

Issued
12 April
2021

RIMU Hydrology Situation Report

Research and
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

Regional summary for 5-12 April 2021

The regional average rainfall for the past week was 28mm, with many sites exceeding 30mm. Soil moisture at all sites is within the normal range. All rivers are above the mean annual low flow (MALF), except for the Taiaotea Stream. 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 0.86 (9 April 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.

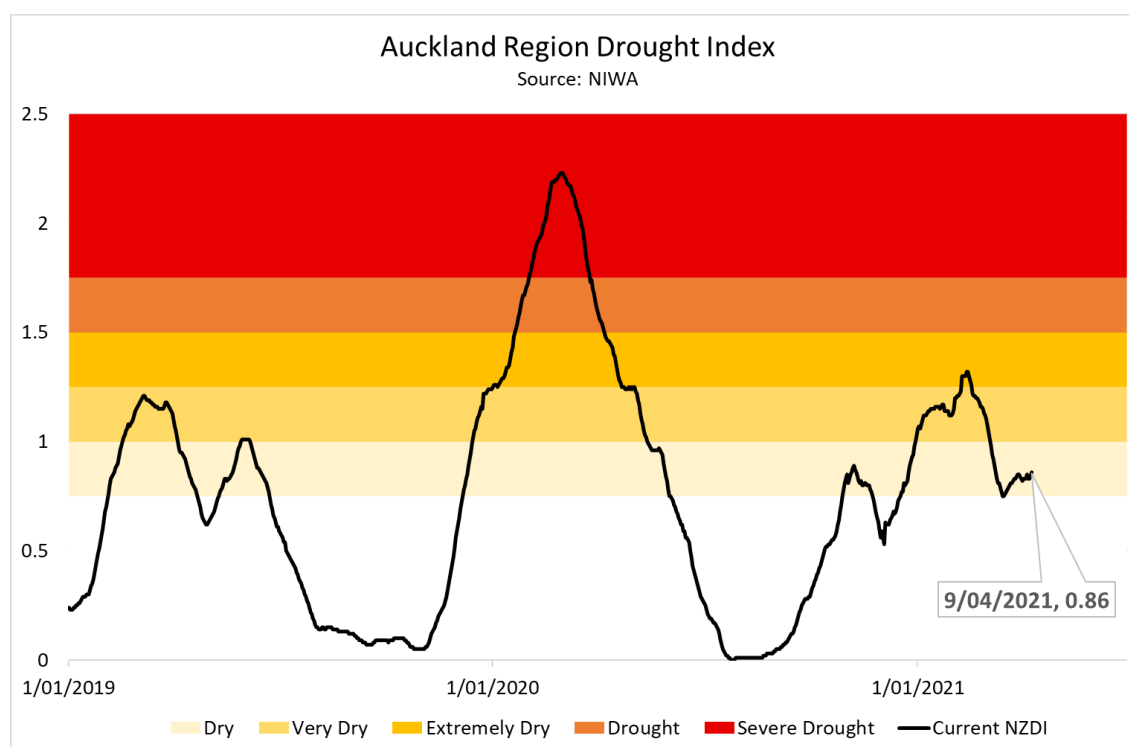


Figure 1: Auckland Region Drought Index 2019-2021 (data source: NIWA).

Rainfall

Rainfall for the period 5-12 April ranged from 17 to 60mm with a regional average of 28mm. The highest weekly totals were on Aotea Great Barrier Island and in the north near Omaha (Figure 2).

