Impacts assessment

Clutha District Council

June 2021

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About this report

This report was written by Morrison Low and commissioned by the Otago Southland Three Waters Office on behalf of Otago and Southland councils. Each territorial authority in the area has received a similar report.

The report is the output of a wider review, the overall purpose of which is to provide Otago and Southland councils and their communities with the information they need to understand the impact of three waters reform.

The report assesses the impact of three potential future scenarios for three waters service delivery in Clutha District. It also provides a recommended way forward. The recommendation is in the opinion of Morrison Low, and is based on its evaluation of the evidence and wider experience of the sector and the reform process.

Why undertake a review?

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.

Since then 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 Bill has been introduced to the House and will reform the regulation of New Zealand's three waters networks. Over the last 12 months, the government has further revitalised the three waters reform programme engaging with the sector on a timetable for change, developing a preferred delivery model and announcing funding for councils that enter into structural change.

It is in that context the councils of Otago and Southland commissioned a series of reports seeking to understand the impact of three waters reform on their communities and their organisations. This report provides each council with that information and in doing so draws upon aspects of previous reports provided to the councils by Morrison Low.

Change is inevitable

Significant changes will flow from the three waters reform that has already taken place and will take place regardless of whether Councils opt in or opt out of the proposed water entities. Legislative, regulatory and community expectations of standards are changing. There is therefore no status quo option. Three waters service delivery will change and every council in New Zealand must change in some way. The only means by which the future standards can be complied with is investment.

Investment to meet changing standards will be required in infrastructure, people, process and systems

The question for Clutha District Council (CDC) is whether that challenge is best met through the current service delivery model or through a dedicated three waters entity.

The case for change is made more complex in that each council must make its own decision about whether to opt out of the government process to create regional water entities. Each council must make that decision based on what is best for its community. However, it is evident that the national and regional context still remains relevant to the local decision.

What did the review consider?

While there may be alternative options available to address some of the challenges outlined in this report, as a result of increasing clarity from the government the review ultimately focussed on two options. The current model and a regional water entity.

The original scope for the Otago and Southland three waters collaboration efforts was to review the merits of a regional water entity. As the review progressed it became apparent that the Governments preferred option is for an entity covering either the Ngāi Tahu Takiwā, or possibly the entire South Island. Further, as part of evolving discussions via LGNZ 'Zone' meetings across neighbouring regions, the Ngāi Tahu Takiwā option was identified as a preferred option should there be an opportunity to influence Government's proposal. As such, throughout this report, where possible consideration of the impacts of this option has been integrated.

The differences in delivery model between a three waters entity (irrespective of its size) and the status quo are outlined below:

Figure 1 Comparison of different delivery models

Status quo

- **Each council retains three waters:**
  - service delivery
  - asset ownership
  - resourcing (employees, consultants and contractors).
- *The approach would see no change to service delivery arrangements but require significant additional resource and investment in infrastructure to meet changes to three waters regulations.*

Three waters entity

- **The entity would:**
  - own the three waters assets.
  - be responsible for investment strategies and plans required for new infrastructure and meeting standards.
  - consolidate operational and infrastructure costs to develop economies of scale.
  - employ its own staff and provide its own support services.
  - deal directly with the public for three waters matters.
  - have regional strategic responsibility for network management and asset management strategies and deliver all capital and operational works for the region.
  - recover costs directly from each customer.
  - be overseen by a board of directors.
- *The Councils would collectively have an oversight role alongside Māori including appointment of Directors (through a sub-committee) and through shared strategic infrastructure planning*

How was the review carried out?

The eight territorial authorities of Otago and Southland (the Council's) jointly commissioned a review of three waters service delivery in December 2020. The review was in response to the government three waters reform programme and in commissioning the review, the Council's acknowledged the existing reform programme:

> *"Both central and local government acknowledge that there are broader challenges facing the delivery of water services and infrastructure, and the communities that fund and rely on these services. There has been regulatory failure, underinvestment in three waters infrastructure in parts of the country, and persistent affordability challenges, and additional investment is required to increase public confidence in the safety of drinking water and to improve freshwater outcomes[1]."*

Ultimately the purpose of the review was to provide the councils and their communities with the information they need to understand the impact of three waters reform. Over the course of the review the nature, direction and timeframe of reform became increasingly clear.

A series of workshops were held by DIA during March 2021 which provided some new information regarding the Government's proposed entity design and structure. The draft governance model for regional water

[1] Excerpt from Otago Southland three waters office RFP for three waters service delivery review

entities includes input from constituent councils and Iwi representatives within a Governance Representative Group. This group is responsible for appointing an independent selection panel (who are in turn responsible for appointing a board of directors), as well as for the development of strategic and performance expectations that are used as guiding documents for the entity.

While no official boundaries for an entity have been formally proposed, there have been suggestions that either a single three waters entity covering the entire South Island, or an entity covering the Ngāi Tahu Takiwā (with Nelson, Marlborough and Tasman being part of the lower North Island) is likely.

The review was structured with multiple concurrent workstreams:

- Work Stream 1 - Network and Service Delivery Analysis
- Work Stream 2 - Financial Assessment
- Work Stream 3 – People and Capability Assessment
- Work Stream 4 - Options Development and Evaluation
- Work Stream 5 - Shortlist Options Impact Assessment for each of the Member Participants

As the nature of the three waters reform became clearer some amendments were made to the process and scope. For example, there was little point progressing the "options development" work stream when the options were significantly reduced with the evolution of the government option. As the work and programme of reforms progressed it became evident for the Otago and Southland three waters collaboration that the options were essentially limited to opting in or opting out. Whilst opting out has the potential to involve a number of variants, including enhanced status quo, or an alternative unfunded entity design, ultimately the decision for each Council remains whether or not to opt in.

- Workstreams 1 – 3 were reported in the Regional Situational Analysis dated February 2021 and the Current State dated March 2021.
- Workstream 4 and 5 are set out in this report.

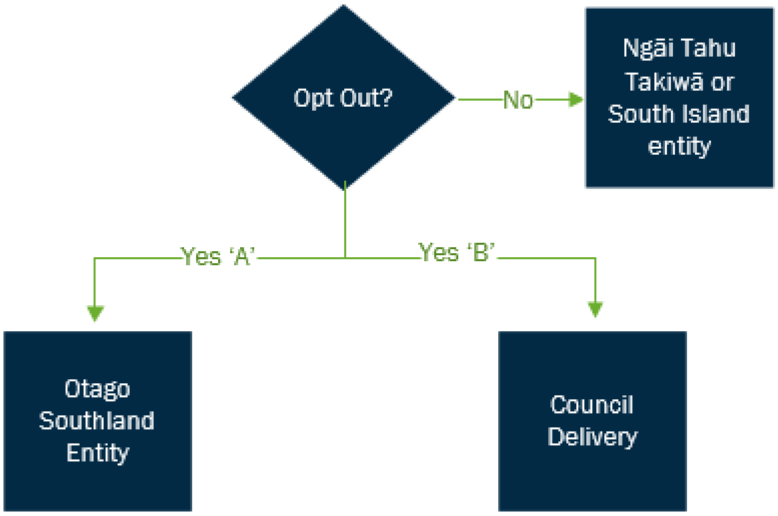
The decision to be made

In late 2021 councils are expected to be asked to either opt out of the three waters reform programme or by deciding not to opt out, opt in to the reform process. At this stage, we anticipate that by not opting out a council will be agreeing to transfer the ownership of its three waters assets, and the consequential transfer of its service delivery responsibilities, human resources, debt, and revenue relating to the three waters in 2023.

While the boundary maps for the proposed three waters entities have not yet been formally publicised, it is likely that as part of that decision process the councils in the Otago and Southland regions will be presented with an entity that covers either the entire South Island, or the Ngāi Tahu Takiwā.

The choices that are likely to be faced by councils in Otago and Southland are outlined in the below chart.

Figure 2 Council's decision point



Analysis within this report is predominantly focussed on the three option variants identified in the diagram above.

Three waters at Clutha District Council

To usefully understand how the different options regarding opting into, or out of, the proposed reform programme may impact Clutha District Council, it is necessary to first understand the existing and emerging challenges and opportunities for the delivery of three waters in the district.

Clutha has a Service Delivery Department that looks after all Infrastructure. There is a Water and Waste Operations team including four dedicated water roles. Infrastructure Strategy and Capital Delivery teams are shared with other council assets. There are 19 FTE shared across water and other assets including the Group Manager Service Delivery.

CDC's levels of compliance and levels of service for wastewater are generally low compared to the Otago-Southland region, with five disclosed serious pollution incidents in 2019/20 (one of only three councils in the region to disclose any serious pollution incidents). In addition, 54% of the district's wastewater receives only primary level treatment, with the majority (99%) being discharged to freshwater receiving environments. This is the largest compliance and level of service issue for the district.

CDC has the third highest incidence of wastewater pipe blockages and the highest incidence of stormwater collapses in the Otago and Southland regions.

The required future investment for three waters services in CDC will see three waters debt exceed $90 million by 2031 but because Council will use an internal borrowing regime total Council debt only reaches $80 million. Council's debt to revenue ration rises to 145% but remains well below the LGFA threshold. Council is therefore able to debt fund the required level of investment but at that level three waters will start to impact the extent to which other activities and services can use debt.

While over 55% of the drinking water in the district receives complex or multistage treatment, CDC notes that 14 of its drinking water treatment plants are not currently meeting the parasitic protozoal compliance regulations in the Drinking Water Standards.

A key challenge for Council will be in delivering that programme as there will need to be a 300% increase in the amount of three water capital works delivered and for that to be consistently through to 2031.

Our forecasts anticipated that the increased investment requirements, and associated impact on annual operating expenditure may result in three waters charges being as high as $2,549 (uninflated) by 2031. This is a 200% increase on current charges.

Due to differences in the charging mechanisms and cost structure for rural schemes, the impacts on rural water schemes and their customers is not immediately clear. However, we note that rural ratepayers that do not receive wastewater or stormwater services may see their drinking water charges increase by approximately 27% before inflation. Further work would be required to disaggregate the impacts on rural and urban ratepayers.

Comparing the options

A comparison of the benefits, risks, challenges, and opportunities for three waters service delivery for Clutha District Council under each of the proposed options are presented in the table below.

The table highlights differences between each of the options around:

- Governance
- Compliance and levels of service
- Infrastructure investment
- Financial considerations
- Capability and capacity
- Risks of councils opting out
- Challenges with the transition process

<table>
<tr><th></th><th>Council delivery model</th><th>Otago Southland</th><th>Ngāi Tahu Takiwā or South Island entity</th></tr>
<tr><td>Governance</td>
<td>Governance of three waters generally
Governance of three waters in Clutha is provided by elected members through the Service Delivery committee and in the case of three rural schemes, through committees.

Embedding of Te Tiriti o Waitangi and Te Ao Māori
Governance of three waters service delivery at Clutha District Council currently does not involve any formal participation from Iwi or local Runanga.

There is no legislative restriction to enabling this at a later date.

Local representation
Rural water schemes governed by elected rural water scheme committees, albeit decision making powers are shared between the committees and Council.</td>
<td>Governance of three waters generally
Governance of three waters would be provided by a skills and merit based board of directors who have a sole focus on the delivery of three waters services and subject to different liabilities than Councilors.

Embedding of Te Tiriti o Waitangi and Te Ao Māori
The model provides the opportunity to deliver on treaty principles and co-governance with Māori from the outset within a new purposely built framework reflecting Te Mana o te Wai.

The development of a co-governance model will require Councils and Māori to participate in what may be a resource intensive process and this needs to be supported by external funding.

Local representation
A potential loss of community influence over priorities and service levels by removing governance from the democratically elected Council into a board of professional directors.

The relationship between water ‘customers’ and the service provider as an Otago Southland water entity would essentially become similar to an electricity company.</td>
<td>Governance of three waters generally
Governance of three waters would be provided by a skills and merit based board of directors who have a sole focus on the delivery of three waters services.

Embedding of Te Tiriti o Waitangi and Te Ao Māori
Alignment of the entity with the Ngāi Tahu Takiwā provides a greater ability to embed Te Ao Māori within the governance of three waters services.

The costs to develop a fit for purpose co-governance model are unlikely to be significantly higher with a larger entity.

Local representation
This issue will likely be magnified if the entity was responsible for the entire Ngāi Tahu Takiwā, as CDC would be a smaller part of a much larger entity.

Again, if the entity was responsible for the entire Ngāi Tahu Takiwā this perception of a lost connection and of lost community assets would likely be greater.</td></tr>
</table>

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
Compliance and Levels of service	**Regulatory compliance** CDC's current levels of compliance and levels of service are low in comparison to other councils. Five serious pollution incidents were disclosed in 2019/20 (one of only three Councils to report such incidents), only 46% of its wastewater is subject to tertiary level treatment, and 99% is discharged to freshwater. 14 water treatment plants are not currently meeting protozoal compliance regulations. Regulatory standards will increase in the near future, and in order to meet these standards in the future CDC will need to make significant investments in its three waters assets. **Private schemes** Despite being a predominantly rural council, we understand that due to poor quality ground water sources and a highly connected network (80%) CDC is unlikely to have a large number of private schemes. Council is currently the supplier of last resort under the Water Services Bill. This means that Council may be obligated to ensure continued water supply if schemes fail.	**Regulatory compliance** A regional water entity is able to provide improved asset management, improved management of risk and will be better placed to meet any increased compliance requirements or increased environmental standards than the Councils can individually. It will allow for consistency between the levels of service provided to residents of neighbouring districts. An entity's financial, human, and contracting resources will still be limited and investment will need to be prioritised across its service area. **Private schemes** The transfer of responsibility for three waters services entity from Council reduces its future liability for and costs of addressing the private supplier risk. These risks remain but transfer to the entire region rather than being concentrated on just CDC. **Rural water schemes** There is limited guidance about whether the government is proposing to transfer ownership of rural schemes to new entities or not, however from a risk perspective we would suggest that councils seek to also transfer such schemes.	**Regulatory compliance** A larger entity covering all, or most, of the South Island will allow for a greater degree of consistency of levels of service between districts. However, with a larger service area comes a greater need to prioritise where investment occurs first. **Private schemes** The transfer of responsibility for three waters services entity from Council reduces its future liability for and costs of addressing the private supplier risk. These risks transfer to the entire region rather than being concentrated on just CDC. **Rural water schemes** There would be no substantial difference in the treatment of rural water schemes between a Ngāi Tahu Takiwā sized entity, a South Island entity, or indeed an Otago-Southland entity. The incidence of rural water schemes in the rest of the South Island is high enough that the schemes will require a similar level of attention in any entity model.

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
	Rural water schemes CDC has a number of rural water supply schemes that provide reticulated water (with varying levels of treatment) to rural properties with the additional purpose of irrigation and stock water. The incidence of private household connections to these schemes may or may not be known or approved by council and may currently present potential health and compliance risks.	A new water entity will need to understand the nuances of providing water to such schemes however, including differences in charging regimes and potential price differentiation.	
Infrastructure investment	**Scale** We have projected that CDC will need to invest approximately $186 million on three waters infrastructure over the next 10 years. **Delivery of capital works** Clutha DC delivered 34% of its capital works program in 2020[2]. The forecast capital expenditure over the next 10 years for Clutha would require annual capital works delivery to increase by 300% and be sustained through to 2031 at that level. Capital works delivery may be harder if CDC is competing with a large water entity for contractors.	**Scale** Between $2.3 – 4.7 billion needs to be invested in three waters infrastructure in Otago and Southland over the next 10 years. **Delivery of capital works** Will still be challenging with the regions needing to increase capital delivery by over 130% compared to the amount delivered in 2020. However, an entity may have an improved ability to coordinate a long-term sustainable program of works which may enable the contractor market to confidently scale up its resources and may reduce inter-district competition for contracting resource. Any improvement in capital works delivery under an entity model will take some time to transpire.	**Scale** Between $8 – 9 billion needs to be invested in three waters infrastructure in the Ngāi Tahu Takiwā. **Delivery of capital works** Delivery is still likely to be challenging until such time as the labour market is able to respond. Would have an enhanced ability to send strong market signals and long term, significant capital works programs that would provide contractors with sufficient certainty of work that they are able to scale up appropriately. Any improvement in capital works delivery under an entity model will take some time to transpire

[2] Note that delivery of the capital works programme in the 2020 financial year was impacted by Covid-19 restrictions

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
	Renewals CDC plans to invest significantly in the renewal of its network, with this being the primary driver for investment. Planned renewals exceed the benchmarks when compared with depreciation and the remaining useful lives of assets. CDC's network is generally on par with the age of the other networks across Otago Southland, noting however that its stormwater network is one of the oldest. **Growth** 30% of the investment over the 10-year period is for growth. This is primarily to support growth in industrial use, noting that much of this is intended to be funded through development contributions from the Milton re-development work. Council has control over the timing and location of its investment in growth infrastructure to attempt to facilitate or respond to growth when it occurs. District planning activities currently consider a range of factors to determine new areas for development, with infrastructure being only part of this equation.	**Renewals** Planned renewals investment across Otago and Southland is substantially lower than our estimates indicate it should be based on age alone. However, differing age profiles across the two regions mean that there may be opportunities to smooth the renewals programme better at a regional level. **Growth** CDC no longer has control over timing and location of investment in growth infrastructure. There will be a need to ensure that the foundation documents and governance structures retain an appropriate balance between the individual priorities of each council with regional priorities including planning and supporting growth. An entity may have different priorities or timeframes over growth investment in CDC. District planning will require interface with a three waters entity which may have different motivations when identifying new development areas.	**Renewals** Planned renewals investment across the Ngāi Tahu Takiwā is about equal to our estimates based on age, however there are shortfalls and surpluses at district level. A Ngāi Tahu Takiwā sized entity would have a large enough renewals budget to address the needs of each district. **Growth** The challenges of coordinating and managing competing growth and investment priorities across a larger number of councils may be increased. However, the entity will also have increased capacity to be able to address these issues and challenges. An entity may have different priorities or timeframes over growth investment in CDC. District planning will require interface with a three waters entity which may have different motivations when identifying new development areas.

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
Financial assessment	**Debt and borrowing capacity** CDC is forecast to have three waters debt exceeding $90 million and due to using internal borrowings total council debt only reaches $80 million. CDC's additional borrowing capacity in 2024 (the estimated year of transition) would be $72.7 million. **Estimated household three waters charge** CDC has an estimated household three waters charge in 2031 of $2,549 (or a 204% increase). Water and wastewater charges would equate to approximately 3.6% of median household income in 2031. **Financial resilience** The forecast investment required in three waters across in all Councils in Otago and Southland has grown significantly since the 2018 LTPs and with the increasing focus brought by three waters reform there is risk that these costs will continue to change and increase further.	**Debt and borrowing capacity** Without three waters debt in 2024 (the presumed year of transition) Councils total borrowing would reduce from $77 million to $0.8 million and its additional borrowing capacity would increase to $103 million. A three waters entity for Otago and Southland would have over $1.9 billion of total debt and a debt to revenue ratio of 465% (which exceeds the limits for a Baa/Ba credit rating). This would result in a credit downgrade leading to increased costs of borrowing, and possibly the need to prioritise investment between districts. A voluntary Otago-Southland entity would still have a balance sheet that is consolidated with its constituent councils without legislative change. **Estimated household three waters charge** A three waters entity would have an estimated three waters charge of $2,001 in 2031. Water and wastewater charges would equate to approximately 2.7% of median household income in 2031. **Financial resilience** This option addresses the risk that the scale of investment required to meet new standards and community expectations is greater than forecast. A larger entity is better able to address the risk of future investment requirements being	**Debt and borrowing capacity** Initial high-level estimates indicate a three waters entity covering the Ngāi Tahu Takiwā would have debt between $6 – 6.5 billion and would exceed the debt to revenue lending covenants that are required for a Baa/Ba credit rating. This would result in a credit downgrade leading to increased costs of borrowing. It will also likely require further prioritization of investment between districts. **Estimated household three waters charge** A three waters entity covering the Ngāi Tahu Takiwā would likely have an average three waters household charge between $1,700 and $1,900. **Financial resilience** This option addresses the risk that the scale of investment required to meet new standards and community expectations is greater than forecast. A larger entity is better able to address the risk of future investment requirements being underestimated as it distributes costs over a larger customer base.

