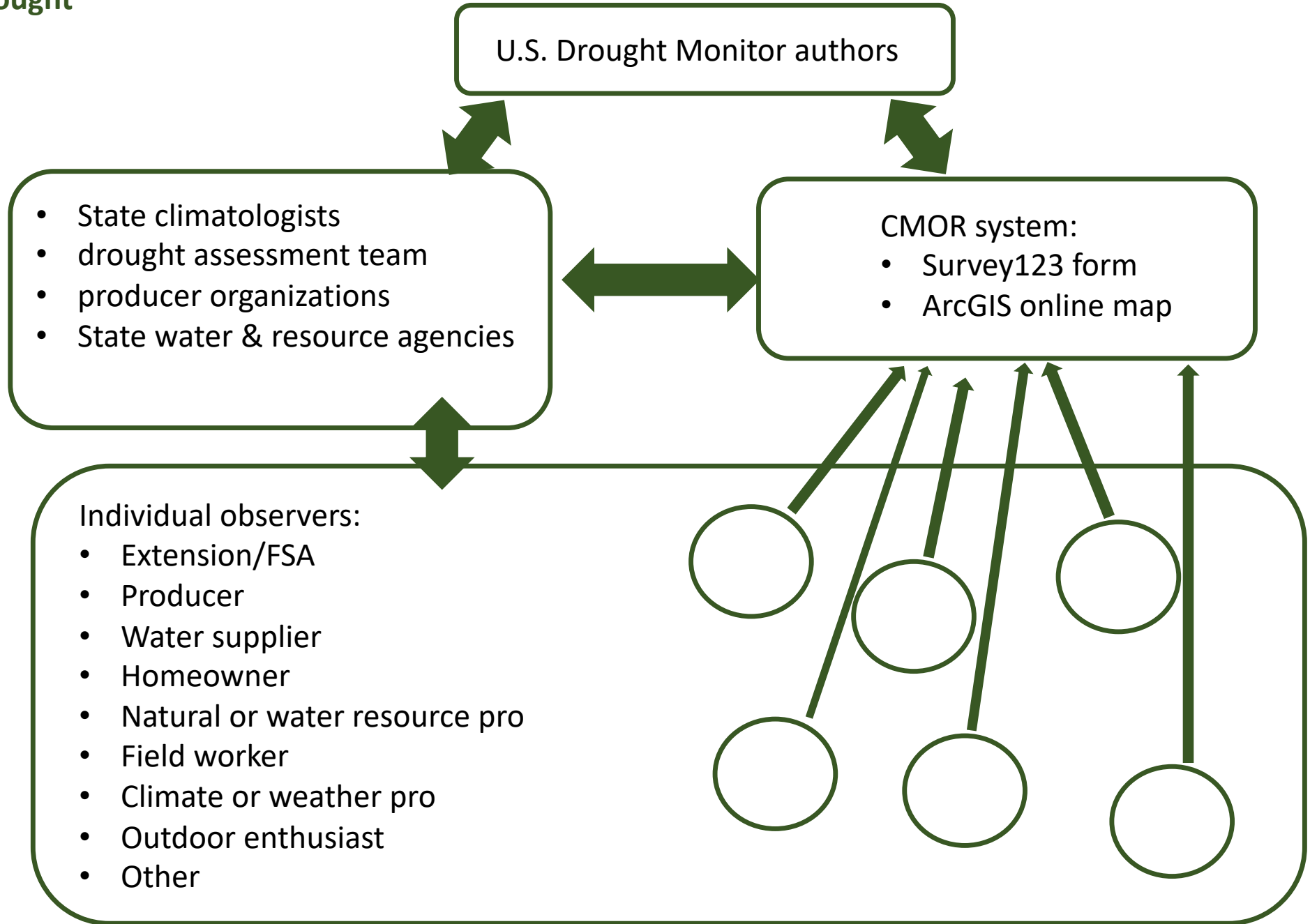
Freshwater fish impact: less\_water, reduced\_streamflow, warmer\_water\_temperatures

Description and/or caption information: I have submitted "Field Photos" from this location for many years. This is CoCoRaHS station NM-SN-45. View to the south photo shows the dying Prickly Pear cactus, which is about the only ground vegetation left. The grasses have mostly died and/or been grazed out as the view of the ground shows. Pinon pines continue to die off, and Juniper trees have been thinning out and losing branches for the past 2 years.

Submitted by: NM-SN-45

Dead pinon tree





Landing Page:  
Go.unl.edu/CMOR\_drought

## Drought Impacts Toolkit

[Home](#) [Tools](#) [Emerging Impacts](#) [Impact Assessments](#)

[Home](#) > [Tools](#) > [CMOR](#)

# Submit and view Condition Monitoring Observer Reports (CMOR)



[2022 Map](#)

[Archive](#)

[Download Factsheet](#)

[Watch Video](#)

[Social Media Resources](#)

Report drought-related conditions and impacts within the U.S. This is a nation-wide service provided by the National Drought Mitigation Center, based at the University of Nebraska, in partnership with the National Integrated Drought Information System. Information submitted by this form appears on a map and becomes part of a permanent public record. Please note that this form is not part of the process to apply for assistance. To participate, you must legally be an adult, at least 18 years old in most states, 19 in Nebraska or Alabama, or 21 in Mississippi. By submitting information, you agree that it may be used in drought monitoring research. Questions? Please email [DIRinfo@unl.edu](mailto:DIRinfo@unl.edu).

[Submit a Report](#)

[Submit Report by App](#)


For further assistance in using the app, see [the factsheet](#).



# Works from computer or mobile device




Open in browser




---

Open in the Survey123 field app

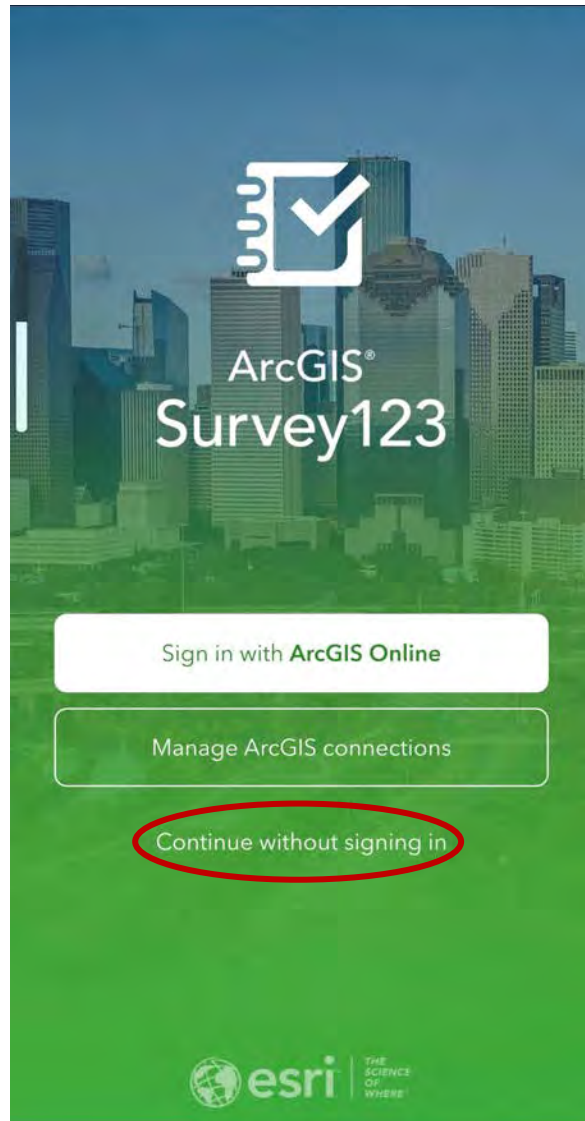


If you don't have the Survey123 field app,  
please download it first.

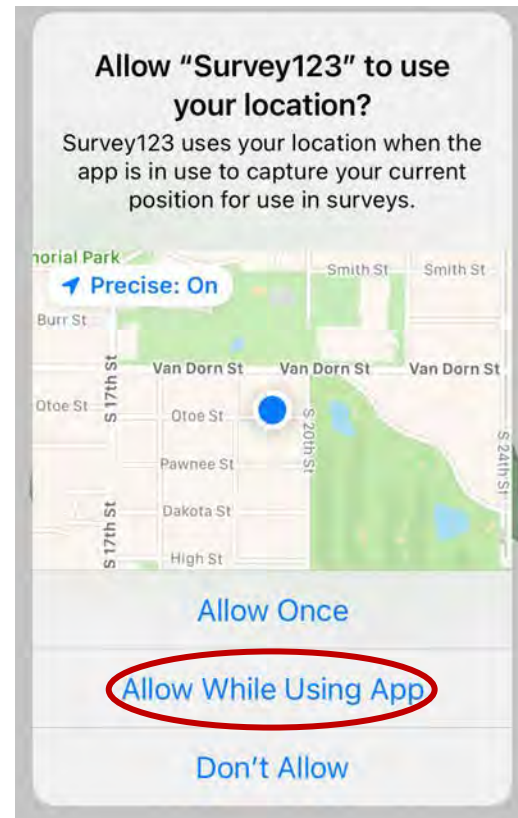


AA [survey123.arcgis.com](https://survey123.arcgis.com) ↻

# Getting started with the field app

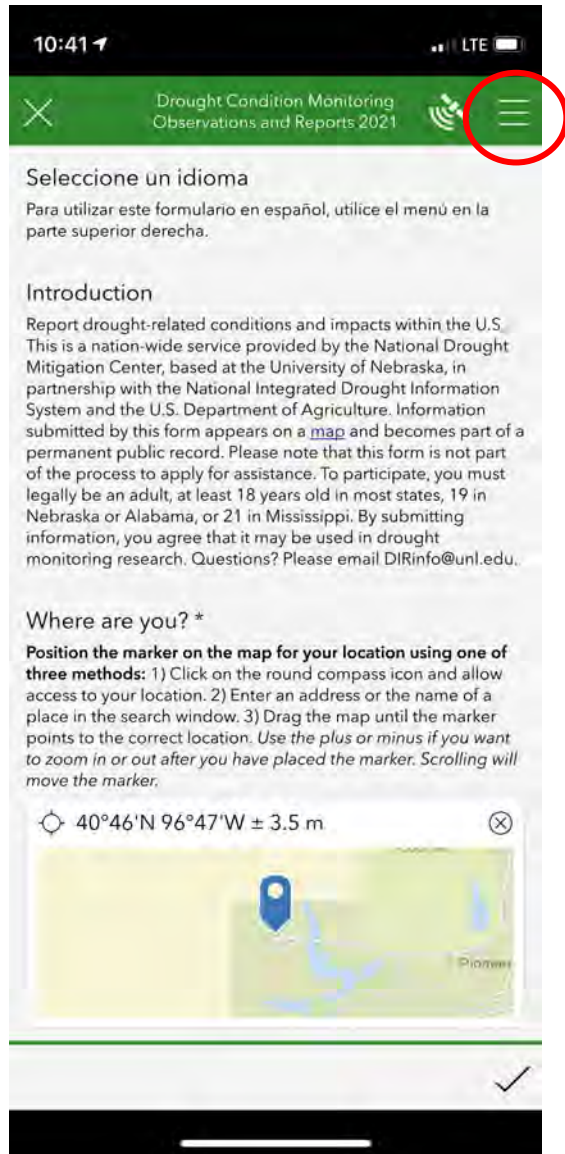


- Go to the app store and download Esri's Survey123 field app.
- Click on "Continue without signing in."

