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AECOM

Audit Report for Water NZ's 2021/2022 National Performance Review

22-Dec-2022

Audit Report for Water NZ's 2021/2022 National Performance Review

Client: Water New Zealand

ABN: N/A

Prepared by

AECOM New Zealand Limited

8 Mahuhu Crescent, Tāmaki Makaurau/Auckland 1010, PO Box 4241, Tāmaki Makaurau/Auckland 1140, New Zealand
T +64 9 967 9200 F +64 9 967 9201 www.aecom.com

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1.0 Introduction

Each year Water New Zealand (Water NZ) carries out a National Performance Review (NPR) of organisations providing water supply, wastewater and stormwater services across New Zealand. AECOM has been contracted to provide verification audit services for the 2021/22 NPR. This report presents the verification audit findings for the 2021/22 NPR which included the following work:

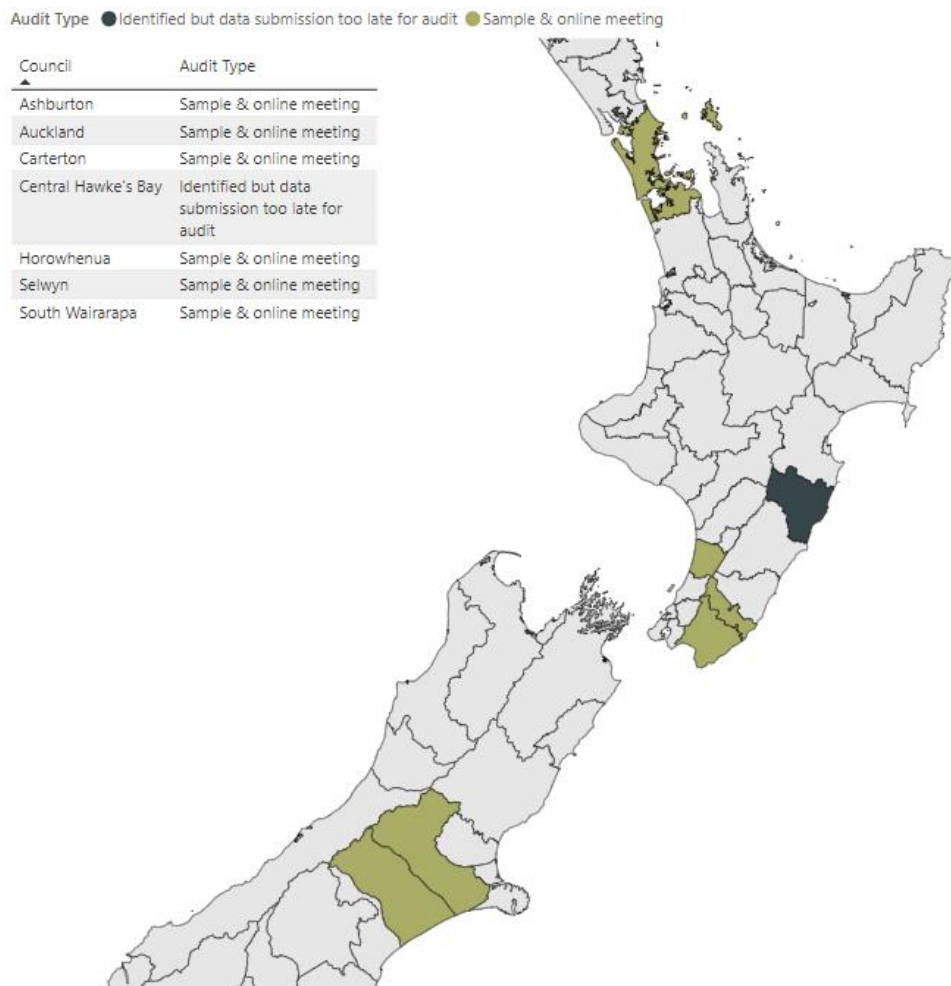
- Data collection workshop (online)
- Reviewing data return spreadsheets from organisations nominated for audits
- Preparing and conveying audit questions to participating organisations
- Online meetings to discuss audit findings and ask further audit questions
- Preparation of audit findings report.

This report documents AECOM's findings arising from the audit work. Included in Appendix A are the detailed findings from each of the organisations audited.

2.0 Methodology

2.1 Organisations Involved

Of the 33 organisations participating in the NPR, AECOM undertook six audits. The participating organisations were:



Central Hawke's Bay were initially identified as an audit participant but for understandable reasons their NPR data submission was late and by which time the bulk of the audit work had been completed.

2.2 Audit Personnel

The audit was undertaken by the following people:

- Miles Wyatt - Principal Consultant, CMEngNZ, MIAM, REA, REAcap
- Brian Sharman – Director, CMEngNZ, CPEng, MInstD

Both people have suitable experience in the water industry and have been involved in a number of previous NPR audits.