	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
		underestimated as it distributes costs over a larger customer base.	
Capability and capacity	Clutha District Council currently has 1 vacancy in its three waters group (7% of three waters roles). There is however a shortage of specialist resources for three waters across New Zealand and internationally. As water reforms occur across New Zealand there is likely to be increased competition to attract and retain the specialist skills in water that are necessary to enhance delivery.	13% of all three waters roles are currently vacant in the Otago and Southland regions. A three waters entity would have sufficient scale to create strategic capacity and capability across the region and support the areas where that is currently lacking. Scale, strategic capacity and capability gives a level of expertise and resilience in three waters that can be applied regionally, benefitting all ratepayers of the region rather than only some. Greater depth in planning and programming is also expected to help deliver the increased capital programme required to implement change in three waters.	Increasing size and scale creates greater opportunities for staff and improves its capacity to train and develop expertise. Larger entities are also further insulated from ebbs and flows in the size of the workforce.
Risks	A number of the challenges highlighted with the current and emerging service delivery will be exacerbated. If CDC "opts out", while other councils "opt in" to reform, CDC is likely to be competing with a large water entity for contractors and internal resources and capability.	There are a significant number of unknowns with the government proposal including: – Entity design. – Council's roles as owner and governor. – Mechanisms to prioritise local investment. – Coordination of planning and investment. – Interfaces with stormwater and the extent to which stormwater assets and functions will be transferred. – Community input and role. – Allocation of liabilities, land ownership.	There are a significant number of unknowns with the government proposal including: – Entity design. – Council's roles as owner and governor. – Mechanisms to prioritise local investment. – Coordination of planning and investment. – Interfaces with stormwater and the extent to which stormwater assets and functions will be transferred. – Community input and role. – Allocation of liabilities, land ownership.

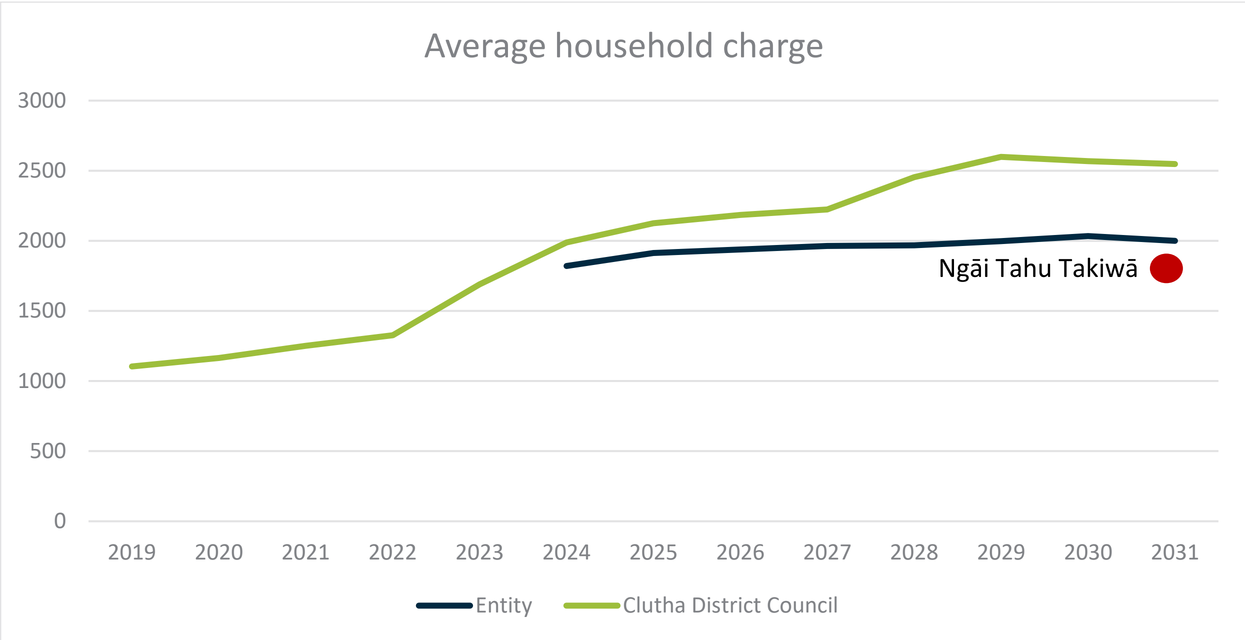
	Council delivery model	Otago Southland	Ngāi Tahu Takiwā or South Island entity
		Without the critical mass of all councils there is a danger that the benefits of change will be substantially reduced or lost. That is particularly the case if the population centres of Dunedin, Invercargill and Queenstown were not involved. Ability to form an Otago Southland entity is a significant risk (unless it emerges as the governments option) as Councils must opt out of reform, and then subsequently engage, commit and fund a voluntary reform process without a suitable structure to do that.	A larger entity be more resilient to some councils opting out of the process. However, the absence of the population centres of Christchurch and Dunedin would still create some challenges. In order to make an informed decision about the benefits or otherwise of opting into reform, it would be helpful to understand the likely position of each council, which will be more challenging with a larger proposed entity.
Impact of transition	There would be no transition, however Council may lose resources to new water entities or transitional bodies in areas where councils have opted into the reform process.	Uncertainty created by the potential change can and will affect existing staff. Attraction, recruitment and retention of key staff is a particular concern for the councils. As this option entails opting out of reform, it is likely that any transition costs (which are likely to be significant) will need to be met by councils.	The issues regarding transition do not differ for a larger water entity. Enforcement of standards during the transition period will need to be carefully managed by Taumata Arowai if councils have a reduced workforce due to staff accepting roles with transition entities. It is anticipated that any costs of transition would be funded by the Government.

Comparison of household charges

The impact of future investment requirements on household charges has been projected over the ten year long term plan period and is outlined in Figure 3 below. The chart shows household three waters charges reaching:

- $2,549 under a continued council service delivery model
- $2,001 in an Otago-Southland three waters entity, and
- Between $1,700 - $1,900 in a Ngāi Tahu Takiwā entity.

Figure 3 Average annual household charge – three waters entity



A Council without three waters

The removal of three waters from Council itself would clearly create some disruption to Council's current operating structure, which in some cases may be significant. Some of the key issues that may arise from the removal of three waters services from Council are outlined below:

- There would be a reduction in Council's resources of around 18 FTE including 15 that are dedicated to water in the service delivery group. Due to the breadth of the three waters service, in our view, there are likely to be minor impacts on staff involved indirectly in the delivery of the service.
- CDC will in our view need to review its structure and service delivery model to most effectively be a local government organisation providing a wide range of services and activities to its communities. The full extent of the impact on Council will be more easily identified once the outcomes of the Resource Management Act and Future of Local Government reviews are complete.
- The formation of large well-resourced water entities across New Zealand may exacerbate the resourcing challenge for Council. While most engineers involved in three waters will transfer to a new entity, councils will still require skilled engineers to deliver roading, waste, and other major capital works. In many cases, engineers in councils are involved in many different projects and activities and if councils are no longer responsible for three waters, these staff may no longer find their roles are appealing or challenging.

- CDC's three waters debt would disappear leaving the Council better able to borrow for investment into other activities or services.
- Total revenue from Council in 2024 without three waters revenue would reduce from $52 million to $37 million but due to the greater reduction in operating costs than revenue, there may be an increase in the operating surplus for Council. Removal of three waters revenue could be beneficial to Council to this extent.
- Based on the information we have considered stranded overheads for CDC in 2020 are estimated to be around $3 per property. However in our view this is likely to be significantly understated, with overheads in other similar sized councils in Otago and Southland being nearer $1 – 3 million (or between $90 – $270 per ratepayer). We recommend further work is undertaken to understand this better in CDC.

Summary

Due to increasing standards and requirements a change to the way three waters services are delivered is inevitable. The form that this change takes is a decision for CDC to make, and this report presents information to assist with making this decision.

The arguments for and against the opt in or out decision are presented below, alongside the relevant risks of each decision. For simplicity, we note that the opt out decision discussed below relates to CDC opting out of reform and continuing with its existing service delivery arrangements.

The option to opt out of reform and pursue voluntary change into an Otago Southland three waters entity in our view has a very low chance of success and risks Council being left as the service provider. The option requires a coordinated and consistent approach across all of the councils in Otago and Southland. All eight councils in the two regions must opt out of the Government's reform process but have a desire to aggregate three waters services at a more local level. They must then go through a detailed entity design process, fund the transition and entity design process themselves, consult with their communities on the same proposals and ultimately agree. There are limited examples of this being successful in New Zealand and none where asset owning has been part of the model.

In the event that an Otago-Southland water entity emerges as the Government's preferred option, most of these challenges will disappear.

Opting in

Arguments for

- A regional water entity will have increased capability and capacity of three waters staff, depth of expertise and increased organisational resilience to changes in staffing levels.
- A three waters entity would have a skills based board with a single focus on three waters issues and would have an enhanced ability to embed the principles of Te Tiriti o Waitangi and Te Ao Māori within its governance framework. There would be no competing interests for investment requirements and funding.
- A three waters entity would have greater financial and technical resources to be able to address compliance issues and make the investment required to comply with new environmental, health, and cultural standards. A three waters entity would also assume most of the risk associated with rural water supplies and private water schemes.
- The required level of future investment in infrastructure is a significant step change for Council, Capital

works will need to increase by 300% and maintain that level of investment through to 2031.

- Average household charges for three waters services are likely to be lower under a regional water delivery model than if Council continues to provide the service.
- Government financial incentives are expected for council who opt in to the reform process.

Arguments against

- CDC may experience some increased challenges to recruit engineering staff and asset managers to support its remaining activities due to increased competition with a three waters entity and a reduction in variety of work although the effects of this may be limited to certain roles within the organisation.
- There will be a number of new challenges introduced relating to the prioritisation and coordination of investment in three waters infrastructure across the region. CDC will no longer control the timing and location of investment. Instead it will be a shared responsibility.
- there may be a loss of local representation, which would be worse with an entity covering the South Island or the Ngāi Tahu Takiwā.
- A three waters entity would face higher borrowing costs, and a potential credit downgrade, if it were to deliver the full capital works programme for the areas that it covers. We believe this to be a national problem, which is more likely to be able to be solved with a small number of water services providers.

Risks

- Delivery of the full capital works programme at an Otago Southland level, or even with a larger entity would appear challenging. There is a risk that a larger three waters entity may not be able to generate improvements in terms of capital works delivery.
- Without critical mass of all councils there is a danger that the benefits of change will be substantially reduced or lost. This is particularly the case if the population centres of Dunedin, Invercargill, Christchurch, and Queenstown were not involved. A Ngāi Tahu Takiwā would be more resilient to this.
- As a three waters entity may have limited access to sufficient debt to fund its full investment programme, it may need to manage competing investment demands from different districts (and to achieve different outcomes, e.g. servicing growth versus improving compliance). There is a risk that these priorities may not align with local priorities.
- There are still a number of unknown factors about entity design which may have a significant bearing on the comparison of an "opt in" option with an "opt out" option. These include issues regarding:
  - Entity design.
  - Council's roles as owner and governor.
  - Mechanisms to prioritise local investment.
  - Coordination of planning and investment.
  - Interfaces with stormwater and the extent to which stormwater assets and functions will be transferred.
  - Community input and role.
  - Allocation of liabilities, land ownership.

Opting out

Arguments for

- CDC is currently projected to have sufficient financial headroom to be able to fund its forecast capital works programme and may have more borrowing capacity to be able to achieve this than a large three waters entity.
- CDC is able to determine the timing and level of investment it makes into its three waters infrastructure if it retains control of its three waters assets. Increasing regulatory enforcement and standards will still be a significant driver for determining the timing and type of investment.
- There is nothing to prevent Council from incorporating formal processes for consultation or engagement with local Iwi or Runanga in decision making for three waters maters.
- There may be alternative options available to council to address many of the potential challenges with continued council service delivery of three waters. These options were not explored as part of this review.
- Household charges are likely to be higher under a continuation of Council led service delivery, however CDC has a number of tools at its disposal to address affordability issues within the district (such as the use of rating differentials, UAGCs, rates postponement policies, and rates remissions).

Arguments against

- Council is making its opt out/opt in decision within the context that every other council in New Zealand is also making that decision. In many cases there is a strong and very strong case for change. The ratepayers of six of the eight councils in Otago Southland would, in our view, have lower water charges under a regional water entity, but this reduces to five when stranded costs are taken into account. The ratepayers of all eight would be better off in a Ngāi Tahu Takiwā..
- The scale of investment required in the Clutha District over the next ten years requires a substantial uplift in capital works delivery which will be difficult to achieve. While a larger three waters entity may also struggle to deal with this uplift in delivery requirements, it will have an increased level of resourcing which may be able to improve lead times and coordination of capital works between districts which may improve delivery.
- While CDC is likely to be able to borrow enough to fund the required investment in three waters infrastructure, the amount that is will be required to borrow will impact on its ability to borrow to fund other activities, or to respond to emergencies.

Risks

- If CDC opts out while other councils opt in, the ability to attract staff or deliver its capital works programme will be further diminished as it will be a small organisation competing with much larger entities. This may also impact on the cost of completing work in Clutha.
- Any incentives that come with the current reform process will not be available to councils if they opt out of the process. Further, while the costs of transition to the new entities will be covered by the government as part of the current reform process, it is possible that councils that later opt to join any three waters entities may face costs to join or transition to these entities.
- The risks and challenges with future water service delivery in Clutha would be significantly increased if the other councils in Otago Southland and the South Island more generally opt in to the reforms.

Introduction

Background

The New Zealand Government is reforming how drinking water, wastewater, and stormwater (three waters) services are delivered across New Zealand. The reforms began in response to the issues identified following the Havelock North drinking water contamination in 2016 and culminated in a Cabinet paper released on 20 November 2018 where 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**".*

Since that initial cabinet paper in November 2018, the Government has further progressed regulatory reform for the delivery of drinking water, including through the establishment of *Taumata Arowai- the Water Services Regulator* and the progression of the Water Services Bill to select committee in December 2020. A cabinet paper of December 2020 also confirmed the above reform objectives and the Government's desire to proceed. That cabinet paper also recommended that participation in further reform discussions be based on an "opt-out" decision process for councils with that decision to made in mid-late 2021.

Significant changes will flow from the three waters reform that has already taken place and will take place regardless of whether councils opt in or opt out of the proposed water entities. Legislative, regulatory and community expectations of standards are changing. There is therefore no status quo option. Three waters service delivery will change and every council in New Zealand must change in some way and the only means by which the future standards can be complied with is investment.

Investment to meet changing standards will be required in infrastructure, people, process and systems

The question for CDC is whether that challenge is best met through the current service delivery model or some other solution.

- **Opting in** to the government process will include financial and other incentives (that are not currently defined) and agreeing to transfer responsibility for the service, assets, responsibilities, duties and liabilities for three waters to a dedicated water entity that is not currently defined but expected to cover the Ngāi Tahu Takiwā and look similar to the proposed structure that the Government has presented to local government over March and April 2020
- **Opting out** of the government process means that either Council retain responsibility for three water service delivery or some other arrangement.

Scope of this report

In late 2020 the Otago-Southland Three Waters office commissioned Morrison Low to undertake a review to examine the impacts and options for three waters reform for the combined Otago and Southland regions. The review has been carried out within the context of the Government's reform programme and has been designed to ensure that it is best able to respond to the recommendations from that programme. In order to ensure that the review focuses on providing decision-makers with the evidence and information that they need to actively participate in conversations with the Government and their communities, this review has:

- Relied primarily on the same information set as is being used by the Government to develop its own recommendations and analysis.
- Been dynamic and responsive to the Government's timeframes such that the agreed deliverables for the review have changed in order to provide decision-makers with relevant information as quickly as possible.
- Compares only status quo (i.e. continued three waters service delivery by territorial authorities) with the Government's preferred option (i.e. transfer of three waters service delivery and asset ownership to a new three waters entity) and a voluntary reform option covering the Otago and Southland regions (which requires councils to "opt out" of the current reform process).

This is the third report by Morrison Low as part of its work assisting the councils of the Otago and Southland regions to further understand the challenges and opportunities facing the local government sector in their regions for the continued delivery of three waters services. The previous reports included:

- Our regional situational analysis – which outlined the high-level challenges with continued service delivery at a regional level based on high-level analysis of each council's response to the Government's Request for Information (RFI).
- Our cross-regional current state assessment – which examined the challenges and opportunities for three waters service delivery at a disaggregated level across the two regions.

This report has been tailored for Clutha District Council (CDC) and examines the benefits and challenges of both retaining and transferring the service delivery of three waters as well as the impacts such a decision would have. It therefore provides the advice to CDC to help determine whether it should opt in or opt out of the government three waters reform programme.

To do so, this report draws on findings of the earlier two reports, and insights gained from our onsite visits to CDC and the other councils in the Otago and Southland regions (as relevant).

While the report attempts to assess the impact of the transfer of ownership and service delivery of three waters into an aggregated entity, we are unable to predict the extent to which the activities and services provided by local government may change (either statutorily or organically), and therefore only compare the immediate impact of the transfer of functions.

The information within this report should be considered to form only part of the total suite of evidence and information available to support decision makers.

Approach

This is the third report as part of our review of three waters service delivery for the Otago-Southland regions. This report builds on analysis undertaken in our earlier *Regional situation analysis* and *Cross regional current state assessment* reports and has been developed based on:

- A review of asset, service performance, and financial information provided in each council's completed RFI responses and asset registers.
- A review of organisational charts provided by councils to assist with the identification of affected roles and functions.
- Our findings from onsite interviews and meetings held at CDC.
- Detailed financial modelling of each council and an aggregated three waters entity.
- Consideration of impacts of community, governance and levels of service.

The financial information within this report should be considered to be directional only and assumes that councils increase their planned investment to levels that we consider are necessary, and are able to deliver that planned investment. It also ignores the political environment in which rates are set and borrowing is drawn down and the trade-offs that must be made between affordability and levels of service.

Differences between data

The financial analysis set out in this report may differ (but is directionally consistent) with our earlier financial analysis, as the analysis presented herein relies on the results of detailed financial modelling which includes the use of standardised assumptions across the councils, and debt and investment optimisation. The full set of assumptions used in the modelling are outlined in Appendix B, and high-level sensitivity analysis is included in Appendix A.

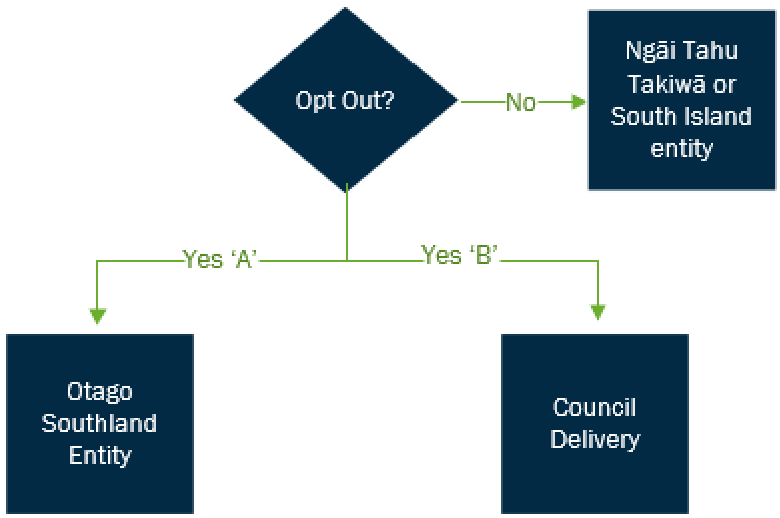
It is also consistent with our analysis in the *Cross regional current state assessment*, which highlighted significant differences in asset unit rates. In that report we highlighted Dunedin's unit rates as being substantially higher than the other councils, and that Dunedin had a valuation completed as recently as late 2020. The impact of this assumption is outlined in Appendix A.