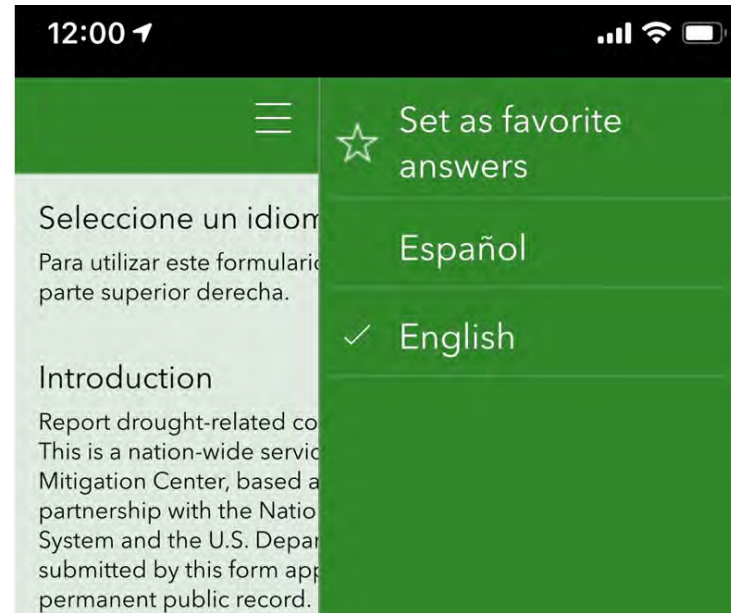


- Allow the app to use your location.
- Then enter [go.unl.edu/CMOR](http://go.unl.edu/CMOR) or use the QR code to download the survey.

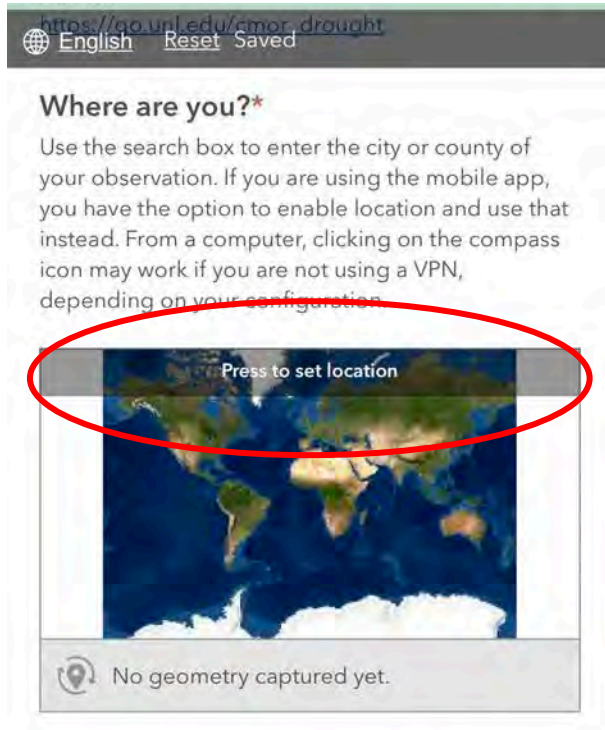




Pick a language  
(current choices are English or Spanish)



# Location widget





# Location quality control

## Select your jurisdiction:

### Select a state/territory:

This will help us spot wrong locations but does not position your report correctly on the map. Use the marker on the map above to make sure your report shows up in the right place.

### Select a local jurisdiction:


This will help us spot wrong locations but does not position your report correctly on the map. Use the marker on the map above to make sure your report shows up in the right place.



# Date (default is current date)

## What is the date?

Please use the calendar to select the date of your observation, if it is other than today.

 2/26/2021

« February 2021 »						
Su	Mo	Tu	We	Th	Fr	Sa
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	<b>26</b>	27
28	1	2	3	4	5	6
7	8	9	10	11	12	13

ir part of the country and base your observation on w  
nal dry season is not the same as drought.  
re. Ponds, lakes, streams and wells may be nearly em  
pasture losses. Mandatory water restrictions may be ir  
in due to dry conditions. Streams, reservoirs or well w  
se restrictions may be in place. There may be water  
may be stressed. Soil is dry.  
d for plants, crops or pastures. Soil is somewhat dry. L  
ve fully recovered if conditions are changing from dri  
wetter.



# 7-point dry to wet scale

## How dry or wet is it?\*

Please use what you know about your part of the country and base your observation on what is normal for this time of year. A normal dry season is not the same as drought.

**Severely Dry:** There is no soil moisture. Ponds, lakes, streams and wells may be nearly empty or dry. Producers may have crop or pasture losses. Mandatory water restrictions may be in place.

**Moderately Dry:** Plants may be brown due to dry conditions. Streams, reservoirs or well water levels may be low. Voluntary water use restrictions may be in place. There may be water shortages. Plants, crops or pastures may be stressed. Soil is dry.

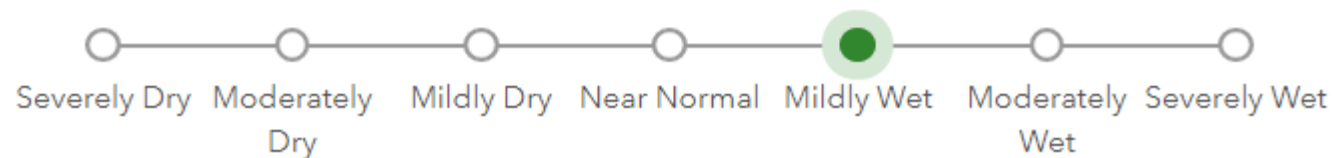
**Mildly Dry:** Growth may have slowed for plants, crops or pastures. Soil is somewhat dry. Local plants, pastures or crops may not have fully recovered if conditions are changing from drier to wetter.

**Near Normal:** What you're seeing is what you expect for this time of year.

**Mildly Wet:** Local plants, crops or pastures are healthy, recovering from dry conditions or draining from wet conditions. Soil moisture is above normal.

**Moderately Wet:** Local plants, crops or pastures are healthy and lush. Soil is very damp and the ground may be saturated with water. There may be standing water in low areas and ditches. Water bodies may be fuller than normal.

**Severely Wet:** Water levels in lakes, streams and ponds are well above normal. Standing water covers some areas that are normally dry. Soil is wet and ground is completely saturated. There may be flooding.



# Experience relates to Drought Monitor levels

How much experience do you have with conditions there?

less than 5 years

5-10 years

10-20 years

20 or more years

How many times in the past have you seen it like this?

Never

Once

Twice or more

Other

Other

Worst winter in memory

How localized or widespread are the conditions you are reporting?

Widespread

Category	Label	Percentiles	Years
D0	Abnormally Dry	21 to 30	1 in 3-5
D1	Moderate Drought	11 to 20	1 in 5-10
D2	Severe Drought	6 to 10	1 in 10-20
D3	Extreme Drought	3 to 5	1 in 20-30
D4	Exceptional Drought	0 to 2	1 in 50



# New in 2022: Report normal or wet conditions

## Conditions are normal or wet

Please use the checkboxes to tell us which of these conditions you are seeing.

Normal conditions for this time of year

More green than usual for this time of year

More standing or flowing water than usual for this time of year

Increased moisture or humidity

Groundwater wells above normal static level

Soil moisture is adequate to good

Non-irrigated crops or pastures are doing well

Lawn and garden watering is not necessary

Low fire danger

Abundant insects or water-loving wildlife

Fisheries in good condition



- Report crop production impact ▶
- Report livestock production impact ▶
- Report municipal water supply impact ▶
- Report community hydropower impact ▶
- Report health impact ▶
- Report household impact ▶
- Report recreation or tourism impact ▶
- Report other business or industry impact ▶
- Report fire impact ▶
- Report forest impact ▶
- Report wildlife impact ▶
- Report freshwater fish impact ▶
- Report spawning fish impact ▶

# Impact checklists

## Report crop production impact ▼

### Crop production

Please use the check boxes to tell us what effects of drought you have experienced and actions you have taken.

Less water for irrigation

Reduced yield

Insect infestation

Crop disease

Other

|

# New in 2022: Crop condition scale, planting and harvest status

Report crop production impact  —

How are crop conditions at this time?

- Very Poor - Extreme degree of loss to yield potential, complete or near crop failure.
- Poor - Heavy degree of loss of yield potential which can be caused by excess soil moisture, drought, disease, etc.
- Fair - Less than normal crop condition. Yield loss is a possibility but the extent is unknown.
- Good - Yield prospects are normal or above normal; moisture adequate with minimal damage.
- Excellent - Yield prospects are above normal and crops are experiencing little or no stress.

Planting Status

When do you anticipate planting compared to a typical year?

- Normal
- Earlier than normal
- Later than normal

Harvest Status

When do you anticipate harvesting compared to a typical year?

- Normal
- Earlier than normal
- Later than normal



## Report livestock production impact

### Livestock production

Please use the check boxes to tell us what effects of drought you have experienced and what actions you have taken.

Reduced pasture, forage

Feeding hay early

Supplemental feed

Purchased hay

More invasive species (plants)

Decreased stock weights

Animal stress

Mortality

Reduced grazing on public lands

## New in 2022: Range conditions

### How are range conditions at this time?

Very Poor - Pastures provide very little or no feed. Supplemental feeding is required to maintain livestock condition.

Poor - Pastures are providing marginal feed; supplemental feeding required.

Fair - Pastures are providing generally adequate feed but still less than normal for the time of year.

Good - Pastures are providing adequate feed supplies for the current time of year.

Excellent - Pastures are supplying feed in excess of what is normally expected at the current time of year.



# New in 2022: Copyright clarification

## Photos

### Upload photo(s)

You can upload a photo of up to 10 MB, if you are the photographer or have permission to share the photo. It will be visible on the web. Please be sure to use the description field below for credit and caption information: Who took the photo, what is the location, what is the date, and what is it showing us?

You as the copyright holder agree that by uploading a photo, it may be used by UNL, and shared with and by government and academic partners, for drought monitoring, management, and education. Your photo will become part of a permanent public archive. UNL reserves the right to remove objectionable content.

Select image file



### Description

Please enter a description to help us understand the drought impact or conditions that you checked, or what to look for in the photo(s). Try to provide context, even a photo from a different year, to help show the difference between dry and normal conditions.

1000

- Take a photo, or upload one that's already taken
- Up to 5 photos
- Provide caption information. If the photo shows drought, please tell us what normal would look like, or upload a photo contrasting drought conditions with normal conditions.
- By uploading a photo, you agree that it may be used and shared for educational and management purposes, but you still hold the copyright.

# Identity

## New in 2022: Display name

### Your role

Please choose one or more observer types to help us understand your perspective.

Extension or Farm Service Agency (FSA)

Farmer or livestock producer

Water supplier

Homeowner

Natural or water resources professional

Field worker

Climate or weather professional

Outdoor enthusiast

Other

### Display Name

A display name will let users of this information see whether multiple reports are from a single individual. Especially if you submit reports consistently over time, this helps you build a credible track record.

You can use your real name, come up with a descriptive username such as "NDrancher07," or use a random string of letters and numbers. If you forget your display name, you can zoom in on the map to find your previous report and see what you used. If the drought center uses one of your photos, we may use your display name as attribution, i.e., "Photo by HappyRancher42 via CMOR."

### Name\*

We won't use your name on public-facing maps but will share it internally with state and federal officials who are assessing drought conditions.

