

Issued
7 March
2022

Auckland Hydrology Situation Report

Research and
Evaluation Unit

RIMU



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Regional summary

The New Zealand Drought Index for the Auckland Region has dropped to the lowest category of Dry. Regional monthly rainfall for February was approximately 20% above the long-term average. Most soil moisture sites are in the Normal range, however three sites have a Low or Very Low status. River flows are variable, with 17 below the mean annual low flow (MALF), 15 of which are below 85% MALF. Groundwater levels vary across the region but have dropped at several locations. Many sites in the deep aquifers in the south of the region are at a Very Low status.

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 0.85 (4 March 2021), which is in the NZDI category of Dry (1.00-1.25). A chart of the NZDI for the Auckland region is shown in Figure 1.

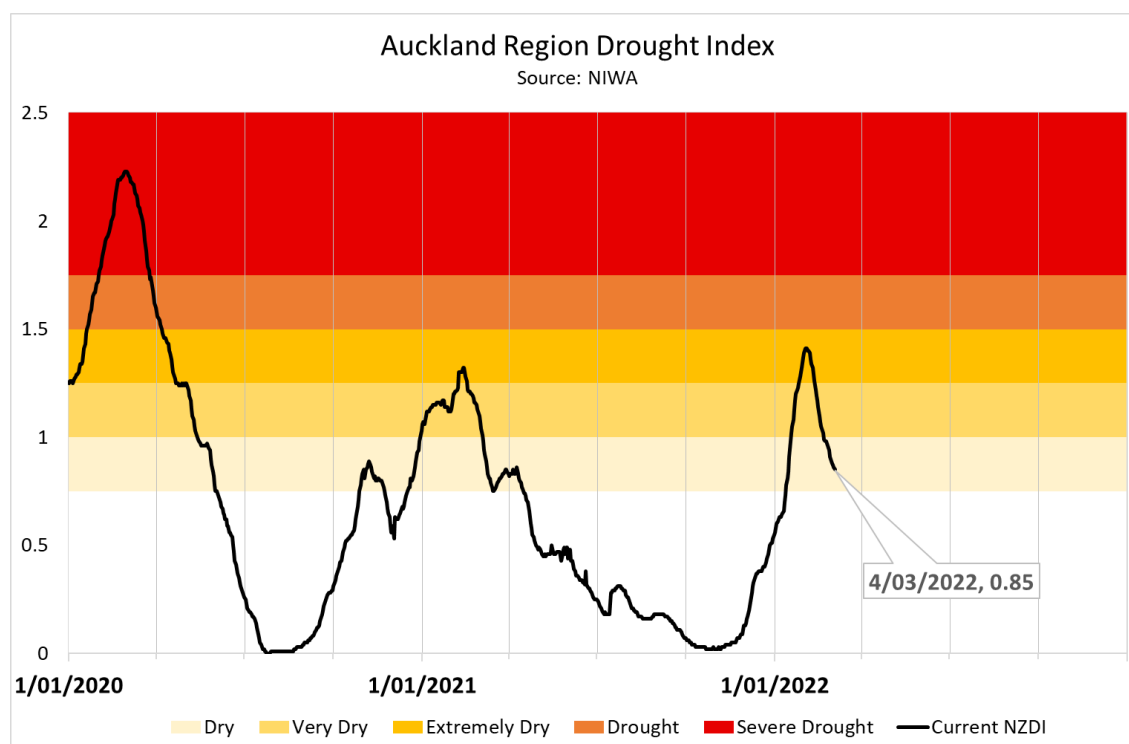


Figure 1: Auckland Region Drought Index 2020-2022 (data source: NIWA).

Rainfall

Rainfall for February 2022 ranged from 44mm to 155mm with a regional average of 84.5mm, approximately 20% above the long-term regional average (Figure 2).