2.3 Measures Audited

A pre-defined set of measures (55 in total) were identified and agreed with Water NZ for inclusion in the audits. These measures were:

Table 1 Audit Measures

Measure	Reason for inclusion
Common	
Staff	
CB10: Internal staff	Difficulties in last year's reporting
CB10a: Staff vacancies	Difficulties in last year's reporting
Water Supply	
Drinking water network information	
WST1: Drinking water networks	New measure
WST2: Drinking water abstraction points	New measure
WST3: Drinking water network source type	New measure
Drinking water network connections	
WSB2: Residential connections in the drinking water network	Changes to sentence structure. Definition captures same assets
WSB3: Non-residential connections in the drinking water network	Changes to sentence structure. Definition captures same assets
WSB1a: Total population served by the drinking water network	New approach for determining population
Resource consent compliance	
WST4: Number of resource consents that are held	New measure
WST5: Type of resources consent	New measure
Asset condition	
WSA2f: Percentage of pipelines that have received a condition grading	Previous definition was of water pipelines that have NOT had their condition graded

Measure	Reason for inclusion
WSA2d: Percentage of pipelines in poor or very poor condition	Previous definition asked for 1 to 5 condition grades
WSA13c: Percentage of above ground assets that have received a condition grading	New measure
WSA2d+ WSA2g: Percentage of above ground assets in poor or very poor condition	New measure
Water pressure	
WST8: Has a reference level for water pressure been set	New measure
Water restriction days	
WSS11: Number of days water restrictions applied	Previous NPR asked the two components of these questions to be combined
WST9: Number of connections affected by restrictions	Previously measure was the multiple of affected connections and days affected. Split apart to align with Taumata Arowai
Water loss	
WSE1a: Estimated total drinking water network water loss	Recommended from last year's audit
Water use	
WSB8: Median residential water consumption (L/day/connection)	Changed for metered areas to specify median if available
WST10: Is there a water conservation education programme in place	New measure
Energy use	
WSE3: Water supply grid electricity use	New measure
WSE3a: Water supply energy use from other fuels	New measure
Critical assets	
WST11: Has an assessment been undertaken to identify critical water supply assets	New measure
Climate change	
WSCC1: Has a climate change risk assessment been undertaken for water supply networks	New measure
WSCC2: Is there a climate change adaptation plan in place for water supply networks	New measure
WSCC3: Has an emissions baseline been set for forecast water supply investments	New measure
Expenditure	
WSF11: Council contract management Costs : water supply	Recommended from last year's audit
Wastewater	
Resource consents	

Measure	Reason for inclusion
WWE4g: Wet weather overflow regulation approach	Recommended from last year's audit
Wastewater network connections	
WWB1b: Wastewater Service Coverage	Recommended from last year's audit
Asset condition	
WWA2f: Percentage of pipelines that have received a condition grading	Previous definition was of water pipelines that have NOT had their condition graded
WWA2d: Percentage of pipelines in poor or very poor condition	Previous definition asked for 1 to 5 condition grades
WWA6: Percentage of above ground assets that have received a condition grading	New measure
WWT1: Percentage of above ground assets in poor or very poor condition	New measure
Energy	
WWT3: Wastewater energy use from other fuels	New measure
Climate change	
WWCC1: Has a climate change risk assessment been undertaken for wastewater networks	New measure
WWCC2: Is there a climate change adaptation plan in place for wastewater networks	New measure
WWCC3: Has an emissions baseline been set for forecast wastewater investments	New measure
Critical assets	
WWT4: Has an assessment been undertaken to identify critical wastewater assets	New measure
Complaints	
WWS4d: The authority's response to issues with its sewerage system	Recommended from last year's audit
Revenue	
WWF6: Debt funding: Wastewater	Recommended from last year's audit
Expenditure	
WWF11: Management Costs: Wastewater	Recommended from last year's audit
WWF12: Councils Contract Management Costs: Wastewater	Recommended from last year's audit
Stormwater	
Asset condition	
SWA2f: Percentage of pipelines that have received a condition grading	Previous definition was of stormwater pipelines that have NOT had their condition graded

Measure	Reason for inclusion
SWA2d: Percentage of pipelines in poor or very poor condition	Previous definition asked for 1 to 5 condition grades
SWA5c: Percentage of above ground stormwater assets that have received a condition grading	New measure
SWA5d: Percentage of above ground assets in poor or very poor condition	New measure
Energy use	
SWT1: Stormwater energy use from other fuels	New measure
Climate change	
SWE6: Has a climate change risk assessment been undertaken for stormwater networks	New measure
SWE7: Is there a climate change adaptation plan in place for stormwater networks	New measure
SWE8: Has an emissions baseline been set for forecast stormwater investments	New measure
SWE9: Attenuation storage requirements for new developments	New measure
SWE10: RCP scenario (s) new stormwater systems are designed to	New measure
SWE11: Time horizon (s) new stormwater systems are designed to	New measure
Charges	
SWS1: Stormwater charge	Recommended from last year's audit
SWF7: Management Costs: Stormwater	Recommended from last year's audit
SWF8: Council Contract Management Costs: Stormwater	Recommended from last year's audit

In addition to the above list, other one-off measures were included where there was a perceived issue. These measures were mostly identified by Water NZ and varied for each organisation.

