

Issued  
1 April  
2022

# Auckland Hydrology Situation Report

Research and  
Evaluation Unit

RIMU



Rainfall | Soils | Rivers | Aquifers

## Regional summary

The New Zealand Drought Index for the Auckland Region is at the lowest category of Dry. Regional monthly rainfall for March was approximately 21% above the long-term average, due almost entirely to rain brought by the storm event on 21 March. Most soil moisture sites are in the Normal range, however three sites have a Low or Very Low status. River flows are generally above the mean annual low flow (MALF), with 4 sites below MALF, 2 of which are below 85% MALF. Groundwater levels are similar to previous reports, with many sites in the deep aquifers in the south of the region at a Low or 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 0.80 (29 March 2021), which is in the NZDI category of Dry (0.75-1.00). A chart of the NZDI for the Auckland region is shown in Figure 1.

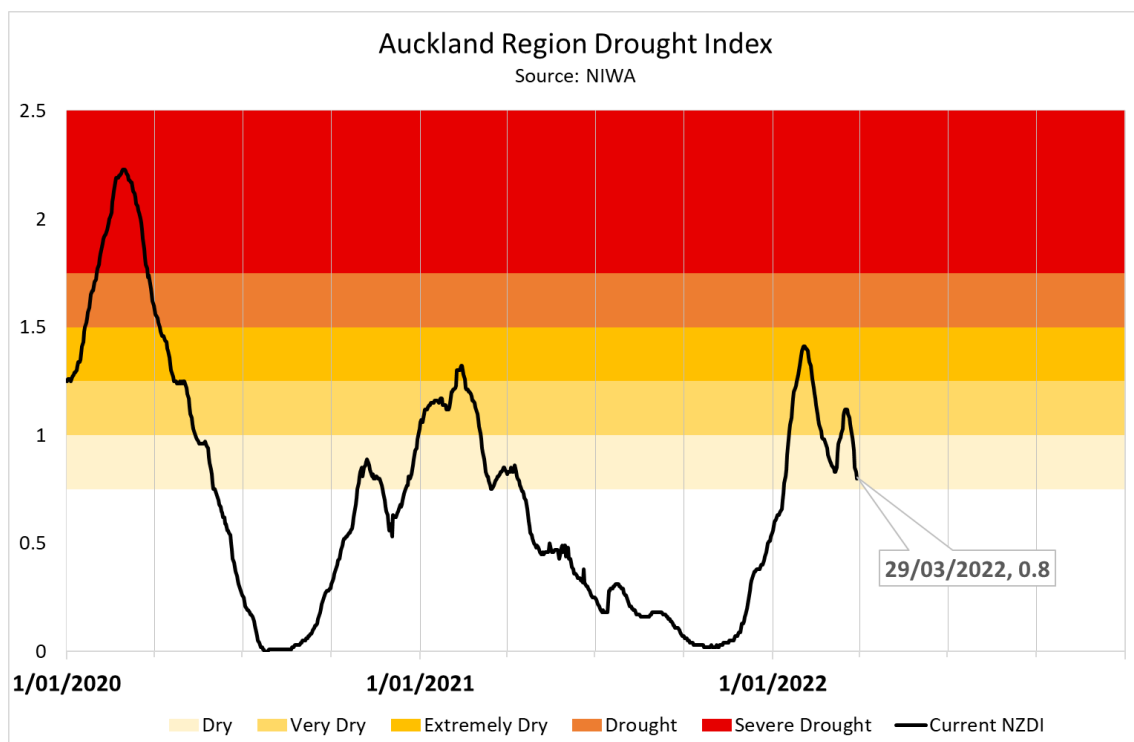
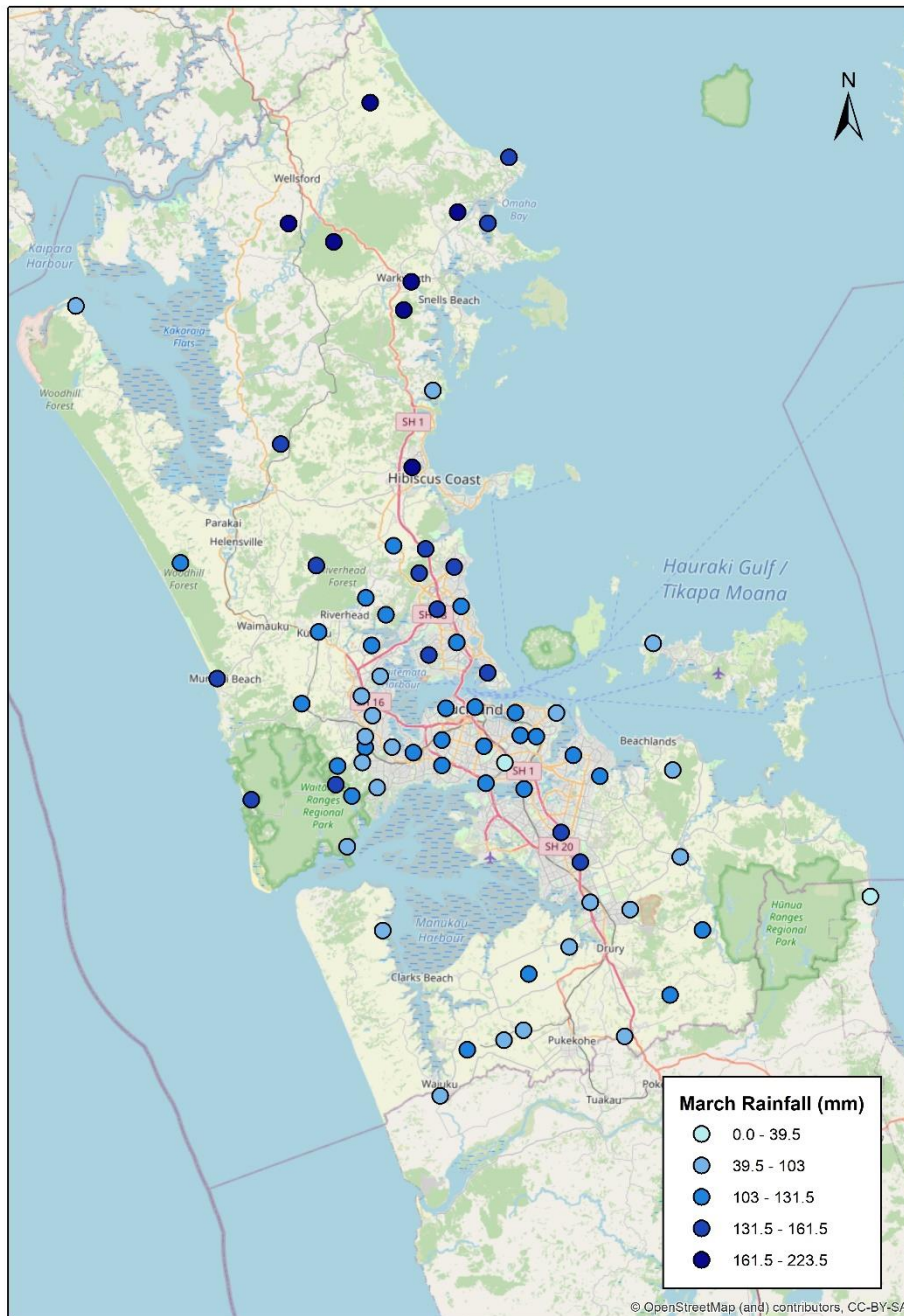


Figure 1: Auckland Region Drought Index 2020-2022 (data source: NIWA).

