

Issued
22 February
2021

RIMU Hydrology Situation Report

Research and
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

Regional summary for 15-22 February 2021

No rain was recorded following the event on 15-16 February, making 6 consecutive days of no rain to date. Soil moisture is normal in most locations with only one site near Waiuku below the normal range. River flows receded through the week and fifteen sites are below the mean annual low flow (MALF) with 11 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.

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 1.21 (19 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.

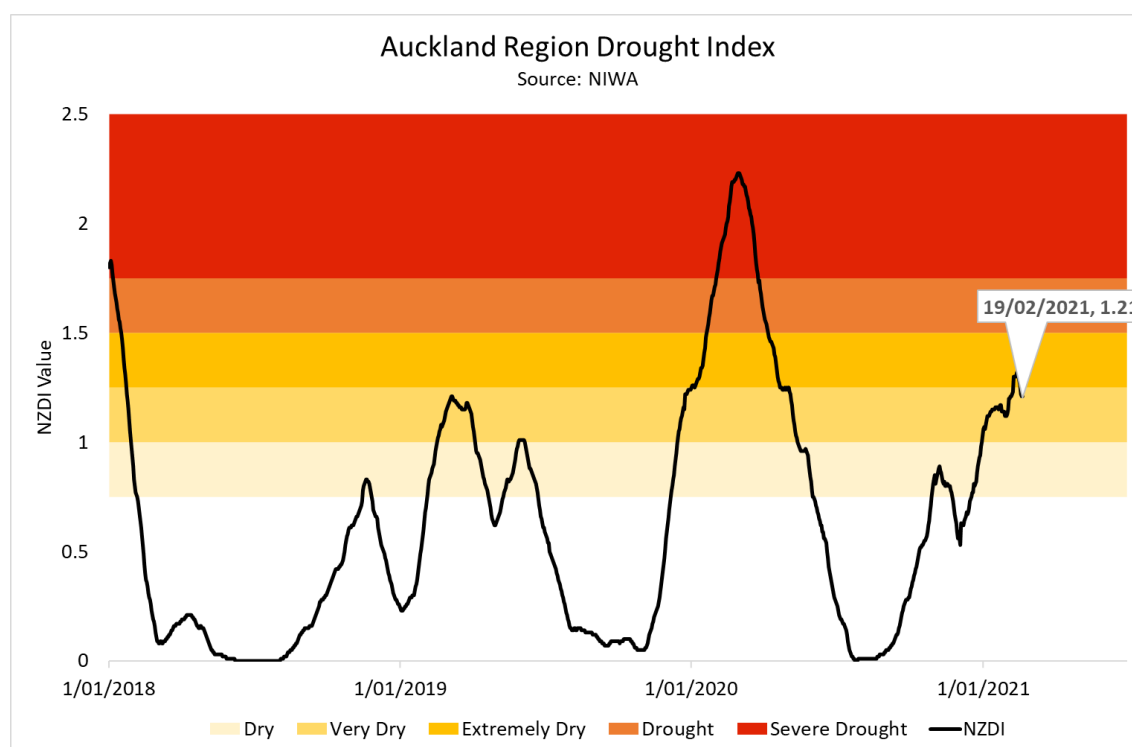


Figure 1: Auckland Region Drought Index 2018-2021 (data source: NIWA).

Rainfall

No rain was recorded after 16 February. Weekly totals for 15-22 February ranged from approximately 10-30mm in the west and 30-60mm in the east (Figure 2).

