



# Local Water Done Well Modelling

Scenarios for Water CCOs in Manawatū - Whanganui

February 2025



#### Document status

Job #	Version	Written	Reviewed	Approved	Report Date
294101	001	S. Cross, C. Murray, and J. Williams-Shigeeda	D.Bonifant	D.Bonifant	19 February 25
294101	FINAL	S. Cross, C. Murray, and J. Williams-Shigeeda	D.Bonifant	D.Bonifant	25 February 25

© Morrison Low

Except for all client data and factual information contained herein, this document is the copyright of Morrison Low. All or any part of it may only be used, copied or reproduced for the purpose for which it was originally intended, except where the prior permission to do otherwise has been sought from and granted by Morrison Low. Prospective users are invited to make enquiries of Morrison Low concerning using all or part of this copyright document for purposes other than that for which it was intended.

## Contents

Introduction	1
Approach	1
The Manawatū – Whanganui scenarios for PNCC	1
Appendix 1: Household costs (inflated and uninflated)	4
Household costs inflated (excluding GST)	4
Household costs uninflated (excluding GST)	13
Appendix 2: Modelling assumptions	22
Standardisation applied to all councils	22
Additional assumptions applied to data	26
CCO variant assumptions	26
Operating and capital efficiencies	26
Appendix 3: Transition costs and expected benefits	29

## Introduction

In late 2024 Morrison Low provided support and advice to Palmerston North City and Manawatū, Horowhenua and Kāpiti Coast district councils (referred to as the “Group of Four”) relating to Local Water Done Well. Following on from this, Palmerston North City Council (PNCC) asked Morrison Low to model a range of scenarios to further consider the options.

This report summarises the information relevant to PNCC in combination with 32 scenarios of the seven councils that make up the Manawatū – Whanganui CCO in variations of 1 to 7 councils.

Further alternative scenarios requested by PNCC will be provided in subsequent report.

This report sets out the results in the following structure:

- Data table showing household costs for the 32 scenarios in **Appendix One**.
- Council and CCO financial modelling assumptions are outlined in **Appendix Two**.
- Transition costs and expected benefits for 32 different scenarios of the Manawatū – Whanganui councils in combination with PNCC in **Appendix Three**.

## Approach

Morrison Low has modelled this group using the same assumptions and approach as used in advice relating to the four council CCO and the Manawatū – Whanganui CCO as a whole.

As part of that process Morrison Low engaged with relevant councils to check key inputs to the modelling e.g., capital expenditure, forecasts, debt positions.

All data is modelled over a 30-year period. This timeframe is used as there is often investment beyond the Long Term Plan (LTP) period that should be considered.

Full assumptions are outlined in Appendix One.

## The Manawatū - Whanganui scenarios for PNCC

Manawatū - Whanganui CCO includes the following seven councils: Palmerston North City (PNCC) and Horowhenua (HDC), Manawatū (MDC), Whanganui (WDC), Rangitikei, Ruapehu and Tararua (TDC) district councils.

In Table 1 below, the 32 combinations of the seven councils modelled are shown.

Operationally certain combinations of the councils to form a water CCO are more efficient than others and are more efficient at delivering capital. This is based on population, proximity and also accounts for population density.

**Table 1: Scenarios for PNCC and the Manawatu - Whanganui councils**

<b>CCO variants</b>	<b>Grouping scenarios</b>
<b>Seven councils</b>	PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC, MDC and TDC
<b>Six councils</b>	PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC and MDC
<b>Five councils</b>	PNCC, WDC, Ruapehu DC, Rangitikei DC and MDC
	PNCC, HDC, Ruapehu DC, Rangitikei DC and MDC
	PNCC, HDC, WDC, Rangitikei DC and MDC
	PNCC, HDC, WDC, Ruapehu DC and MDC
	PNCC, HDC, WDC, Ruapehu DC and Rangitikei DC
<b>Four councils</b>	PNCC, Ruapehu DC, Rangitikei DC and MDC
	PNCC, WDC, Rangitikei DC and MDC
	PNCC, WDC, Ruapehu DC and MDC
	PNCC, WDC, Ruapehu DC and Rangitikei DC
	PNCC, HDC, Rangitikei DC and MDC
	PNCC, HDC, Ruapehu DC and MDC
	PNCC, HDC, WDC and MDC
	PNCC, HDC, WDC and Rangitikei DC
	PNCC, HDC, WDC and Ruapehu DC
<b>Three councils</b>	PNCC, Rangitikei DC and MDC
	PNCC, Ruapehu DC and MDC
	PNCC, Ruapehu DC and Rangitikei DC
	PNCC, WDC, and MDC
	PNCC, WDC, and Ruapehu DC
	PNCC, WDC, Rangitikei DC
	PNCC, HDC, and MDC
	PNCC, HDC, and Ruapehu DC
	PNCC, HDC, Rangitikei DC
	PNCC, HDC, and WDC

CCO variants	Grouping scenarios
<b>Two councils</b>	PNCC and MDC
	PNCC and Ruapehu DC
	PNCC and Rangitikei DC
	PNCC and WDC
	PNCC and HDC
<b>One council</b>	PNCC

## Appendix 1: Household costs (inflated and uninflated)

### Household costs inflated (excluding GST)

Years 2024 - 2034	Metric	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
<b>The Seven CCO</b>											
Manawatu-Whanganui	HH Charges	n/a	n/a	n/a	1,669	1,852	1,966	2,085	2,354	2,414	2,482
<b>Six Council CCO</b>											
PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,635	1,814	1,929	2,052	2,323	2,387	2,457
<b>Five Council CCO</b>											
PNCC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,542	1,715	1,836	1,974	2,256	2,338	2,419
PNCC, HDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,707	1,915	2,065	2,227	2,633	2,731	2,836
PNCC, HDC, WDC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,670	1,819	1,918	2,068	2,391	2,462	2,542
PNCC, HDC, WDC, Ruapehu DC and MDC	HH Charges	n/a	n/a	n/a	1,640	1,821	1,937	2,056	2,330	2,406	2,484
PNCC, HDC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,640	1,827	1,948	2,088	2,373	2,452	2,537
<b>Four Council CCO</b>											
The Four CCO Base	HH Charges	n/a	n/a	n/a	1,779	1,963	1,996	2,173	2,520	2,584	2,656
PNCC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,622	1,914	2,089	2,268	2,621	2,748	2,869
PNCC, WDC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,534	1,713	1,839	1,987	2,283	2,372	2,461

