

Issued
19 April
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RIMU Hydrology Situation Report

Research and
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

Regional summary for 12-19 April 2021

The New Zealand Drought Index for the Auckland Region has dropped below the first category of Dry. The regional average rainfall for the past week was 25mm, with several 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 0.74 (9 April 2021), which is now 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.

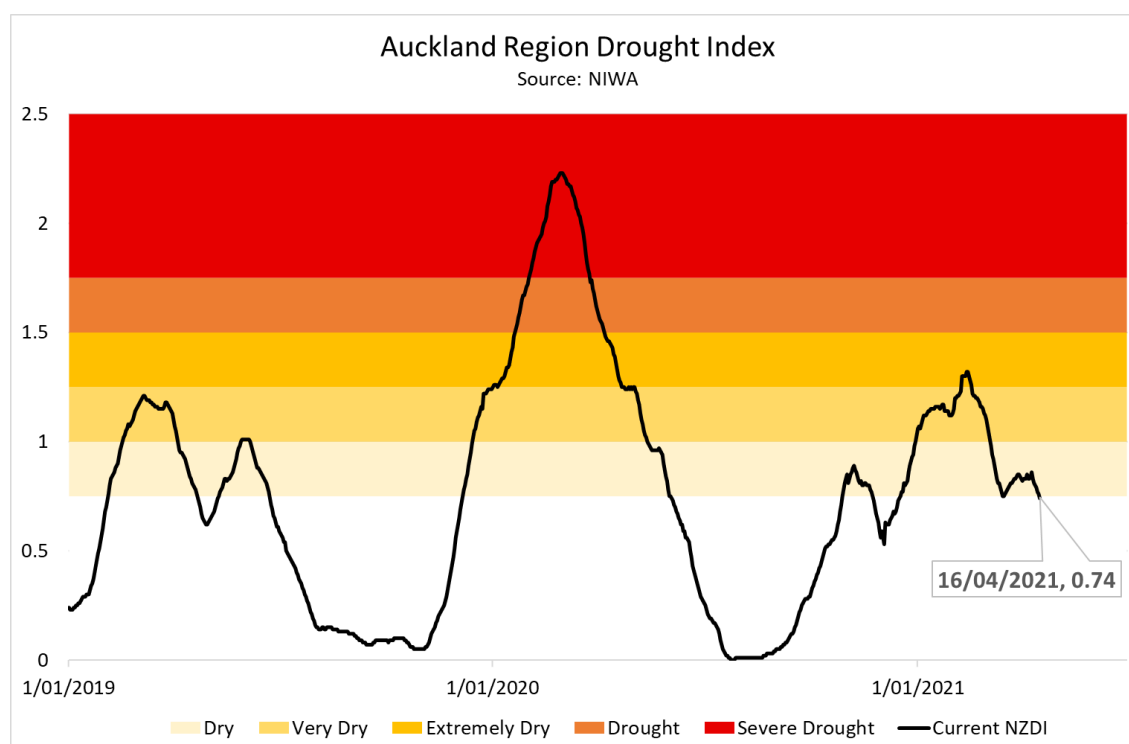


Figure 1: Auckland Region Drought Index 2019-2021 (data source: NIWA).

Rainfall

Rainfall for the period 12-19 April ranged from 12 to 47mm with a regional average of 25mm. The highest weekly totals were in the west and south of the region (Figure 2).