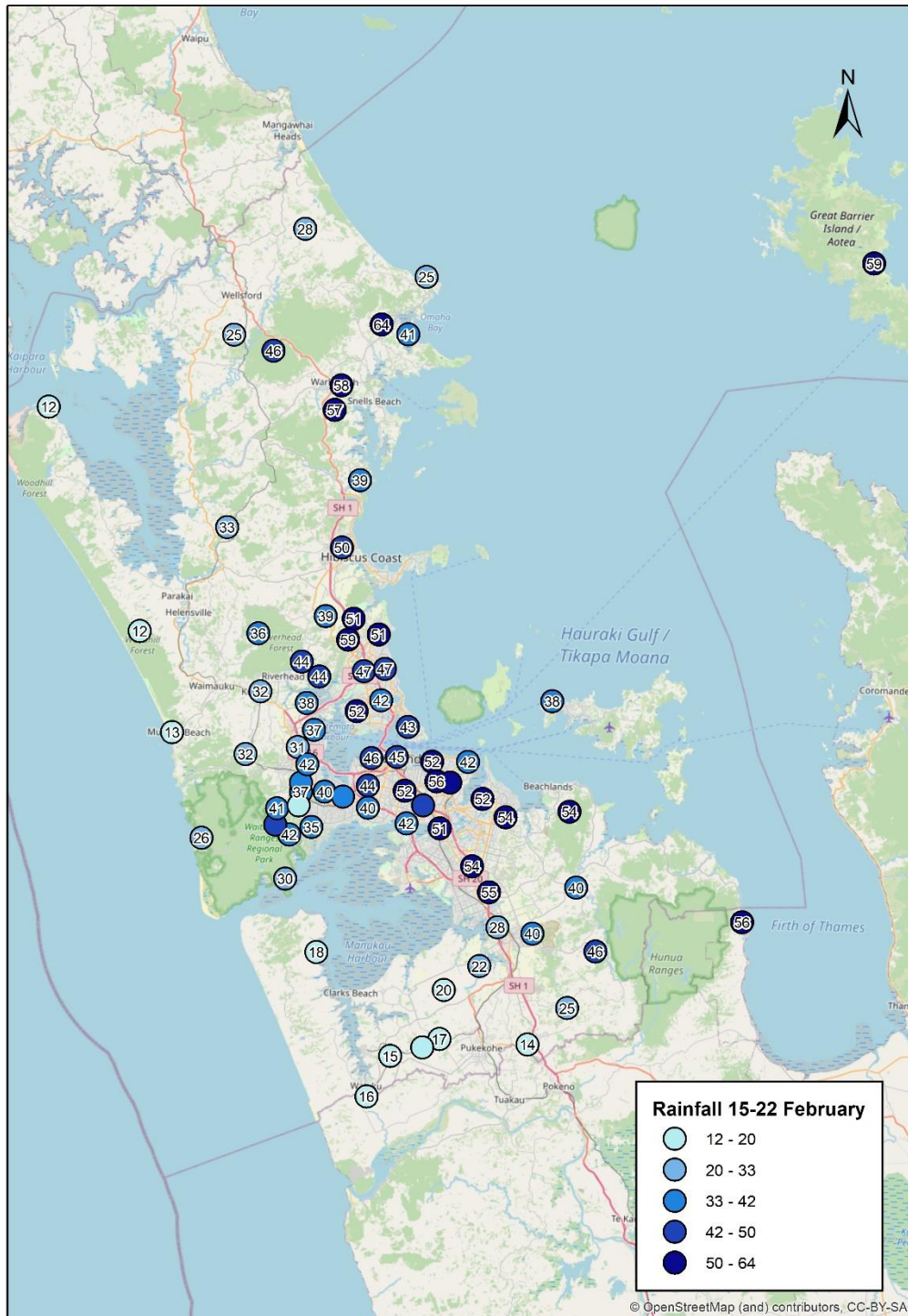


Figure 2: Total rainfall (mm) for the week of 15-22 February 2021.

Soil moisture

Soil moisture was similar to last week, however sites at Awhitu and Waiuku had decreases that led to a drop in category to Normal and Low, respectively (Figure 3).