Years 2024 - 2034	Metric	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
PNCC, WDC, Ruapehu DC and MDC	HH Charges	n/a	n/a	n/a	1,498	1,677	1,801	1,933	2,217	2,311	2,397
PNCC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,492	1,677	1,806	1,961	2,328	2,444	2,537
PNCC, HDC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,699	1,916	2,072	2,247	2,675	2,780	2,897
PNCC, HDC, Ruapehu DC and MDC	HH Charges	n/a	n/a	n/a	1,658	1,877	2,031	2,187	2,598	2,712	2,823
PNCC, HDC, WDC and MDC	HH Charges	n/a	n/a	n/a	1,625	1,813	1,931	2,059	2,422	2,501	2,583
PNCC, HDC, WDC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,617	1,812	1,937	2,086	2,387	2,550	2,643
PNCC, HDC, WDC and Ruapehu DC	HH Charges	n/a	n/a	n/a	1,583	1,774	1,895	2,029	2,317	2,409	2,500
<b>Three Council CCO</b>											
PNCC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,537	1,758	1,933	2,143	2,729	2,871	3,010
PNCC, Ruapehu DC and MDC	HH Charges	n/a	n/a	n/a	1,485	1,706	1,878	2,064	2,607	2,758	2,891
PNCC, Ruapehu DC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,551	1,813	1,930	2,299	2,886	3,036	3,216
PNCC, WDC and MDC	HH Charges	n/a	n/a	n/a	1,506	1,691	1,814	1,954	2,250	2,348	2,438
PNCC, WDC and Ruapehu DC	HH Charges	n/a	n/a	n/a	1,431	1,623	1,752	1,900	2,268	2,397	2,437
PNCC, WDC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,474	1,665	1,796	1,963	2,348	2,470	2,552
PNCC, HDC and MDC	HH Charges	n/a	n/a	n/a	1,624	1,938	2,002	2,229	2,595	2,735	2,830
PNCC, HDC and Ruapehu DC	HH Charges	n/a	n/a	n/a	1,819	2,006	2,184	2,362	2,645	2,816	2,935
PNCC, HDC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,654	2,065	2,247	2,449	2,856	2,994	3,141
PNCC, HDC and WDC	HH Charges	n/a	n/a	n/a	1,592	1,792	1,914	2,055	2,353	2,448	2,543
<b>Two Council CCO</b>											
PNCC and MDC		n/a	n/a	n/a	1,457	1,710	1,963	2,229	2,592	2,774	2,892





Years 2024 - 2034	Metric	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
PNCC and Ruapehu DC	HH Charges	n/a	n/a	n/a	1,551	1,763	1,971	2,191	2,814	3,059	3,135
PNCC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,549	1,817	2,100	2,437	2,923	3,179	3,357
PNCC and WDC	HH Charges	n/a	n/a	n/a	1,394	1,625	1,741	1,970	2,285	2,442	2,528
PNCC and HDC	HH Charges	n/a	n/a	n/a	1,608	1,921	2,044	2,350	2,758	2,934	3,058
<b>One Council CCO</b>											
PNCC CCO	HH Charges	n/a	n/a	n/a	1,388	1,667	1,834	2,096	2,952	3,177	3,366

Years 2034 - 2044	Metric	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
<b>The Seven CCO</b>											
Manawatu-Whanganui	HH Charges	2,532	2,485	2,445	2,445	2,401	2,390	2,356	2,322	2,312	2,302
<b>Six Council CCO</b>											
PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,510	2,463	2,423	2,423	2,378	2,365	2,330	2,295	2,216	2,184
<b>Five Council CCO</b>											
PNCC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,518	2,495	2,455	2,414	2,378	2,346	2,316	2,287	2,280	2,273
PNCC, HDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,917	2,880	2,847	2,860	2,818	2,811	2,779	2,746	2,738	2,730
PNCC, HDC, WDC, Rangitikei DC and MDC	HH Charges	2,602	2,557	2,519	2,519	2,476	2,461	2,423	2,385	2,349	2,268
PNCC, HDC, WDC, Ruapehu DC and MDC	HH Charges	2,529	2,477	2,447	2,457	2,423	2,415	2,386	2,356	2,281	2,253
PNCC, HDC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	2,601	2,564	2,531	2,537	2,499	2,487	2,455	2,421	2,410	2,398
<b>Four Council CCO</b>											
The Four CCO Base	HH Charges	2,696	2,662	2,626	2,638	2,598	2,567	2,584	2,557	2,529	2,522
PNCC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,961	2,924	2,885	2,894	2,716	2,714	2,688	2,665	2,666	2,692
PNCC, WDC, Rangitikei DC and MDC	HH Charges	2,527	2,544	2,439	2,437	2,399	2,385	2,349	2,315	2,304	2,295
PNCC, WDC, Ruapehu DC and MDC	HH Charges	2,445	2,452	2,358	2,367	2,340	2,334	2,308	2,284	2,282	2,190
PNCC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	2,607	2,571	2,514	2,477	2,446	2,436	2,407	2,379	2,352	2,324
PNCC, HDC, Rangitikei DC and MDC	HH Charges	2,984	2,945	2,909	2,919	2,873	2,861	2,824	2,784	2,772	2,761

Years 2034 - 2044	Metric	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
PNCC, HDC, Ruapehu DC and MDC	HH Charges	2,890	2,841	2,818	2,842	2,809	2,808	2,783	2,755	2,753	2,751
PNCC, HDC, WDC and MDC	HH Charges	2,630	2,572	2,516	2,479	2,441	2,362	2,194	2,213	2,231	2,250
PNCC, HDC, WDC and Rangitikei DC	HH Charges	2,712	2,672	2,636	2,639	2,597	2,492	2,456	2,418	2,404	2,346
PNCC, HDC, WDC and Ruapehu DC	HH Charges	2,554	2,508	2,485	2,501	2,473	2,468	2,441	2,412	2,407	2,401
<b>Three Council CCO</b>											
PNCC, Rangitikei DC and MDC	HH Charges	3,114	3,075	3,032	3,037	2,995	2,983	2,945	2,908	2,900	2,786
PNCC, Ruapehu DC and MDC	HH Charges	2,966	2,916	2,890	2,915	2,891	2,894	2,874	2,854	2,860	2,866
PNCC, Ruapehu DC and Rangitikei DC	HH Charges	3,314	3,262	3,177	3,119	3,064	3,036	3,035	3,061	2,981	3,006
PNCC, WDC and MDC	HH Charges	2,486	2,425	2,387	2,388	2,352	2,342	2,222	2,150	2,171	2,192
PNCC, WDC and Ruapehu DC	HH Charges	2,490	2,459	2,409	2,378	2,375	2,349	2,326	2,304	2,303	2,302
PNCC, WDC and Rangitikei DC	HH Charges	2,626	2,604	2,539	2,494	2,415	2,421	2,385	2,308	2,299	2,268
PNCC, HDC and MDC	HH Charges	2,874	2,816	2,810	2,776	2,734	2,729	2,725	2,690	2,684	2,679
PNCC, HDC and Ruapehu DC	HH Charges	3,023	2,985	2,974	3,012	2,990	2,995	3,028	3,056	3,082	3,107
PNCC, HDC and Rangitikei DC	HH Charges	3,253	3,224	3,194	3,210	3,168	3,155	3,116	3,073	3,058	3,044
PNCC, HDC and WDC	HH Charges	2,597	2,543	2,514	2,522	2,486	2,476	2,443	2,385	2,376	2,344
<b>Two Council CCO</b>											
PNCC and MDC		2,943	2,855	2,817	2,780	2,794	2,713	2,685	2,660	2,662	2,665
PNCC and Ruapehu DC	HH Charges	3,205	3,131	3,105	3,059	3,064	3,020	3,056	3,041	3,078	3,057
PNCC and Rangitikei DC	HH Charges	3,463	3,401	3,300	3,227	3,157	3,067	3,031	2,997	2,991	2,985
PNCC and WDC	HH Charges	2,523	2,486	2,449	2,411	2,401	2,348	2,319	2,312	2,307	2,280



