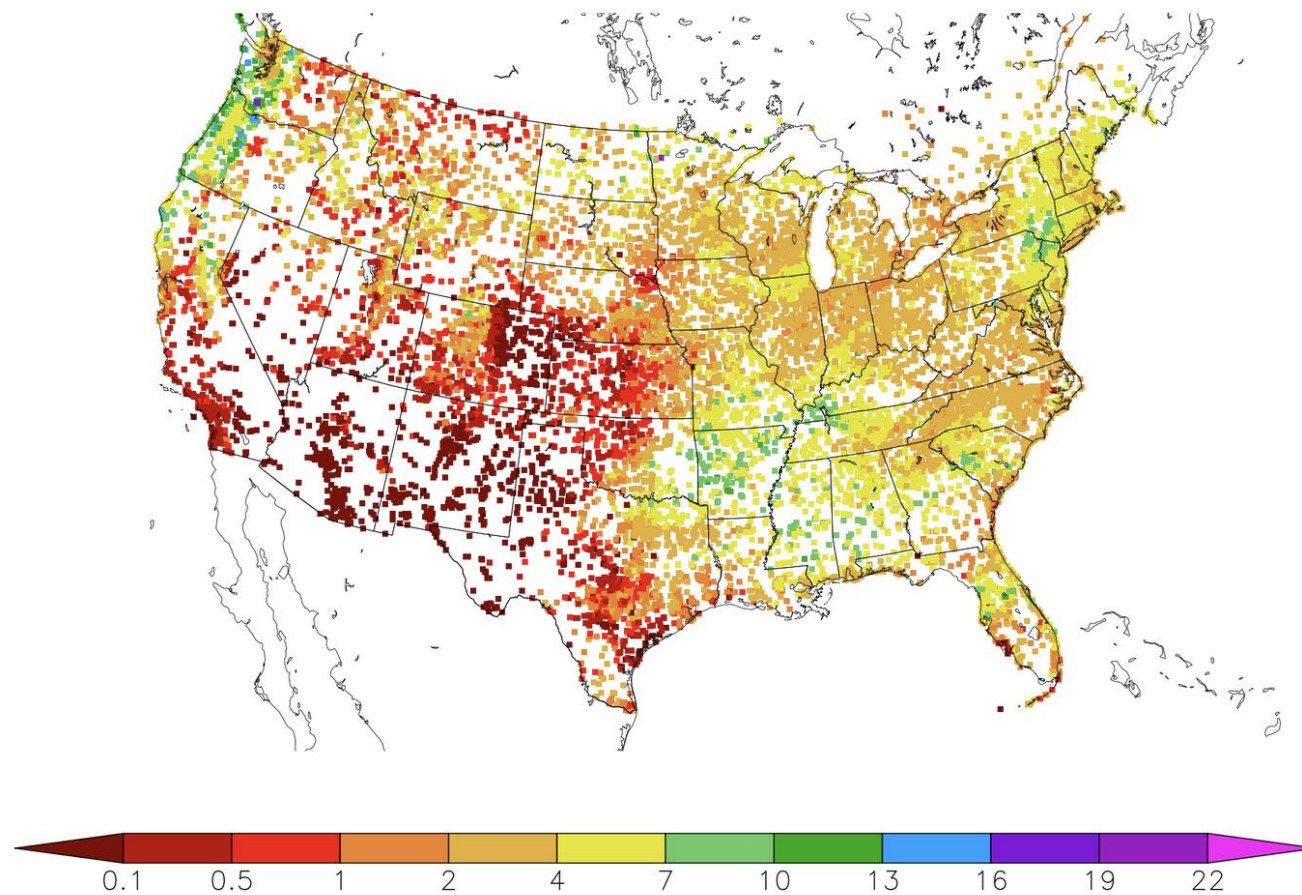


High Plains Regional Climate Center

Bill Sorensen

Precipitation (in)

4/1/2022 – 4/30/2022

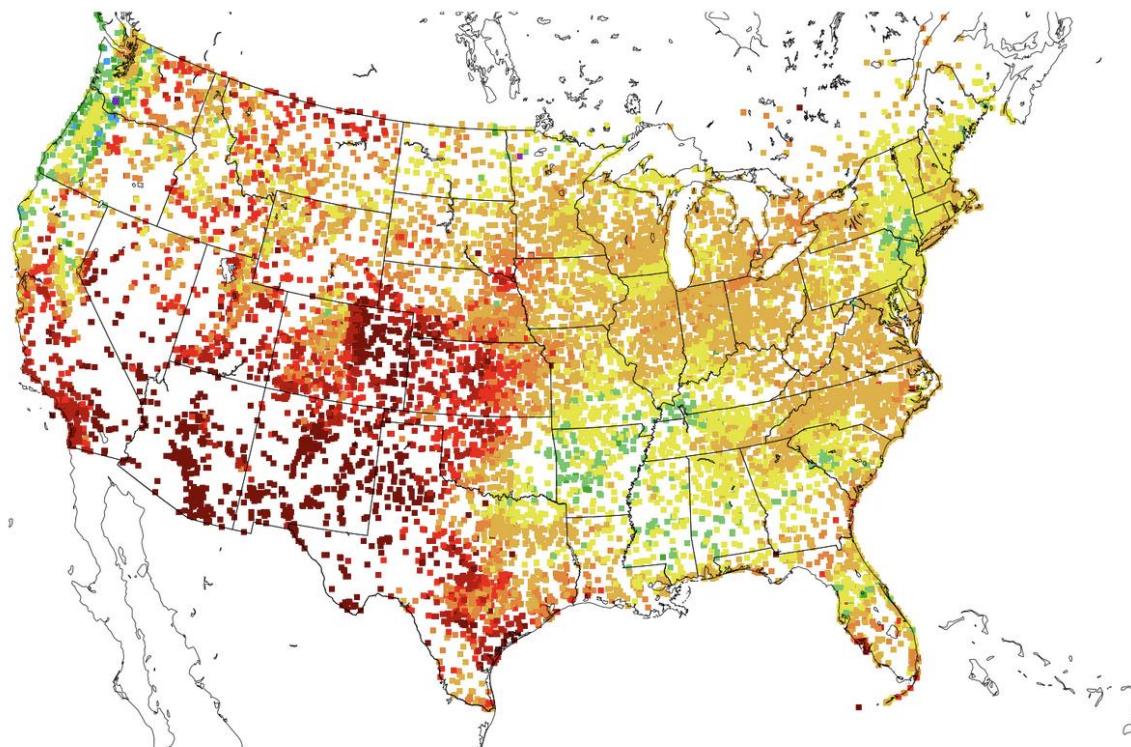


Generated 5/10/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

Providing timely climate data and information to the public for cost effective decision making since 1987

Precipitation (in)
4/1/2022 – 4/30/2022

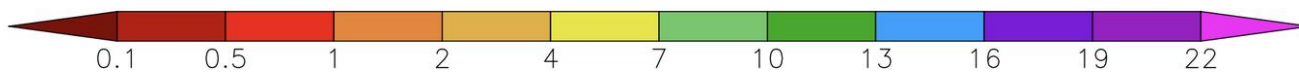


CoCoRaHS station count for April 2022

17891 total stations

10390 CoCoRaHS stations

58% of stations are CoCoRaHS



Generated 5/10/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

Providing timely climate data and information to the public for cost effective decision making since 1987

Data Update Lag – 2 to 4 days

SC ACIS

Product selection

Options selection

Station/Area selection




ID

Search

ID: US1NELA0019

Type: GHCN

Go



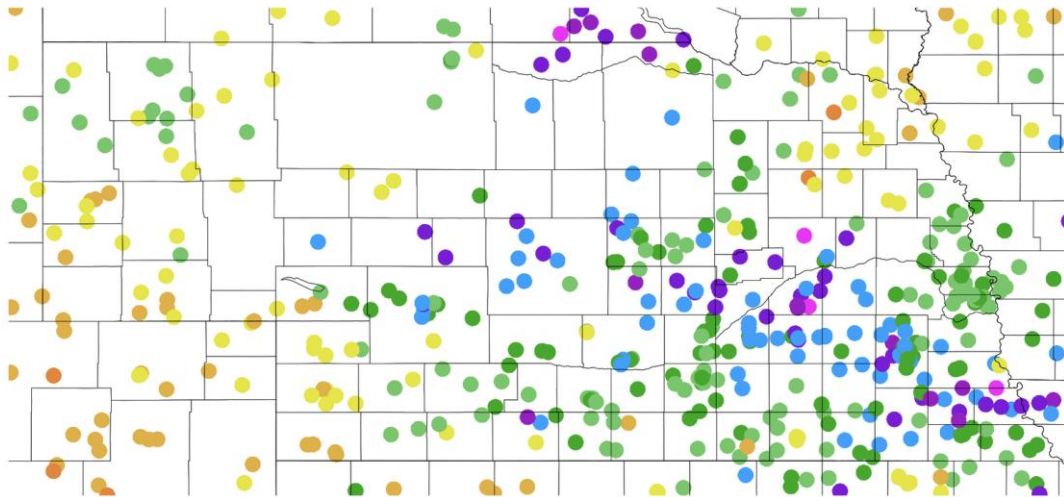
Data for LINCOLN 6.8 SE, NE (CoCoRaHS)

Click column heading to sort ascending, click again to sort descending.

