



**CLUTHA
DISTRICT
COUNCIL**



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Rural Water Feasibility Study

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Executive Summary

Following the Havelock North water incident, the Government embarked on a major review of the regulatory and service delivery environment for three waters services. The review has resulted in a number of changes, including the establishment of a water services regulator, Taumata Arowai. As part of these reforms, in October 2021 the Government announced that three waters services currently owned and managed by councils will be transferred to four new water service entities.

The announcement to mandate the transfer of three waters services new water services entities came after an eight week consultation period with local government. During this period the Government received a significant amount of feedback regarding the proposed governance and representation arrangements, as well as the impacts on rural water schemes, and the integration with urban planning. To respond to this feedback, the Government has established three working groups:

- The Working Group on Representation, Governance and Accountability
- A planning technical advisory group
- A rural supplies technical advisory group

Clutha District Council commissioned Morrison Low to undertake a feasibility review of the potential service delivery options available for rural water supply schemes within the Clutha District. This review is intended to inform future discussions with the rural supplies technical advisory group, and with the rural water scheme committees. It considers the opportunities, challenges, benefits, issues, and risks associated with three different service delivery options, including:

- Transfer of the management, ownership and governance of rural water schemes to the water services entity.
- Retention of the status quo (management, ownership and governance of the rural water schemes retained by Clutha District Council).
- Transfer of the management, ownership and governance of the rural water supply schemes to the community in some way (for example through an entity that is owned by the customers of all of the rural water supply schemes).

In assessing the feasibility of each option, we have considered technical feasibility (including resourcing, financial and legal impacts), the relative benefits and risks of each option, and the relative performance of each option against a set of additional criteria that reflect the ambitions of rural water scheme committees and the Governments service delivery bottom lines.

This report does not make a recommendation regarding the future management, ownership or governance arrangement for rural water supply schemes. In our view, this is a decision that must be made by the rural water scheme committees and council together having regard to the benefits and risks of each option; however we note that:

- From a pure feasibility perspective, the transfer of rural water supply schemes to a water services entity is likely to be more feasible than the other options because it is the Government's currently preferred model and addresses a number of potential risks regarding future compliance and resource constraints. However, there are significant hurdles that would need to be overcome to ensure that the concerns of the rural water schemes are addressed.
- Continuation of the current management, governance and ownership arrangements would likely be the most desirable outcome for rural water scheme committees, and this was communicated to us through our conversations with rural water scheme committee chairs. However, there are likely to be a number of challenges associated with this, and in particular there is significant risk that Clutha District Council will not have or be able to recruit or retain the necessary skills to manage these schemes in the long term. It will also require the government to change from what is currently proposed in the reforms.
- Transfer of the management, governance and ownership of the rural water supply schemes to the community is likely to be the least feasible option from a technical perspective because it requires government support and is likely to face challenges regarding future compliance and enforcement as well as resourcing constraints. While the option meets many of the objectives sought from rural water scheme committees, it also comes with a heightened level of risk for scheme committee members, further costs relating to the need to establish a corporate structure, and limitations regarding the ability to attract, and retain, skilled resources. It will also require the government to change from what is currently proposed in the reforms.

Following the initial development of this report, and its publication in draft in December 2021:

- Council invited rural water scheme committee chairs to a workshop on 17 January 2022 to consider the potential options and issues outlined in this report.
- A mixed ownership model "the hybrid model" which involves Entity D taking ownership of the treatment and water source assets, with Council retaining ownership of the reticulation assets, was developed. That model is considered in more detail in an addendum to this report.
- Rural water scheme committee members met with Council on 27 January 2022 to discuss the preferred way forward.

These meetings resulted in the confirmation that the principles outlined in the hybrid option be further explored and pursued by Council in its discussions with the government. A package will be further developed with more detail on the hybrid model to present as a compelling case to the Government.

Overview

Introduction

Four Water Services Entities are being created with the Government's mandated three water reforms to improve the effectiveness and efficiency of service delivery. Under this new arrangement, Clutha District Council's (CDC) three waters assets, rights, duties, obligations and liabilities for drinking water, wastewater and stormwater services will transfer to Water Services Entity D (Entity D).

Given the unique challenges around the operation and governance of rural water supplies, the Government has indicated that it intends to establish a working group to specifically consider the role of rural water supplies within the reform proposals. Following the Department of Internal Affairs' (DIA) visit to Clutha District in September 2021, it was indicated that there may be opportunities for rural water supplies to be excluded from the reform proposals.

Morrison Low was engaged to undertake a review into the feasibility of three different potential service delivery arrangements for rural water supply schemes, being:

- The option of the management, governance and ownership of the rural water supply schemes being transferred to the proposed water services entities
- The option for the management, governance and ownership of the rural water supply schemes to be retained by CDC, noting that this may involve some changes to the current arrangements given developments regarding drinking water standards and the regulation of water suppliers.
- The option of the management, governance and ownership of the rural water supply schemes being transferred back to community ownership in some form. In this report we have assumed that all schemes would be transferred to a single entity that would be owned by the customers of rural water schemes.

CDC wished to have a clear understanding of the key issues, benefits and risks with retaining the rural water schemes or moving to community ownership to meet current and future legislative requirements.

Review scope

The scope of the review covered the CDC owned rural water schemes and excluded the urban water supplies. It is noted that in specific locations, the urban and rural water schemes are physically interconnected. This has been identified as a key issue for technically separating the rural water schemes (discussed further below).

The intent of the review was to undertake a feasibility study that specifically considers:

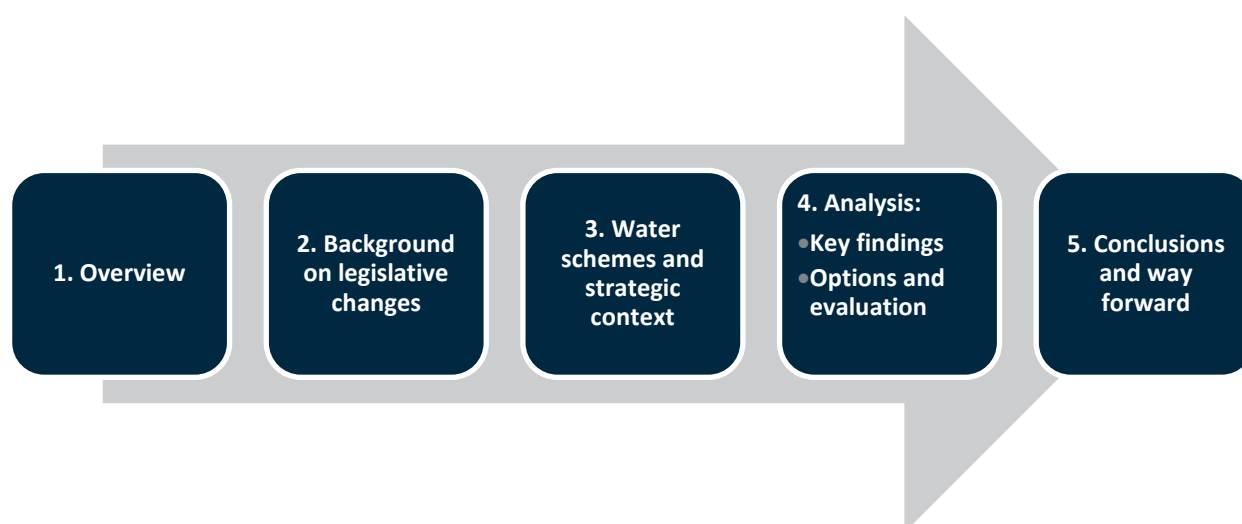
- **Technical feasibility** - The technical feasibility of separating the rural water schemes.
- **Resourcing requirements** - The resourcing requirements and capability that would need to be retained by CDC were it to keep the rural water schemes.
- **Financial impacts** - The financial impacts of retaining the rural water schemes in the event that CDC's remaining three waters activities are transferred.

- **Legal/political feasibility** – The legal and political feasibility of the schemes being retained by CDC or returned to community ownership and management.
- **Compliance** - The potential risks, including compliance with drinking water standards (current and future standards and rules being developed by Taumata Arowai) associated with retaining rural water schemes, and future compliance with an economic and consumer protection regulator. Compliance with environmental and consent requirements imposed by regional councils.
- **Risks** – the risks associated with water service delivery under each proposed model.

The Waipahi Rural Water Scheme (stock water only) has been excluded from the main analysis as it does not provide potable drinking water. It is therefore not covered by the three waters reforms. While the scheme is currently fully owned by Council, in the future it could potentially be operated by the connected customers rather than CDC. The Waipahi Scheme is addressed separately elsewhere in this report.

The detailed methodology is provided in Appendix B. The report has been structured as follows:

Figure 1 Report structure



Background

Three waters reform

The New Zealand Government is reforming how drinking water, wastewater and stormwater (three waters) services are delivered across New Zealand. In a Cabinet paper released on 20 November 2018, the Government indicated that alongside regulatory changes there may be major structural reform of the water sector. It described a system facing significant issues where:

“the scale of the challenge indicates that the status quo is not sustainable in the long term”.