2.4 Audit Process

For each measure standard questions were defined and conveyed to each participating organisation in writing using the NPR spreadsheets. All organisations were requested to respond in writing prior to the online audits. All six organisations complied with this request.

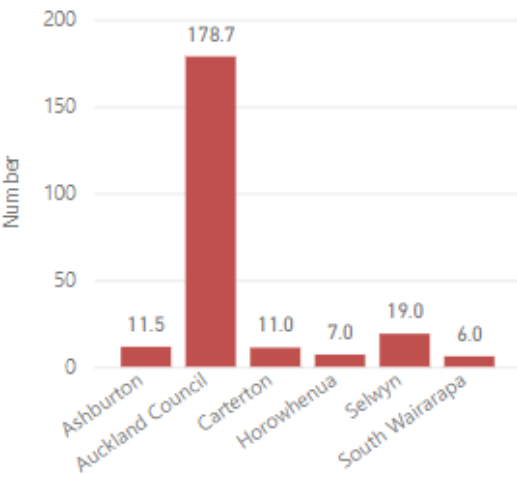
In some cases, depending on the data value provided and/or associated commentary, the questions changed or were worded slightly different from organisation to organisation. The written responses were reviewed, and further follow-up questions/clarifications were identified, which were then addressed in the online audit meetings. Online audit meetings were held with all six organisations.

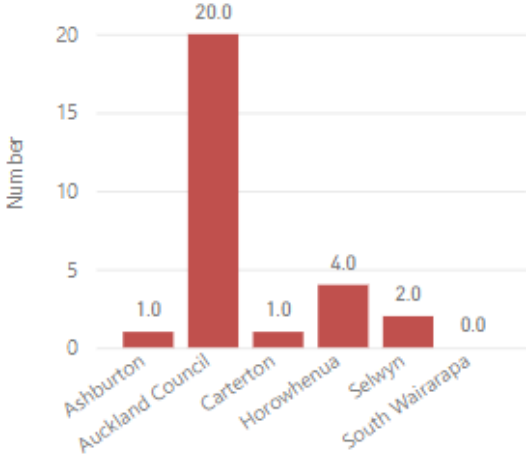
Where responses to audit measure questions were quite clear and unambiguous, often this meant no additional questions were asked.

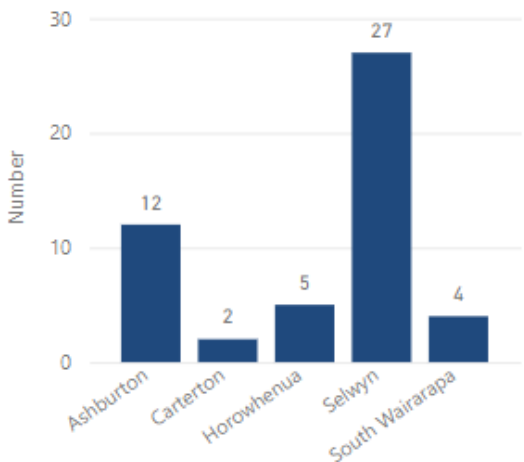
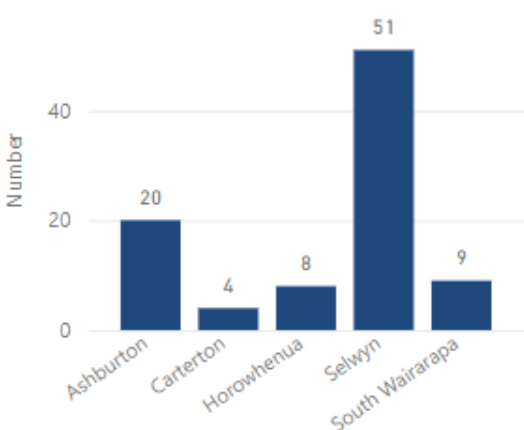
The questions and the documented responses to those questions are included in Appendix A. Issues, observations and commentary on the measures audited are covered in Section 3.0.

