



Issued
15 March
2021

RIMU Hydrology Situation Report

Research and
Evaluation Unit

RIMU

Auckland
Council
Te Kauhine o Tamaki Makaurau

Rainfall | Soils | Rivers | Aquifers

Regional summary for 8-15 March 2021

Rainfall was recorded at all sites in the region, but almost all weekly totals were less than 10mm. Soil moisture for six sites remains in the normal range and three sites are in the low range. River flows dropped from last week with 17 sites below the mean annual low flow (MALF), 16 of which are 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 are in Franklin and 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 0.79 (13 March 2021), within the first NZDI category of Dry (0.75-1.00). A chart of the NZDI for the Auckland region is shown in Figure 1.

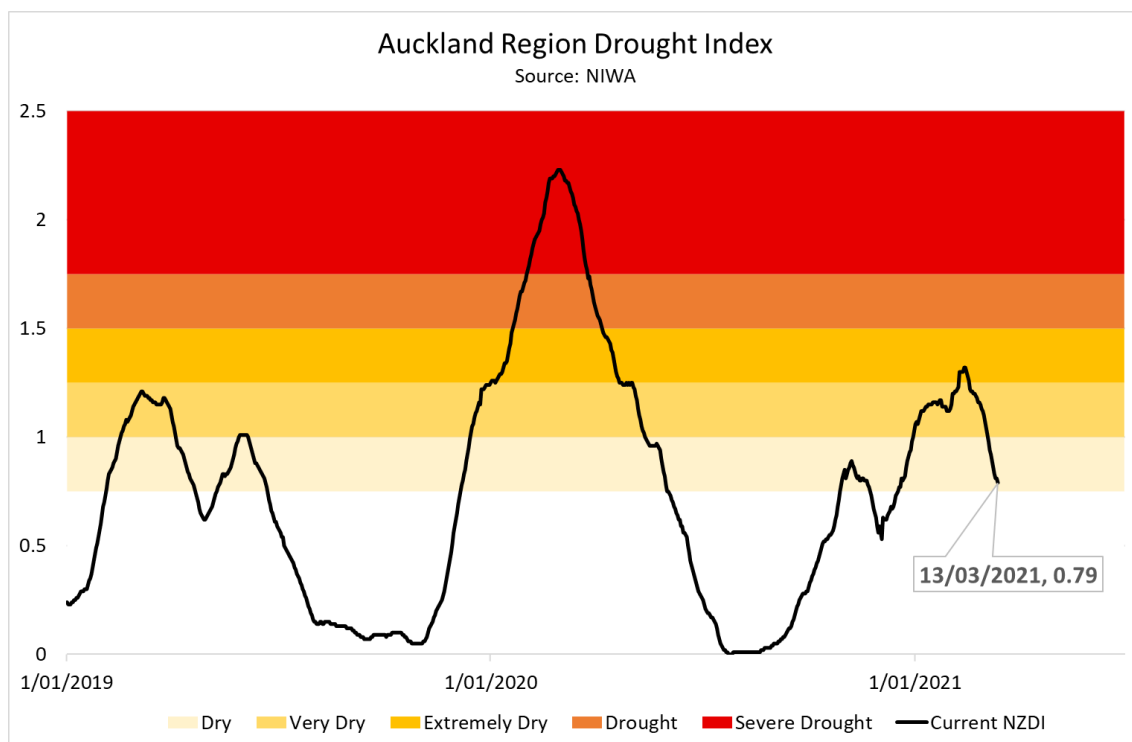


Figure 1: Auckland Region Drought Index 2019-2021 (data source: NIWA).

Rainfall

Rainfall for the week 8-15 March ranged from 2 to 24mm. Only eight sites recorded greater than 10mm total weekly rainfall (Figure 2).

