

Issued
9 February
2021

RIMU Hydrology Situation Report

Research and
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

Regional summary for 2-9 February 2021

Rainfall for the region was low, with most sites having less than 5mm total rainfall in the last week. Soil moisture fell at most sites, with only one remaining in the normal range (all others low or very low). River flows increased slightly due to recent rains, but many sites remain below the mean annual low flow (MALF). This includes 19 sites that are less than the default minimum flow of 85% MALF. Groundwater levels are similar to previous reports, but some decreases were observed in Kaawa and Waitematā aquifers in the south, likely due to irrigation demand.

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 is 1.22 (6 February 2021), which is within the second NZDI category of Very Dry (1.0-1.25). A chart of the NZDI for the Auckland region is shown in Figure 1.

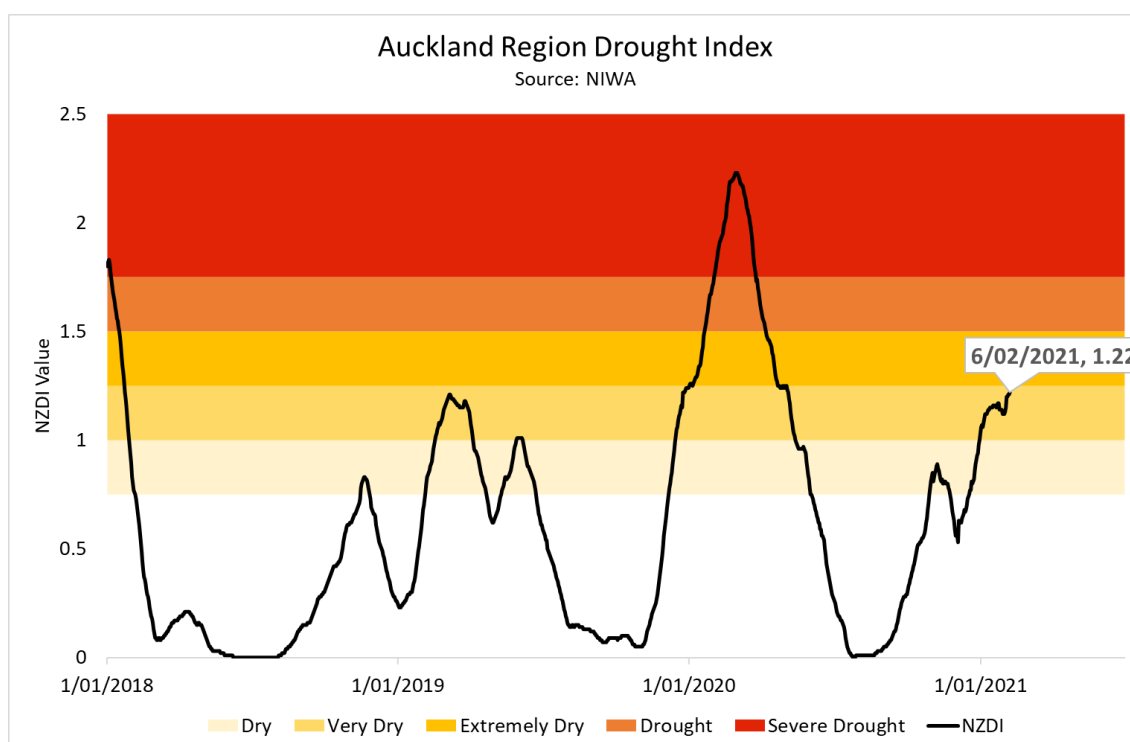


Figure 1: Auckland Region Drought Index 2018-2021 (data source: NIWA).

Rainfall

Rainfall was low across the region, with most sites recording less than 5mm in the last week (Figure 2).

