

Upper Hutt City Council 2021-31 Long Term Plan supporting paper for three waters investment options

(updated short story 16/11/2020)



Our water, our future.

Priorities for three waters investment



Looking after existing infrastructure

The top priority is looking after existing assets, it is foundational to a sound risk management approach. It reduces the risk of surprises that usually cost more and have greater negative effects.

Growth

Growth is inevitable and must be managed in a way that ensures it doesn't add to existing challenges for the three waters network,

Reducing water consumption

Other priorities are system wide issues that need addressing over the next 30 years:

Improving environmental water quality

- the region is near capacity for water supply
- communities expect better environmental water quality than we have now
- carbon emissions are a key contributor to climate change.

Reducing carbon emissions

Individual activities associated with localised risks e.g. flooding & resilience still to be progressed.

After discussion with council we have prepared a “**Reduced**” investment option that is more affordable for UHCC. This presentation summarises the numbers and increased risks associated with this funding option.

Opex for looking after existing infrastructure



Modelling shows an uplift of 33% is needed by year three. Given the current economic environment, Wellington Water Limited was requested by council officers to provide a reduced option of 5%, 5%, 5% for looking after existing infrastructure and signal corresponding stimulus funding.

Stimulus funding is only applies to the 21/22 year and not all activities funded through the uplift have corresponding stimulus funding linkages.

It is important that UHCC continue to invest in the Proposed Natural Resources consultation, workshops and work streams. This is required in years 1 -3.

- A 3% funding increase has been proposed for year 1, this is only for the Natural Resources Plan work which is not covered by stimulus funding.
- A 5% funding increase has been proposed for years 2 and 3 and an additional increase is also required in year 4 to achieve the recommended uplift of 20%.

Opex for looking after existing infrastructure	Linear increase of 20% on current funding	Reduced Option
Total 3 year Opex spend	\$18.4M	\$17.6M
Commentary	Gradually builds knowledge and capability.	An overall funding increase of 14% on the 2020/21 year for the first 3 years has been modelled. Slower implementation of required planned maintenance and condition assessment programme increasing chances of asset failure.

Notes:

- 20/21 opex \$5.67M
- Figures above excludes management fee
- Excludes the Bulk Water Levy. 20/21 level is \$3.73M per annum, this is signalled by GWRC to increase for the 2021-31 LTP.
- Looking after existing infrastructure only, Opex spend for regional priority and localised areas additional and detailed on Slide 9

- Opex increase in Year 1 required to participate in the proposed Natural Resources Plan process.
- Drainage levy stays consistent at current annual plan levels. However the Opex budgets for HCC has increased and UHCC will see flow on affects from this. Actual numbers will need to be provided by HCC.

Looking after existing infrastructure

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Capex for looking after existing infrastructure

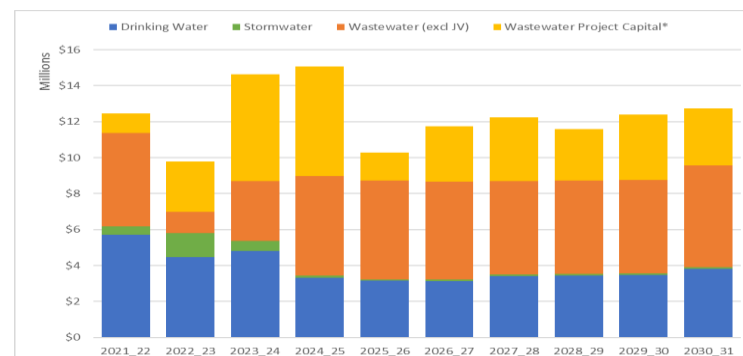


Provide for renewals at a pace that meets the life cycle of the asset and deterioration over time to reduce the requirement for higher cost reactive renewals and prevent compounding operational costs. Early focus on condition assessments to inform increased evidence-based renewals planning.

