

HOW TO OBTAIN HISTORICAL AND CURRENT DAILY (Global Summary of Day) METEOROLOGICAL DATA FOR ALL METEOROLOGICAL STATIONS IN THE WORLD

STEP 1

Go to the following website (clickable link – or copy & paste into your browser):

<https://www.ncei.noaa.gov/access/search/data-search/global-summary-of-the-day>

(BE PATIENT - it can take half a minute to appear !)

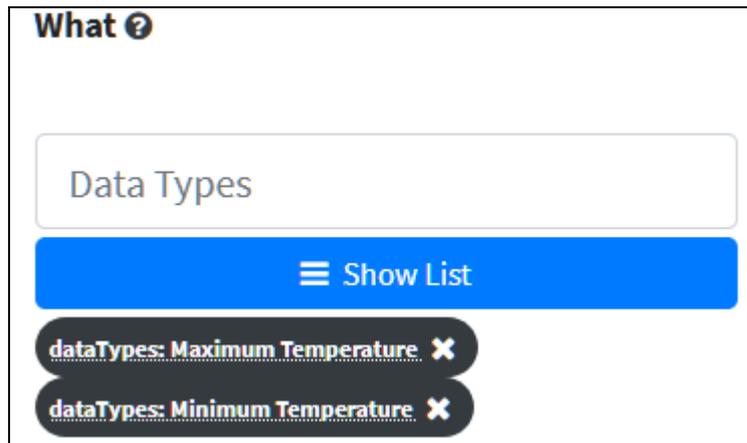
The screenshot shows the NOAA National Centers for Environmental Information website. The main heading is "Global Surface Summary of the Day - GSOD". Below this, there are search filters for "What" (Data Types), "Where" (Ex: Texas), and "When" (YYYY, MM, DD). A "Station Search" field contains "Ex: Airport". At the bottom, there are buttons for "List View", "Summary View", and "Map View". A "Select All" button is visible, along with a "File Count/Limit: 520546/1000" indicator. A specific station entry "JOKULHEIMAR, IC (04166099999.csv)" is shown with "Download" and "Select" buttons.

STEP 2

Select the data you want – click on the **SHOW LIST** blue button. We can select any or all of the variables. Select **Minimum Temperature** and **Maximum Temperature** and click on **Accept**:

The screenshot shows the "NCEI Searchable Attributes" dialog box. It has a "Data Types" tab selected. Under "All Searchable Data Types", there is a list of variables with checkboxes. "Maximum Temperature" and "Minimum Temperature" are checked. At the bottom, there are "Cancel" and "Accept" buttons.

You should now see the variables selected with a black background:



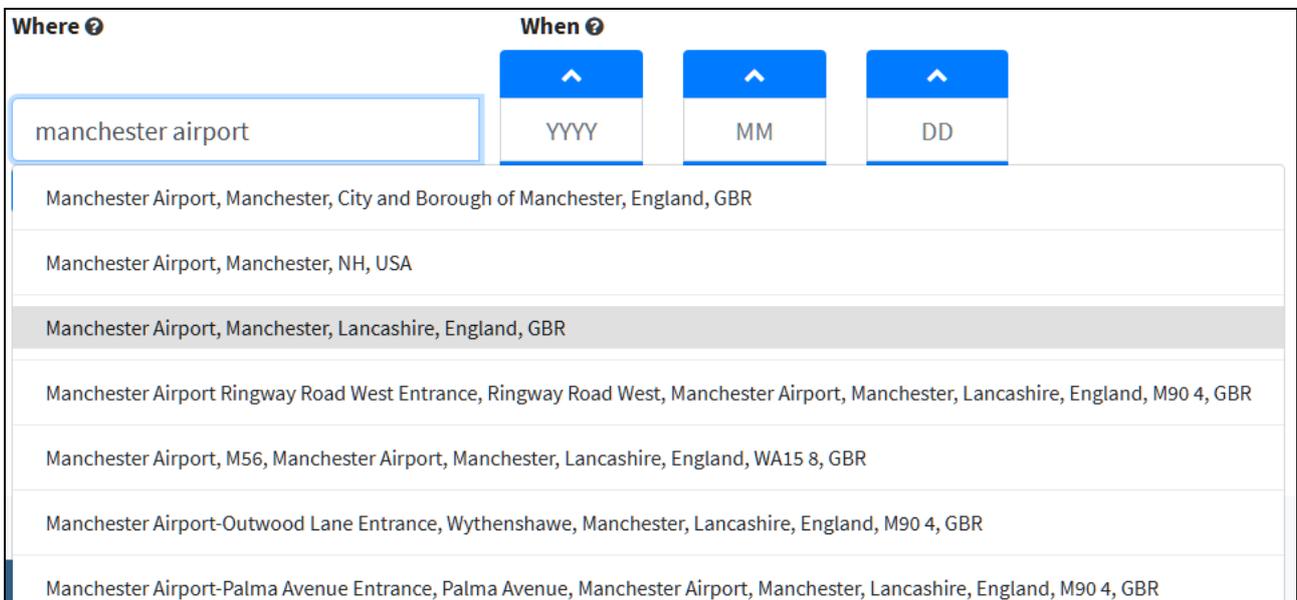
If you don't see them listed, you may have to reload the page in your browser by pressing 'F5'.

STEP 3

You can select a single station by typing in the location – or by using the **Find Location Using Map** button. For this example, type in the following station name:

MANCHESTER AIRPORT

As you type, a list of stations around the globe that share the same name will appear:



Select:

'Manchester Airport, Manchester, City and Borough of Manchester, England, GBR'

STEP 4

Now you simply select the range of dates you would like the data for or specific dates. For this example we will get data from **January 1980 to December 1984**. Make sure you tick the **Select Date Range** option:

When ?

1980 01 01

Select Date Range

1984 12 31

1980-01-01 00:00 to 1984-12-31 23:59 ✕

Now the system knows the variables you want, the location and the date range. To download the data, click on the **Select All** button:

+ Select All File Count/Limit: 3/1000

Near the bottom of the page, select .CSV file format and click on the blue **Configure and Add** button:

Output Format: csv

✕ Clear ⚙️ Configure and Add

File Count/Limit: 2/1000 ?

The pop-up window gives you a last chance to change the variables and optionally have extra information written into the file. When you are happy – just click on the **+ Add Order to Cart** button:

Choose Order Options for Global Surface Summary of the Day - GSOD ✕

SELECTION SUMMARY ?

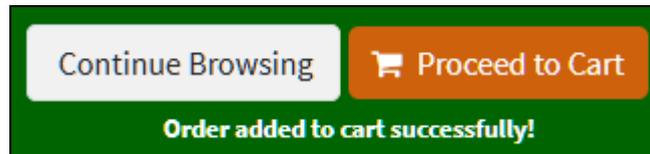
Start Date ?	1980-01-01T00:00:00
End Date ?	1984-12-31T23:59:59
Bounding Box ?	53.379,-2.300,53.329,-2.250
Stations ?	MANCHESTER, UK

ORDER OPTIONS ?

Data Types ?	Maximum Temperature, Minimum Temperature ✎ Edit Data Types
Include Station Name ?	<input checked="" type="radio"/> No <input type="radio"/> Yes
Include Station Location ?	<input checked="" type="radio"/> No <input type="radio"/> Yes
Include Attributes ?	<input checked="" type="radio"/> No <input type="radio"/> Yes

✕ Cancel
+ Add Order To Cart

Now click on the **Proceed to Cart** button:



Put in your email address and click on **Submit**. You will receive an email when the data is ready to download.

