

Issued
1 March
2021

RIMU Hydrology Situation Report

Research and
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

Regional summary for 22 February to 1 March 2021

Almost no rain was recorded in the past week (maximum of 3mm). Soil moisture is normal in most locations with only one site near Waiuku below the normal range. River flows receded through the week and 19 sites are below the mean annual low flow (MALF), with 18 of those sites below 85% MALF. Groundwater levels remain at similar levels to the last report. Low groundwater levels persist in deep aquifers and those aquifers which respond slowly to rainfall, most of which also are important sources for irrigation.

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 1.15 (26 February 2021), which is within the second NZDI category of Very Dry (1.00-1.25). A chart of the NZDI for the Auckland region is shown in Figure 1.

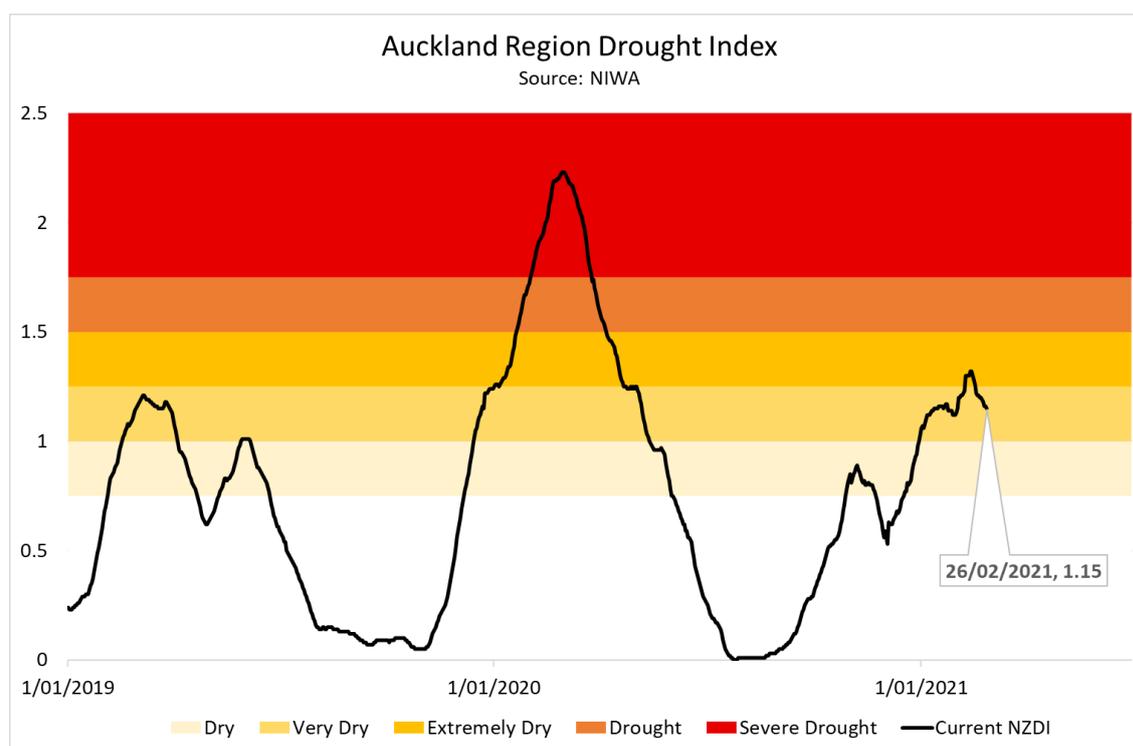


Figure 1: Auckland Region Drought Index 2019-2021 (data source: NIWA).

Rainfall

Over half of all rainfall sites recorded no rain in the last week. The maximum rainfall recorded was 3mm in central Auckland and the North Shore (Figure 2).