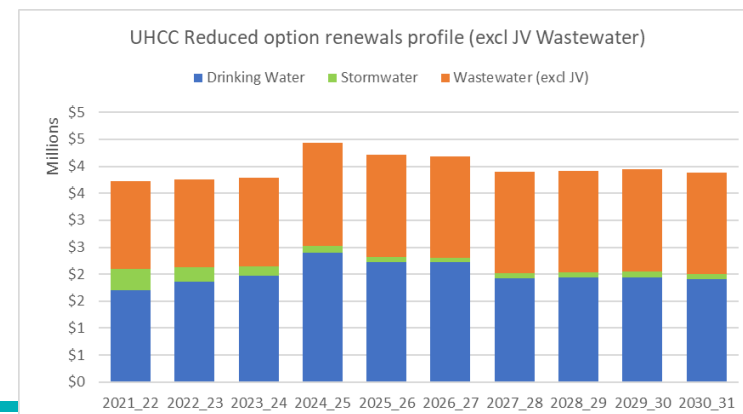
The level of investment for Low and Reduced options is the same however timing is smoothed in the Reduced option

Capex	Lower range / Reduced option (\$ M)	Mid range \$(M)
10 year TOTAL	88	137
Drinking water	20	39
Stormwater	2	3
Wastewater*	18	47
Wastewater JV	48	48
Inherent impacts and risks	<ul style="list-style-type: none"> • Backlog will increase further • Compounding decrease in service levels • Unplanned service disruption grows • Potential for high criticality asset failure increases • Increased operational response needed 	<ul style="list-style-type: none"> • Network reliability improves over 30 years • Number of service interruptions stabilises • Potential high criticality asset failure still exists but closes over 30 years

UHCC 10 year higher range renewals profile



UHCC Reduced option renewals profile (excl JV Wastewater)



Looking after existing infrastructure

For project budget estimates, Wellington Water have used a 95 percentile figure. Costs are based on 2020 NZD and may vary as more detailed planning is completed

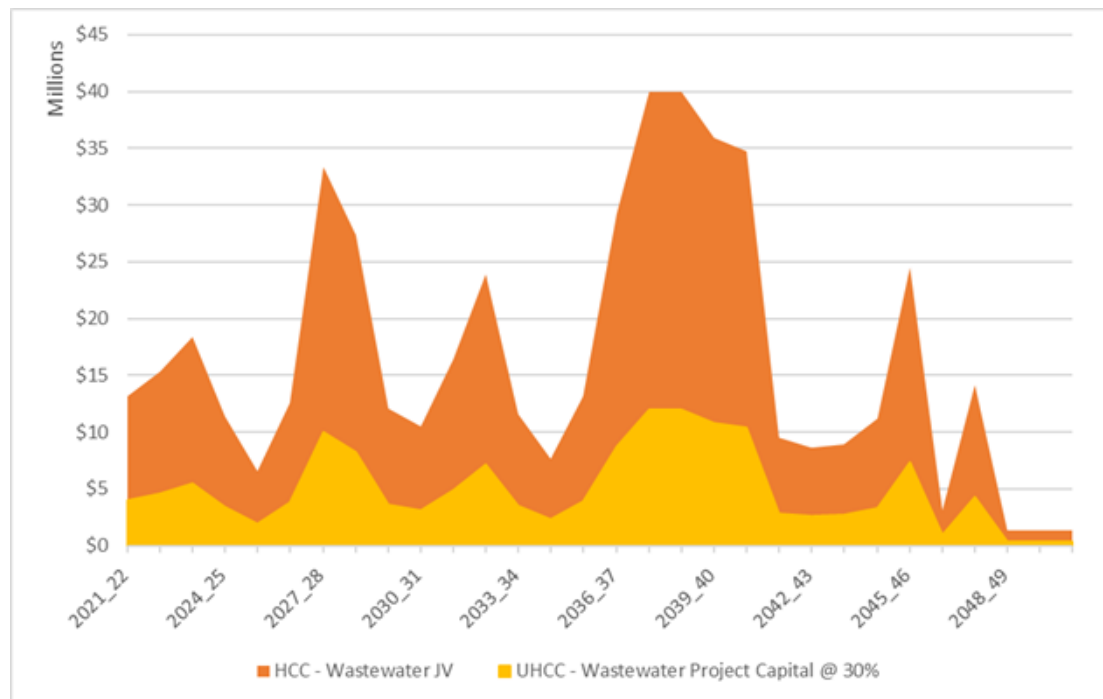
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Wastewater joint venture network



Upper Hutt City Council owns approximately 30% of the Seaview Wastewater Treatment Plant and infrastructure, HCC owns the balance.