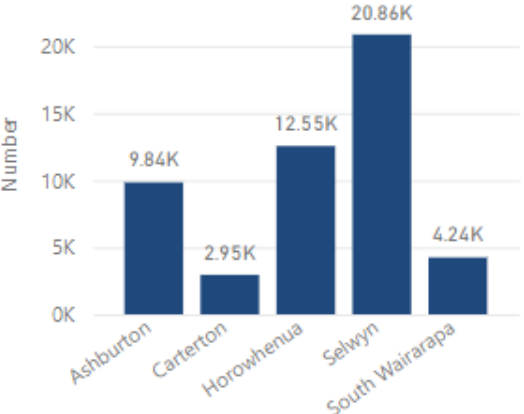
3.0 Audit Findings

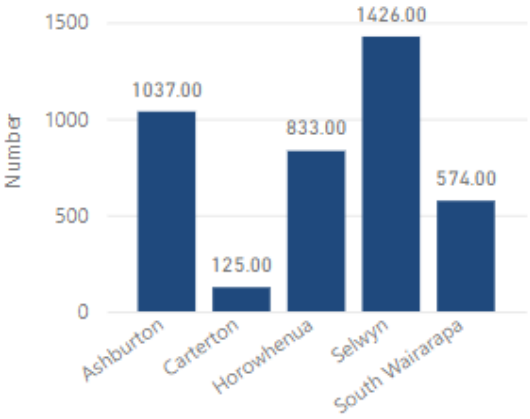
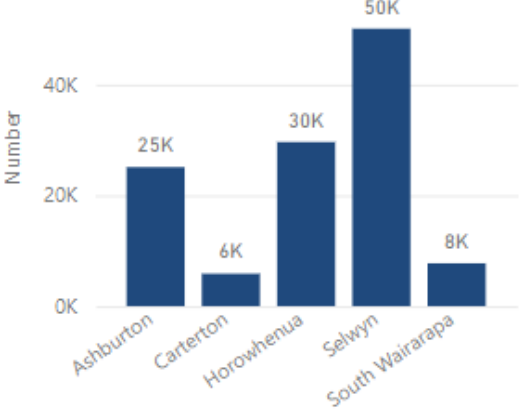
Table 2 Audit Findings

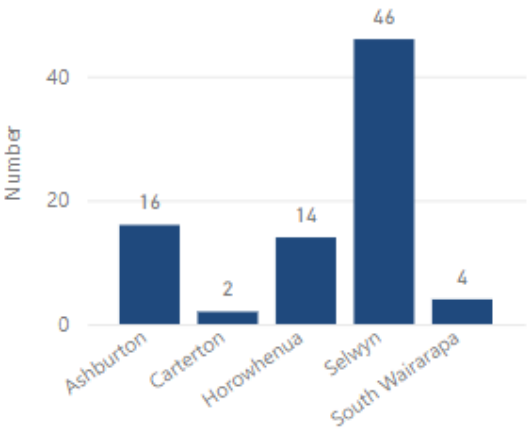
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations														
Common																
<p>CB10: Internal staff</p>  <table border="1" data-bbox="190 606 705 1085"> <caption>Internal Staff Data</caption> <thead> <tr> <th>Organization</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>11.5</td> </tr> <tr> <td>Auckland Council</td> <td>178.7</td> </tr> <tr> <td>Carterton</td> <td>11.0</td> </tr> <tr> <td>Horowhenua</td> <td>7.0</td> </tr> <tr> <td>Selwyn</td> <td>19.0</td> </tr> <tr> <td>South Wairarapa</td> <td>6.0</td> </tr> </tbody> </table>	Organization	Number	Ashburton	11.5	Auckland Council	178.7	Carterton	11.0	Horowhenua	7.0	Selwyn	19.0	South Wairarapa	6.0	<p>All organisations were able to report data values and none reported having any problems.</p> <p>The average data confidence across the five organisations that did provide a rating was between “Highly Reliable”.</p>	<p>It has been previously suggested that it would be easier to have a measure that reports the number of staff whose time is fully dedicated solely to 3 waters service delivery. Then have a separate measure for those in supporting roles who only devote part of their time to 3 waters service delivery. This is an area that the National Transition Unit is currently wrestling with as part of its water reform work.</p> <p>We still support the suggestion but possibly the second measure could be split into two – so maybe have one measure for those who spend less than 100% of their time but more than 50% and another measure for those that spend less than 50% of their time.</p> <p>If the suggestion is adopted, we recommend the measures be audited next year.</p>
Organization	Number															
Ashburton	11.5															
Auckland Council	178.7															
Carterton	11.0															
Horowhenua	7.0															
Selwyn	19.0															
South Wairarapa	6.0															

