Title: Temperature and water supply

Instructions

You have been tasked with investigating the effect of temperature on Melbourne's water supply. Follow the steps below to find out if and how the mean highest temperature has changed over the decades.

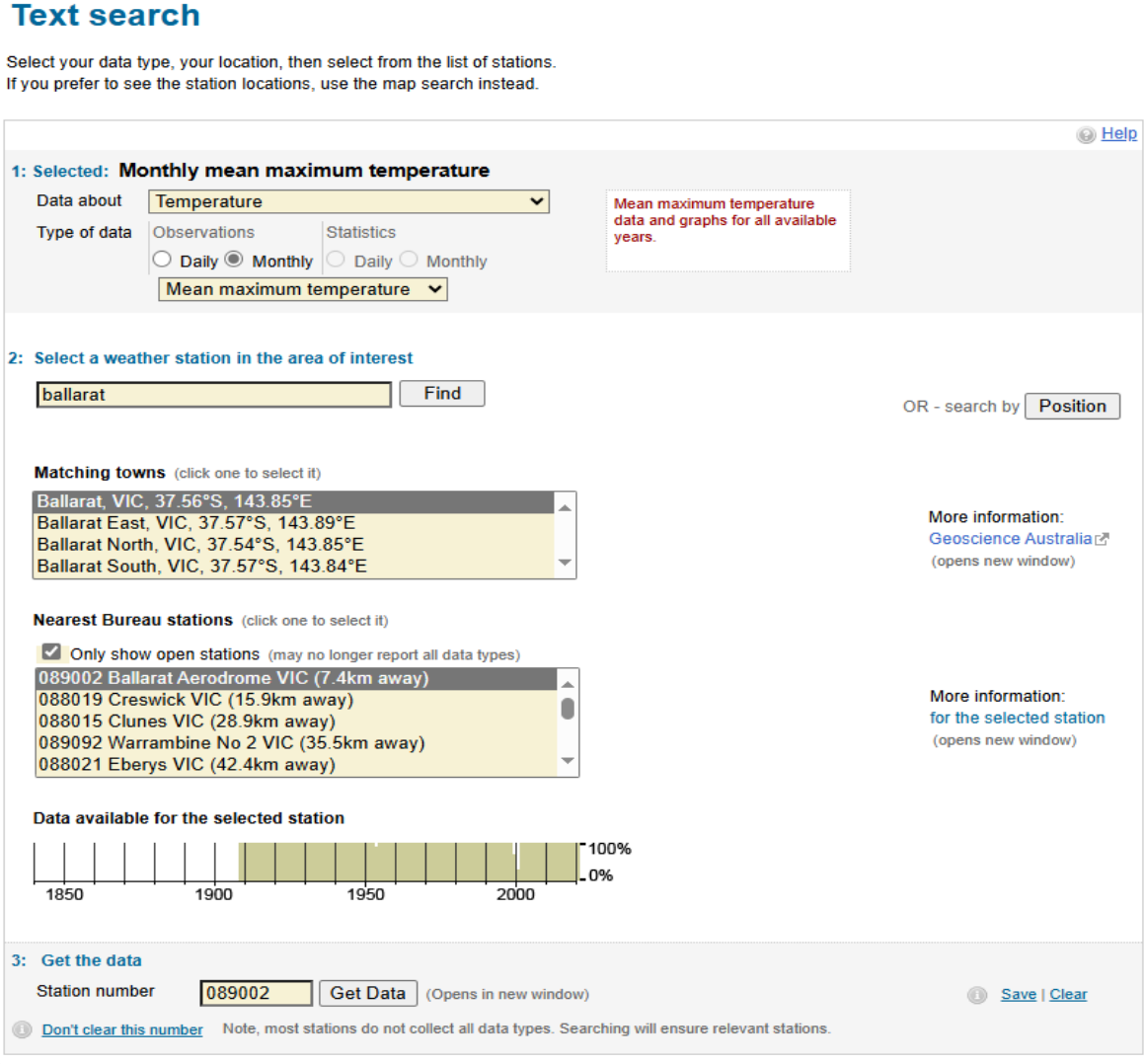
Explore the Interactive Map for some background information on:

- Water Supply for Melbourne
- Climate change and it's impacts on Melbourne's Water
- Reservoir levels

Step 1.

Take a look at the historical temperature data for an area of your choice in Victoria with help from the Bureau of Meteorology:

Visit the BOM's Climate Change data, here. Select "Temperature" from the drop down box and then "Mean maximum temperature" below. Then select a weather station of your choice by using the search. Once selected, click the "Get data" button.



Melbourne Water

Step 2.