Alignment of report with three waters reform

The key question facing CDC is whether to opt out of the reform process or continue to opt in. There is a lot of uncertainty for Council. Chief of which is that the Government has yet to advise CDC (or any council) exactly what the option they are faced with is.

This report has been structured to give the best possible information to Council to support that decision. The figure below sets out our assumption for how the options considered in this report match with a decision to opt out of the reform or opt in.

Figure 4 Council's decision point



Current situation – Clutha District Council

Three waters services

The delivery of three waters services in the future will be in an environment with increased health, environmental, and economic regulation. These regulations will require changes in services and service delivery. Meeting these changes is likely to be challenging for any provider of three waters.

CDC is situated in the Otago region of New Zealand, and has an estimated population (as at June 2020) of 18,300 people.

The district is divided into eight wards, the Balclutha, Bruce, Catlins, Clinton, Clutha Valley, Kaitangata-Matau, Lawrence-Tuapeka and the West Otago wards. The district has a strong agricultural base and low reliance on sectors like tourism and retail and is focused on promoting growth. A range of projects and initiatives have been helping make that happen including:

- Residential development e.g. Balclutha's Plantation Heights
- Industrial development e.g. Rosebank Industrial Estate
- Community initiatives such as the Clutha Community Hub and Naish Park developments in Balclutha.
- Plans to develop a new community facility in Milton to replace aging facilities in the town.
- The development of growth hubs via the District Plan, e.g. Milton as an industrial hub and Balclutha as a service hub.

Clutha have annual summer water restrictions.

In December 2020 Clutha District Council pled guilty to charges relating to violating the Resource Management Act 1991 in relation to the condition of wastewater treatment plants in its district. The court cases for this are still ongoing, as Council's contractor, Citycare, pleaded not guilty to the same charges.

Table 1 Financial summary of three waters service delivery

	Council total	Three waters	Net of three waters
Debt (2021)	$27 million	$23 million (85%)	$4 million
Operating Revenue (2021)	$43.7 million	$11.7 million (26%)	$32 million
Infrastructure assets (book value)	$1.07 billion	$139 million (13%)	$935 million

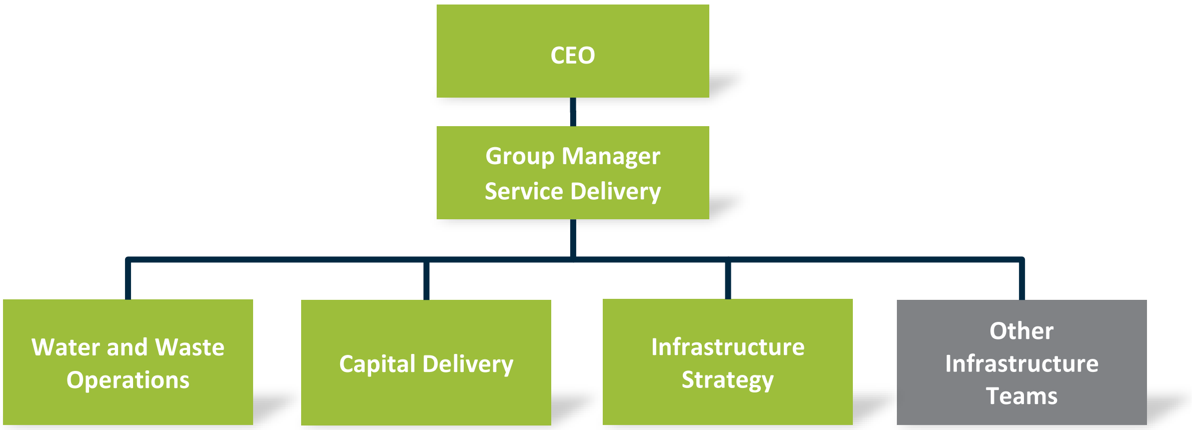
According to its completed RFI, in 2021 CDC is forecast to have $27 million of external borrowings, of which $23 million (or 85%) is related to the three waters infrastructure. As outlined in our *Cross regional current state assessment* CDC forecast in its RFI that it would be likely to maintain relatively low levels of debt by 2031, however, this would still result in an uplift for the council of 300% by 2031.

Structure and resourcing

Clutha has a Service Delivery Department that looks after all Infrastructure. There is a Water and Waste Operations team including four dedicated water roles. Infrastructure Strategy and Capital Delivery teams are shared with other council assets. There are 19 FTE shared across water and other assets including the Group Manager Service Delivery.

Clutha currently has one vacancy in its water and waste operations team.

Figure 5 Clutha District Council three waters team structure



We have assumed that in the event that Council chooses to retain three waters services that it is unlikely to change its overall delivery structure.

Support for the three waters team is also currently provided by:

- Human Resources – who have one FTE for the organisation, who provides support to three waters when needed. Three waters can be a high user at times (i.e. when recruitment is needed).
- Finance – who have one management accountant for the entire organisation, who spends approximately 40% of their time on three waters. Finance also provide support in relation to invoicing and payments.
- Information Technology – who have one FTE that provide GIS support to the organisation, and for which three waters is a large user.
- Health and Safety – which has one dedicated FTE who provides organisational health and safety, including contractor inspections in the three waters space.
- Community engagement and communications – Council has two staff members responsible for this across the organisation, and no dedicated resource for three waters.

We would not anticipate any significant growth in the level of resources provided by these areas of Council without any significant changes to levels of service provided to ratepayers.

CDC operates out of one office within Balclutha itself, with four service centres located elsewhere in the district. No staff involved in the provision of three waters services are located in service centres, and the majority of water complaints or queries are received via phone rather than in person through service centres.

Key issues

CDC's levels of compliance and levels of service for wastewater are generally low compared to the Otago-Southland region, with five disclosed serious pollution incidents in 2019/20 (one of only three councils in the region to disclose any serious pollution incidents). In addition, 54% of the district's wastewater receives only primary level treatment, with the majority (99%) being discharged to freshwater receiving environments. This is the largest compliance and level of service issue for the district.

CDC has the third highest incidence of wastewater pipe blockages and the highest incidence of stormwater collapses in the Otago and Southland regions.

The required future investment for three waters services in CDC will see three waters debt exceed $90 million by 2031 but because Council will use an internal borrowing regime, total Council debt only reaches $80 million. Council's debt to revenue ratio rises to 145% but remains well below the LGFA threshold. Council is, therefore, able to debt fund the required level of investment but at that level three waters will start to impact the extent to which other activities and services can use debt.

While over 50% of the drinking water in the district receives complex or multistage treatment, CDC notes that 14 of its drinking water treatment plants are not currently meeting the parasitic protozoal compliance regulations in the Drinking Water Standards.

A key challenge for Council will be in delivering that programme as there will need to be a 300% increase in the amount of three water capital works delivered and for that to be consistent through to 2031.

Our forecasts anticipated that the increased investment requirements, and associated impact on annual operating expenditure may result in three waters charges being as high as $2,549 (uninflated) by 2031. This is a 200% increase on current charges.

In our *Cross regional current state assessment* report, we noted that CDC currently has the highest average household charge for combined three waters services in the Otago and Southland regions. This is a combination of having high costs of treating and distributing a cubic metre of water and wastewater and the comparatively large volumes utilised by rural supply schemes.

Wider context

The nature, extent and pace of the three waters reform is now widely documented and understood. It will be far reaching and change service provision for three waters at a national level. This is relevant because Councill's opt out/opt in decision will not be made in isolation. The decision of all other councils in New Zealand and particularly Otago and Southland has flow on impacts for CDC, its communities and the decision Council makes.

In July 2020 the government announced a $500M three waters stimulus package to encourage councils to be part of the reform programme. There is expected to be incentives for councils to remain in the three waters reform programme, although at this stage we do not know what those are.

Equally, the government through Taumata Arowai, Regional Councils and the new economic regulator that will be established is expected to increase relevant standards and requirements and with greater resource and focus on compliance, create a regime that will hold the service providers to account far more strongly than in the past.

What options were considered?

Status Quo

Under this option Clutha District Council would continue to retain responsibility, duties, obligations and liabilities for three waters:

- service delivery
- asset ownership
- resourcing (employees, consultants and contractors).

While this approach would see no change to service delivery arrangements, it will still require additional resource and investment in infrastructure to meet changes to three waters standards, regulations and the new regulatory framework where there is increased environmental, health, service and economic regulation of three waters.

Three water service delivery entities

The Government's three waters reform programme has a clear and open objective of transforming the delivery of three waters services through structural reform. This will involve the establishment of publicly owned, asset owning three waters service delivery entities and, should a council choose not to "opt out" of the process, the transfer of council's assets and liabilities into such entities.

If the delivery of three waters services and the consequential asset ownership is transferred to a new water entity, then any related funding, assets, resources, and liabilities are likely to be transferred with it. This would mean that Council would no longer be responsible for setting charges, managing investments, and borrowing or operating any of its current three waters services. The obvious, most immediate effects of this will be a reduction in revenue, operating expenses, assets, and debt.

Staff directly involved in the delivery of three waters services will also be transferred into a new entity, while some staff that support three waters may also transfer (predominantly those that are 100% supporting the delivery of three waters). Staff that spend only part of their time supporting three waters are likely to retain their roles within CDC, and there is sufficient workload within the organisation to ensure a continued meaningful role for these staff in the absence of three waters.

The two dedicated water entity options considered are

- Otago Southland - would include the territorial authorities with Otago and Southland, and most likely would need to be the result of a voluntary process that would take place outside of the current government driven reform.
- Ngāi Tahu Takiwā would include the areas encompassed by all South Island territorial authorities except Nelson, Tasman and Marlborough. This option is considered to be the most likely option under the government driven reform and is the "opt in" option.

The table below sets out high level information comparing potential aggregated water entities for Otago and Southland and the Ngāi Tahu Takiwā.

Table 2 Comparison of options for three water entities (2021)

	Otago Southland	Ngāi Tahu Takiwā
Number of Territorial Authorities	8	21
Replacement cost of infrastructure assets	$11.2 billion	$28 – 30 billion
Debt	$1.93 billion	$6 – 7 billion
Annual revenue	$415 million	$0.9 – 1 billion
Annual operating expenditure	$383 million	$0.9 – 1 billion
Water connections/ratepayers	About 141,000	About 420,000
FTE	Around 240	Over 500

Assumptions

The government has provided limited detail about the ultimate structure and design of the proposed three waters entities, and the mechanisms that will be put in place to ensure that they will deliver on the government's stated objectives and principles of reform. It is unclear whether this detail will be available at the time that councils will need to make their decisions.

For the purposes of this report we have assumed that the proposed entities will be able to deliver on these principles. The key assumptions about council service delivery, an Otago -Southland region entity and a Ngāi Tahu Takiwā regional entity are set out in Appendix B and C.

- **Appendix B –** Data and financial modelling including treatment of:
  - Asset values
  - Planned capital investment
  - Renewals
  - Depreciation
  - Use of RFI data
- **Appendix C** -entity design including:
  - Governance
  - Ownership
  - Assets and debt
  - Stormwater
  - Revenue and charging

Assessment of the options

This section of the report presents an assessment of the options using a range of non-financial and financial criteria so that both the benefits and the challenges of each option in the future delivery of three waters services are considered. The section largely draws on analysis undertaken in our *Cross regional current state assessment* report, with additional information from our on-site visit of CDC and detailed financial modelling included.

Its aim is to provide a comparison of the impacts of three waters service delivery under aggregated delivery models, and under the status quo, to allow decision-makers to assess the impacts of reform on their council, and for their ratepayers.

Due to time constraints and the later emergence of the option we have not analysed the Ngāi Tahu Takiwā option to the same extent. Where appropriate and relevant we have provided high level commentary on how the impacts of a larger entity would differ from that of one based around Otago and Southland.

Key outcomes achieved, and the impacts on councils, are discussed through both the qualitative and quantitative lens. While the financial performance of a new entity is not the only relevant consideration, it is an important one, with affordability and the ability to fund and deliver the potential required investment in three waters infrastructure being cited as two of the main investment drivers for the Government's three waters reform programme. We have focused on these details as they are typically easily understood and demonstrate the scale of the challenge for the Otago and Southland regions.

However, a three waters entity is also likely to deliver increased capability and capacity to the delivery of three waters in the two regions, as it will have sufficient scale, and dedicated focus on the delivery of three waters services. It is this scale, capability, and capacity benefit that will likely give rise to longer term efficiencies and improvements to customer levels of service.

Many of the local issues identified here are common to all of the councils in Otago and Southland as well as those across New Zealand. In many respects, it is that similarity that is driving the Government's reform programme and their proposed solution to aggregate services to address these common issues. Each council is however unique in the way the mix of different risks and opportunities arise and their impact on their community and where this is the case, we have highlighted those different considerations.

For example, Clutha has a potential challenge relating to the management of rural water supply schemes (including stockwater schemes) and the facilitation of economic development. Dealing with these issues means that continued delivery of three waters services by CDC is likely to be highly challenging, with investment needs driving high levels of potential borrowings, and the impacts of increased regulatory costs being passed on to ratepayers.

Capability and capacity

Council

Capacity and capability give an organisation an appropriate level of expertise and resilience. In relation to three waters an organisation needs strategic, technical, and operational capacity and capability. Strategic capacity is important to ensure good long-term asset investment decisions are made.

The entire three waters sector is facing capability constraints at a national level. 13% of all existing three waters roles in the Otago and Southland regions are currently vacant. Clutha has one current vacancy in the water and waste operations team.

The competition for human resource will increase throughout the sector as in many cases other councils are also planning to increase the size of their three waters teams and will effectively be competing with each other to attract resource. This could be further exacerbated by the establishment of large, multi-regional three waters entities which will have the size and scale to attract a high level of talent and offer clear career progression pathways and a diverse range of challenges.

Through our conversations with Human Resources and the Service Delivery teams in CDC it was apparent that CDC has been reasonably successful at filling vacancies within its three waters teams. CDC has typically achieved this by taking a different approach toward recruitment with a focus on promoting work life balances and ensuring it retains a reputation as a good employer. This has also required CDC to get creative in advertising and recruitment approaches by recruiting talent from offshore and promoting from within.

These recruitment challenges are common across the Otago and Southland regions and are broadly a reflection of a nationwide skills shortage. However, attracting staff to provincial areas is particularly challenging and can result in protracted recruitment processes, or the need to consider alternative approaches (such as hiring from overseas or developing talent internally).

Regional water entity

If a single three waters entity covering either the Ngāi Tahu Takiwā or the Otago and Southland regions was created, then it would remove any competition between councils for resources. There is a shortage of specialist resources for three waters across New Zealand and internationally, and while a regional entity will not in and of itself create new resources, it will be able to make better use of the specific skills and expertise of its existing resources across the region in which it operates for the benefit of all areas within the region. So, unlike now, resource constraints would not disproportionately impact any individual district.

A larger entity and the staff, contractors and consultants involved in it would provide sufficient scale to create strategic capacity across the region and support the areas where there is currently a gap. Scale, capacity and capability give a level of expertise, depth of resources and resilience in three waters that can be applied regionally, benefitting all ratepayers of the region rather than only some as is the case now. Importantly the capacity and capability is shared across the region in an ongoing and sustainable way and the burden on smaller communities would be reduced.

A regional water entity would provide greater opportunities for carer development and progression than an individual council can offer.

These benefits would be expected to increase if the entity was across the Ngāi Tahu Takiwā compared to an Otago-Southland entity.

There are however challenges with the creation of regional water entities and the potential for resources to be centralised and pulled away from rural communities. In our view there is likely to be an overall increase in resources if a regional water entity was formed and there will always be a need for some roles to remain disbursed but until the Government model is finalised this is a risk that the Councils must continue to manage through ongoing engagement with Government.

Governance

Council

Governance for three waters service delivery at CDC is through the service delivery committee of Council. The committee comprises all of the elected members to Clutha District Council and discusses issues relating to water, waste, roading, greenspace and community facilities.

The committee has no formal Iwi or Rūnanga representation, but there is nothing preventing Council from doing that or recognising Treaty partnership principles in some other way.

In addition to the formal Council committees, many of the District's rural water schemes are governed by rural water scheme committees which are elected by and from customers of the schemes. These committees have no expenditure delegations but can make decisions relating to the addition of new connections.

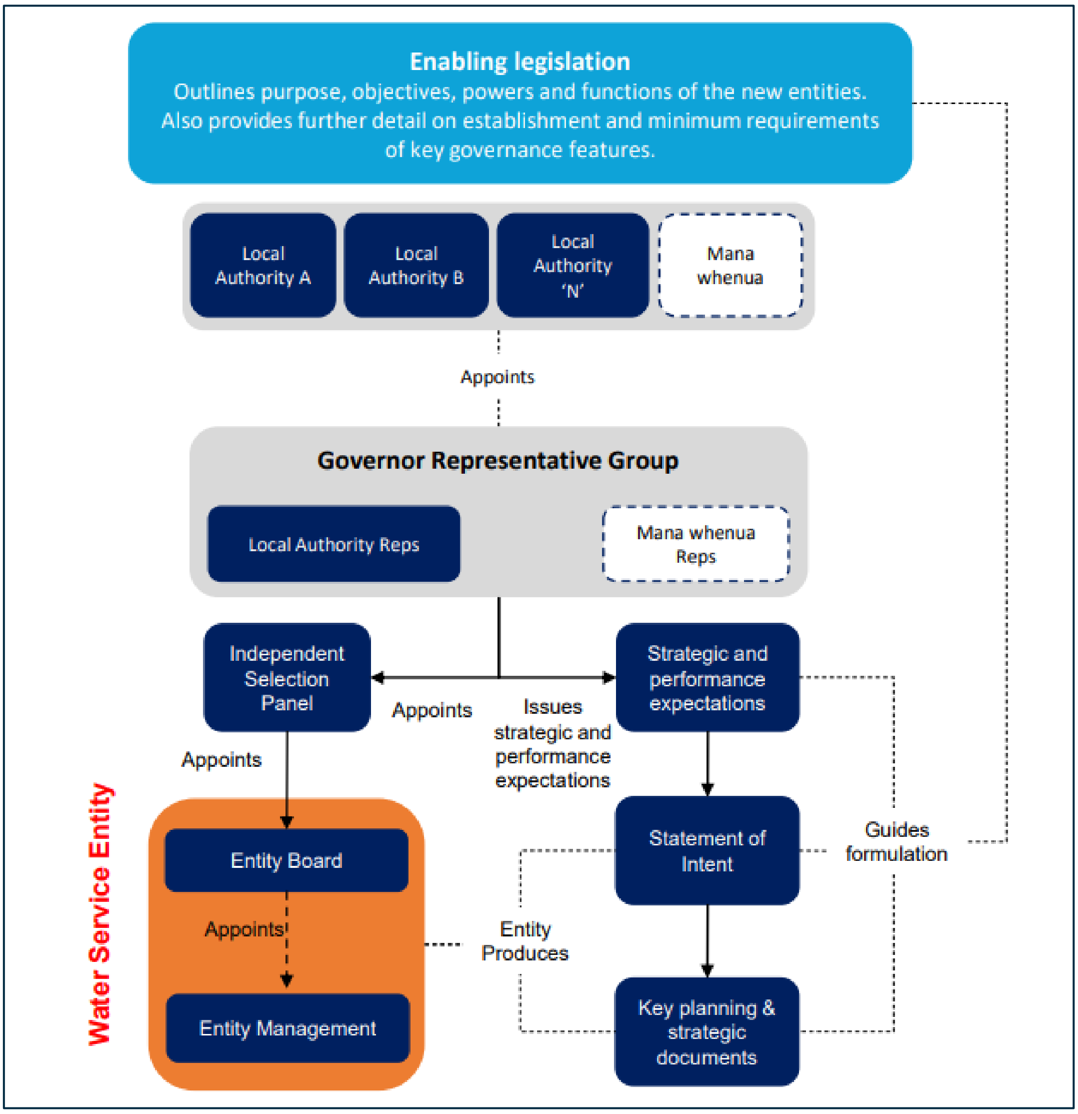
The schemes make recommendations to Council regarding investment and management of their respective schemes, and these recommendations are typically followed by Council (though Council is not obligated to follow them).

