Issued 1 August 2022

Auckland Hydrology Situation Report

Research and Evaluation Unit | RIMU | Auckland Council

Rainfall | Soils | Rivers | Aquifers

Regional summary

The New Zealand Drought Index for the Auckland Region is currently zero. Regional monthly rainfall for July was approximately 88% above average. One soil moisture site in the far north of the region is below the normal range and the remaining nine are at Normal or above. River flows are all above the mean annual low flow (MALF). Groundwater level increases were observed in many bores across the region, however long-term drought effects persist. Most sites in the southern aquifers are at a Low or Very Low status, including shallow volcanic aquifers.

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 0.00 (27 July 2021), which is below the lowest NZDI category of Dry (0.75-1.00). A chart of the NZDI for the Auckland region is shown in Figure 1.

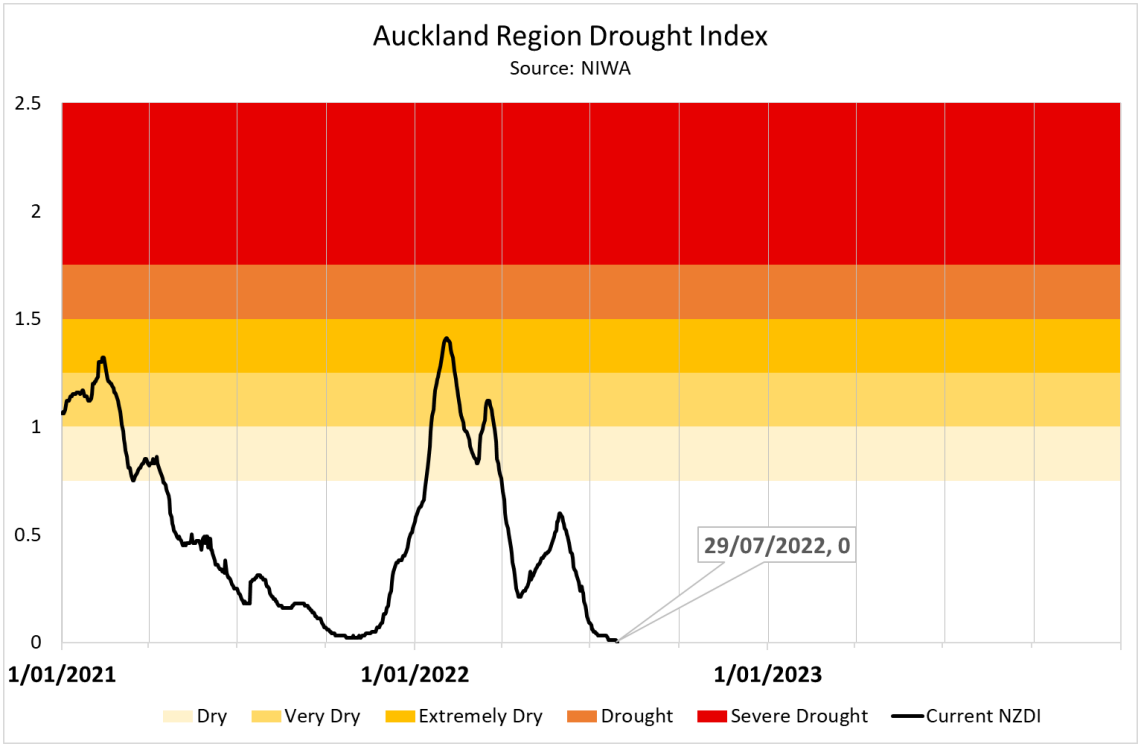

Figure 1: Auckland Region Drought Index 2021-2023 (data source: NIWA).

Rainfall

Rainfall for July 2022 ranged from 210mm to 422mm with a regional average of 295mm, approximately 88% above the long-term regional average (Figure 2).