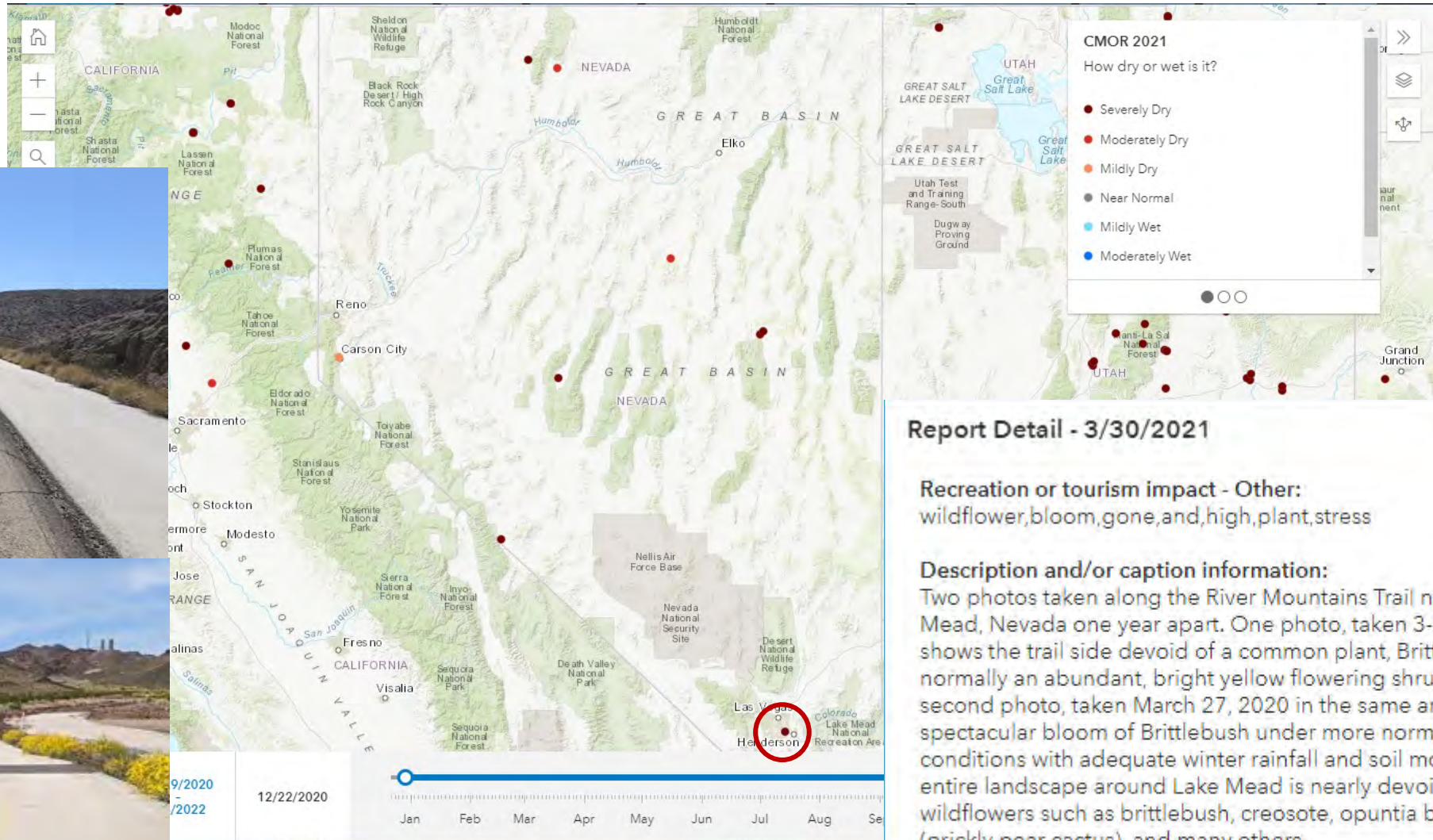
IMPORTANT: Please enter your name the same each time you submit a report if you wish to establish a consistent record.

### Your email\*

We won't use your email on public-facing maps but will share it internally with state and federal officials who are assessing drought conditions in case they need to follow up with you.

IMPORTANT: Please enter your email the same each time you submit a report if you wish to establish a consistent record.

# Find your dot on the map



Zoom to

## Default view of CMOR dashboard Read reports & see photos in panel at right

- Dashboard Year to Date
- Dashboard 2018 - Yesterday
- Detail Year to Date
- Detail 2021
- Detail 2020
- Detail 2019
- Detail 2018

### Filter Options

Select Date Range

Predefined Calendar

- Year to Date
  - Past 30 Days
  - Past 7 Days

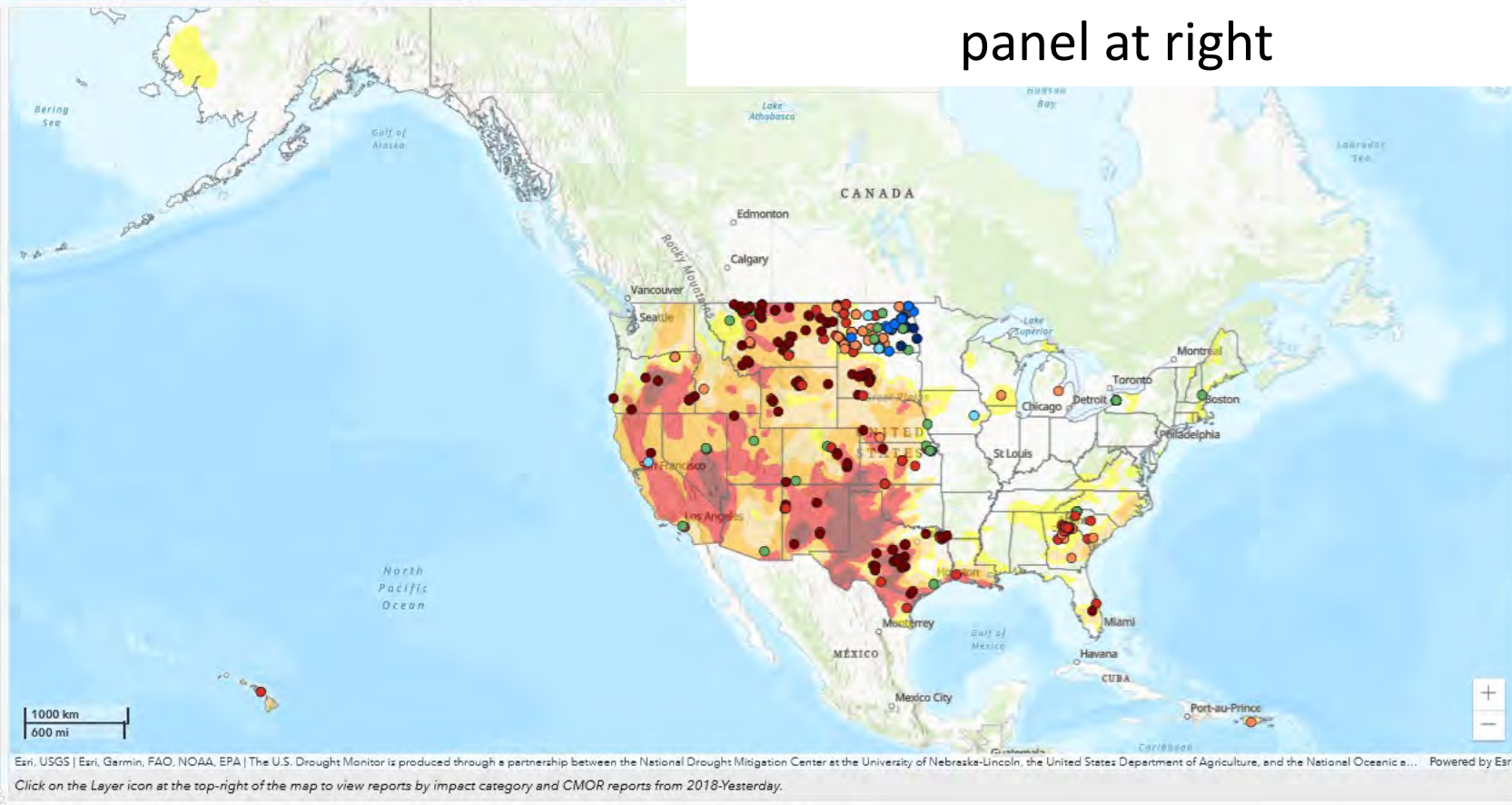
Select State

Select County

Select How Dry or Wet

Reports with Photos

Display Name



Report Details

Display limited to 2000 reports.

State/Territory: Montana  
Date: 5/24/2022

How dry or wet is it? Severely Dry

How much experience do you have with conditions there?  
20 or more years

How many times in the past have you seen it like this?  
Once

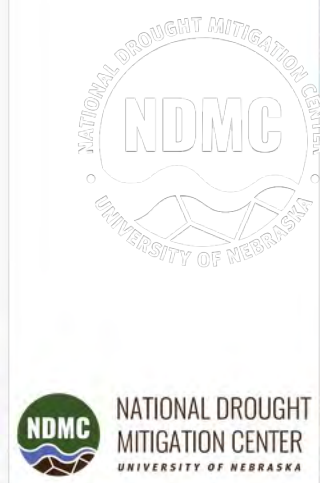
How localized or widespread are the conditions you are reporting?  
While there has been several rain events central Musselshell county- the north remains quite dry. We recieved 1.41 inches for May so far- two events of .37 and .86. with plenty of wind, there is a temporary green up, but soil is dry underneath. some crested has headed out at 4 inches tall (picture), dandelions showing some wilting, etc. Drier conditions seem consistant in the northern part of the county

Description and/or caption information:  
crested plants heading out at 4 inches tall.

Submitted by: Deborah Adolph



IMG\_0637.JPG



### Filter Options

Select Date Range

Predefined Calendar

Year to Date

Past 30 Days

Past 7 Days

Reset

Select State

Colorado

Select County

Select one or more

Select How Dry or Wet

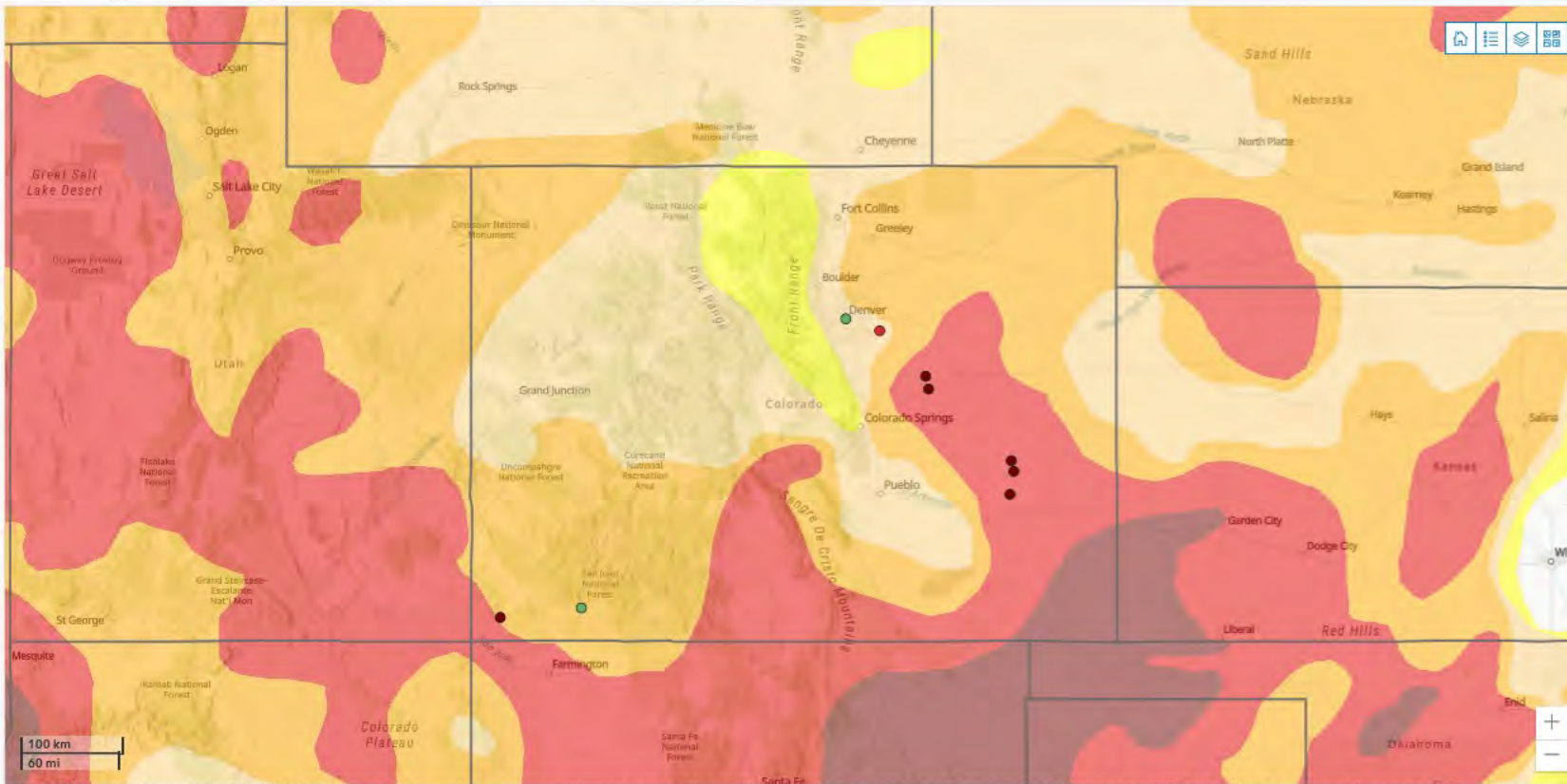
Select one or more

Reports with Photos

Show All Reports

Display Name

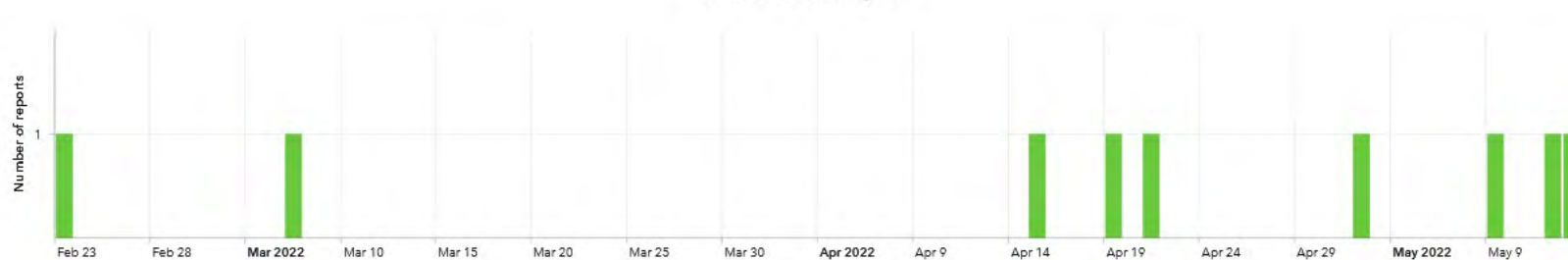
Select one or more



Eri, USGS | Eri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS | 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 ... Powered by Eri

Click on the Layer icon at the top-right of the map to view reports by impact category and CMOR reports from 2018-Yesterday.