## Rainfall

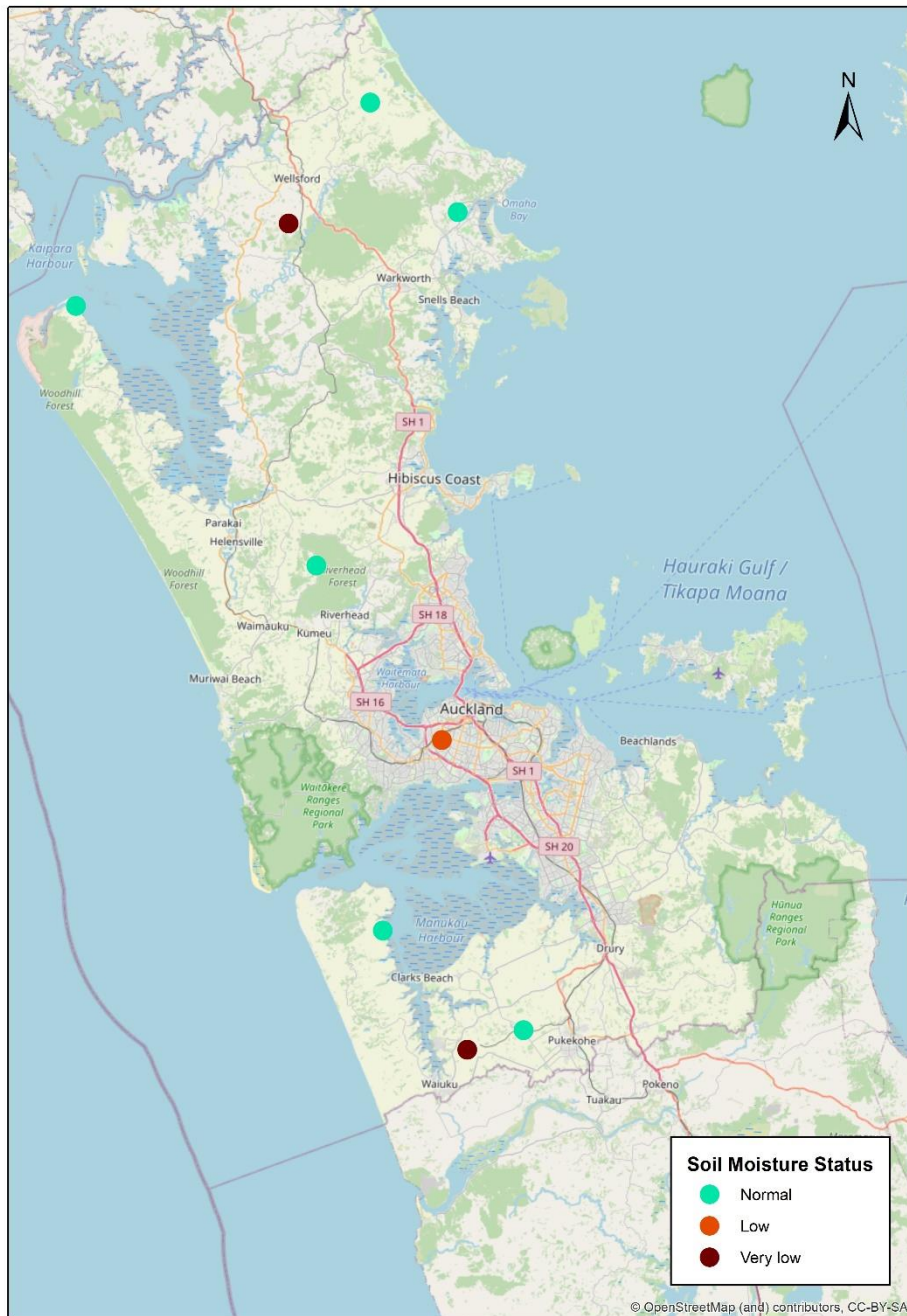
Rainfall for March 2022 ranged from 39.5mm to 223.5mm with a regional average of 119mm, approximately 21% above the long-term regional average (Figure 2). Nearly all the recorded rainfall for March occurred during the storm event that made landfall 21 March.