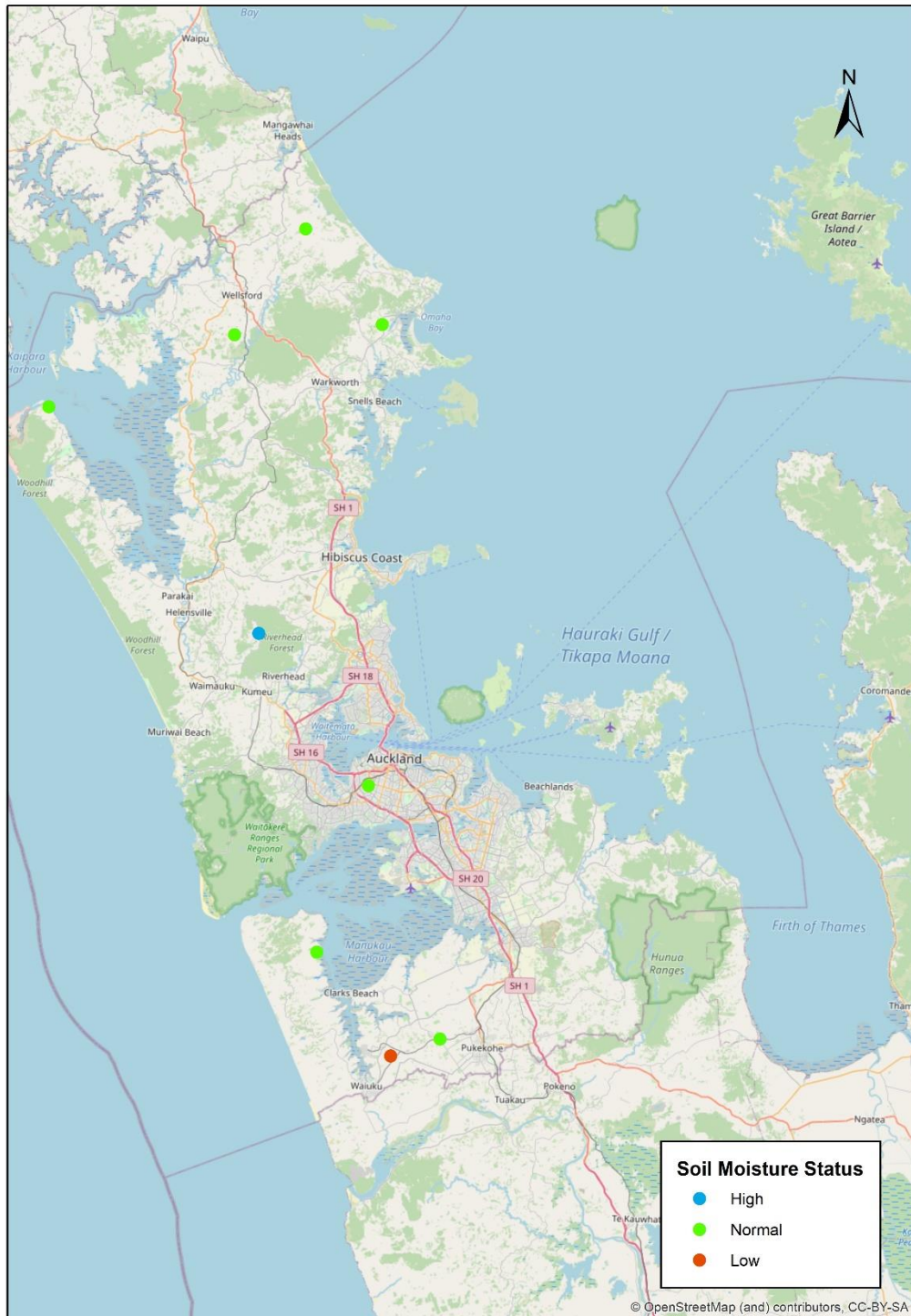


Figure 3: Current soil moisture category relative to long-term statistics for 22 February 2021.

River flows

River flows decreased throughout the region with no rainfall since 16 February. Fifteen sites fell below the mean annual low flow (MALF). Eleven of the fifteen 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.