### Year to Date CMOR Reports



\* Click on the arrows below to scroll through category charts.

CMOR Reports

### Report Details

\* Display limited to 2000 reports.

State/Territory: Colorado

County: Montezuma

Date: 5/13/2022

How dry or wet is it? Severely Dry

How much experience do you have with conditions there?  
20 or more years

How many times in the past have you seen it like this?  
Never

How localized or widespread are the conditions you are reporting?  
widespread throughout the 4 corners region

How are range conditions at this time?  
Very Poor - Pastures provide very little or no feed. Supplemental feeding is required to maintain livestock condition.

Livestock production:  
reduced\_pasture\_forage,supplemental\_feed,purchased\_hay,more\_invasive\_species\_plants,animal\_stress,reduced\_grazing\_on\_public\_land,less\_water\_in\_ponds\_creeks\_etc,hauled\_water,erosion,other

Livestock production - Other:  
Hay prices are higher than normal.

Description and/or caption information:  
Along Highway 160, toward southern part of Ute Mountain Ute Reservation, land can barely support cattle or feral horses, heading toward sand dune formation.

Submitted by: Marjorie Connolly

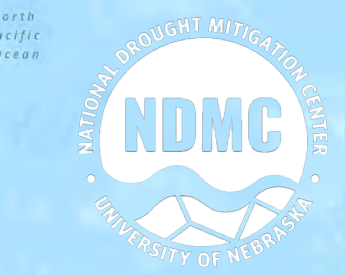
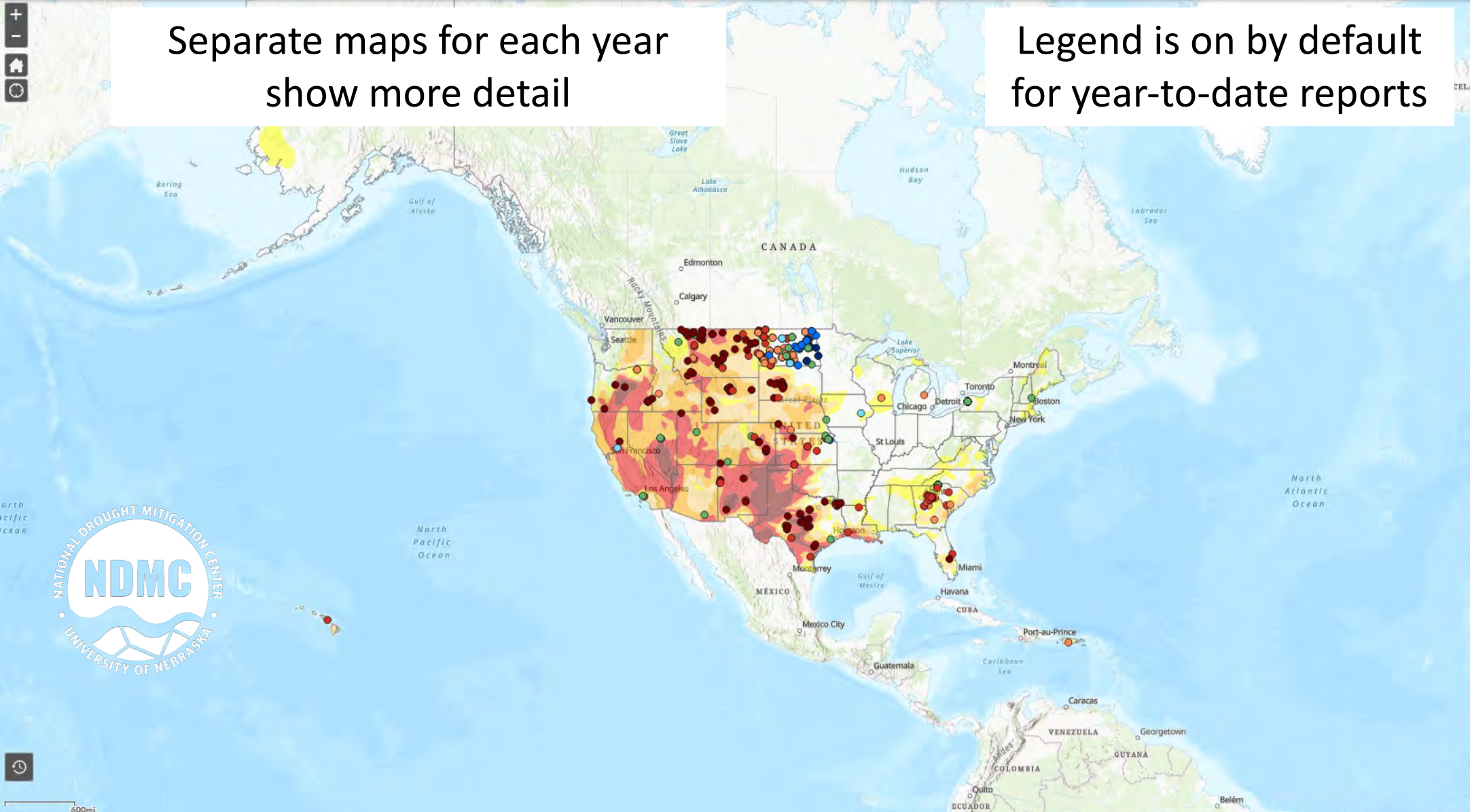


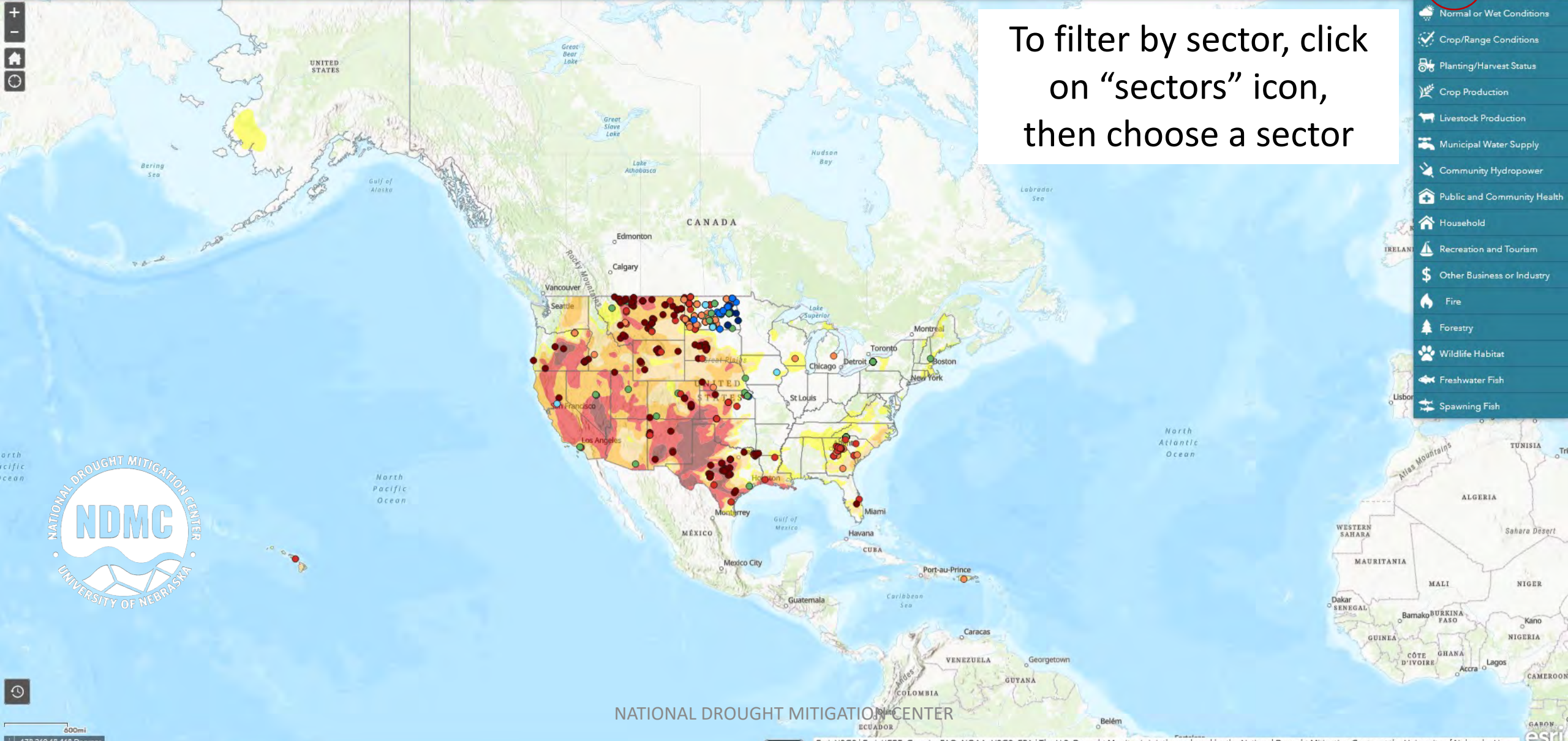
UMU.jpg



Separate maps for each year show more detail

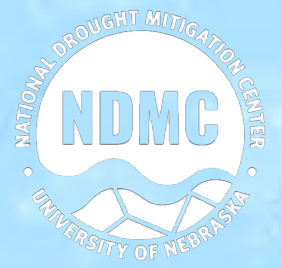
Legend is on by default for year-to-date reports