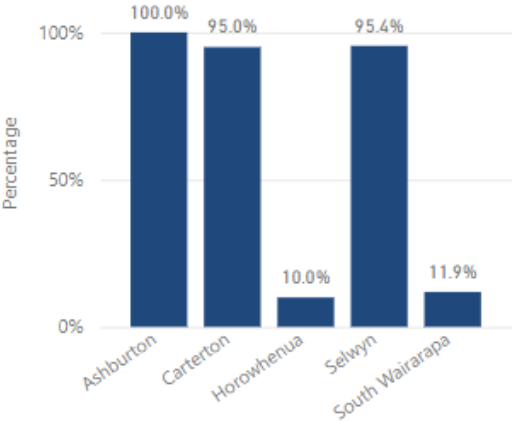
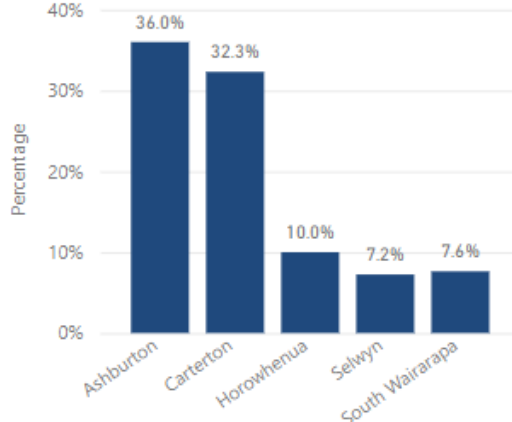
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations														
<p>CB10a: Staff vacancies</p>  <table border="1"> <caption>Staff Vacancies Data</caption> <thead> <tr> <th>Organization</th> <th>Number of Vacancies</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>1.0</td> </tr> <tr> <td>Auckland Council</td> <td>20.0</td> </tr> <tr> <td>Carterton</td> <td>1.0</td> </tr> <tr> <td>Horowhenua</td> <td>4.0</td> </tr> <tr> <td>Selwyn</td> <td>2.0</td> </tr> <tr> <td>South Wairarapa</td> <td>0.0</td> </tr> </tbody> </table>	Organization	Number of Vacancies	Ashburton	1.0	Auckland Council	20.0	Carterton	1.0	Horowhenua	4.0	Selwyn	2.0	South Wairarapa	0.0	<p>All organisations were able to report data values and none reported having any problems.</p> <p>The average data confidence across the five organisations that did provide a rating was “Reliable”.</p>	<p>This measure is a good indicator of the current state of resourcing within the water industry. With the impending water reform people are starting to move around within the industry as well as some completely leaving the industry.</p> <p>It would be worthwhile continuing to monitor this measure and we suggest it be included in next year’s NPR audit.</p>
Organization	Number of Vacancies															
Ashburton	1.0															
Auckland Council	20.0															
Carterton	1.0															
Horowhenua	4.0															
Selwyn	2.0															
South Wairarapa	0.0															
<p>Water Supply</p>																

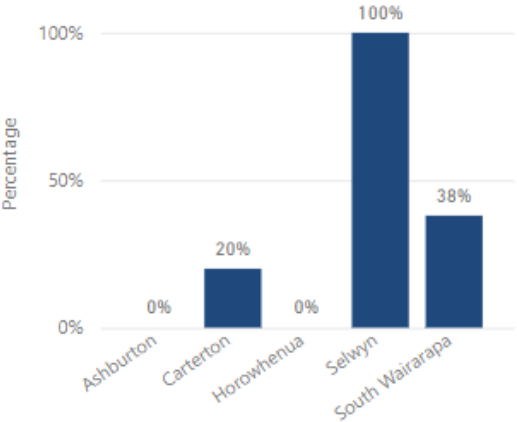
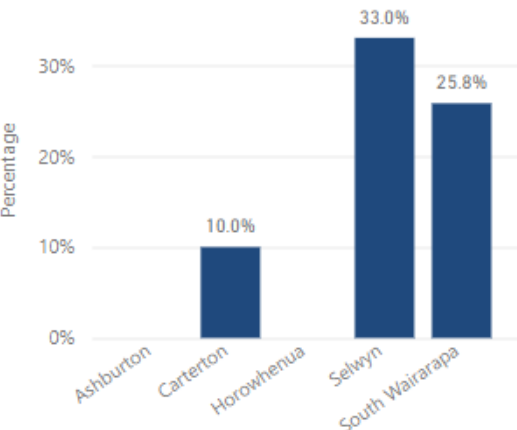
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WST1: Drinking water networks</p>  <table border="1"> <caption>Data for WST1: Drinking water networks</caption> <thead> <tr> <th>Region</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>12</td> </tr> <tr> <td>Carterton</td> <td>2</td> </tr> <tr> <td>Horowhenua</td> <td>5</td> </tr> <tr> <td>Selwyn</td> <td>27</td> </tr> <tr> <td>South Wairarapa</td> <td>4</td> </tr> </tbody> </table>	Region	Number	Ashburton	12	Carterton	2	Horowhenua	5	Selwyn	27	South Wairarapa	4	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>There were no issues with this measure, but some clarity is needed around interconnected networks, especially those with more than one source.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>We recommend that all the responses to this measure be reviewed and if there are any permutations that differ from the current definition of a drinking water network, then seek clarification from Taumata Arowai and modify the definition if required.</p> <p>If the definition is amended, we recommend this measure be included in next year's NPR audit.</p>
Region	Number													
Ashburton	12													
Carterton	2													
Horowhenua	5													
Selwyn	27													
South Wairarapa	4													
<p>WST2: Drinking water abstraction points</p>  <table border="1"> <caption>Data for WST2: Drinking water abstraction points</caption> <thead> <tr> <th>Region</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>20</td> </tr> <tr> <td>Carterton</td> <td>4</td> </tr> <tr> <td>Horowhenua</td> <td>8</td> </tr> <tr> <td>Selwyn</td> <td>51</td> </tr> <tr> <td>South Wairarapa</td> <td>9</td> </tr> </tbody> </table>	Region	Number	Ashburton	20	Carterton	4	Horowhenua	8	Selwyn	51	South Wairarapa	9	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>There were no issues with this measure, but some clarity is needed for situations where an organisation is being supplied from another organisation.</p> <p>The average data confidence across the four organisations that did provide a rating was "Reliable".</p>	<p>We recommend that clarification be sought from Taumata Arowai where organisations are receiving drinking water from another organisation i.e. should an organisation count those abstraction points that are in another jurisdictional area?</p> <p>If the definition is amended, we recommend this measure be included in next year's NPR audit.</p>
Region	Number													
Ashburton	20													
Carterton	4													
Horowhenua	8													
Selwyn	51													
South Wairarapa	9													

