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RIMU Hydrology Situation Report

Research and
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

Regional summary for June 2021

The New Zealand Drought Index for the Auckland Region remains below the first category of Dry. Total rainfall for June was approximately 20% below the long-term average. Soil moisture was below the normal range for 8 of 10 sites, four of which are at a Very Low status. All rivers are above the mean annual low flow (MALF). Groundwater levels are low for many aquifers, particularly deep aquifers and those 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 0.25 (29 June 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.

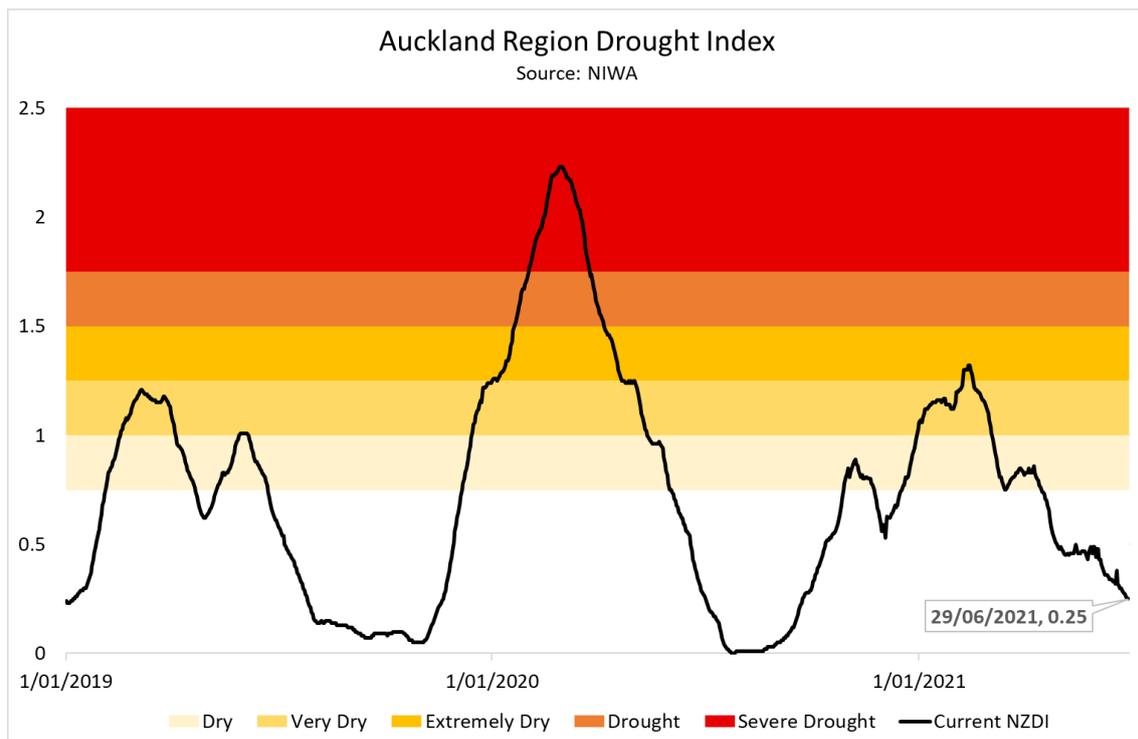


Figure 1: Auckland Region Drought Index 2019-2021 (data source: NIWA).

Rainfall

Rainfall for June ranged from 71 to 196mm with a regional average of 112mm, approximately 80% of the long-term average. (Figure 2).