Order Review

✕ Clear Cart

Global Surface Summary of the Day - GSOD	✕ Remove
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FORMAT	csv
START DATE	1980-01-01T00:00:00
END DATE	1984-12-31T23:59:59
DATA TYPES	Maximum Temperature, Minimum Temperature
BOUNDING BOX	53.379,-2.300,53.329,-2.250
STATIONS	MANCHESTER, UK
INCLUDE STATION NAME	No
INCLUDE STATION LOCATION	No
INCLUDE ATTRIBUTES	No

Contact Information

Email *

m.cresswell@mmu.ac.uk ✉

Confirm email *

m.cresswell@mmu.ac.uk ✉

* Denotes required field

Continue Browsing
✔ Submit

When you get a second email informing you that the data is ready to download, just click on the **Download** link in the email. This is Comma Separated Values format file – where each variable (column) is separated by a comma. This is a very common form of scientific data file format. If you have a file with a .CSV file extension, Microsoft Excel will give it an Excel icon and open it automatically when you double-click on it.

If you need documentation for the data (what it is, how it is derived, what units the data is in etc) then click on the **View Documentation** link:

 **NOAA** NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Order Complete

Your order has been processed and is ready for download. Use the links below to download the individual orders.

If any part of your order has certifiable data, a link will be supplied that will help you with the certification process.

Documentation for each dataset is linked from within the order for your convenience.

Order Details

Order #2227760 (Global Summary of the Day CSV)

File	Download (Available until 2020-Aug-02)
Order ID	2227760
Date Submitted	2020-07-26 02:15
Order Summary	View Summary
Documentation	View Documentation

Want to manage your previous orders online?

If you want to check or resubmit an older order, please visit our [order status page](#).

Global Surface Summary of the Day is derived from The Integrated Surface Hourly (ISH) dataset. The ISH dataset includes global data obtained from the USAF Climatology Center, located in the Federal Climate Complex with NCDC. The latest daily summary data are normally available 1-2 days after the date-time of the observations used in the daily summaries. The online data files begin with 1929 and are at the time of this writing at the Version 8 software level. Over 9000 stations' data are typically available. The daily elements included in the dataset (as available from each station) are: Mean temperature (.1 Fahrenheit) Mean dew point (.1 Fahrenheit) Mean sea level pressure (.1 mb) Mean station pressure (.1 mb) Mean visibility (.1 miles) Mean wind speed (.1 knots) Maximum sustained wind speed (.1 knots) Maximum wind gust (.1 knots) Maximum temperature (.1 Fahrenheit) Minimum temperature (.1 Fahrenheit) Precipitation amount (.01 inches) Snow depth (.1 inches) Indicator for occurrence of: Fog, Rain or Drizzle, Snow or Ice Pellets, Hail, Thunder, Tornado/Funnel Cloud Global summary of day data for 18 surface meteorological elements are derived from the synoptic/hourly observations contained in USAF DATSAV3 Surface data and Federal Climate Complex Integrated Surface Hourly (ISH). Historical data are generally available for 1929 to the present, with data from 1973 to the present being the most complete. For some periods, one or more countries' data may not be available due to data restrictions or communications problems. In deriving the summary of day data, a minimum of 4 observations for the day must be present (allows for stations which report 4 synoptic observations/day). Since the data are converted to constant units (e.g, knots), slight rounding error from the originally reported values may occur (e.g, 9.9 instead of 10.0). The mean daily values described below are based on the hours of operation for the station. For some stations/countries, the visibility will sometimes 'cluster' around a value (such as 10 miles) due to the practice of not reporting visibilities

greater than certain distances. The daily extremes and totals--maximum wind gust, precipitation amount, and snow depth--will only appear if the station reports the data sufficiently to provide a valid value. Therefore, these three elements will appear less frequently than other values. Also, these elements are derived from the stations' reports during the day, and may comprise a 24-hour period which includes a portion of the previous day. The data are reported and summarized based on Greenwich Mean Time (GMT, 0000Z - 2359Z) since the original synoptic/hourly data are reported and based on GMT. (Source: <https://data.nodc.noaa.gov/cgi-bin/iso?id=gov.noaa.ncdc:C00516>)