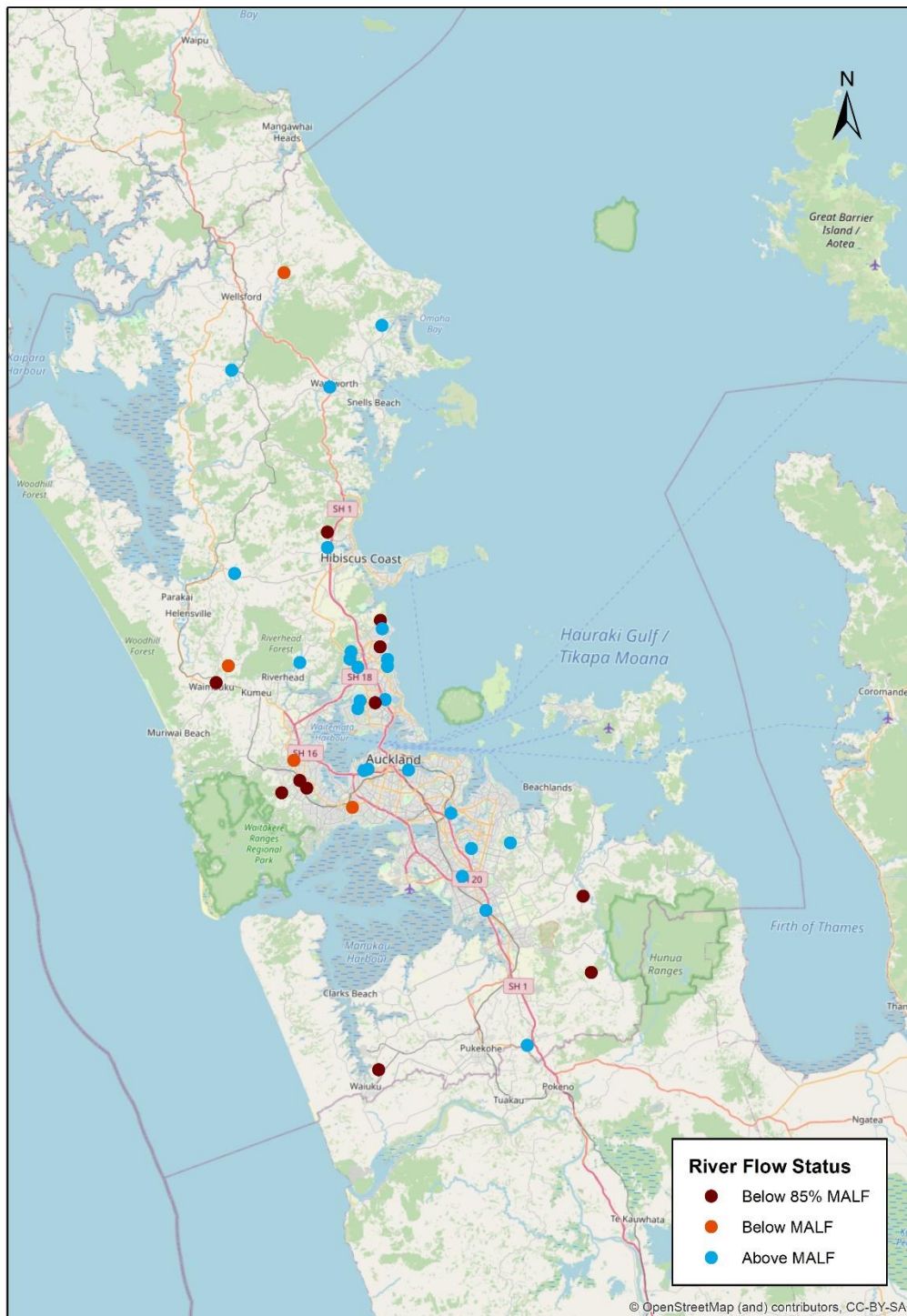


Figure 4: River flow on 22 February 2021 relative to the mean annual low flow (MALF).

Aquifer water levels

Groundwater levels are consistent with the last report. Deep aquifers in Waitematā Group, Waiheke greywacke, and Kaawa Formation rocks remain at low levels. Groundwater monitoring sites and groundwater level category are shown in Figure 5.