Years 2034 - 2044	Metric	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
PNCC and HDC	HH Charges	3,117	3,039	3,064	3,034	2,995	2,964	2,987	2,951	2,916	2,909
<b>One Council CCO</b>											
PNCC CCO	HH Charges	3,363	3,296	3,255	3,086	3,053	3,077	3,102	3,073	3,073	3,073

Years 2044 - 2054	Metric	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
<b>The Seven CCO</b>											
Manawatu-Whanganui	HH Charges	2,275	2,302	2,294	2,310	2,327	2,346	2,362	2,379	2,397	2,416
<b>Six Council CCO</b>											
PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,200	2,228	2,243	2,260	2,276	2,293	2,310	2,327	2,345	2,364
<b>Five Council CCO</b>											
PNCC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,201	2,221	2,242	2,263	2,285	2,307	2,330	2,352	2,732	2,400
PNCC, HDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,699	2,738	2,733	2,756	2,695	2,723	2,693	2,722	2,752	2,783
PNCC, HDC, WDC, Rangitikei DC and MDC	HH Charges	2,284	2,313	2,329	2,345	2,361	2,379	2,396	2,413	2,431	2,450
PNCC, HDC, WDC, Ruapehu DC and MDC	HH Charges	2,275	2,309	2,331	2,353	2,375	2,398	2,420	2,444	2,468	2,492
PNCC, HDC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	2,367	2,396	2,340	2,358	2,376	2,394	2,412	2,431	2,450	2,469
<b>Four Council CCO</b>											
The Four CCO Base	HH Charges	2,521	2,559	2,555	2,581	2,548	2,574	2,598	2,604	2,570	2,594
PNCC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,719	2,694	2,725	2,701	2,734	2,768	2,687	2,726	2,766	2,806
PNCC, WDC, Rangitikei DC and MDC	HH Charges	2,264	2,281	2,275	2,294	2,313	2,333	2,353	2,374	2,395	2,417
PNCC, WDC, Ruapehu DC and MDC	HH Charges	2,214	2,239	2,265	2,291	2,318	2,345	2,373	2,402	2,431	2,461
PNCC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	2,320	2,317	2,315	2,314	2,336	2,360	2,383	2,407	2,432	2,457
PNCC, HDC, Rangitikei DC and MDC	HH Charges	2,727	2,766	2,758	2,780	2,659	2,687	2,715	2,743	2,772	2,801

Years 2044 - 2054	Metric	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
PNCC, HDC, Ruapehu DC and MDC	HH Charges	2,725	2,773	2,801	2,831	2,801	2,833	2,806	2,779	2,817	2,855
PNCC, HDC, WDC and MDC	HH Charges	2,270	2,304	2,325	2,345	2,366	2,387	2,409	2,431	2,454	2,478
PNCC, HDC, WDC and Rangitikei DC	HH Charges	2,314	2,346	2,362	2,379	2,395	2,412	2,429	2,446	2,464	2,482
PNCC, HDC, WDC and Ruapehu DC	HH Charges	2,374	2,434	2,454	2,426	2,423	2,446	2,469	2,493	2,518	2,543
<b>Three Council CCO</b>											
PNCC, Rangitikei DC and MDC	HH Charges	2,703	2,567	2,603	2,639	2,675	2,712	2,750	2,788	2,828	2,868
PNCC, Ruapehu DC and MDC	HH Charges	2,844	2,796	2,808	2,821	2,834	2,727	2,777	2,827	2,880	2,933
PNCC, Ruapehu DC and Rangitikei DC	HH Charges	2,952	2,927	2,933	2,939	2,959	2,982	2,990	3,028	3,037	3,063
PNCC, WDC and MDC	HH Charges	2,213	2,236	2,259	2,284	2,308	2,333	2,358	2,384	2,411	2,439
PNCC, WDC and Ruapehu DC	HH Charges	2,302	2,302	2,305	2,308	2,335	2,363	2,392	2,421	2,451	2,482
PNCC, WDC and Rangitikei DC	HH Charges	2,262	2,256	2,275	2,249	2,270	2,338	2,358	2,379	2,400	2,422
PNCC, HDC and MDC	HH Charges	2,621	2,698	2,725	2,723	2,722	2,752	2,752	2,754	2,788	2,823
PNCC, HDC and Ruapehu DC	HH Charges	3,138	3,190	3,217	2,975	3,161	3,192	3,223	2,936	2,946	2,990
PNCC, HDC and Rangitikei DC	HH Charges	3,009	3,052	3,041	2,740	2,771	2,803	2,834	2,866	2,898	2,931
PNCC, HDC and WDC	HH Charges	2,315	2,352	2,371	2,392	2,411	2,432	2,453	2,474	2,496	2,518
<b>Two Council CCO</b>											
PNCC and MDC		2,669	2,676	2,685	2,694	2,704	2,746	2,759	2,803	2,850	2,898
PNCC and Ruapehu DC	HH Charges	3,009	3,021	3,067	3,052	3,096	3,112	3,130	3,180	3,233	3,251
PNCC and Rangitikei DC	HH Charges	2,954	2,953	2,956	2,929	2,961	2,966	3,002	3,007	3,045	3,051
PNCC and WDC	HH Charges	2,277	2,276	2,300	2,325	2,348	2,373	2,399	2,425	2,452	2,480



Years 2044 - 2054	Metric	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
PNCC and HDC	HH Charges	2,880	2,964	2,960	2,958	2,955	2,954	2,955	2,956	2,991	2,993
<b>One Council CCO</b>											
PNCC CCO	HH Charges	2,869	2,909	2,953	2,997	2,975	3,021	3,069	3,050	3,102	3,154