Date	Precipitation	Snowfall	Snow Depth
2022-05-01	0.11	M	M
2022-05-02	0.00	0.0	M
2022-05-03	1.13	M	M
2022-05-04	0.00	0.0	M
2022-05-05	0.03	M	M
2022-05-06	0.79	M	M
2022-05-07	0.01	M	M
2022-05-08	0.01	M	M
2022-05-09	0.11	M	M
2022-05-10	M	M	M
2022-05-11	M	M	M
2022-05-12	M	M	M

Data Update Lag – 2 to 4 days

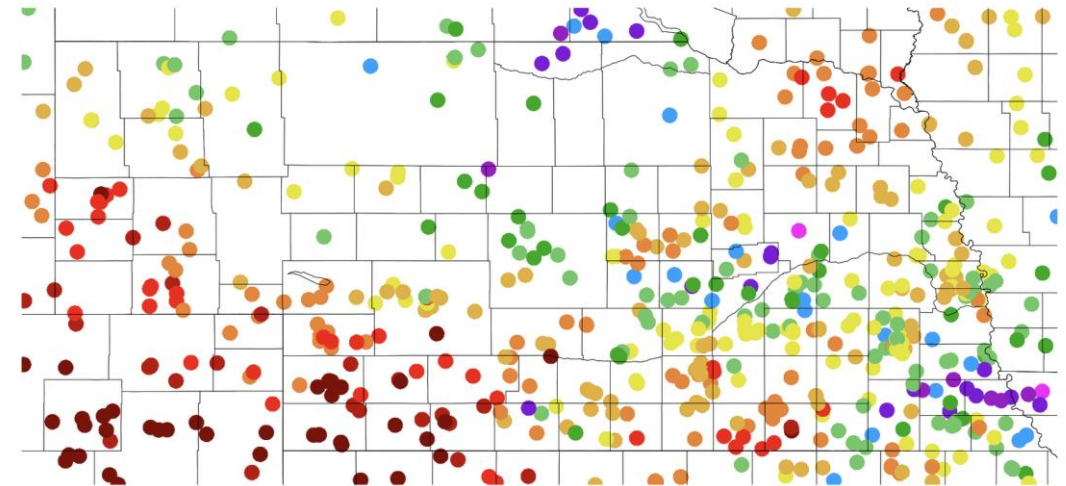
Precipitation (in)
4/12/2022 – 5/11/2022



Generated 5/12/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

Precipitation (in)
4/1/2022 – 4/30/2022

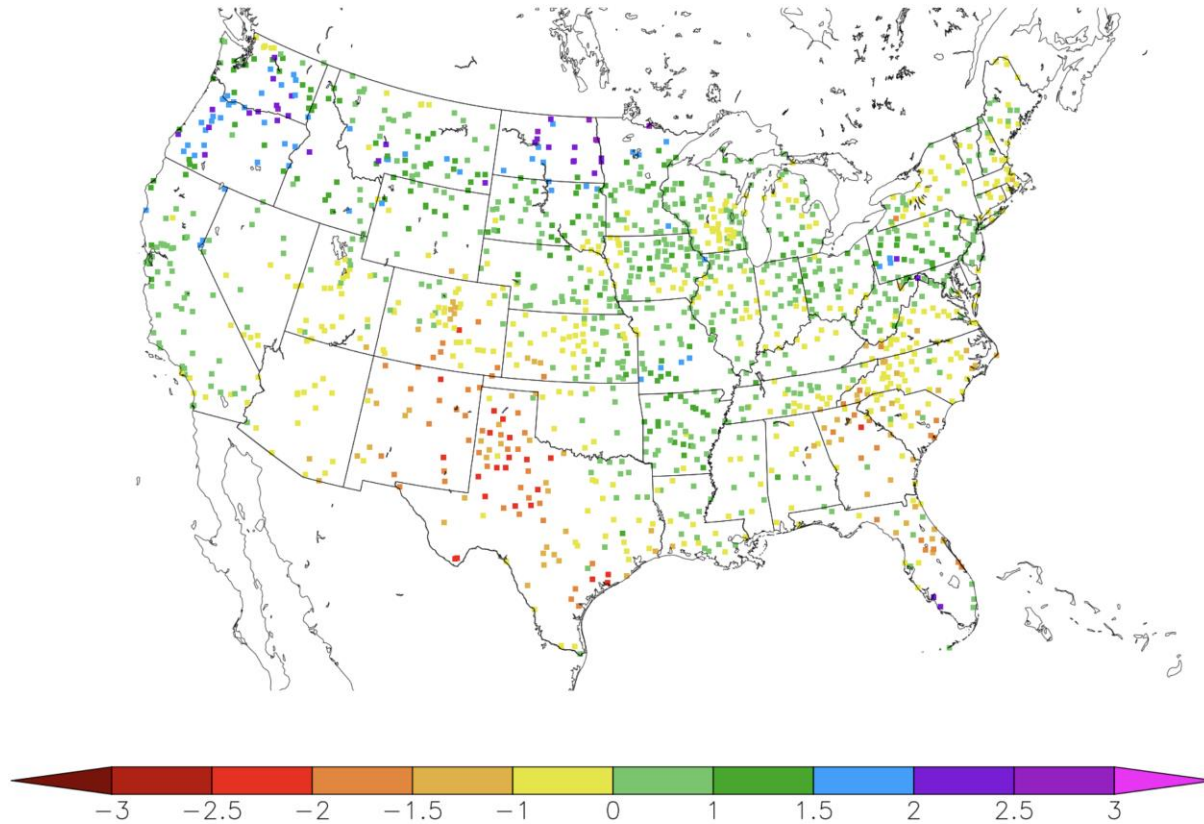


Generated 5/10/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

30 Day SPEI
4/11/2022 – 5/10/2022

ACIS Maps
New product



Generated 5/11/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers



ACIS GIS Products

<https://hprcc.unl.edu/gis/>

ACIS Maps

Available ACIS GIS products

The entire suite of ACIS Climate Maps products is available in GIS formats. These files are produced on a daily basis for a range of time periods, including an archive for monthly, seasonal, and annual time scales. Choose from:

- Precipitation, Departure from Normal Precipitation, Percent of Normal Precipitation
- Standardized Precipitation Index (SPI)
- Temperature, Departure from Normal Temperature
- Maximum/Minimum Temperature
- Cooling Degree Days, Departure from Normal CDD
- Heating Degree Days, Departure from Normal HDD

Access to ACIS GIS products

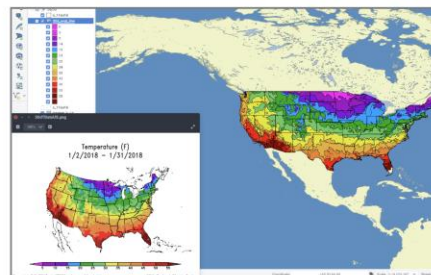
- Direct Downloads: Download individual shapefiles for over 500 different map options.
- GeoServer Access: Connect directly to shapefile data without the hassle of manually downloading the latest datasets!
- Data Archive: Download shapefiles for archived monthly, seasonal, and annual map options. (2018-present)

Uses for ACIS GIS products

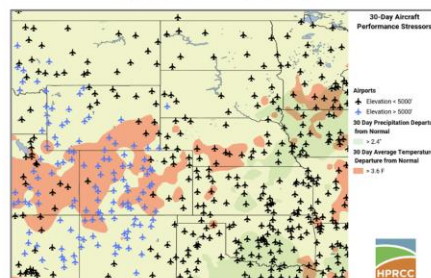
- Enhance climate and drought monitoring by overlaying multiple datasets, or adding new ones:
 - Overlay current fires with precipitation totals to assess fire risk.
- Overlay range conditions with temperature and precipitation data to monitor for emerging drought.
- Overlay streamflow data with percent of normal precipitation to monitor for potential flooding.