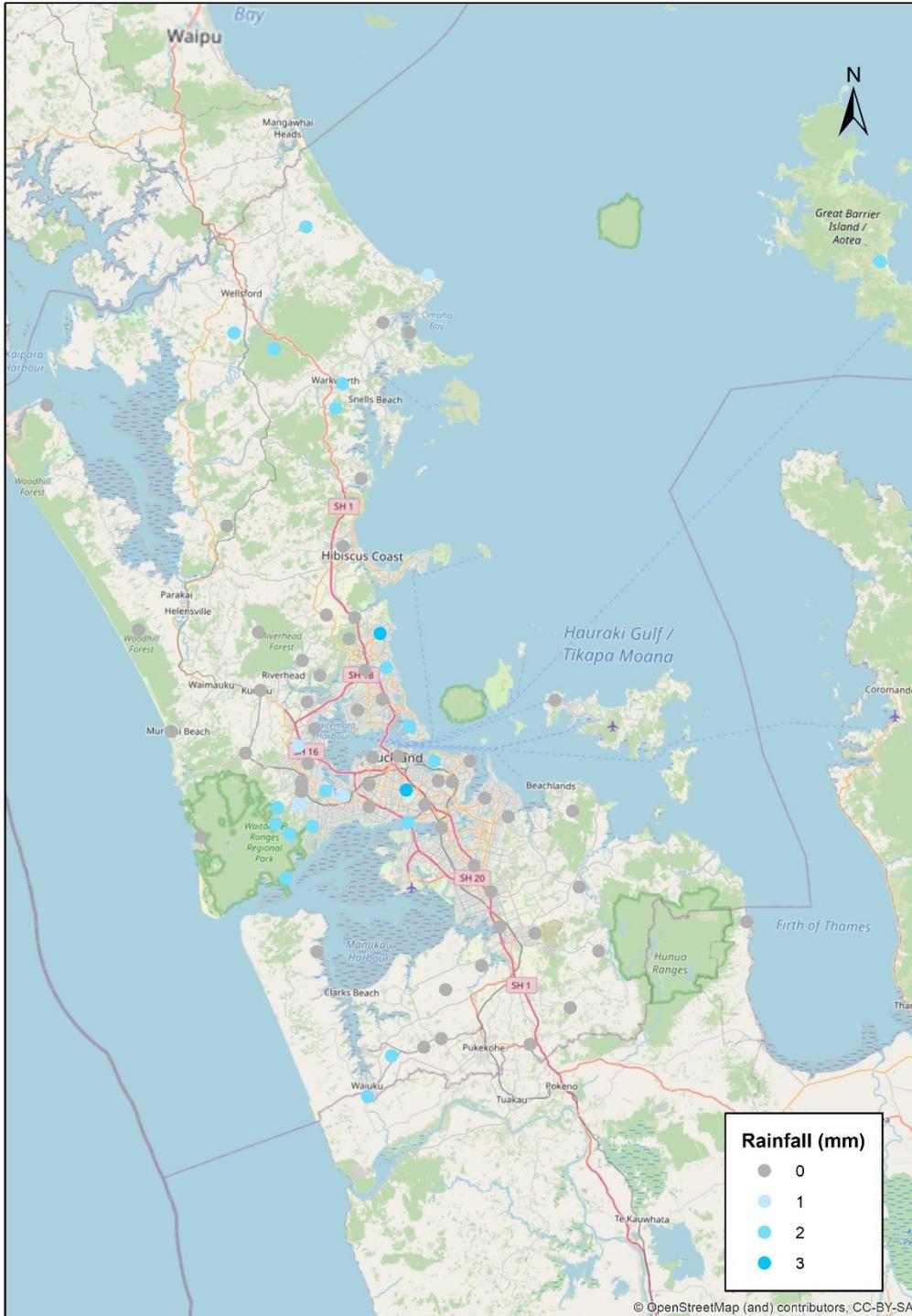


Figure 2: Total rainfall (mm) for the week of 22 February to 1 March 2021.

Soil moisture

Soil moisture status is the same as last week, with all but one site near Waiuku in the normal range (Figure 3).

