

Issued  
2 June  
2021

# RIMU Hydrology Situation Report

Research and  
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

## Regional summary for May 2021

The New Zealand Drought Index for the Auckland Region remains below the first category of Dry. However, the total rainfall for May (a regional average of 74mm) was approximately half of the long-term average. Soil moisture dropped out of the normal range for 7 of 10 sites, two of which are at a Very Low status. Most rivers are above the mean annual low flow (MALF), except for three small streams. Groundwater levels are low for many aquifers, particularly deep aquifers and those which respond slowly to rainfall.

## Current drought index

The New Zealand Drought Index (NZDI) is used to determine the severity of drought conditions across the country. The latest NZDI value for Auckland was 0.49 (30 May 2021), which is below the first NZDI category of Dry (0.75-1.00). A chart of the NZDI for the Auckland region is shown in Figure 1.

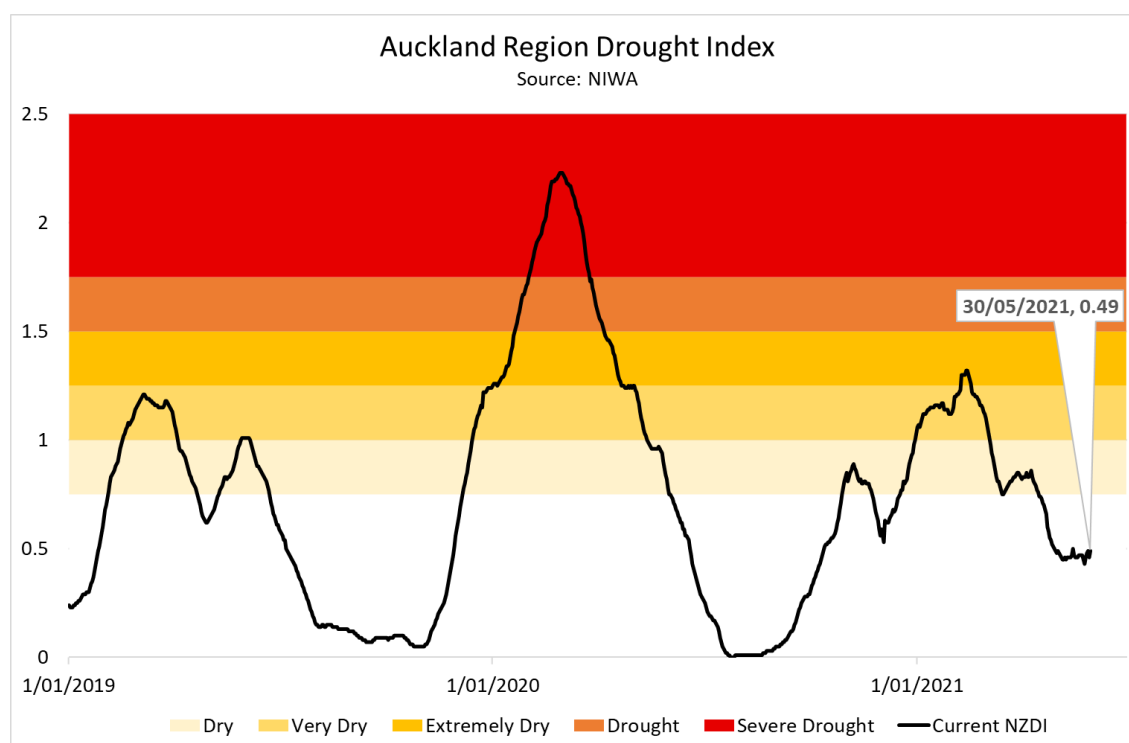


Figure 1: Auckland Region Drought Index 2019-2021 (data source: NIWA).

## Rainfall

Rainfall for May ranged from 22 to 112mm with a regional average of 74mm, approximately 54% of the long-term average. (Figure 2).

