



### **How to Use – Historical Data**

# How do I obtain historical climate data for a specific location in Canada when using the Historical Data tool?

On the <u>Historical Data</u> page, you will be presented with three different search methods for locating historical climate data;

- 1. Search by Station Name
- 2. Search by Province and Territory
- 3. Search by Proximity

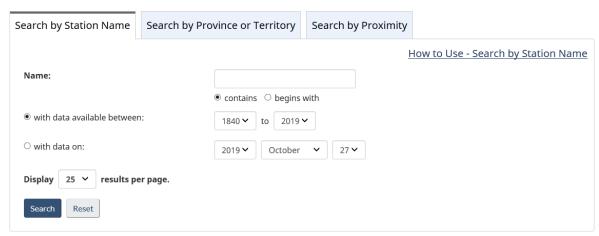
You can find data for any Canadian climate station using any of these three options. Each method is described in detail below:

## 1. How do I obtain historical climate data for White Rock, British Columbia (BC) by using the "Search by Station Name" function?

The <u>Historical Data</u> tool gives you the option of acquiring data for a station by using the name of the station itself. Beside "Name" in the "Search by Station Name" box, enter the name of the location you are searching for (e.g. White Rock). Next, you can specify the time period of the data that you are searching for. Do this by selecting "with data available between \_\_\_\_\_ to \_\_\_\_\_", or select and enter "with data on". The default setting selects all data from the year 1840 to the current year. The default time period will generate a large list of stations. The dropdown arrows beside each of the two year options can be used to select a time period in between. If you have a specific date in mind, enter it, and this will decrease the amount of time taken to find the station you are searching for.

The last parameter to set is how many results you would like to display per page. The default is set at 25 but you may change this option to 10, 50 or 100, by clicking on the dropdown list. Once all this information has been selected, click "Search".

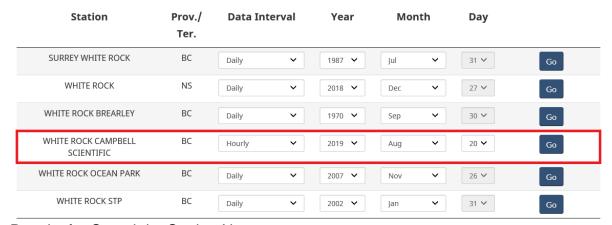




Search by Station Name

You will be taken to a page with a list of all the stations that have the criteria that you have specified in your search, if any exist. In this example a list containing 6 stations is generated.

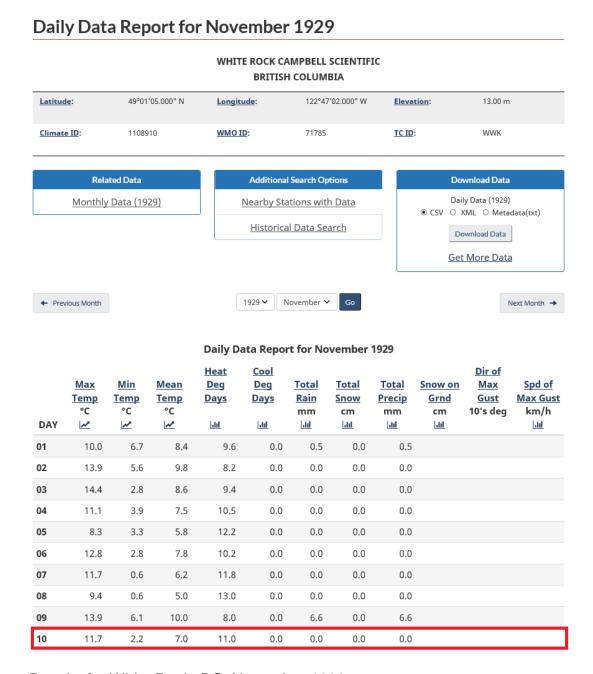
6 stations found with name containing "white rock", with data available between 1840 and 2019. Stations are listed in alphabetical order. Confirm the <u>Data Interval</u> and the date for one of the stations listed and click "GO" to display the historical data.



Results for Search by Station Name

All of these stations contain the word "White Rock" and have data available between 1840 and 2019. The stations are listed in alphabetical order so continue through the list until you find the "White Rock Campbell Scientific" station. For this station you must then select a Year, Month, Day and Data Interval. Selecting "Hourly" in the data interval will give you weather conditions for every hour including temperature, humidity and wind information, where available, for a specified day. Selecting "Daily" in the data interval will give you information about the maximum and minimum temperature, amount of precipitation (rain/snow), maximum wind gust and more, where available, for every day of the selected month. Selecting "Monthly" in the data interval will give you the monthly totals for a specified year (this section is often not up-to-date by several months due to a longer quality control process).