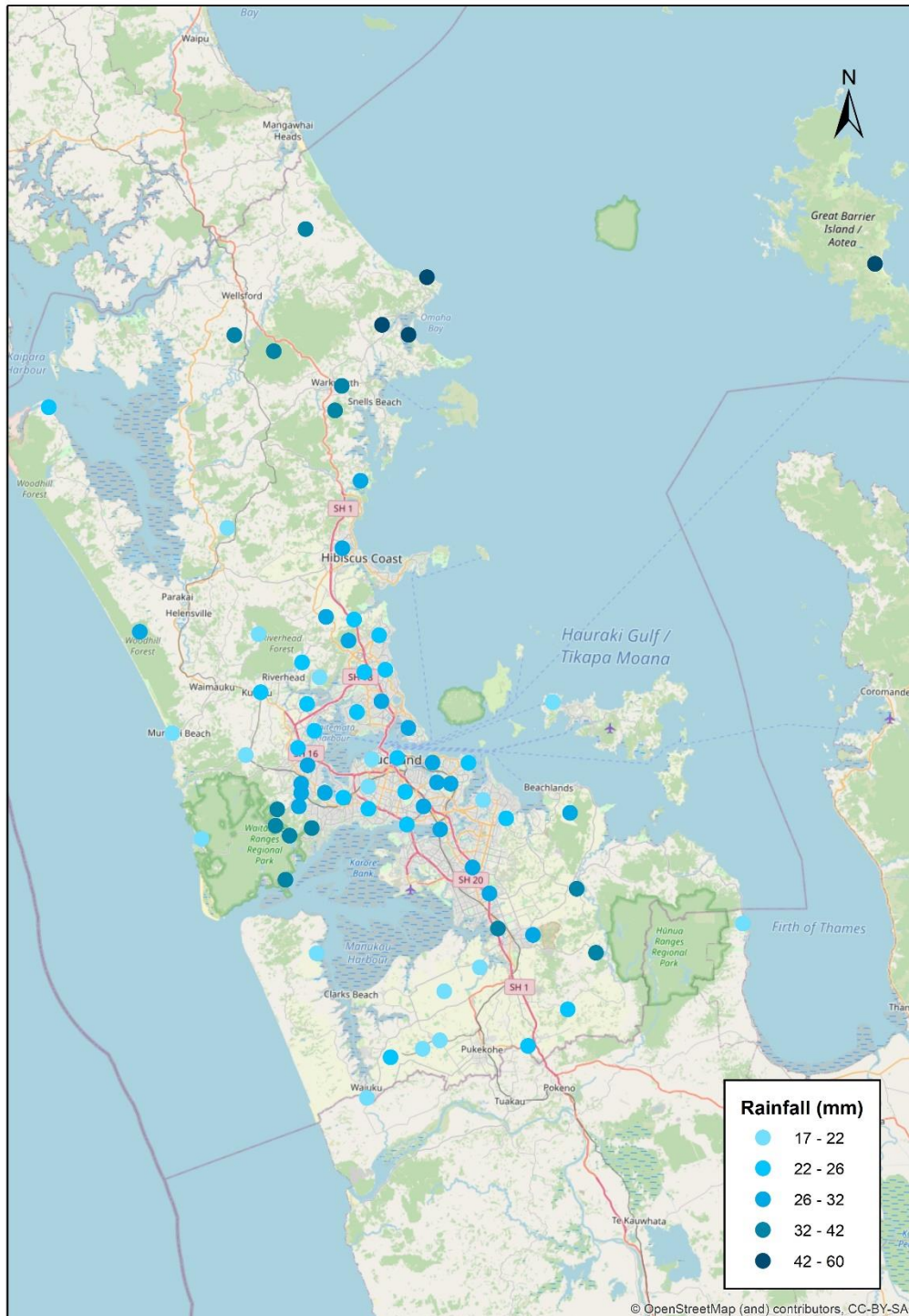


Figure 2: Total rainfall (mm) for the period 5-12 April 2021.

Soil moisture

Soil moisture is in the normal range at all sites (Figure 3).