Regional water entity

We have assumed that the same governance model would exist in both the Otago Southland and Ngāi Tahu Takiwā options. We recognise that ultimately this may not be the case as the Government will dictate the option that is presented under this model.

A key goal of Government in the reform process is to provide mechanisms for enabling Iwi/Hapū input so that Māori rights and interests are considered in the new service delivery system. In December 2020, Cabinet agreed to a high-level principle of partnership with Iwi/Māori, which will be followed throughout the reform programme, and reflected in the new service delivery plan, and in the proposed model (shown in Figure 5) and in particular the Governor Representative Group.

Figure 6 Governments "Emerging structure" for proposed three waters entities



While the new model provides better recognition of a partnership with Iwi/Māori than the current approach it increases the separation between the community and the service provider. Currently, there is a direct democratic connection but the new model changes that, deliberately. The sense of separation from the community is only likely to increase the larger an entity was. The communities role and how they exercise it will fundamentally change.

While the draft model proposed by the DIA as part of their consultation process is not a CCO, we note that it has become accepted practice that an integral element of creating effective service delivery entities is the establishment of a new governance framework, including the appointment of independent competency-based boards. The Auditor General has reinforced that by saying that appointing elected members to Boards of CCOs should be the exception[3].

In our view, there will be an improvement to risk management processes and practices that are driven by the Board because they will bear all the associated duties, obligations and liabilities of company directors (or

[3] *Governance and Accountability of council-controlled organisations*, Office of the Audit General, September 2015

equivalent) rather than having the current statutory protections of councillors.

It is unclear how rural water schemes such as those within CDC would fit within the government's proposed option, but the assumption is that any responsibility that currently sits with CDC would transfer to the entity.

Compliance and levels of service

Council

CDC's levels of compliance and levels of service for wastewater are generally low compared to the Otago-Southland region, with five disclosed serious pollution incidents in 2019/20 (one of only three councils in the region to disclose any serious pollution incidents). In addition, 54% of the District's wastewater receives only primary level treatment, with the majority (99%) being discharged to freshwater receiving environments. This is the largest compliance and level of service issue for the District.

99% of wastewater discharged to freshwater

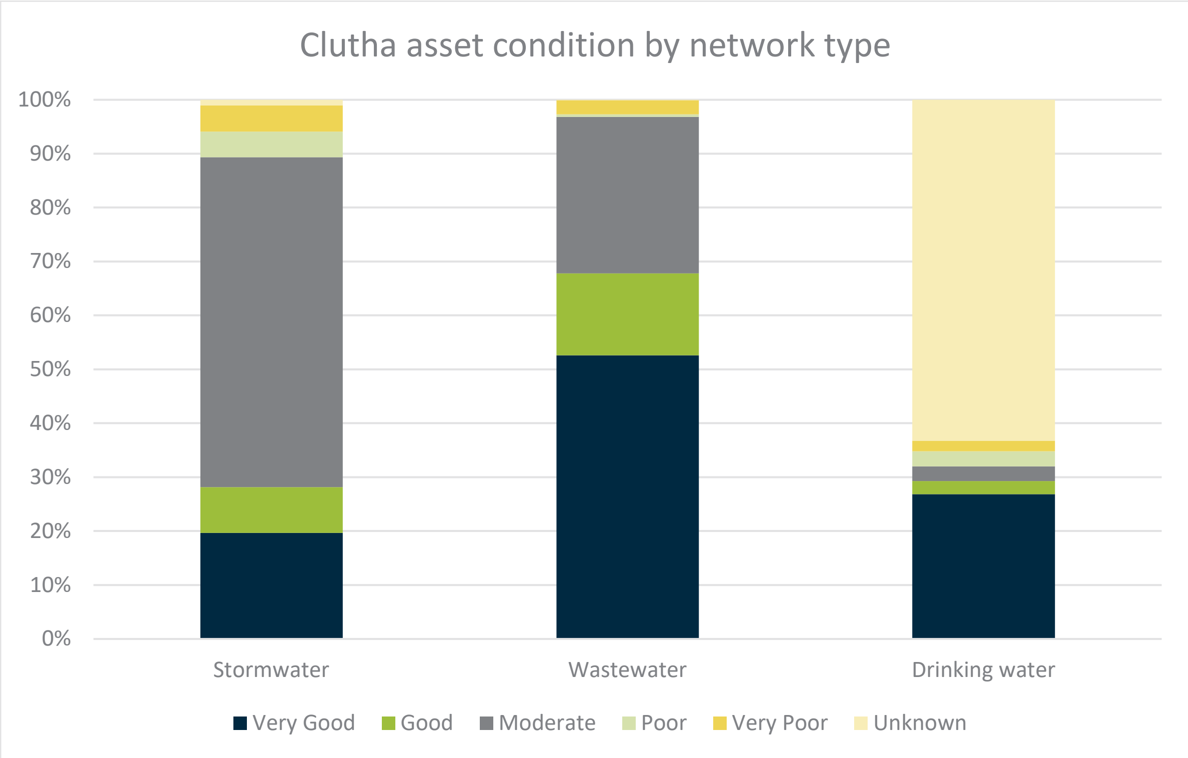
CDC has the third highest incidence of wastewater pipe blockages and the highest incidence of stormwater collapses in the Otago and Southland regions.

While over 50% of the drinking water in the district receives complex or multistage treatment, CDC notes that 14 of its drinking water treatment plants are not currently meeting the parasitic protozoal compliance regulations in the Drinking Water Standards. Additionally, Clutha had the largest number of samples that exceeded compliance values for faecal coliforms in the Otago and Southland regions. These are likely to relate predominantly to the rural water supply schemes, which vary in terms of level of service.

CDC's RFI notes level of service enhancement projects relating to wastewater treatment plant and pond upgrades and compliance improvements, installation of residential water meters, and drinking water treatment plant upgrades.

As noted in our *cross regional current state* report and shown in Figure 6 below, asset condition in Clutha is average with the condition of stormwater assets typically being worse than wastewater assets. A large portion (63%) of Clutha's drinking water network is in an unknown condition, however, the portion of the network that has a known condition is typically in very good condition.

Figure 7 **Asset condition by network type**



If three waters service delivery remains with Council, then CDC will need to continue to fund the required level of service investment directly (as it is forecast to within its Long-Term Plan). This will require a sustained period of investment that will require water charges to double over 10 years. Cost increases like this will come with community pressure and if Council deviates from that path it will need to accept the additional risk associated with continued non-compliance.

Private schemes

Under the draft Water Services Bill councils are considered to be the supplier of last resort for drinking water services provided within their territorial boundaries. This means that in the event that a private drinking water scheme fails or ceases to provide drinking water, Council may be responsible for ensuring continuity of supply to households serviced by that scheme.

The risk of this occurring is a significant concern for most councils that we spoke to during our on-site visits, particularly given the increased enforcement of drinking water standards that has been proposed and the increased levels of personal liability associated with non-compliance.

In the event that three waters reform proceeds, we understand that the Government would most likely transfer the obligation to act as the supplier of last resort to the new water entities. It is not yet clear whether this would extend to giving the new entities the powers to forcibly takeover the management of schemes, or to act as the supplier of last resort in districts where councils have not opted into the reform process.

While the number of private schemes in CDC is unknown the proportion of population that is connected to a water supply scheme provides a proxy for the scale of the risk. CDC has a good (80%) percentage of its population connected to a Council drinking water scheme, and has limited access to good quality ground water within the district. As a consequence we understand that CDC is not likely to have a large number of private water schemes.

Regional water entity

An aggregated water entity would have the ability to concentrate on three water challenges and prioritise investment decisions across the region, leading to improved environmental and community outcomes than the councils can individually achieve when considered regionally. An entity could prioritise investment into the areas where the greatest benefit could be achieved.

The organisation would have a single focus. It would not be faced with trade-offs as is the case now where councils must juggle multiple competing priorities for investment and resources. It would not be subject to the same political pressure over rate increases. Pricing will be regulated by the economic regulator, not through the annual planning process.

The particular risks for the Otago Southland region include:

- Compliance risks in the current system: thirty five percent (35%) of the regions drinking water (by volume) does not meet protozoa requirements of the Drinking Water Standards.
- Seventeen percent (17%) of the resource consents for wastewater treatment in the region have already expired, and a further twelve percent (12%) are due to expire within the next 5 years, this creates a legal, regulatory and financial risk for the region.
- Eighty two percent (82%) of the three waters pipe network across Otago and Southland is in an unknown condition and therefore there must be uncertainty about the future investment requirements and risks that these could be greater than estimated.
- Under a status quo approach the future cost of three waters services that comply with the increased standards could be unaffordable in some communities.
- A larger aggregated entity should be in a better position to undertake the actions required to address these risks through opportunities to realise economies of scale, improved asset management and management of risk enabling funding and delivery of larger scale investment programmes. This should allow an entity to better meet any increased compliance requirements or increased environmental standards than the councils can.

These increasing service levels and compliance requirements are driving investment into systems, processes, resources and infrastructure. Our view is that it is unlikely that all councils in the regions have sufficiently allowed for all of the increased operating costs that these will create. There is therefore a risk that the compliance cost increases currently projected by the councils (including CDC) will be greater than forecast. A regional entity with greater depth of resources will be better placed to respond to system wide compliance requirements and the administrative workload of dealing with the regulators and regulatory regime.

Infrastructure assessment

Future investment requirements

The Government's three waters reform programme that is being managed by the Department of Internal Affairs conducted a series of workshops across the country in March 2021. These workshops presented some of the preliminary findings from analysis of the responses to its request for information to the local government sector. The workshops highlighted the national investment challenge as being one of the major drivers for reform.

The workshops noted:

- A total investment requirement over the next 30 – 40 years of between **$110 – $170 billion** across the country.
- Current national investment of only $1.5 billion per year across the country (equating to $45 billion over the same 30 year time frame).

Our assessment of the future three waters investment is that CDC requires a total of **$186M** over 10 years with an average annual spend of approximately $18.6 million per year (real, 2021 uninflated). The primary driver for capital investment in CDC is renewals, followed closely by level of service and growth.

$186 m of capital expenditure on three waters over 10 years

The main driver for our uplift in planned investment in CDC, as compared to its own RFI, relates to an adjustment to reflect differences in values of assets and unit rates.

Our assessment does not include any uplift in planned renewal investment for CDC. CDC's level of investment is above the benchmarks used when we compare investment with rates of deprecation and the remaining useful life of assets.

Our analysis of RFIs completed by the councils of Otago and Southland, as well as our review of information provided in asset registers, was presented in our earlier *Cross-regional current state assessment* report (March 2021) and identified between **$2.3 – 4.7 billion** of capital expenditure across the two regions over the next 10 years. Our modelling assumes a total of $3.9 billion.

The issue is whether Council or a regional water entity is better able to plan, deliver and fund the requirement level of investment.

Delivery

Council

The ability to deliver on a capital works programme may have a significant impact on debt projections, rates and operational risk. As a sector, local government in New Zealand has historically been unable to deliver its full capital works budget.

Council needs to increase delivery of capital works by 300%

CDC has itself had challenges in doing that and in 2019/20 delivered 34% of the planned programme (based on budget and actual expenditure)[4]. In order to meet the investment required over the next 10 years, Council must increase its investment by 300% and deliver that each year until 2031.

There is a risk around the councils, individually or collectively, being able to deliver the increased infrastructure investment required. The Otago and Southland councils, like most New Zealand councils, have generally struggled to deliver their capital programmes each year. Yet, the forecast investment required in three waters for the eight councils will more than double from $101M in 2020 to an average of $230M per annum each year over the next ten years.

Dedicated water entity

A larger aggregated entity should be better able to develop a coordinated programme and enable effective working relationships with service providers to ensure that the operation of three waters conforms to contracted services and performance levels across the region. This includes improving transparency and accountability for the delivery and costs of three waters services, including the ability to benchmark the performance of service suppliers. The greater depth in capacity, in particular in strategy, planning and programming should help support delivery of such a large programme of work.

However, the challenges with delivering the increased capital works programmes are likely to continue for some time until the industry prepares to increase its capacity, and long-term coordinated capital works programmes are developed and finalised.

There is also a risk around the ability of an individual council to meet the investment requirements if it was competing for scarce resources with a regional water entity (locally) and entities (nationally).

Providing for growth

Council

Under the current model CDC has control over the growth in its district and largely dictates the timing of growth through the provision of three waters and other supporting infrastructure. This may be directly through construction or through vested assets built by developers in accordance with CDC standards and passed over to Council.

Growth is a significant driver for infrastructure investment in CDC, making up approximately 30% of the modelled infrastructure spend over the ten year period between 2022 and 2031. Despite this, CDC has not forecast any increase in the number of three waters connections to its network within its RFI.

A review of the key projects identified in CDC's completed RFI shows that growth projects in the region are primarily intended to support a growth in the industrial consumption of water and wastewater treatment. Key projects include:

- Sewer network extensions.
- A new Wastewater treatment plant to support industry in Milbury.
- A new water pipeline to connect the Milton and Waihola schemes.
- Reservoir storage upgrades and Water Treatment plant capacity upgrades.
- A new water treatment plant to support industrial growth in Milbury.

A large portion of the planned investment in growth is anticipated to be funded from development contributions from the Milton redevelopment work.

[4] We note that capital delivery in the 2020 financial year was impacted by Covid-19 restrictions

The level of planned growth expenditure that relates to industrial development further reiterates the role that investment in water infrastructure has for the economic development of provincial councils like CDC, and the importance of ensuring that such investment is prioritised by any new three waters entity.

District planning, including the identification of new areas for housing, commercial and industrial activities, is currently an activity that looks across Council's activities and roles. The process considers factors such as, but not limited to, placemaking, transportation (including public transport), supply of greenspace, and availability of infrastructure.

Regional water entity

Shared responsibility for growth infrastructure creates risks for individual councils

One of the most significant changes introduced through an aggregated water entity is the change from the current full council control over providing for growth and investment priorities into the broader regional mandate of the water entity. Councils have control over broader growth planning and infrastructure provision for their areas but for three waters that will largely transfer to the water entity. Growth planning and the provision of infrastructure will effectively be shared between councils and the water entity. Shared responsibility can create duplication, gaps and has potential risks.

There will be a need to balance regional priorities with local in order to achieve best overall outcome for the region. There is a risk that CDC's priorities do not match the entities priorities for investment, either in timing or absolute terms. If the entity was covering the Ngāi Tahu Takiwā then the issues are only likely to be more complicated and balancing individual communities' priorities with the needs of the region more difficult.

The Government's consultation programme has indicated the development of a regional spatial planning process to guide that, but without the detail of how that operates it is an important risk as there will be change. It is an area council's must work with government on in order for communities, councils and a water entity to be successful.

District planning will require additional interfaces with the new water entity. In some cases a water entity may have different motivations than council, and is likely to place a greater focus on the provision (and cost of providing) infrastructure.

If considered regionally then the development of a single set of standards and a consistent approach to their application across the region will simplify things for developers and community.

Financial assessment

The financial analysis presented in this section builds on the previous work undertaken to support our *Cross regional current state assessment*, and our *Regional situation analysis* reports. The analysis uses our financial models to optimise debt and standardise forecasting assumption across each council and the proposed entity itself. These assumptions, which are outlined in Appendix B are based on our experience and understanding of the Government's reform objectives but are unlikely to match Council's own projections.

In this regard, the forecast should be considered to be directional only, noting that any change to underlying assumptions will impact both the entity and Council.

In our view, the most significant financial issues arising from meeting the total investment challenge are likely to be the impact on a council's debt, and the impact on ratepayers. These issues are covered below.

A note regarding rural schemes

CDC has a high proportion of its population connected to a reticulated, treated, drinking water scheme. In many cases, the schemes that ratepayers are connected to are rural water schemes, which provide treated water for the purposes of drinking as well as for use as stock water or for irrigation.

The charging mechanisms and cost structure for these schemes differs substantially from urban schemes. For example, water in rural schemes is charged per unit of consumption rather than on a connection basis. By necessity, our analysis has treated rural and urban schemes the same, and for comparison purposes, has assumed that a single district wide approach to charging applies. This means that charges presented in this section of the report will not represent rural or urban charges.

The extent to which rural or urban charges may differ from the charges presented is difficult to determine at this stage and would require further work to be undertaken. There is also a lack of clarity about how rural water schemes may be treated in a new entity and this is likely to have a significant bearing on the impacts for those ratepayers.

Impact on household charges

Council

We estimate that three waters charges for CDC households may increase by almost 200% in real terms from approximately $1,252 per property in the 2021 financial year to around $2,549 in 2031 (in 2021 dollars). When an allowance for inflation is included (using BERL LGCI cost index) this figure is as high as $3,560.

Water charges increase 200% (before inflation)

In some cases, ratepayers that receive water from a rural drinking water scheme may not receive wastewater or stormwater services at all. In this case, a comparison of the three waters rate may not be helpful. The table below sets out the estimated current[5] and future household charges for each of the three waters.

Table 3 Comparison of water, wastewater and stormwater charges

	2021 charge (ML adjusted)	2031 estimated charge - CDC
Water	$606	$772
Wastewater	$510	$1,509
Stormwater	$136	$267
Three waters	$1,252	$2,549

Affordability of these water charges should not be measured in absolute terms and should also consider the costs that a community can bear. In the Water NZ 2017-18 National Performance Review it considered relative affordability of water and wastewater services. It referred to varying international water affordability metrics for water and wastewater services ranging from 2 - 5% of household income[6].

[5] For comparison purposes we have estimated 2021 water charges using the same approach as our estimates for 2031. Importantly, this means the 2021 charges shown here may not match the charges set by council. The 2021 charges shown here are intended to provide a useful baseline to demonstrate the scale of uplift in costs.

[6] 2018-18 National Performance Review, Page 7

By this metric CDC exceeds the lower threshold for affordability issues in 2023 and by 2031, water and wastewater charges equate to approximately 3.6% of median household income.

An affordability metric that considers only the median household income in a district masks the impacts that increasing water and wastewater charges may have on the more vulnerable populations that are on fixed incomes. 5% of CDC's population receives benefit support of some kind, and a further 18% receives a pension.

Projected water and wastewater charges in 2031 for CDC reach:

- 9.8%, the jobseeker support for a sole parent.
- 8.7% of the pension rate for a single person living alone under the status quo.

We note that this analysis may not be fully representative of affordability for these groups however, as many pensioners will have the ability to draw on retirement savings or equity and may have additional income streams. Similarly, beneficiaries are less likely to be directly liable for paying these charges, and our analysis also excludes any additional allowance by way of the accommodation supplement.

Regional water entity

The Water Industry Commission of Scotland (WICS) noted, in their report to the New Zealand Government (the WICS report), that a three waters service delivery entity could be expected to achieve operating efficiencies of between 10 - 40% over a time period of 10 years (after adjusting for inflation and level of service improvements)[7]. It also indicated potential capital works savings in the order of 45% over a period of 30 years.