## Household costs uninflated (excluding GST)

Years 2024 - 2034	Metric	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Inflation Index		1.00	1.03	1.05	1.08	1.11	1.13	1.16	1.18	1.21	1.23
<b>The Seven CCO</b>											
Manawatu-Whanganui	HH Charges	n/a	n/a	n/a	1,545	1,673	1,736	1,800	1,988	1,997	2,011
<b>Six Council CCO</b>											
PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,514	1,638	1,703	1,771	1,962	1,974	1,991
<b>Five Council CCO</b>											
PNCC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,428	1,549	1,622	1,704	1,905	1,934	1,960
PNCC, HDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,580	1,730	1,823	1,922	2,223	2,259	2,298
PNCC, HDC, WDC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,547	1,643	1,694	1,785	2,020	2,037	2,060
PNCC, HDC, WDC, Ruapehu DC and MDC	HH Charges	n/a	n/a	n/a	1,518	1,645	1,710	1,775	1,968	1,990	2,012
PNCC, HDC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,518	1,651	1,720	1,802	2,004	2,029	2,055
<b>Four Council CCO</b>											
The Four CCO Base	HH Charges	n/a	n/a	n/a	1,647	1,773	1,763	1,875	2,129	2,138	2,152
PNCC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,502	1,729	1,845	1,958	2,213	2,273	2,325
PNCC, WDC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,421	1,548	1,624	1,715	1,929	1,962	1,994
PNCC, WDC, Ruapehu DC and MDC	HH Charges	n/a	n/a	n/a	1,387	1,515	1,590	1,668	1,872	1,912	1,942



Years 2024 - 2034	Metric	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
<b>Inflation Index</b>		<b>1.00</b>	<b>1.03</b>	<b>1.05</b>	<b>1.08</b>	<b>1.11</b>	<b>1.13</b>	<b>1.16</b>	<b>1.18</b>	<b>1.21</b>	<b>1.23</b>
PNCC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,381	1,514	1,595	1,693	1,966	2,022	2,056
PNCC, HDC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,573	1,731	1,830	1,940	2,259	2,300	2,347
PNCC, HDC, Ruapehu DC and MDC	HH Charges	n/a	n/a	n/a	1,535	1,695	1,793	1,888	2,195	2,243	2,287
PNCC, HDC, WDC and MDC	HH Charges	n/a	n/a	n/a	1,505	1,638	1,705	1,777	2,046	2,069	2,093
PNCC, HDC, WDC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,498	1,637	1,710	1,801	2,016	2,110	2,141
PNCC, HDC, WDC and Ruapehu DC	HH Charges	n/a	n/a	n/a	1,466	1,603	1,674	1,751	1,956	1,992	2,025
<b>Three Council CCO</b>											
PNCC, Rangitikei DC and MDC	HH Charges	n/a	n/a	n/a	1,423	1,588	1,707	1,849	2,305	2,375	2,439
PNCC, Ruapehu DC and MDC	HH Charges	n/a	n/a	n/a	1,375	1,541	1,658	1,781	2,201	2,282	2,342
PNCC, Ruapehu DC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,436	1,638	1,704	1,984	2,438	2,512	2,606
PNCC, WDC and MDC	HH Charges	n/a	n/a	n/a	1,395	1,527	1,602	1,687	1,900	1,942	2,258
PNCC, WDC and Ruapehu DC	HH Charges	n/a	n/a	n/a	1,325	1,466	1,547	1,640	1,915	1,983	1,975
PNCC, WDC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,364	1,504	1,586	1,694	1,983	2,044	2,068
PNCC, HDC and MDC	HH Charges	n/a	n/a	n/a	1,504	1,751	1,768	1,924	2,191	2,262	2,293
PNCC, HDC and Ruapehu DC	HH Charges	n/a	n/a	n/a	1,684	1,812	1,928	2,039	2,234	2,330	2,378
PNCC, HDC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,532	1,865	1,984	2,114	2,412	2,477	2,544
PNCC, HDC and WDC	HH Charges	n/a	n/a	n/a	1,474	1,618	1,690	1,773	1,987	2,025	2,060
<b>Two Council CCO</b>											
PNCC and MDC	HH Charges	n/a	n/a	n/a	1,349	1,545	1,734	1,924	2,189	2,294	2,343

Years 2024 - 2034	Metric	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
<b>Inflation Index</b>		<b>1.00</b>	<b>1.03</b>	<b>1.05</b>	<b>1.08</b>	<b>1.11</b>	<b>1.13</b>	<b>1.16</b>	<b>1.18</b>	<b>1.21</b>	<b>1.23</b>
PNCC and Ruapehu DC	HH Charges	n/a	n/a	n/a	1,436	1,592	1,740	1,891	2,377	2,530	2,540
PNCC and Rangitikei DC	HH Charges	n/a	n/a	n/a	1,434	1,641	1,854	2,103	2,469	2,629	2,719
PNCC and WDC	HH Charges	n/a	n/a	n/a	1,291	1,468	1,538	1,700	1,930	2,020	2,048
PNCC and HDC	HH Charges	n/a	n/a	n/a	1,489	1,735	1,805	2,029	2,330	2,427	2,477
<b>One Council CCO</b>											
PNCC CCO	HH Charges	n/a	n/a	n/a	1,285	1,506	1,620	1,809	2,493	2,628	2,727

Years 2034 - 2044	Metric	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
<b>Inflation Index</b>		<b>1.26</b>	<b>1.28</b>	<b>1.31</b>	<b>1.34</b>	<b>1.36</b>	<b>1.39</b>	<b>1.42</b>	<b>1.45</b>	<b>1.48</b>	<b>1.50</b>
<b>The Seven CCO</b>											
Manawatu-Whanganui	HH Charges	2,011	1,935	1,867	1,830	1,762	1,719	1,662	1,606	1,567	1,530
<b>Six Council CCO</b>											
PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	1,994	1,918	1,850	1,813	1,745	1,701	1,643	1,587	1,502	1,451
<b>Five Council CCO</b>											
PNCC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,000	1,943	1,874	1,807	1,745	1,688	1,633	1,581	1,546	1,511
PNCC, HDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,317	2,242	2,173	2,140	2,068	2,022	1,960	1,899	1,856	1,814
PNCC, HDC, WDC, Rangitikei DC and MDC	HH Charges	2,067	1,991	1,923	1,886	1,817	1,770	1,709	1,649	1,592	1,507
PNCC, HDC, WDC, Ruapehu DC and MDC	HH Charges	2,009	1,929	1,868	1,839	1,778	1,737	1,683	1,629	1,546	1,498
PNCC, HDC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	2,066	1,996	1,932	1,899	1,834	1,789	1,731	1,674	1,634	1,594
<b>Four Council CCO</b>											
The Four CCO Base	HH Charges	2,142	2,073	2,004	1,975	1,907	1,847	1,822	1,768	1,714	1,676
PNCC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	2,352	2,277	2,203	2,166	1,993	1,952	1,896	1,843	1,807	1,789
PNCC, WDC, Rangitikei DC and MDC	HH Charges	2,007	1,981	1,862	1,824	1,760	1,715	1,657	1,601	1,562	1,525
PNCC, WDC, Ruapehu DC and MDC	HH Charges	1,942	1,909	1,800	1,772	1,717	1,679	1,628	1,579	1,547	1,455
PNCC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	2,071	2,002	1,919	1,854	1,795	1,753	1,698	1,645	1,594	1,545