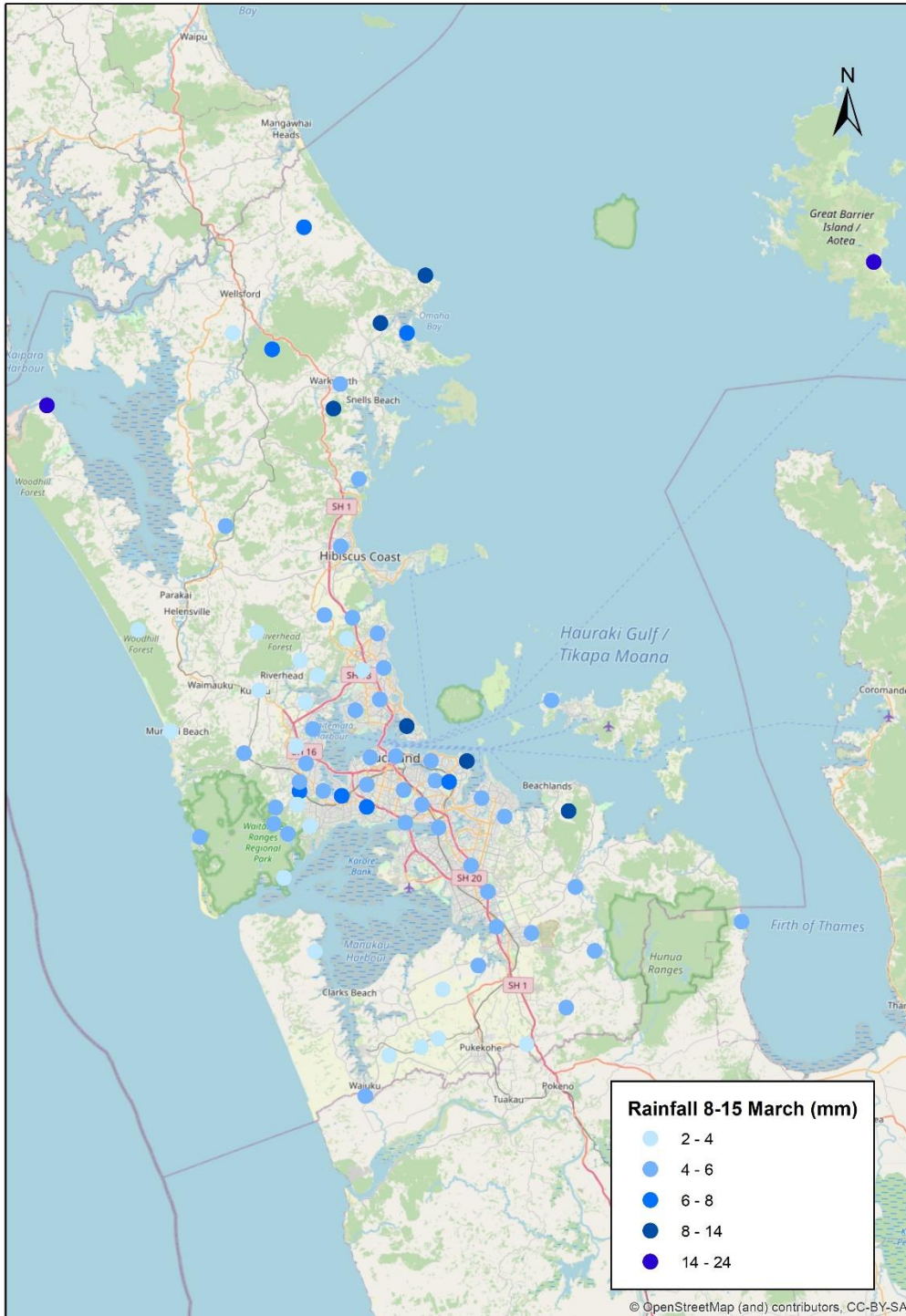


Figure 2: Total rainfall (mm) for the week of 8-15 March 2021.

Soil moisture

Soil moisture decreased slightly at most sites and three sites in the central and southern parts of the region are at low soil moisture levels (Figure 3).