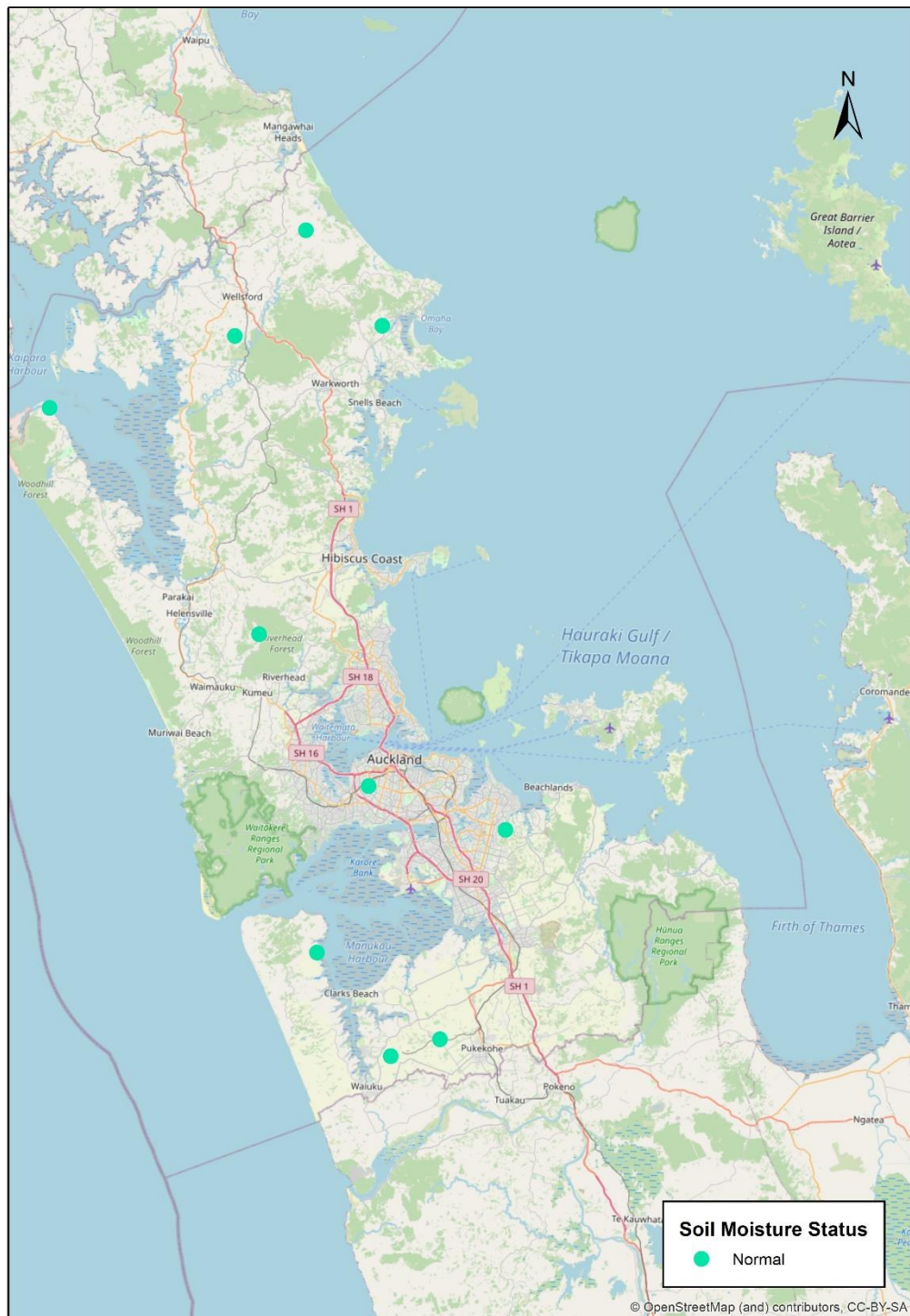


Figure 3: Current soil moisture category relative to long-term statistics for 12 April 2021.

River flows

All sites are above the MALF except for the Taiotea Stream, which is below 85% MALF. The locations of sites and the flow relative to MALF are shown in Figure 4.

