

Issued
6 December
2021

Auckland Hydrology Situation Report

Research and
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

Regional summary

The New Zealand Drought Index for the Auckland Region has risen slightly but remains well below the first category of Dry. Regional monthly rainfall was approximately 80% of the long-term average for November. Soil moisture status is variable across the region, with some sites at Very Low status in the north and central areas. All rivers are above the mean annual low flow (MALF). Groundwater levels have decreased at most sites, coinciding with dryer summer conditions. Most sites in the north have very high groundwater levels for this time of year. Many sites in the south are at low levels for this time of year, particularly for those in deep Waitematā sandstones which respond slowly to rainfall.

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 0.16 (3 December 2021), which is 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.

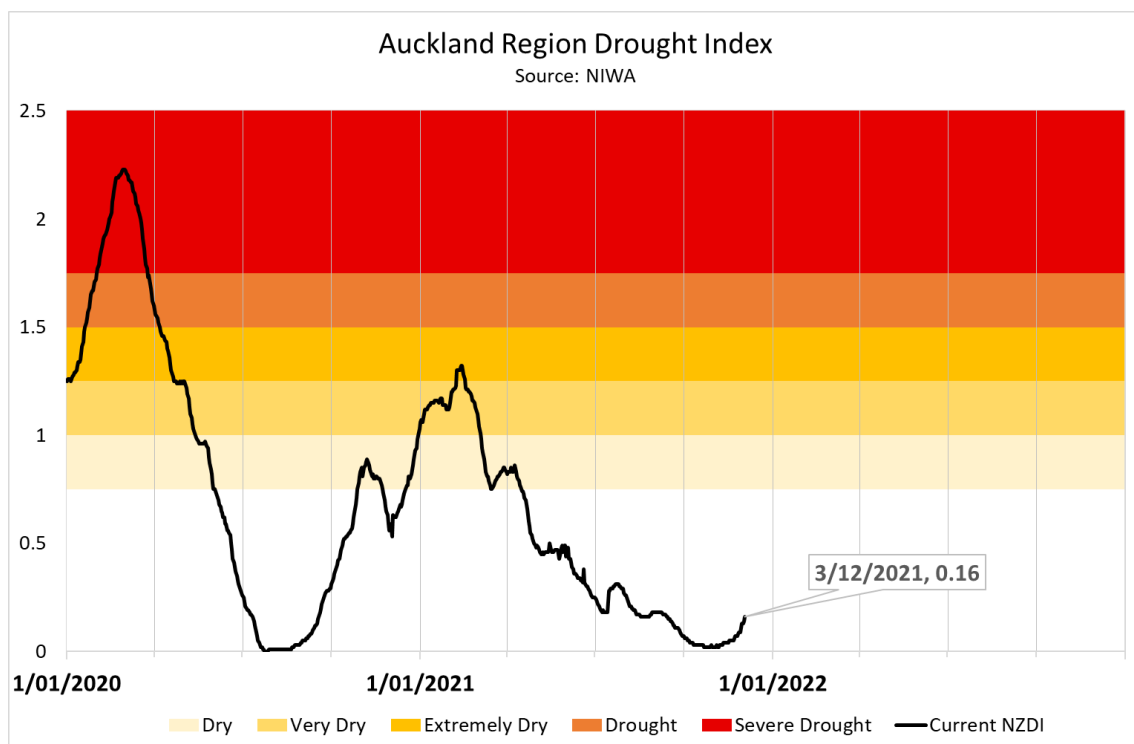


Figure 1: Auckland Region Drought Index 2020-2022 (data source: NIWA).

Rainfall

Rainfall for November ranged from 37 to 152mm with a regional average of 65mm, approximately 80% of the long-term regional average (Figure 2).