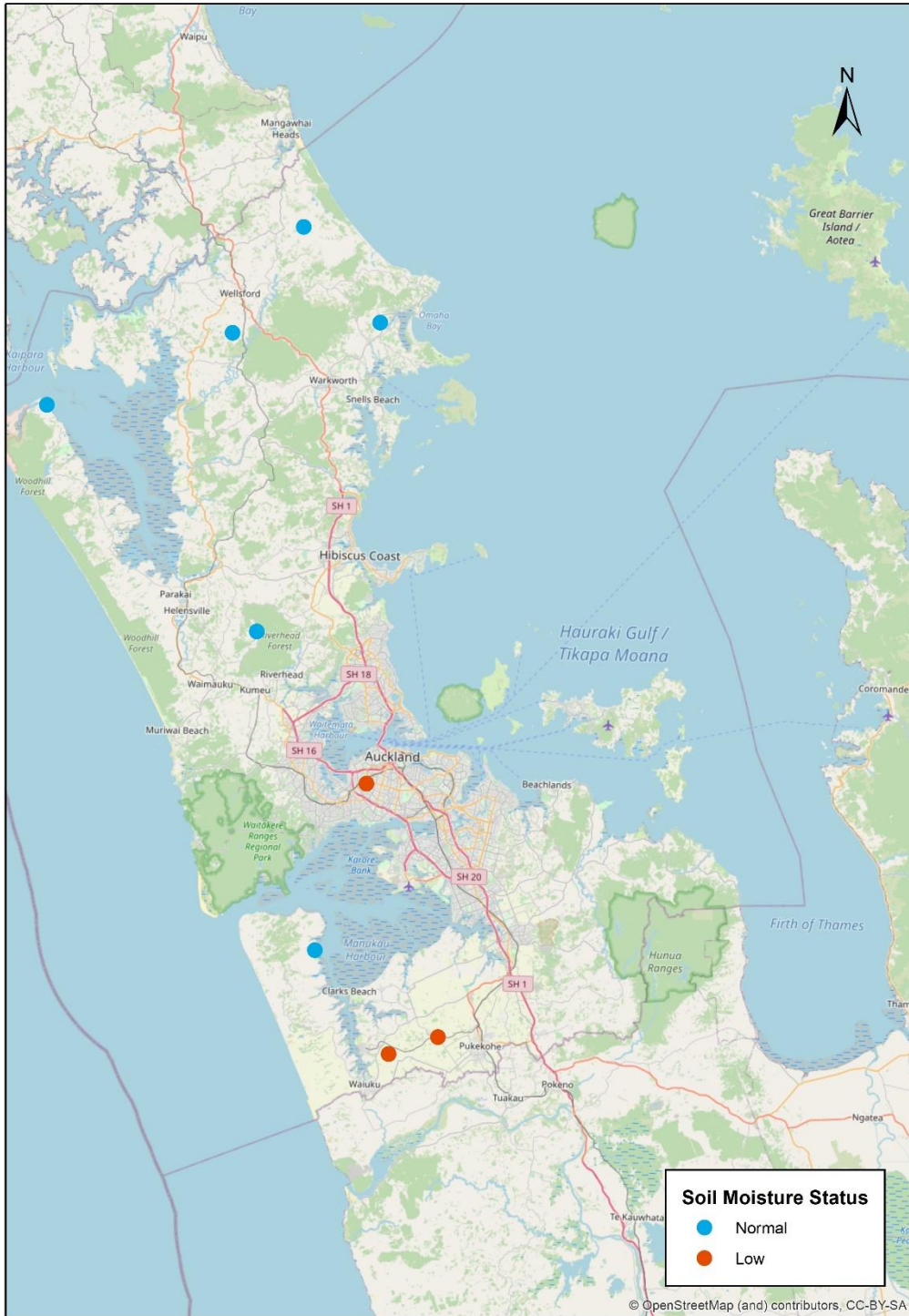


Figure 3: Current soil moisture category relative to long-term statistics for 15 March 2021.

River flows

River flows decreased throughout the region. Seventeen sites are below the mean annual low flow (MALF) with 16 of those sites below 85% MALF, which is the default guideline minimum flow in the Auckland Unitary Plan (AUP). The locations of sites and the flow relative to MALF are shown in Figure 4.