Years 2034 - 2044	Metric	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
<b>Inflation Index</b>		<b>1.26</b>	<b>1.28</b>	<b>1.31</b>	<b>1.34</b>	<b>1.36</b>	<b>1.39</b>	<b>1.42</b>	<b>1.45</b>	<b>1.48</b>	<b>1.50</b>
PNCC, HDC, Rangitikei DC and MDC	HH Charges	2,370	2,293	2,221	2,185	2,108	2,058	1,992	1,925	1,879	1,835
PNCC, HDC, Ruapehu DC and MDC	HH Charges	2,296	2,213	2,152	2,127	2,061	2,020	1,963	1,905	1,866	1,828
PNCC, HDC, WDC and MDC	HH Charges	2,089	2,003	1,921	1,855	1,791	1,699	1,548	1,530	1,512	1,495
PNCC, HDC, WDC and Rangitikei DC	HH Charges	2,155	2,081	2,013	1,975	1,906	1,793	1,732	1,672	1,630	1,559
PNCC, HDC, WDC and Ruapehu DC	HH Charges	2,029	1,953	1,897	1,872	1,815	1,775	1,722	1,668	1,632	1,596
<b>Three Council CCO</b>											
PNCC, Rangitikei DC and MDC	HH Charges	2,473	2,395	2,315	2,273	2,198	2,146	2,077	2,011	1,966	1,852
PNCC, Ruapehu DC and MDC	HH Charges	2,356	2,271	2,207	2,182	2,122	2,082	2,027	1,974	1,939	1,905
PNCC, Ruapehu DC and Rangitikei DC	HH Charges	2,632	2,540	2,425	2,335	2,248	2,184	2,140	2,116	2,021	1,998
PNCC, WDC and MDC	HH Charges	1,974	1,889	1,822	1,787	1,726	1,685	1,567	1,487	1,472	1,457
PNCC, WDC and Ruapehu DC	HH Charges	1,978	1,915	1,839	1,780	1,743	1,690	1,640	1,593	1,561	1,530
PNCC, WDC and Rangitikei DC	HH Charges	2,086	2,028	1,939	1,866	1,772	1,742	1,682	1,596	1,558	1,508
PNCC, HDC and MDC	HH Charges	2,282	2,193	2,145	2,078	2,007	1,964	1,922	1,860	1,820	1,780
PNCC, HDC and Ruapehu DC	HH Charges	2,401	2,324	2,271	2,254	2,194	2,155	2,136	2,113	2,090	2,065
PNCC, HDC and Rangitikei DC	HH Charges	2,584	2,511	2,439	2,403	2,325	2,270	2,198	2,125	2,073	2,023
PNCC, HDC and WDC	HH Charges	2,063	1,980	1,919	1,888	1,825	1,781	1,723	1,649	1,611	1,558
<b>Two Council CCO</b>											
PNCC and MDC	HH Charges	2,338	2,224	2,151	2,081	2,050	1,952	1,894	1,839	1,805	1,771
PNCC and Ruapehu DC	HH Charges	2,546	2,438	2,371	2,290	2,248	2,172	2,155	2,103	2,087	2,032

Years 2034 - 2044	Metric	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44
<b>Inflation Index</b>		<b>1.26</b>	<b>1.28</b>	<b>1.31</b>	<b>1.34</b>	<b>1.36</b>	<b>1.39</b>	<b>1.42</b>	<b>1.45</b>	<b>1.48</b>	<b>1.50</b>
PNCC and Rangitikei DC	HH Charges	2,751	2,648	2,520	2,415	2,317	2,207	2,138	2,072	2,028	1,984
PNCC and WDC	HH Charges	2,004	1,936	1,870	1,804	1,762	1,689	1,635	1,599	1,564	1,515
PNCC and HDC	HH Charges	2,476	2,366	2,340	2,271	2,198	2,132	2,107	2,040	1,977	1,934
<b>One Council CCO</b>											
PNCC CCO	HH Charges	2,671	2,566	2,485	2,310	2,240	2,214	2,188	2,125	2,083	2,042

Years 2044 - 2054	Metric	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
Inflation Index		1.26	1.28	1.31	1.34	1.36	1.39	1.42	1.45	1.48	1.50
<b>The Seven CCO</b>											
Manawatu-Whanganui	HH Charges	1,482	1,471	1,437	1,419	1,401	1,384	1,367	1,350	1,333	1,317
<b>Six Council CCO</b>											
PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	1,433	1,423	1,405	1,387	1,370	1,353	1,337	1,320	1,304	1,289
<b>Five Council CCO</b>											
PNCC, WDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	1,434	1,419	1,404	1,390	1,375	1,362	1,348	1,334	1,520	1,309
PNCC, HDC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	1,759	1,749	1,711	1,692	1,622	1,607	1,558	1,544	1,531	1,518
PNCC, HDC, WDC, Rangitikei DC and MDC	HH Charges	1,488	1,477	1,458	1,440	1,421	1,404	1,386	1,369	1,352	1,336
PNCC, HDC, WDC, Ruapehu DC and MDC	HH Charges	1,482	1,475	1,460	1,445	1,430	1,415	1,400	1,386	1,372	1,359
PNCC, HDC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	1,542	1,531	1,466	1,448	1,430	1,413	1,396	1,379	1,362	1,346
<b>Four Council CCO</b>											
The Four CCO Base	HH Charges	1,643	1,635	1,600	1,585	1,534	1,519	1,503	1,477	1,429	1,415
PNCC, Ruapehu DC, Rangitikei DC and MDC	HH Charges	1,772	1,721	1,706	1,658	1,646	1,634	1,555	1,546	1,538	1,530
PNCC, WDC, Rangitikei DC and MDC	HH Charges	1,475	1,457	1,425	1,409	1,392	1,377	1,362	1,346	1,332	1,318
PNCC, WDC, Ruapehu DC and MDC	HH Charges	1,442	1,430	1,418	1,407	1,395	1,384	1,373	1,362	1,352	1,342
PNCC, WDC, Ruapehu DC and Rangitikei DC	HH Charges	1,512	1,480	1,450	1,421	1,406	1,393	1,379	1,365	1,352	1,339