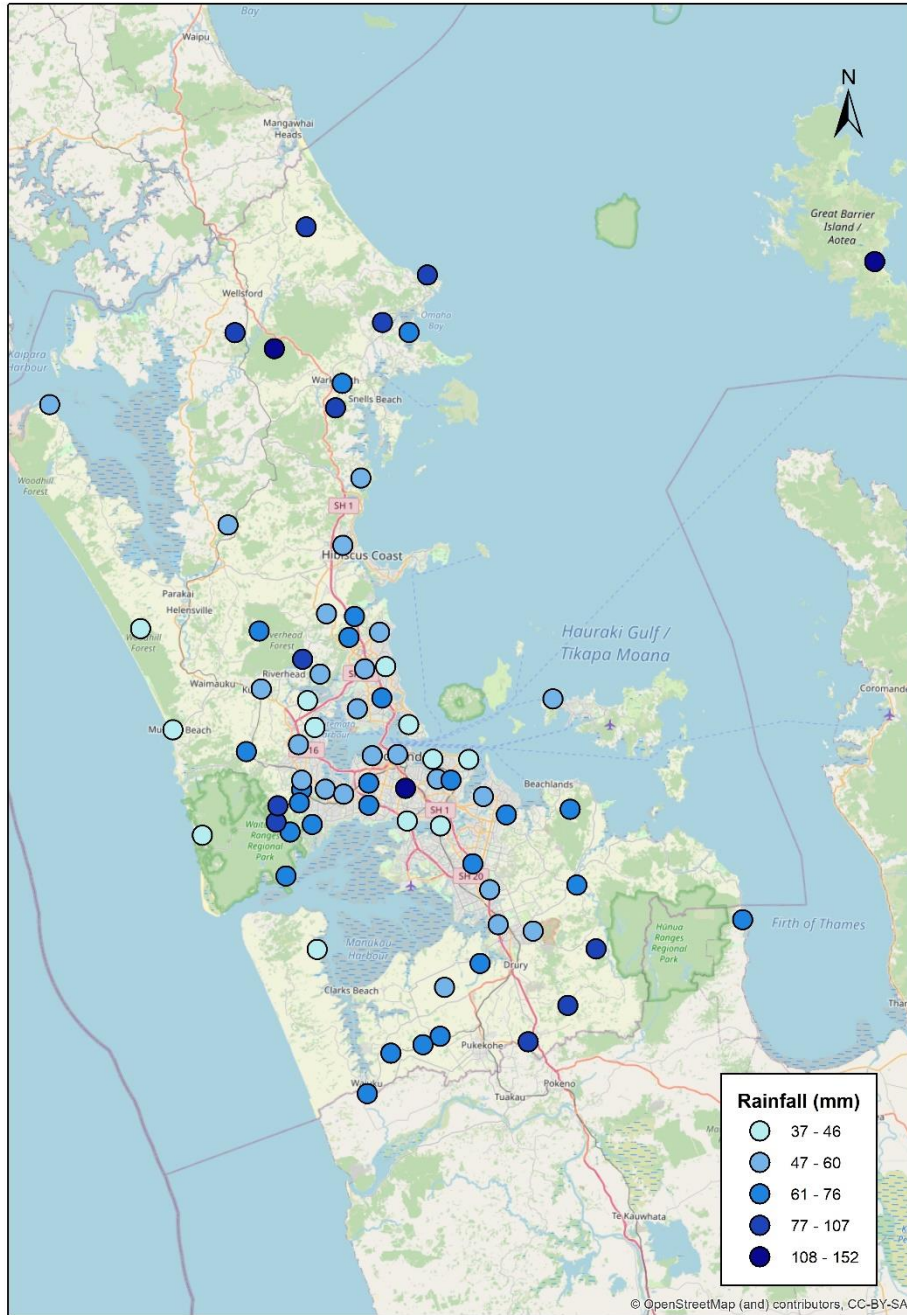


Figure 2: Total rainfall (mm) for November 2021.

Soil moisture

Soil moisture is currently variable across the region, ranging from Very low to High. Soil moisture sites are shown in Figure 3.