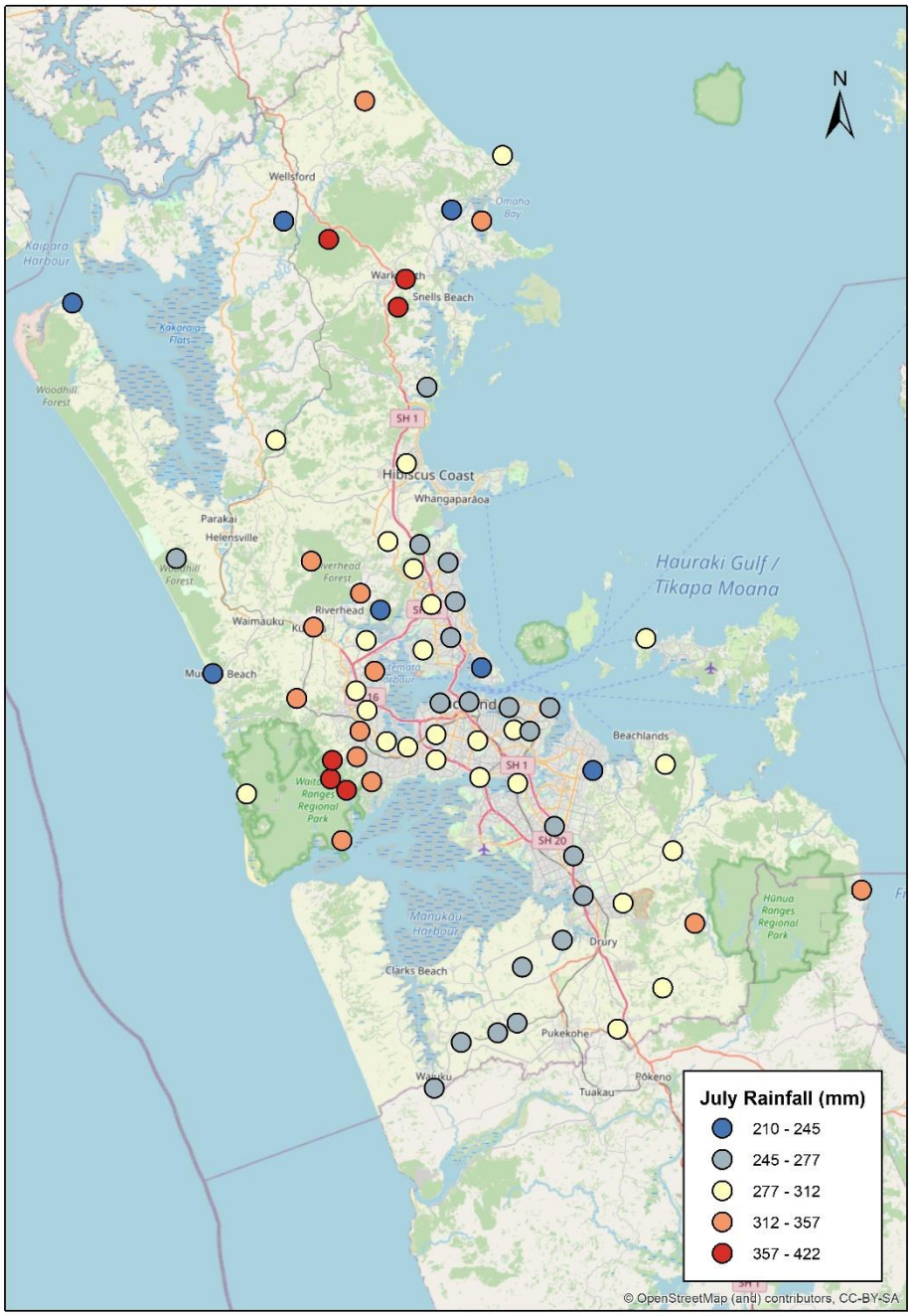

Figure 2: Total rainfall (mm) for July 2022.

Soil moisture

Soil moisture varies across the region but only site (Tomarata) was below the normal range. Soil moisture sites are shown in Figure 3.