Our own work has indicated savings of a similar (albeit slightly less ambitious) scale may be achievable (we estimated 11% operating savings in 10 years, and 10% capital savings in 10 years). In our experience, these savings typically relate to:

- efficiency – doing things right, with less inputs, e.g. a reduction in the costs of contracted services.
- effectiveness – doing the right thing, e.g. reduction in re-active maintenance from improved asset management practices.
- efficacy – setting the right objectives (as it relates to three waters, e.g. asset management).

It is important to note that establishment of a new entity will likely take time to deliver benefits and will not necessarily solve all existing issues, for example, addressing capital investment backlog or affordability. An early Frontier Economics report commissioned by DIA concludes however, there is considerable international evidence to suggest that reform, when accompanied by a suite of other governance and regulatory reforms, has led to improvements in performance[8].

The impact of the modelled capital and operating savings are outlined in the table below with 2031 highlighted in the table as it is not until that point that a regional water entity begins to deliver savings through to the ratepayers.

[7] This assumes that an economic regulator is also established. WICS made no attempt to attribute benefits between regulation and aggregation.

[8] https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Frontier-Economics-review-of-experience-with-aggregation-in-the-water-sector.pdf

Table 4 Potential savings

	Three waters entity	Saving
Capital expenditure 2024 – 2035	**$2.9 billion**	**4%**
Operating expenditure 2024 - 2031	**$2.86 billion**	**2.7%**
Annual operating expenditure 2031	**$383 million**	**6.6%**

We have not undertaken detailed modelling or analysis on a Ngāi Tahu Takiwā entity to complete the above table, however, we note that we would expect such an entity to have 2 – 3 times the level of capital and operating expenditure of an Otago-Southland entity. Similarly, we would expect savings within a larger entity to be larger, or more likely to be able to be achieved.

Our modelling focusses on the ten year period outlined in CDC's responses to the Government's RFI and covered by CDC's latest (draft) long-term plan. Our analysis shows that the potential operating and capital savings only begin to have an impact on household charges at the end of the modelling period. These efficiencies could be expected to have an increasing effect on household charges beyond that.

$2,001 – average household water charge in 2031 (uninflated)

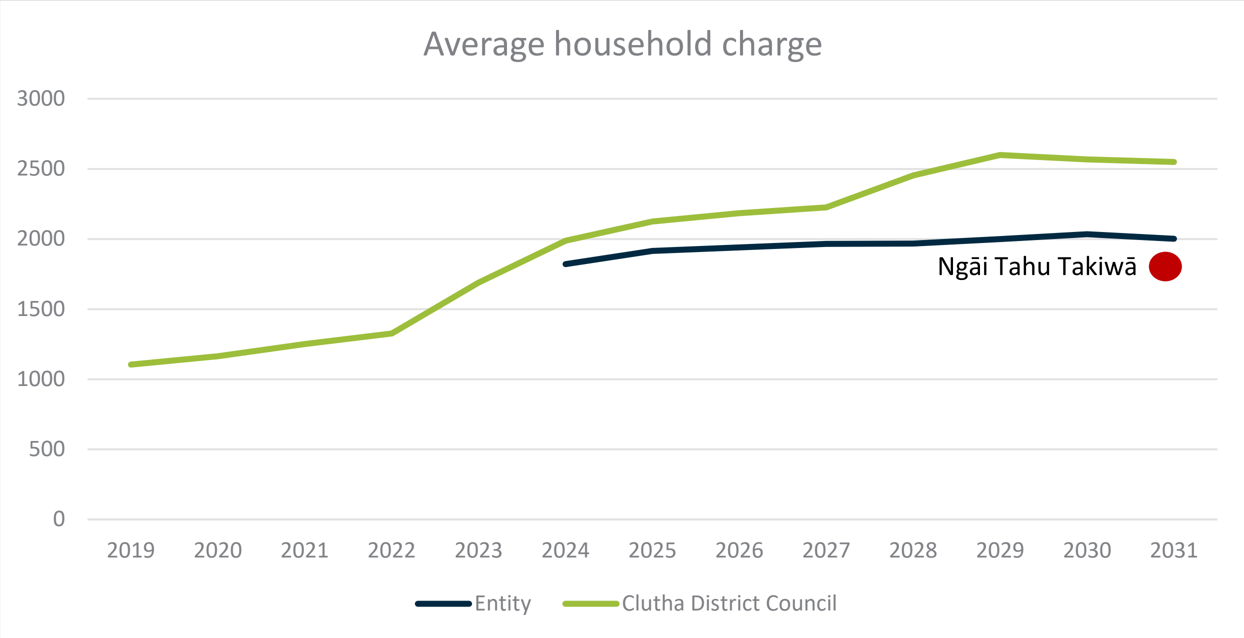
Three waters charges are likely to be higher under the status quo (Council delivery model) than under a regional water entity covering Otago Southland for ratepayers in Clutha in most scenarios.

Table 5 Comparison of three waters charges in 2031

	Water charge	Wastewater charge	Stormwater charge	Three waters charge	Increase (%) vs 2021	2031 range
CDC	$772	$1,509	$267	$2,549	204%	$2,010 – $3,087
Otago Southland Water Entity	$841	$882	$277	$2,001	208%	$1,785 – 2,216
Ngāi Tahu Takiwā[9]	$600 - 700	$800 - 850	$300 - 350	$1,700 - $1,900	144%[10]	No information

[9] The estimate of household three waters charges for the Ngāi Tahu Takiwā has been prepared based on limited information and contains a number of assumptions and high level estimates.
[10] Based on midpoint.

Figure 8 Average annual household charge – three waters entity



An Otago Southland three waters entity breaches the 2% of household income threshold on establishment but through reduced charges when compared to Council it has a better outcome over time and by 2031 is at 2.7%. Under a regional water entity covering Otago Southland projected water and wastewater charges in 2031 for CDC ratepayers reach:

- 7.4% of the jobseeker support for a sole parent,
- or 6.5% of the pension rate for a single person living alone

Given the likely reduction in three waters charges in a larger entity covering the Ngāi Tahu Takiwā we would expect household affordability for water and wastewater service to be further improved for CDC ratepayers under such a model.

However, with the water services entity it is likely that charging mechanisms for renters may change. Under the current council delivery model, water charges are incorporated into rates bills and are covered by landlords in the first instance (and recovered in rental income). A water services entity would likely have a direct billing approach meaning tenants in rented properties may have to cover these costs directly (and there is unlikely to be a complimentary reduction in rent).

Table 6 Comparison of affordability of three waters charges

	Three waters Estimated charge (2031)	Two waters estimated charge (2031)	Two waters % of average household income (2031)	Two waters % of pension (2031)	Two waters % of job seeker support (2031)
CDC	$2,549	$2,281	3.6%	8.7%	9.8%
Otago Southland Water Entity	$2,001	$1,723	2.4%	6.5%	7.4%
Ngāi Tahu Takiwā Entity	$1,700 - $1,900	$1,400- $1,700[11]	2.2% - 2.7%	5.3% - 6.5%	6% – 7.3%

Resilience

A key benefit of a regional water entity is the larger population base it serves. This provides the entity with more financial resilience. Potential future price shocks within the Otago and Southland regions may include:

- The costs to meet increasing drinking water and wastewater standards.
- The valuation of assets, and in particular, the potential under-valuation of underground assets, and the consequential impact of that on planned capital investment.
- The significant level of investment in renewals that is required in the district and in the wider region.

Debt

The scale of the capital investment required will need to be funded by debt. This is an entirely appropriate funding mechanism for three waters infrastructure. However, debt is also a significant driver of cost, with financing costs accounting for an increasing proportion of total operating cost as investment requirements grow, and a need for the eventual repayment of that debt.

The question is whether there are differences with either a regional water entity or with Council and if so whether those are benefits or challenges.

[11] We have not assessed two waters charges for a Ngāi Tahu Takiwā entity, and this range assumes that two waters charges in such an entity would be similarly lower than three waters charges as we have observed in Otago and Southland.

Council

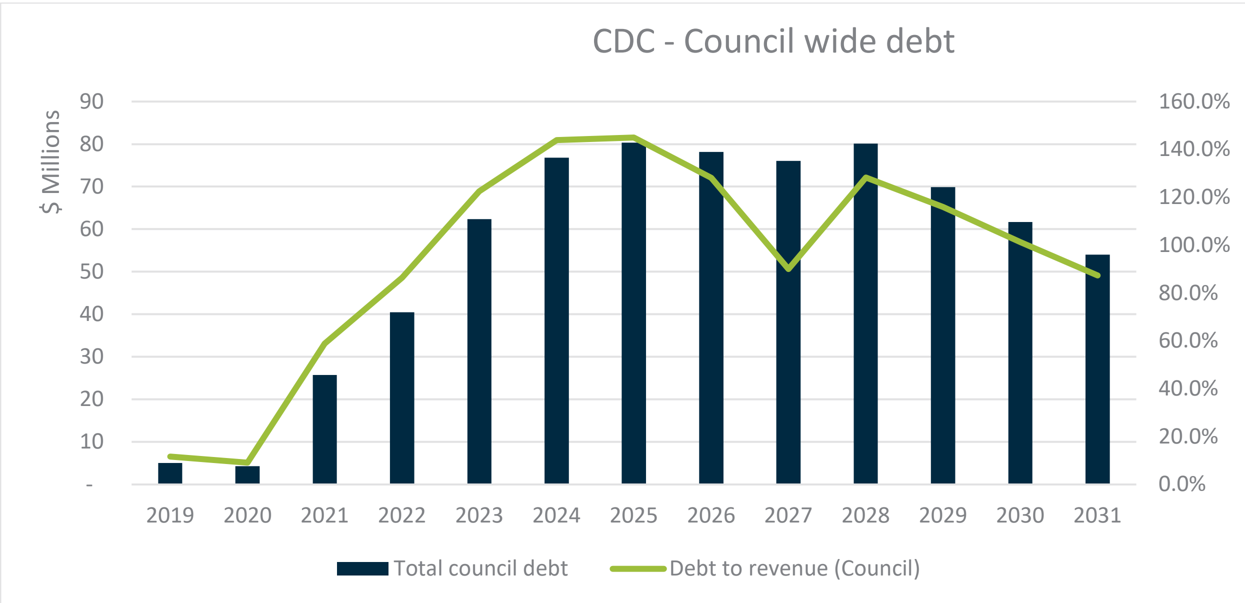
The forecast debt position and debt to revenue ratio for the three waters is for three waters debt to exceed $90 million (or 460% of three waters revenue) in 2031. Given the local government funding agency's borrowing covenant of 280% of revenue, the serviceability of three waters debt in CDC will become somewhat dependent on revenues from other activities (thereby constraining the ability of those other activities to borrow).

$90 million of three waters debt in 2031

While we are unable to predict what the impact of our increased investment programme would be on planned borrowing for other Council activities, we have attempted to predict total Council debt in the chart below. This assumes that Council does not alter the amount of debt, or revenue, that it requires to fund its other activities in response to the increasing funding requirements for three waters (although we would anticipate that such adjustments would be inevitable).

This shows an increase in debt to $80 million, and a debt to revenue ratio that peaks at 145% for CDC as a whole. This shows that even with three waters service delivery Council will not become debt constrained.

Figure 9 Whole of Council debt and debt to revenue ratio



Regional water entity

By 2031 a three waters entity is forecast to have debt totalling:

- Between $6 – 6.5 billion, and exceeding 600% of its annual revenue, in a Ngāi Tahu Takiwā entity.
- $1.9 billion , or 465% of its annual revenue, in an Otago Southland entity.

This represents a small reduction compared to simple aggregation which is achieved through efficiency improvements.

However, we estimate that a regional three waters entity covering the Otago and Southland region or at the Ngāi Tahu Takiwā will breach both the LGFA lending covenant, and the debt to revenue covenants that would likely be imposed by the credit agency Moody's if the agency was to seek a Baa/Ba credit rating. [12]

Borrowing will exceed lending covenants or investment constrained

This means that either regional water entity would have to rely on Government subsidies or higher user charges to be able to afford the current investment programme.

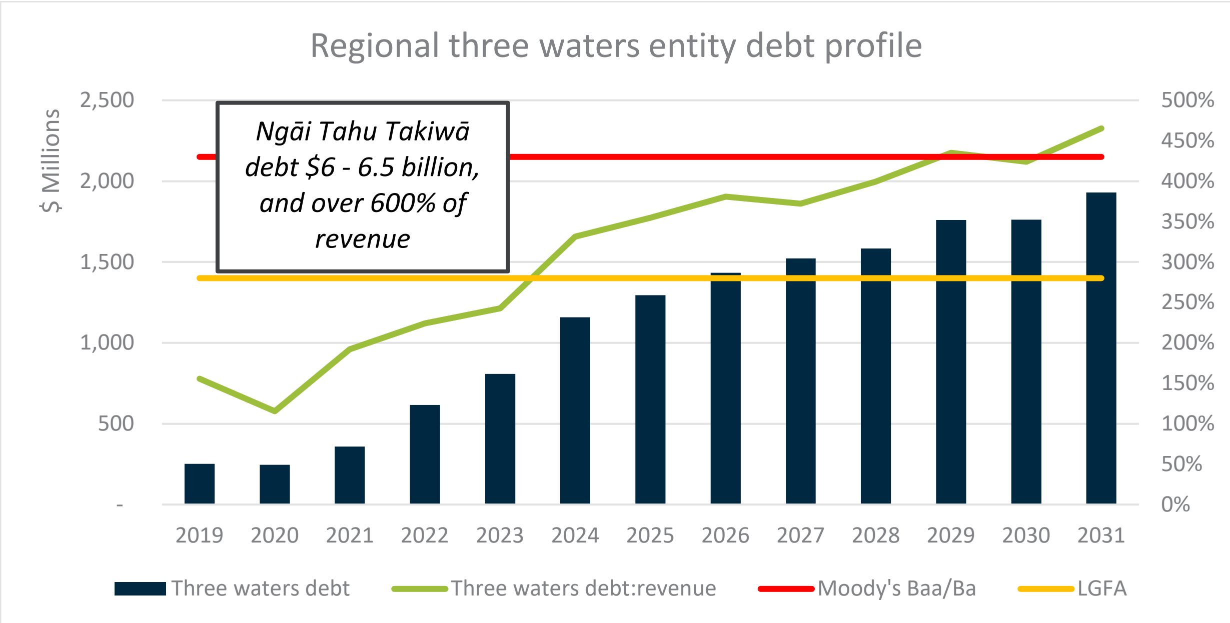
Sensitivity testing outlined in Appendix A shows that this is likely to be the case regardless of the assumptions adopted in our modelling.

Alternatively, the three waters entity could delay or stage investment to ensure that it remains within the borrowing limits, but delayed investment is one of the many potential causes of the current issues with three waters service delivery within the local government sector.

The challenges for an Otago Southland regional water entity or Ngāi Tahu Takiwā entity to be able to borrow sufficient funds to meet the required investment programme is considered a major impediment to the viability if an Otago Southland three waters entity. It appears from a recent newspaper article "Water reforms hit an expensive snag, as cost estimate rises to $185b" [13] that this situation may be replicated across the country which could provide for further incentives or changes.

The issues regarding the total debt for proposed water entities should not be underestimated as they are likely to be an impediment to the overall effectiveness of the proposed entities if they are unable to be resolved.

Figure 10 Debt to revenue ratio versus LGFA and Moody's benchmarks – three waters entity



[12] Per the WICS report. Note that the LGFA currently has an AA+ rating for foreign currency lending from Standards and Poors – equivalent to an Aa1/Aa2 rating from Moody's. A Baa/Ba rating would likely result in higher borrowing costs than can be obtained through the LGFA.

[13] https://www.stuff.co.nz/national/politics/300309952/water-reforms-hit-an-expensive-snag-as-cost-estimate-rises-to-185b

What would the impact of change be?

A change in role for Clutha District Council

If three waters was transferred out of Council, then in our view for CDC, this could have a large impact on the organisational structure and capability of Council. While there may be opportunities for Council to refocus around the wellbeings, or on its community development and placemaking roles, there will be a need to consider the way that this is reflected in Council's overall organisational structure. In addition to three waters reform, the outcomes of the review of the Resource Management Act, and the recently announced review of the Future of Local Government, will also have a meaningful impact on this.

Many Council teams have resources at or close to capacity. As discussed above, several roles have an element of generalist support built into them, so some of the capacity and capability that existing three waters employees provide across non water related functions will be lost to Council with the transfer of three waters to a new water entity. However, some roles which have only a small element of three waters involvement will remain and will have additional capacity. There could include a future reorganisation of resources allocated to the various functional areas. This will reduce the risks that will arise although, attracting and retaining high quality staff to the reduced roles in future may also be a challenge.

Transfer of responsibility for delivering water to a new entity will mean the Council (from the Councillors, through its leadership and operational staff), will have the opportunity to reassess the ways in which it can effectively deliver on other issues for its community with its remaining resource. For example, the removal of three waters roles may provide an opportunity to evolve the remaining organisation structure to respond to the wellbeing of their communities as detailed in The Local Government (Community Wellbeing) Amendment Act 2019.

The Frontier Economics report addresses the potential concerns with aggregation leading to loss of economies of scope with other council functions and concludes that such issues do not appear to have emerged in practice as a major problem in the jurisdictions examined in the study.

The true impact on Council, and the exact nature of its future role is, however, uncertain. In addition to three waters reform, reform of the Resource Management Act, which may alter the responsibilities and obligations of councils, and the recently announced "Future of Local Government" review, will also have a significant impact on the broader impacts for a council that cannot be ignored.

Impact on Council as an organisation

In CDC's current organisation structure, the Service Delivery group has 15 roles that are entirely or predominantly dedicated to three waters with about 11 roles spending between 25-65% of their time on three waters or supporting service delivery. Many roles are already outsourced within the three waters function. As depicted in Figure 9, groups outside Service Delivery provide some support to three waters but there is insufficient resourcing in these support functions for any other staff to realistically transfer.

These roles are predicted to remain at Council and create additional capacity. This additional capacity will not be funded by water revenue so may become a stranded cost (to the extent that it does not simply delay or defer otherwise planned recruitment). The organisation will need to manage this cost as well as the funding of senior positions within the Council whose roles would have in part been based on a span of responsibility that included water. Stranded costs are discussed and quantified in the following section.