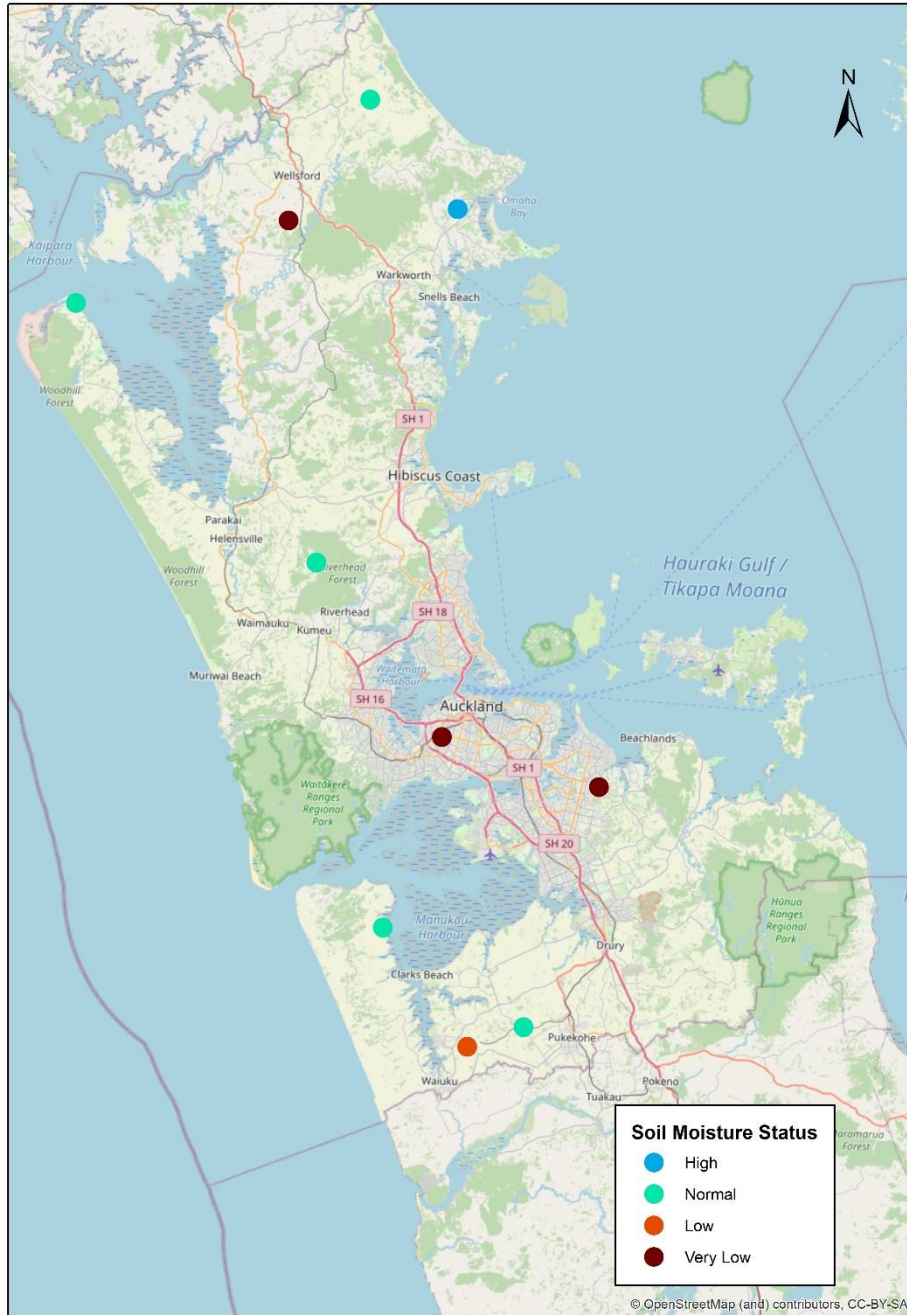


Figure 3: Soil moisture category relative to long-term statistics on 6 December 2021.