Among the key issues identified were weak regulation, capability challenges (particularly for smaller councils) and funding and financing issues for upgrading infrastructure.

The reform has continued at pace. A new regulatory authority to oversee, administer and enforce a revised three waters regulatory system, Taumata Arowai, has been created. The Water Services Act has been passed and will reform the regulation of New Zealand's three waters networks.

During 2020 and 2021 Morrison Low worked with the eight territorial authorities of Otago and Southland on a business case for three waters service delivery. That process was overtaken by the Government's own proposals for three waters service delivery which were socialised in mid 2021.

The Government has now announced the creation of four Water Services Entities, released data to support the proposed reforms including the local council dashboards and individual council reports and a \$2.5B support package to enable reform. While it was originally intended for councils to be allowed to opt out of the reform proposals, the Minister for Local Government has since announced that these reforms will be mandatory.

CDC is proposed to be part of Entity D along with the rest of the South Island, with the exception of the Nelson, Tasman and Marlborough areas which have been proposed to form part of Entity C. All of the proposed Water Services Entities are proposed to be a new form of independent statutory entities. Key features include:

- There will be no shareholding.
- Board members will be appointed by a regional representative group (potentially via an independent selection panel) comprising up to twelve representatives with an even number of iwi/Māori representatives and representatives from local government.
- The entities will borrow in their own name and will have full balance sheet separation from councils (i.e. the debt of the entity will not be considered to form part of the constituent councils' debt).
- The entities will not be able to pay a dividend and will not have a profit motive.

Detail about how the proposed entities will function, at an operational level, is scarce. While the government has published information about potential future price increases, and estimated future investment cost, this has not been segregated into individual charges for water, wastewater, and stormwater. Neither has this information been segregated into different price paths for rural or urban customers (if indeed there is any price segregation).

The government has also indicated that anyone who currently works on three waters at a council will be offered a job within the same location and under the same conditions as they have now. This means that staff currently based in Clutha District will continue to be in Clutha District but no longer work for CDC.

In response to some of the feedback received from councils, particularly around the rural schemes, their complexity and difference in nature from typical urban water supplies, the government has established three working groups to consider key issues relating to the reform, these working groups include:

- The Working Group on Representation, Governance and Accountability
- A planning technical advisory group
- A rural supplies technical advisory group

The Government has indicated that it is prepared to consider proposals from those working groups, as long as they uphold its bottom lines for reform, which include:

- That the entities retain balance sheet separation, which would give them the ability to borrow sufficient sums to meet infrastructure needs.
- Giving effect to the Crown's Treaty of Waitangi obligations, including enabling iwi/Māori to have rights and mechanisms of influence.
- Ensuring good governance through roles and responsibilities, and board selection processes based on merit and competence.
- Ensuring that each entity remains in public ownership.

Any proposed amendment to the proposals, such as is considered in this report, is likely to need to meet these bottom lines or demonstrate how it will address them (for instance balance sheet separation may not be necessary if it can be clearly demonstrated that there are no funding constraints for future investment).

This report is prepared based on the current proposals at December 2021. It is possible that the working group on governance and representation will make recommendations that alter the structure, ownership, governance or number of water services entities.

Economic and consumer protection regulation

A key element of the Government's proposed three waters reform programme is the introduction of an economic regulator. In the various reports produced by the Water Industry Commission of Scotland, it was stated that service delivery reform would not be successful without economic regulation, and vice versa.

The arrangements for an economic and consumer protection regulator have not yet been finalised. The Ministry of Business, Innovation and Employment released a discussion document on 27 October, seeking written submissions by 20 December. However, the discussion document gives some insight into what economic regulation of the water industry may look like. It notes:

- Economic regulation will apply to Water Services Entities at a minimum, and there are likely to be provisions to enable it to be extended to large private schemes. The current proposals are predicated on the assumption that there are only two drinking water schemes that service more than 5,000 people and that these are both self-supplies (i.e. there are no other schemes of sufficient size to warrant regulation).
- Economic regulation is likely to involve detailed information disclosure. We note that the detailed RFI completed by Clutha at the end of 2020 was said to be less than half the size of the information request issued by the Water Industry Commission of Scotland to its water suppliers.
- Economic regulation is also likely to involve the establishment of price quality paths. These paths limit the amount of revenue an entity can generate in any given year and are usually designed to force entities to operate more efficiently.
- A consumer protection regulator is also likely to be established. This is likely to apply, at a minimum, to all schemes providing water to more than 500 people, and may include:
 - The development of minimum levels of service and mandatory reporting against those levels of service. These may include measures such as response time, time to resolution, minimum water pressure, security of supply, etc.

- Protections for vulnerable customers who may require different levels of service than the general population.
- Controls around the pricing structures that may be able to be used by the water services entity.
- Formal processes for dispute resolution and management of complaints.

Compliance with the requirements of both an economic and consumer protection regulator is likely to require future additional resources, over and above those currently employed by CDC.

New legislation and other local government reform

The environment in which local government operates and delivers three waters services is subject to constant change. While councils are used to change, and to the Government introducing new rules and regulations, the level of change in recent years has been significant. Of particular relevance to rural water supplies, is the recent passing of the Water Services Act 2021. That Act:

- Requires drinking water suppliers to provide safe drinking water that complies with drinking water standards up to the point of supply
- Requires all water supplies to be registered
- Requires owners of water supply schemes to have Water Safety Plans
- Sets record keeping requirements
- Gives Taumata Arowai the power to set drinking water standards, and requires reporting to Taumata Arowai
- Provides for Taumata Arowai to take criminal proceedings or issue fines against water suppliers that make an offence against the Water Services Act. Importantly, elected members of CDC are not able to be charged under the Water Services Act.

In 2020 the Taumata Arowai – the Water Services Regulator Act 2020 was enacted to establish Taumata Arowai as the quality regulator for the provision of drinking water.

In addition, there is a range of other legislation and reform currently being proposed by the Government which is likely to have some impact on the way councils deliver rural water supplies. In particular:

- The introduction of legislation to create water services entities, which was due prior to Christmas 2021 but has since been delayed by at least four months
- The introduction of legislation to establish an economic and consumer protection regulator for three waters, which is in early consultation processes (draft legislation has not yet been prepared)
- The proposed Resource Management Act reforms, which may alter the role that councils have in district and spatial planning, and consenting, as well as the protections for the local environment
- The proposed review of the Future for Local Government, which has a broad terms of reference, and will consider issues such as the ways in which councils generate their funding, as well as the range of services local government provides to its communities.

Water schemes and context

Clutha's rural water schemes

Scheme overview and history

CDC manages 22 separate drinking water schemes within its district. Of those schemes, there are 12 schemes that are classified as rural (with Richardson North and South categorised separately). About a third of the district water produced is for domestic consumption and the balance is largely used for stock water.

The rural water schemes provide drinking water for domestic and business use, special users such as schools, community halls and campgrounds, and for stock water. The Waipahi Rural Water Scheme provides stock water only. The rural water schemes are summarised in Appendix C and include Balmoral 1, Balmoral 2, Clydevale-Pomahaka, Glenkenich, Moa Flat, North Bruce, Richardson North, Richardson South, South Bruce, Tuapeka, Waipahi and Wangaloa.

The schemes are all run by their own rural water scheme committees (other than Richardson North and Richardson South which share a committee) which provide an overview role in the operation and development of the schemes and make recommendations to CDC on budgets, capital works and operational improvements. They have delegated powers on applications for changes to existing connections or additional connections or disconnections to the scheme. They are semi-autonomous and have a degree of control on how the schemes are operated and managed. Scheme committees typically get involved with decisions relating to:

- New connections and the sale and purchase of water units
- The operation and maintenance of the network
- Potential capital upgrades on the network
- The setting of the unit rate to be charged.

While formal delegations for the scheme committees are limited, in practice it is extremely rare for Council to reject a recommendation of the rural water scheme committees.

The schemes are entirely managed, governed and operated by CDC. CDC is responsible for developing the Asset Management Plans, record keeping, contract management, setting fees and charges, planning, issuing water rates, paying suppliers, testing and compliance and all other matters relating to the operation of the rural water supply schemes.

The rural water schemes were mostly established as stock water schemes in the 1970s and 1980s with support from Government funding. The schemes were required to provide potable water to the drinking water standards at that time as part of funding conditions, and over time have expanded to provide drinking water to many households, townships, and community facilities (including primary schools). The schemes were constructed by their customers using volunteer labour, hence there is as a strong sense of ownership. Most of the reticulation networks are located on private land, and there are no formal easements over that land.

We understand that ownership (including the legal ownership of assets, all decision making responsibilities and the ability to levy charges) of the schemes was transferred to council in the 1980s, in part to allow access to grant funding from Central Government for the capital work to enable the schemes to be compliant with the drinking water standards that were applicable at the time. However, we note that ownership of the schemes is a contentious issue and we have not obtained legal advice regarding ownership of the schemes.