Tutorials Available!

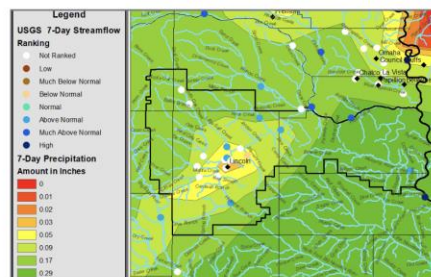
Select Your Region



Customize Colors



Combine Datasets



<https://hprcc.unl.edu/gis/index.php>

ACIS Web Services

Introduction

The [Applied Climate Information System](#) (ACIS) Web Services consists of five types of calls - StnMeta, StnData, MultiStnData, GridData and General. Each of these calls is documented below. Each call has certain parameters that are required and optional parameters that let you further refine your request.

Web service calls can be made in several ways. Basic calls can be made via http requests from a web browser with the complete call specified in the url. More advanced calls require a [JSON](#) object to adequately specify the request. Such requests can be submitted to the ACIS server from most programming languages by specifying the server address and a JSON "params" object. In this document, some of the examples will take the form of a simple url, while others will provide just the "params" object. For each example, a link to a jsFiddle is provided to submit the request and display the results. jsFiddle allows you to experiment with changing the parameters and seeing how this affects the results.

The [ACIS Query Builder](#) is a useful tool for learning how the ACIS Web Services calls are constructed and how the returned results are formatted.

I. StnMeta

The **StnMeta** web services call returns metadata for a station or stations meeting the specified criteria.

1. Required parameters

One or more of the following keys must be specified:

Key	Description
sids	Station identifier(s) and optional id types codes. Can be any of the id types in Table 1. Ambiguous identifiers require the station id type be appended to the identifier , separated by a space (e.g. BUFthr 9 or BUFthr thrdx). The value associated with this key can be either a single id or an array of ids. This key cannot be combined with any of the other keys in this table.
county	County (FIPS) id. Made up of a 2-digit state and 3-digit county id. List of FIPS codes .
climdiv	NCDC Climate Division. Consists of a 2-letter state abbreviation and 2-digit climate division id (e.g. FL01). Map of climate divisions .
cwa	NWS County Warning Area. Three-letter forecast office identifiers .
basin	River basin id. Eight-digit (subbasin) USGS Hydrologic Unit Codes .
state	State postal abbreviation. Two-letter abbreviations. A Wikipedia map or list is available for reference. The 50 states plus territories (AS, GU, MP, PR, VI), freely associated states (FM, MH, PW), and federal district (DC) are available. Note that using DC may be somewhat unreliable because many stations are listed as either MD or VA, rather than DC, in their metadata.
bbox	Bounding box. A latitude/longitude bounding box defined in decimal degrees (West, South, East, North) with negative values indicating west longitude and south latitude (e.g. -90.7, 40.5, -88.9, 41.5).

The above keys can be specified with a single value or an array of values (see Example 1.4 below). A combination of any of the keys listed above (except **sids**) can be provided to further refine your request (see Example 1.5).

Table 1. Station Id Type Codes			
Code	Type	Description	Example
1	wban	5-digit WBAN id	14742

- Datasets
- Metadata
- Gridded Data
- Data Synchronization
- Web Services
 - Table 3. Element Codes
 - Results
 - Examples
 - II. StnData
 - Required parameters
 - Elms objects
 - Table 4. Duration Codes
 - Table 5. Reduce Codes
 - Table 6. Reduce/Smry Add Codes
 - Table 7. Add Codes
 - Table 8. Smry Codes
 - Optional parameters
 - Results
 - Examples
 - III. MultiStnData
 - Required parameters
 - Optional parameters
 - Results
 - Examples
 - IV. GridData
 - Required parameters
 - Elms objects
 - Table 9. Grid Codes
 - Table 10. Area Reduction Codes
 - Table 11. Element Codes for Monthly/Yearly PRISM Data
 - Optional parameters
 - Image object
 - Results
 - Examples
 - V. General
 - Required parameters
 - Table 11. Area Information
 - Optional parameters
 - Results
 - Examples
 - VI. Programming Examples
 - StnMeta Example (JavaScript)
 - StnData Example (JavaScript)
 - MultiStnData Example (Python)
 - GridData Examples (Python)
 - Spatial Summary of Gridded Data
 - Temporal Summary of Gridded Data
 - Updates

https://www.rcc-acis.org/docs_webservices.html

SC ACIS

Product selection

Options selection

Station/Area selection

ID

Search

ID: US1NELA0019 Type: GHCN

Go



Climatological Data for LINCOLN 6.8 SE, NE (CoCoRaHS) - April 2022

Click column heading to sort ascending, click again to sort descending.

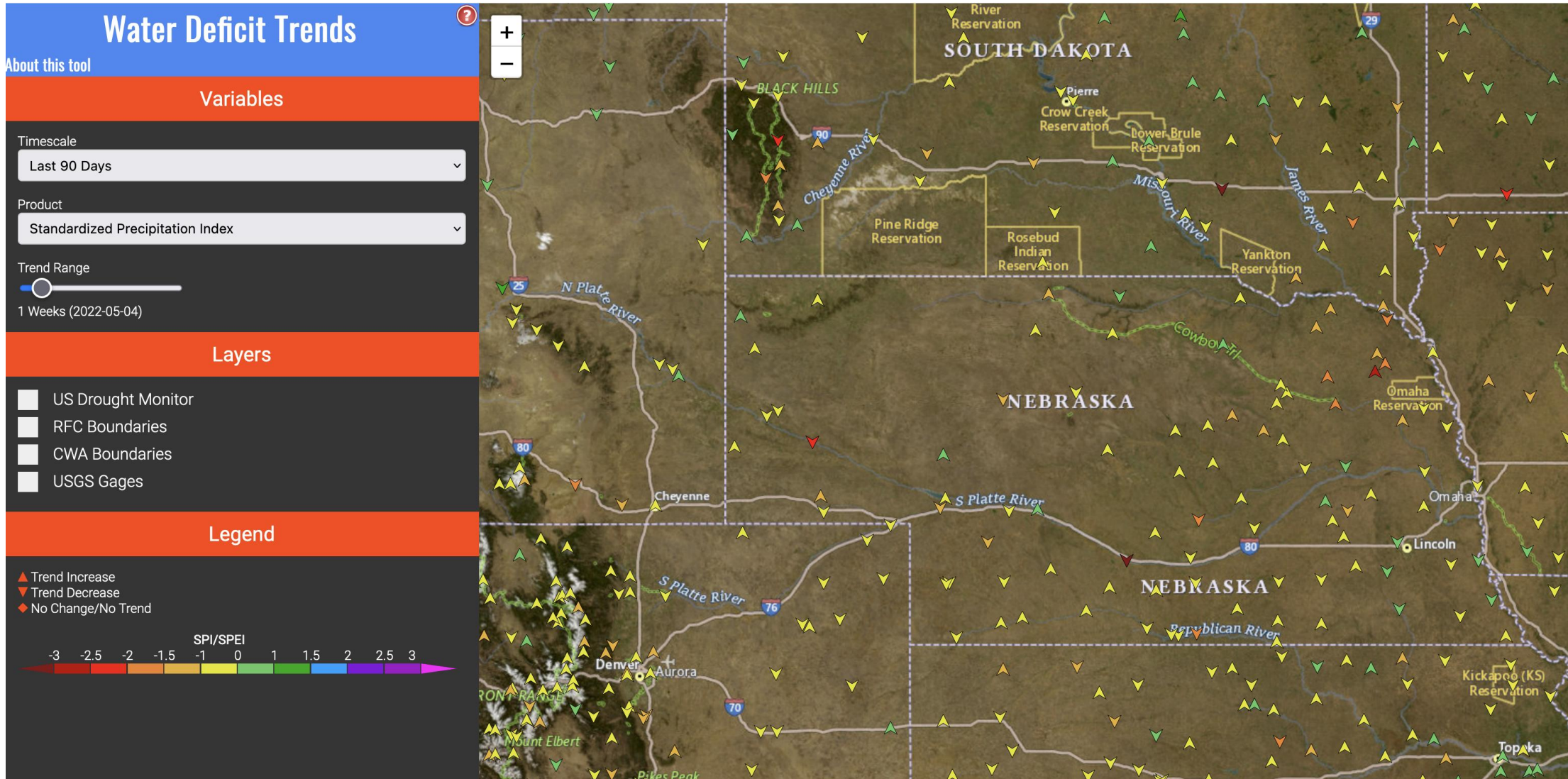
Date	Precipitation	Snowfall	Snow Depth
2022-04-01	0.00	0.0	0
2022-04-02	0.03	0.0	0
2022-04-03	0.00	0.0	0
2022-04-04	T	0.0	0
2022-04-05	0.00	0.0	0
2022-04-06	0.14	0.0	0
2022-04-07	0.01	0.0	0
2022-04-08	0.02	T	0
2022-04-09	0.00	0.0	0
2022-04-10	0.00	0.0	0
2022-04-11	0.00	0.0	0
2022-04-12	0.00	0.0	0
2022-04-13	0.34	0.0	0
2022-04-14	0.00	0.0	0
2022-04-15	0.00	0.0	0
2022-04-16	0.00	0.0	0
2022-04-17	0.00	0.0	0
2022-04-18	T	T	0
2022-04-19	0.00	0.0	0
2022-04-20	0.00	0.0	0
2022-04-21	0.10	0.0	0
2022-04-22	0.02	0.0	0
2022-04-23	0.00	0.0	0
2022-04-24	0.00	0.0	0
2022-04-25	0.00	0.0	0
2022-04-26	0.00	0.0	0
2022-04-27	0.00	0.0	0
2022-04-28	0.00	0.0	M
2022-04-29	0.56	M	M
2022-04-30	0.23	M	M
Sum	1.45	T	-
Average	-	-	0.0
Normal	2.76	M	-