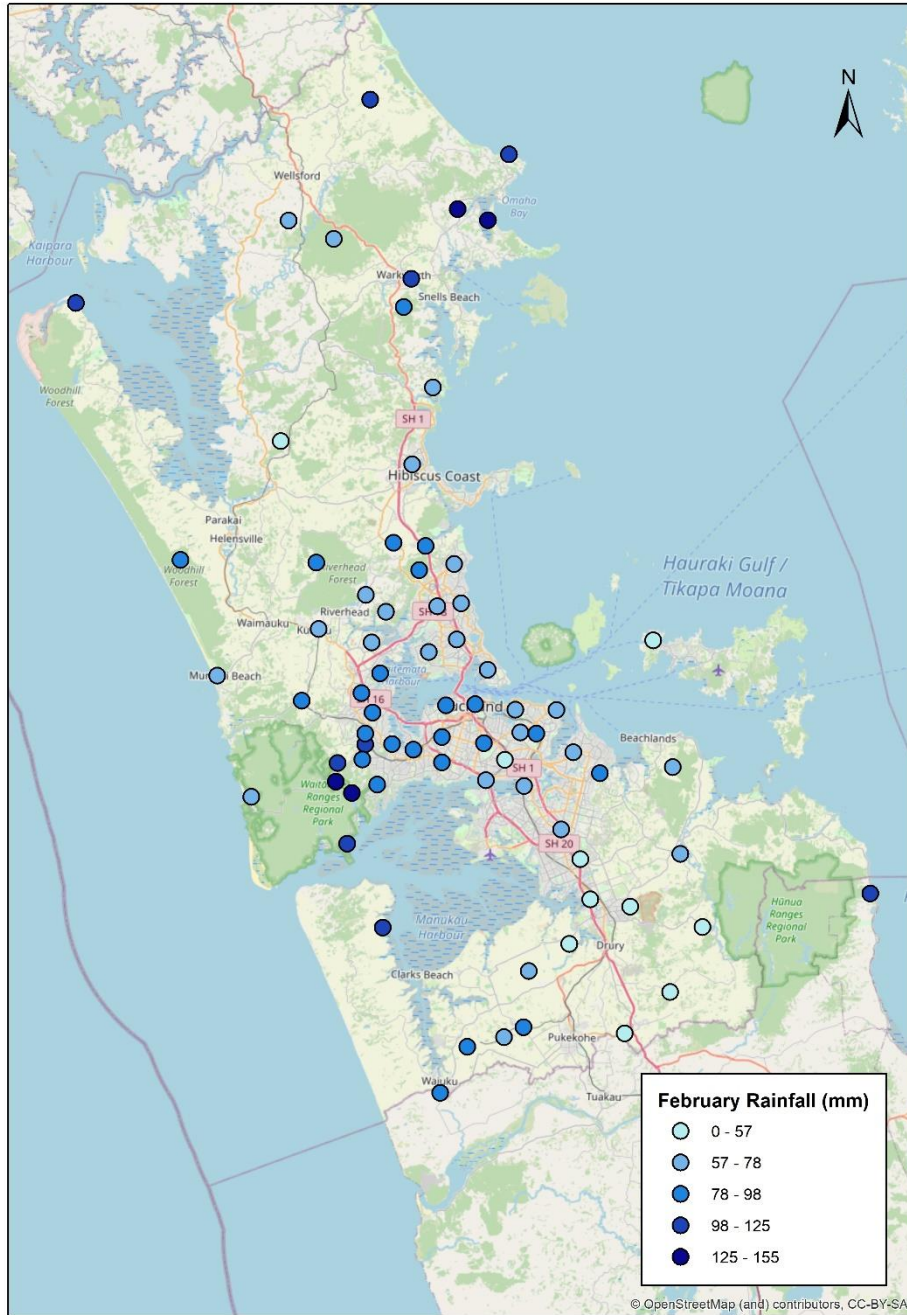


Figure 2: Total rainfall (mm) for February 2022.

Soil moisture

Most soil moisture sites are in the Normal range, with one at Low (central) and two at Very Low status (far north and far south). Soil moisture sites are shown in Figure 3.