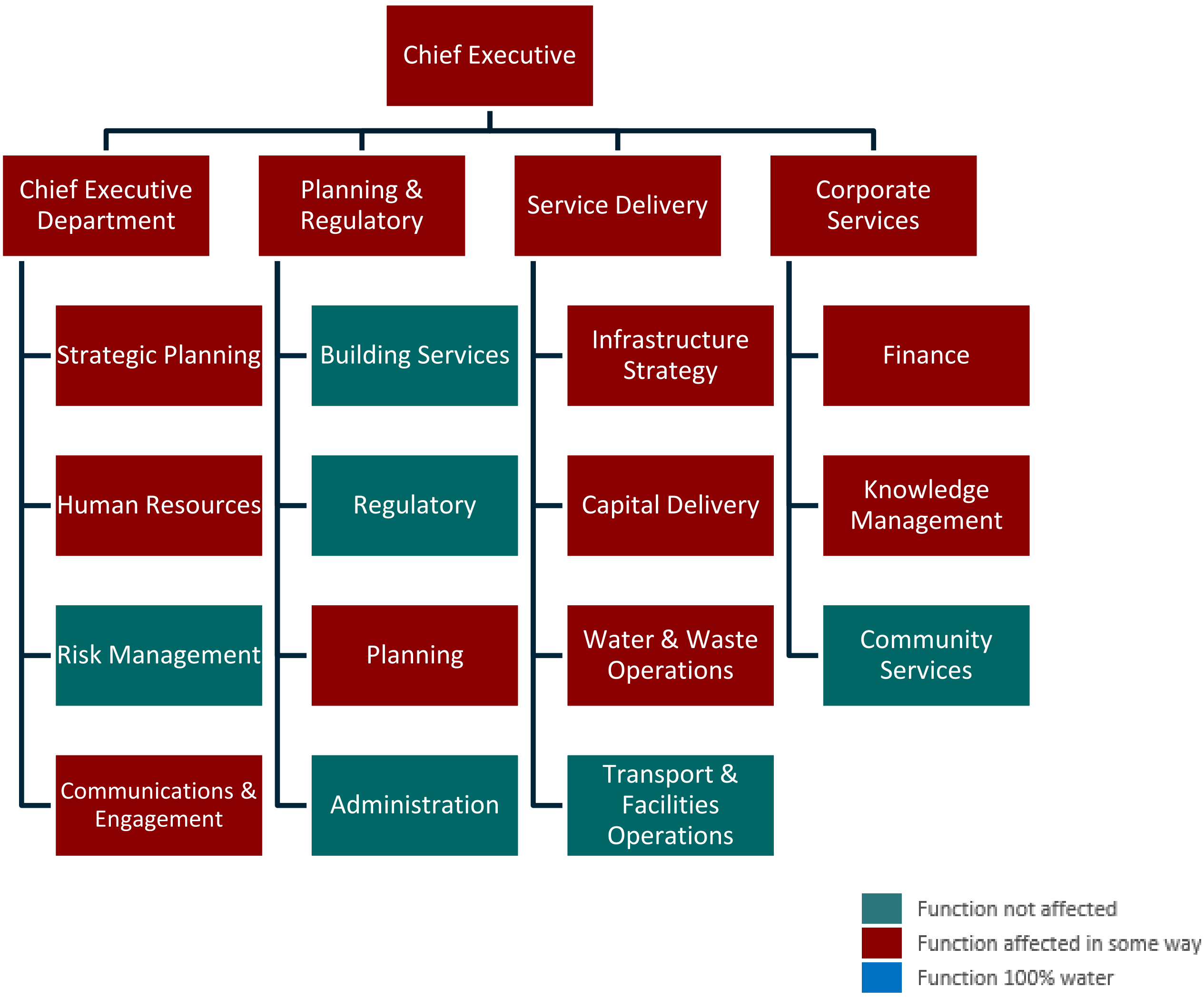
The actual transfer of resources from Council to the water entity would be noticeable, but not majorly significant. Our analysis shows 15% of Council's FTEs are solely or significantly focussed on water related activities with a lot of technical design work and physical delivery outsourced. Before and after functional structure charts of CDC are set out on the following pages to demonstrate the extent of change within Council. In all cases, vacancies have been included.

CDC operates out of one office within Balclutha itself, with four service centres located elsewhere in the district. The Balclutha office is limited for space and the transfer of three waters space would give other teams the opportunity to expand their footprint. This would release some of the overhead that is currently funded by three waters activities.

Table 7 Pre and post change Council FTEs

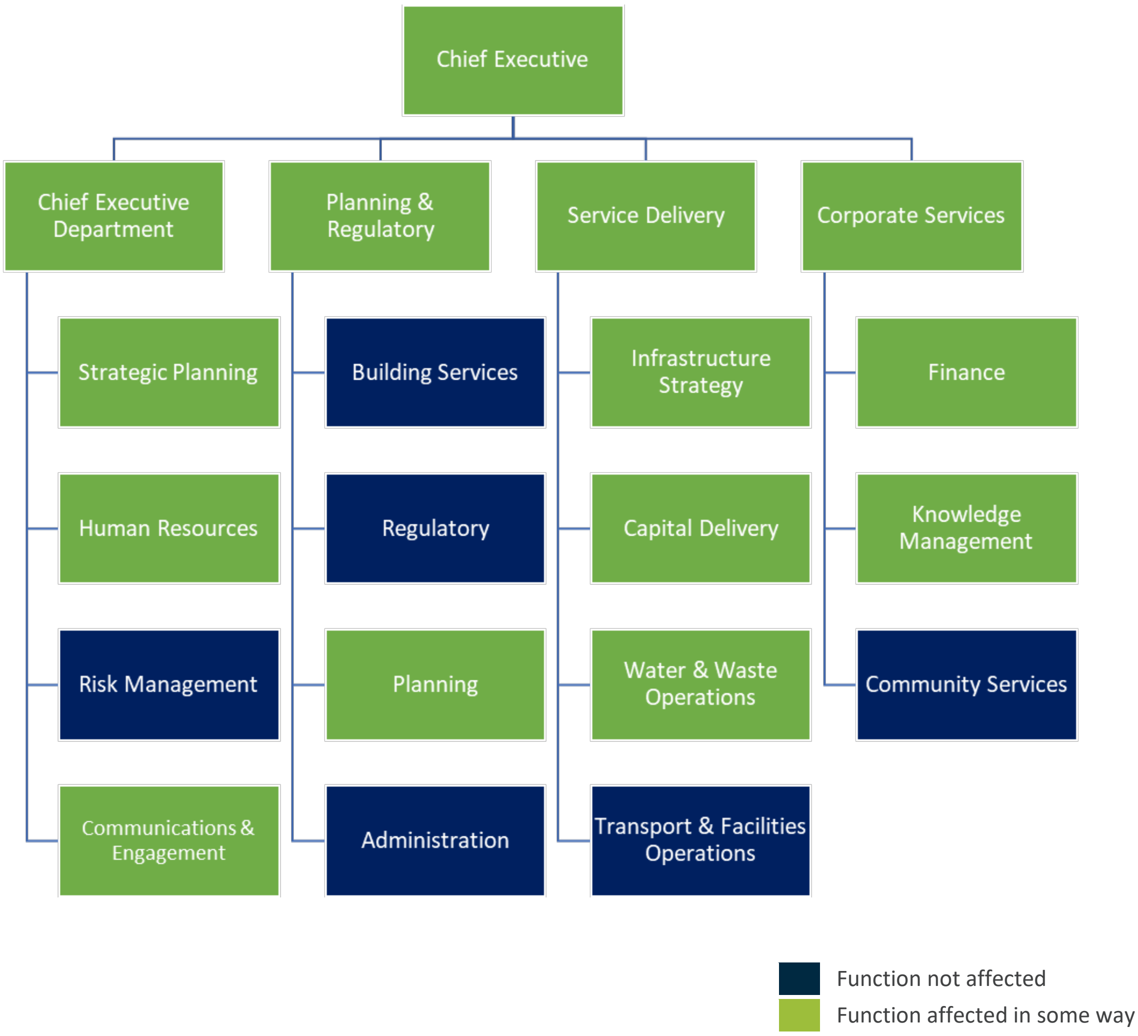
Pre water entity FTE	Post water entity FTE
130 [14]	~ 112

Figure 11 Current Clutha District Council functional chart showing functions impacted by water aggregation



[14] As at 4 Feb 2021

Figure 12 Indicative functional chart for Clutha District Council post creation of water entity



Financial impacts

The transfer of three waters service delivery into a new three waters entity would give rise to a reduction in the overall revenue of Council.

Three waters accounted for an average of 25% of Council's total revenue between 2019 and 2021, and 27% of its total operating expenditure in the same period. The removal of both the revenue and expenditure would therefore likely have a positive impact on Council's financial performance.

The anticipated impact on Council's total revenue from the transfer of three waters service delivery is shown in the table below:

Table 8 Comparison of Council revenue after transfer of three waters service delivery

	With three waters (ML adjusted) (2021)	Without three waters (2024)
Council revenue	$43.7 million	$37 million

The net impact of the removal of three waters service delivery from CDC is that by 2024 Council will collect approximately 13% less revenue than it would in 2021.

Balance sheet impacts

We have assumed that the transfer of three waters assets from Council to new three waters entities would be accompanied with an equivalent transfer of debt. The impacts on CDC's balance sheet, assuming three waters debt is transferred in 2024 is shown below.

Table 9 Impacts on Clutha District Council's balance sheet

	With three waters (ML adjusted) (2024)	Without three waters (2024)
Total Council debt	$76.8 million	$0.8 million
Debt to revenue ratio	159.6%	2.2%
Debt capacity ($)	$72.7 million	$103 million

The decrease in CDC's debt to revenue ratio from 143.9% to 2.2% without three waters assets would create opportunities to leverage the increased borrowing capacity if it so desires. However, the extent to which this occurs, or does not, will be the result of a political decision-making process that is difficult to predict.

We have not attempted to predict CDC's debt (without three waters) beyond 2024 as the impacts on Council's revenue and balance sheet would be of such a magnitude that they are likely to have a substantial impact on Council's decision-making processes.

Stranded overheads

The delivery of three waters services in CDC is heavily supported by other areas of the business including the wider Service Delivery Department and most corporate support functions. Most of this cost is charged to three waters activities through an allocation of corporate overhead, that uses an allocation system which broadly reflects the use of those services by the three waters team.

Stranded overheads are understated

In many cases these costs reflect the cost of staff time (for example, it may include a portion of the employment costs for an accounts payable officer). Where this is the case, it is unlikely that the removal of three waters services will result in a reduction in these employment costs (as the role is still required within Council). These costs are therefore considered “stranded” as they remain with Council despite the loss of the activity which funds them.

CDC’s completed RFI identified only $51,000 of expenses categorised as “General support and other costs”. We understand this to include corporate and finance overhead which has been allocated based on various measures of use (headcount, transaction volume, etc). We have not been provided with a detailed breakdown of the expenses which make up this corporate overhead charge. The stranded overhead equates to around $3 per rateable property in CDC in 2020.

However, we consider that the amount of overhead allowed for in Clutha’s RFI is abnormally low, and we would anticipate it to be significantly larger. Further work may be needed to fully understand the extent of stranded overhead in CDC.

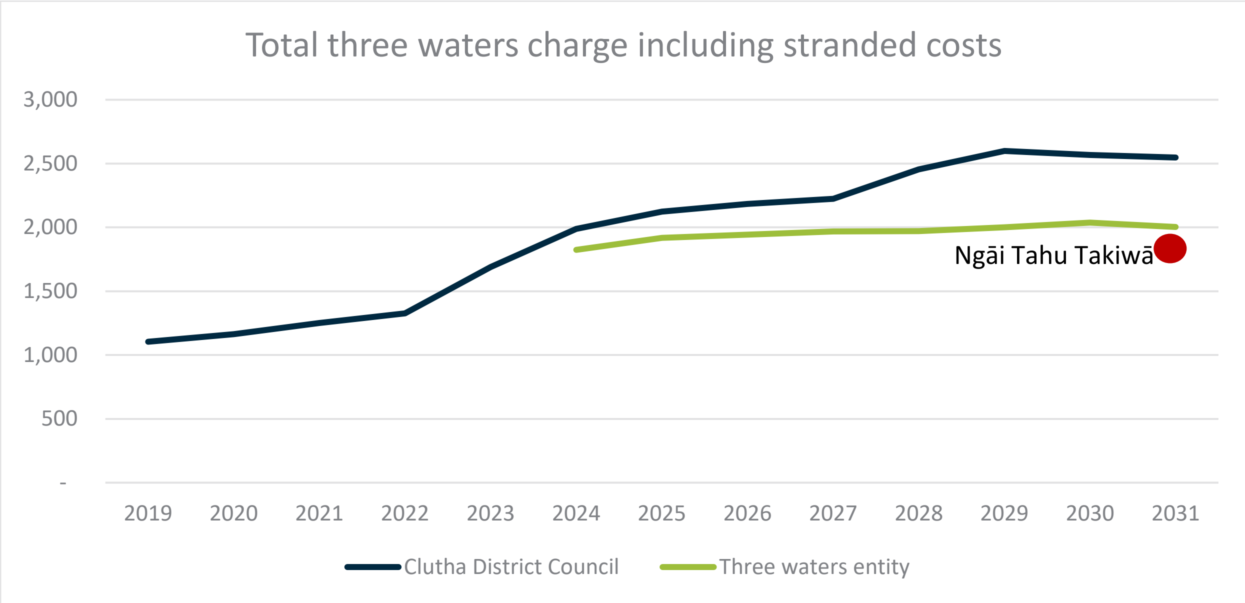
Other similar sized Councils in Otago and Southland have overheads ranging between $1 – 3 million per year. The typical range for stranded overheads within the Otago and Southland regions is between $70 – 200 per ratepayer, further reflecting the need for more work to understand the true stranded overhead cost for CDC.

Total cost impacts for ratepayers

If three waters assets were transferred out of Council, the net impact on ratepayers would be the combined cost of the three waters charges imposed by the new entity and the additional component of CDC rates that is required to fund the stranded overhead of Council.

To identify the potential impact on ratepayer from the transfer of three waters assets to a new entity, we have therefore compared the combined entity charge with the average household charge that would otherwise be paid if CDC retained responsibility for the delivery of three waters services.

Figure 13 Comparison of total household cost for three waters services council versus three waters entity



This comparison shows that, even when the cost of stranded overheads is considered and passed on to ratepayers, the overall cost of three waters services for CDC ratepayers will be:

- Between 25% and 33% cheaper in an entity covering the Ngāi Tahu Takiwā.
- around 25% cheaper by 2031 with an Otago Southland three waters entity.

Summary

Due to increasing standards and requirements a change to the way three waters services are delivered is inevitable. The form that this change takes is a decision for CDC to make, and this report presents information to assist with making this decision.

The arguments for and against the opt in or out decision are presented below, alongside the relevant risks of each decision. For simplicity, we note that the opt out decision discussed below relates to CDC opting out of reform and continuing with its existing service delivery arrangements.

The option to opt out of reform and pursue voluntary change into an Otago Southland three waters entity in our view has a very low chance of success and risks Council being left as the service provider.

That option requires a coordinated and consistent approach across all of the councils in Otago and Southland. All eight councils in the two regions must opt out of the Government's reform process but have a desire to aggregate three waters services at a more local level. They must then go through a detailed entity design process, fund the transition and entity design process themselves, consult with their communities on the same proposals and ultimately agree. There are limited examples of this being successful in New Zealand and none where asset owning has been part of the model.

In the event that an Otago-Southland water entity emerges as the Government's preferred option, most of these challenges will disappear.

Opting in

Arguments for:

- A regional water entity will have increased capability and capacity of three waters staff and increased organisational resilience to changes in staffing levels.
- A three waters entity would have a skills based board with a single focus on three waters issues and would have an enhanced ability to embed the principles of Te Tiriti o Waitangi and Te Ao Māori within its governance framework.
- A three waters entity would have greater financial and technical resources to be able to address compliance issues and make the investment required to comply with new environmental, health, and cultural standards. A three waters entity would also assume most of the risk associated with rural water supplies and private water schemes.
- The required level of future investment in infrastructure is a significant step change for Council. Capital works will need to increase by 300% and maintain that level of investment through to 2031.
- Average household charges for three waters services are likely to be lower under a regional water delivery model than if Council continues to provide the service.

Arguments against:

- CDC may experience some increased challenges to recruit engineering staff and asset managers to support its remaining activities due to increased competition with a three waters entity and a reduction in variety of work although the effects of this may be limited to certain roles within the organisation.

- There will be a number of new challenges introduced relating to the coordination of district planning, particularly as it results to investing in infrastructure to support new water and wastewater connections, with a large three waters entity.
- There may be a loss of local representation, which would be worse with an entity covering the South Island or the Ngāi Tahu Takiwā.
- A three waters entity would not have the borrowing capacity to be able to deliver the full capital works programme for the areas that it covers without suffering a credit rating downgrade and, consequently, higher costs of borrowing. We believe this to be a national problem, which is more likely to be able to be solved with a small number of water services providers.

Risks:

- Delivery of the full capital works programme at an Otago Southland level, or even with a larger entity would appear challenging. There is a risk that a larger three waters entity may not be able to generate any improvements in terms of capital works delivery.
- Without critical mass of all councils there is a danger that the benefits of change will be substantially reduced or lost. This is particularly the case if the population centres of Dunedin, Invercargill, Christchurch, and Queenstown were not involved. A Ngāi Tahu Takiwā would be more resilient to this.
- As a three waters entity may have limited access to sufficient debt to fund its full investment programme, it may need to manage competing investment demands from different districts (and to achieve different outcomes, e.g. servicing growth versus improving compliance). There is a risk that these priorities may not align with local priorities.
- There are still a number of unknown factors about entity design which may have a significant bearing on the comparison of an “opt in” option with an “opt out” option. These include issues regarding:
  - Entity design.
  - Council’s roles as owner and governor.
  - Mechanisms to prioritise local investment.
  - Coordination of planning and investment.
  - Interfaces with stormwater and the extent to which stormwater assets and functions will be transferred.
  - Community input and role.
  - Allocation of liabilities, land ownership.

Opting out

Arguments for:

- CDC is currently projected to have sufficient financial headroom to be able to fund its forecast capital works programme and may have more borrowing capacity to be able to achieve this than a large three waters entity.
- CDC is more able to determine the timing and level of investment it makes into its three waters infrastructure if it retains control of its three waters assets. Increasing regulatory enforcement and standards will still be a significant driver for determining the timing and type of investment.

- There may be alternative options available to Council to address many of the potential challenges with continued Council service delivery of three waters. These options were not explored as part of this review.
- Household charges are likely to be higher under a continuation of Council led service delivery, however CDC may have more tools at its disposal to address affordability issues within the district (such as the use of rating differentials, UAGCs, rates postponement policies, and rates remissions).

Arguments against:

- Council is making its opt out/opt in decision within the context that every other council in New Zealand is also making that decision. In many cases there is a strong and very strong case for change. The ratepayers of six of the eight councils in Otago Southland would, in our view, have lower water charges under a regional water entity, but this reduces to five when stranded costs are taken into account. The ratepayers of all eight would be better off in a Ngāi Tahu Takiwā.
- The scale of investment required in the Clutha District over the next ten years requires a substantial uplift in capital works delivery which will be difficult to achieve. While a larger three waters entity may also struggle to deal with this uplift in delivery requirements, it will have an increased level of resourcing which may be able to improve lead times and coordination of capital works between districts which may improve delivery.
- While CDC is likely to be able to borrow enough to fund the required investment in three waters infrastructure, the amount that is will be required to borrow will impact on its ability to borrow to fund other activities, or to respond to emergencies.

Risks:

- If CDC opts out while other councils opt in, the ability to attract staff or deliver its capital works programme will be further diminished as it will be a small organisation competing with much larger entities. This may also impact on the cost of completing work in Clutha.
- Any incentives that come with the current reform process will not be available to councils if they opt out of the process. Further, while the costs of transition to the new entities will be covered by the government as part of the current reform process, it is possible that councils that later opt to join any three waters entities may face costs to join or transition to these entities.
- The risks and challenges with future water service delivery in Clutha would be significantly increased if the other councils in Otago Southland and the South Island more generally opt in to the reforms.

Preparing for change

Challenges and opportunities

The transfer of three waters assets to a new three waters entity in Otago-Southland (or a larger geographical region to be determined) will not be without challenge for CDC, or any of the other councils. Many of these challenges will be consistent across all of the existing councils, and these are outlined in the section on "common issues". These issues primarily relate to the need to establish new processes and relationships to ensure investment planning and Council's regulatory functions continue to operate smoothly.

CDC also has some unique challenges which will likely need to be addressed prior to any transition. These primarily relate to the management of rural water schemes and the need to facilitate economic development in the district.

Rural water supplies

CDC, like many provincial councils, serves a number of remote and rural communities which receive drinking water and wastewater in a variety of different ways. In many cases rural or remote properties are served by private supplies such as rainwater and septic tanks, or private water bores. In other cases, typically in the presence of sufficiently sized settlements, properties may be connected to a discrete council supply (particularly in the case of drinking water).

Councils with rural properties may also have a number of rural water supplies which have a primary purpose of providing stock water or water for irrigation purposes. In the South Island, many of these schemes convey water through a reticulated network which often feature both approved and unapproved private connections for drinking water.