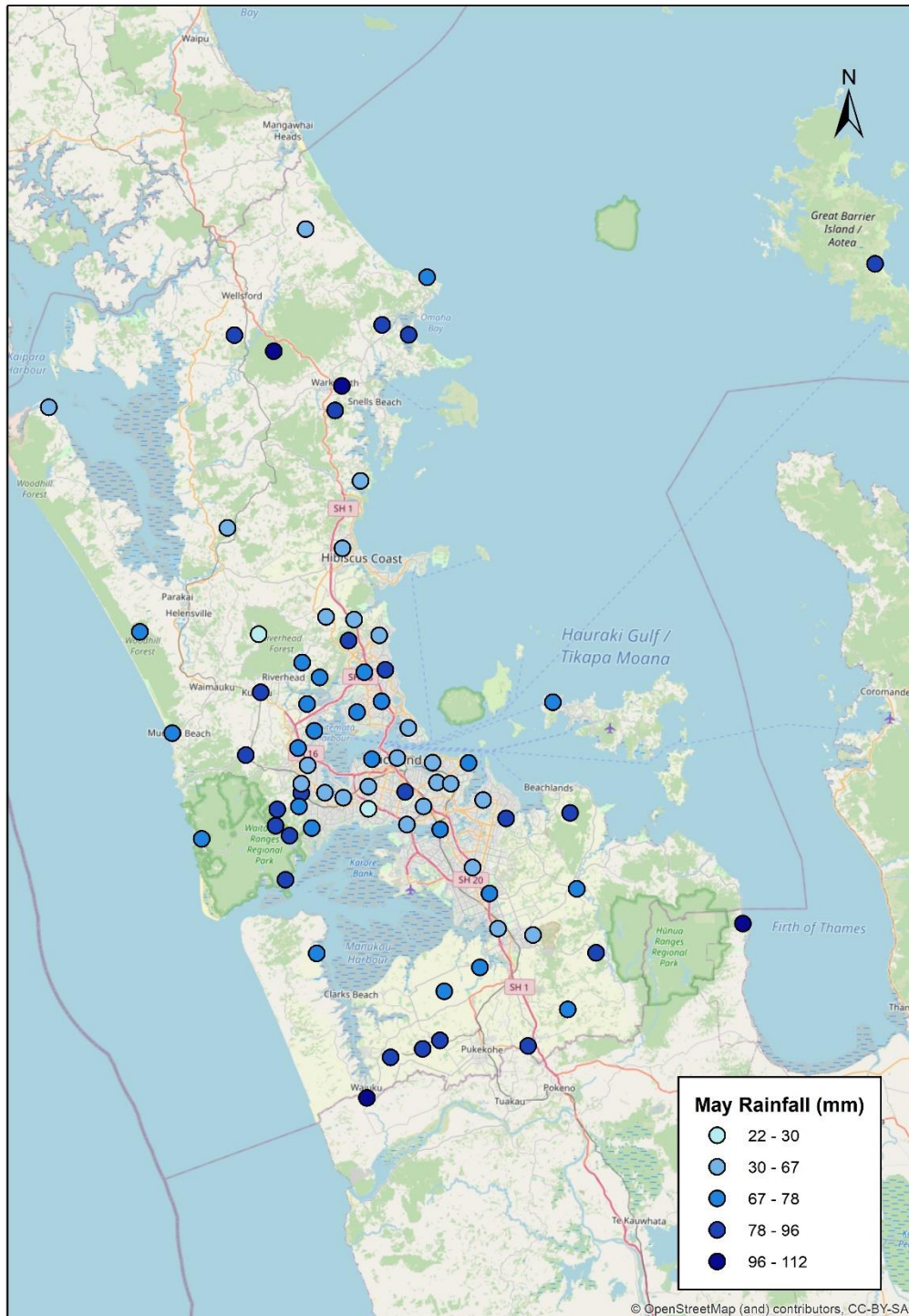


Figure 2: Total rainfall (mm) for May 2021.

## Soil moisture

Soil moisture is in the Low to Very Low range for this time of year at 7 of 10 sites in the region, with the remaining three sites in the Normal range (Figure 3).

