

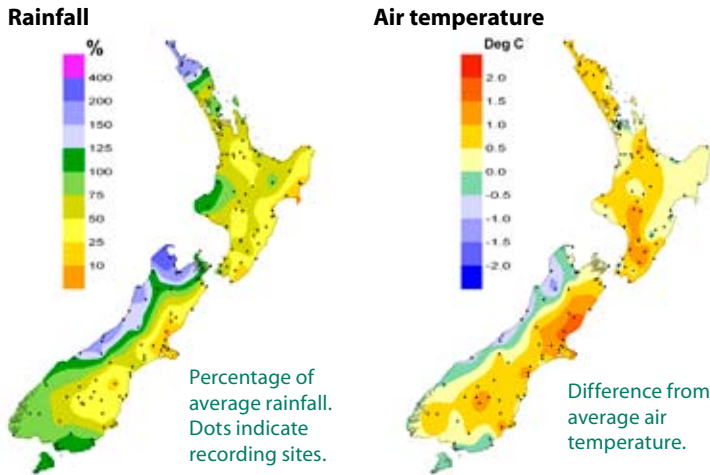
The Climate Update

A monthly newsletter from the National Climate Centre

November climate – mostly drier than normal with near or above average air temperatures. Low river flows in northern and eastern regions.

Outlook for December to February – above average or average air temperatures are likely over the country. Rainfall is likely to be near normal in the North Island and north of the South Island. Eastern regions of the country are likely to experience ongoing drier than normal conditions.

New Zealand climate in November



Rainfall was less than 50% of normal in eastern areas of the country (continuing the pattern from October) and between 50% and 80% of normal for the majority of the North Island except Taranaki and Northland.

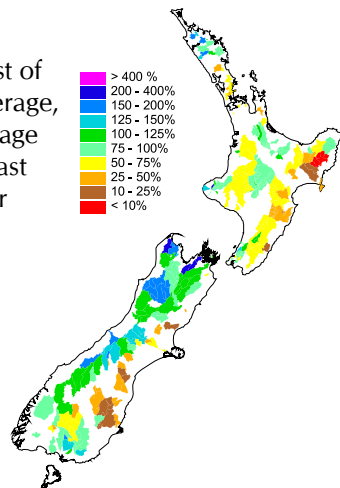
November temperatures were above normal for most of the country, although cooler than average along the South Island west coast. North Canterbury was particularly warm. The national average temperature of 14.0 °C was 0.3 °C above the average for November.

For more information see www.niwascience.co.nz/ncc/cs/mclimsum_08_11

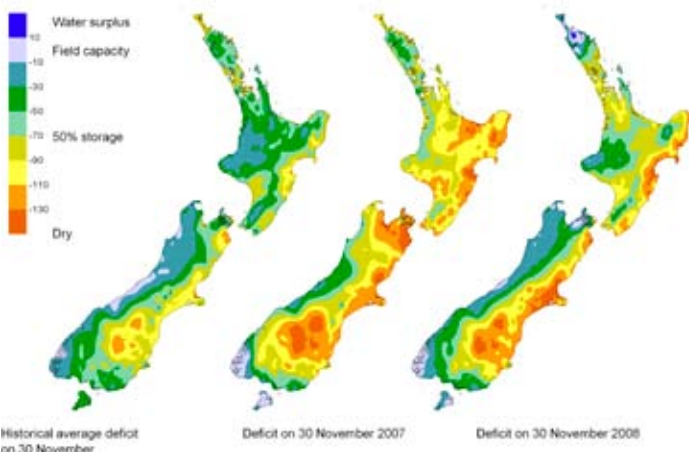
River flows

River flows in the north and west of the South Island were above average, and were average to below average elsewhere. A number of east coast rivers had record low November flows.

Percentage of average November river and stream flows at monitored catchments. NIWA field teams, regional and district councils, and hydro-power companies, are thanked for providing data.



Soil moisture



Water balance in the pasture root zone for an average soil type, where the available water capacity is taken to be 150 mm.

Soil moisture levels along the east coast of the country dropped markedly during November, with 'drought-like' conditions developing in some areas. Auckland, Waikato, Bay of Plenty, and Manawatu were also drier than normal at the end of the month.

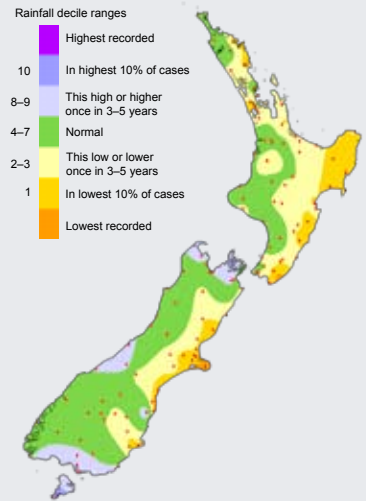
September to November – the climate we predicted and what actually happened

Rainfall

Predicted: Normal or below normal over much of the South Island and north of the North Island; near normal elsewhere.