UHCC / HCC share capex and opex charges. **HCC indicative project capital spend including JV wastewater assets** is shown and has been provided to HCC.



Notes on spend profile

- 2021-22 Barber Grover
- 2022-25 Seaview Wastewater storage
- 2027-29 Seaview Dryer
- 2032-33 Petone collecting sewer renewal
- 2035-42 Pencarrow pipeline & outfall renewal

Looking after existing infrastructure

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Growth is coming; but it cannot be at the expense of the environment



An initial growth study has recently been undertaken. **Further growth planning needs to continue over the next 3 years to better understand UHCC needs to be incorporated in the next LTP.**

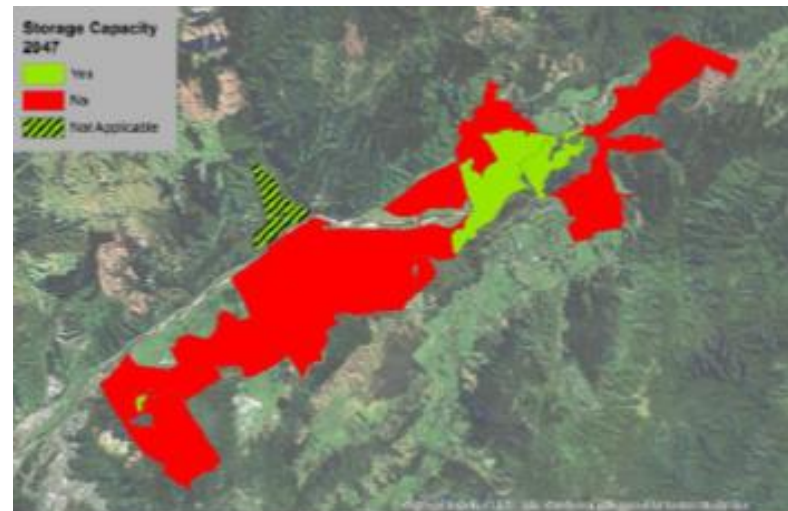
UHCC policies can help reduce impacts of growth.

Under the “Reduced” funding scenario, there is no allowance in the next 10 years for identified growth areas of Kingsley Heights and Pinehaven. Investment in new water supply storage and upgrades to the local wastewater network are deferred pending further studies. The timing of development however may trigger these needs earlier than is funded. Existing Level of Service gaps in these areas will remain.

Additional wastewater storage at Silverstream & upgrading the WWTP are included in the WW JV Network Capital from Year 11.

Funding	2018-28 LTP	LTP 2021-31	Reduced 2021-31
*Capex	\$0.5m	\$32m	\$2.4m
Opex	N/A	\$3m	\$1.3m

- Minimal spend based on the initial growth planning done to date. Further growth planning needs to continue over next 3 years. These figures exclude projects funded via the WW JV Network Charge.



Population growth is forecast at 20% over the next 30 years. Networks at or approaching capacity in 2047.

Growth

Note: Opex and capex figures in this slide are additional to the numbers shown earlier in the presentation.