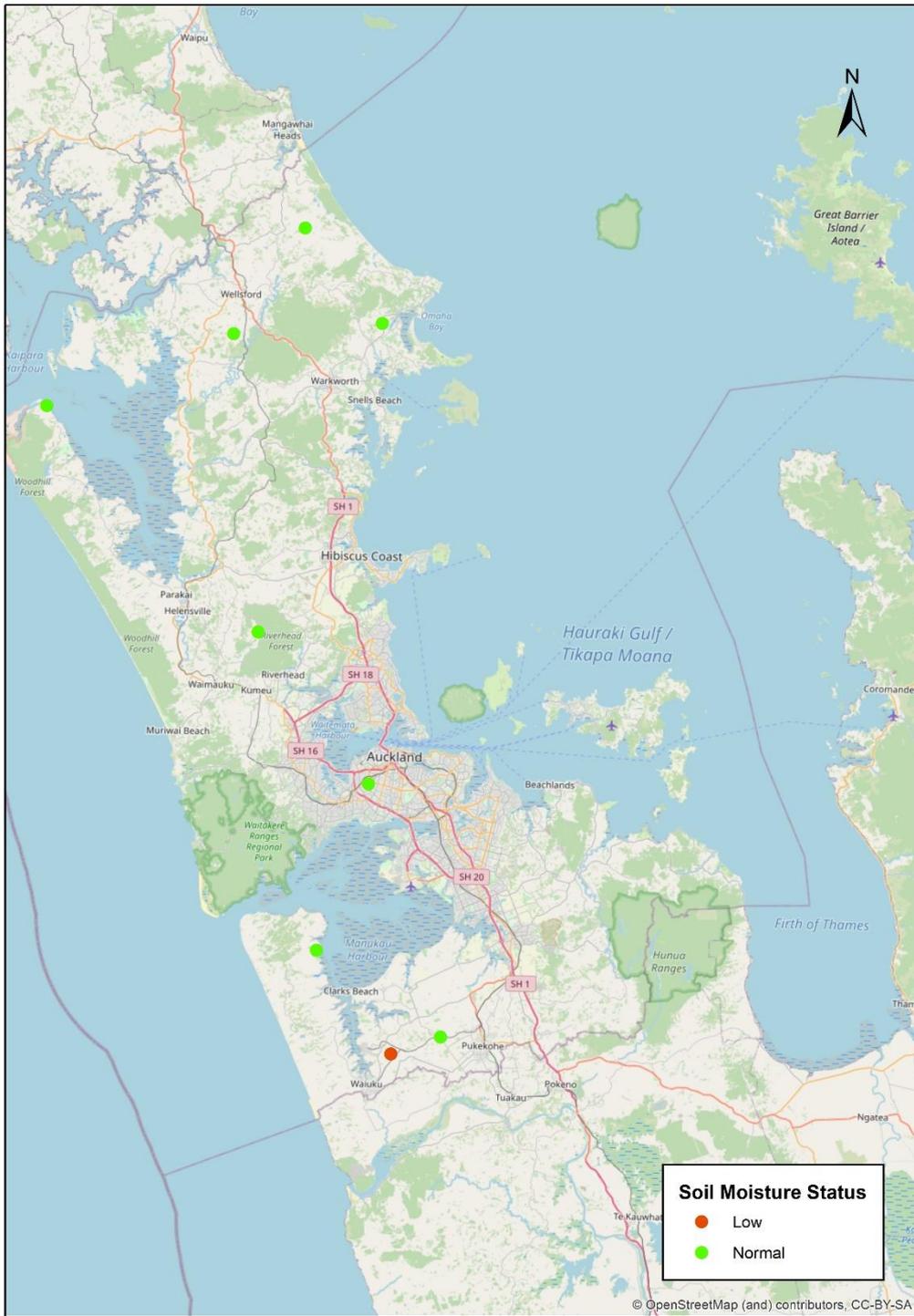


Figure 3: Current soil moisture category relative to long-term statistics for 1 March 2021.

River flows

River flows decreased throughout the region. Auckland’s larger river systems are in low flow conditions. Nineteen sites are below the mean annual low flow (MALF). Eighteen of those sites are below 85% MALF, the default minimum flow in the Auckland Unitary Plan. The locations of sites and the flow relative to MALF are shown in Figure 4.

