

Friday, 24 December 2015

## **NIWA's Hotspot Watch**

*A weekly update describing soil moisture across the country to help assess whether severely to extremely dry conditions are occurring or imminent. Regions experiencing these soil moisture deficits are deemed "hotspots". Persistent hotspot regions have the potential to develop into drought.*

### **Facts: Soil Moisture**

Soil moisture levels across the North Island have slightly decreased when compared to this time last week, particularly in the Taranaki, Waikato and Northland regions. Soil moisture in the coastal Hawke's Bay and southern Gisborne regions remains in the near normal range for the time being. Meanwhile, much drier to severely drier than normal soils for the time of year dominate parts of Auckland and Northland. Additionally, much drier to severely drier than normal soils for this time of year exist over central and eastern Waikato and parts of the Bay of Plenty.

In the South Island, the past week saw some rain, but the big story was the soaring temperatures as dry north westerlies took hold. Overall soil moisture levels in the South Island have remained largely unchanged compared to this time last week, with the exception of Tasman, central Canterbury and central Otago where soil moisture levels decreased. Marlborough and Central Otago remain hotspot areas where soils are drier to severely drier than normal for this time of year. Soil moisture along the West Coast and coastal Southland is near normal for the time of year.

### **Outlook**

For the North Island, Christmas day will bring some isolated showers, particularly about the central North Island, but the days which follow are set to be warm, sunny and dry. The next round of showers is forecast for mid-week but rain will not be significant. The prevalence of high pressure, sunny and dry conditions expected means that soil moisture levels are likely to decrease over the coming week.

The South Island is set to remain dry through to Tuesday when a weak front will bring scattered showers, particularly west of the Divide. Showers may continue into Wednesday and early Thursday but rain to the key hot spot areas will be very limited. As a result soil moisture levels across the entire South Island are expected to decrease slightly by this time next week.

For the North Island, a hotspot exists in South Wairarapa. We are continuing to watch for potential hotspot development by this time next week over portions of the east and southeast Waikato as well as portions of the Auckland and Northland regions, chiefly north of Auckland City.

For the South Island, hotspots exist in eastern Canterbury and parts of Central Otago, as well as the coastal Marlborough region.

NB: Hotspot Watch will be taking a one week break over the Christmas Holiday. The next issue will be released on Friday 8<sup>th</sup> January 2016.

## Background:

**Hotspot Watch** a weekly advisory service for New Zealand media. It provides soil moisture and precipitation measurements around the country to help assess whether extremely dry conditions are imminent.

**Soil moisture deficit:** the amount of water needed to bring the soil moisture content back to field capacity, which is the maximum amount of water the soil can hold.

**Soil moisture anomaly:** the difference between the historical normal soil moisture deficit (or surplus) for a given time of year and actual soil moisture deficits.

**Definitions:** “Extremely” and “severely” dry soils are based on a combination of the current soil moisture status and the difference from normal soil moisture (see soil moisture maps at <https://www.niwa.co.nz/climate/nz-drought-monitor/droughtindicatormaps>)

**Pictured below: Soil Moisture Anomaly Maps, relative to this time of year. On the left are values this time last week. On the right are the most recent values.**