Levels of service

Most of these rural water schemes have restricted supplies to consumers (that is the water is provided at a reduced pressure and is fed directly into water tanks on connected properties), except for Benhar and Stirling which are both on demand schemes and Stirling is also universally metered. The district's supplies are categorised as follows (due to the system interconnections between some of the urban and rural water schemes):

- Urban water on demand
- Urban water restricted
- Rural water restricted.

Compliance with the New Zealand Drinking Water Standards is much lower for the rural compared to urban schemes. The achievement against the bacteriological compliance was 64% for 2020/21 (compared to 100% for urban) with no plants achieving protozoal compliance (compared to 47% for urban).

Capital works to close these significant service gaps were approved and adopted as part of the 2021 Long Term Plan. This included the decision to approve the major capital Greenfield bore project with a budget of \$14.5 million. This is for establishment of a new supply from the Clutha River and a single treatment plant. This will replace the Evans Flat and Waitahuna Treatment Plants that had source water issues including reliability and resilience. The new plant will provide water to three rural water schemes (Balmoral 1 and 2, Tuapeka) and Lawrence township.

We understand that the proposed capital works on rural water schemes will result in all rural water schemes being capable of producing water that is fully compliant with the current drinking water standards by around 2024, with a number of schemes becoming compliant before then.

System interconnections

The rural water supply schemes in Clutha District supply drinking water to an estimated combined population of nearly 6,000. This includes supplies to farm properties, lifestyle blocks, townships, and community facilities such as primary schools, food service businesses and community halls.

Some of the urban and rural water schemes are physically interconnected where smaller communities and townships are provided with bulk water from the rural water schemes. These townships are (also summarised in Appendix C):

- Clinton (Clydevale-Pomahaka)
- Kaka Point (Richardson)
- Waihola and Tokoiti (North Bruce)
- Benhar (South Bruce / Stirling Treatment Plant)
- Stirling (South Bruce / Stirling Treatment Plant)

- Heriot (Moa Fat)
- Waitahuna (Tuapeka)
- Waikaka, Waikoikoi and Pukerau

The Glenkenich Rural Water Scheme is split between Gore and Clutha Districts.

Importance of water for farms

The schemes provide water to farms used as stock water for livestock including dairy, sheep and beef. Continuous and reliable water supply (not necessarily quality) to the farms is essential. Long outages are unacceptable as water is critical for animal welfare. The schemes were typically installed with the help of voluntary labour and financial contributions from scheme customers.

Water supply provides security for the district's agriculture based economy. The agriculture, forestry and fishing sector provides 32% of the district's economy (measured as a proportion of Gross Domestic Product, Infometrics, 2020).

The rural water schemes referred to in this report provide water to households, townships and community facilities in addition to farms. However, the overwhelming majority of the water produced and sold on the rural water supply schemes is used to support farming activities. Access to water adds value to farmland, and critically, allows for a broader range of uses for land.

While the primary concern for farms is security over the quantity of water, and the continuity of supply, we heard many examples of where the quality of water is also highly valued. Having access to high quality water:

- Improves outcomes for livestock – animals prefer high quality water
- Is essential for some agricultural activities such as cleaning milk plant and equipment
- Minimises the incidence of blockages in on-farm reticulation
- Ensures that farm workers are also provided with access to clean water.

We also heard, however, that in some instances the quality of source water has been particularly poor. After heavy rainfall events, water quality for some sources can deteriorate to the point that the existing treatment processes limit the amount of water that can be supplied. Given the importance of water to farms, in some cases that has resulted in some treatment processes being bypassed to maintain volume of supply, and consequentially boil water notices have been issued. We understand that these issues are likely to be resolved through the Greenfield bore scheme.

Key elements for managing water supply schemes

There are multiple functions required to deliver three waters services adequately, ranging from strategic planning to the day to day operations. This is regardless of the network size and / or complexity as well as the asset owner size (i.e. rural district council versus large water entity). The core activities need to be considered with evaluating the options to separate the rural and urban drinking water schemes.

The key functions are:

- Strategy
- Technical asset management
- Investment planning and prioritisation
- Plans and manages network
- Service delivery
- Revenue and customer service
- In the future, increased levels of record keeping, monitoring, reporting and information disclosure.

The functional roles and responsibilities are detailed in Appendix D.

CDC currently estimates that it has approximately 19 staff members within its service delivery group that work on the water, wastewater and stormwater schemes within the district. Under the proposed three waters reform, all of these staff members are likely to take on new roles within the water services entity.

CDC estimates that if rural water schemes are retained, without the remaining three waters services, that it will need to employ between 5-8 staff within the service delivery group.

In addition to the technical engineering staff, other council staff also are involved in providing three waters services, including:

- Accounts payable and receivable staff
- Financial and management accountants
- Building consent officer and inspectors
- Rating officers
- Community engagement and communications teams
- Customer service staff, including operation of the call centre
- Human resources staff
- Contract managers and procurement specialists
- Governance and oversight of the management of the scheme, including some of the time of the CEO, and the elected members of CDC.

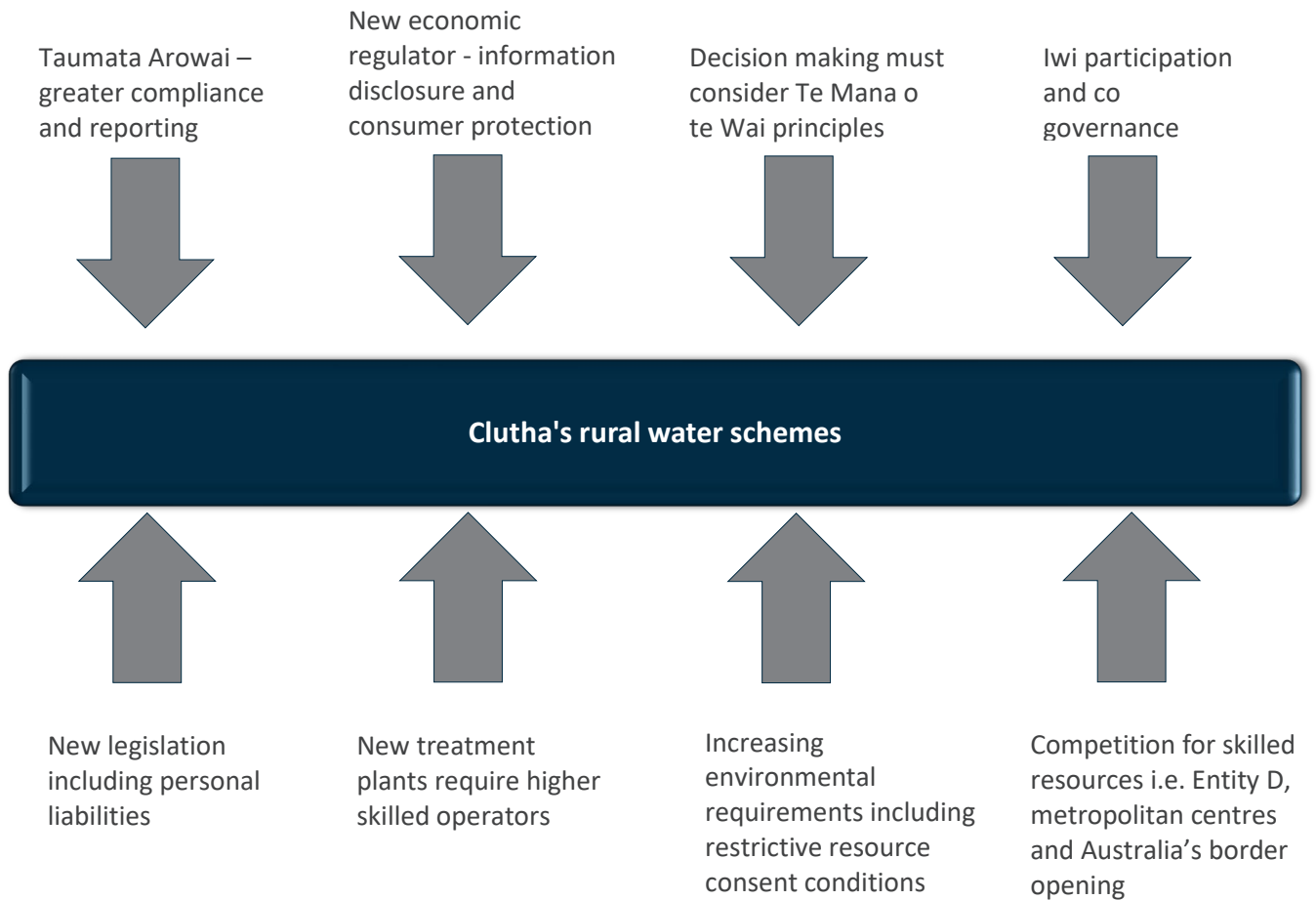
Most of these staff would remain in council even if wastewater, stormwater and urban drinking water was transferred to a new water services entity but some of the funding for their roles would have transferred to the water services entity and may represent “stranded costs” for CDC).

Strategic context

The obligations required for managing the rural water schemes has increased significantly since they were established in the 1970s and 1980s. These obligations will increase as described in the previous sections with the Water Services Act 2021 and new regulators (Taumata Arowai and the proposed economic regulator).