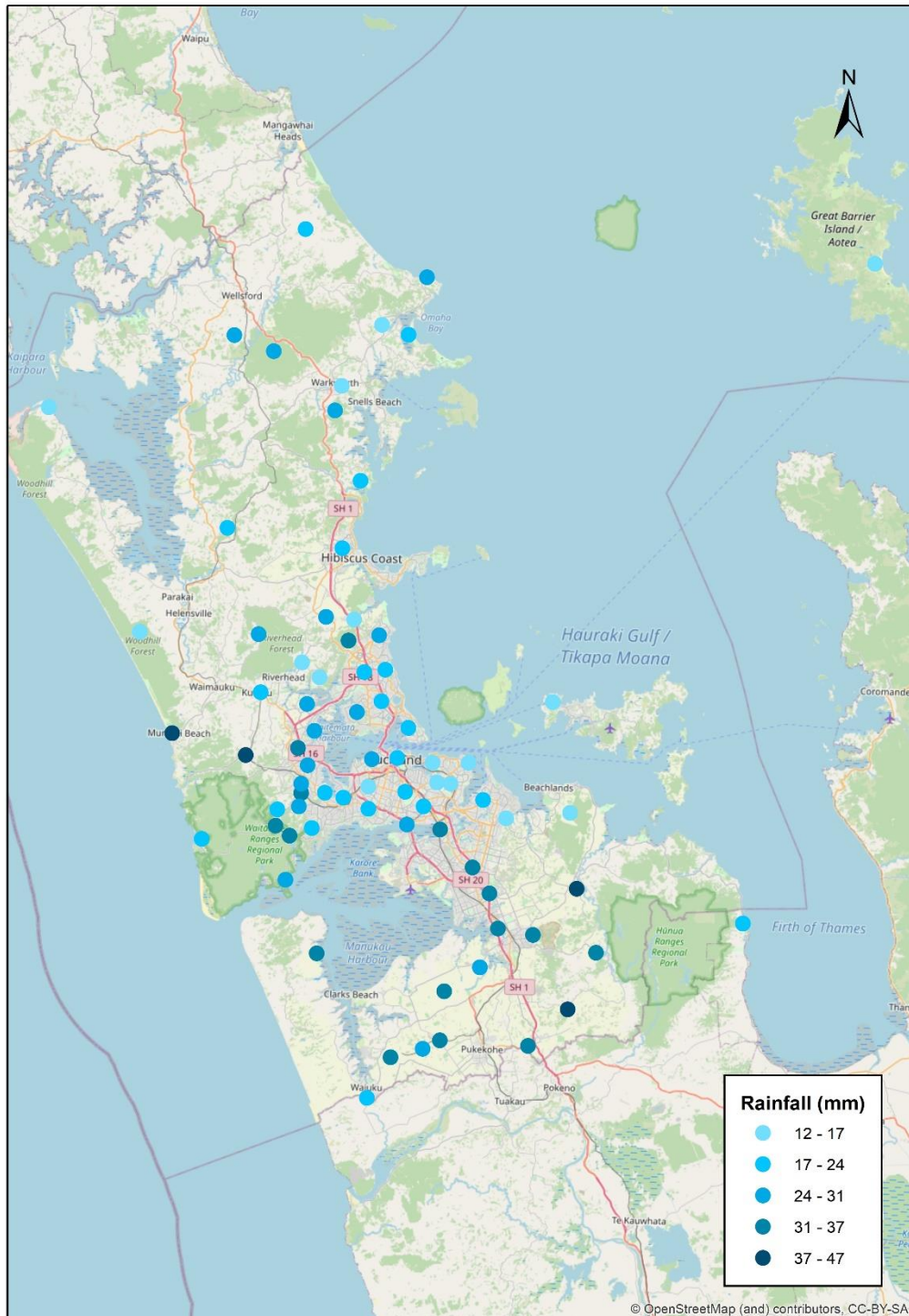


Figure 2: Total rainfall (mm) for the period 12-19 April 2021.