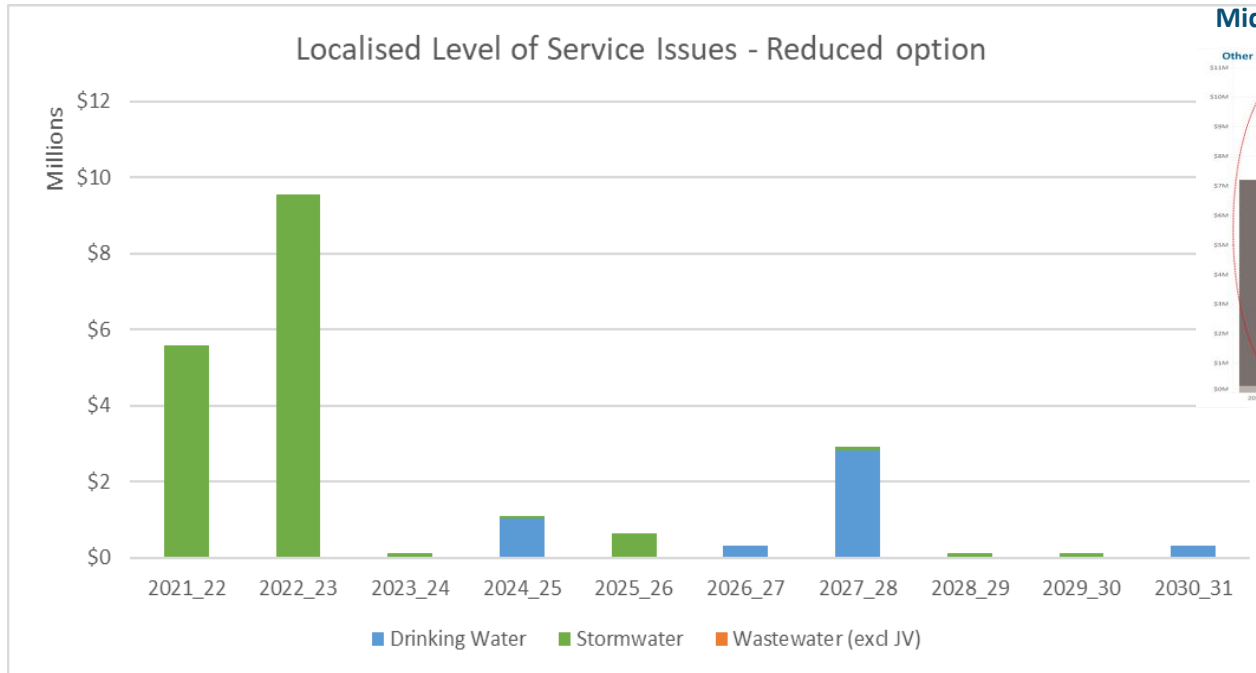
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UHCC to choose spend in regional priority areas; but they should not be ignored

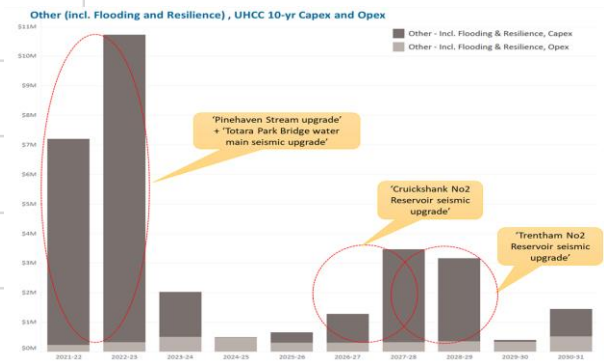


	Reducing Water Consumption	Improving environmental water quality	Reducing carbon emissions
What and Why?	<p>We are close to using our full allocation of all water takes in the height of summer (increasing reliability risk).</p> <p>Reducing the amount of water we consume will enhance environmental outcomes & defer capital spend in new storage.</p>	<p>Removing e-coli from our streams, rivers & harbours. NPSFW targets swimmable water bodies by 2040</p> <p>Wastewater network leaks & overflows pollute our environment. Communities are dissatisfied with expectations increasing.</p>	<p>NZ is aiming to be net carbon zero by 2050, UHCC has set targets for 2035.</p> <p>Water services are a significant emitter of carbon. While baselines are being set we are yet to make any meaningful reduction in carbon.</p>
Risks	<p>Top priority for the next 3 years if the region is to defer investment in a new water source.</p> <p>Bulk water levy for UHCC could increase further on a relative usage basis if the demand reduction activities of other cities are not matched.</p>	<p>This is a long term game, but some targeted investment is proposed while we build our understanding of this complex issue.</p> <p>The targets and limits being agreed through the Whaitua process as well as the NPSFW 2040 target for swimmable water will not be met.</p>	<p>Over the next 3 years we need to better understand which activities will have the biggest impact.</p> <p>The net carbon zero target by 2050 will not be met.</p>

Specific localised spend; firefighting, flooding & resilience



Mid-Option view



Risks of deferrals:

- The Pinehaven Stream Upgrade may be further delayed leading to additional cost increases.
- Both water supply feeds to Totara Park remain vulnerable with likely loss of supply to Totara Park zone in a seismic event.
- Key reservoirs remain vulnerable to seismic impact, potential loss of storage and supply to multiple suburbs in a seismic event.
- Stormwater capacity remains limited and may deteriorate further. Inability to protect properties and residents from flooding events in localised areas.