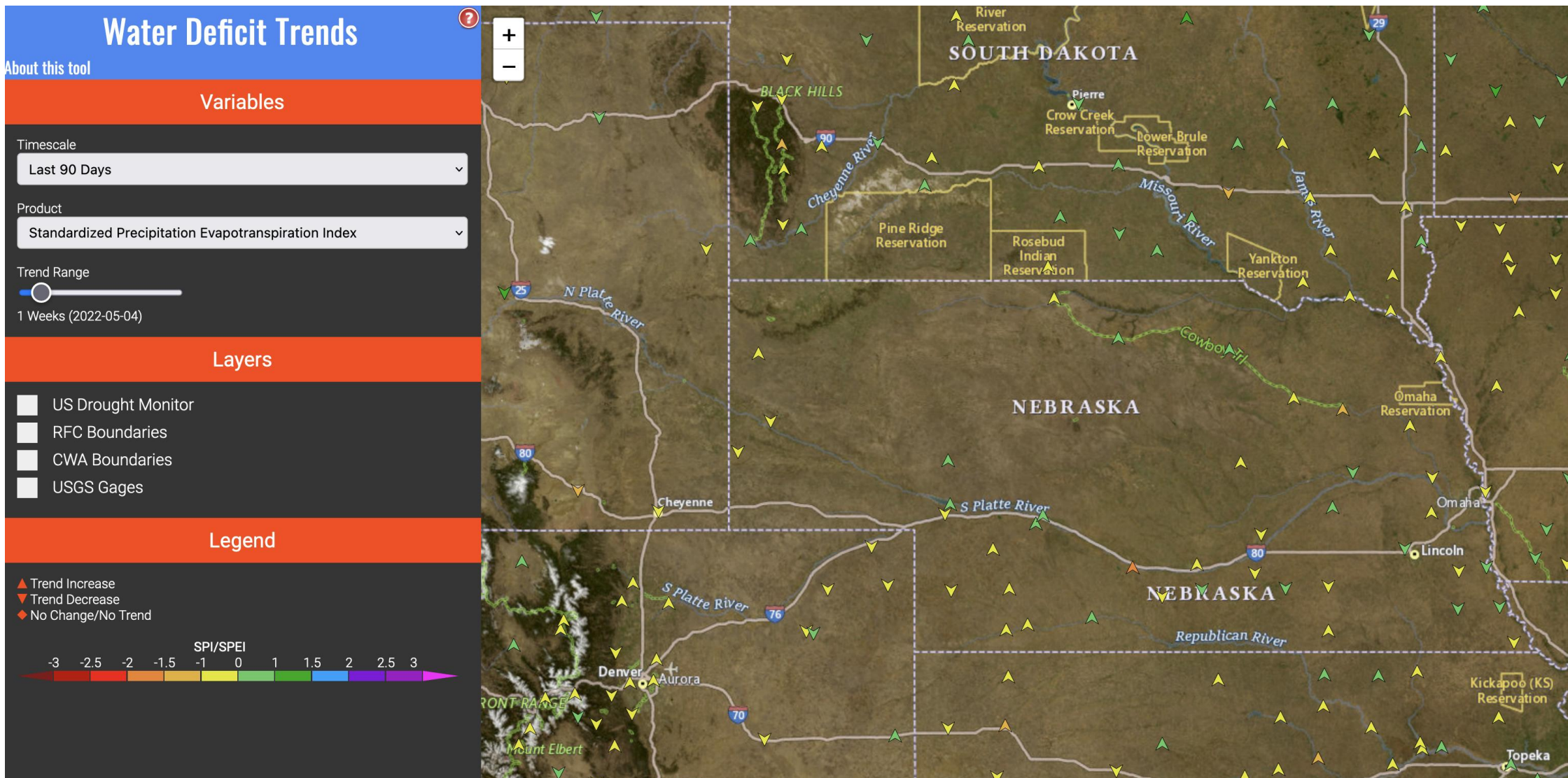
Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).

Precipitation : 7am

Snowfall : 7am

Snow Depth : 7am





Water Deficit Trends

About this tool

Variables

Timescale

Last 90 Days

Product

Standardized Precipitation Index

Trend Range



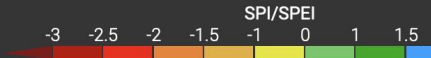
1 Weeks (2022-05-04)

Layers

- ☐ US Drought Monitor
- ☐ RFC Boundaries
- ☐ CWA Boundaries
- ☐ USGS Gages

Legend

- ▲ Trend Increase
- ▼ Trend Decrease
- ◆ No Change/No Trend



Trend Analysis Panel

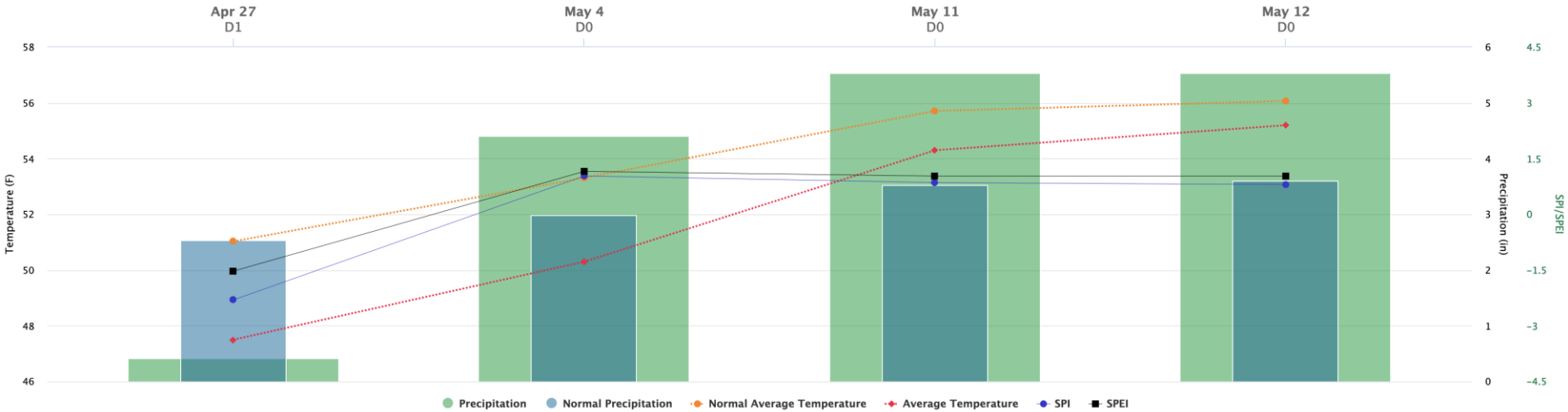
Graph

Table

Report

Lincoln Airport, NE (14939)