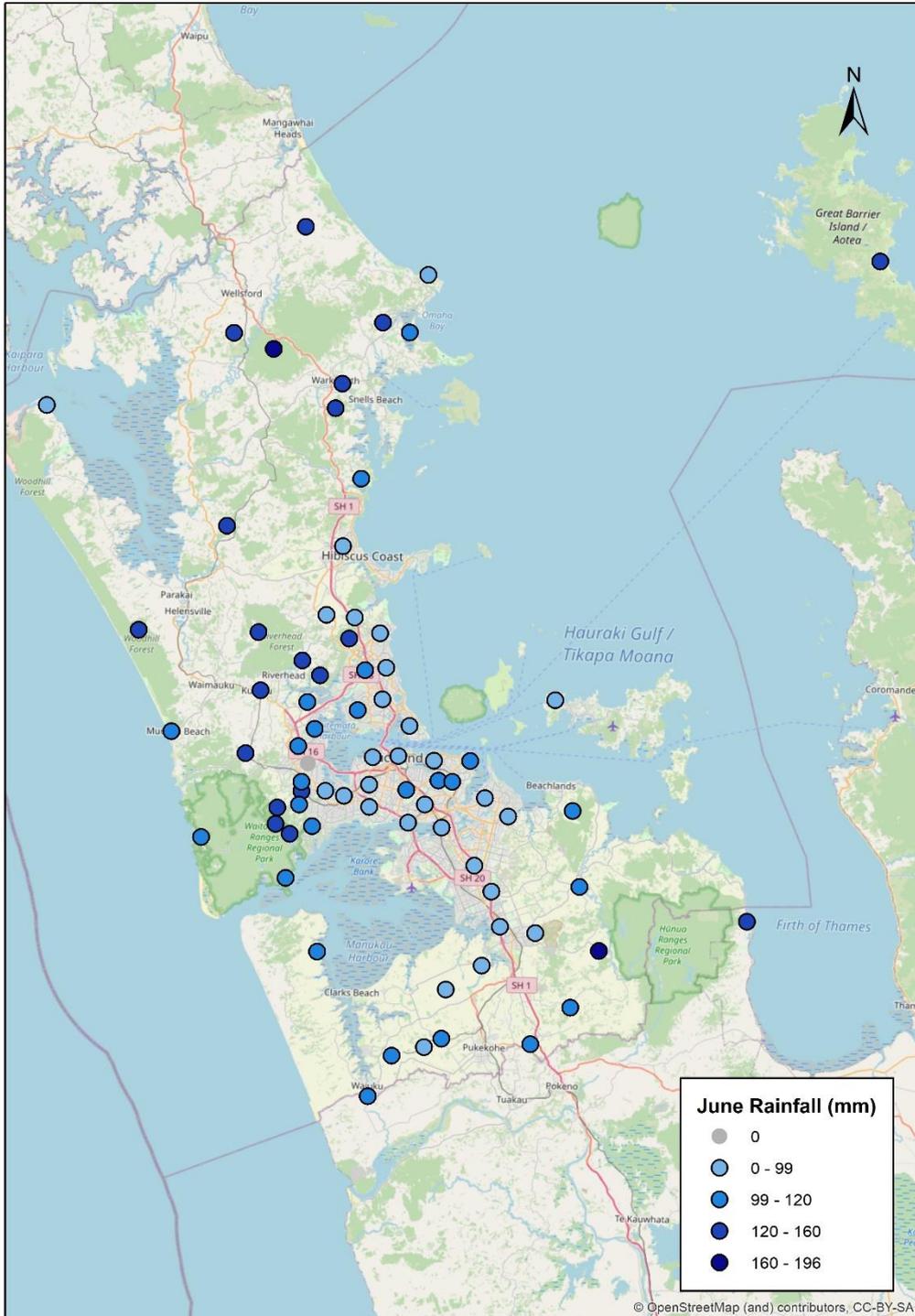


Figure 2: Total rainfall (mm) for June 2021.

Soil moisture

Soil moisture is in the Low to Very Low range for this time of year at 8 of 10 sites in the region, with the remaining two sites in the High and Normal range, respectively (Figure 3).