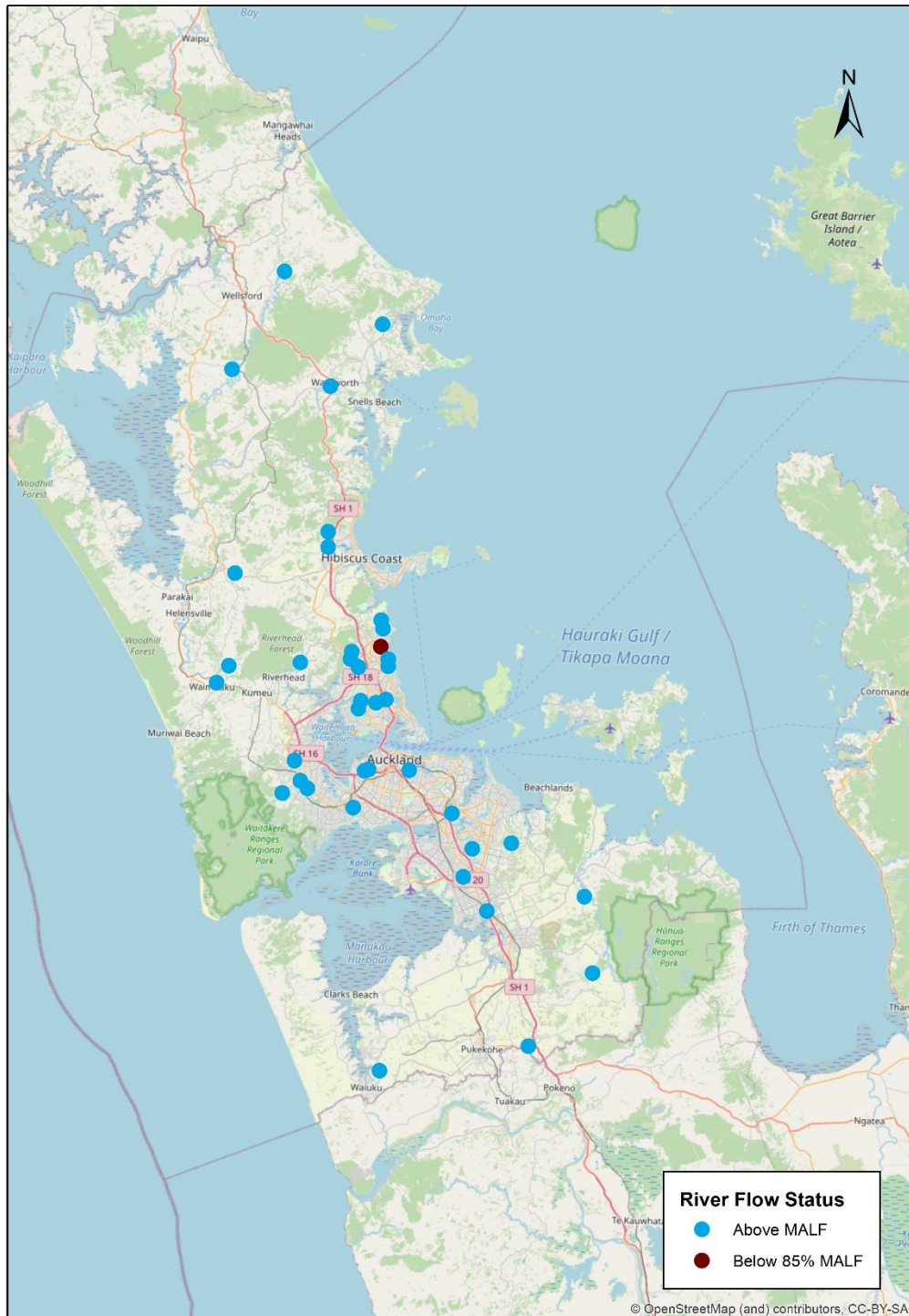


Figure 4: River flow on 12 April 2021 relative to the mean annual low flow (MALF).

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.