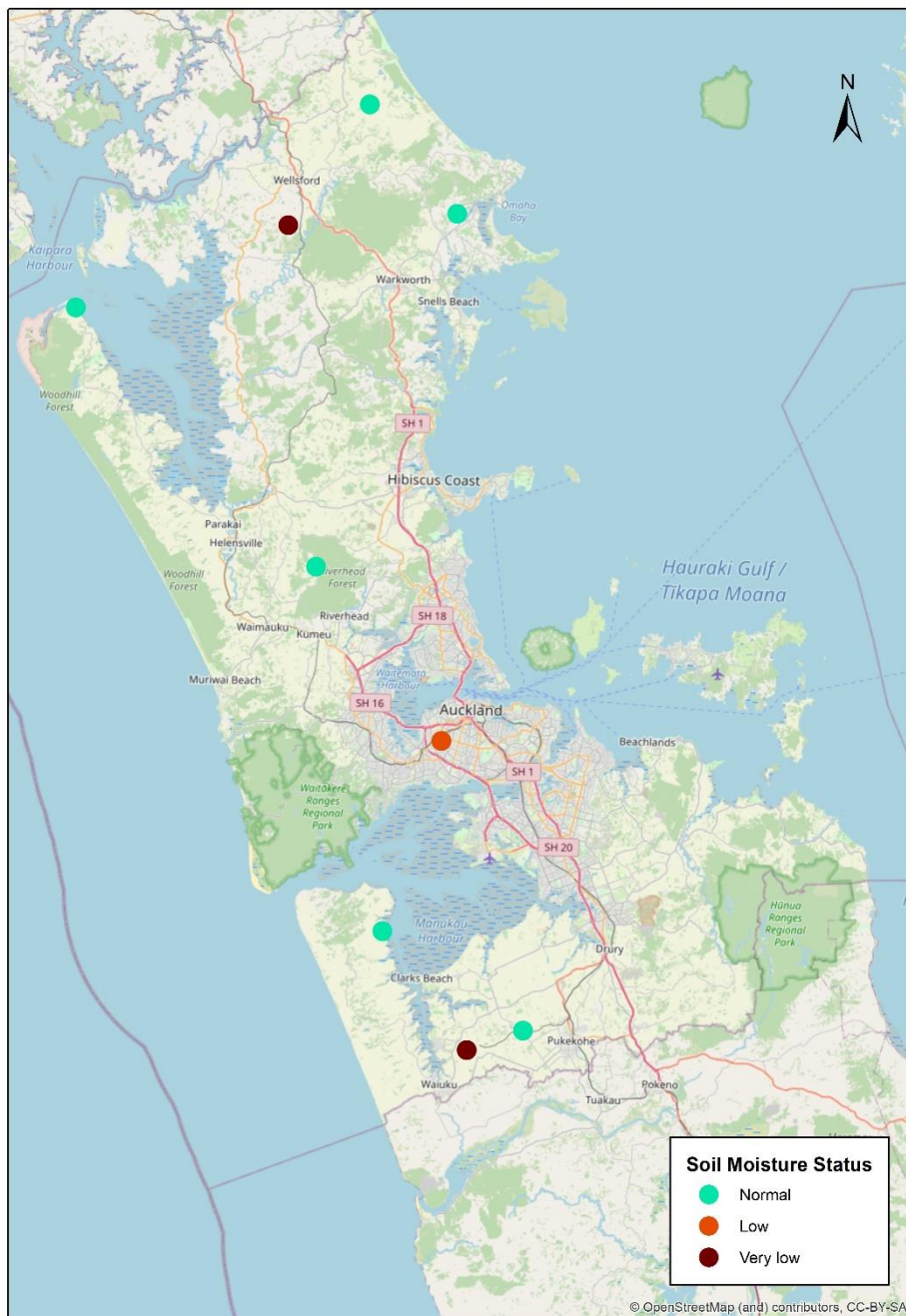


Figure 3: Soil moisture category relative to long-term statistics on 7 March 2022.

River flows

Seventeen river flow sites are now below the mean annual low flow (MALF), 15 of which are below the Unitary Plan default minimum flow of 85% MALF. The locations of sites and the flow relative to MALF are shown in Figure 4.