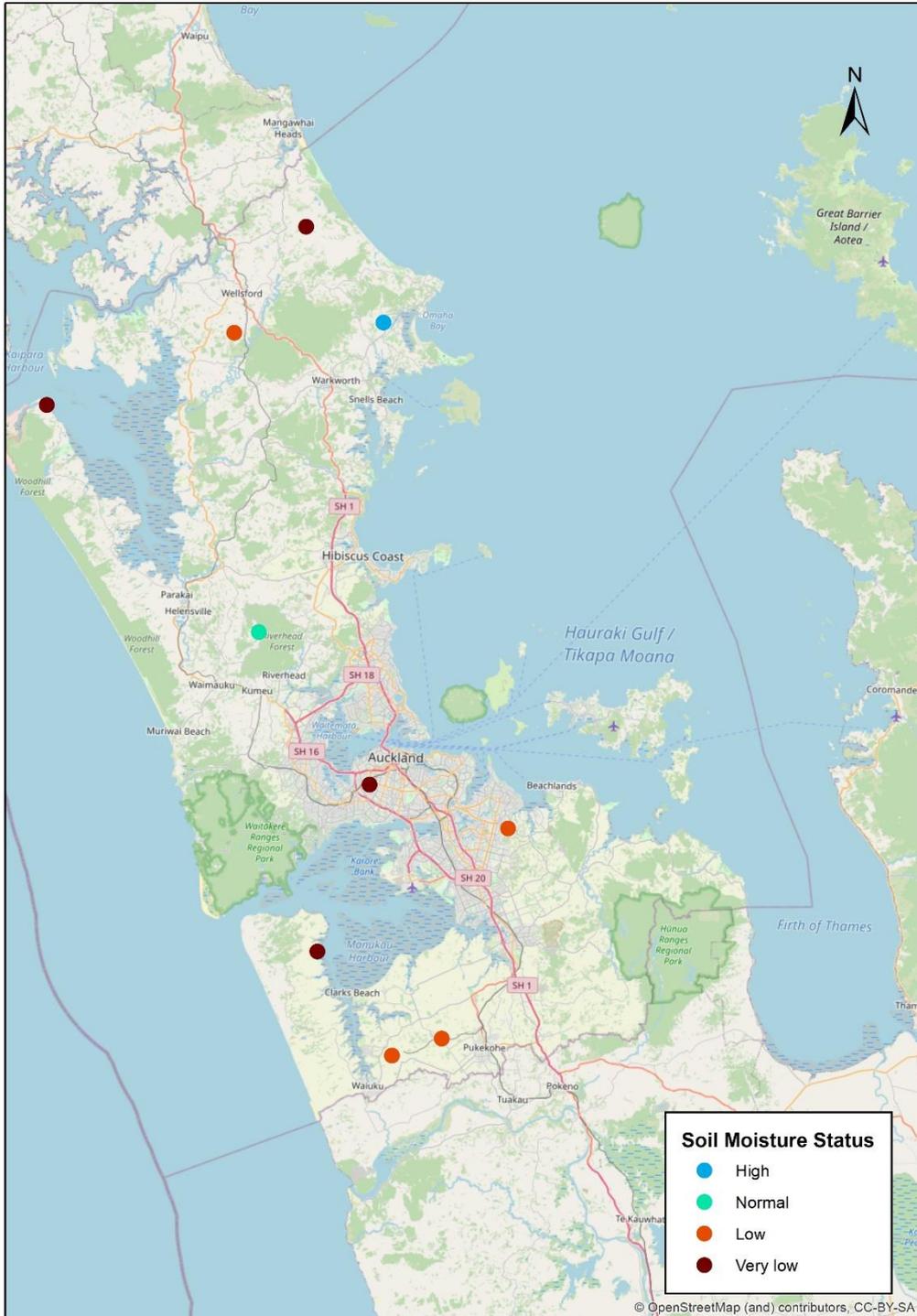


Figure 3: Current soil moisture category relative to long-term statistics for 1 July 2021.

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.