For project budget estimates, Wellington Water have used a 95 percentile figure. Costs are based on 2020 NZD and may vary as more detailed planning is completed

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Other priority areas; low and mid range spend options, UHCC to chose



Note: Figures in this slide are additional to the numbers shown earlier in the presentation for looking after existing infrastructure.

	\$M over 10 yrs	Reducing Water Consumption	Improving environmental water quality	Reducing carbon emissions	Localised projects
Capex	Low	\$2.6M	\$0M	\$0M*	\$23.5M
	Mid	\$13.4M	\$9.3M	\$0M*	\$27.1M
	Reduced	\$2.6M	\$0M	\$0M	\$20.7M
Opex	Low	\$21.4M	\$3.0M	\$0M	\$0.8M
	Mid	\$21.4M	\$11.0M	\$0.4M	\$3.7M
	Reduced	\$0M	\$1.0M	\$0M	\$0.2M
	What activities are not funded under the Reduced spend option?	Universal water meters <i>Active leak control</i> <i>Roving team private leakage</i> <i>Benchmarking extraordinary use</i> <i>Commercial meter bylaws</i>	Green infrastructure development Wastewater modelling updates <i>Roving team inflow and infiltration</i> <i>Planned prevention of network blockages</i>	* Nil for capex noting Seaview Dryer Replacement included under JV renewals Carbon emissions assessments <i>Modelling on effects of climate change</i> <i>Support on community engagement</i>	Pinehaven No2 reservoir seismic strengthening Firefighting water supply upgrades Rain gauge installation for Maymorn Valley Stormwater model build Further deferral of seismic strengthening and flood reduction projects <i>Structural assessments of network/stations</i> <i>Flood reduction modelling and mitigation activities.</i>

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Reduced option; total spend



The number 1 priority is investment in looking after existing infrastructure. UHCC to choose appropriate level of spend for regional and localised priorities.

Fund an additional \$1.3M OPEX over 3 years, supporting a step change increase in operational costs to look after existing infrastructure.

An additional \$300k over 3 years in the management fee for system improvements and additional capability.

Fund \$88m CAPEX over 10 years for renewals to look after existing infrastructure.

Fund growth investment of \$2.4m CAPEX and \$1.3m OPEX. Council complements this with enabling policies.

Fund \$2.6m CAPEX and \$0m OPEX over 10 years in activities that Reduce Water Consumption.

Fund \$0m OPEX over 10 years to Reduce Carbon Emissions, noting that the Seaview Dryer renewal will also contribute \$13m CAPEX (30%) towards Reducing Carbon Emissions.

Fund \$0m CAPEX and \$1m OPEX over 10 years to Improving Environmental Water Quality.

Fund up to \$20.7m CAPEX and \$0.2m OPEX over 10 years on Localised Projects.

Reduced option; Indicative outcomes for Investment



		Reduce service interruptions	Lower risk of critical asset failure	Increase customer satisfaction	Defer future investment	Reduce water consumption	Improve environmental water quality	Reduce CO2 emissions
	Fund \$1.6m OPEX (over 3 years & incl Mgt Fee)	Part	Part	Part	Part	Part	N	N
	Fund \$88m CAPEX Renewal	N	N	N	N	N	Part	N
	Fund Growth \$2.4m CAPEX and \$1.3m OPEX	N	N	N		N	N	N
	Fund \$2.6m CAPEX and \$0m OPEX				N	Part		
	Fund \$0M CAPEX and \$0m OPEX							Part (through other projects)
	Fund \$0m CAPEX and \$1m OPEX						N	
	Fund up to \$20.7m CAPEX and \$0.2m OPEX		Part					