
Sensitivity testing of WICS analysis

Introduction

Morrison Low previously undertook detailed financial modelling as part of its three waters business case for Council's in the Hawke's Bay. This modelling has been updated on a number of occasions, including most recently to incorporate updated financial information as included in each Council's completed RFI and 2021-31 long term plans. This modelling included sensitivity analysis.

Separately, the Government has undertaken its own detailed financial analysis for each individual council, as well as for the four proposed water services entities. As part of the Government's information release for the three waters reform programme, individual council dashboards, highlighting current and future three waters charges have been released. The modelling that supports this has now also been made publicly available.

The report provides high level sensitivity testing of the WICS' economic models. In order to provide that, we have:

- Adjusted the number of household connections to adopt the average of water and wastewater billed properties from each of the Hawke's Bay councils' completed RFIs rather than using the standard WICS assumption based on population and an assumed number of people per household.
- Adjusted the percentage of revenue from households to match the percentage disclosed in each of the Hawke's Bay councils' RFIs rather than using the standard WICS assumption of 70%.
- Sensitivity testing of the debt to revenue ratio assumption, to show the impact of applying a three waters debt to revenue ratio of 500%¹ ratio instead of 250%.
- Sensitivity testing around the projected investment requirement, showing the impact of halving the amount of investment projected by WICS.
- Sensitivity testing of the projected efficiencies for Entity C. Again, for simplicity we have halved the efficiencies projected by WICS.

The 'base case', adjusted for the number of household connections and proportion of revenue from households is shown in green.

¹ 500% represents a typical figure of three waters debt/revenue that most councils can accommodate without breaching the LGFA council debt/revenue ratio of 280%.

Central Hawke's Bay

The current three waters household cost for Central Hawke's Bay is estimated by WICS as \$1,530.

The dashboard projects an estimated three waters cost in 2051 of \$7,260.

Table 1 Sensitivity testing of projected household charges in 2051 for Council

Investment	Three waters debt to revenue	
	250%	500%
100%	\$7,249	\$6,371
50%	\$3,823	\$3,483

The sensitivity testing shows the greatest impact on household costs for Central Hawkes Bay is the forecast investment.

Hastings District Council

The current three waters household cost for Hastings is estimated by WICS as \$810.

The dashboard projects an estimated three waters cost in 2051 of \$4,530.

Table 2 Sensitivity testing of projected household charges in 2051 for Council

Investment	Three waters debt to revenue	
	250%	500%
100%	\$4,910	\$4,127
50%	\$2,362	\$2,178

The sensitivity testing shows the greatest impact on household costs for Hastings is the forecast investment.

Napier City Council

The current three waters household cost for Napier is estimated by WICS as \$610.

The dashboard projects an estimated three waters cost in 2051 of \$2,540.

Table 3 Sensitivity testing of projected household charges in 2051 for Council

Investment	Three waters debt to revenue	
	250%	500%
100%	\$1,995	\$1,650
50%	\$921	\$851

The sensitivity testing shows the greatest impact on household costs for Napier is the forecast investment as well as the adjustments for the number of connections and proportion of income from households.

Wairoa District Council

The current three waters household cost for Wairoa is estimated by WICS as \$1,100.

The dashboard projects an estimated three waters cost in 2051 of \$8,760².

Table 4 Sensitivity testing of projected household charges in 2051 for Council

Investment	Three waters debt to revenue	
	250%	500%
100%	\$21,924	\$16,753
50%	\$8,920	\$8,228

The sensitivity testing shows the greatest impact on household costs for Wairoa District Council is the forecast investment.

Entity C

Table 5 Sensitivity testing of projected household charges in 2051 for Entity C

Investment	Efficiencies	
	100%	50%
100%	\$1,260	\$1,685
50%	\$678	\$958

The sensitivity testing shows the greatest impact on household costs for Entity C is the forecast investment.

² Ratepayer costs for any council are capped in the WICS reports at \$8,760. The actual figures are shown here for transparency.