

## 11.2 Marton Water Supply Strategy

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### 1. Executive Summary

1.1 During the May 2021 Council meeting the following resolution was passed:

That Option 2 - Ground water as raw water source with a new WTP to supply 5000 m<sup>3</sup>/day - be selected as the preferred option for the Marton Water Supply Strategy.

The purpose of this report is to present the finalised Marton Water Strategy to Council.

### 2. Context

2.1 The Assets and Infrastructure Committee endorsed the development of a Marton Water Supply Strategy and indicative development process and timelines in February 2019. The purpose of the Water Supply Strategy outlined in this paper is to consistently deliver good quality, affordable, safe drinking water at volumes for today and the future.

A Problem/Opportunity statement was created in March 2019 and was followed by a review of all existing information/reports and recent works covering the Marton water supply scheme. In early 2020 RDC engaged the services of consulting experts to advise Council on the costs and complexities of treating the existing groundwater sources as well as the costs of delivering the existing Calico Line bore water to the existing water treatment plant site. This work was followed by additional investigation work considering the whole of life costs for all identified options. A more detailed business case was developed to consider the financial implications of changing the raw water source and treatment process to produce drinking water for Marton. This detailed business case was presented to Council in May 2021, and the following resolution passed:

**Resolved minute number 21/RDC/097**

That Option 2 - Ground water as raw water source with a new WTP to supply 5000 m<sup>3</sup>/day - be selected as the preferred option for the Marton Water Supply strategy.

Cr Wilson/Cr Raukawa. Carried

### 2.2 Raw Water Source

The existing Tutaenui bore is consented for the abstraction of 3500 m<sup>3</sup>/day and a second bore will be required to achieve the 5000 m<sup>3</sup>/day goal. The scope of work and timelines to achieve this outcome will include the following:

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Activity	Expected Completion Date
Revisit the Electro Kinetic Surveys of the groundwater resources around Marton completed in November and December of 2008.	End of August 2021
Determine if these reports are accurate enough for use or if it is necessary to commission an update of these surveys.	End of August 2021
Identify the locations from which water is most likely to be obtained.	End of November 2021
Tender and complete construction of a test bore to determine flow and water quality.	End of June 2022
If flowrates and quality from the test bore is sufficient, proceed to the construction of a production bore.	End of December 2022
Create the necessary resource consent applications for the new bore.	End of August 2022

If the test bore does not yield water of sufficient volume or quality, secondary locations will be identified and investigated. This will cause a delay in the construction of a second bore but will not delay the Strategy due to the availability of the existing Tutaenui bore.

**2.3 Water Treatment**

RDC engaged the services of water treatment process engineers to investigate the costs and complexity of treating existing groundwater sources. In terms of the whole of life costs, the most cost-effective treatment process applicable to the current groundwater sources is Ion Exchange. The concept design created in 2020 will be progressed to a full detailed design ready for tender and construction. The following activities and timelines will apply:

Activity	Expected completion date
Create Tender documents for detailed design of a new ion exchange treatment plant	End of October 2021
Award the contract and start detailed design	End of November 2021
Detailed design completed	End of March 2022
Create Tender documents for the construction of the new treatment plant and go to market	End of June 2022
Award the contract and start of construction	February 2023
Completion of construction	December 2023

**2.4 Water Storage**

The new treated drinking water reservoir at the existing treatment plant site will be assessed against the required future demand to determine whether additional storage capacity may be required, and if so, when.

**2.5 Water Supply Network**

Previous work on the Marton water supply identified high per capita water use (litres per person per day). The high daily water use can be the result of different factors such as inefficient water use, water leaks from an aging water supply network or water leaks on private properties.

This part of the water supply strategy will be looking at the supply network in more detail to determine how the network is performing in the following areas:

Activities	Expected completion date
Investigate network performance and condition assessments. This is part of the current asset management strategy work and forms part of a District wide programme of work.	End of December 2022
Create a programme of work to plan all future upgrades and renewals	End of December 2023
Investigate current levels of leakage and loss from the supply networks	End of June 2022
Investigate the feasibility of creating metered supply zones	End of June 2022
Install all required valves and bulk water flow meters to create metered supply zones if required.	End of June 2023.
Investigate possible unintended consequences resulting from the change in water supply characteristics and identify proactive preventative measures to avoid these changes.	End of June 2022

**3. Conclusion**

3.1 The proposed actions and timelines above will consistently deliver good quality, affordable, safe drinking water at volumes for today and the future. The strategy will be completed by the end of 2024 to align with budget allocations in the current approved 2021 – 2031 LTP.

**Recommendation**

That the Marton Water Supply Strategy be received.