In this example we are searching for historical climate data for White Rock, BC, on November 10<sup>th</sup>, 2004. To determine how far back daily data is available for White Rock in BC, select the "Daily" Data Interval for that station. Then, click on the year dropdown list to see what years of data are available. As you will see, White Rock daily data goes back as far as 1929. Select November, 1929 and press "Go". You will find that on November 10<sup>th</sup>, 1929 the maximum temperature in White Rock, BC was 11.7°C, the minimum temperature was 2.2°C and there was no precipitation.

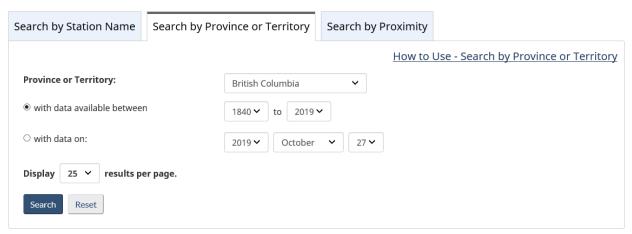


Results for White Rock, BC, November 1929

## 2. How do I obtain historical climate data for White Rock, BC by using the "Search by Province or Territory" function?

In the "Search by Province or Territory" option, select your province/territory of interest by clicking on the "Province or Territory" dropdown list. In the example below, *British Columbia* was chosen. Similar to the "Search by Station Name" function, you are also prompted to enter information about the time period of the data that you are searching for.

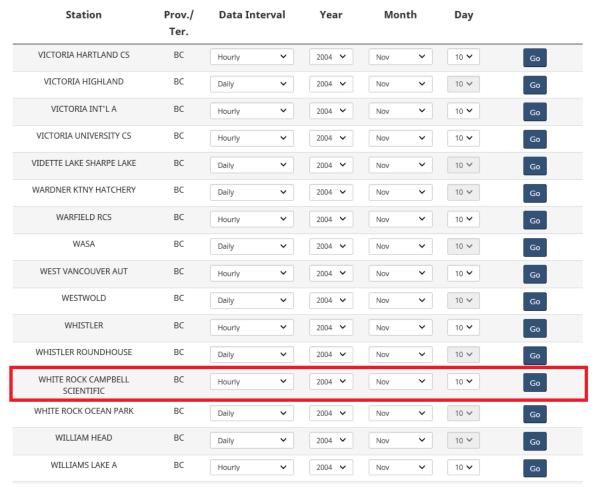
Using the same example from above, enter the information and submit your query by clicking on "Search".



Search by Province or Territory

A list containing over 370 stations will be generated. All of these stations are within BC and have data available for November 10<sup>th</sup>, 2004. The stations are listed in alphabetical order, so continue through the list until you find the station, "White Rock Campbell Scientific".

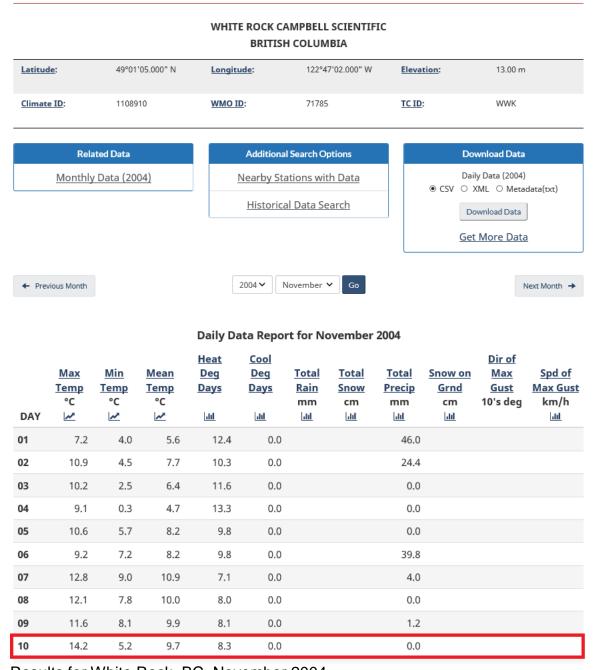
372 stations found in British Columbia, with data available on November 10, 2004. Stations are listed in alphabetical order. Confirm the <u>Data Interval</u> and the date for one of the stations listed and click "GO" to display the historical data.