Soil moisture

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

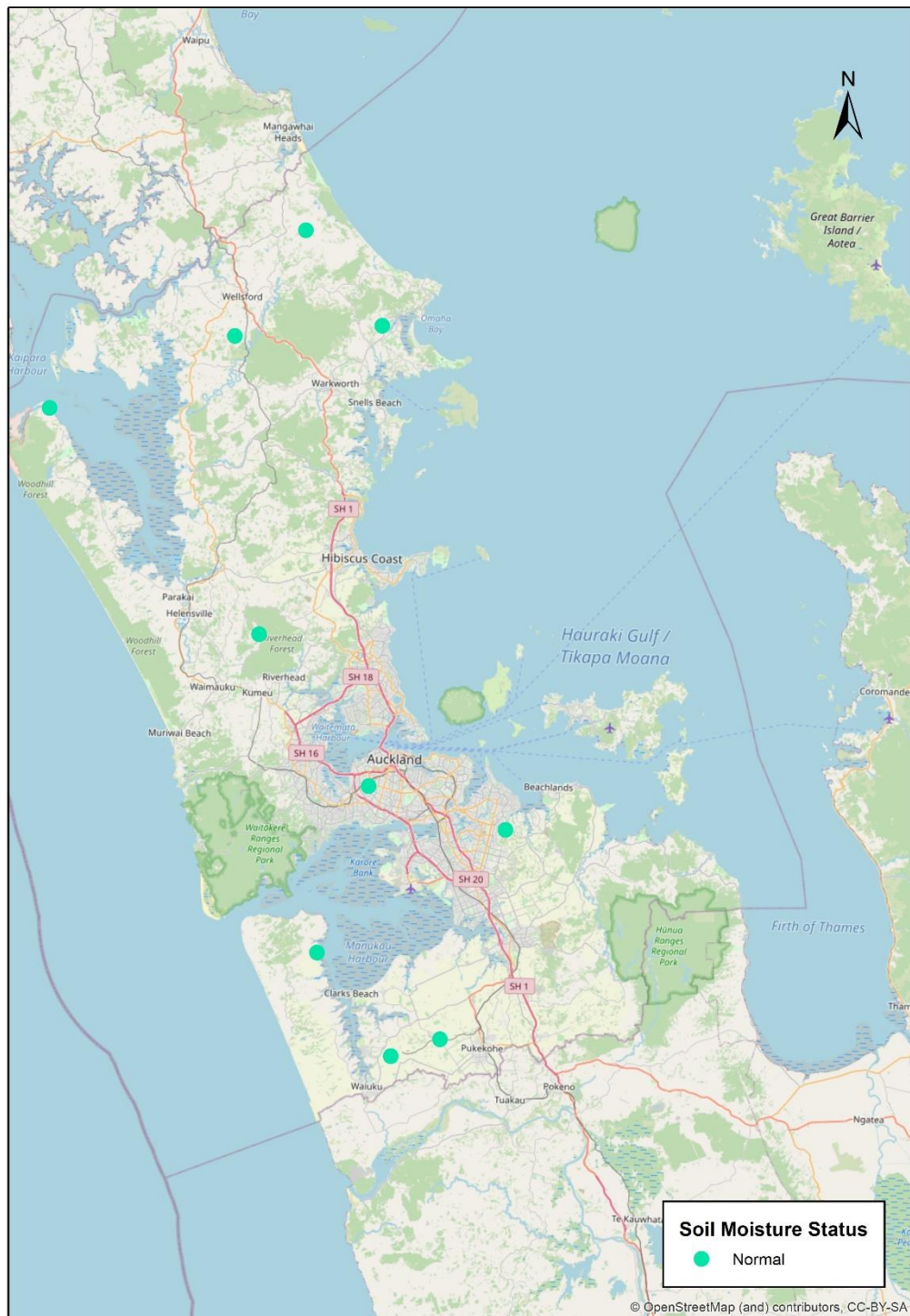


Figure 3: Current soil moisture category relative to long-term statistics for 19 April 2021.

River flows

All sites are above the mean annual low flow (MALF). The locations of sites and the flow relative to MALF are shown in Figure 4.