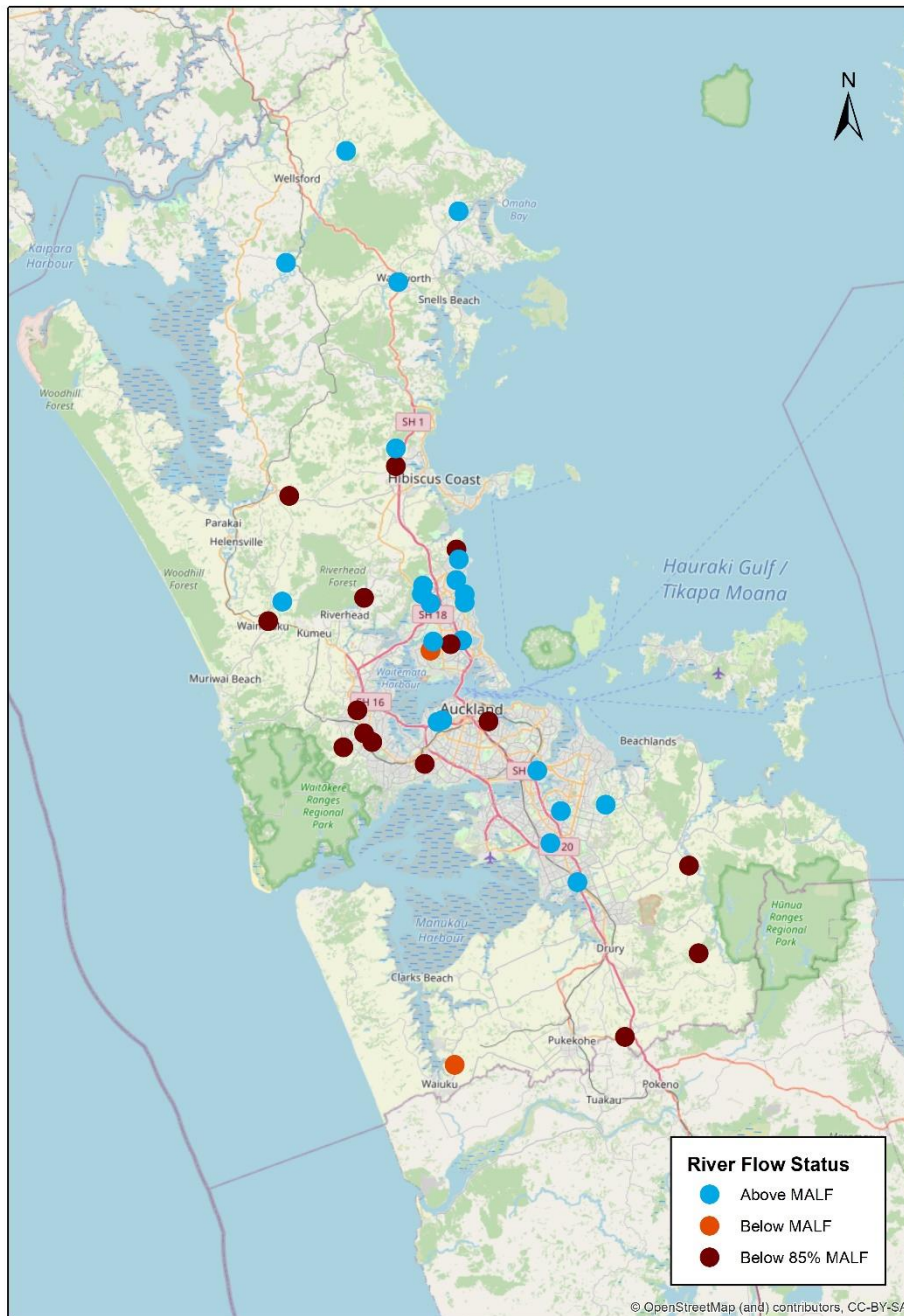


Figure 4: River flow on 7 March 2022 relative to the mean annual low flow (MALF).

Aquifer water levels

Most aquifers in the south are at a Low or Very Low status for this time of year. Most of the aquifers in the Low and Very Low categories are deep Waitematā sandstones and Kaawa sand/shellbeds which respond slowly to rainfall recharge. One site on Waiheke Island has dropped from the Normal range to Low. Groundwater monitoring sites and groundwater level category are shown in Figure 5.