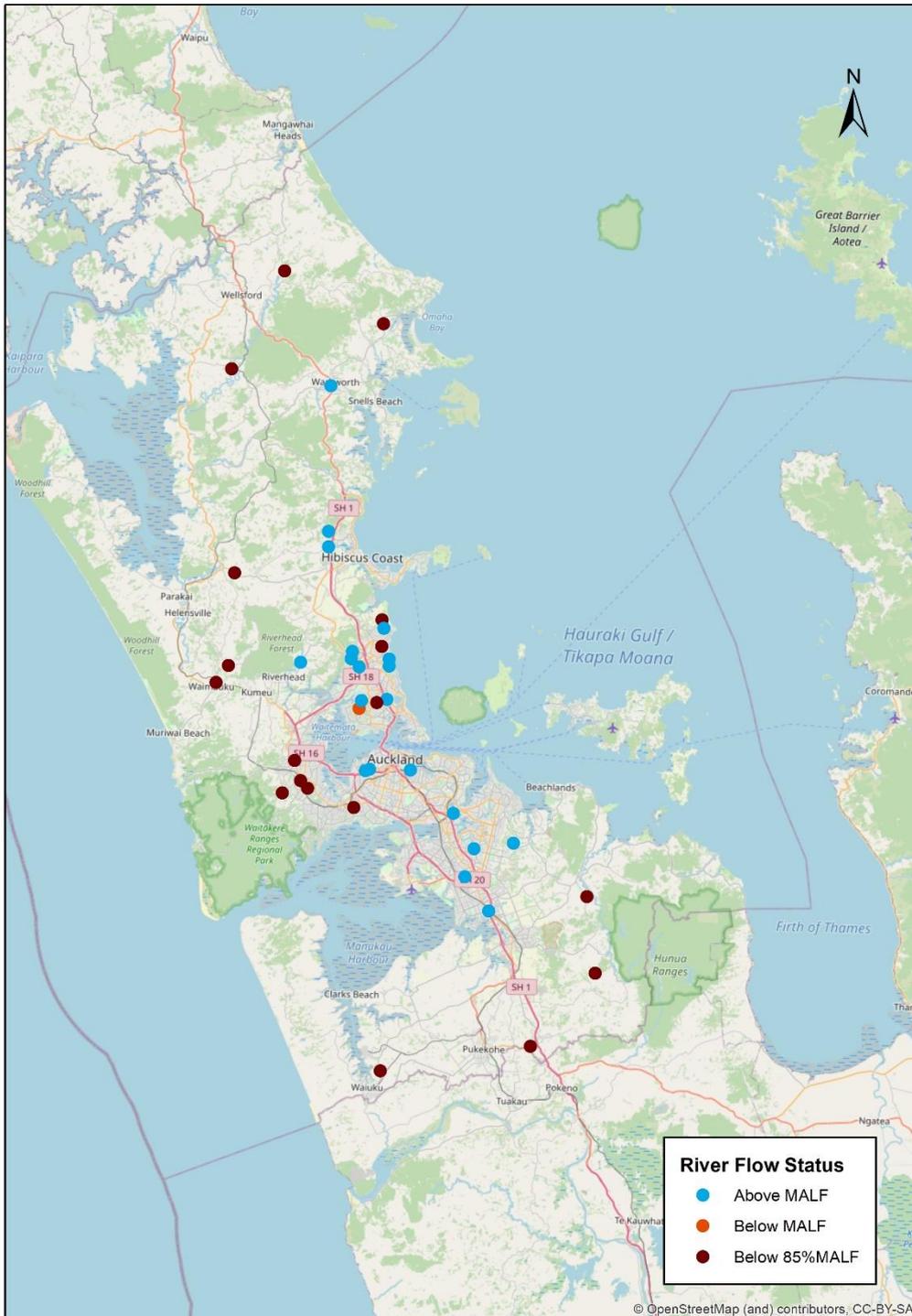


Figure 4: River flow on 1 March 2021 relative to the mean annual low flow (MALF).

Aquifer water levels

Deep aquifers in Waitematā Group, Waiheke greywacke, and Kaawa Formation rocks remain at low levels. Low groundwater levels are also consistently present in aquifers with high irrigation demand. Groundwater monitoring sites and groundwater level category are shown in Figure 5.