Years 2044 - 2054	Metric	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
<b>Inflation Index</b>		<b>1.26</b>	<b>1.28</b>	<b>1.31</b>	<b>1.34</b>	<b>1.36</b>	<b>1.39</b>	<b>1.42</b>	<b>1.45</b>	<b>1.48</b>	<b>1.50</b>
PNCC, HDC, Rangitikei DC and MDC	HH Charges	1,777	1,767	1,728	1,707	1,601	1,586	1,571	1,556	1,541	1,527
PNCC, HDC, Ruapehu DC and MDC	HH Charges	1,776	1,771	1,754	1,738	1,686	1,672	1,623	1,577	1,567	1,557
PNCC, HDC, WDC and MDC	HH Charges	1,479	1,472	1,456	1,440	1,424	1,409	1,394	1,379	1,365	1,351
PNCC, HDC, WDC and Rangitikei DC	HH Charges	1,508	1,499	1,479	1,461	1,441	1,423	1,405	1,388	1,370	1,353
PNCC, HDC, WDC and Ruapehu DC	HH Charges	1,547	1,555	1,537	1,489	1,458	1,443	1,429	1,414	1,400	1,386
<b>Three Council CCO</b>											
PNCC, Rangitikei DC and MDC	HH Charges	1,761	1,640	1,630	1,620	1,610	1,601	1,591	1,582	1,573	1,564
PNCC, Ruapehu DC and MDC	HH Charges	1,853	1,786	1,759	1,732	1,706	1,609	1,607	1,604	1,601	1,599
PNCC, Ruapehu DC and Rangitikei DC	HH Charges	1,923	1,870	1,837	1,805	1,781	1,760	1,730	1,718	1,689	1,670
PNCC, WDC and MDC	HH Charges	1,442	1,428	1,415	1,402	1,389	1,377	1,364	1,352	1,341	1,330
PNCC, WDC and Ruapehu DC	HH Charges	1,500	1,471	1,443	1,417	1,406	1,395	1,384	1,373	1,363	1,353
PNCC, WDC and Rangitikei DC	HH Charges	1,474	1,441	1,425	1,381	1,366	1,380	1,365	1,349	1,335	1,321
PNCC, HD and MDC	HH Charges	1,708	1,723	1,706	1,672	1,638	1,624	1,592	1,562	1,550	1,539
PNCC, HDC and Ruapehu DC	HH Charges	2,045	2,038	2,015	1,826	1,903	1,884	1,865	1,665	1,638	1,630
PNCC, HDC and Rangitikei DC	HH Charges	1,960	1,950	1,905	1,683	1,668	1,654	1,640	1,626	1,612	1,598
PNCC, HDC and WDC	HH Charges	1,508	1,502	1,485	1,469	1,452	1,435	1,419	1,403	1,388	1,373
<b>Two Council CCO</b>											
PNCC and MDC	HH Charges	1,739	1,709	1,681	1,654	1,628	1,621	1,596	1,590	1,585	1,580
PNCC and Ruapehu DC	HH Charges	1,961	1,930	1,921	1,874	1,864	1,837	1,811	1,804	1,798	1,773

Years 2044 - 2054	Metric	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54
<b>Inflation Index</b>		<b>1.26</b>	<b>1.28</b>	<b>1.31</b>	<b>1.34</b>	<b>1.36</b>	<b>1.39</b>	<b>1.42</b>	<b>1.45</b>	<b>1.48</b>	<b>1.50</b>
<b>PNCC and Rangitikei DC</b>	HH Charges	1,925	1,886	1,851	1,799	1,782	1,750	1,737	1,706	1,693	1,664
<b>PNCC and WDC</b>	HH Charges	1,484	1,454	1,441	1,427	1,414	1,401	1,388	1,376	1,364	1,352
<b>PNCC and HDC</b>	HH Charges	1,876	1,893	1,854	1,816	1,779	1,744	1,709	1,677	1,663	1,632
<b>One Council CCO</b>											
<b>PNCC CCO</b>	HH Charges	1,869	1,858	1,850	1,840	1,791	1,783	1,776	1,730	1,725	1,720



## Appendix 2: Modelling assumptions

### Standardisation applied to all councils

In order to enable a like for like comparison between regional delivery options and the existing delivery model, we have made adjustments to financial and capital investment programmes provided by each council as the ‘status quo’. These adjustments ensure that differences between regional delivery models are not purely the result of a different approach to managing revenue, debt and expenditure, or differences to underlying assumptions across the individual models.

*It is also important to note that this means that the comparator scenarios presented in our modelling may not mirror an individual councils’ current long term plan projections and some changes in household costs may be solely the result of the changes we have made to standardise the models.*

We have endeavoured to ensure that our approach aligns with the requirements of a water services delivery plan. This means that some councils may wish to use the comparator case from this modelling as a starting point for a water services delivery plan (WSDP) for in-house delivery. This is however a “best endeavours” approach, and councils may further refine capital programmes before preparing their WSDP.

Where councils are undertaking detailed asset and investment planning work this should then be used to inform their WSDP.

To assist councils in understanding the alignment of our comparator case with their own WSDP or LTP work, we have outlined the key adjustments and changes we have made below.

### Operating expenditure

Our modelling of the scenarios for operating expenditure predominantly relies on each council’s own operating budgets, as provided through our information request. Adjustments have been made to:

- Reverse the impact of any internal transfers or overhead activities that occur between water, wastewater and stormwater activities. We have retained overhead allocations from other council activities to/from each of the waters activities.
- Recalculate interest costs based on any amendments made to the capital works programme (refer below) and any additional revenue generated in order to stay within borrowing limits.
- Recalculate interest rates using a common interest rate across all councils. The rate used will be the weighted average interest rate across the councils currently. We have applied an interest rate of 5% in our modelling. Interest is calculated off the previous year’s closing balance, meaning the effective interest rate is slightly lower than this when current year movements are considered.
- Recalculate depreciation based on any amendments made to the capital works programme. The depreciation rate applied to the recalculation is based on each council’s average depreciation rate. Depreciation rates are set at 1.48% for water supply, 1.62% for wastewater, and 1.32% for stormwater.

- Assets are revalued at 2% per annum and depreciation recalculated based off revalued asset base (including additions).
- Inflation is modelled at 2% per annum for years 11 – 30.

### Capital expenditure

Our modelling for capital expenditure focuses on ensuring that each council is able to meet the requirements of a water services delivery plan, being:

- The requirement to meet all relevant regulatory quality standards for its water services.
- The requirement to meet all drinking water quality standards.
- Supports the territorial authority's housing growth and urban development, as specified in the territorial authority's long-term plan.
- The need to demonstrate financial sustainability through:
  - generating sufficient revenue to ensure long term investment in delivering water services.
  - being financially able to meet all regulatory standards and requirements for the delivery of water services.