4 Week Trend Analysis



High Plains Regional Climate Center - Powered by ACIS

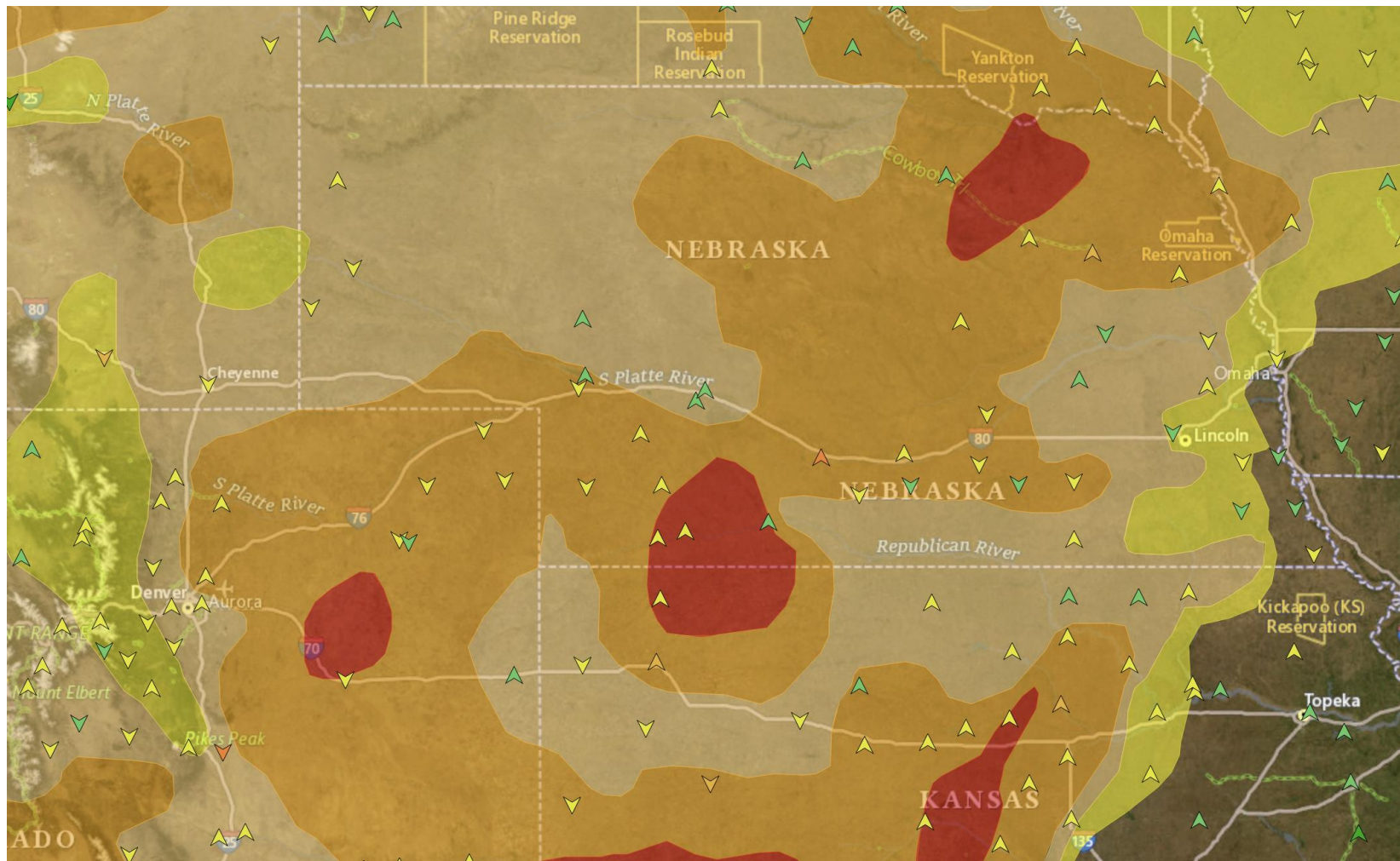
Weekly Timescale

30 Days

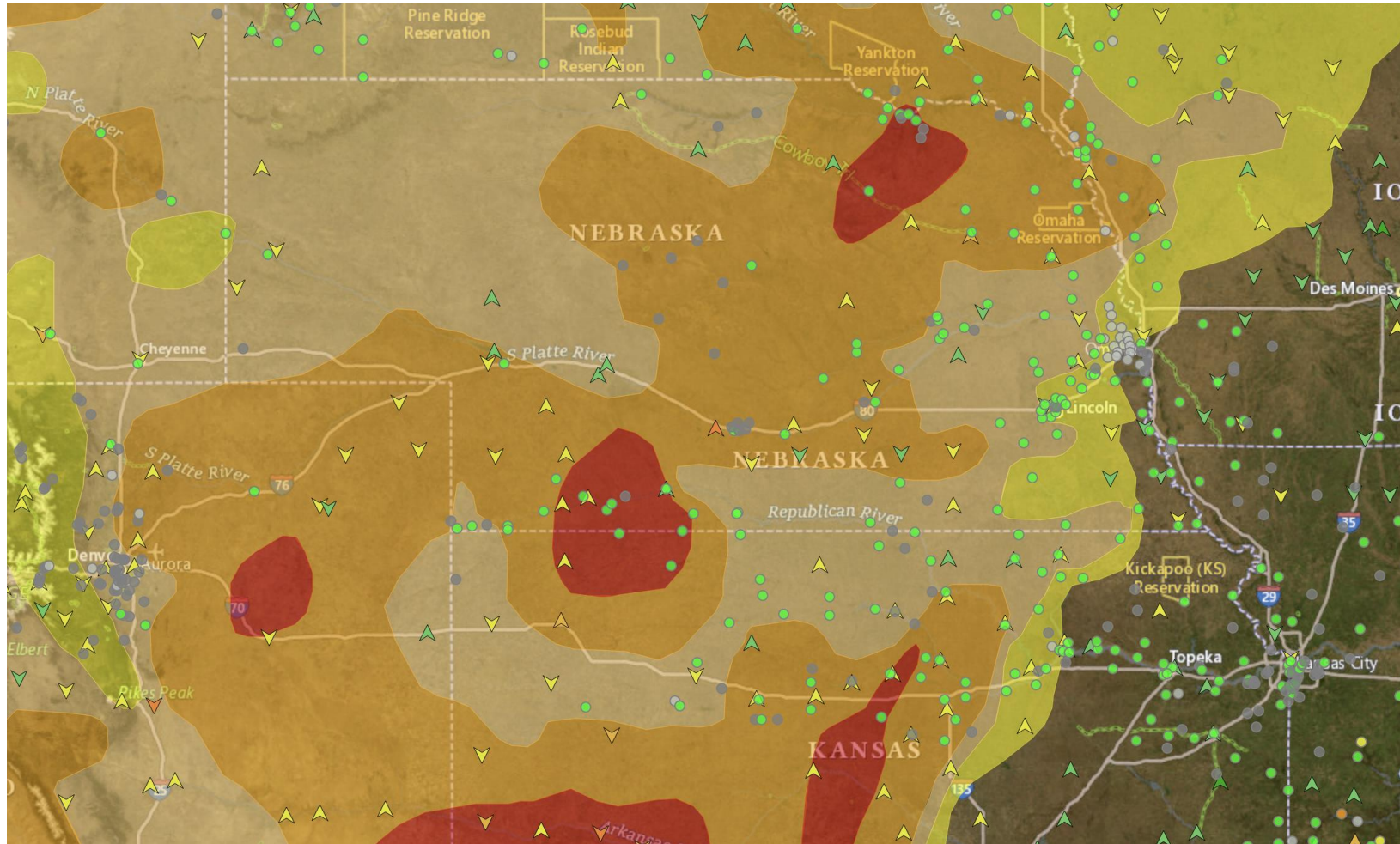
Number of Weeks

3 weeks

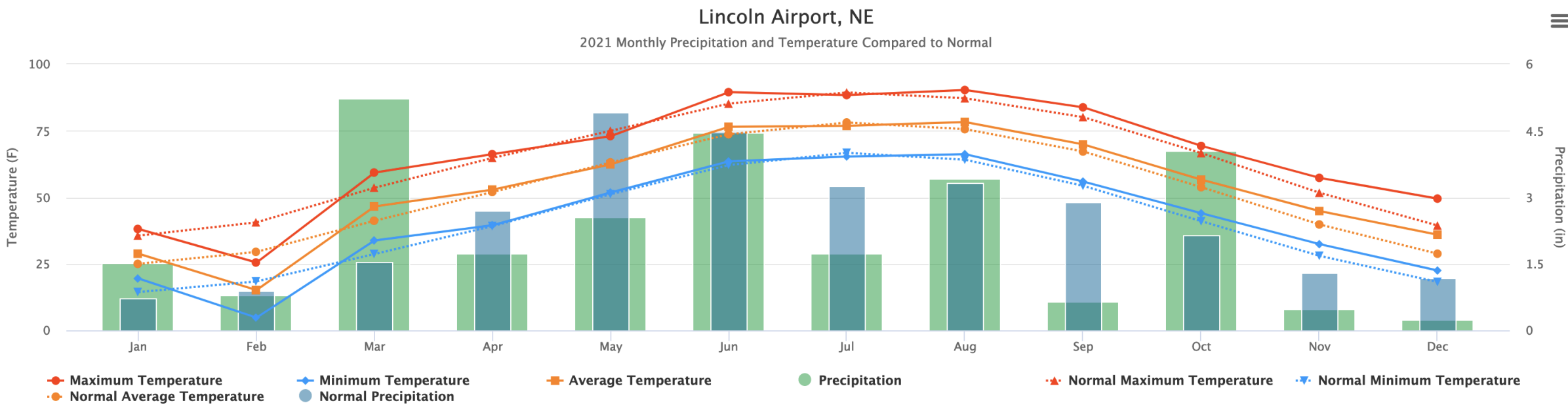
Drought Monitor Overlay



USGS Stream flow gages



Station Data Explorer



High Plains Regional Climate Center – Powered by ACIS

Station Data Explorer



Station Data Explorer

About this tool

Station ID: (Find a station...)

US1NELA0019

Select Variable:

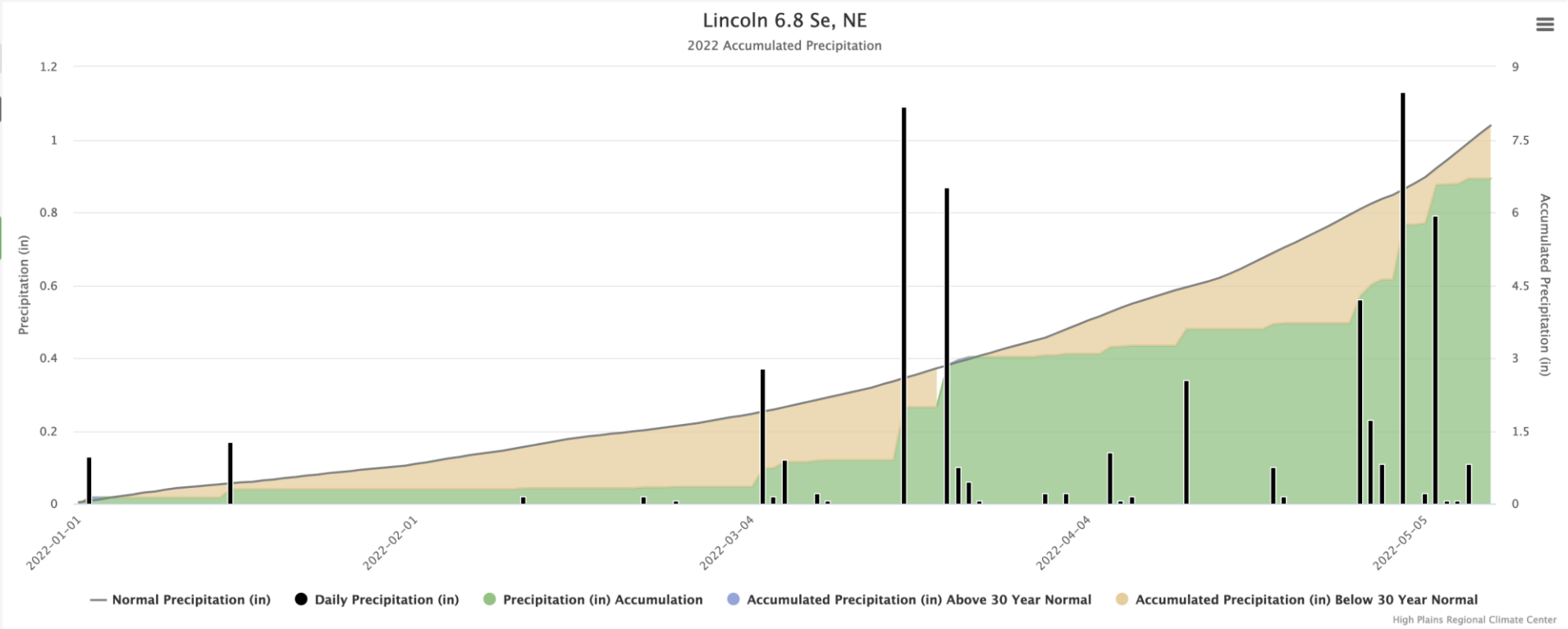
Precipitation Accumulation

Enter Date Range:

01 / 01 / 2022 to 05 / 11 / 2022

Create Graph

[Link to this graph](#)



Station Report



Almanac for Lincoln Airport, NE on May 11, 2022

Daily Data	Observed	Normal	Record Highest	Record Lowest
Max Temperature	93.0	73.0	94.0 in 2000	52.0 in 2020
Min Temperature	63.0	49.1	66.0 in 2004	31.0 in 1981
Avg Temperature	78.0	61.1	78.0 in 2022	44.0 in 2020
Precipitation	0.00	0.16	2.96 in 2014	0.00 in 2022