CDC's rural water schemes are impacted by external and internal influences, and national drivers such as Taumata Arowai. These external factors and pressures impact the specialist resources required to adequately manage the schemes as well as meeting current and future legislative requirements. The external factors and pressures are conceptualised in the following figure.

Figure 2 External factors and pressures concept



Options and evaluation

In order to assess the feasibility of each option we have:

- Initially considered whether each option is feasible from a technical, resourcing, financial, legal and compliance perspective
- Then compared the relative benefits, risks and challenges with each option; and
- Finally, assessed each option against criteria developed based on conversations with rural water scheme committee chairs and the Government's bottom lines for three waters reform.

The tables presented in this section summarise our findings in each of the above areas.

Feasibility

Our assessment of the feasibility of each of the proposed options for the future ownership, management and governance of the rural water schemes is presented in the table below. The summarised findings are based on our asset management, three waters reform, and engineering expertise, review of technical information provided by CDC and our conversations with key staff and stakeholders, listed in Appendix A.

This summary of feasibility doesn't specifically address some of the key concerns with each model around retention of local voice, local decision making, responsiveness, or Māori/Iwi representation. These matters are covered in our evaluation of each option against additional assessment criteria.

Table 1 Feasibility assessment

	Schemes managed by water services entity	Schemes managed by CDC	Schemes managed by a community body
What is it?	<p>Rural water schemes would transfer to Entity D as part of the Government’s three waters reform.</p> <p>CDC would no longer continue to have any role in the provision of rural water schemes.</p>	<p>CDC would largely continue its current role in the delivery of rural water, and the existing role of rural water scheme committees would be retained.</p> <p>Service delivery would be different to current service delivery given the new rules and regulations that CDC will need to comply with.</p>	<p>CDC would hand over all of its existing roles, functions and responsibilities for the management of rural water schemes to the community.</p> <p>In our view, this option would only be viable if all schemes were managed under a single community body. We have not considered options under which each existing rural scheme committee fully manages its own scheme.</p>
Technical feasibility	<p>As this option sees the transfer of all of the drinking water schemes (rural and urban) currently managed by CDC to the water services entity, there are unlikely to be any technical feasibility issues.</p>	<p>Rural water supply schemes provide drinking water to townships within the district as well as farms. In most cases, the schemes provide treated drinking water and reticulation to these schemes. In addition a number of special users (schools, community halls, youth camps, etc.) are connected to rural water supplies.</p> <p>Separation of the township supplies from the rural water supply scheme is unlikely to be technically feasible or would require significant investment that is not likely to be economic.</p>	<p>Rural water supply schemes provide drinking water to townships within the district as well as farms. In most cases, the schemes provide treated drinking water and reticulation to these schemes. In addition a number of special users (schools, community halls, youth camps, etc) are connected to rural water supplies.</p> <p>Separation of the township supplies from the rural water supply scheme is unlikely to be technically feasible or would require significant investment that is not likely to be economic.</p>

	Schemes managed by water services entity	Schemes managed by CDC	Schemes managed by a community body
		This option would require CDC to continue to supply drinking water to these townships.	This option would require the community owned entity (in whichever form it takes) to continue to supply drinking water to these townships.
Resourcing implications	<p>Water services entities are likely to employ all of the water professionals currently employed by councils and will provide strong career development opportunities which mean they will be highly attractive employers.</p> <p>Any resourcing issues applying to water services entities are likely to be limited to retaining local expertise and contractors within the Clutha District.</p>	<p>Water services entities are likely to employ all of the water professionals currently employed by councils and will provide strong career development opportunities which mean they will be highly attractive employers.</p> <p>Analysis undertaken by the Department of Internal Affairs indicates that an additional 5,850 – 9,260 additional jobs will be required to deliver the estimated future investment needs in three waters.</p> <p>It will likely be extremely difficult for CDC to be able to attract skilled water industry experts when it is competing with a large water entity for scarce resource.</p> <p>It is likely that the resourcing constraints would be addressed by outsourcing key roles and responsibilities.</p>	<p>Water services entities are likely to employ all of the water professionals currently employed by councils and will provide strong career development opportunities which mean they will be highly attractive employers.</p> <p>Analysis undertaken by the Department of Internal Affairs indicates that an additional 5,850 – 9,260 additional jobs will be required to deliver the estimated future investment needs in three waters.</p> <p>It will likely be extremely difficult for a community board to be able to attract skilled water industry experts when it is competing with a large water entity for scarce resource.</p> <p>A community owner water entity will also need additional resources to manage corporate tasks such as billing and contract management. The entity would be able to outsource this work to a third party to manage this risk.</p>

	Schemes managed by water services entity	Schemes managed by CDC	Schemes managed by a community body
Financial implications	<p>There is a lot that is not known about the proposed water services entities, including pricing arrangements, such as:</p> <ul style="list-style-type: none"> • Whether different prices will be charged between rural and urban communities • What proportion of future estimated charges relates to drinking water • Whether there will be any cross-subsidisation. • The Government has indicated that Water Services Entities may be able to generate efficiencies of around 50%, which if actually achieved would likely result in lower prices than could otherwise be achieved. 	<p>In September 2021 Morrison Low (Appendix E) undertook high level indicative financial analysis of the potential future costs for the supply of rural water.</p> <p>That analysis was undertaken at a combined level, rather than for individual rural water schemes, and indicated potential price increases of 58%, on average by 2031 before inflation.</p> <p>That analysis did not consider the costs of running rural schemes in isolation from wastewater, stormwater, and urban drinking water, and it is likely that price rises would be moderately higher (between 10% – 20% more plus inflation) if this were the case.</p> <p>The actual impact will differ between schemes.</p>	<p>The analysis undertaken by Morrison Low in September 2021 (Appendix E) may provide some guidance around future potential price impacts for rural water that is managed by a community board.</p> <p>However the community board model will likely be further impacted by the need to engage staff to provide corporate support, and to invest in billing and asset management systems.</p> <p>Further, investment in capital works is currently typically loan funded. Because CDC has a large revenue base it is able to borrow more than it may be able to if it relied on rural water revenue only. In the analysis supporting Morrison Low’s September 2021 report rural water debt exceed 380% of its revenue.</p> <p>It is possible that a community board management model may face debt constraints.</p>
Legal and political feasibility	<p>The transfer of rural water supplies to a water services entity is the Government’s preferred model, and consequently is politically feasible at a national level.</p>	<p>This option would need to be accepted by the Government to proceed and is not well aligned with the Government’s reform objectives.</p>	<p>This option would need to be accepted by the Government to proceed and is not well aligned with the Government’s reform objectives.</p>

	Schemes managed by water services entity	Schemes managed by CDC	Schemes managed by a community body
	<p>However, private water schemes are currently partially located on private land with no formal easements. Additionally, ownership of the schemes is contested by some members of the community. We understand the Local Government Act contains provisions to protect council access to water infrastructure on private land and would assume that these provisions would be passed to a water services entity.</p> <p>There is a great deal of animosity towards this proposal in the local rural community, which may make this option less feasible politically at a local level.</p>	<p>CDC continuing to be responsible for the supply of drinking water to nearly 6,000 people is likely to be politically challenging at a national level as it is not consistent with the Government’s broader objectives.</p> <p>However, representatives from the Department and Internal Affairs and Taumata Arowai have previously indicated that Clutha District’s rural water supplies may be able to be treated differently to other drinking water schemes.</p> <p>In our opinion, Council would need to provide for formal input from Māori/iwi for this solution to be acceptable to the current Government.</p>	<p>Transfer of the management of the rural water schemes supplying drinking water to nearly 6,000 people to a community board is likely to be challenging given the objectives of the three waters reform programme.</p> <p>We note that the Otama scheme in Gore District required special legislation and a referendum to return to private ownership, and that this process was lengthy, and began prior to the current three waters reform programme.</p> <p>If this option was to be pursued CDC would need to seek legal advice regarding the current ownership of the schemes, and the process to return ownership and management to the community.</p>
Compliance implications	<p>Water services entities will be large entities with a dedicated focus on the provision of three waters services. They will have competency based boards and employ a skilled workforce.</p> <p>These entities will have sufficient capability and capacity to ensure compliance with drinking water standards and will be subject to the full suite of enforcement powers under the Water Services Act.</p>	<p>CDC has a strong level of local understanding about its rural water supply schemes, and where the key risks are likely to be.</p> <p>Assuming CDC is able to attract the appropriate level of capability and capacity to manage its networks it is likely to be able to meet the compliance obligations imposed upon it.</p>	<p>Rural scheme committees have a strong level of local understanding about its rural water supply schemes, and where the key risks are likely to be.</p> <p>However, they are likely to be resource constrained which may impose challenges with their ability to comply with the Water Services Act and the information disclosure requirements imposed by any economic or consumer protection regulator.</p>

	Schemes managed by water services entity	Schemes managed by CDC	Schemes managed by a community body
	While compliance is not guaranteed, it is highly likely that these entities will be best able to meet all compliance obligations.	<p>New regulatory regime imposes penalties and liabilities on individuals for water supply.</p> <p>Compliance will likely come with additional costs and those additional costs would be borne entirely by the rural water scheme users</p>	<p>New regulatory regime imposes penalties and liabilities on individuals for water supply.</p> <p>Compliance will likely come with additional costs and those additional costs would be borne entirely by the rural water scheme users</p>

All of the options are technically feasible however risks around the compliance with drinking water standards and the personal liabilities associated with non-compliance, coupled with the potential resourcing constraints associated mean that transfer of the rural water schemes to a three waters entity is likely to be much more feasible than the other two options.