River flows

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

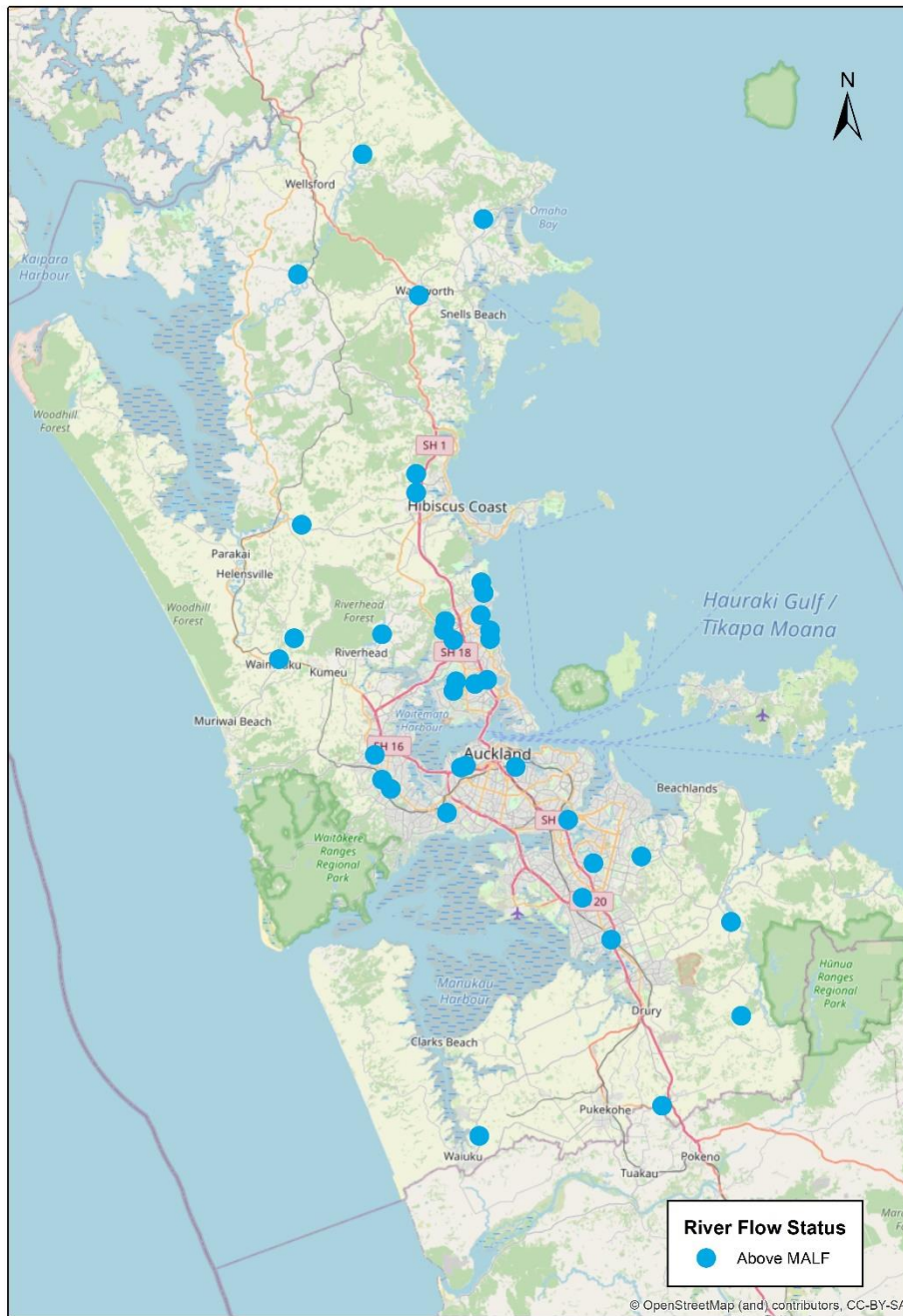


Figure 4: River flow on 6 December 2021 relative to the mean annual low flow (MALF).

Aquifer water levels

Most groundwater levels from the isthmus north are in the Very High range for this time of year, with a few exceptions in Omaha and Kumeu. Many aquifers in the south are still at Low levels for this time of year. Most of the aquifers in the Low category are deep Waitematā sandstones which respond slowly to rainfall recharge. Groundwater monitoring sites and groundwater level category are shown in Figure 5.