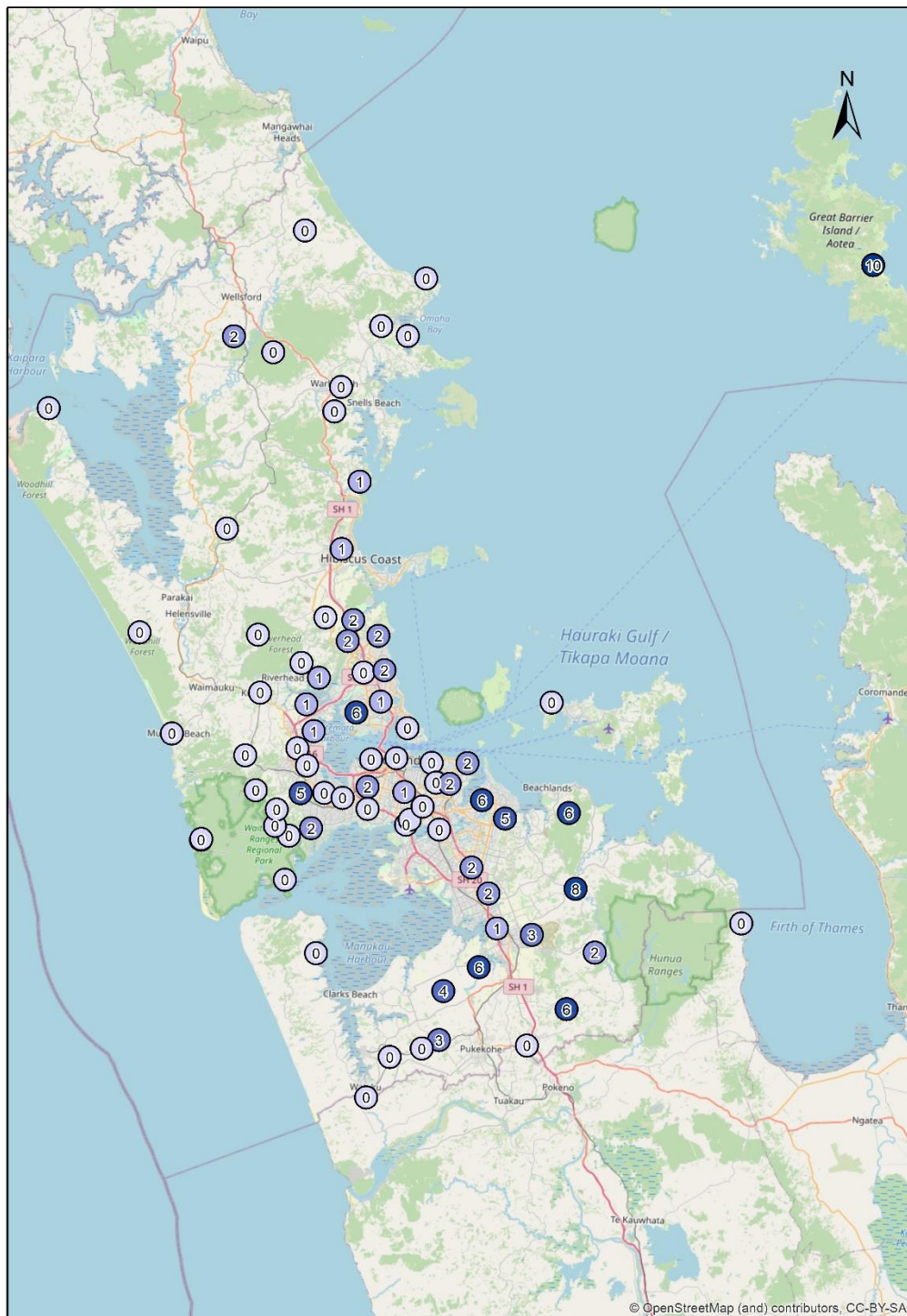


Figure 2: Total rainfall (mm) for the week of 2-9 February 2021.

Soil moisture

Only one soil moisture sensor near Wellsford is recording levels in the normal range for early February (Figure 3). The remaining nine sites are either at low or very low soil moisture levels.