Benefits and risks

The benefits and risks for the three options were identified and are summarised in the following table. This shows that there are benefits and risks with each option, with no option standing out as risk free. The major risks with community ownership and retaining in CDC are having adequate specialist resources to cover the core activities to manage the schemes. The major risk with transferring rural water schemes to the water services entity is that the Water Services Entities are not aligned to the rural customers’ needs as set up for managing urban water.

Table 2 Benefits and risks of options

Options	Main benefits	Key risks
Moved to Entity D	<ul style="list-style-type: none"> Specialist resources available for managing range of schemes / networks in size, complexity and technology. Entity D will have sound understanding on how to manage water networks including new technology, technical training, processes, systems and people capability. They will be up to date with the latest water industry practices and legislative requirements. Scale benefit for absorbing compliance costs. Potential efficiencies (whether monetary benefits or improvements in service etc). 	<ul style="list-style-type: none"> Water Service Entities set up for managing urban water supplies so not aligned to customers' needs. Decisions are made outside of the district and rural water will compete with the higher priority and larger urban water supply, wastewater and stormwater networks. Cost uncertainty with this new arrangement as charges not within the control of the community and the tariff methodology will also likely change. Entity D may not have the same focus on local service delivery, with a risk that may potentially result in longer water outages.
Retain in CDC	<ul style="list-style-type: none"> The governance structure remains similar to the status quo so well understood. Decision making remains in the district and local. Investment programmes continue to be planned through close engagement with the rural water scheme committees to ensure the schemes are managed prudently. CDC understands the importance of the farming sector to the district's economy. Reliable service provided as operational resources located in the district and available to respond to faults. 	<ul style="list-style-type: none"> CDC's three waters technical expertise will move to Entity D and therefore not available for managing the rural water schemes as per the current arrangements. Difficult to attract suitable resources to the district as competing with Entity D and the metropolitan centres for talent. May not be able to afford the future investments to ensure the schemes are compliant with legislative requirements, although may not face the same debt constraints that would be present in a community ownership structure. CDC will be accountable for providing safe drinking water including personal liability for non-compliance.
Move to community ownership	<ul style="list-style-type: none"> Decision making remains in the district and local. Able to provide valuable input into the planned capital works programmes based on the ground observations and knowledge. 	<ul style="list-style-type: none"> Do not have the same access to specialist resources to cover the core activities to adequately manage the schemes. External resources will need to be procured under agreement with CDC and / or Entity D.

Options	Main benefits	Key risks
	<ul style="list-style-type: none"> • Accessible to governance structure as local and likely to also be the scheme customers. • Able to influence decisions (except those driven by compliance with national standards and regulatory standards) so Rural water scheme customers may have some control over the inputs that ultimately influence the price of water. • Costs and investment programmes are transparent to community as they will have developed them. 	<ul style="list-style-type: none"> • May not be able to afford the future investments to ensure the schemes are compliant with legislative requirements. • The governors of the community owned water supply entity (directors, committee members, etc) will be accountable for providing safe drinking water including personal liability for non-compliance.

The key benefits and risks associated with transfer to the water services entity relate to the lack of understanding of rural water schemes and the risk that investment in rural water schemes will not be prioritised. This is balanced against a mitigation of compliance risk and personal liability, and the ability to better address resourcing constraints. The benefits and risks are mirrored in the community ownership and council ownership models, whereby compliance and resourcing are the largest risks under these models, with the key benefits relating to the retention of local decision making and understanding of rural water schemes.

Additional considerations

Additional considerations have been included based on our understanding of the Government’s bottom lines for three waters reform and the key themes that were communicated through conversations with the rural water scheme committee chairs as being important to customers of their schemes.

When considering the overall feasibility of each option, these criteria should be regarded as being of equal importance to other feasibility issues raised earlier in this report.

1. Ability to be responsive to local issues in a timely way and processes for raising issues, faults, and concerns.
2. Clear accountability of decision making back to the customers of rural water schemes.
3. Ability for rural water scheme boards to retain a meaningful role in deciding the level of service and investment within their schemes.
4. Assurance that prices charged to rural water scheme customers are fair and do not result in rural customers bearing the costs of wastewater or stormwater schemes.
5. Giving effect to the Crown's Treaty of Waitangi obligations, including enabling iwi/Māori to have rights and mechanisms of influence.
6. Ensuring good governance through roles and responsibilities, and board selection processes based on merit and competence.
7. Ensuring that each entity remains in public ownership.

The government’s bottom line regarding balance sheet separation has been addressed in table 1 in relation to the financial feasibility of each option.

The performance of each option against these considerations is summarised in the table below.

Table 3 Non-technical performance of each option

	Schemes managed by water services entity	Schemes managed by CDC	Schemes managed by a community body
1. Responsiveness	There is a risk that call centre functions and decision making is centralised outside Clutha District and responsiveness is compromised. There is a concern that rural scheme issues may not be treated with priority or by people that understand the schemes.	Local presence would be guaranteed which may provide scheme customers with the confidence that issues are well understood and are likely to be responded to appropriately. Resource constraints that may arise through the reform process may impact ability to be responsive.	Local presence would be guaranteed which may provide scheme customers with the confidence that issues are well understood and are likely to be responded to appropriately. Resource constraints that may arise through the reform process may impact ability to be responsive.

	Schemes managed by water services entity	Schemes managed by CDC	Schemes managed by a community body
2. Accountability	<p>The proposed structure sees board members of the water services entity being accountable to the regional representative group which may or may not have any local representation from Clutha District.</p> <p>There are also some mechanisms for the water services entities to be directly accountable to communities.</p>	<p>Governance of the rural water schemes would ultimately be through elected members of council. These individuals are local and directly accountable to ratepayers in the Clutha District.</p>	<p>Governance of the rural water schemes would be through a group of people that will most likely be selected by the scheme customers in some way. Appointees will be directly accountable to rural water scheme customers.</p>
3. Role for scheme committees	<p>It is unlikely that rural scheme committees will have any meaningful role under the current proposals.</p>	<p>Rural scheme committees' existing roles will be maintained.</p>	<p>Enhanced role for rural scheme committees, which will be responsible for all aspects of service delivery.</p>
4. Pricing	<p>Pricing structures have not been confirmed but it is possible that these will involve some level of cross-subsidisation.</p>	<p>Costs for rural water supply will be ringfenced. It is likely any decisions about cross-subsidisation between schemes will take advice from rural scheme committees.</p>	<p>Costs for rural water supply will be ringfenced. Any decisions about cross-subsidisation between schemes will take advice from rural scheme committees.</p>
5. Treaty of Waitangi responsibilities	<p>Water services entities will have co-governance with Māori/iwi embedded.</p>	<p>There are no current formal processes for Māori/iwi input into rural water schemes but it may be required if this option was progressed.</p>	<p>Rural scheme committees currently do not have specific roles for Māori/iwi outside of their involvement as a customer of the scheme but it may be required if this option was progressed.</p>

	Schemes managed by water services entity	Schemes managed by CDC	Schemes managed by a community body
6. Merit based boards	<p>Merit based boards are embedded into the reform proposals.</p> <p>Roles and responsibilities will be clearly defined through a national or entity level process.</p>	<p>Rural water schemes are governed by elected members that may or may not have experience in water services or governance and have a broad focus.</p> <p>The roles and responsibilities of elected members are broader than just relating to the provision of drinking water services.</p>	<p>Rural water schemes are governed by elected members that may or may not have experience in water services or governance.</p> <p>Roles and responsibilities of governors could be clearly defined and restricted to the provision of water, although may not be aligned to national objectives.</p>
7. Public ownership	<p>Water services entities will be publicly owned with protections against privatisation.</p>	<p>The Local Government Act prevents councils from privatising water services.</p>	<p>Schemes will effectively be owned by their customers but would assume, given the prohibition of privatisation that if this option progressed assets could only transfer to CDC or a WSE to prevent (further) privatisation.</p>

Conclusions and way forward

In our view, all three options are feasible (if supported by the Government). The extent to which each option is appealing, or has merits in being pursued further will ultimately depend upon the views of CDC and the rural scheme committees about:

- The level of risk they are willing to take on.
- Exposure to potential compliance driven costs increases they are willing to accept.
- The extent to which they wish to consume time, staff resources, and money to influence and/or challenge the Government’s proposals.
- Their assessment of the likelihood of being able to attract the appropriate level of resources to manage the schemes under each option.
- The extent to which CDC believes it is able to achieve concessions or guarantees regarding the management of rural water schemes by the water services entities.