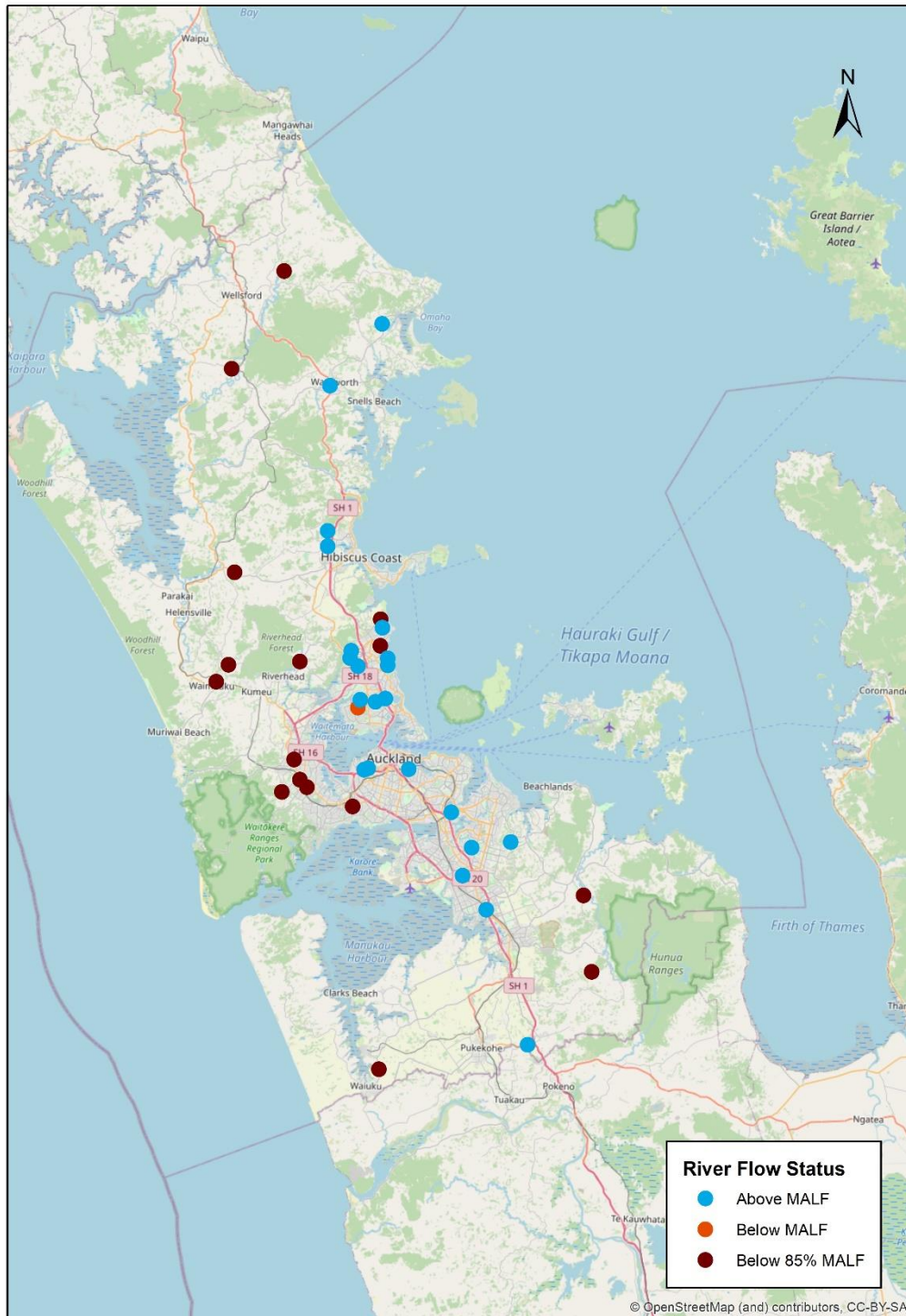


Figure 4: River flow on 15 March 2021 relative to the mean annual low flow (MALF).

Aquifer water levels

Deep aquifers in the Waitematā Group, Waiheke greywacke, and Kaawa Formation rocks remain at low levels. 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.