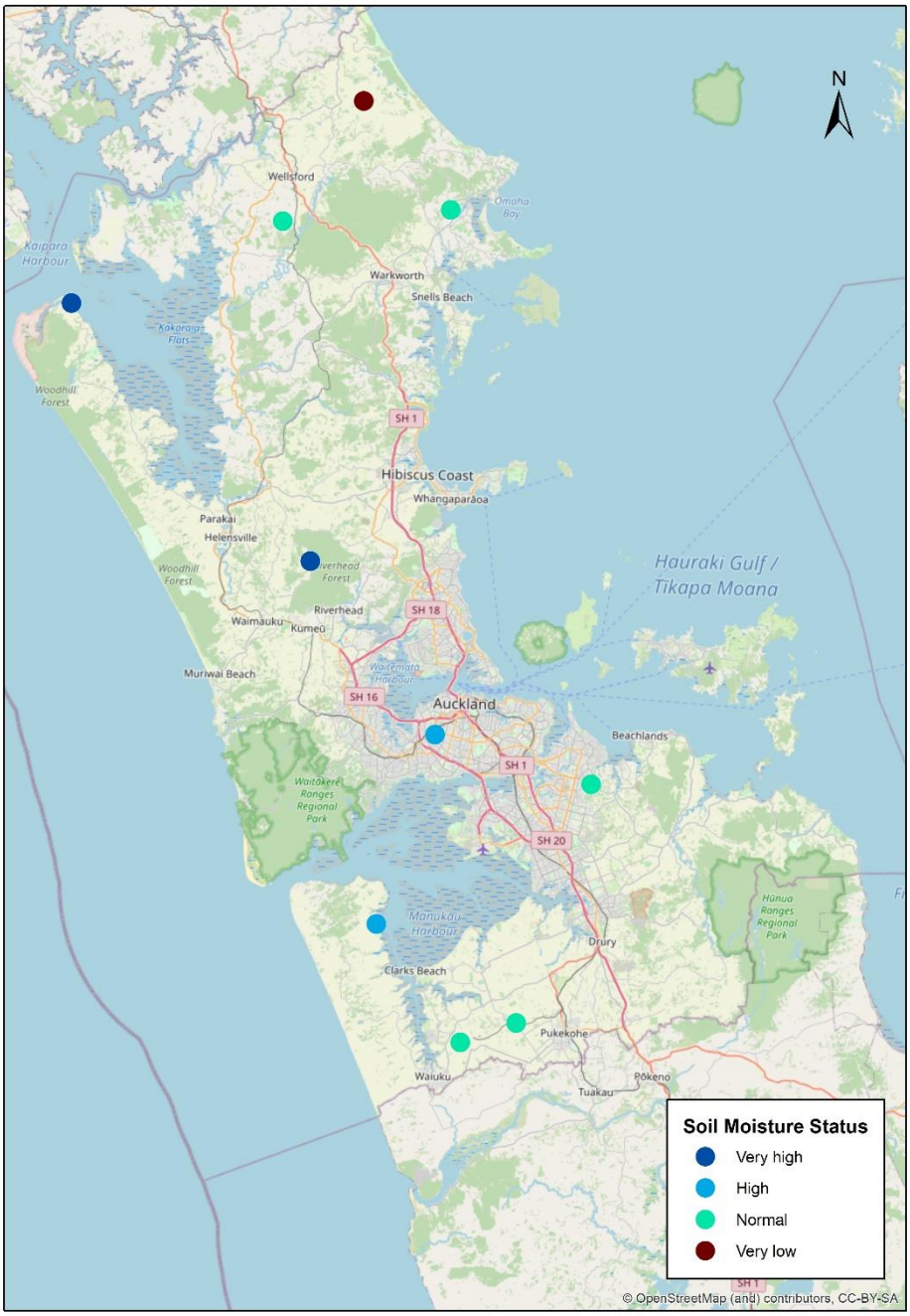

Figure 3: Soil moisture category relative to long-term statistics on 1 August 2022.