When considering the additional assessment criteria that was identified during this review, it is clear that no single option is the “silver bullet”. There is no option that clearly addresses all of the concerns and objectives held by both the Government and rural scheme customers. Below, we outline some of the key issues that would need to be addressed for each of the options, alongside the potential solutions where they are able to be identified.

Through the workshops held on 17 January 2022 and 27 January 2022, it was made clear the rural water scheme committee members and chairs were particularly passionate about retaining a meaningful role for the existing scheme committees and about ensuring water remains affordable. It was also suggested that a meaningful role would include ability to influence decisions regarding:

- Capital works
- Operations and maintenance
- Unit prices

Schemes managed by water services entity

Transfer of the ownership and management of rural schemes to the new water services entity is likely to meet most of the feasibility criteria easily. However, it:

- May not be as responsive as a continuation of the CDC management arrangements currently in place.
- May lack clear accountability and understanding of rural needs.
- Lacks any clear or meaningful role for rural water scheme boards, including loss of ability to influence decisions about operations and maintenance or unit prices for water.
- Creates risks that rural customers may cross subsidise the costs incurred by urban customers, out of district customers, or wastewater and stormwater services – as is highlighted in our report regarding the rural/urban split of future water costs in **Appendix E** (although may equally benefit from cross-subsidisation).

We believe that some of these risks could be managed by:

- The creation of a dedicated “rural water” group or team within the water services entity that is responsible for pricing, investment decisions, and operation of rural water schemes.
- A requirement for the water services entity to establish and then engage with rural water scheme committees on matters relating to levels of service (beyond compliance with drinking water standards), or investment that impacts pricing, but which is not required to meet standards.
- Provision of additional assurances that key resources would remain within the district.
- There may need to be a definition of what constitutes a rural water scheme. This could be based on a percentage of water volume used by farms versus households.

Schemes managed by CDC

Retention of the rural water schemes by CDC (essentially continuing the status quo) has some challenges regarding feasibility, including:

- The Government must be persuaded that this option will still ensure that its reform objectives are met, and particularly the provision of affordable and safe drinking water.
- The challenges that CDC may have in retaining or recruiting sufficient resources to continue to manage and maintain the schemes.
- The risk that increased economic, consumer protection, environmental and water quality regulation will result in increased costs and personal liabilities for water suppliers.

In addition, we note that some of the additional assessment criteria are not met under the status quo, in particular:

- There are no formal processes in place at CDC for the inclusion of Māori/iwi in the management of rural water supplies.
- Governance of the rural water schemes under continued CDC management would be by elected members who are elected on a broad range of issues and may or may not have expertise in the water industry or have prior governance experience.

In our view, some of these issues could be addressed by:

- Contracting technical advice (and potentially operations and maintenance contracts) from the Water Services Entity to fill the resource constraints.
- Establishing a rural water subcommittee of Council comprising of elected members, Māori/iwi representatives and an independent industry expert (potentially from the Water Service Entity). This committee would be responsible for reviewing and providing direction to the development of, asset management plans, capital works plans and the setting of levels of service.

Schemes managed by a community body

Transfer of the management of rural water schemes to a community body is likely to be the most challenging in terms of feasibility. We would expect that challenges would exist relating to:

- The Government needing to be persuaded that this option will still ensure that its reform objectives are met, and particularly the provision of affordable and safe drinking water and the inclusion of provision for this in the Water Services Entity Bill.
- The challenges that a community board may have in retaining or recruiting sufficient resources to continue to manage and maintain the schemes. This is compounded by the need to develop a corporate structure/support services, systems, and processes.
- There may be some financial constraints, given the additional overhead costs and the potentially reduced borrowing capacity.
- The level of legal liability that is likely to be assumed by anyone elected to govern these schemes, and therefore the willingness of people to take on such a role.
- The risk that increased economic, consumer protection, environmental and water quality regulation will result in increased costs and personal liabilities for water suppliers.

We also note that some of the additional assessment criteria are not met under a proposed community board structure, or would need to be specifically addressed, particularly:

- The need to include Māori/iwi in the management of rural water supplies.
- Governance of the rural water schemes under community ownership would be through a body of elected individuals who are most likely customers of the rural water schemes.
- The need to protect public ownership of the scheme.

In our view, some of these issues could be addressed by:

- Contracting technical advice (and potentially operations and maintenance contracts) from the Water Services Entity to fill the resource constraints.
- The appointment of an independent water industry expert to the governing board. This position would not be likely to be elected and would be selected by the elected members subject to agreed competency criteria. Given the risks associated with managing such schemes in the future, it is unclear whether there would be a lot of willingness to take on such roles.
- Making provision for some formal representation by Māori/iwi (if they so choose to have it) within the governing group of the rural water schemes.

Next steps

Morrison Low cannot advise CDC or the rural scheme committees about what the best course of action is going forward. The purpose of this report is to present our view of the feasibility of each of the three potential options for the ongoing management of the rural water schemes, and the potential solutions to mitigate some of the challenges and risks associated with each option.

However, in our view, it is critical that CDC and the rural scheme committees reach a consensus on the approach going forward, and in particular, on the outcomes that it wants to seek from discussions with the Government.

A workshop including the rural water scheme committee chairs was held on 17 January 2022, and a subsequent workshop was held involving a wider group of members of rural water scheme committee members on 27 January 2022. During those workshops:

- Final feedback on this report was presented and amendments are agreed.
- Agreement was sought to finalise this report subject to the consolidation of feedback.
- Council and the rural scheme committee chairs agree to the preferred approach for future discussions with Government, including the bottom lines for the district's rural water schemes. The agreed approach was to progress with the hybrid model that is outlined in an addendum to this report.

Waipahi scheme

The Waipahi rural water scheme does not provide treated drinking water to households. Consequently, the ongoing management of this scheme is not subject to the same issues, opportunities and risks as have been identified in the rest of this report.

In our view, the Waipahi rural water scheme is likely to be excluded from the three waters reform proposals by default because it is neither drinking water supply, wastewater or stormwater (although we note that this will be subject to the outcomes of the rural water supply technical advisory group discussions).

We note however that the management and operation of this scheme still requires a base level of expertise and staff. In particular the scheme will need to establish a mechanism for billing customers, to develop asset management plans, meet environmental regulations and consent conditions, and meet financial reporting requirements.

We note that it is possible the Waipahi scheme may be able to cross contract the maintenance and asset management advice for the scheme from the Water Services Entity, or alternatively Council may retain sufficient skills to be able to manage this scheme (though it is unlikely to retain any specific water expertise).

Appendix A Interviewees and key interview themes

Table 4 List of interviewees

Person	Role	Organisation	Date
Jules Witt	Group Manager Service Delivery	CDC	30 November 2021
Thyagu Gopalan	Water and Waste Operations Manager		
Niko Trbuhovic	Infrastructure Engineer		
Tony Somerville	Asset Data Analyst		
Debra Tobin-Alexander	Asset Management Officer		
Steve Hill	Chief Executive	CDC	3 December 2021
Bryan Cadogan	Mayor	CDC	3 December 2021
Stewart Morrison	Committee Chair	South Bruce Rural Water Scheme	8 December 2021
Richard Peirce	Committee Chair	Glenkenich Rural Water Scheme	8 December 2021
John Whiteside	Committee Chair	Clydevale / Pomahaka Rural Water Scheme	9 December 2021
Roger Cotton	Committee Chair	Tuapeka Rural Water Scheme	9 December 2021
Chris Morahan	Committee Chair	Wangaloa Rural Water Scheme	10 December 2021
Alec McHutchon	Committee Chair	Moa Flat Rural Water Scheme	10 December 2021
Andrew Gray	Committee Chair	Balmoral 1 Rural Water Scheme	10 December 2021
Stephen Gold	Committee Chair	Richardson Rural Water Scheme	10 December 2021
Ashley Smail	Committee Chair	Balmoral 2 Rural Water Scheme	13 December 2021
Geoff Finch	Committee Chair	North Bruce Rural Water Scheme	16 December 2021
Raymond Brock	Committee Chair	Waipahi Rural Water Scheme	16 December 2021

Through our interviews with the rural water scheme committee chairs and CDC staff we identified a number of key themes that are relevant to the analysis presented in this report.

Six key themes were identified based upon the review and associated interviews. These will be validated with the Committee Chairs at the scheduled workshop in late January 2022. These have been considered as part of the wider feasibility review and have also been considered in our evaluation of each option in terms of overall feasibility.