We understand that Council currently has a reticulated stockwater scheme which may have some unapproved private connections. Ongoing operation and maintenance of such a scheme is unlikely to be desirable for Council if it no longer has other water assets however, as it would take particular expertise which Council would not otherwise need to resource.

The extent to which these schemes treat water, and the standards to which that water is treated, vary widely between differing schemes. Additionally, the level of council control, management, and decision making varies considerably. Similarly, the charging mechanisms and costs for managing these schemes can differ from a normal urban drinking water scheme.

Continued management of these schemes is likely to be both costly and risky for Council once the Water Services Bill has been passed, and there will be increased responsibility and liability associated with compliance with the drinking water standards. We understand that there were multiple submissions regarding the Water Services Bill which relate to whether elected members will be exposed to the legal liabilities contained within the Bill or not.

In Clutha, we understand the rural water schemes are typically operated in consultation with rural water scheme committees who have traditionally been able to exert influence on councillors in terms of the levels of investment into their schemes and the consequential impact on operating costs and charges. It is likely that this level of independence or influence would be lost to a new three waters entity, particularly where that entity covers the entire Ngāi Tahu Takiwā.

On the other hand, a water entity dealing with the entire Ngāi Tahu Takiwā may be better equipped to deal with the uniqueness of rural water supply schemes as it will have an expanded catchment which includes a number of rural councils and will have an expanded capability and capacity to be able to address the specific issues relating to such schemes.

Facilitation of economic development

We noted that CDC's main driver for investment in growth related infrastructure in its RFI relates to the construction of new wastewater and drinking water treatment plants to service industrial development within the district.

Water plays a key role in the establishment of new industry in rural areas. A lot of the industry that is associated with the processing agricultural and horticultural products requires significant volumes of water and may generate large amounts of wastewater. In order to facilitate this industrial development, councils may need to reach agreements, or make provisions, for the installation of new water infrastructure.

Such arrangements are likely to be more difficult to manage with a new water entity, as there may be competition for contractor capacity as well as financial resource. The difficulties associated with this are likely to be exacerbated by a larger water entity servicing the entire Ngāi Tahu Takiwā, particularly where districts may be competing with each other to attract the same industrial development.

We also note that residential development within the Clutha district has been facilitated by Council taking a direct, hands on approach, where it has acted as a property developer. These arrangements have been successful for Council but may become more difficult if it does not have existing contracts for the construction of water infrastructure.

Common themes

Through our various onsite visits to councils to identify the impacts of water reform on each organisation, we have identified the emergence of a number of consistent themes that apply to all councils (although some may apply to CDC more than others) which are listed herein.

Typically these are issues which we consider can, and should, be addressed as part of any transition process, but which are sufficiently large to warrant specific discussion herein.

Ensuring investment in small communities is maintained

One of the key concerns that emerged through our early conversations with stakeholders, and our subsequent site visits to councils in the Otago and Southland regions was the need to ensure that small communities continue to see a fair share of investment. This concern is particularly pertinent when considering an entity that encompasses a larger geographical area than the Otago and Southland regions on their own.

This is a key entity design consideration that we believe should be addressed before a council agrees on whether or not it wishes to opt into the wider reform. At the time of writing, the Government has not made it clear what specific mechanisms will be introduced to ensure that this occurs, however we understand that:

- Proposals include the establishment of a Governor Representative Group, which will include representatives from Iwi and Councils and will influence the overall governance of the entity and will set strategic and performance objectives for the entity.

- New planning regulations may be introduced to require a level of coordination between councils and the proposed entities in the planning process. These may address issues regarding the timing and quantum of investment in growth infrastructure, though it is unclear how these may relate to renewal or level of service investment.

Councils may wish to further investigate other potential mechanisms to ensure small communities get a fair share of investment. This may include the development of enforceable KPIs or investment quotas for regions, although care needs to be taken to ensure that the new entity is still empowered to make its own investment decisions and obtain efficiencies.

Operating model considerations

The operating model of any three waters entities established through the Government's reform programme will be determined by the Government after consultation with the sector, and accordingly, we have not suggested or proposed an operating model here. However, in engaging with the Government through this process, we consider it important that Council considers the following key features of any such proposed model.

- The governance structure and the mechanisms in place to ensure that councils have some say in the management and governance of the entity, and that planning and investment decisions are coordinated.
- The mechanisms in place to ensure investment is fairly distributed between small and large communities.
- How the entity may ensure that expertise remains local, whether through flexible workplaces, or district offices.
- How relationships between councils will be established to ensure that there is open sharing of information and to encourage collaboration and coordination of activities and investment.

It is clear from our discussions with councils in the Otago and Southland regions, as well as from the information released from the Government to date, that in addition to three waters technical expertise, a new three waters entity will need to establish functions or roles relating to:

- District and spatial planning to the extent that the new entity will most likely be involved in spatial planning within the regions in which it operates.
- Consents to the extent that the new entity would likely need to be involved in the process for issuing and granting resource and building consents, particularly in the case of residential development and connection to infrastructure, development agreements, and the potential vesting of assets.
- Council relationship managers or partners to ensure coordinated responses and ongoing working relationships are maintained.
- Customer services.
- Human resources.
- Property and fleet management.
- Legal and regulatory roles.
- Finance and business reporting.
- Health and safety and risk management.
- Communications, engagement, and marketing.
- OIA/LGOIMA responses.

Importantly, from our onsite interviews to date, we consider that it is unlikely that many of the roles discussed above will be able to be filled by existing council resources (that is they are predominantly new, rather than transferred, roles). However, the process for transferring the three waters service delivery functions, and everything that goes with that, will likely be protracted and will need to be carefully managed.

Competing with large water entities for resources

The Otago-Southland region, and New Zealand at large, is currently facing a shortage of skilled engineers, with most councils in the two regions having to offer a premium above market rates to attract skilled staff. The Otago-Southland regions currently have approximately 12.8% of positions in three waters vacant.

While most engineers involved in three waters will transfer to a new entity, councils will still require skilled engineers to deliver roading, waste, and other major capital works. In many cases, engineers in councils are involved in many different projects and activities. If councils are no longer responsible for three waters, these staff may no longer find their roles are appealing or challenging.

Large water entities may be able to offer more career opportunities, choices in work location, and more challenges for engineers. This additional competition may make recruiting and retaining skilled engineering staff harder for councils than it already is. However, larger entities are also more likely to be able to develop expertise within the sector, which may ease the longer term skills deficit.

Systems and processes that need replicating

The delivery of three waters services typically supports, or is supported by, a range of Council systems and processes that are likely to need to be replicated into a new three waters entity. The processes that we have identified to date have been listed below, however it is unlikely that this list is comprehensive.

- Building and resource consent applications where it is essential to identify where underground services exist in relation to the proposed development/construction. Currently it is common for developers or builders to meet with Council staff (which may include three waters engineers) to discuss applications.
- Building and resource consent applications where the installation of infrastructure is involved and needs to be consented to by Council typically draws on expertise from the three waters staff.
- Access to GIS data and asset information held by the engineering teams/three waters engineers by other parts of Council will need to be preserved. Planning and consents typically need to access this information from time to time and it is not uncommon for these teams to have direct access to this information.
- Customer services needs to be managed, including consideration of whether there can/should be a single point of contact for a ratepayer, and if not the development of a clear information campaign.
- Processes for obtaining LIM and PIM reports from councils and three waters entities will need to be developed, as councils may no longer hold up to date information (or institutional knowledge) about properties or may not have the expertise to be able to assess that information.
- If stormwater assets are transferred, there will be a need to develop relationships and processes for the roading and urban planning teams to work with the three waters entity in stormwater design and hydraulic modelling. These may also require the inclusion of other areas of Council such as parks and open spaces.

Approval for vested assets

When developers install infrastructure to service a new development area they will typically "vest" that infrastructure in the council once title has been granted for the development (and the development is complete).

As part of this process, resource consent applications, and some building consent applications require the proposed infrastructure to reviewed by Council's engineers to receive "engineering approval". This is a formal sign off to certify that the proposed infrastructure is of an appropriate size and standard to be connected to Council's network and to service the proposed development.

Once the infrastructure has been installed (and during its installation) councils will also typically carry out inspections to ensure that the infrastructure is consistent with the engineering approvals that were granted. These inspections may be carried out by at the same time, and by the same people, that are undertaking inspections of other infrastructure in the development.

In the event that a new water entity take ownership of any vested three waters assets, processes will need to be developed to transfer the responsibility to grant engineering approval for three waters asset to the new water entity. This may result in delays to the granting of resource consents or additional costs for developers.

Mixed use or strategic property

If three waters assets are transferred to a new service delivery entity, one of the key pieces of work that will need to occur as part of the transition will be the identification of which assets should transfer to the entity. Any such transfer will clearly involve the underground pipe network and above ground treatment assets that can be easily identified as being critical to the provision of three waters services.

However, in many cases councils may have assets that are designated as being used for three waters activities, but which have either a mixed use, or have little to no use in the delivery of three waters services. Such assets may include reserve land used for water catchment, or land upon which treatment plants (current, decommissioned, or earmarked for the future) are sited.

There may be strategic reasons why councils may wish to retain some of these assets even when the three waters activity is transferred. In some cases this may mean that land may need to be formally subdivided into separate titles or redesignated for an alternative use. In addition, councils may need to seek legal advice regarding the future use of land acquired under the Public Works Act or bequeathed.

Civil defence and emergency management

Councils are responsible for coordinating civil defence responses within their districts and communities. Engineers are typically heavily involved in the civil defence and emergency management teams within a council and are highly valued for their knowledge of the networks and potential areas of risk.

If the staff that are responsible for the delivery of three waters services are transferred to a new three waters entity, it will be essential that a level of expertise remains local to each district to maintain emergency response capability. While civil defence operates in a consistent manner nationally, and uses a common response framework, local knowledge of networks is critical in ensuring an efficient and effective response.

Joint training between the three waters entity and councils should also occur to facilitate closer relationships and a more coordinated response. We understand that territorial authorities already undertake joint regional civil defence training which includes regional councils and would anticipate that three waters entities would take part in this.

Council as a water user

In many cases councils can be high users of water in their districts. Councils often use large volumes of water to fill and operate swimming pools, or to irrigate sports fields or public parks. While some councils charge themselves for the consumption of this water (effectively through an internal transfer from a parks budget to a water budget) this charging usually involves no actual transfer of cash out of the council.

When a new water entity is established, councils will have to pay the new three waters entity for any water that they consume. This cost, particularly for the irrigation of fields and reserves, could be significant. Councils may therefore wish to consider other options for the supply of water to their parks and reserves (such as the installation of private bores).

Transition planning

We anticipate that the transition process to the Government proposed option will be through a centrally lead and prescribed process. We would expect that it would require resourcing from the councils and contain workstreams that are likely to include the following:

- Transition management
- Assets & Infrastructure
- Service Delivery
- Communications & Engagement
- Iwi/Māori
- Governance
- ICT
- Finance
- People & capability

There are however a number of actions that it would be useful to undertake in the event that Council (and its regional partners) wishes to “opt in” to the reform programme, or alternatively to “opt out” but move into an Otago-Southland entity that would benefit Council regardless of the Government programme. These include:

- Complete a strategic review of property held by the three waters team to identify property that should remain with the organisation and property that could transfer to a new entity. This may include subdivision of parcels of land.
- A review of long term plans to reprioritise projects both within and outside of the three waters space and consideration of whether any projects should be advanced or delayed to ensure that they get completed by a new entity.
- Developing processes and systems that will be needed to enable effective working relationships with a new water entity.

- Managing communications with staff and ensuring that staff have a clear understanding of the transition process and what it may mean for them.
- Consideration of short and long term resourcing, including a post three waters operating structure, and the resourcing of three waters during the transition to a new entity.
- Preparing an engagement and communications plan to communicate the impact of the change to the community.

Appendix A Sensitivity testing

Our financial modelling relies on a number of different assumptions which may alter the comparative performance of each entity. While we believe that the assumptions used are appropriate, this appendix examines the impact of these assumptions on the debt and household charge profiles for both CDC and the three waters entity.

Asset values and capital delivery

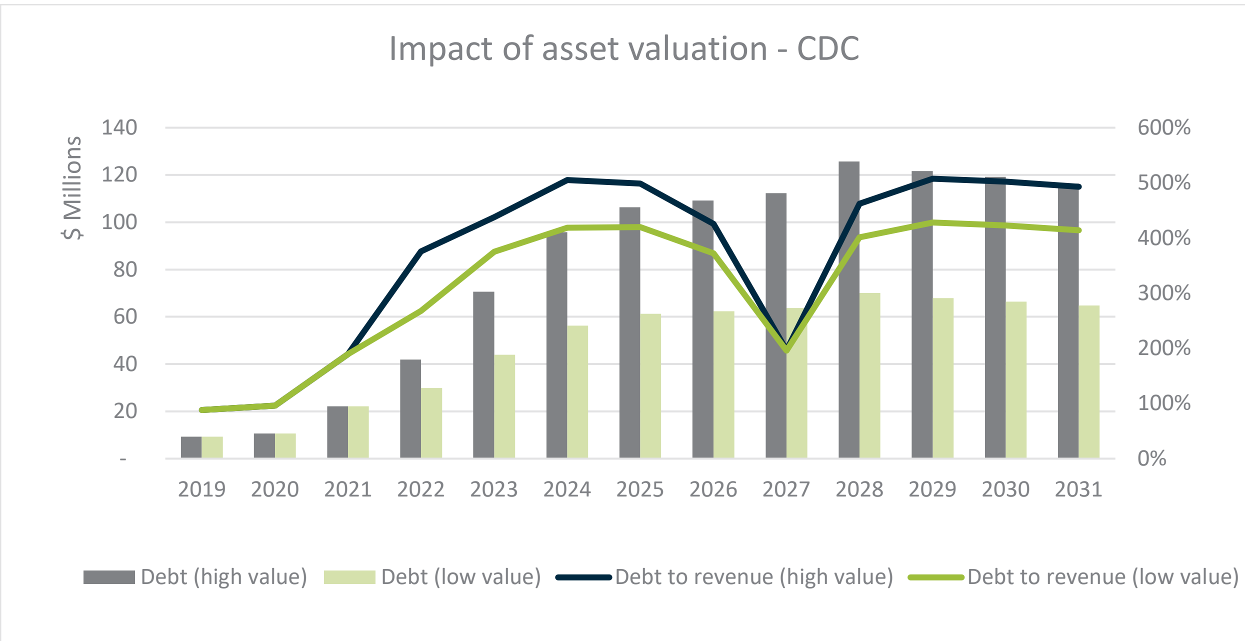
Moderate impact

Our modelling adopts asset values at the mid-point of the valuation scale provided in completed RFIs. Our decision to use the mid-point valuations is based on:

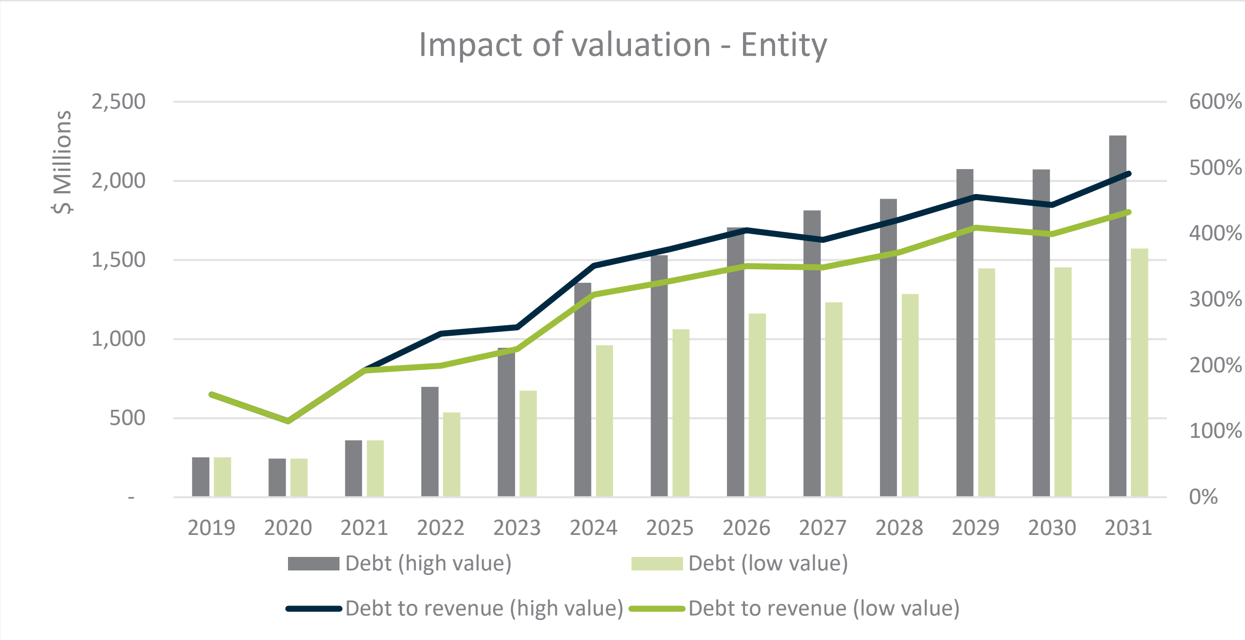
- Comments in the WICS report that New Zealand's assets are typically under-valued by international standards.
- Corroborating evidence based on the difference in Dunedin's unit rates for asset replacement values when compared to unit rates for the same assets elsewhere in Otago-Southland. Dunedin's asset valuation is the most recent in the group, and Dunedin City Council have suggested a high level of confidence in their asset valuations through the RFI process.

The sensitivity analysis compares the outcomes if valuations at the low and high ends of the scale are used. The analysis here can also be used to understand the impact of under-delivery of planned capital works at a council or entity level (the "low valuation scenario").

As shown in the figure below, CDC's forecast three waters debt would fall between $64 million and $116 million, and its three waters debt to revenue ratio would fall between 414% to 493% if its asset valuations are adjusted. Under this scenario debt would still be a significant constraint for CDC at a three waters level but would not be a constraint at a council level.

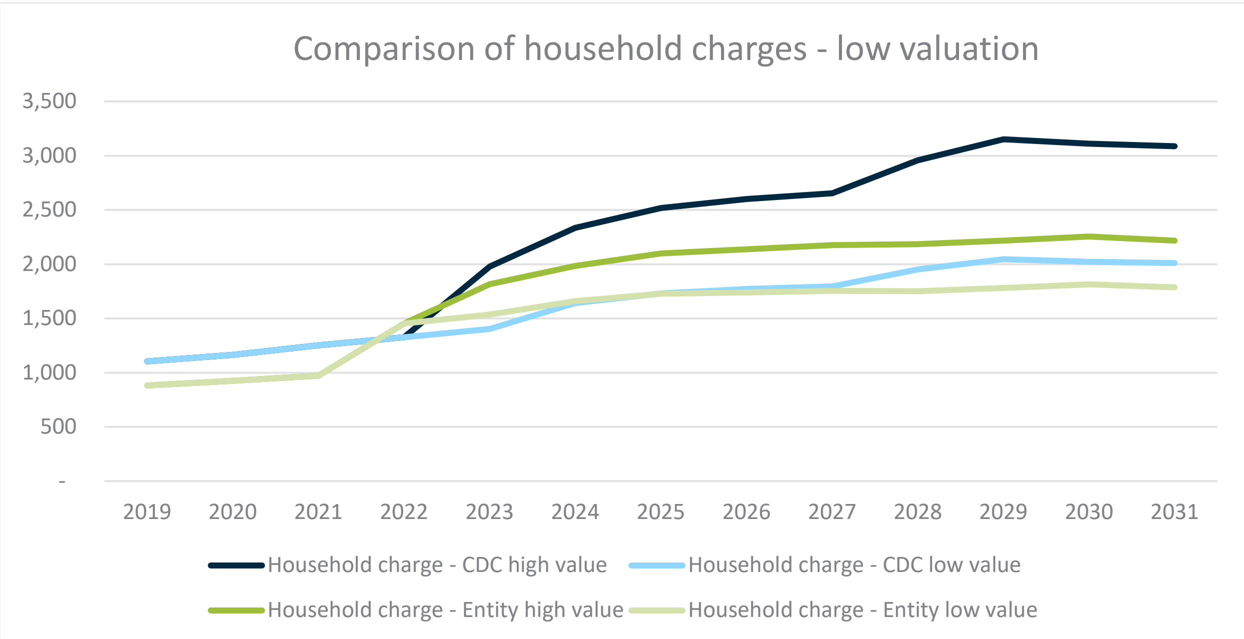


Similarly, a three waters entity's debt would fall between $1.57 billion and $2.3 billion, and its debt to revenue ratio between 491% to 433% if assets across the Otago and Southland councils should be more correctly valued at the low end of the scale. Debt still remains a constraint for a three waters entity under this scenario, with the debt to revenue ratio exceeding even the Moody's debt to revenue requirement of 430% (which would result in a credit downgrade from the current LGFA credit rating).