Snowfall	0.0	0.0	0.0 in 2022	0.0 in 2022
Snow Depth	0.0	-	0.0 in 2022	0.0 in 2022
HDD (base 65)	0	6	21 in 2020	0 in 2022
CDD (base 65)	13	2	13 in 2022	0 in 2021
Month-to-Date Summary	Observed	Normal	Record Highest	Record Lowest
Max Temperature	68.9	71.2	80.4 in 2018	55.9 in 1954
Min Temperature	52.5	47.0	54.5 in 2007	35.5 in 1954
Avg Temperature	60.7	59.1	66.4 in 2012	45.7 in 1954
Precipitation	0.00	1.61	0.02 in 1949	0.02 in 1949
Snowfall	0.0	0.1	2.7 in 2013	0.0 in 2022
Snow Depth	0.0	-	1.2 in 2013	0.0 in 2022
HDD (base 65)	81	79	209 in 1954	11 in 1977
CDD (base 65)	37	14	56 in 2004	0 in 2013
Year-to-Date Summary	Observed	Normal	Record Highest	Record Lowest
Max Temperature	52.2	50.6	58.1 in 2012	39.7 in 1978
Min Temperature	24.2	27.1	31.8 in 2012	18.8 in 1978
Avg Temperature	38.2	38.8	44.9 in 2012	29.2 in 1978
Precipitation	7.85	7.47	13.34 in 1973	2.75 in 1989
Snowfall	4.3	18.3	47.2 in 1948	3.9 in 1954
Snow Depth	2.0	-	18.0 in 2010	1.0 in 1954
HDD (base 65)	3534	3455	4661 in 1978	999 in
CDD (base 65)	59	27	101 in 2012	0 in 1995