1. Reliable and continuous and supply of water:
 - Reliable volume of water 24/7 is mission critical for the farms. The water is used for the livestock so continuous supply is essential to ensure animal welfare and viable businesses.
 - There will be outages from time to time due to pipe breaks but these need to be resolved within reasonable timeframes.
 - The farming sector is important for the district's economy.
2. Loss of control and decision making:
 - There is strong ownership of the water schemes as many were installed by their fathers with volunteer labour and are physically located on the farms.
 - The Rural Water Scheme Committees provides a governance structure to make direct recommendations to CDC's elected members. There is concern that decisions will be made by Entity staff that do not have knowledge of the schemes.
 - Importantly, in many cases it was suggested that rural water schemes would be willing to pay more than they would to a water services entity if it meant that they were able to retain some degree of control. The extent to which they would be willing to pay more was not explored, and there was still a strong desire for affordable water.
 - There has been good investment into the schemes to date. The 2021 Long Term Plan includes capital investment to ensure all schemes will be compliant with the Drinking Water Standards in the short to medium term.
3. Increasing regulatory compliance obligations and future costs
 - The regulatory framework that water supplies need to comply with is growing both in terms of complexity and obligation, as well as the level of enforcement. It is likely this will impose significant additional operating and capital costs and will require more resources and investment to address.
 - There are increasing environmental requirements from Regional Councils including greater monitoring and reporting and imposing stricter conditions for the discharge of backwash from treatment plants.
4. Three water reforms not designed for rural water schemes:
 - The three water reforms were initiated with the Havelock North gastro outbreak and the significant costs to address the shortfall in three water asset investment nationally.
 - The design of the Water Services Entities under the reforms did not consider the rural water schemes in terms of core purpose and uniqueness (i.e. to provide continuous water for the livestock).
5. System interconnections:
 - All the rural water schemes provide drinking water except for Waipahi which is stock water only.

- In most cases, the rural water schemes supply water to rural properties and farms as well as residential properties in townships, schools, and other special users. Therefore, water supply provided must be to the Drinking Water Standards and require a greater level of management compared to stock water only schemes. The supply to farms and rural properties is typically not able to be physically separated from the supplies to townships, and any future service delivery arrangement would need to take over responsibility for the supply of drinking water to both groups of customers.
6. Accountability for providing safe water:
- Under the Water Services Act 2021, there is greater accountability for providing safe drinking water including significant fines and potentially custodial sentences (although these do not apply to elected members of a council). The consequences for non-compliance are likely to be significant for anyone with responsibility for the schemes.
 - An economic regulator is also proposed by Ministry of Business Innovation and Employment although still in public consultation phase. At a minimum, we would anticipate that information disclosure will be required for the Clutha rural water schemes if they were to be retained.

Following the provision of a draft report in December 2021, Morrison Low also attended a zoom workshop with rural water scheme committee chairs on 17 January 2022 and an in person workshop with rural water scheme committee members on 27 January 2022. The findings of those workshops are also reflected in this report.

Appendix B Methodology

The following methodology was used to undertake the feasibility study:

1. Review of the existing information and kick off meeting with key senior CDC staff in late November 2021. The existing resources to manage and operate the schemes were established.
2. Interviewed CDC's Chief Executive and Mayor separately in early December 2021.
3. Interviewed the Committee Chairs of the rural water schemes separately in mid-December 2021.
4. Reviewed the information received to provide context and background on the management of the rural water schemes.
5. Preliminary high level options for the future scheme governance and management, benefits and risks for each option were identified. The options were evaluated against criteria. Assessed the financial implications with each option at a high level.
6. Validated the options, benefits and risks with key senior CDC staff in mid-December 2021.
7. Development of a Summary Report to document the review process and make high level recommendations and what the new arrangements make look like under each option.
8. Validated the key findings and identified options, consequential financials, risks and resourcing requirements in a workshop on site with Committee Chairs in late January 2021. The report was updated to reflect the agreed changes.

Appendix C Summary of Rural Water Schemes

Table 5 Summary of rural water schemes

Scheme	Population served (estimated) ¹	Treatment Plant	Townships served	Special users	Planned changes / notes
Balmoral 1	247	Waitahuna	Tuapeka Mouth		Proposed to be part of new Greenfield Bore scheme.
Balmoral 2	399	Waitahuna		Community Hall	
Clydevale / Pomahaka	778	Clydevale Bore	Clinton	Two primary schools, one kindergarten and community hall(s)	Supplied by Clydevale Bores. Water treatment plant can be compliant with Drinking Water Standards as has UV unit but needs reporting improved. Schemes combined in 2007.
Glenkenich	705		Waikaka, Waikoikoi and Pukerau	Three primary schools, church, and community hall, youth camp	New \$3.4 million membrane water treatment plant being built. Split between Clutha and Gore districts.

¹ Includes townships

Scheme	Population served (estimated) ¹	Treatment Plant	Townships served	Special users	Planned changes / notes
Moa Flat	534		Heriot	One school, community hall(s)	Water treatment plant being upgraded to meet Drinking Water Standards. A small proportion is also in the Central Otago District.
North Bruce	928		Waihola and Tokoiti	Youth camp, one school, community hall(s)	Water treatment plant being upgraded to meet Drinking Water Standards.
Richardson – north	312	Whitelea Road		Community halls	Two water treatment plants - one membrane plant and the other close to meeting Drinking Water Standards compliance.
Richardson – south	691	Puerua	Kaka Point,	Community halls, two schools, rural polytechnic campus	
South Bruce	434 Plus 303 in Stirling Township supplied by treatment plan	Stirling	Benhar and a small area of Balclutha – both on demand		Stirling township's reservoir is supplied by the Stirling treatment plant but is not part of the scheme (Stirling is on demand and fully metered). Dairy scheme with design of 450 L/ha/day.
Tuapeka	276- east	Waitahuna and Evans	Waitahuna	One primary school and	Supplied by Waitahuna Water Treatment Plant and also very basic

Scheme	Population served (estimated) ¹	Treatment Plant	Townships served	Special users	Planned changes / notes
	283 – west	Flat pump station		community hall(s)	Evans Flat Pump Station. Proposed to be part of new Greenfield Bore scheme. Permanent boil water notice on Evans Flat.
Waipahi	NA	NA – stock water only	NA	NA	Commissioned 2011.
Wangaloa	50	Kaitangata		Golf club	Supplied by Kaitangata Water Treatment Plant. Predominantly dairy supply.

Appendix D Functional roles and responsibilities

Table 6 Summary of key functions

Key functions	Core activities
Strategy	Establishes long term policy and strategy for three water assets
	Prepares three water activity inputs into Long Term Plan
	Prepares three water activity inputs into 30 Year Infrastructure Strategy
	Establish future demand for assets (type and standard)
	Establish service level outcomes for three water assets
	Relationship with iwi and key stakeholders for three water assets
Technical asset management	Prepares Three Waters Asset Management Plan
	Collects and analyses asset data including condition
	Integrates three waters asset management with Long Term Plan and 30 Year Infrastructure Strategy
	Collation and analysis of demand
	Ensures asset accounting is accurate and maintained
	Improvement programming, monitoring and reporting
	Develops and maintains asset systems
Develops asset reporting	
Investment planning and prioritisation	Manages asset risks
	Capital works prioritisation for three waters
	Develops business cases for major capital works
Plans and manages network	Develops three waters forward works programmes
	Develops asset management delivery plans
	Monitors compliance and performance of three water assets including Drinking Water Standards and resource consents
	Develops and keeps Water Safety Plans up to date
	Develops operational plans (i.e. SOP and manuals)
	Reports on asset performance as defined in AMPs and service level achievements
	Develops and schedule planned maintenance programmes
Service delivery	Delivers three waters capital works programme
	Delivers three waters operations and maintenance
	Controls operational and capital budgets
	Implements technical training
Revenue and customer service	Prepares water bills and sends to customers and responds to any billing enquires
	Responds to customer requests for service for faults 24/7



Appendix E September 2021 Morrison Low report



Clutha District Council

Supplemental report on rural and urban household charges

September 2021

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Document status

Ref	Approving Director	Date
2642	Dan Bonifant	17 September 2021
2642	Dan Bonifant	22 September 2021

Introduction

Morrison Low has previously provided advice and support to Clutha District Council (Council) on issues relating to the current proposals for three waters reform through the Otago Southland Three Waters Office. That work produced a number of reports regarding the challenges and opportunities for the future delivery of three waters services in Clutha and the broader Otago and Southland regions and culminated in the report titled “*Impacts Assessment*” of June 2021.

Subsequently, the Government released information packs for all councils in New Zealand which provided high level analysis of information disclosed in responses to the Government’s request for information (RFI). As part of this information release, the Government provided projections of future household costs under both the opt in (i.e. transfer water service delivery to a new water services entity servicing the Ngāi Tahu Takiwā – “Entity D”) and opt-out (Council continues to deliver three waters services on its own) scenarios. Following the release of this information Morrison Low prepared an additional report entitled “*Review of WICS data*” which outlined the differences in approach taken by Morrison Low and the Water Industry Commission of Scotland (WICS).

Both the Morrison Low reports, and the government’s own analysis, did not specifically address the differences in service delivery, governance, ownership and funding mechanisms that relate to rural water supply schemes. In Clutha, many rural water schemes are owned and operated by Council, with governance provided through rural water supply boards, who are able to make recommendation to (but not formal decisions) elected members regarding levels of service and investment. The schemes are characterised by having the primary function of providing water for agricultural and horticultural purposes, while also providing water for household consumption and in this report that is what is meant by ‘rural water customers’

This means that the future approach to rural schemes of this nature (service delivery, treatment and compliance) is unlikely to be the same as for urban supplies and that the costs are therefore also likely to be different.