All Councils have reviewed the capital programmes and made adjustments from the initial LTP and Infrastructure Strategy programmes.

### Renewals

Water Services Delivery Plan templates indicate some of the key measures that Department of Internal Affairs (DIA) expect to be reported in relation to these tests, and therefore what may be expected by the Department. In particular:

- The need to report on combined capital expenditure versus depreciation, indicating a desire from the Department for capex to exceed depreciation. We don't anticipate this being an issue for any councils over the ten year period.
- The need to report on an "asset sustainability index" which compares renewals expenditure with depreciation, and notably, where renewals expenditure is not equal to depreciation, why that approach is appropriate.
- The need to report on an asset consumption ratio, and note why that ratio may deteriorate over time (if it does). This is unlikely to be a problem for councils that are spending more than their depreciation on capital investment each year. This ratio again is intended to ensure their adequacy of a renewals programme.

All Councils have reviewed the renewal programmes and confirmed them as appropriate.

No other changes have been made to renewals programmes in our base case other than changes applied through sensitivity testing.

## Upgrades

Councils are also required to demonstrate and assert that their WSDPs contain sufficient investment to meet regulatory requirements and respond to growth.

For all Councils our approach to reviewing this and making revisions to the status quo was to check with each council that:

- Investment is provided for any drinking water treatment plants that are not currently compliant with drinking water standards. We did not identify any significant missing expenditure through this process.
- Investment is provided for any wastewater treatment plants that have consents expiring during the period. We did not identify any significant missing expenditure through this process.
- Any upgrade projects that have been deferred beyond the 10 year LTP period. Where these are identified, we will confirm whether these should be moved back into the 10 year planning period.
- In the case of KCDC additional upgrades were identified through a capex workshop that also identified additional opex that was added into the modelling.

## Growth

For all Councils:

- We sought confirmation that the growth investment proposed in the LTP responds to the WSDP requirements, and for any significant projects to be identified if they are not already identified in AMPs/LTPs.
- We have not included any sensitivity testing on increased/decreased growth rates, however our model does allow for this to be completed if needed. In our model, sensitivity testing of growth assumes planned capex scales proportionally to the change in the number of new properties being connected.
- Scaling is applied to original growth capital expenditure forecasts at the same rate as the uplift or decrease in connections on an annual basis. The cumulative impact of this is that if sensitivity testing results in 20% more properties over 10 years, the total capital expenditure will have been increased by 10%.
- It is recognised that growth projects do not neatly scale in real life. The scaling recognises that there is likely to be some uplift, or advancement of timing, and that, at the least, increased or decreased rates of growth impact the capacity life of infrastructure.

## Revenue

WSDP templates indicate some of the key measures that DIA expect to be reported in relation to these tests, and therefore what may be expected by the Department. In particular:

- A chart demonstrating projected revenue versus projected costs including depreciation, and net operating surplus or loss. We anticipate that DIA are expecting revenue to at least equal total expenditure including depreciation based on the examples provided.
- An operating surplus ratio. DIA guidance notes that “Where this ratio percentage is negative, this represents the percentage increase required for revenues to cover costs”. Costs in this ratio include depreciation.

Based on these questions, and additional commentary within the WSDP templates, we intend to model status quo arrangements to be fully funding depreciation from the 2028 financial year onwards. Councils that are not currently fully funding depreciation will be modelled to move to a fully funded scenario evenly over the remaining years.

In addition, from 2028 and beyond:

- Revenue has been modelled to “break even” before accounting for development contributions, vested assets and grants and subsidies.
- Additional revenue has been calculated to ensure that the council remains in borrowing limits. This revenue line is recovered through water/wastewater/stormwater charges and is calculated to be no more than the amount needed to remain within agreed debt caps.
- The additional debt repayment/control revenue is modelled to ensure that debt caps are not breached over the life of the modelling period, however the additional revenue is modelled over the entire modelling period, meaning revenue is collected in anticipation of debt otherwise exceeding limits. This will impact price paths, where councils may have otherwise deferred increases in revenue to a later year than our modelling. Our modelling smooths the impact of this increase.
- Development contribution revenue has been modelled to scale proportionally with changes in growth capital expenditure. Scaling is completed annually.

### Debt and borrowing costs

Revisions to capital works programmes, revenue, and expenditure all impact the amount of debt required by councils to fund their three waters activity. Our modelling recalculates three waters debt under the base case scenarios to ensure comparability with regional delivery models.

To calculate debt, we have:

- Assumed each councils’ starting debt position is correct.
- Identified the cash surplus available from operations, development contribution receipts, and capital and operating subsidies.
- Subtracted the cost of capital works from the cash surplus.
- Identified ongoing working capital requirements and any shortfalls in cash balances to meet those requirements.
- Where this value is negative, we have increased borrowings to fund the difference.
- Where this value is positive, we have modelled a debt repayment.

We have not assumed any “regular” debt repayments under a table loan facility. Council’s typically borrow through bond issues that are repaid on maturity date. Our modelling effectively assumes that these bonds are renewed if needed. Our modelling also assumes that in any given year there will be sufficient bonds expiring that council will have the opportunity to repay debt if it holds surplus cash.

## Additional assumptions applied to data

We've also made the following minor additional assumptions to data provided by Councils. These adjustments impact projections in the "status quo" modelling.

- The percentage of water, wastewater and stormwater revenue received from residential customers is assumed to be consistent with the percentage split across these activities as provided to the Water Industry Commission of Scotland (WICS) in their RFI of 2021.
- Where specific projections of the number of connections has not been provided, we've assumed connection growth continues at the rate of growth in rateable units.
- We've assumed the proportion of residential to non-residential customers is consistent with WICS RFI where detailed breakdown of these projections has not been provided.
- In all models, we have assumed that council revenue and debt relating to non-three waters activities is unchanged under all investment scenarios. That is, even where three waters investment, charges, or debt increase, we have assumed that there is no consequential or offsetting reduction in the corresponding expenditure/charge for non-three waters activities.
- In 30 years modelling, we have relied on capital programmes from infrastructure strategies or long term capital works plans provided to us by participating councils as the initial base. Each Council has reviewed and adjusted those based on changes since those estimates were made or confirmed them as still valid. In the case of HDC the 30 year projections showed a considerable drop off in investment beyond year 10. Years 11 – 20 contain a total investment of 20% less than the first 10, and years 21 -30 represented a further 30% drop. To mitigate this we have modelled HDC annual capital investment over years 11 – 30 based on the mid-point between the original projections (low) and the average annual investment over years 1 – 10 (high).
- Corporate costs, as provided, have been retained in the base case. Some of these costs may represent "stranded overhead" in individual councils, however we note that the amount of cost allocated varies greatly across councils, and assessment of the amount of stranded overhead in each council would not be possible without a detailed assessment of the cost allocation and apportionment approaches used by each council.