Outcome: Below normal in the east of both islands and much of Northland; near normal elsewhere, although higher than normal rain in parts of the north, west, and south of the South Island.

September to November rainfall

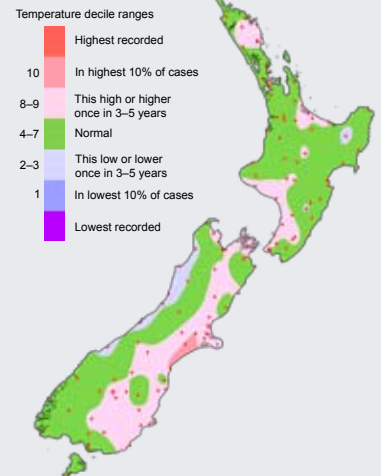


Air temperature

Predicted: Average or above average in most regions.

Outcome: Mostly average or above average, apart from below average temperatures in coastal Buller and Westland.

September to November temperature

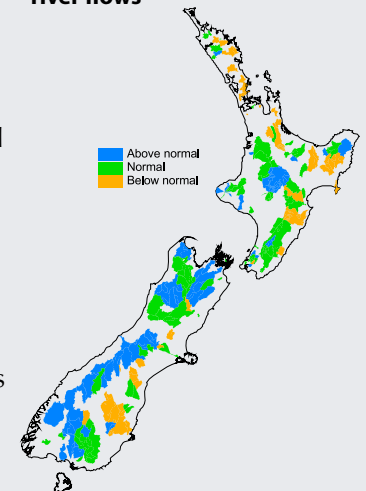


River flows

Predicted: Normal or below normal streamflows in the north of the North Island; below normal streamflows in the west and south of the South Island. Elsewhere, normal conditions are likely.

Outcome: Higher than normal river flows in southwest of the North Island and the north, west, and south of the South Island. Streamflows were normal to below normal in most other locations.

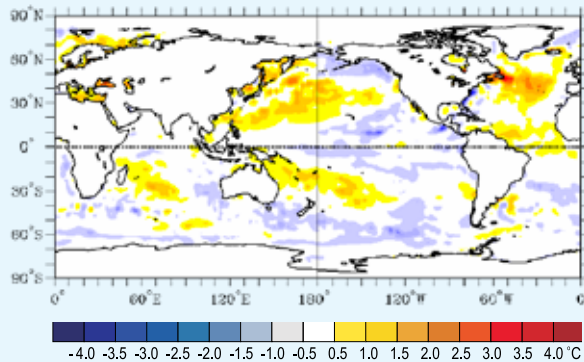
September to November river flows



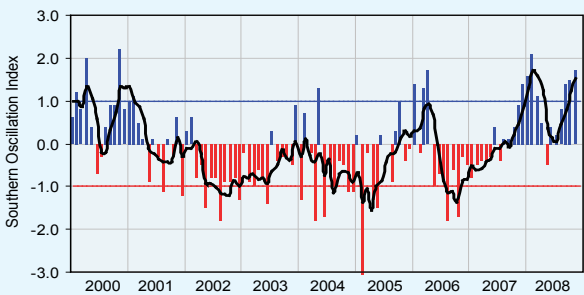
Global setting and climate outlook

El Niño-Southern Oscillation remains neutral

Neutral conditions (no El Niño or La Niña) now prevail in the tropical Pacific Ocean and are very likely to continue through the summer, although there is a chance of weak La Niña conditions redeveloping.



Difference from average global sea surface temperatures for November 2008. Map courtesy of NOAA Climate Diagnostics Centre.

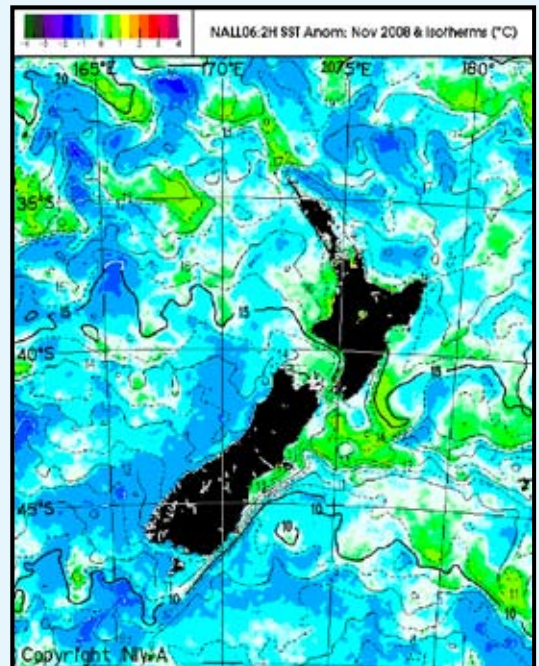


Monthly values of the Southern Oscillation Index (SOI), a measure of the changes in atmospheric pressures across the Pacific, and the three-month mean (black line).