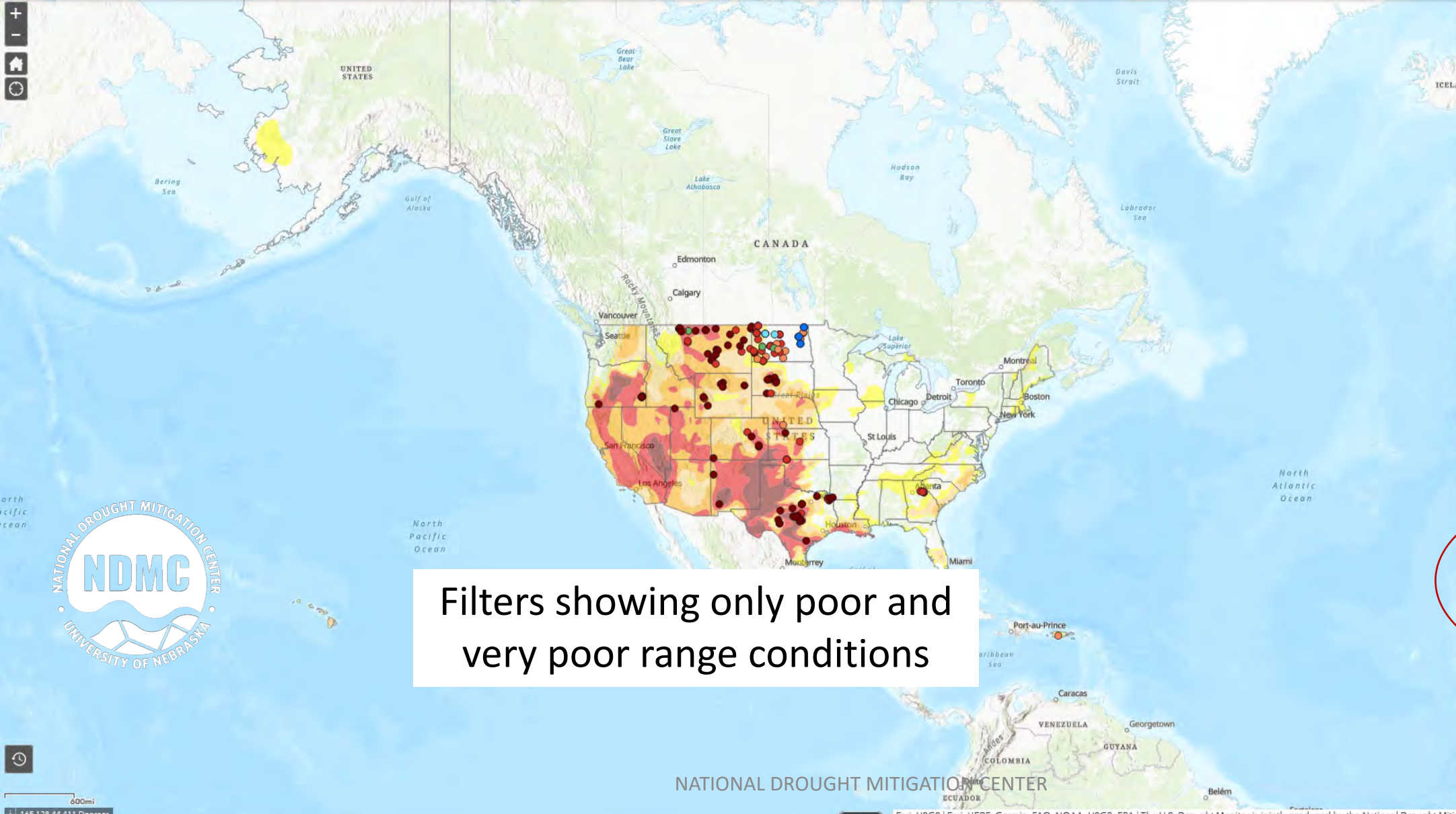




To filter by sector, click on “sectors” icon, then choose a sector

- Normal or Wet Conditions
- Crop/Range Conditions
- Planting/Harvest Status
- Crop Production
- Livestock Production
- Municipal Water Supply
- Community Hydropower
- Public and Community Health
- Household
- Recreation and Tourism
- Other Business or Industry
- Fire
- Forestry
- Wildlife Habitat
- Freshwater Fish
- Spawning Fish



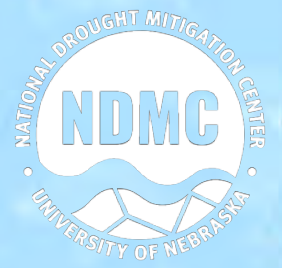


### Crop/Range Conditions

CMOR Reports year to date

- Crop Conditions: Excellent - Yield prospects are above normal and crops are experiencing little or no stress.
- Crop Conditions: Good - Yield prospects are normal or above normal; moisture adequate with minimal damage.
- Crop Conditions: Fair - Less than normal crop condition. Yield loss is a possibility but the extent is unknown.
- Crop Conditions: Poor - Heavy degree of loss of yield potential which can be caused by excess soil moisture, drought, disease, etc.
- Crop Conditions: Very Poor - Extreme degree of loss to yield potential, complete or near crop failure.
- Range Conditions: Excellent - Pastures are supplying feed in excess of what is normally expected at the current time of year.
- Range Conditions: Good - Pastures are providing adequate feed supplies for the current time of year.
- Range Conditions: Fair - Pastures are providing generally adequate feed but still less than normal for the time of year.
- Range Conditions: Poor - Pastures are providing marginal feed; supplemental feeding required.
- Range Conditions - Very Poor: Pastures provide very little or no feed. Supplemental feeding is required to maintain livestock condition.

Filters showing only poor and very poor range conditions

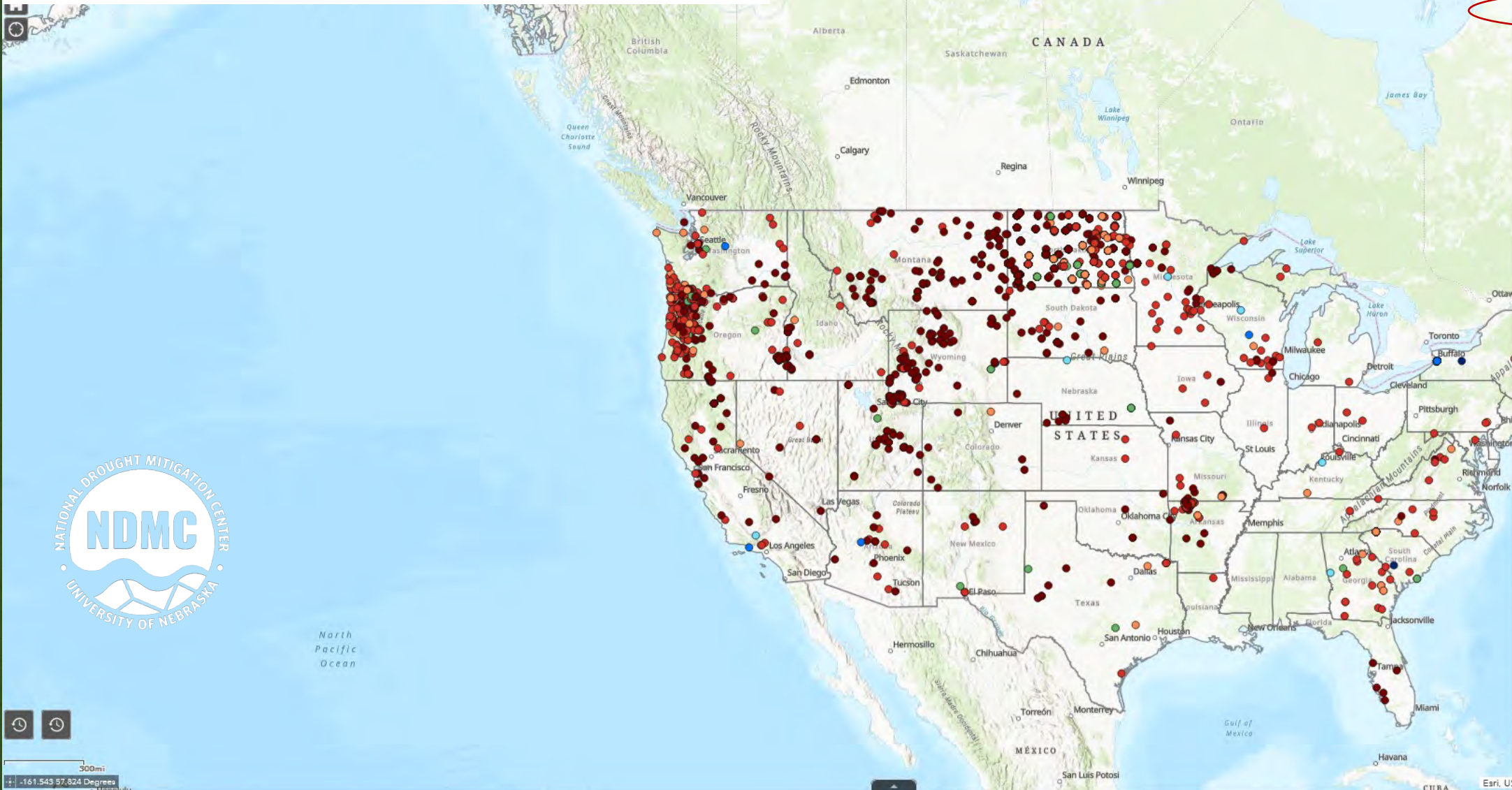




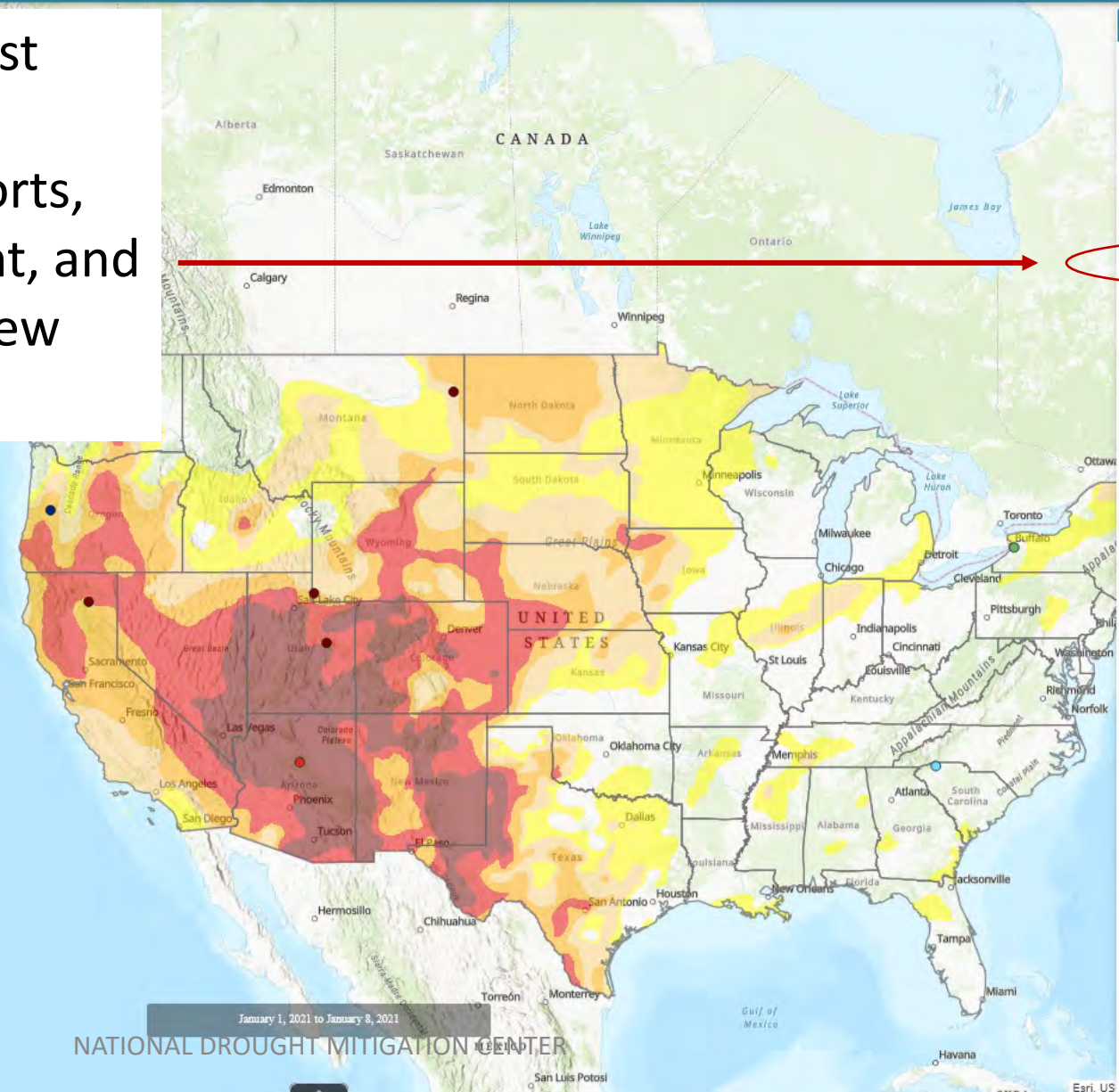
Find past years on separate tabs

### Map Layers

- CMOR Reports 2018 - Yesterday
- US State/Territory Boundary
- US County/Territory Boundary
- U.S. Drought Monitor - Current Week
- U.S. Drought Monitor - Archive



U.S. Drought Monitor: current (most recent) or archive  
To compare USDM and CMOR reports, activate USDM archive layer at right, and one-year time slider, below left. View defaults to beginning of year.