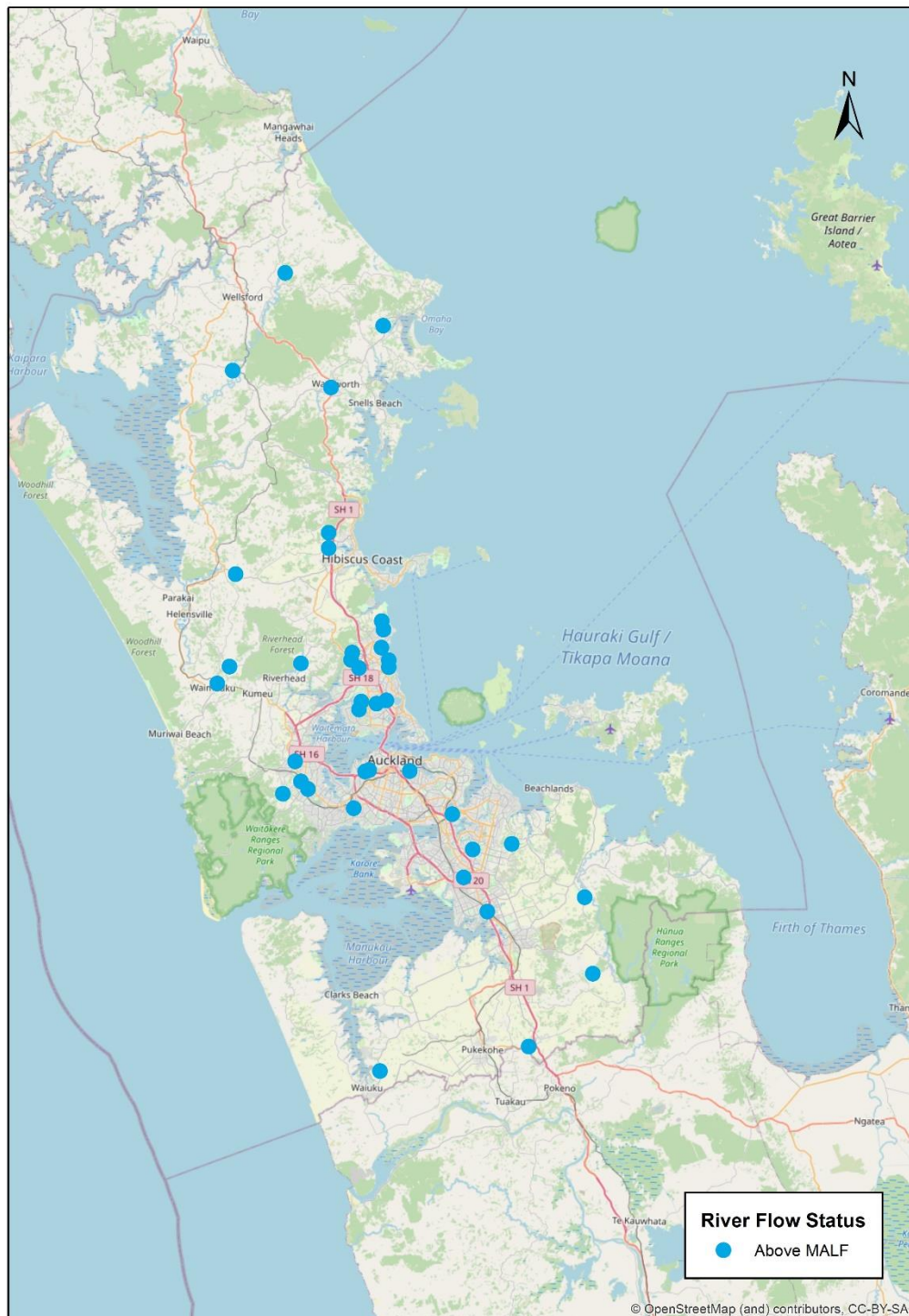


Figure 4: River flow on 19 April 2021 relative to the mean annual low flow (MALF).

Aquifer water levels

Deep aquifers in the Waitematā Group, Waiheke greywacke, and Kaawa Formation rocks remain at low levels. These aquifers are slow to recharge and low water levels affected by recent 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.