**Figure 2: Total rainfall (mm) for March 2022.**

## Soil moisture

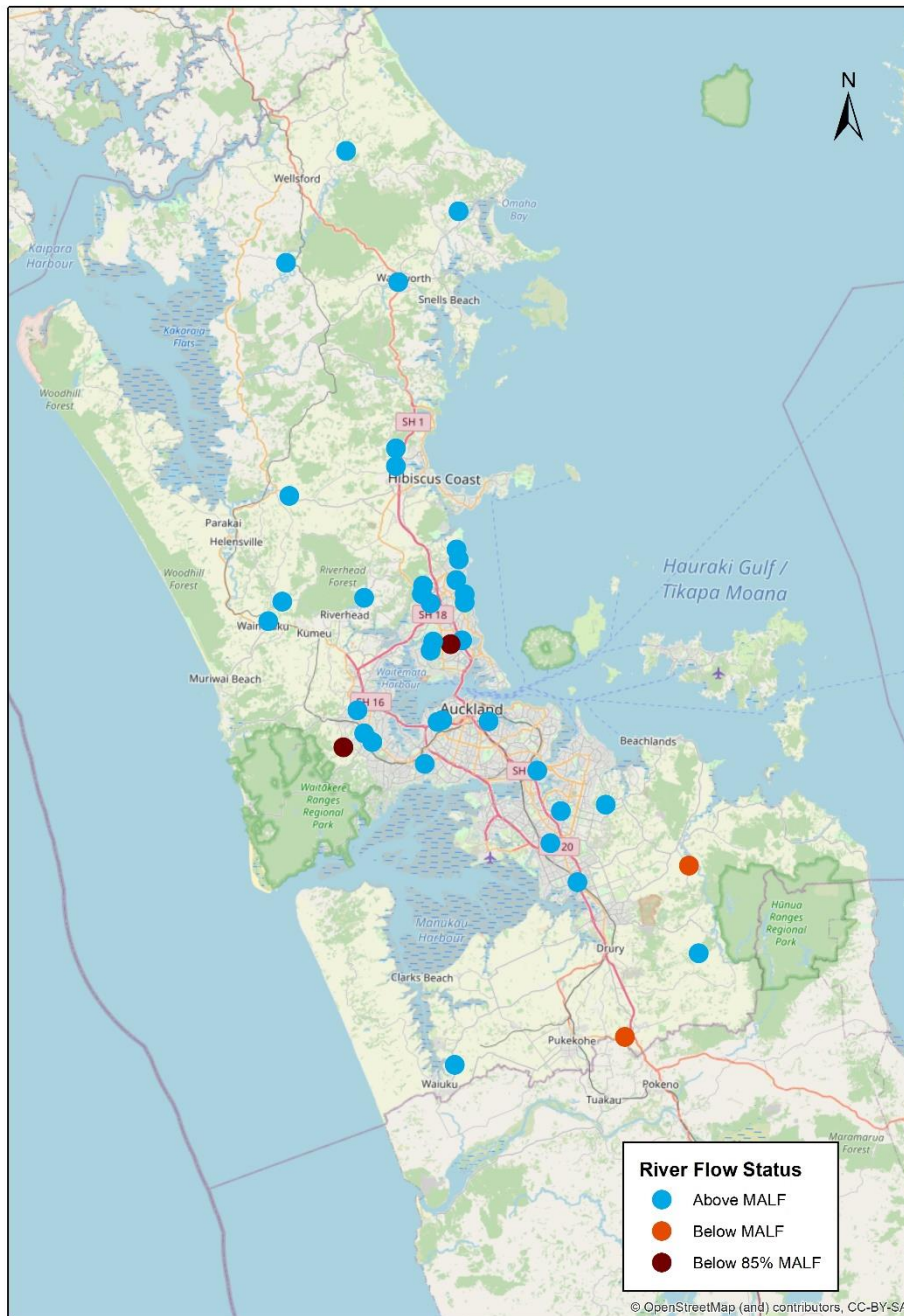
Six of nine soil moisture sites are in the Normal range, with one at Low (Auckland central) and two at Very Low status (Hoteo catchment and Waitangi catchment). Soil moisture sites are shown in Figure 3.