Almanac for Lincoln 6.8 Se, NE on May 6, 2022

Daily Data	Observed	Normal	Record Highest	Record Lowest
Max Temperature	M	M	-999.0 in	999.0 in
Min Temperature	M	M	-999.0 in	999.0 in
Avg Temperature	M	M	-999.0 in	999.0 in
Precipitation	0.79	0.18	1.38 in 2019	0.00 in 2017
Snowfall	M	M	0.0 in 2016	0.0 in 2016
Snow Depth	M	-	0.0 in 2015	0.0 in 2015
HDD (base 65)	M	M	-999 in	999 in
CDD (base 65)	M	M	-999 in	999 in
Month-to-Date Summary	Observed	Normal	Record Highest	Record Lowest
Max Temperature	M	M	-999.0 in	999.0 in
Min Temperature	M	M	-999.0 in	999.0 in
Avg Temperature	M	M	-999.0 in	999.0 in
Precipitation	0.11	0.73	0.00 in 2015	0.00 in 2015
Snowfall	0.0	M	0.0 in 2022	0.0 in 2022
Snow Depth	M	-	0.0 in 2016	0.0 in 2016
HDD (base 65)	M	M	-999 in	999 in
CDD (base 65)	M	M	-999 in	999 in
Year-to-Date Summary	Observed	Normal	Record Highest	Record Lowest
Max Temperature	M	M	-999.0 in	999.0 in
Min Temperature	M	M	-999.0 in	999.0 in
Avg Temperature	M	M	-999.0 in	999.0 in
Precipitation	6.57	6.91	10.71 in 2021	4.30 in 2018
Snowfall	6.0	M	38.0 in 2019	6.0 in 2022
Snow Depth	2.0	-	15.0 in 2021	2.0 in 2022
HDD (base 65)	M	M	-999 in	999 in
CDD (base 65)	M	M	-999 in	999 in

Station Report

About this tool

Station ID: ([Find a station...](#))

254795

Select Report Type:

Growing Degree Day Report

Select Crop (GDD Threshold):

✓ Alfalfa 40/77 F

Corn 50/86 F

Dry Beans 50/86 F

Grass 40/77 F

Potatoes 45/97 F

Sorghum 50/86 F

Soybeans 50/86 F

Sugarbeets 50/86 F

Sunflower 50/99 F

Wheat 40/77 F

[Link to this report](#)



Growing Degree Day Report for Lincoln Airport, NE

Start Date: April 1, 2022

Upper/Lower Temperature Limits: 77/40 F

Crop: Alfalfa

Last Freeze Date: Apr 25, 2022

Week	GDD	Est Growth Stage*
2022-04-01	67	Stage 1
2022-04-07	154	Stage 2
2022-04-14	215.5	
2022-04-21	354	Stage 4
2022-04-28	437	Maturity
2022-05-05	595.5	

First Freeze Date:

Generated by the High Plains Regional Climate Center on 12-May-2022 using data from the Applied Climate Information System. The data in this report is preliminary in nature, and is subject to change as described in the High Plains Regional Climate Center's disclaimer for online services.

* Estimated growth stages are based on the GDD accumulations presented. They are an estimate and should not be interpreted as an accurate indication of growth

©2022 High Plains Regional Climate Center. All Rights Reserved. [Contact Us](#) | [Privacy Policy & Disclaimer](#) | [Follow Us](#)



HIGH PLAINS
REGIONAL CLIMATE CENTER

Providing timely climate data and information to the public for cost effective decision making since 1987



Select State

Colorado

Select Product

✓ Average Temperature

Maximum Temperature

Minimum Temperature

Precipitation

County Level Data

Copy

CSV

Excel

PDF

Print

Search:

County	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Yuma County	29.23	31.47	40.84	48.35	58.64	69.89	75.53	73.22	64.67
Weld County	28.10	29.97	38.84	45.76	55.29	65.89	72.41	70.17	61.60
Washington County	28.51	30.71	40.03	47.11	57.09	68.19	74.36	72.16	63.75
Teller County	24.84	26.21	33.37	39.03	48.00	57.86	62.72	60.71	53.99
Summit County	16.98	19.48	27.02	34.04	42.84	52.00	57.52	55.58	48.82
Sedgwick County	27.78	30.21	39.48	47.42	57.54	68.68	74.85	72.65	63.72
San Miguel County	25.42	29.43	37.07	43.66	52.66	62.48	68.15	66.08	58.63
San Juan County	19.38	21.65	28.70	35.57	44.64	53.53	58.93	56.80	50.46
Saguache County	19.26	23.58	32.80	40.17	48.79	58.01	62.98	60.95	54.16
Routt County	18.29	21.75	30.84	38.76	47.70	56.71	63.43	61.64	53.71

Showing 1 to 10 of 64 entries

Previous

1

2

3

4

5

City Data Explorer - Historical Climate Data and Trends

Explore historical climate thresholds for a city.

Select State:
-- Select State --

Select Location:
-- Select Location --

Select Variable:
-- Variables --


Select Timeframe:
Spring (Mar, Apr, May)

Enter Year Range: to

☐ Trend Line

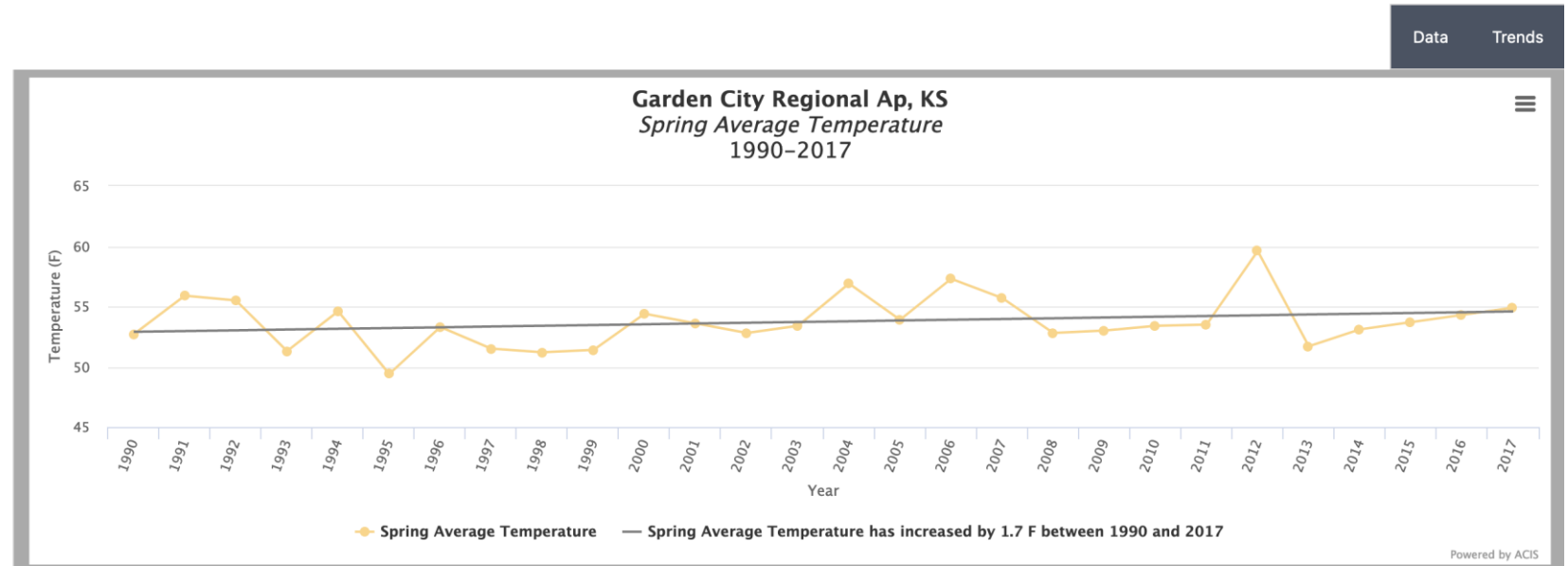
☐ Compare to another location

Get Data and Trends!

Powered by  ACIS
NOAA Regional Climate Centers

Climate Thresholds [?](#)
--Category--

[How do I use this tool?](#)



<https://hprcc.unl.edu/climate4cities/>

View climate projections for a city.