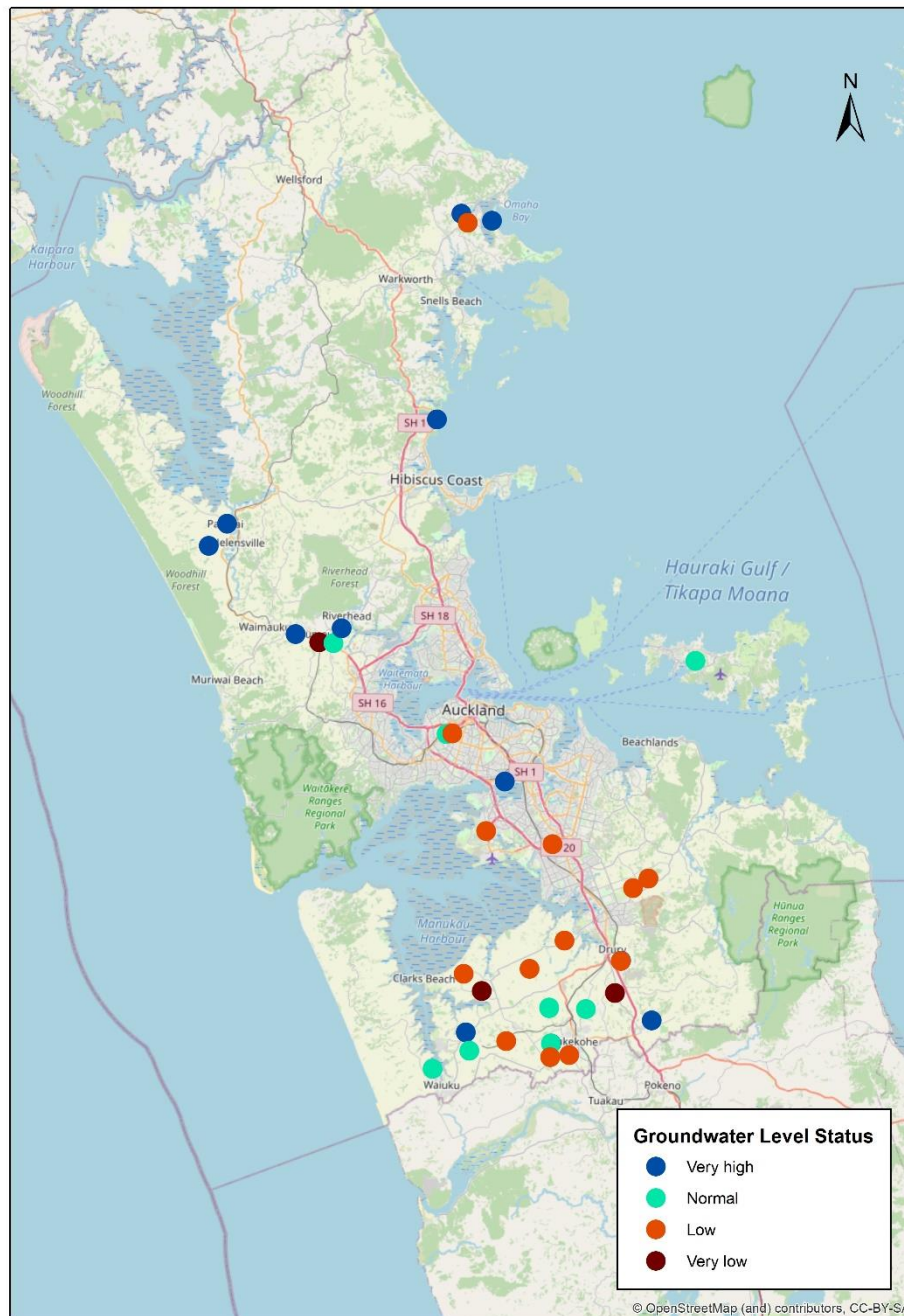


Figure 5: Groundwater levels relative to long-term statistics for 6 December 2021.

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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