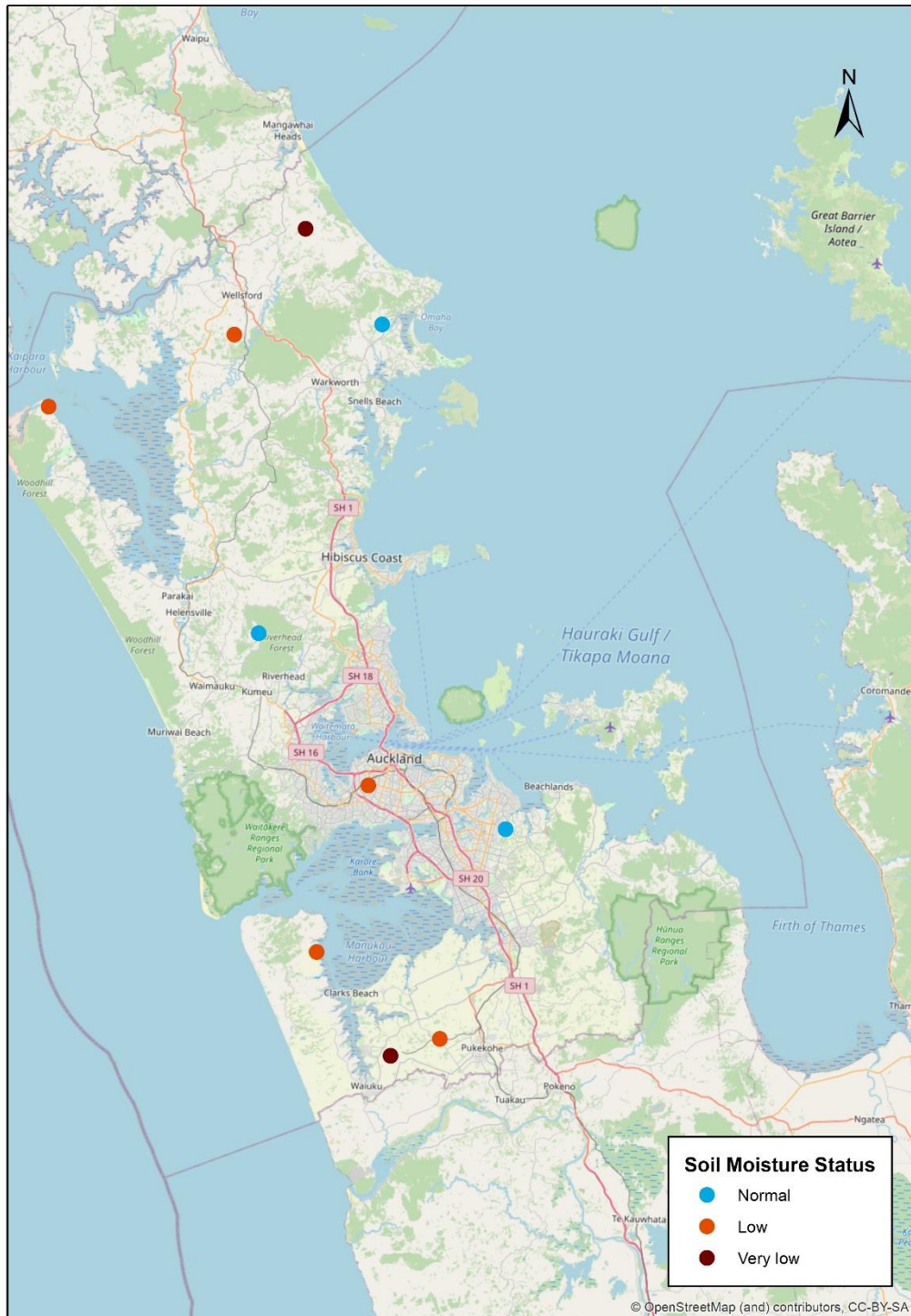


Figure 3: Current soil moisture category relative to long-term statistics for 2 June 2021.

## River flows

Most sites are above the mean annual low flow (MALF), with only three small streams below the MALF. The locations of sites and the flow relative to MALF are shown in Figure 4.