Select State:
-- Select State --


Select Location:
-- Select Location --

Projection Scenarios:
Lower Emissions (RCP 4.5)

30-Year Interval:
2021-2050

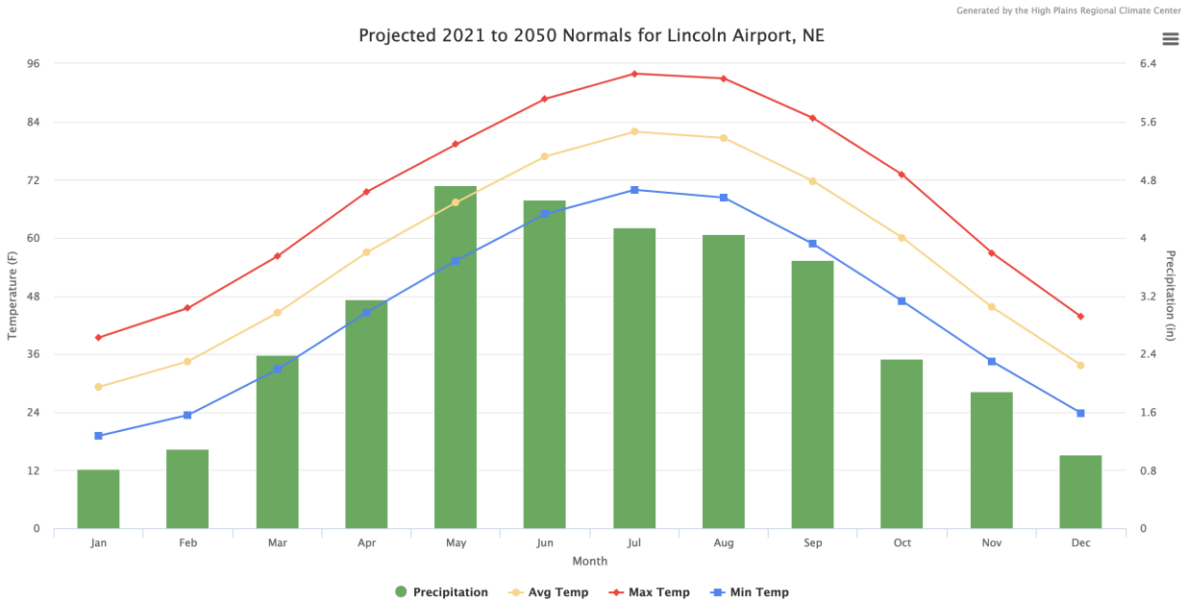
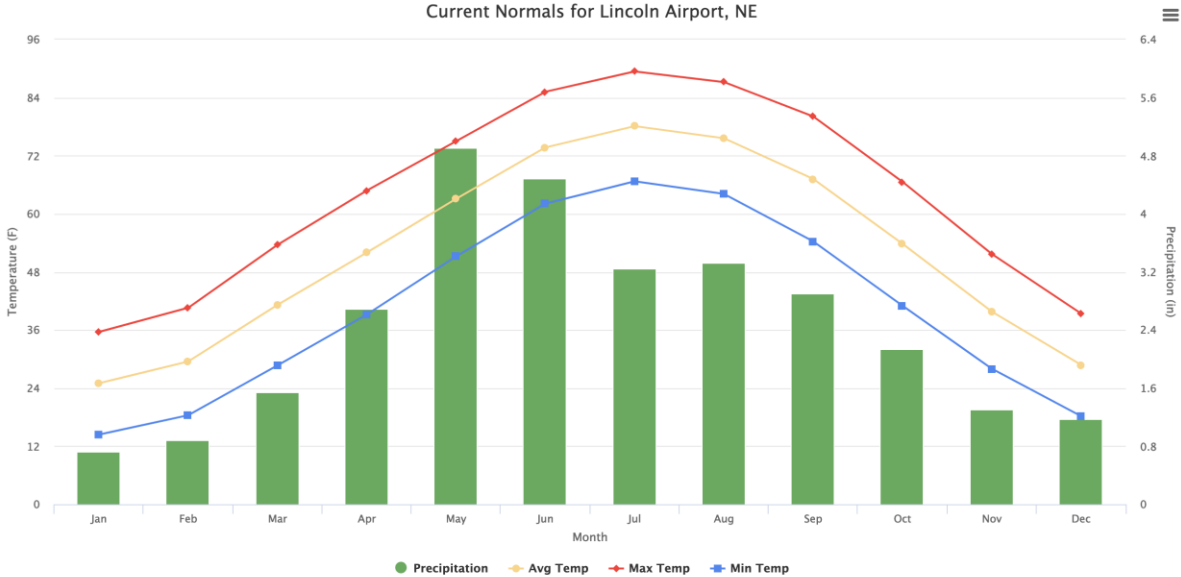
View Projection

Powered by

ACIS

NOAA Regional Climate Centers

[How do I use this tool?](#)



City Data Explorer - Sister City Tool

Find a "sister city" with current normals similar to your projected normals.

Select State:
-- Select State --

Select Location:
-- Select Location --

Select Variable:
--Variables--


Select Timeframe:
Spring

Projection Scenarios:
✓ Lower Emissions (RCP 4.5)
Higher Emissions (RCP 8.5)

2021-2050

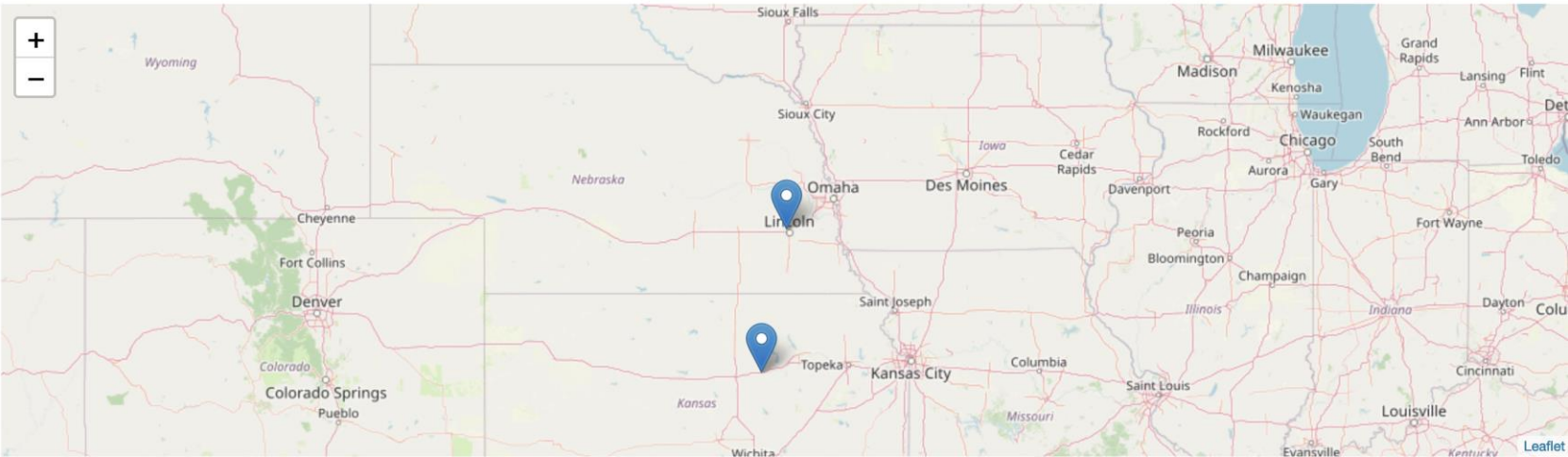
Find Sister City!

Powered by


NOAA Regional Climate Centers

How do I use this tool?

By 2050 Lincoln Airport's spring average temperature will be similar to Abilene, KS



Lincoln Airport, NE
Current Normal: 52.1F
Projected Normal (2021-2050) : 56.3F

Abilene, KS
Current Normal: 56.1F

<https://hprcc.unl.edu/climate4cities/>

NELA0019





Providing timely climate data and information to the public for cost effective decision making since 1987





PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE OMAHA/VALLEY NE
121 PM CDT WED MAY 11 2016...UPDATED

...NWS DAMAGE SURVEY FOR MAY 09, 2016 TORNADO EVENT...

...**LINCOLN TORNADO #1 IN LANCASTER COUNTY**...

EF SCALE RATING:	EF-1
ESTIMATED PEAK WIND:	100 MPH
PATH LENGTH /STATUTE/:	0.59 MILES
PATH WIDTH /MAXIMUM/:	100 YARDS
FATALITIES:	0
INJURIES:	0

START DATE:	MAY 9, 2016
START TIME:	TO BE DETERMINED
START LOCATION:	40.7365, -96.6106

END DATE:	MAY 9, 2016
END TIME:	TO BE DETERMINED
END LOCATION:	40.7364, -96.6208

MOST OF THE DAMAGE WAS LOCATED SOUTH OF PINE LAKE.



Expensive hail pad

Penetrated asphalt shingles and $\frac{3}{4}$ " particle board
Did not penetrate insulation and ceiling drywall





Questions?

Thanks!

Bill Sorensen
wsorensen1@unl.edu