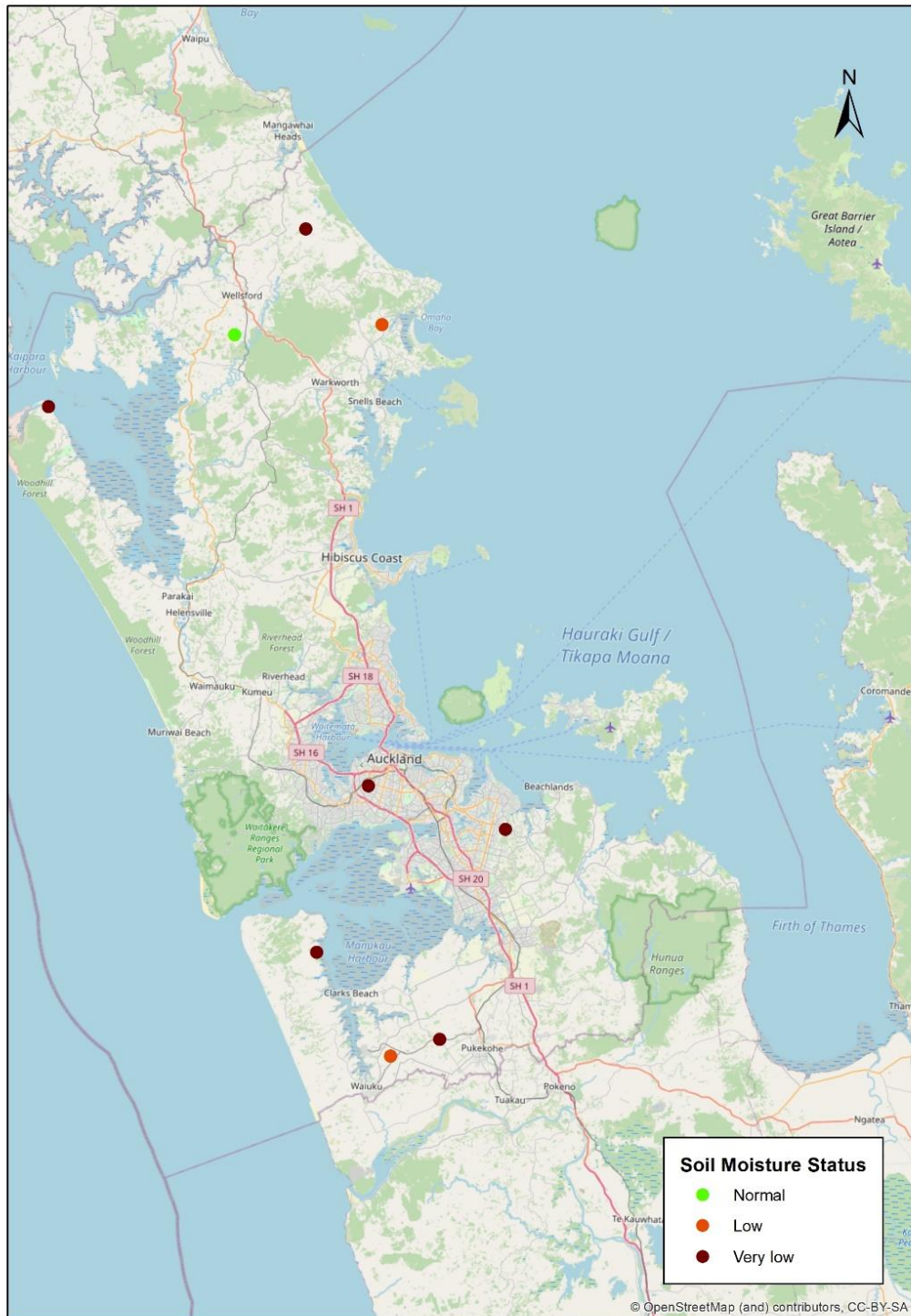


Figure 3: Current soil moisture category relative to long-term statistics for 9 February 2021.

River flows

River flows had small increases in some locations due to recent rainfall. Five sites that were below the mean annual low flow (MALF) last week have increased to above MALF today. Twenty-four of 39 monitored sites are currently below MALF. Nineteen sites had flows below the default minimum flow of 85% MALF set in Appendix 2 of the Auckland Unitary Plan (the same number as last week). The locations of sites and the flow relative to MALF are shown in Figure 4.