Search by Province or Territory Results

Once you have found the "White Rock Campbell Scientific" station, a data interval needs to be set. By using the dropdown menu next to "data interval", select hourly, daily, or monthly. For this example select the "Daily" Data Interval for November 10<sup>th</sup>, 2004 and press "Go". You will find that on November 10<sup>th</sup>, 2004 the maximum temperature in White Rock, BC was 14.2°C, the minimum temperature was 5.2°C and there was no precipitation.

#### Daily Data Report for November 2004

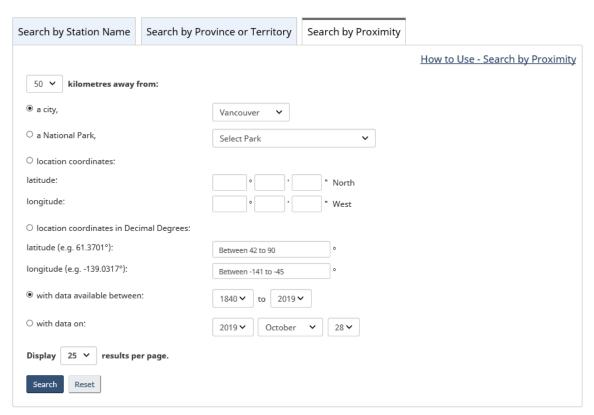


Results for White Rock, BC, November 2004

## 3. How do I obtain historical climate data for White Rock, BC by using the "Search by Proximity" function?

The final box on the <u>Historical Data</u> page, "Search by Proximity" allows you to find stations that are located close to major cities, National parks or a specified set of

geographic co-ordinates. To find White Rock, BC, set the distance to 50 "kilometers away from", using the drop down list for the distance and select Vancouver from the "Select City" dropdown list. Again, a specific date or timeframe can be selected, along with the number of display results per page.

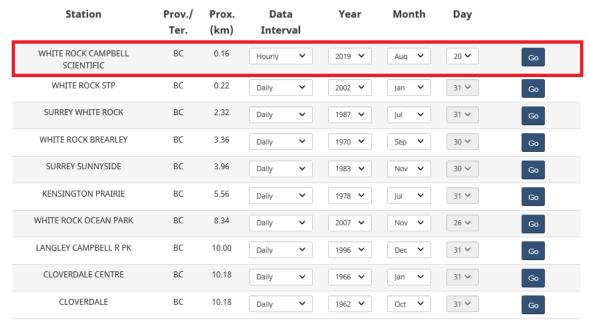


#### Search by Proximity

The resulting list represents all of the stations that are located within 50 km of Vancouver. The exact geographic co-ordinates used for all cities can be found on the Geographical Name Search Service of Natural Resources Canada. This service was also used to determine the co-ordinates for all other major cities and National parks. The proximity search for Vancouver generates a list of over 250 stations. These stations are ordered by distance within a 50 km range from the closest to the assigned co-ordinates for Vancouver, to the furthest. After searching through many pages of station names, "White Rock Campbell Scientific" can be found however due to the long list of stations this method can be somewhat slow.

If you know the geographic co-ordinates for a location of where you are looking to find the closest nearby station, the "location coordinates" option may prove to be a more efficient method. For White Rock, enter in the co-ordinates of 49°1'N and 122°47'W. By using a distance criteria of 25 km, a list of over 50 stations is generated with "White Rock Campbell Scientific" at the top. Select the data interval and date to view the data for this station.

55 stations found within a search radius of 25 kilometers of "49° 01' 00" N, 122° 47' 00" W", with data available between 1840 and 2019. Stations are listed in proximity order relative to the search criteria (nearest to farthest). Confirm the <u>Data Interval</u> and the date for one of the stations listed and click "GO" to display the historical data.



#### Results for Search by Proximity

A station may also be found if it is located near a National park. This search method is similar to the search by proximity tool for a given city. Instead of selecting a city, use the dropdown list beside "a National Park" and select a park of interest. The distance criteria must also be set, along with a specified date, if desired. A list of all stations located within the specified distance from the National park ranging from the closest to the furthest away will be generated. Similarly to the city search, the location of the park has been predetermined according to Natural Resources Canada. A search using this function can also produce a large output list. The more specific the criteria, the easier it will be to find the data that you are looking for.

The <u>Historical Data</u> page is an excellent way to locate any historical climate data that you are searching for. Each search method within this page generates data based on different criteria, but will generate the same resulting information for a station for all three methods. Choosing the most efficient method greatly depends on what information you have to input into the search function.