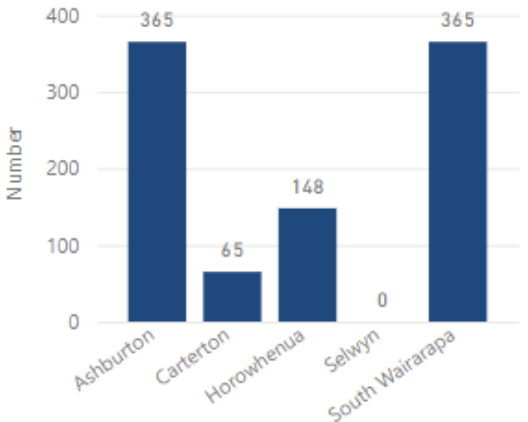
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WST3: Drinking water network source</p> <table border="1"> <tr> <td>Ashburton</td> <td>Other (include detail in comments field)</td> </tr> <tr> <td>Carterton</td> <td>Other (include detail in comments field)</td> </tr> <tr> <td>Horowhenua</td> <td>Other (include detail in comments field)</td> </tr> <tr> <td>Selwyn</td> <td>Other (include detail in comments field)</td> </tr> <tr> <td>South Wairarapa</td> <td>Bore</td> </tr> </table>	Ashburton	Other (include detail in comments field)	Carterton	Other (include detail in comments field)	Horowhenua	Other (include detail in comments field)	Selwyn	Other (include detail in comments field)	South Wairarapa	Bore	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>There were no issues with this measure, but some clarity is needed around the different names used for different sources e.g. an infiltration gallery can be called a horizontal bore. 'Other' was typically used when there were multiple source types but maybe 'Multiple' would be more appropriate.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>We recommend that clarity be sought from Taumata Arowai around the naming options for different source types and a full list be included in the definitions guide. Modify the dropdown options in the spreadsheet and consider using 'Multiple' for when there are multiple source types.</p> <p>If the definition is amended, we recommend this measure be included in next year's NPR audit.</p>		
Ashburton	Other (include detail in comments field)													
Carterton	Other (include detail in comments field)													
Horowhenua	Other (include detail in comments field)													
Selwyn	Other (include detail in comments field)													
South Wairarapa	Bore													
<p>WSB2: Residential connections in the drinking water network</p>  <table border="1"> <caption>Residential connections in the drinking water network</caption> <thead> <tr> <th>Region</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>9.84K</td> </tr> <tr> <td>Carterton</td> <td>2.95K</td> </tr> <tr> <td>Horowhenua</td> <td>12.55K</td> </tr> <tr> <td>Selwyn</td> <td>20.86K</td> </tr> <tr> <td>South Wairarapa</td> <td>4.24K</td> </tr> </tbody> </table>	Region	Number	Ashburton	9.84K	Carterton	2.95K	Horowhenua	12.55K	Selwyn	20.86K	South Wairarapa	4.24K	<p>All organisations were able to report data values and most did not have any problems.</p> <p>At least one organisation struggled with the inclusion of multi-unit buildings, saying that they did not hold data down at that level.</p> <p>The average data confidence across the five organisations was "Less Reliable".</p>	<p>There is still some indecision or uncertainty around the counting of multi-unit buildings. We recommend that this measure be included in next year's NPR audit.</p>
Region	Number													
Ashburton	9.84K													
Carterton	2.95K													
Horowhenua	12.55K													
Selwyn	20.86K													
South Wairarapa	4.24K													