This report is intended to supplement both of the earlier reports prepared by Morrison Low by including further analysis on the potential cost impacts specifically for rural¹ and urban schemes. Accordingly, it should be read in conjunction with those earlier reports, as the additional analysis and commentary outlined in those reports is not repeated herein.

¹ For reference, rural schemes in the context of this report refers to the Balmoral, Clydevale, Glenkenich, Moa Flat, North Bruce, Richardson, South Bruce, Tuapeka, Waipahi, Waitahuna, and Wangaloa rural water schemes.

Summary of findings

Morrison Low has undertaken a comparison of the financial impacts of service delivery reform on rural and urban three waters customers using two separate methodologies:

- Utilising the financial model used for the Otago-Southland three waters collaboration work.
- Utilising the financial modelled produced by the WICS.

Both approaches show that future charges for water for both rural and urban customers will increase significantly over the next 10 – 30 years and they both highlight differences in the potential future household costs for rural and urban ratepayers. In particular:

- The disparity between the potential benefits of reform for rural and urban ratepayers highlights the need for any new service delivery model to have bespoke pricing and charging mechanisms in place for rural water supplies which would need careful consideration when implemented.
- Increases for urban water customers are likely to be larger than the increases for rural water customers (on a per unit basis and percentage basis), with urban water customers facing increases exceeding 100% (before inflation) over the next ten years.
- While service delivery reform is likely to have positive impacts on future household charges for urban water customers, it is unlikely that rural customers would see similar benefits over the next ten years, and unclear whether any benefits would exist over a 30 year time period.
- In our view these differences are likely to be driven by the difference in estimated future costs associated with the provision of water to rural and urban customers, and the application of volumetric pricing for rural water customers (i.e. the costs have a spread over a large number of water “units” such that the impact on an individual unit is lesser).

Approach and analysis

In order to assist Clutha District Council to understand the impact of future water service delivery on its rural and urban ratepayers, Morrison Low has undertaken high level modelling using two different approaches:

Using the same methodology applied as part of our three waters work undertaken for the Otago and Southland regions. This modelling uses Council’s investment plans and revenue sources, with a number of standard adjustments applied by Morrison Low². The modelling covers a ten year period and in this report compares only the impact on drinking water charges. The analysis in this report also relies on more up to date information, which includes a larger investment programme than used in the earlier work undertaken for the Otago and Southland Councils.

² The details of this modelling approach are outlined in the report titled “Clutha District Council – Impact Assessment” of June 2021

- Using the modelling undertaken by WICS which applies a top-down approach to assessing future household costs. In assessing future investment requirements Morrison Low used WICS' assumption regarding future investment, with adjustments to reflect the relative proportion of investment between rural and urban three waters that has been observed in Clutha's own investment plans. This analysis compares three waters charges in 2051. Because there are no rural wastewater or stormwater schemes in Clutha, no analysis is provided for rural schemes. Instead, projected three waters charges have been presented for Clutha for urban ratepayers and for a combined network to demonstrate the impact that including rural water customers has on the projections and on that basis make some assumptions about the potential impact on rural water customers.

Morrison Low modelling

The results from modelling using the Morrison Low approach are outlined in the table below. Note that average charges for 2021 as presented in the table below may not reconcile to actual charges levied by Council, as the calculation of charging has been standardised in the Morrison Low model to ensure comparability between 2021 and 2031 charges.

Table 1 Comparison of rural and urban water charges and earlier analysis

	2021	2031	% Increase
Urban water (per household)	\$596	\$1,218	104%
Rural water (per unit)	\$257	\$406	58%
Average water charge per Morrison Low report of June 2021	\$606	\$772	27%
Average three waters charge in Morrison Low report of June 2021	\$1,252	\$2,549	104%
Projected water charge under entity model per Morrison Low report of June 2021	N/A	\$841	N/A

The comparison shows that the proposed impacts of water reform will be more significant for urban ratepayers than they will for rural ratepayers, although both groups will see increases in water charges that exceed 50% of current charges before inflation.

Along with lower future investment costs being projected for rural water supplies, the lower future increases in unit costs for rural customers is also related to the particularly high number of water units sold to rural customers. This means that while the increases for rural customers are lower, per unit, in percentage terms, the actual cost impact on rural customers that buy multiple units of water could be significant.

If a universal water charge was implemented, water charges for rural water supply customers are likely to increase more under a revised service delivery model (including an Otago-Southland entity) than they would under continued council service delivery. This emphasises the need for any future service delivery reform to be sympathetic to the impacts on rural water customers, and for separate pricing/charging arrangements to be implemented for rural water supply.

The disaggregated analysis presented in this report also shows a larger increase in water charges than was highlighted in Morrison Low's report of June 2021 due to the larger investment programme than used in the earlier work undertaken for the Otago and Southland Councils.

WICS modelling

As outlined in Morrison Low's report entitled "*Review of WICS data*", WICS have undertaken high level analysis of potential future household costs under the reform (i.e. Entity D) and no reform (i.e. Council alone) scenarios. That modelling uses a top-down approach that determines future household costs based on investment and borrowing requirements.

The approach adopted by WICS does not attempt to separate future water, wastewater or stormwater costs. Neither does it attempt to separate future household charges between rural or urban communities.

In order to provide additional context when comparing the reform and no reform scenarios, Morrison Low has attempted to model the impact of the proposed reform on Clutha's urban three waters alone. To do this the WICS investment projections have been adjusted according to Clutha's own split between projected rural and urban investment needs (urban three waters accounts for 66.6% of planned future investment) from its RFIs as well as the number of connections.

The results of this analysis are demonstrated in Figures 1 and 2 below and show that:

- In both the combined network and urban three waters scenario it is likely that household charges would be higher under continued Council service delivery than under an entity model by 2051.
- However, future household charges for urban customers in Clutha are likely to increase more than they would for rural customers because:
 - WICS modelling assumes that rural customers will pay for all three waters, whereas they only receive drinking water
 - Future investment in rural drinking water for rural schemes is lower, particularly when considered on a per unit basis, than investment in urban drinking water schemes.

This suggests that the benefits of three water reform for rural customers are not likely to be as large as they may be for urban customers.

- The WICS analysis is directionally consistent with that undertaken by Morrison Low. That is, under both models, urban ratepayers are likely to see larger increases in future three waters charges than rural ratepayers, and that the benefits of a change in service delivery model for rural water users are likely to be much lower than the benefits for urban water users.

Figure 1 Summary of sensitivity analysis – combined network

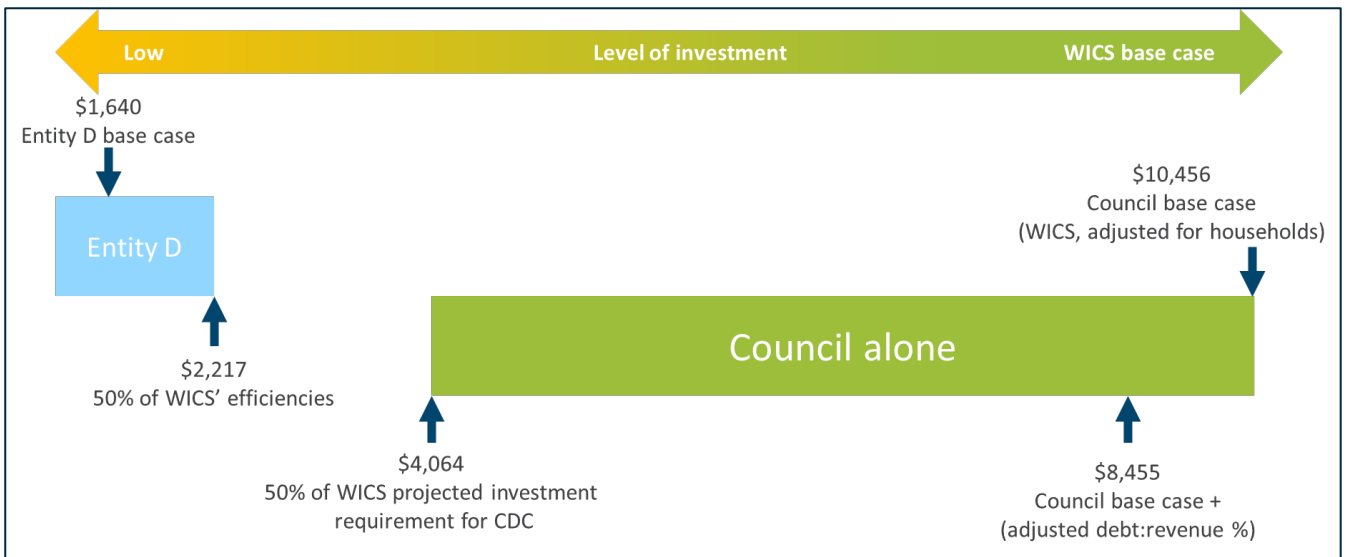


Figure 2 Summary of sensitivity analysis – urban three waters