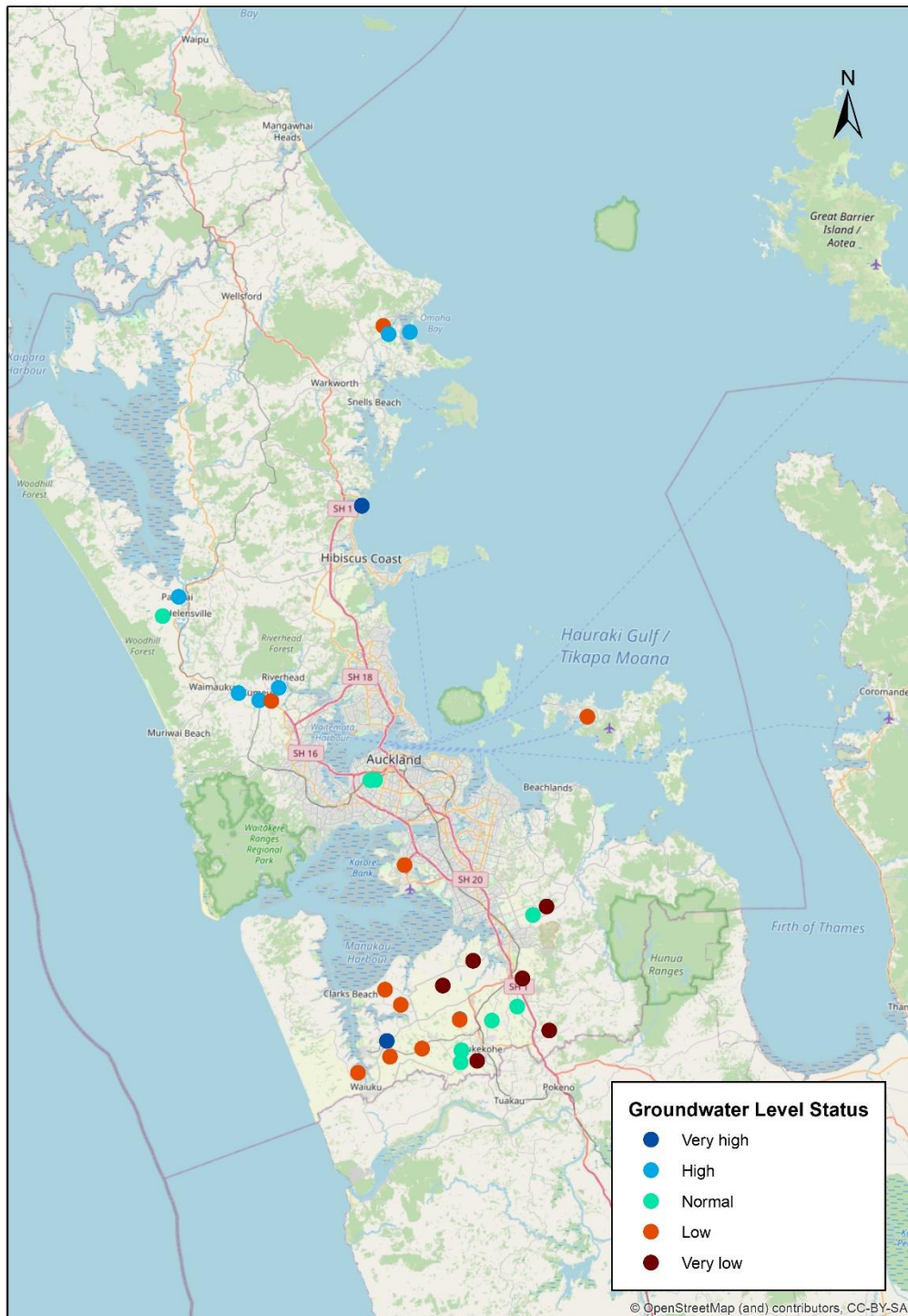


Figure 5: Groundwater levels relative to long-term statistics for 15 March 2021.

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.

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