SOI mean values:
November: +1.7
September to November: +1.5

Sea surface temperatures

Sea surface temperatures around New Zealand were below average in November, but are expected to be near or slightly above normal over the summer.



Differences from normal November surface temperatures in the seas around New Zealand.

Outlook for December 2008 to February 2009

Mean sea level pressures are likely to be higher than normal to the east of New Zealand, with frequent northerly or northeasterly winds over the North Island and stronger than normal northwesterlies over the South Island. Air temperatures are likely to be above average in most regions of the country. Rainfall is likely to be near normal in the North Island, normal or above normal in the west of the South Island and normal or below normal in the east of the South Island. Normal soil moisture

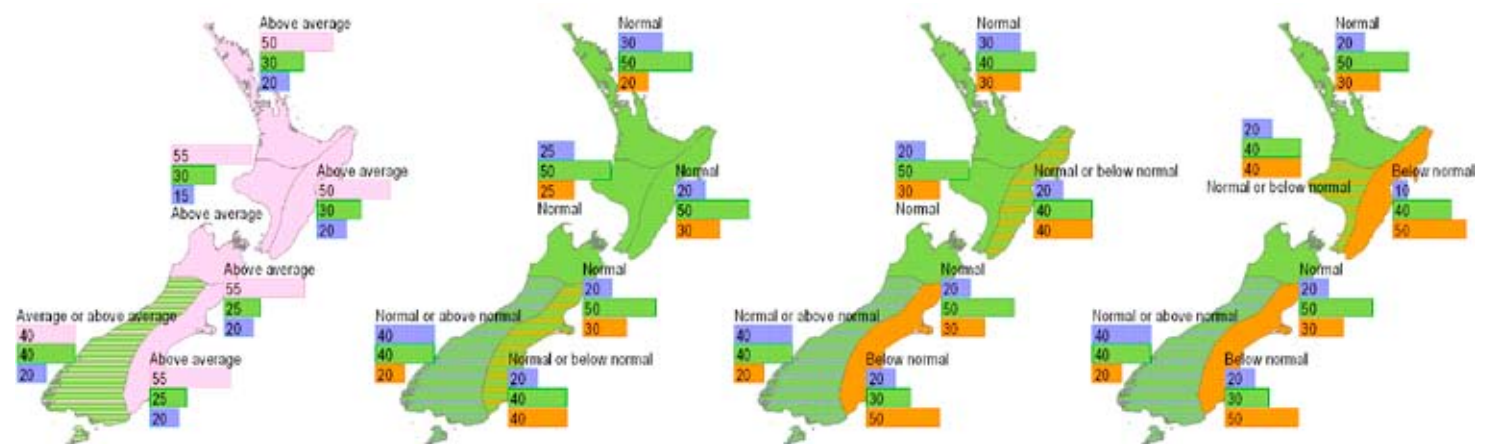
levels and streamflows are likely in the north of both islands. In the southwest of the North Island normal soil moisture levels and normal to below normal streamflows are likely. In the east of both islands normal to below normal soil moisture levels and below normal streamflows are likely. Normal or above normal soil moisture levels and streamflows are likely in the west and south of the South Island.

Mean air temperature

Rainfall

Available soil moisture

River flows



How to interpret these maps

In the example here the climate models suggest that below normal conditions are likely (50% chance), but, given the variable nature of the climate, the chance of normal or above normal conditions is also shown (30% and 20% respectively).

20	20% chance of above normal
30	30% chance of normal
50	50% chance of below normal



Climate Update by email

This is the final printed edition of The Climate Update.

From January 2009, The Climate Update will continue online on the NIWA website at www.niwa.co.nz/ncc/cu/

This is part of a bigger change in the way NIWA delivers news and information. Our aim: to bring you climate outlooks and other news more quickly, more sustainably, and in a way that allows you easy access to more detailed information.

New email service


The Climate Update and all of NIWA's other newsletters will soon be available via a free email news service.

To get our free e-newsletters, send an email to: updates@niwa.co.nz, and write **subscribe** in the subject line.

Then look out for more details in the New Year.

Best wishes for 2009 to all our readers from Editor Alan Porteous and the NIWA Climate Update team.





Apricots near Cromwell.
Cover photo: Steve Le Gal

The Climate Update is a monthly newsletter from NIWA's National Climate Centre, and is published by NIWA, Private Bag 14901, Wellington.
Email: ncc@niwa.co.nz
Phone: 0-4-386 0300.
Visit our webpage: www.niwa.co.nz/ncc

Notice of copyright: The contents of *The Climate Update* may not be copied or reproduced without the prior consent of NIWA. Please contact the Editor.

This newsletter is printed on paper sourced from sustainably managed forests, produced using elemental chlorine-free processes. Vegetable-based inks from renewable sources are used. Packaging is fully biodegradable.