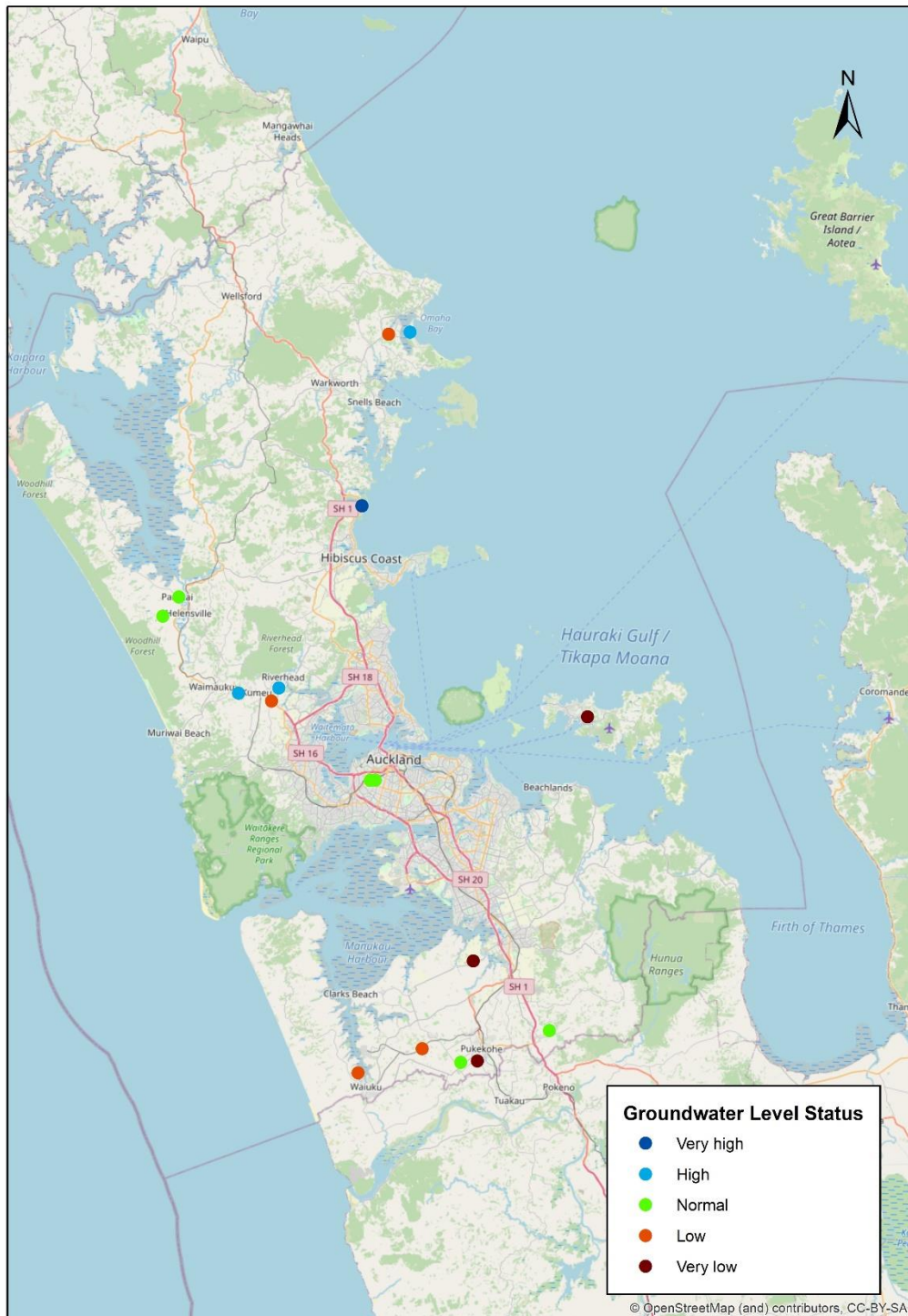


Figure 5: Groundwater levels relative to long-term statistics for 22 February 2021.

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

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

Find out more: phone 09 301 0101, email
rimu@aucklandcouncil.govt.nz or visit
aucklandcouncil.govt.nz and knowledgeauckland.org.nz