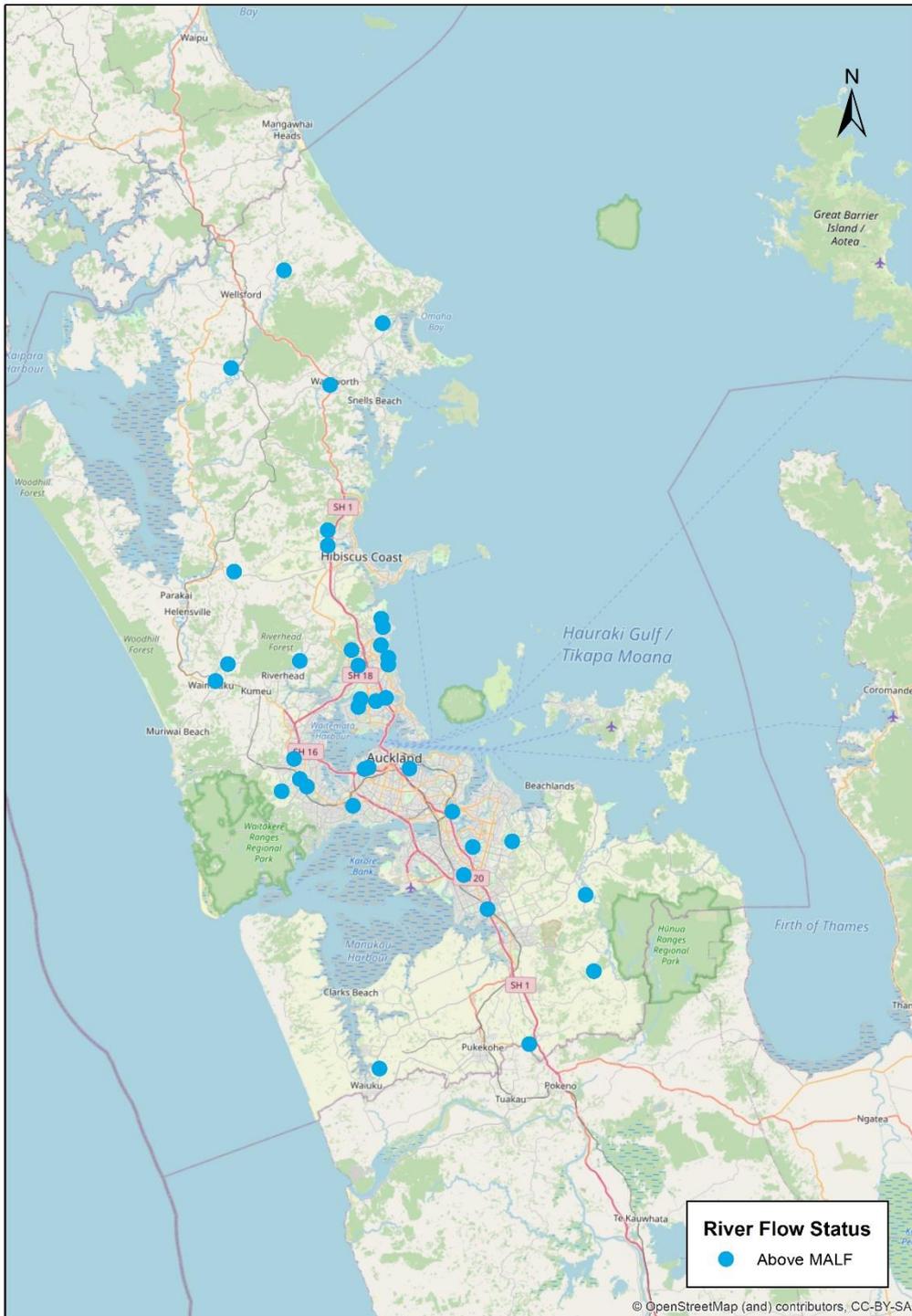


Figure 4: River flow on 1 July 2021 relative to the mean annual low flow (MALF).

Aquifer water levels

Deep aquifers in the Waitematā Group, Waiheke greywacke, and Kaawa Formation rocks are generally at low to very low levels. Volcanic aquifers in the Auckland isthmus and south of the Manukau Harbour have also dropped into the low range. The effects of low rainfall over the last 24 months appear to influence current conditions. Groundwater monitoring sites and groundwater level category are shown in Figure 5.