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

### River flows

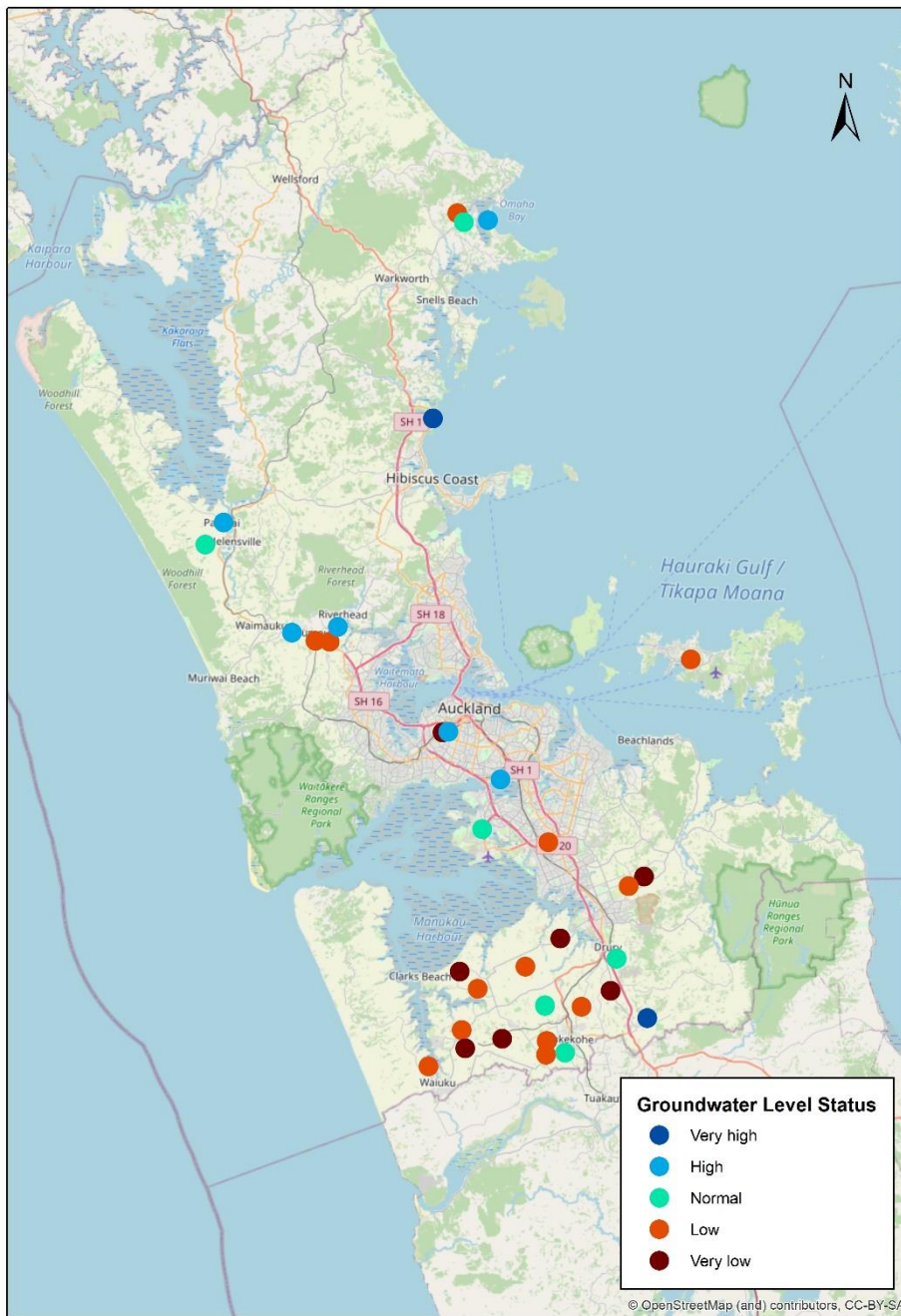
Only four river flow sites are below the mean annual low flow (MALF), 2 of which are below the Unitary Plan default minimum flow of 85% MALF. The locations of sites and the flow relative to MALF are shown in Figure 4.



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

### Aquifer water levels

There has been little change in groundwater status across the region. 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 Waitemata 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 1 April 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](mailto:EnvironmentalData@aucklandcouncil.govt.nz).

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