The difference in valuation used has only a limited impact on whether the three waters entity presents as the most affordable option or not for Clutha. Where a low valuation is adopted, the three waters entity remains more affordable for CDC ratepayers than CDC continuing to provide three waters services itself.

The difference in valuation also has a much smaller impact (in both real dollars and percentage terms) on the average household rates at the entity level, showing that uncertainty over future costs has a smaller impact on the outcome under an aggregated delivery model than it does when assets are retained by Council.



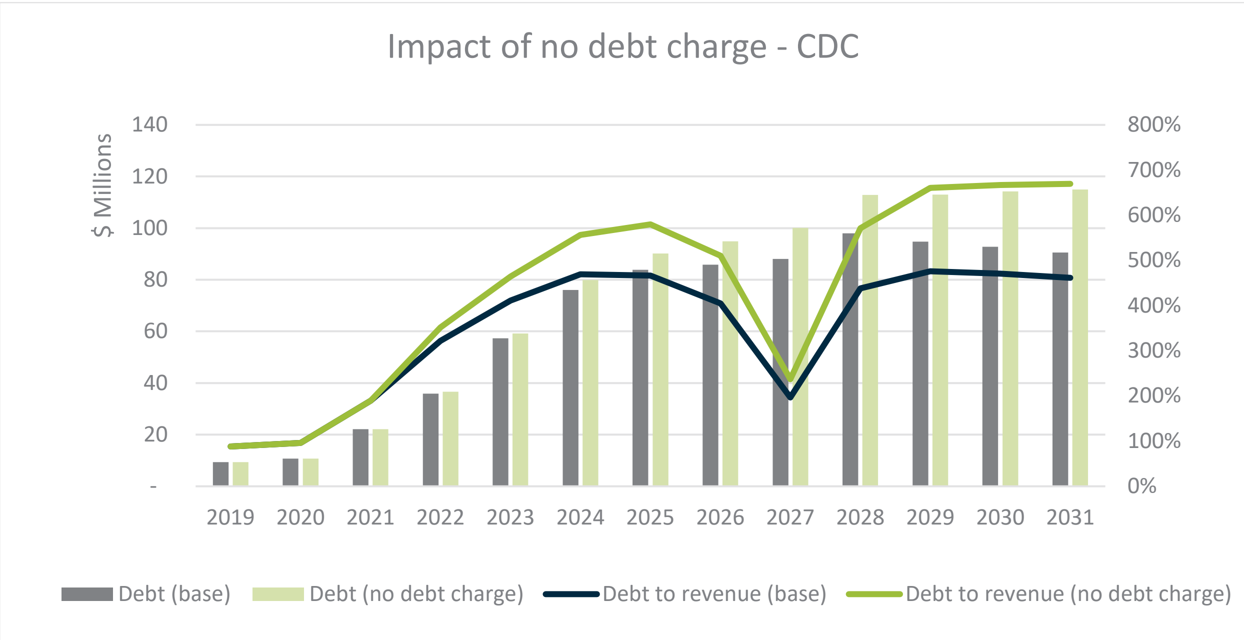
Debt repayment

Minor impact

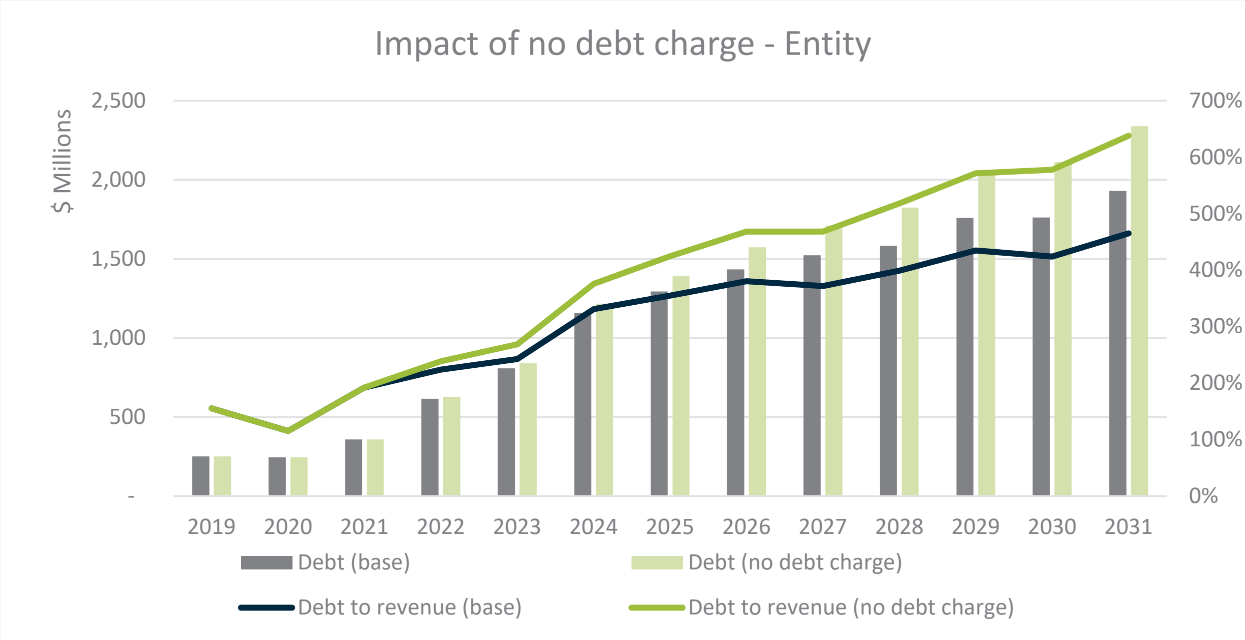
Our modelling includes an annual recovery from customers for the repayment of debt over a 30 year term. This is unusual in local government, particularly when depreciation is fully funded, however it has been adopted to try and ensure that a three waters entity (or indeed a council) continues to maintain a certain level of borrowing capacity.

This scenario tests the impacts on debt and household charges if the debt repayment charge is removed.

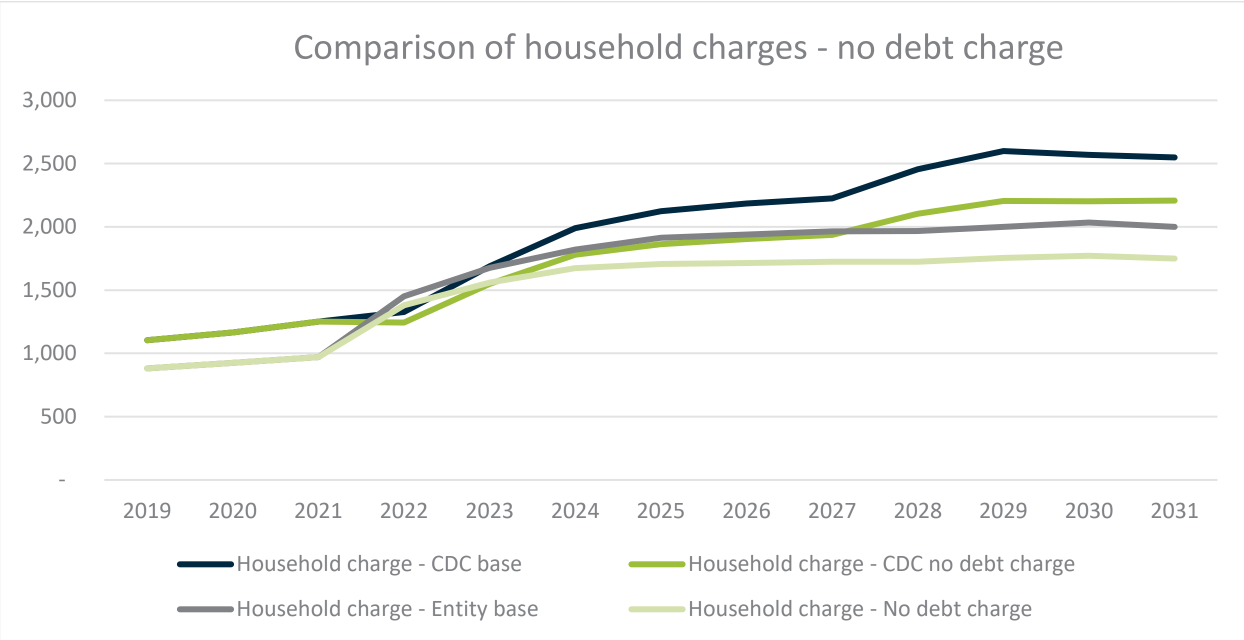
As shown in the figure below, CDC's forecast three waters debt would increase from $90 million to $114 million, and its three waters debt to revenue ratio would rise from 461% to 669% if it did not introduce a debt repayment charge. This would create additional pressure on investment.



Similarly, a three waters entity's debt would increase from $1.9 billion to $2.3 billion, and its debt to revenue ratio from 465% to 638%. While our base case shows debt being a major constraint on the ability for a three waters entity to invest in infrastructure, without the introduction of a debt repayment charge of some description these problems would be further exaggerated.



The introduction of a debt repayment charge does have a significant impact on household three water charges. The introduction of such a charge will result in charges that are 15% higher for CDC, or 14% higher in the three waters entity than they would otherwise be. Importantly though, over time this difference decreases as the debt repayment charge results in a reduction in interest costs.



In addition, it is worth noting that a three waters entity that introduced such a charge would have lower average household charges in 2031 than CDC would if it retained three waters assets and did not introduce such a charge.

Appendix B Methodology

Review of RFIs and asset registers

As a consequence of signing the Government's Memorandum of Understanding in July 2020, all councils in the Otago and Southland regions were required to return a request for information regarding the delivery of three waters services. The completed responses were provided to the Government, and Morrison Low at the end of January 2021.

Morrison Low and WSP reviewed the content of the RFI responses to identify challenges and opportunities for service delivery in the regions.

The content of the RFIs was predominantly investment and financially driven, with additional information also provided about compliance to various regulatory standards and asset performance. Most information was quantitative in nature, with only limited qualitative data included.

Councils were asked to apply confidence grades to most of the information contained within their RFIs. These confidence grades ranged from A1 being extremely reliable, through to D5 which is effectively a guess. The level of confidence that councils expressed for different pieces of information varied widely between councils, and it was also clear that each council adopted a different approach to applying a confidence grade to information (this was an exercise in subjective judgement). Where we have relied on information from RFIs in our analysis, we have made no adjustments to reflect varying levels of confidence in the underlying data.

Asset registers were reviewed, standardised and cleansed to reduce errors. Data from asset registers was analysed and used on various reports and queries of the combined asset register database.

On site interviews

Morrison Low conducted on site interviews at each council in the Otago and Southland regions during the course of our three waters review. On site interviews were conducted at CDC on 20 April 2021. During the onsite visits and subsequent video-conferences, we interviewed:

- Steve Hill (Chief Executive Officer)
- John Scott (General Manager Corporate Services)
- Sharon Jenkinson (Finance Manager)
- Chris Till (Human Resources Manager)
- Jules Witt (Group Manager Service Delivery)
- Ben Gold (Infrastructure Strategy Manager)
- Gerry Essenberg (Capital Delivery Manager)
- Thyagu Gopalan (Water and Waste Operations Manager)

During the onsite interviews we sought to understand what the qualitative impacts of three waters reform would be on Council. This included understanding where three waters roles provided services to, or received services from, other parts of the organisation, and what the major challenges and opportunities are for the district. We also sought to identify the processes and interaction points that may need to be replicated in the event that three waters services are provided by an aggregated delivery model.

Financial modelling

Our modelling has used the mid-point between the “low” and “high” estimates for asset replacement cost that were included in each council’s RFI responses. This is consistent with commentary from the Water Industry Commission of Scotland, who in their report for the New Zealand Government (the WICS report)[15], indicated that they believed assets in New Zealand to be significantly under-valued.

Our financial model predicts the potential future household charge based on the total funding requirements under our standard modelling assumptions, and assumes that:

- The proportion of revenue collected from households, commercial businesses, fees and charges, or other revenue remains the same throughout the modelling period (i.e. if 75% of total water revenue is collected from households in 2019, then it is assumed that 75% of water revenue will be collected from households in 2031 as well).
- Any new connections to the water network will also connect to the stormwater and wastewater networks (or at least pay the same charge as a connected property).

Assumptions

- Planned capital investment has been determined by reference to the investment plans set out within CDC’s completed RFI. We have used the “constrained” investment plans, and where appropriate have adjusted these to reflect:
  - Potential under-valuation of assets and unit prices for asset replacement (as outlined below).
  - Additional renewals investment as outlined below.
  - Additional costs for the upgrade of wastewater treatment plants to meet future discharge standards.
- Asset values - we have applied the mid-point replacement costs for asset values from each council’s completed RFI. This reflects an uplift in values compared to those used in annual reports or asset management plans. This uplift has also been applied to the estimated cost of future capital expenditure, and depreciation charges.
- Savings – operating and capital savings derived by the entity are based on the WICS report which estimates potential capital expenditure efficiencies of 45% after 30 years, and between 10 – 40% operating efficiencies in 10 years (we use 20% over 10 years). This has been turned into annualised capital and operating efficiencies of 1.25% and 1.84% respectively.
- Compliance costs – we have included a 16% uplift in operating expenditure for the delivery of drinking water based on our previous experience and analysis of post-havelock north incident costs within Hawke’s Bay.
- Renewals – we have assumed that all councils will have a renewals spend that is the greater of:
  - The estimated renewals spend from completed RFIs.
  - Our estimated required renewals based on remaining useful life of pipes.
  - 80% of annual depreciation expense.

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[15] Water Industry Commission of Scotland, *Economic analysis of water services aggregation: Report prepared for the Department of Internal Affairs*. Retrieved from https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/Economic-analysis-of-water-services-aggregation-Stage-One-Report.pdf on 6 April 2021

This helps provide a like for like comparison across options and between Councils, and also as we expect that an economic regulator would bring greater focus to areas such as depreciation and renewal expenditure.

- Depreciation – depreciation is calculated based on the average depreciation rate used across the councils of the Otago and Southland regions for each water type. Depreciation is fully funded in our model in order to provide a like for like comparison across options and between Councils, and also as we expect that an economic regulator would bring greater focus to areas such as depreciation and renewal expenditure.
- Timing – we have assumed that a new entity would take over operations from 1 July 2024. We have assumed that compliance upgrades will not commence before the earlier of:
  - 2024
  - Two years prior to the expiration of the resource consent for the underlying plant.
  - 2031
- Interest – we have assumed an interest rate of 3% in our modelling.
- Debt repayment – we have assumed that an additional charge will be levied for the repayment of debt, as the entities (or indeed councils) would otherwise reach debt limits rapidly. We have assumed that this charge is based on a 30 year repayment period for debt.
- Stranded costs have been estimated using Council's disclosed overheads charges to three waters activities and are based on our high-level estimates of costs which may be released if three waters activities are removed from councils. These estimates are based on discussions with councils and do not include detailed financial analysis of overhead allocations.

Ngāi Tahu Takiwā

In comparing the future household charges for the Ngāi Tahu Takiwā against the projections for Otago and Southland it should be noted that we have not undertaken detailed modelling of the costs and benefits of either Ngāi Tahu Takiwā model:

- The projections for Ngāi Tahu Takiwā do not include additional costs for compliance with increased enforcement of drinking water standards – in Otago Southland we allowed for 16% of existing drinking water operating costs as an additional cost.
- The projections for Ngāi Tahu Takiwā also do not include additional costs for the repayment of debt over time (without which a three waters entity was constrained in its ability to invest in Otago and Southland) – household charges in Otago Southland would be $1,750 if this debt charge was not imposed.
- The projections for Ngāi Tahu Takiwā do not include organisational costs or efficiencies from three waters aggregation. In Otago Southland, the net impact of this was a 6% reduction in operating costs by 2031 when compared to simple aggregation and we would expect the savings to be greater for a Ngāi Tahu Takiwā model

Our estimate is that the net impact of the above is that a Ngāi Tahu Takiwā model will have a lower average household charge than an Otago Southland entity by approximately the amount of savings that the entity could generate due to efficiencies.

Appendix C Assumptions regarding entity design

This report has adopted the following assumptions regarding entity design. These are based on communications from central government, along with the principles and objectives for reform from the Otago and Southland councils. In addition to outlining what the assumption is, we have also described below the impact on our modelling of that assumption being wrong, and the source of the assumption.

In some cases, we would anticipate that if the proposed entity does not address the key assumption, or the underlying problem that our assumption is seeking to address, then it would not be an acceptable model for the councils.

Issue	Assumption	Source for assumption
Ownership	The entities will be publicly owned. Any ownership in the entities by councils will be unlikely to have any beneficial rights associated with it.	Government information
Governance	Entities will be governed by professional, competency based boards. Mechanisms will be put in place to ensure that Council and mana whenua have a role in governance.	Government information
Assets	The entity will be asset owning, and three waters infrastructure currently owned by councils will be transferred to the new entity.	Government information
Debt	All existing three waters related debt will be transferred to the new entities.	Morrison Low assumption based on asset transfer. Would undermine proposals if this was left out.
Stormwater	The provision of stormwater services, and associated assets (other than roads or regional council flood protection assets) will be transferred to the new entity.	Latest advice from Government, also a clear desirable outcome based on conversations with councils
Revenue and charging	A single charging mechanism/approach to be applied to all customers of the water entities (e.g. a single rate).	Implied in latest Government communications “Cost sharing across communities”

Issue	Assumption	Source for assumption
Economic regulation	An economic regulator will be established (or set up within an existing agency) to regulate the water sector and seek operating and capital investment efficiencies. Based on similar organisations in other jurisdictions and industries in NZ it will not only regulate prices, but also investment and investment planning	Implied in latest Government guidance "Economic regulation"
Investment planning	Legislative mechanisms to require entities to work with councils. Required to invest in infrastructure that supports spatial plan. Entity will be empowered to make its own decisions regarding investment for compliance or renewal of infrastructure but may have to adopt LTP investment plans (particularly for growth) on establishment.	Morrison Low assumption
Investment returns (dividends, interest, or overhead reimbursement)	We have assumed that there will be no dividends to owners, or any other return to council owners (whether to compensate for stranded overheads or otherwise).	Morrison Low assumption
Borrowing	We have assumed that the entity would not be able to obtain borrowing at a rate that is any more favourable than the current rates afforded to councils that are members of the LGFA	Morrison Low assumption (note Government correspondence assumes a more favourable rate is available).
Taxation	We have assumed that the three water entities would have the same tax status as local authorities (i.e. they would be exempt from income tax)	