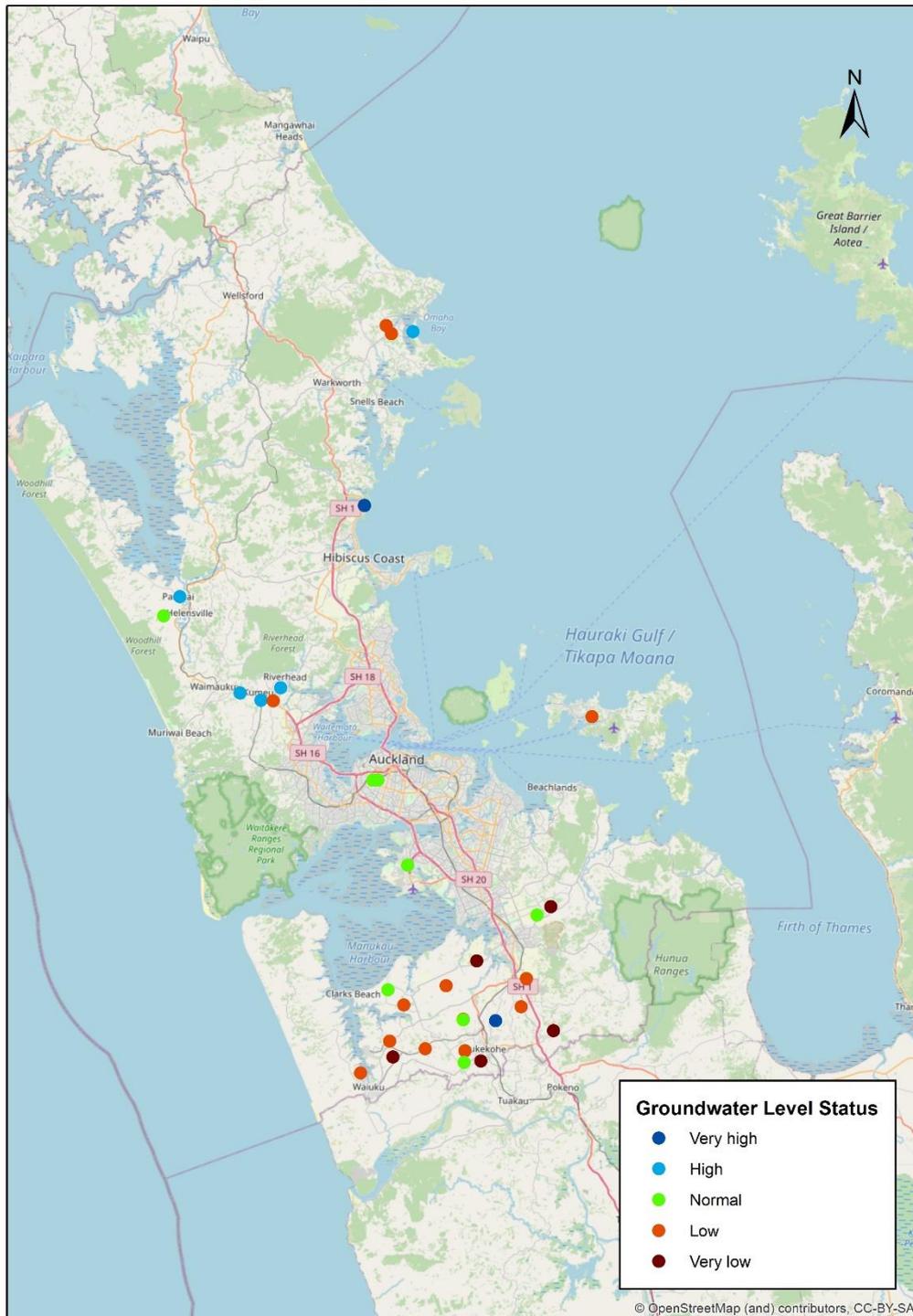


Figure 5: Groundwater levels relative to long-term statistics for 1 March 2021.

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.

Primary contact

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