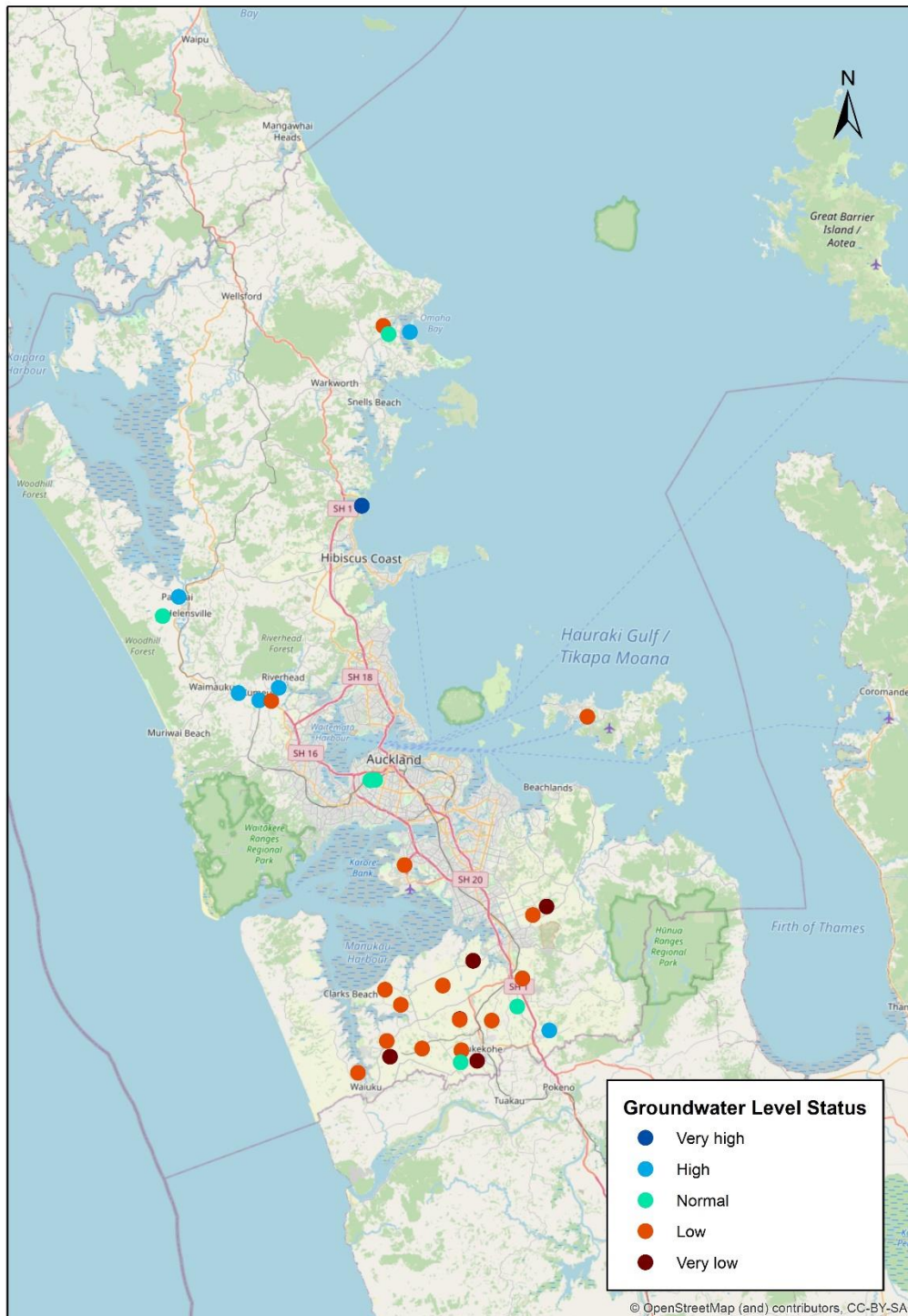


Figure 5: Groundwater levels relative to long-term statistics for 12 April 2021.

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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