

# ARF013 Drinking Water Resilience

## Risk Status Progress Report September 2021

Prepared: 10/08/2021

### Description of risk and impact

In accordance with our Risk Management Policy, adopted by Council August 2019, the “Drinking Water Resilience” risk was adopted at the 05/07/20 Council meeting as a top organisational risk. This risk was scored and prioritised using Council’s bespoke IDEATE methodology.

Council own and operate eight drinking water schemes supplied by 14 primary and supplementary sources and nine water treatment plants.

The primary source for Kaikohe, Kaitaia, Opononi, Rawene, Kawakawa and Paihia are surface water takes from local rivers and streams. Kerikeri also relies heavily on surface water as its secondary source. For each of these surface water takes Council hold a consent issued by the Northland Regional Council. The consents have conditions relating to many things but most importantly:

- the volume of water FNDC is authorised to take, and
- the instantaneous residual flow we are required to leave in the environment.

Surface water takes are impacted by droughts. Droughts typically cover a large geographical area; not just a single catchment or community. Irrespective of the volume of water FNDC is consented to take, there is a 20 percent chance each year that we will not be authorised to take water from the surface water sources for a week or more.

Group / SLT	Risk level	Inherent Risk	Risk description	Because of	There is a chance that...	leading to...
Infrastructure and Asset Management	Organisational	35	Strategic	Lack of freshwater resilience - long-term trends in rainfall coupled with changing and increasing consumer demands	Current freshwater supply systems will continue to not meet demand both now and into the future	Critical impact on our communities i.e. lengthy water restrictions; no/interrupted supply; costly economic consequences (affordability); extensive Health & Safety impacts across the district; economic and reputational risk from a failure to supply adequate potable and fresh water; negative environmental impacts.

The “Drinking Water Resilience” risk has been analysed as both an organisational and a strategic risk. A score of 35 or greater is in the high-risk category. Drinking Water Resilience scored 35:

To ensure clarity this risk excludes “Action for healthy waterways” new rules and regulations aimed to:

- stop further degradation of New Zealand's freshwater resources and improve water quality within 5 years
- reverse past damage and bring New Zealand's freshwater resources, waterways, and ecosystems to a healthy state within a generation.

### Existing Treatments

1. Professionally managed water source and networks.
2. Asset management plans.
3. Water Supply Bylaw - this allows us to make water restrictions.
4. Water Shortage Management Plan – this outlines the processes and provides guidance on how water restrictions can be implemented to manage demand.
5. Water Shortage Management Committee is established with internal technical specialists who monitor and make recommendations on water restrictions to GMIAM.
6. Drought Communication Plan.
7. Ability to enact a dedicated drought response team (as used in the 19/20 drought).

### High level treatment plan and progress up-date:

High level treatment plan:	Progress update:
Drought resilience work for 20/21 financial year.	This work continues in FY22 with DIA funded projects needing to be complete by 31 March 2022.  A large part of this program is externally funded through the Crown 3-waters reform.
Water shortage management plan.	Annual review completed and approved.  Learnings from the 20/21 season have been documented for use in coming years
2021/2031 Long Term Plan.	Programme of work for water infrastructure has been developed. The LTP was approved in June 2021 and activities for year 1 have now been or are being scoped for delivery
Programme Darwin – to understand asset knowledge to refine investment planning.	The establishment of an Asset Management System is progressing. The other streams in the programme including Asset Lifecycle Management are being defined and resourced following a reset session in May that garnered useful insight from what staff saw as being needed from this programme.
Crown 3-waters reform funding.	MOU signed.  Funding agreement and delivery plans have been approved.  The Funding Agreement and Delivery Plan submitted September 2020 included a portfolio of projects to be completed prior to March 2022. The projects are split roughly 60% capital in nature, and 40% operational. Of the 18 projects, 13 of these projects will improve resilience.  Key projects include:

	<ul style="list-style-type: none"> <li>• Kaitaia new water source</li> <li>• Kaikohe new water source</li> <li>• Update water safety plans across the district</li> <li>• Network model upgrades</li> <li>• Enhanced water leak management</li> <li>• Enhanced water monitoring capability and data capture</li> </ul>
Water Safety Plans	Water Safety Plans are being updated for each of our eight water schemes, also under the DIA funded programme. This significant piece of work is progressing and is on track for completion by 31 march 2022. This work will inform our understanding on the resilience issues faced by each scheme along with an improvement plan for those issues.
Water Shortage Management Committee	<p>Establishment of the WSMC for the 2021/22 summer is underway with Chairmanship remaining with the Infrastructure Planning team.</p> <p>The lessons learned from the session held in May identified a number of improvements to the Water Shortage Management Plan and eco-system which will adopted this coming year</p>
Drought Communication Plan	The “be water wise” campaign commenced December 2020 and continues to be live.

### Where are the gaps? / what more could we be doing?

The June 2021 deep dive was a rapid immersion into our drinking water resilience risk. At the session Elected Members wanted to understand resilience in regard to changing conditions and operations, and how our thinking around resilience has matured. The main activities underway or being considered to further build our resilience are:

- Alternative water supply for Kaitaia should be available after Christmas 2021
- Second deep bore at Monument Hill
- Reservoir storage for Kerikeri
- Catchment management process review of Water Treatment Plants
- Water Safety Plans (which also address risk management) will protect from source to customer and include improvement plans

What the acceptable level of risk is, for each water scheme and the residual risk profile, is yet to be determined. Whilst previous workshops with Elected Members were unable to assess the residual risk score, those workshops and ongoing work identified three aspects to understanding our adaptive capacity – source, treatment and network, of which there are a number of contributing factors towards achieving resilience.

Water Safety Plans are being updated for each of our eight water schemes. This significant piece of work will be completed by March 2022 and will inform our understanding on the resilience issues faced by each scheme. When completed this assessment, along with capacity analysis as part of the network modelling and any other available relevant information, can then be used to inform the Assurance, Risk and Finance Committee discussion to develop a residual risk profile.

The solutions to the gaps identified below will become clearer as 3-water reforms become more advanced and with the enactment of the Water Services Bill. These gaps are:

- What are Council obligations in respect of non-public schemes?
- If a private scheme starts to impact ratepayer health what is Councils responsibility?
- Council needs to determine what level of residual risk are we prepared to accept.

- The uncertainty of the ongoing ownership/management of these schemes under the Crowns proposed water supply reforms and the transition of this activity if these reforms are adopted.

Inherent Risk:	Trend	Residual Risk:	Accountable:	CEO	Date raised:	March 2020	Report frequency:
	Stable		Responsible:	GM IAMs	Date accepted:	05/07/20	Three monthly