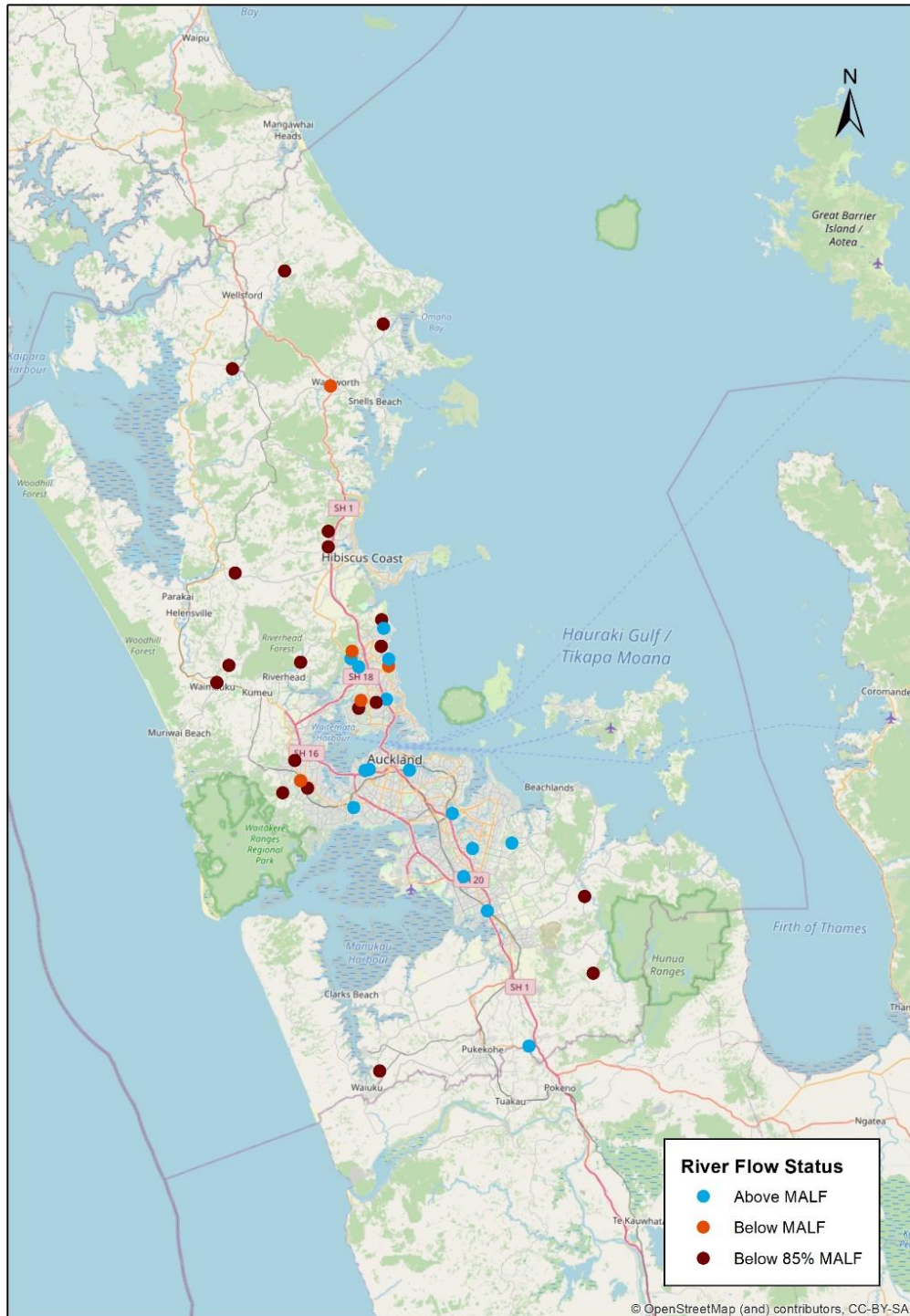


Figure 4: River flow on 9 February 2021 relative to the mean annual low flow (MALF).

Aquifer water levels

Groundwater levels are similar to the last report; however, decreases were noted in some Kaawa and Waitematā aquifers in south Auckland that have high irrigation demand. Groundwater monitoring sites and groundwater level category are shown in Figure 5.