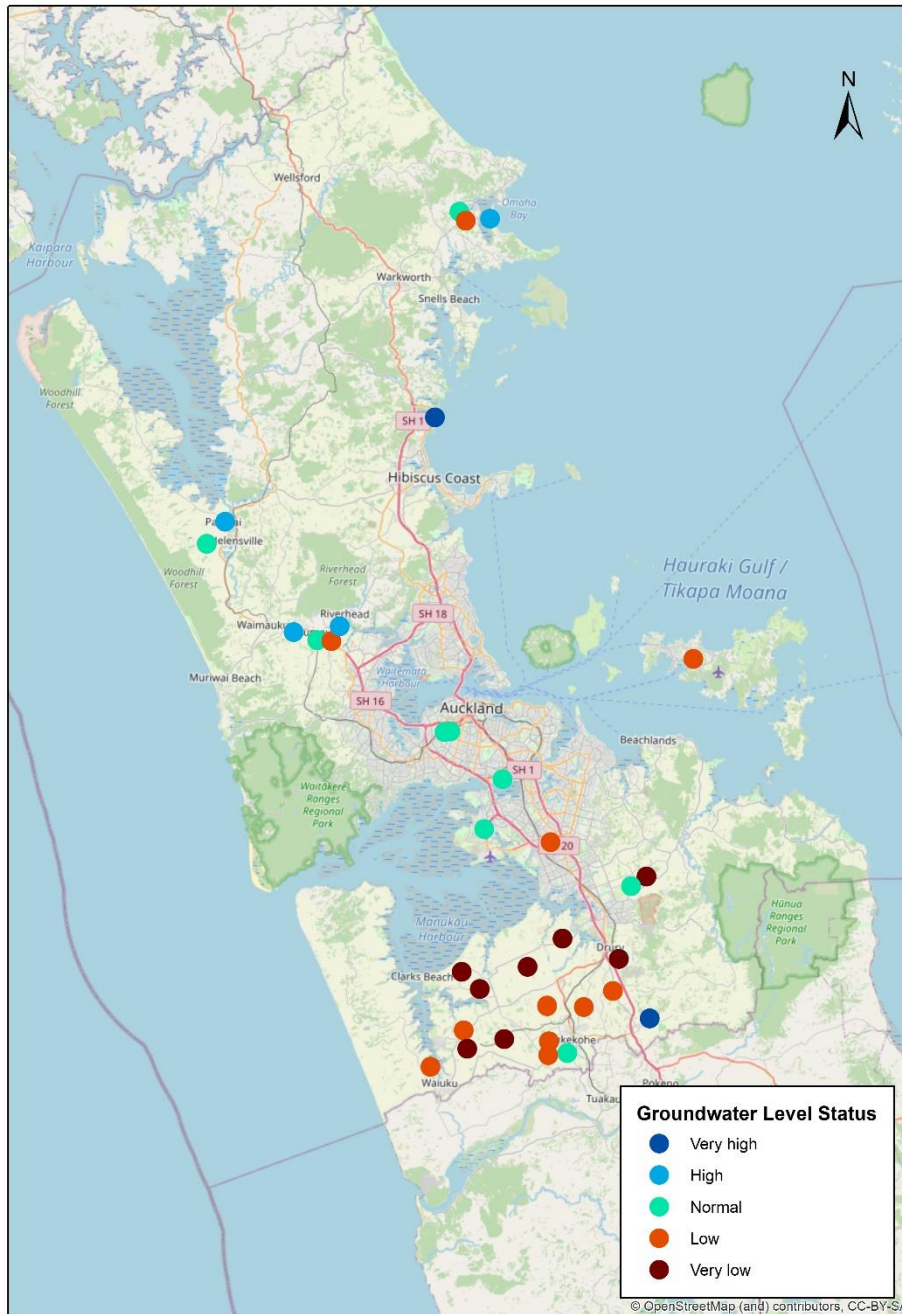


Figure 5: Groundwater levels relative to long-term statistics for 7 March 2022.

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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