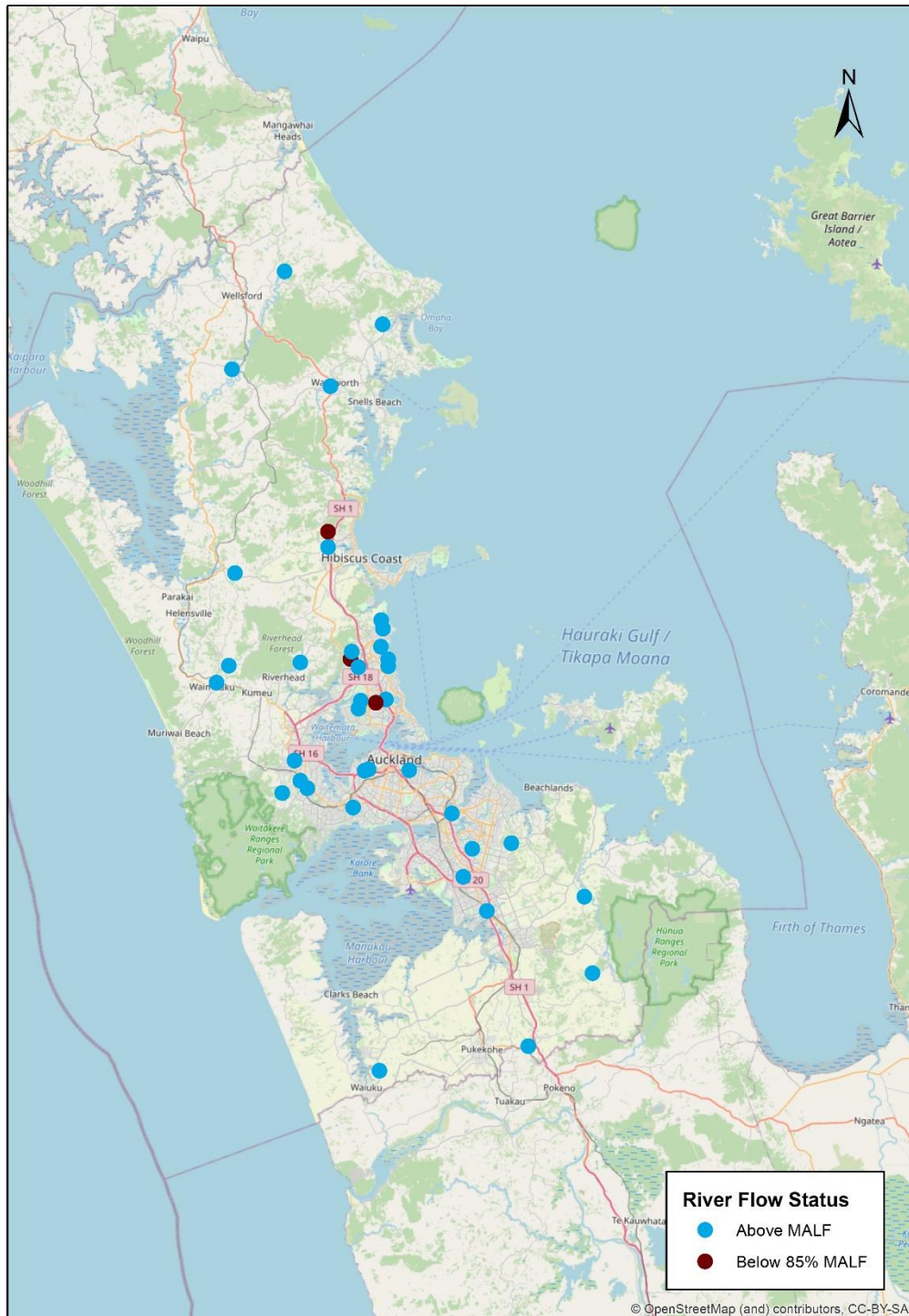


Figure 4: River flow on 2 June 2021 relative to the mean annual low flow (MALF).

## Aquifer water levels

Deep aquifers in the Waitematā Group, Waiheke greywacke, and Kaawa Formation rocks remain at low levels. These aquifers are slow to recharge and low water levels are affected by drought conditions. Low groundwater levels are also consistently present in aquifers with high irrigation demand, particularly in Franklin. Groundwater monitoring sites and groundwater level category are shown in Figure 5.