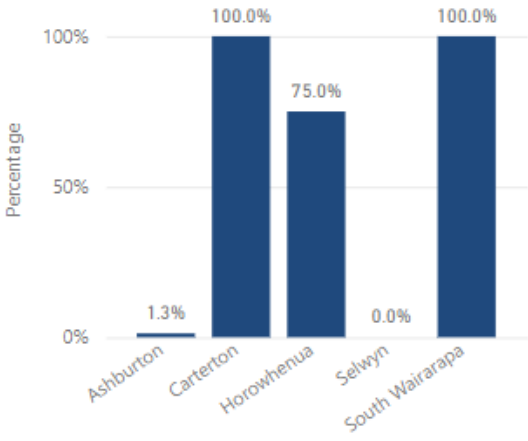
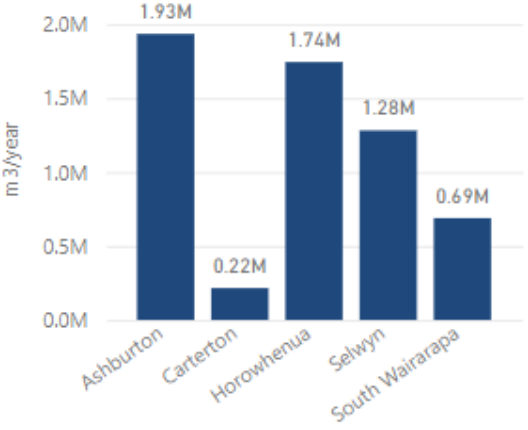
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WSB3: Non-residential connections in the drinking water network</p>  <table border="1"> <caption>WSB3: Non-residential connections in the drinking water network</caption> <thead> <tr> <th>Region</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>1037.00</td> </tr> <tr> <td>Carterton</td> <td>125.00</td> </tr> <tr> <td>Horowhenua</td> <td>833.00</td> </tr> <tr> <td>Selwyn</td> <td>1426.00</td> </tr> <tr> <td>South Wairarapa</td> <td>574.00</td> </tr> </tbody> </table>	Region	Number	Ashburton	1037.00	Carterton	125.00	Horowhenua	833.00	Selwyn	1426.00	South Wairarapa	574.00	<p>All organisations were able to report data values, and none reported having any problems.</p> <p>The average data confidence across the five organisations was "Reliable".</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year's audit.</p>
Region	Number													
Ashburton	1037.00													
Carterton	125.00													
Horowhenua	833.00													
Selwyn	1426.00													
South Wairarapa	574.00													
<p>WSB1a: Total population served by the drinking water network</p>  <table border="1"> <caption>WSB1a: Total population served by the drinking water network</caption> <thead> <tr> <th>Region</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>25K</td> </tr> <tr> <td>Carterton</td> <td>6K</td> </tr> <tr> <td>Horowhenua</td> <td>30K</td> </tr> <tr> <td>Selwyn</td> <td>50K</td> </tr> <tr> <td>South Wairarapa</td> <td>8K</td> </tr> </tbody> </table>	Region	Number	Ashburton	25K	Carterton	6K	Horowhenua	30K	Selwyn	50K	South Wairarapa	8K	<p>This year organisations were able to enter their own data values, whereas last year the values were calculated based on other data.</p> <p>The only issue seemed to be how this year's values compared to last year with the difference being attributed to the fact organisations were now entering their own values.</p> <p>The average data confidence across the five organisations was "Reliable".</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year's audit.</p>
Region	Number													
Ashburton	25K													
Carterton	6K													
Horowhenua	30K													
Selwyn	50K													
South Wairarapa	8K													

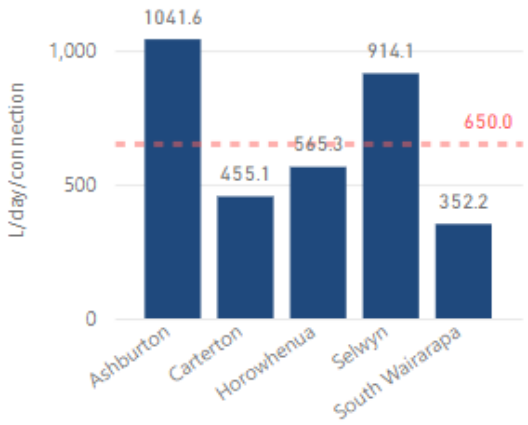
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WST4: Number of resource consents that are held</p>  <table border="1" data-bbox="190 438 716 869"> <caption>Number of resource consents held by organization</caption> <thead> <tr> <th>Organization</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>16</td> </tr> <tr> <td>Carterton</td> <td>2</td> </tr> <tr> <td>Horowhenua</td> <td>14</td> </tr> <tr> <td>Selwyn</td> <td>46</td> </tr> <tr> <td>South Wairarapa</td> <td>4</td> </tr> </tbody> </table>	Organization	Number	Ashburton	16	Carterton	2	Horowhenua	14	Selwyn	46	South Wairarapa	4	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>It is a relatively straightforward measure, and all five organisations were able to report a data value.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year's audit.</p>
Organization	Number													
Ashburton	16													
Carterton	2													
Horowhenua	14													
Selwyn	46													
South Wairarapa	4													
<p>WST5: Type of resource consents</p> <table border="1" data-bbox="190 941 716 1268"> <thead> <tr> <th>Organization</th> <th>Type of resource consents</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>Water permits - take, use, dam, and divert</td> </tr> <tr> <td>Carterton</td> <td>Water permits - take, use, dam, and divert</td> </tr> <tr> <td>Horowhenua</td> <td>Other (include detail in comments field)</td> </tr> <tr> <td>Selwyn</td> <td>Water permits - take, use, dam, and divert</td> </tr> <tr> <td>South Wairarapa</td> <td>Water permits - take, use, dam, and divert</td> </tr> </tbody> </table>	Organization	Type of resource consents	Ashburton	Water permits - take, use, dam, and divert	Carterton	Water permits - take, use, dam, and divert	Horowhenua	Other (include detail in comments field)	Selwyn	Water permits - take, use, dam, and divert	South Wairarapa	Water permits - take, use, dam, and divert	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>There were no real issues with this measure other than one organisation not neatly fitting into the dropdown list options.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>We recommend that a review be done of all organisations reporting 'Other' consent types and, if necessary, add further options into the dropdown list. The other option is to add further definition around what can fit into each dropdown option.</p> <p>If the dropdowns and/or definition is amended, we recommend that this measure be included in next year's NPR audit.</p>
Organization	Type of resource consents													
Ashburton	Water permits - take, use, dam, and divert													
Carterton	Water permits - take, use, dam, and divert													
Horowhenua	Other (include detail in comments field)													
Selwyn	Water permits - take, use, dam, and divert													
South Wairarapa	Water permits - take, use, dam, and divert													

