



Using NCEI API and Web Site to Obtain Monthly COOP Precipitation Data

Overview:

From Water Years 2002 through 2025, CNRFC provided monthly and water year precipitation data from National Weather Service cooperative (COOP) observers in a tabular format [here](#). NOAA's National Centers for Environmental Information (NCEI) has been and continues to be the official source of climate information. In addition to traditional data request services, NCEI provides a convenient API service called "Climate Data Online: Web Services" that allows easy programmatic access to this data and more. In an effort to reduce workload and improve efficiency, the manual collection of monthly precipitation data on the CNRFC web site will end at the conclusion of Water Year 2025. The remainder of this document describes the process of collecting monthly precipitation data for COOP stations via the NCEI API and via NCEI data access requests.

General Information and Getting Set up to Use NCEI API:

- Information about getting started with using the NCEI climate data API can be found here: <https://www.ncdc.noaa.gov/cdo-web/webservices/v2>
- As mentioned on the page above, using the API requires first [obtaining a token](#).
- Location IDs can be found by using one of the following resources:
 - <https://www.ncei.noaa.gov/cdo-web/search>
 - You can also look up an NWS ID (called NWSLI) and find the corresponding NCEI ID (GHCND) by going here: <https://www.ncei.noaa.gov/access/home>. Then, select "NWSLI" from the first dropdown and type the ID in the appropriate box (first screenshot below). Click search. Then scroll down to the bottom of the page, and you'll see the NCEI ID (second screenshot).

STATION HISTORY SEARCH

ID		LOCATION	NAME	NETWORK		
NWSLI	Is	GPSO3	Any Location	Contains	Any Name	Any

Search Clear

— Date Ranges ([Show All](#) / [Hide All](#)) — Format: reported [dec dms](#)

2020-01-28 to Present	42.42382, -123.32193 (DDddddd) 1
LAT/LON SOURCE: CELL PHONE - APPLE	HORIZ. DATUM: NAD83
Topography FLAT VALLEY BOTTOM APPROXIMATELY 0.5 MILE SOUTH OF ROGUE RIVER. VALLEY SURROUNDED BY 3000-4000 FOOT MOUNTAINS 2-4 MILES IN ALL DIRECTIONS. LOCATION IS MOSTLY URBAN IN NATURE WITH MAJOR ROADWAYS VERY CLOSE BY AND PAVED PARKING LOT ADJACENT.	
2004-04-08 to 2020-01-28	42°25'28"N, 123°19'25"W (DDMMSS) 2
2002-03-04 to 2004-04-08	42°25'28"N, 123°19'25"W (DDMMSS) 3
2001-05-30 to 2002-03-04	42°26'14"N, 123°21'28"W (DDMMSS) 4
1996-02-16 to 2001-05-30	42°26'14"N, 123°21'28"W (DDMMSS) 5
1991-05-01 to 1996-02-16	42°26'N, 123°21'W (DDMM) 6
1983-11-08 to 1991-05-01	42°25'N, 123°20'W (DDMM) 7
1948-07-01 to 1983-11-08	42°26'N, 123°19'W (DDMM) 8
1947-06-24 to 1948-07-01	42°26'N, 123°19'W (DDMM) 9
1919-01-02 to 1947-06-24	42°27'N, 123°20'W (DDMM) 10
1889-03-01 to 1918-12-31	42°26'N, 123°20'W (DDMM) 11

[Open this station in a new window](#)
[Get station data from NCEI
\(data may not be available for entire station history\)
GHCND: \[USC00353445\]](#)
[View station metadata as JSON](#)

- Information about how to find and use other datatypes is given on this web page as well. Following sections will detail how to obtain monthly precipitation data, as well as monthly and yearly normals, specifically.

Obtaining Observed Monthly Precipitation via the NCEI API:

Note: The example below uses `curl` to obtain data values. See [this page](#) for information about how to download using `ajax` in Javascript.

```
curl -H "token:insert_your_token_here"
"https://www.ncei.noaa.gov/cdo-web/api/v2/data?datasetid=GSOM&stationid=GHCND:USC00042574&units=standard&startdate=2025-07-01&enddate=2025-07-01&datatypeid=PRCP"
```

Where USC00042574 is the station ID (Dunsmuir, CA in this case)

The `units=standard` field forces the output to be in inches.

Selecting different start/end dates will retrieve values for different months. Note: In returned JSON output, the “date” field corresponds to the first day of the month for which data is valid. In the example below, the date of “2025-07-01T00:00:00” refers to the precipitation value for the month of July.

Output looks like the following JSON:

```
{
```

```

"metadata":
{
  "resultset":
  {
    "offset":1,
    "count":1,
    "limit":25
  }
},
"results":[{"
  "date":"2025-07-01T00:00:00",
  "datatype":"PRCP",
  "station":"GHCND:USC00042574",
  "attributes":"3,,H",
  "value":2.94
}]
}

```

Obtaining Monthly-Averaged Precipitation Values

Example curl command:

```

curl -H "token:insert_your_token_here"
"https://www.ncei.noaa.gov/cdo-web/api/v2/data?datasetid=NORMAL_MLY&stationid=GHCND:USC00042574&units=standard&startdate=2025-07-01&enddate=2025-07-01&datatypeid=MLY-PRCP-NORMAL"

```

Selecting different start/end dates will retrieve normals for different months.

Obtaining Yearly-Averaged Precipitation Values

Example curl command:

```

curl -H "token:insert_your_token_here"
"https://www.ncei.noaa.gov/cdo-web/api/v2/data?datasetid=NORMAL_ANN&stationid=GHCND:USC00042574&units=standard&startdate=2025-07-01&enddate=2025-07-01&datatypeid=ANN-PRCP-NORMAL"

```

Selecting different start/end dates will retrieve normals for different months.

Obtaining Precipitation Values and Normals via NCEI Web Download:

All available climate data can be requested via a web download tool [here](#). Requested data will be delivered by email.

Alternate Sources of Data

Although not official COOP data, real-time monthly and water year precipitation totals are available for each month and water year using our [front map interface](#). Also, a tabular version of this data for monthly and water precipitation totals is available by selecting any gauge location on the map and selecting the "Link to text version of this data".

Please refer to the [Climate Data Online: Web Services Documentation](#) page for updates and assistance.