**Map Layers**

- CMOR Reports 2018 - Yesterday
- US State/Territory Boundary
- US County/Territory Boundary
- U.S. Drought Monitor - Current Week
- U.S. Drought Monitor - Archive

300mi  
-161.060 38.427 Degrees

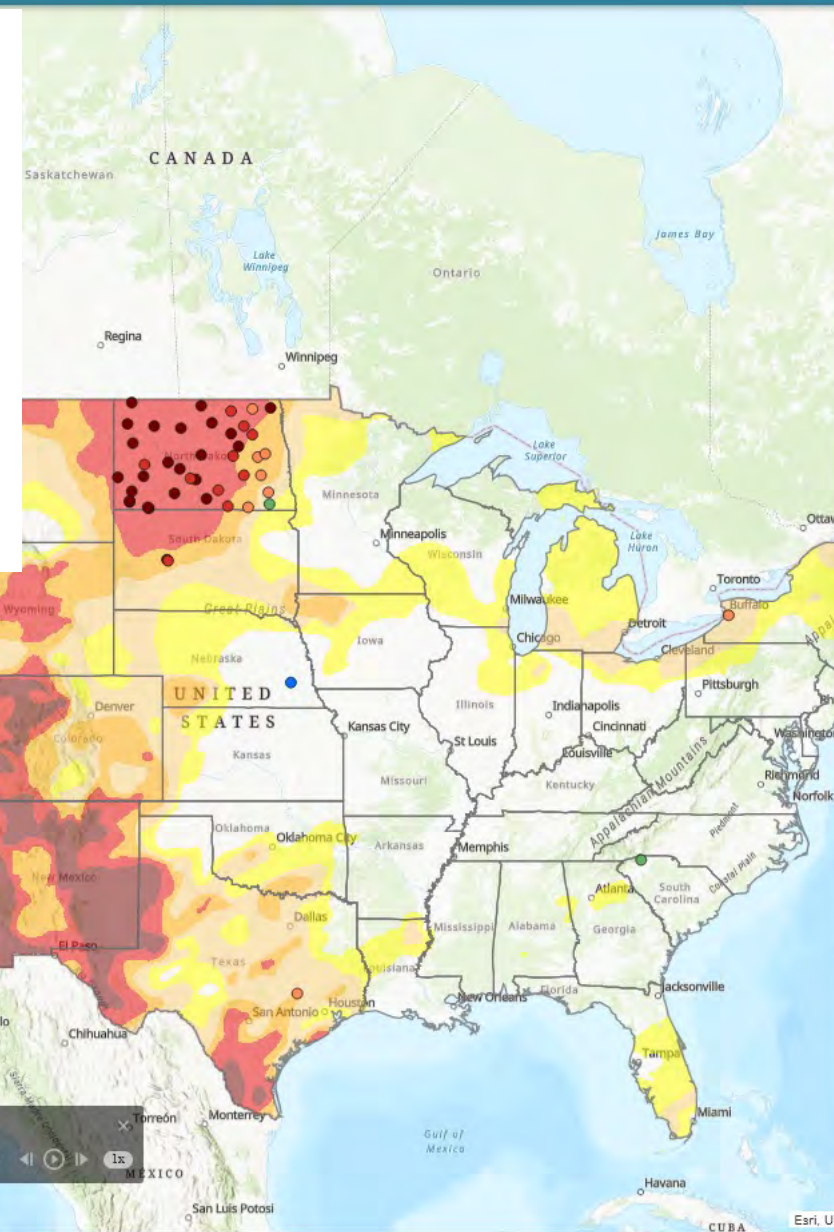
January 1, 2021 to January 8, 2021

NATIONAL DROUGHT MITIGATION CENTER



Click on the time slider and then push play or advance to move through the year a week at a time.

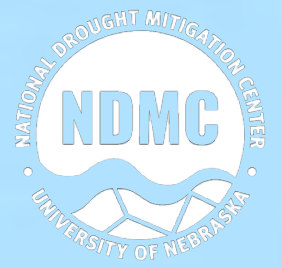
Caution: You can use the time slider or calendar to view a wider interval of time, but for more than a week at a time, turn off the U.S. Drought Monitor - Current Week because it will be meaningless.



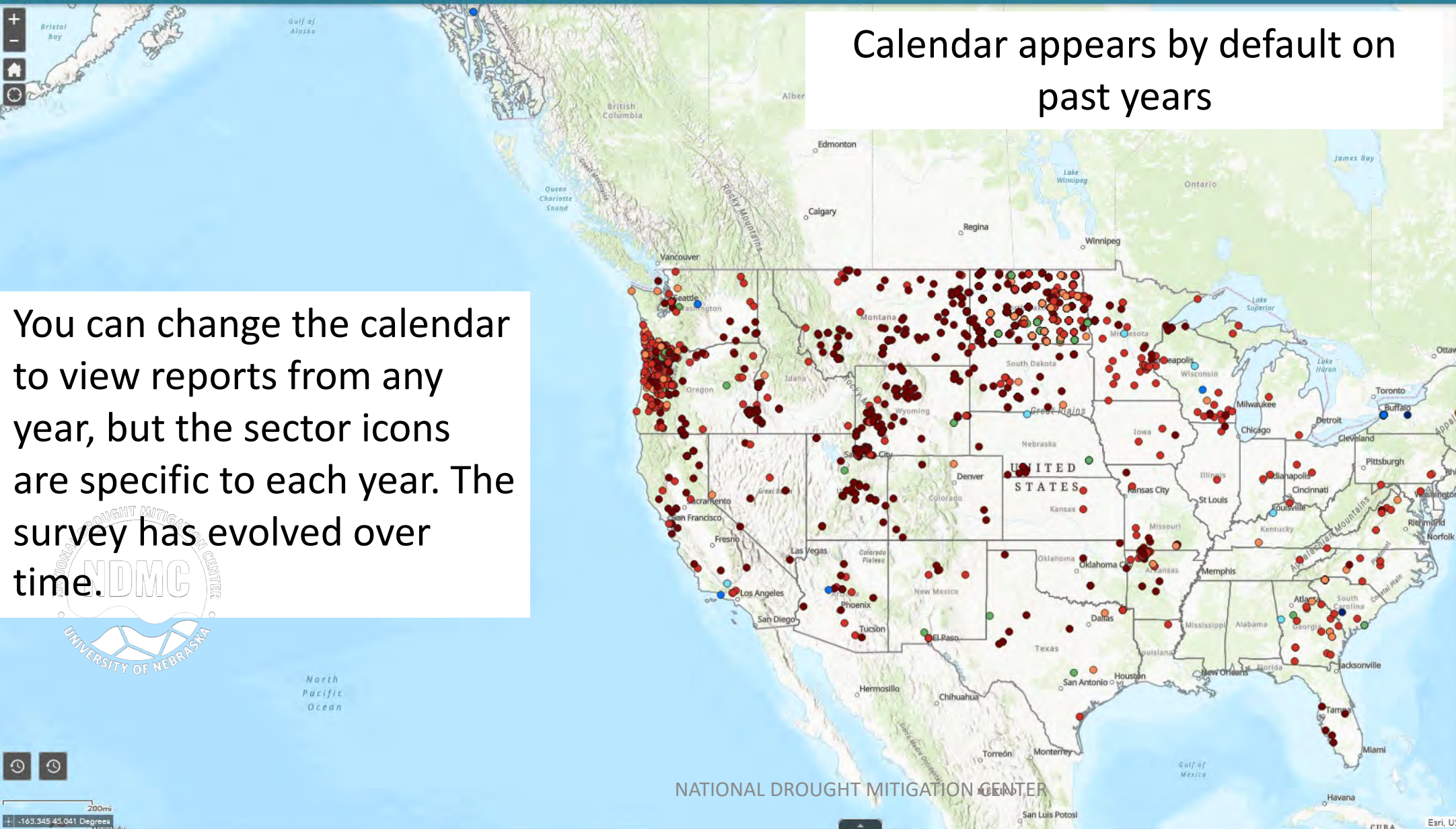
### Map Layers

Layers

- CMOR Reports 2018 - Yesterday
- US State/Territory Boundary
- US County/Territory Boundary
- U.S. Drought Monitor - Current Week
- U.S. Drought Monitor - Archive



April 9, 2021 to April 16, 2021

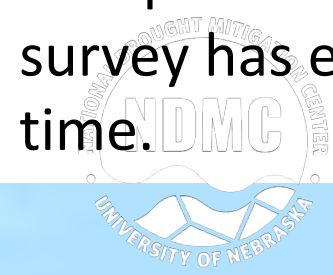


Calendar appears by default on past years

You can change the calendar to view reports from any year, but the sector icons are specific to each year. The survey has evolved over time.

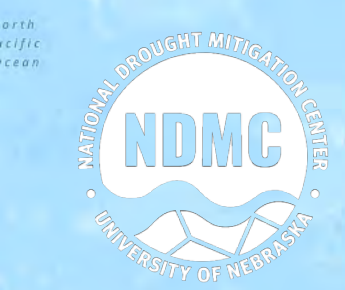
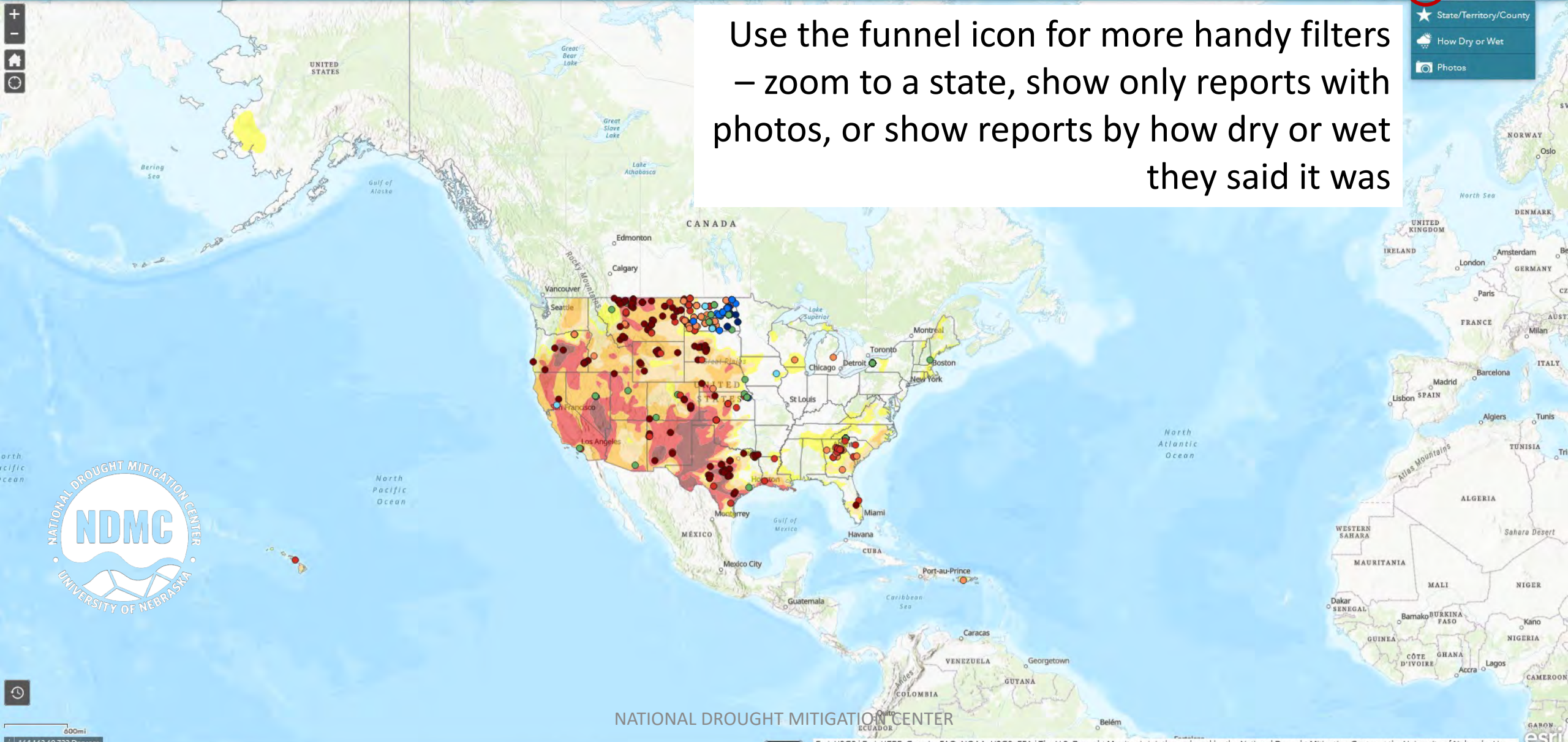
**Date Filter**