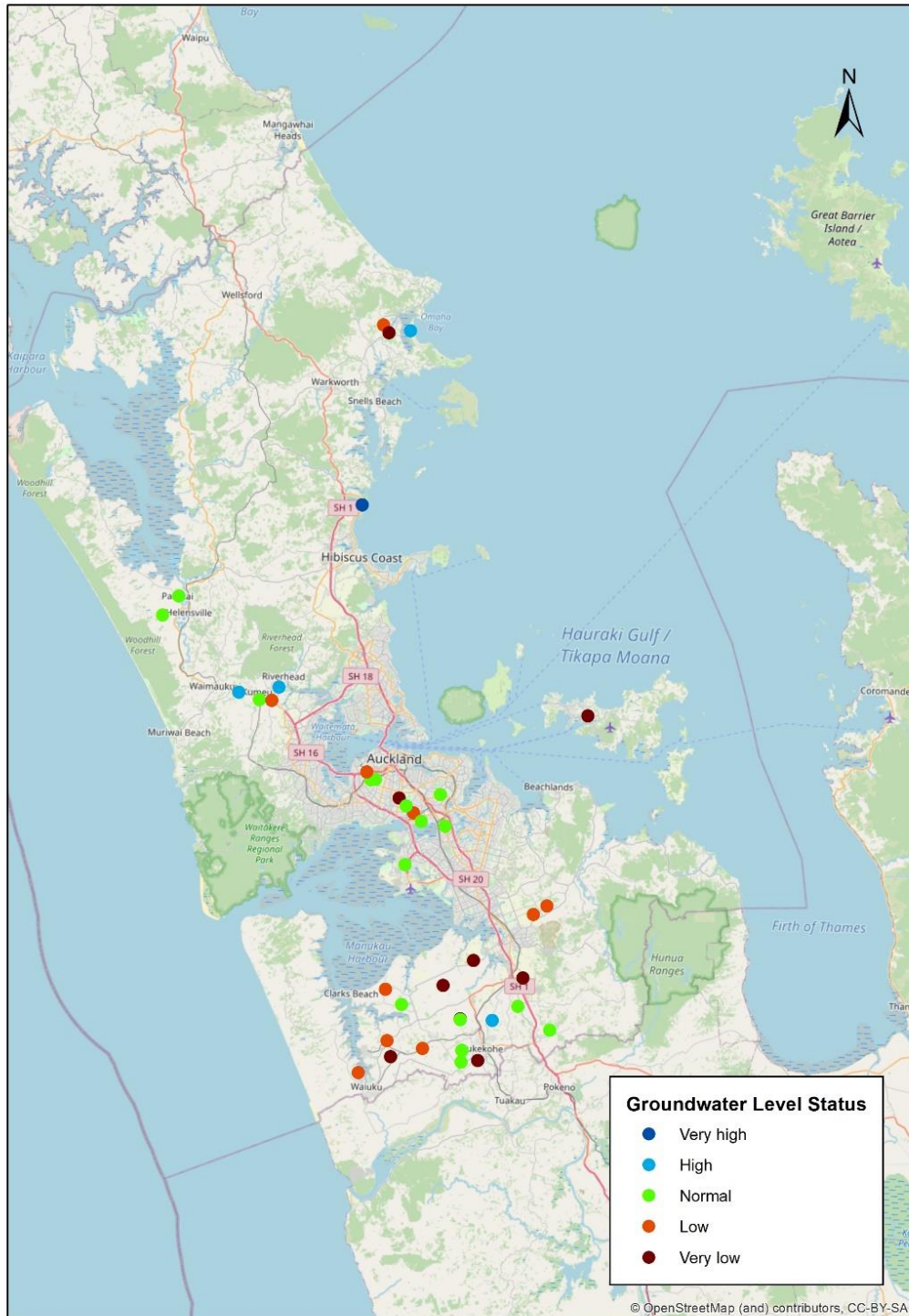


Figure 5: Groundwater levels relative to long-term statistics for 9 February 2021.

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.

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