Click the graph button in the 'Annual' column to produce a graph from the data:

Monthly mean maximum temperature

Ballarat Aerodrome

About this page

All years of data | PDF

The Monthly mean maximum temperature is the average of all available daily maxima for the month. The Daily maximum air temperature is nominally recorded at 9 am local clock time. It is the highest temperature for the 24 hours leading up to the observation, and is recorded as the maximum temperature for the previous day. Temperature data prior to 1910 should be used with extreme caution as many stations prior to that date used non-standard shelters. About temperature data

Station: Ballarat Aerodrome | Number: 89002 | Opened: 1908 | Now: Open | Lat: 37.51° S | Lon: 143.79° E | Elevation: 435 m | Details

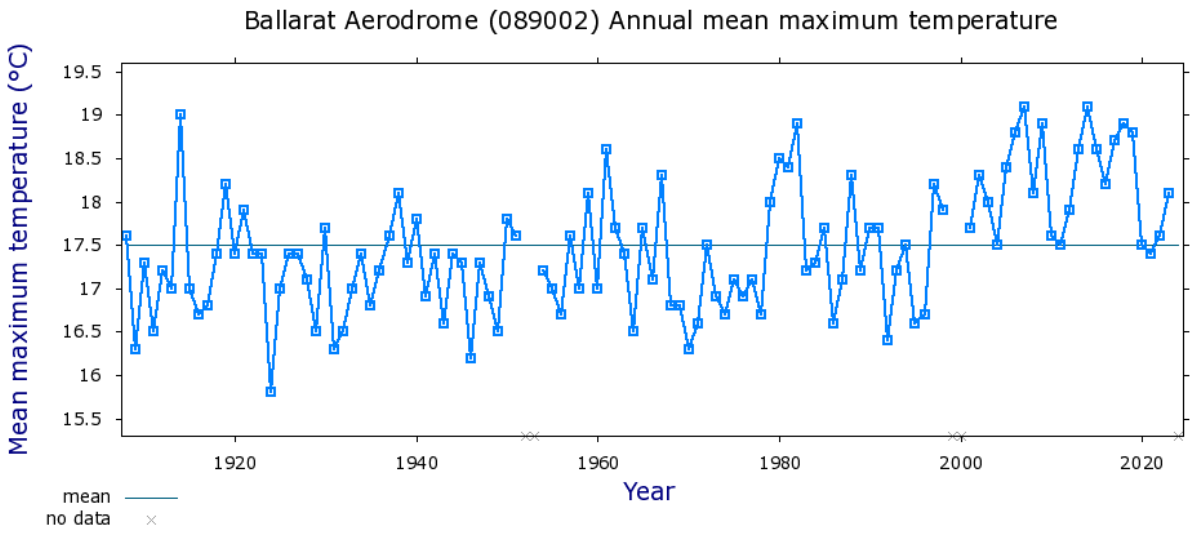
No highlight

Key: Units = °C. *12.3* = Not quality controlled or uncertain, or precise date unknown

Period for calculating statistics: All years | 1961-1990

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Graph													
1908	30.1	26.4	20.8	18.2	12.0	8.6	9.2	10.3	11.9	17.7	21.9	24.5	17.6
1909	23.3	24.2	20.9	14.7	11.9	9.4	8.7	9.9	12.9	17.0	21.4	21.3	16.3
1910	25.3	27.4	21.9	18.6	13.4	10.6	9.4	11.8	13.7	14.3	20.3	20.4	17.3
1911	24.1	22.5	19.4	15.2	12.8	8.8	9.6	12.6	14.2	15.8	22.6	20.2	16.5
1912	24.8	27.4	23.1	15.1	14.1	10.7	9.6	11.7	13.0	16.9	18.1	21.8	17.2
1913	25.1	25.4	18.4	18.3	11.8	10.4	9.9	10.8	13.3	17.0	17.8	25.3	17.0
1914	25.8	29.2	24.7	17.2	13.8	11.3	9.5	12.9	14.8	22.4	23.6	23.2	19.0
1915	25.3	25.9	21.3	16.7	12.2	9.8	11.1	11.3	13.4	14.9	18.4	23.3	17.0

This will generate a graph like the one shown below:



Name:

1. **Has the temperature for _____ (your location) changed in the last 50 years?**

   In this location, the average temperature over the last 50 years was _____C. This average temperature is [higher | lower] than last year's average temperature by _____C.

   The hottest year(s) on record for this area was in _____ with a temperature of _____C.

2. **Do you see a general trend or pattern in the graph you generated from the mean temperature data? Explain and use data in your response.**

_____
_____
_____
_____
_____
_____
_____

3. **What impacts do you think this change in temperature will have on:**

   a) Melbourne's water supply?

_____
_____
_____
_____
_____
_____

   b) The demand for water?

_____
_____
_____
_____
_____
_____

Melbourne Water

3. **With help from the Interactive Map, create a mind map/visual display showing the impacts a restricted water supply in Melbourne would have (e.g. less water for the environment).**