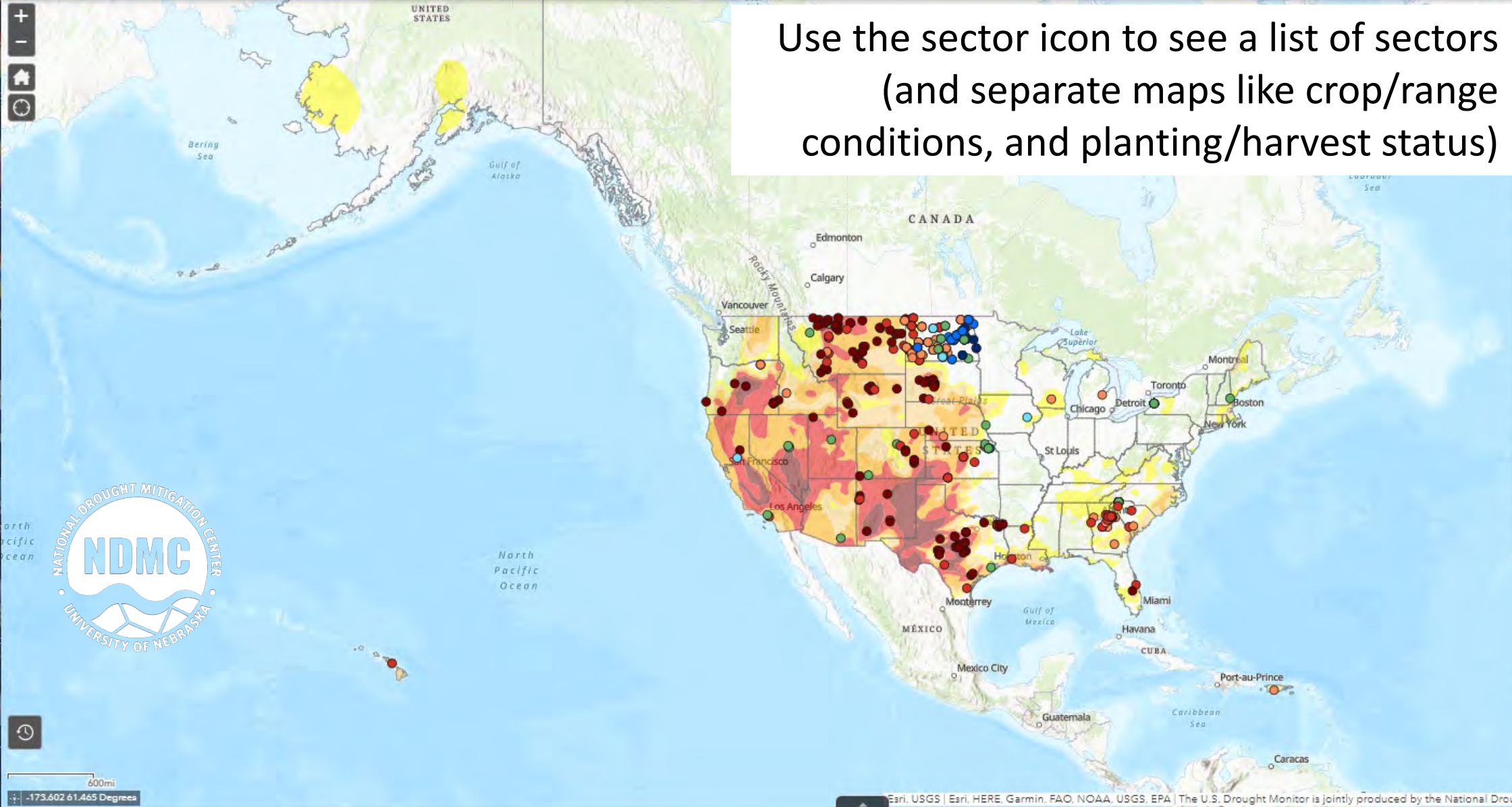
- CMOR Reports 2021
- Select a Date Range  Turn off time slider when using this option
- Select a Date Range  Turn off time slider when using this option
- Select a Date Range  Turn off time slider when using this option
- Select a Date Range  Turn off time slider when using this option



- ★ State/Territory/Country
- ☁ How Dry or Wet
- 📷 Photos

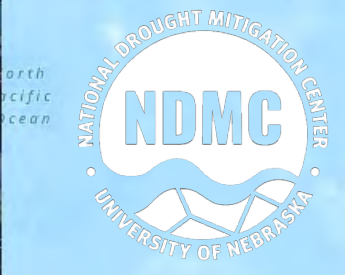
Use the funnel icon for more handy filters – zoom to a state, show only reports with photos, or show reports by how dry or wet they said it was





Use the sector icon to see a list of sectors (and separate maps like crop/range conditions, and planting/harvest status)

- Normal or Wet Conditions
- Crop/Range Conditions
- Planting/Harvest Status
- Crop Production
- Livestock Production
- Municipal Water Supply
- Community Hydropower
- Public and Community Health
- Household
- Recreation and Tourism
- Other Business or Industry
- Fire
- Forestry
- Wildlife Habitat
- Freshwater Fish
- Spawning Fish



# Drought Condition Monitoring Observer Reports

National Drought Mitigation Center, University of Nebraska



Dashboard Year to Date

Dashboard 2018 - Yesterday

Detail Year to Date

Detail 2021

Detail 2020

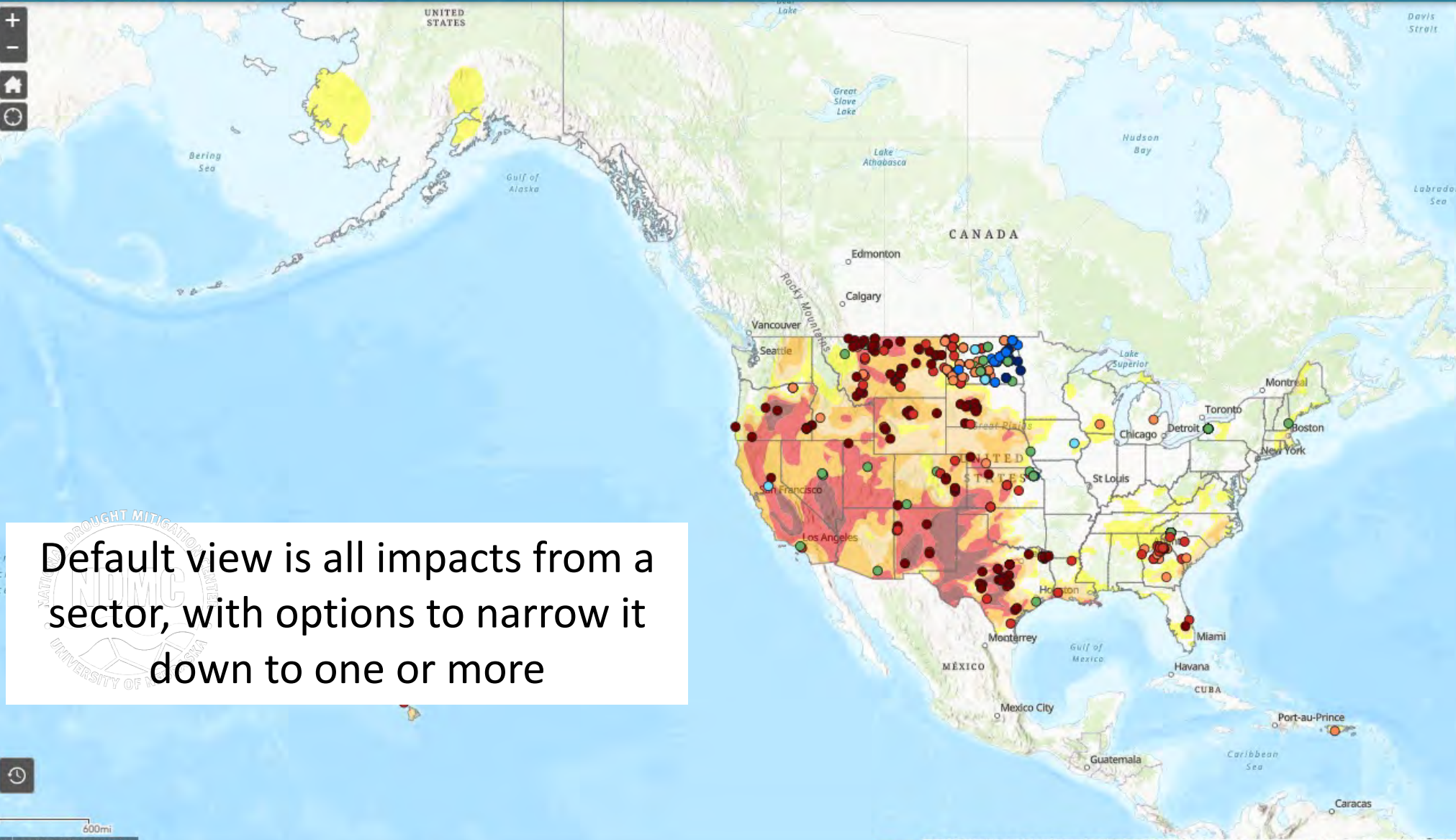
Detail 2019

Detail 2018

Info

CMOR Year to Date

[| CMOR Main Page](#) | [| Submit a Report](#) |

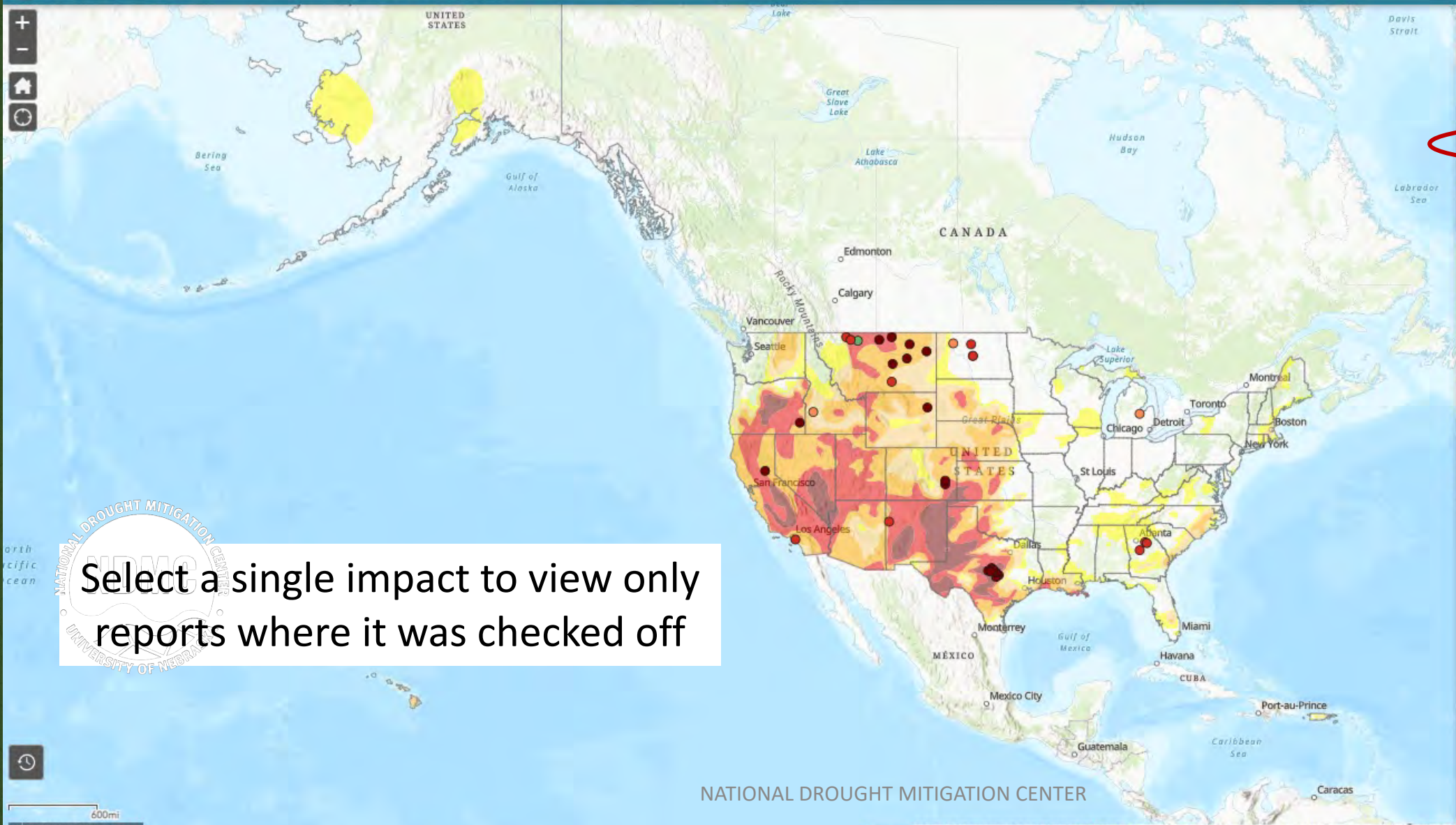


### Public and Community Health

CMOR Reports year to date

- All Public and Community Health Impacts
- Air quality, dust, pollen
- More vector-borne disease
- Special meetings or activities held
- Ceremonies or festivals cancelled
- Less food for subsistence
- Garden needs more water or yields less
- People relocating
- Stress
- Increased algal blooms
- Public and Community Health - Other