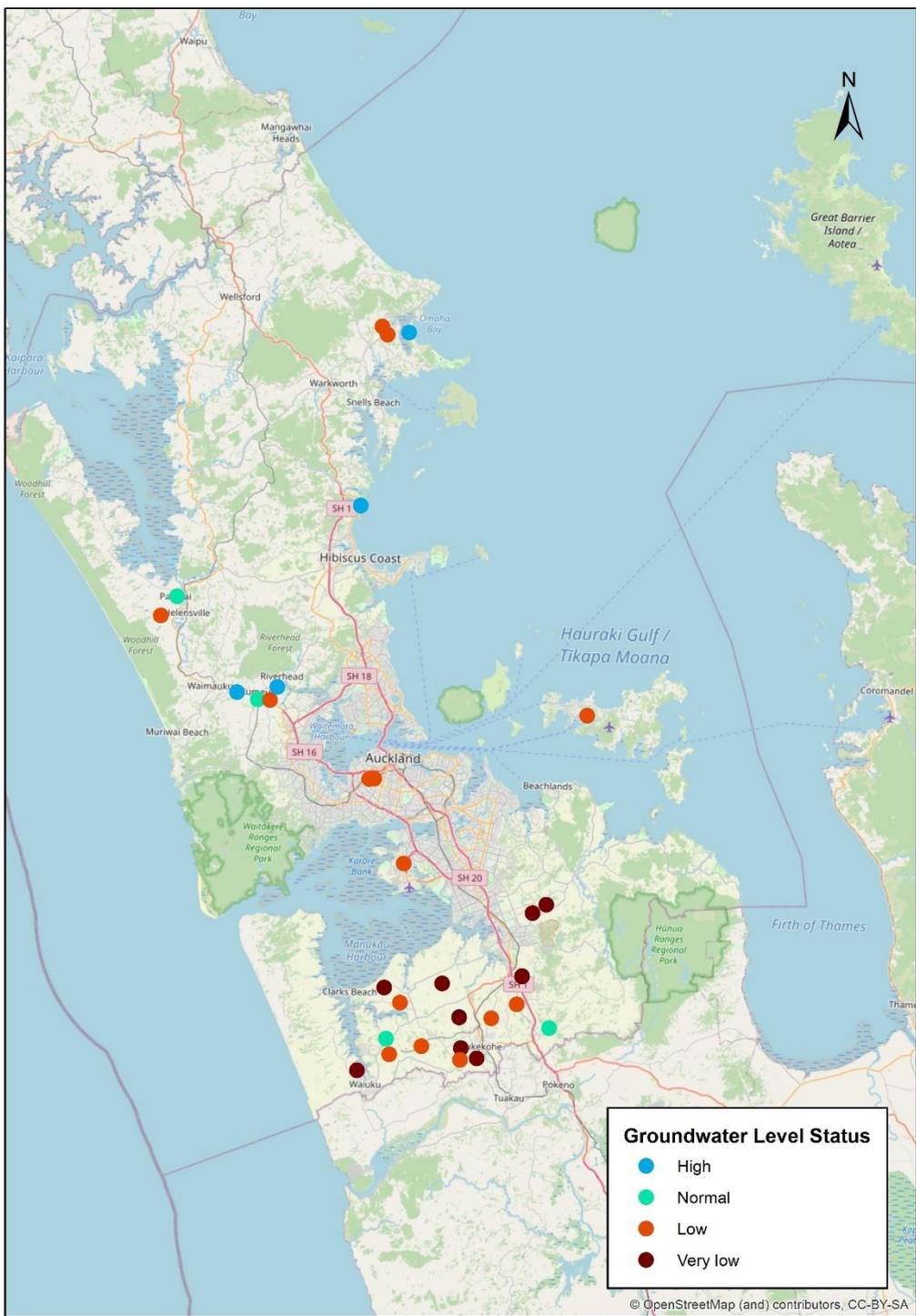


Figure 5: Groundwater levels relative to long-term statistics for 1 July 2021.

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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