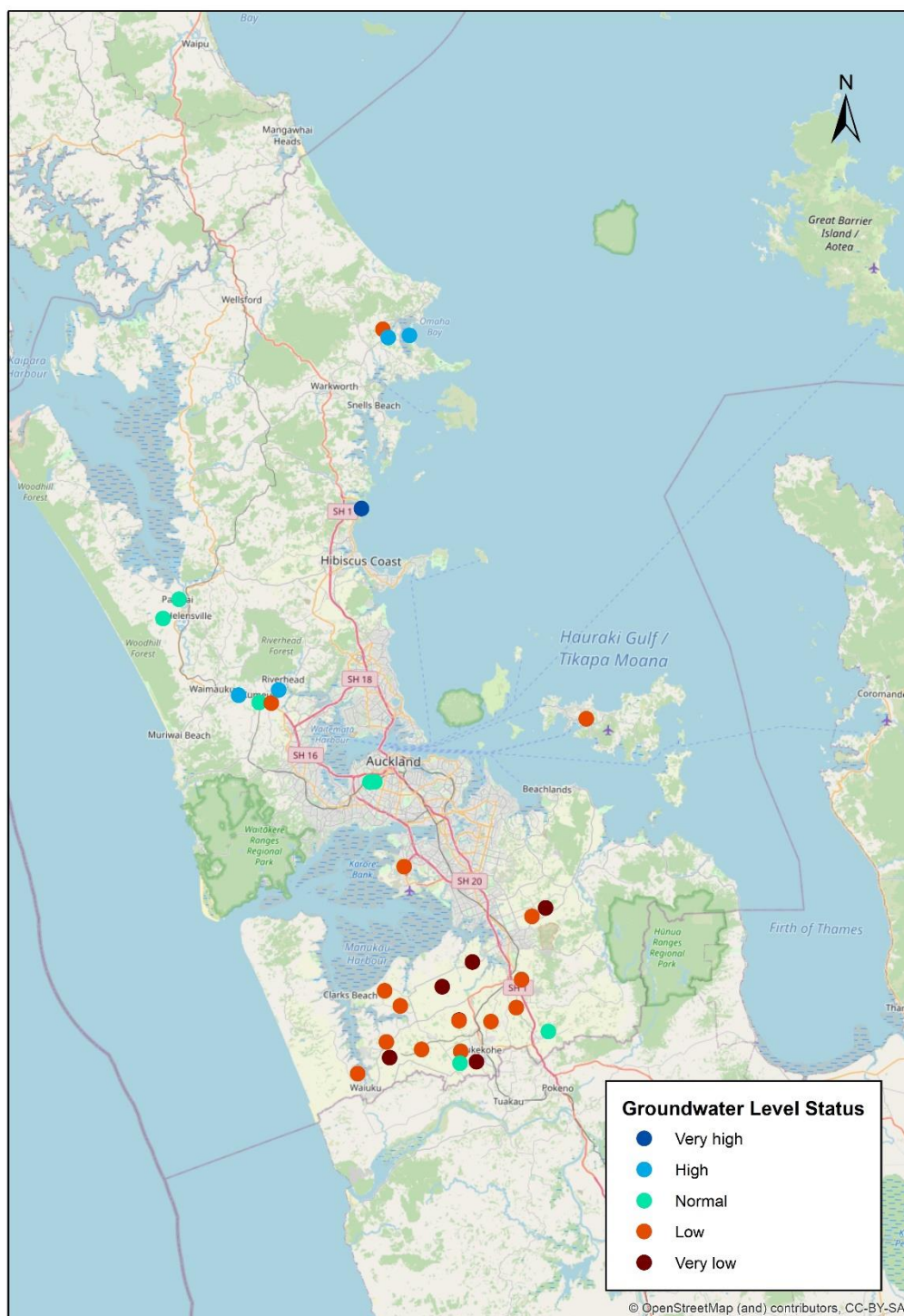


Figure 5: Groundwater levels relative to long-term statistics for 19 April 2021.

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.

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