Default view is all impacts from a sector, with options to narrow it down to one or more

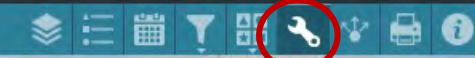
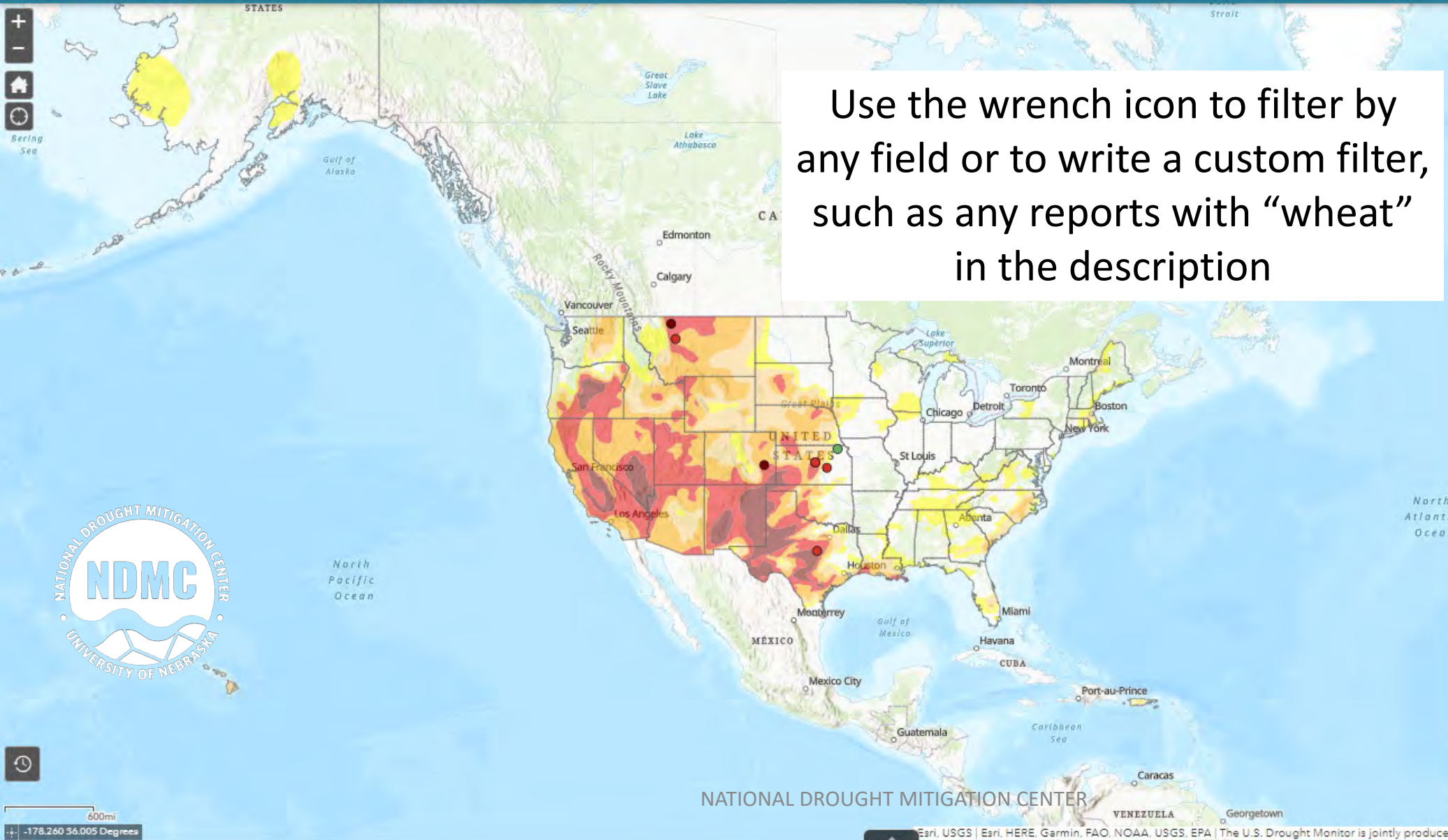


### Public and Community Health

- CMOR Reports year to date
- All Public and Community Health Impacts
- Air quality, dust, pollen
- More vector-borne disease
- Special meetings or activities held
- Ceremonies or festivals cancelled
- Less food for subsistence
- Garden needs more water or yields less
- People relocating
- Stress
- Increased algal blooms
- Public and Community Health - Other

Select a single impact to view only reports where it was checked off





### Custom Filter

Custom filter

Layer: CMOR Reports year to date

Display features in the layer that match the following expression

Description and/or caption information (String)

contains

Case sensitive

+ Add expression + Add set



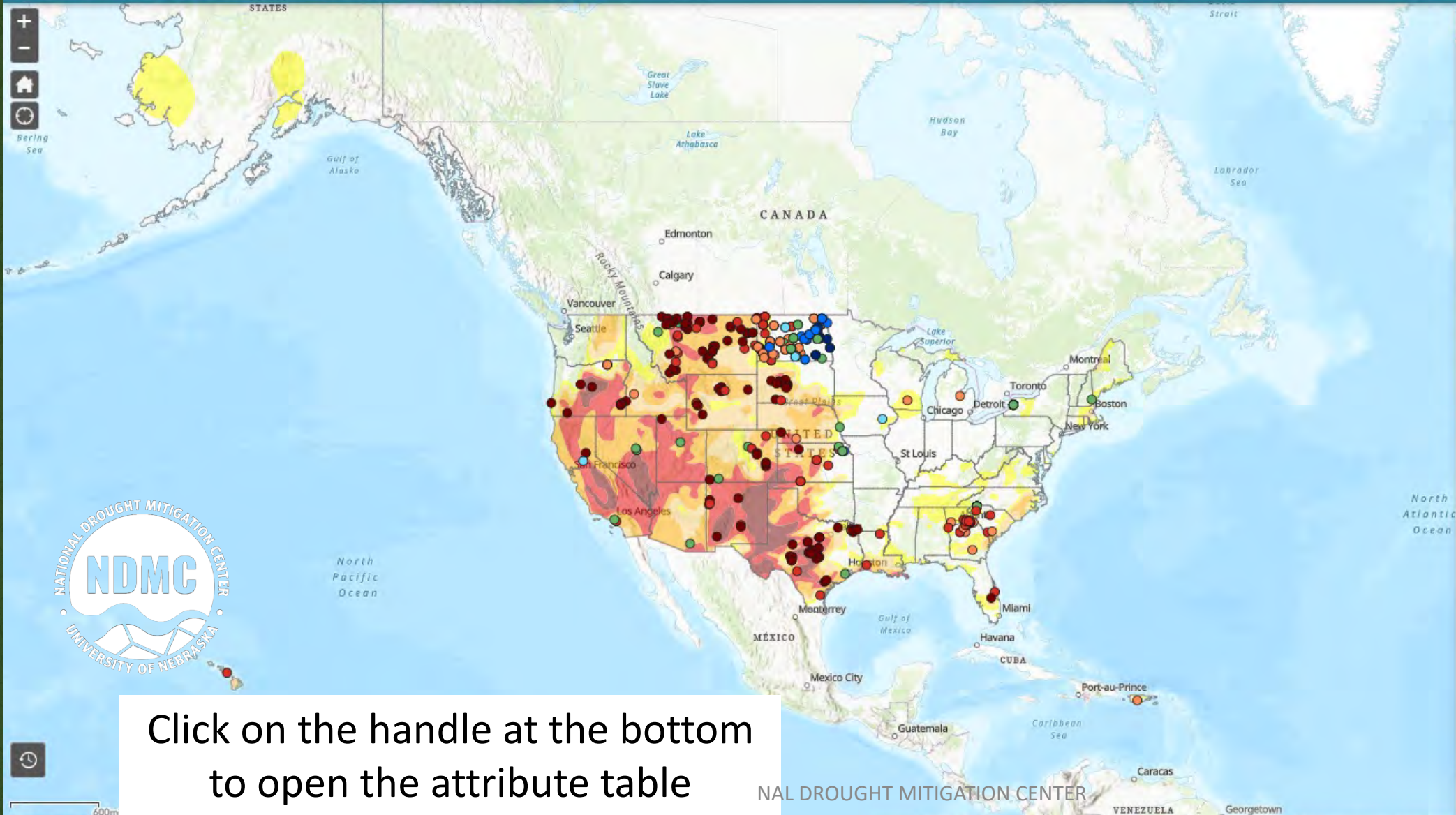
# Drought Condition Monitoring Observer Reports

National Drought Mitigation Center, University of Nebraska



- Dashboard Year to Date
- Dashboard 2018 - Yesterday
- Detail Year to Date
- Detail 2021
- Detail 2020
- Detail 2019
- Detail 2018
- Info

CMOR Year to Date | CMOR Main Page | Submit a Report



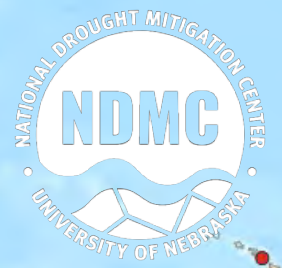
### Legend

CMOR Reports year to date

- Severely Dry
- Moderately Dry
- Mildly Dry
- Near Normal
- Mildly Wet
- Moderately Wet
- Severely Wet

U.S. Drought Monitor - Current Week

- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- None



Click on the handle at the bottom to open the attribute table

NATIONAL DROUGHT MITIGATION CENTER



The attribute table lets you write custom queries and export to csv

Select state/territory:	Select county:	How dry or wet is it?	How much experience do you have with conditions there?	How many times in the past have you seen it like this?	Other	When was it like this in the past?	When was it most recently like this?	How localized or widespread are the conditions you are reporting?	How are crop conditions at this time?	Planting Status	Harvest Status	How are range conditions at this time?	Generator issues	Other	Description and/or caption information	photo_exists	Form Version	What is the date?	Crop prod
Montana	Glacier	Severely Dry	10-20 years	Once		2021		Reporting extreme loss of feed on grazing lands, also lack of water in lakes, and reservoirs.								0	CMOR 2022 MT	5/26/2022	
Colorado	Logan	Moderately Dry	20 or more years	Twice or more			2012	Very widespread	Poor - Heavy degree of loss of yield potential	Earlier than normal	Earlier than normal	Poor - Pastures are providing marginal feed:				0	CMOR 2022 NDMC	5/26/2022	less_water



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 /NationalDroughtMitigationCenter  @droughtcenter