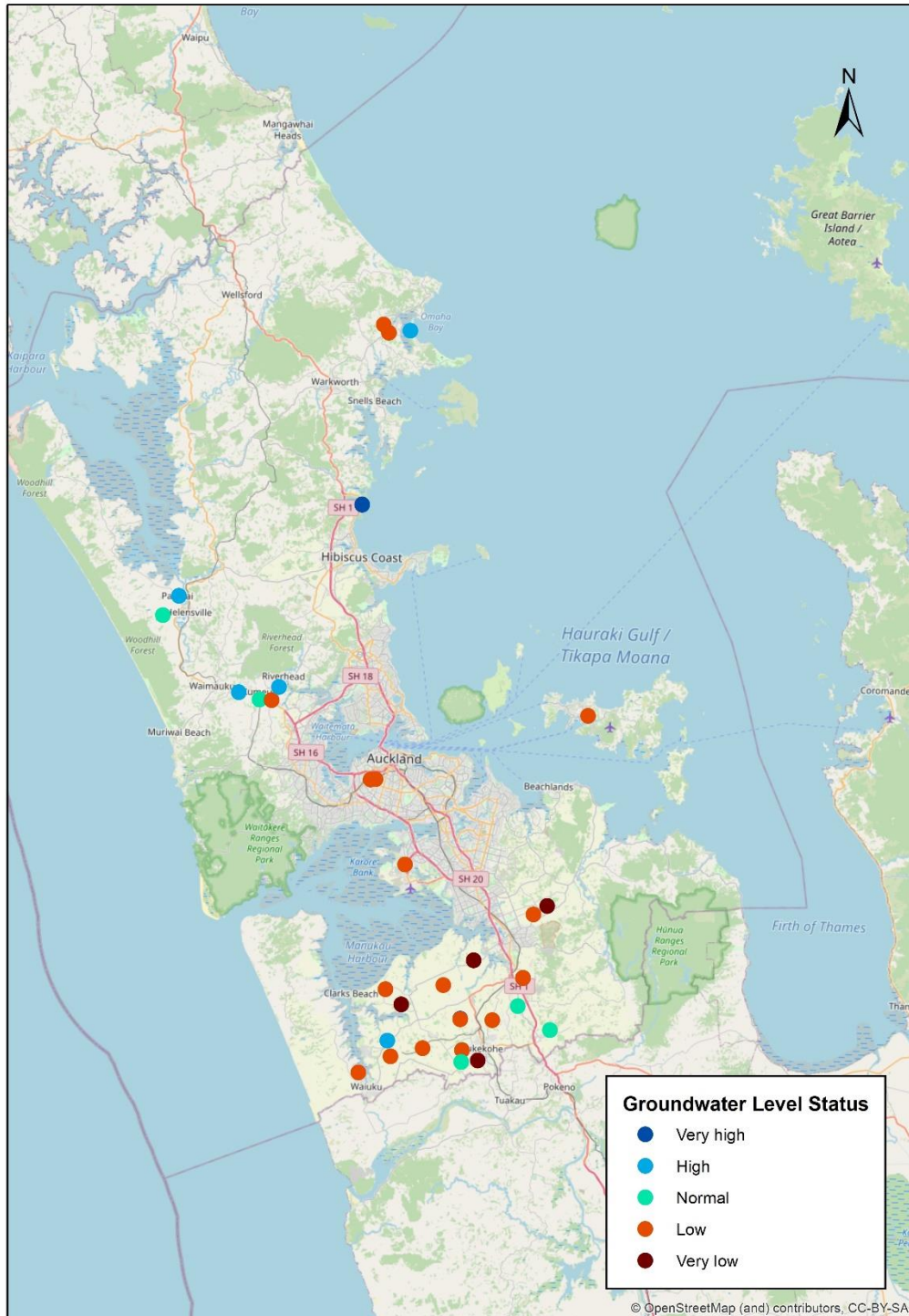


Figure 5: Groundwater levels relative to long-term statistics for 2 June 2021.

## Disclaimer

This report contains provisional data and is intended for informational purposes only. For detailed questions concerning hydrometric data, please email [EnvironmentalData@aucklandcouncil.govt.nz](mailto:EnvironmentalData@aucklandcouncil.govt.nz).

## Primary contact

For inquiries concerning this report, contact Kolt Johnson, Senior Scientist (RIMU):  
[Kolt.Johnson@aucklandcouncil.govt.nz](mailto:Kolt.Johnson@aucklandcouncil.govt.nz).

**Find out more:** phone 09 301 0101, email  
[rimu@aucklandcouncil.govt.nz](mailto:rimu@aucklandcouncil.govt.nz) or visit  
[aucklandcouncil.govt.nz](http://aucklandcouncil.govt.nz) and [knowledgeauckland.org.nz](http://knowledgeauckland.org.nz)