## CCO variant assumptions

To create the CCO options we have modelled transitional and organisational costs based on a ground up approach. The full details of costs included in our model are outlined below.

## Operating and capital efficiencies

Efficiencies have been modelled using the efficiency data produced by WICS for the DIA as a base case, noting the following adjustments:

- The total achievable efficiency identified by WICS were scaled back by 75% and this was compared to our bottom-up estimates of potential efficiencies for multiple council CCOs. These two approaches produced similar outcomes. Using that, Morrison Low then developed a population-based scale for efficiencies

using the logarithmic scale of connections approach of WICS, but not based on their estimated efficiencies. This allows for cost effective and efficient estimates for indicative modelling such as that used in this report in table 1<sup>1</sup>.

- We have assumed that these efficiencies are achievable over a 10 year period, commencing two years after the establishment of the entity.
- Efficiencies are assumed to arise from:
  - Ability to employ specialists that are otherwise contracted out at an individual level
  - Limited opportunities to combine networks
  - Spend to save investment due to increased borrowing capacity and improved asset management focus
  - Bundled procurement and panel arrangements. We have examples of where this approach has resulted in significant reduction of costs
  - Decreased competition for resources between councils
  - Increased market attractiveness
  - Reduction of duplicated systems, processes and roles
  - Streamlined investment decision making due to dedicated focus on three waters services
- Efficiencies are less than the rate of inflation. Inflation (2%) is applied to all costs before any efficiencies are applied in the modelling. Efficiencies are applied at a compounding rate over ten years until they reach the maximum (for example in the case of Manawatū – Whanganui CCO (the seven councils together) 1.27 capex and 1.34 opex until they reach 14% and 14% respectively.

## Borrowing

The Government and the Local Government Funding Agency (LGFA) jointly announced that water entities would be able to borrow up to a 500% debt to revenue ratio. The fine print of that announcement noted that entities will actually be measured based on an FFO to debt ratio, with the intention that lending covenants would be set at such a level that the entity could maintain an “investor grade” credit rating.

Our modelling adopts the Moody’s credit rating approach, with non-financial components being set based on Moody’s assessment of water entities in the United Kingdom, and based on their published guidance.

The result of the credit rating approach is that it is likely that the CCOs considered would be able to maintain an investment grade credit rating with an FFO to debt ratio of 10% or higher. Our modelling assumes a 10% minimum threshold and includes additional modelled revenue, where necessary, to support that.

Sensitivity testing has been undertaken using an 8% ratio as well.

---

<sup>1</sup> These are rounded in the description below

## Costs of change

Corporate overhead from each council has been replaced with costs for the CCO, and transition costs have been included as set out in the tables that follow:

- Transitional costs to establish the CCO (assumed to be borne by the CCO).
- Increased compliance costs associated with regulatory reforms (recognising the role and requirements to report to both a service and economic regulator) has been applied to base cases and any options modelled.
- Any change is assumed for modelling purposes to take place on 1 July 2026/7.

Costs have been indexed using BERL inflation rates for water services through 2034, and 2% per annum thereafter.

## Appendix 3: Transition costs and expected benefits

For the 32 Manawatū – Whanganui scenarios in combination with PNCC

CCO variants	Grouping scenarios	Efficiencies (Capex) %	Efficiencies (Opex) %	Transition Costs (000)
Seven councils	PNC, HDC, WDC, Ruapehu DC, Rangitikei DC, MDC, and TDC	14.0 %	14.0 %	\$22,760
Six councils	PNCC, HDC, WDC, Ruapehu DC, Rangitikei DC, and MDC	14.0 %	14.0 %	\$20,760
Five councils	PNCC, WDC, Ruapehu DC, Rangitikei DC, and MDC	10.5 %	9.8 %	\$14,190
	PNCC, HDC, Ruapehu DC, Rangitikei DC, and MDC	10.5 %	9.8 %	\$14,190
	PNCC, HDC, WDC, Rangitikei DC, and MDC	11.2 %	10.4 %	\$14,190
	PNCC, HDC, WDC, Ruapehu DC, and MDC	11.2 %	10.4 %	\$14,190
	PNCC, HDC, WDC, Ruapehu DC, and Rangitikei DC	11.2 %	10.4 %	\$14,190
Four councils	PNCC, Ruapehu DC, Rangitikei DC, and MDC	6.8 %	7.5 %	\$13,134
	PNCC, WDC, Rangitikei DC, and MDC	9.0 %	8.0 %	\$14,190
	PNCC, WDC, Ruapehu DC, and MDC	9.0 %	8.0 %	\$14,190
	PNCC, WDC, Ruapehu DC, and Rangitikei DC	6.8 %	7.5 %	\$13,134
	PNCC, HDC, Rangitikei DC, and MDC	8.0 %	8.0 %	\$14,190
	PNCC, HDC, Ruapehu DC, and MDC	8.0 %	8.00 %	\$14,190
	PNCC, HDC, WDC, and MDC	10.0 %	9.2 %	\$14,190
	PNCC, HDC, WDC, and Rangitikei DC	9.0 %	8.0 %	\$14,190
	PNCC, HDC, WDC, and Ruapehu DC	9.0 %	8.00 %	\$8,983
Three councils	PNCC, Rangitikei DC, and MDC	4.0 %	3.0 %	\$9,452
	PNCC, Ruapehu DC, and MDC	4.0 %	3.0 %	\$9,452
	PNCC, Ruapehu DC, and Rangitikei DC	4.0 %	3.0 %	\$9,452
	PNCC, WDC, and MDC	8.8 %	9.3 %	\$10,702
	PNCC, WDC, and Ruapehu DC	6.8 %	7.5 %	\$10,590
	PNCC, WDC, Rangitikei DC	6.8 %	7.5 %	\$10,702
	PNCC, HDC, and MDC	6.8 %	7.5 %	\$10,702
	PNCC, HDC, and Ruapehu DC	4.0 %	3.0 %	\$9,452
	PNCC, HDC, Rangitikei DC	4.0 %	3.0 %	\$9,452
	PNCC, HDC, and WDC	8.8 %	9.3 %	\$8,983



CCO variants	Grouping scenarios	Efficiencies (Capex) %	Efficiencies (Opex) %	Transition Costs (000)
Two councils	PNCC and MDC	6.00 %	7.0 %	\$8,983
	PNCC and Ruapehu DC	4.00 %	3.0 %	\$8,538
	PNCC and Rangitikei DC	4.00 %	3.00 %	\$8,538
	PNCC and WDC	6.8 %	7.50 %	\$10,077
	PNCC and HDC	7.00 %	7.00 %	\$9,216
One council	PNCC	4 %	4 %	\$8,900