River flows

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

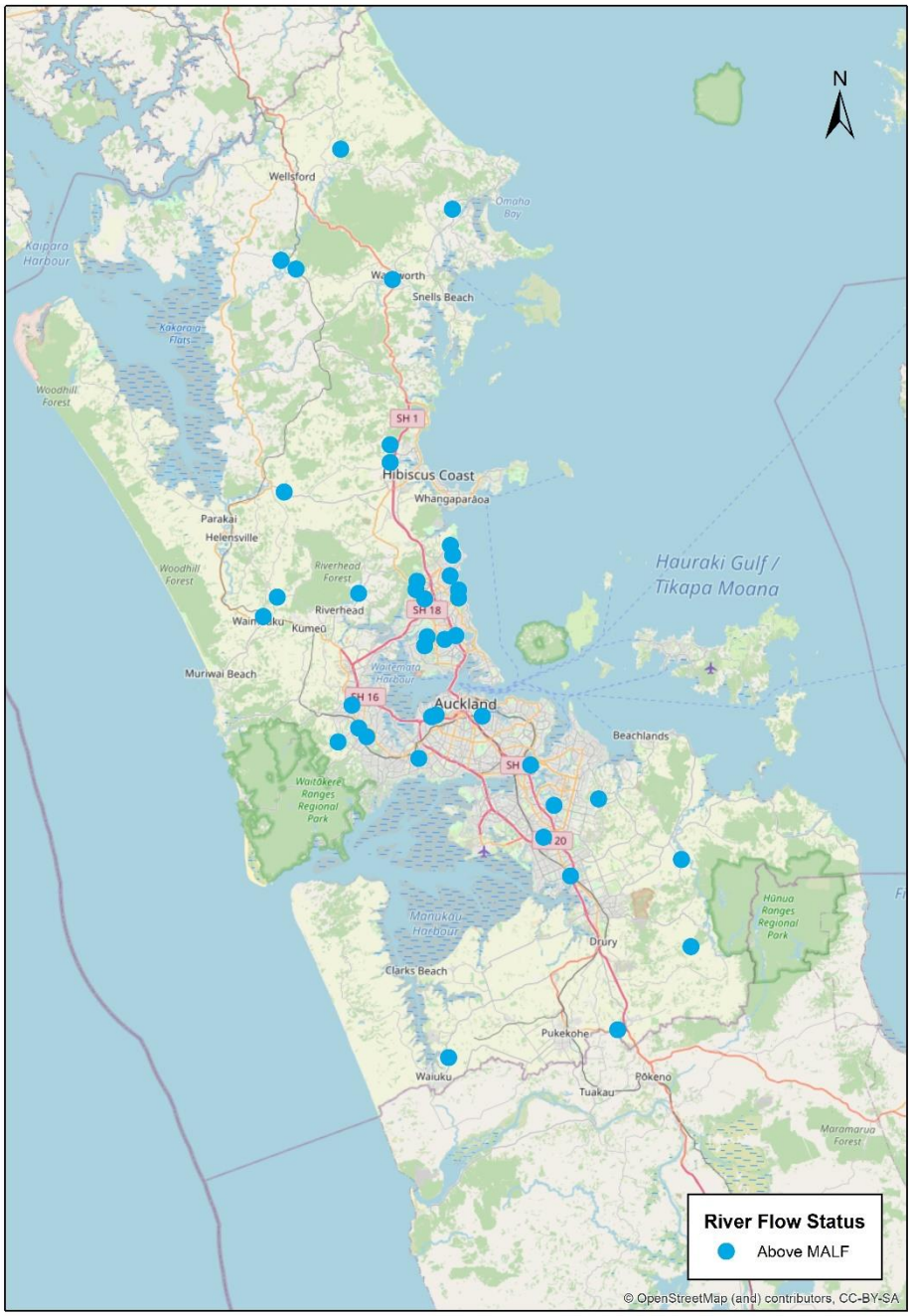

Figure 4: River flow on 1 August 2022 relative to the mean annual low flow (MALF).

Aquifer water levels

Groundwater conditions remain similar to previous reports, although increases have occurred across the region with a result in a slight upward shift in status of some aquifers. Groundwater levels in the Low and Very Low categories have persisted in deep Waitematā sandstones and Kaawa sand/shellbeds, and groundwater levels are lower than normal in some shallow volcanic aquifers as well. Groundwater monitoring sites and groundwater level category are shown in Figure 5.

