

# ARF013 Drinking Water Resilience

## Risk Status Progress Report March 2022

Prepared: 17/02/2022

### 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. Treated 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:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water Shortage Management Plan, Committee and Drought Communication Plan       | 21/22 following Water Shortage Management Plan. No water restrictions imposed so far this year.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2021/2031 Long Term Plan.                                                      | A programme of work for water infrastructure has been adopted. Activities for year 1 have now been or are being scoped for delivery. The Kerikeri clarifier project is now with the project delivery team for replacement in 2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Programe Darwin – to understand asset knowledge to refine investment planning. | The Asset Condition Assessment programme of work is progressing well with tenders out for work across 3 Waters and District Facilities. Procurement has been approved for drinking water pipe condition assessment (potholing), condition assessment of pipe bridges and seismic assessment of dams and reservoirs.                                                                                                                                                                                                                                                                                                                                                                                     |
| Crown 3-waters reform funding.                                                 | <p>MOU signed.</p> <p>Funding agreement and delivery plans have been approved.</p> <p>The Funding Agreement and Delivery Plan included a portfolio of projects to be completed prior to June 2022. The projects are split roughly 60% capital in nature, and 40% operational. Of the 18 projects, 13 of these projects will improve resilience.</p> <p>Key projects include:</p> <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> |

|                    |                                                                                                                                                                                                                                |
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| Water Safety Plans | Water Safety Plans are being updated. This is on track for completion by 31 March 2022. This work will inform our understanding of the resilience issues faced by each scheme along with an improvement plan for those issues. |
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### 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. 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. 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 Council's responsibility?
- Council needs to determine what level of residual risk are we prepared to accept.
- There is uncertainty about the future ownership and management of water supply assets due to the proposed three waters reforms.

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