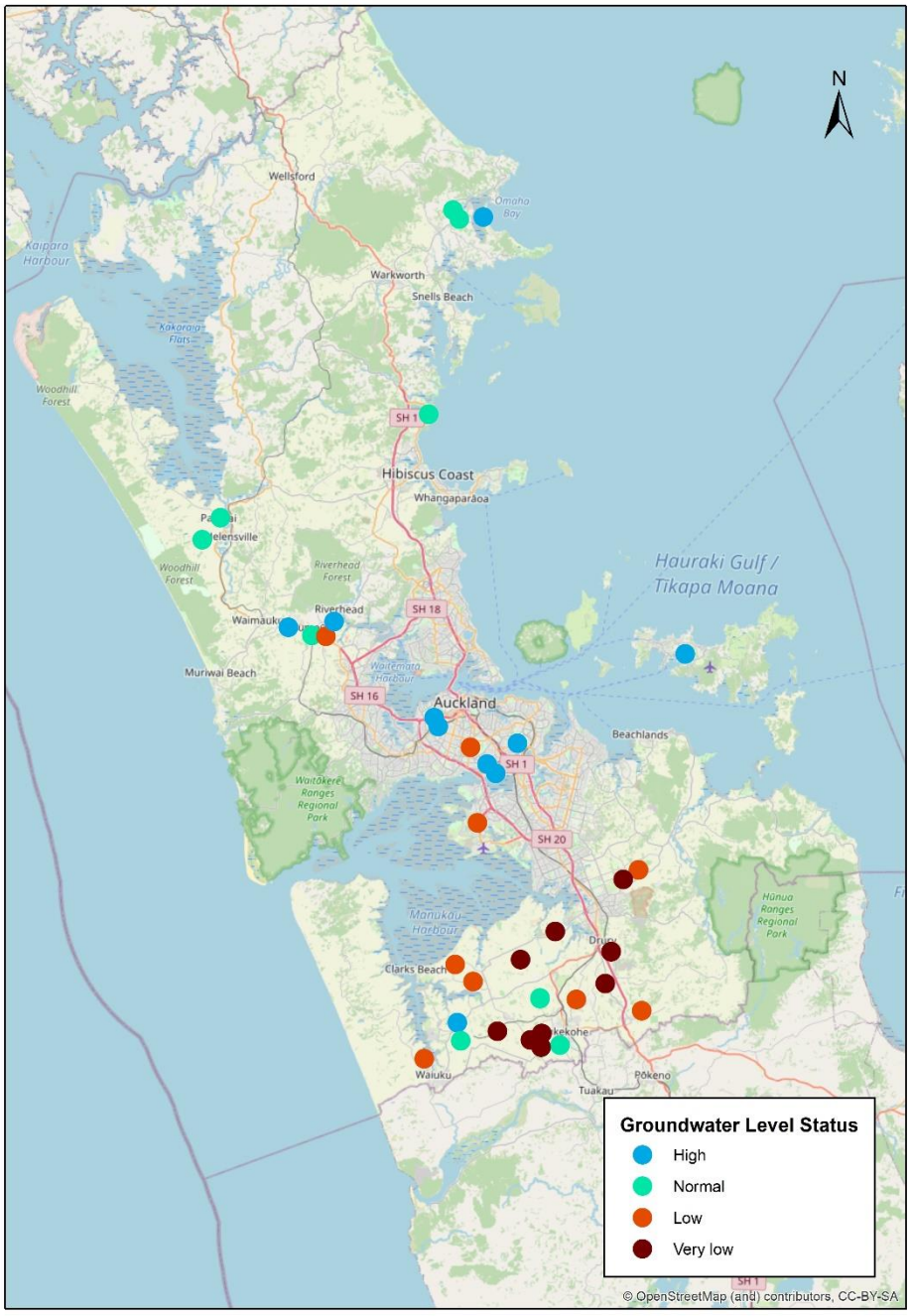

Figure 5: Groundwater levels relative to long-term statistics for 1 August 2022.

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.

Primary contact

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