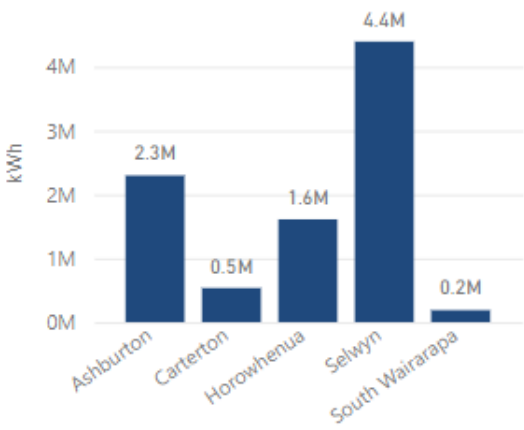
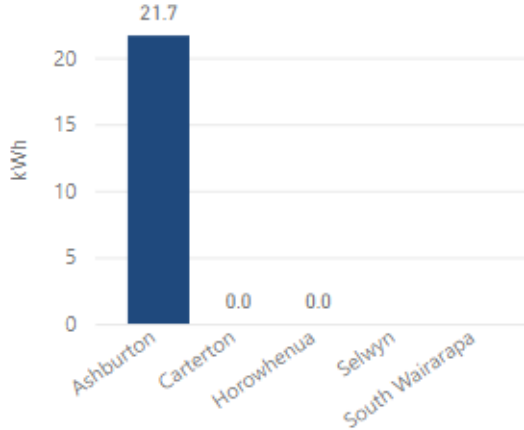
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WSA2f: Percentage of pipelines that have received a condition grading</p>  <table border="1"> <caption>Data for WSA2f: Percentage of pipelines that have received a condition grading</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>100.0%</td> </tr> <tr> <td>Carterton</td> <td>95.0%</td> </tr> <tr> <td>Horowhenua</td> <td>10.0%</td> </tr> <tr> <td>Selwyn</td> <td>95.4%</td> </tr> <tr> <td>South Wairarapa</td> <td>11.9%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	100.0%	Carterton	95.0%	Horowhenua	10.0%	Selwyn	95.4%	South Wairarapa	11.9%	<p>The definition for this measure has been turned around and organisations were asked to report on the % of pipelines that had received a condition grading rather than the % that had not received a condition grading.</p> <p>All organisations were able to report data values. The most notable observation was the different approaches taken, although the data confidence reported was almost identical across all five organisations.</p> <p>The average data confidence across the five organisations was “Less Reliable”.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year’s audit.</p>
Organization	Percentage													
Ashburton	100.0%													
Carterton	95.0%													
Horowhenua	10.0%													
Selwyn	95.4%													
South Wairarapa	11.9%													
<p>WSA2d: Percentage of pipelines in poor or very poor condition</p>  <table border="1"> <caption>Data for WSA2d: Percentage of pipelines in poor or very poor condition</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>36.0%</td> </tr> <tr> <td>Carterton</td> <td>32.3%</td> </tr> <tr> <td>Horowhenua</td> <td>10.0%</td> </tr> <tr> <td>Selwyn</td> <td>7.2%</td> </tr> <tr> <td>South Wairarapa</td> <td>7.6%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	36.0%	Carterton	32.3%	Horowhenua	10.0%	Selwyn	7.2%	South Wairarapa	7.6%	<p>The definition for this measure was changed from requiring 1 to 5 gradings.</p> <p>All organisations were able to report data values. The most notable observation was the different approaches taken, although the data confidence reported was almost identical across all five organisations.</p> <p>The average data confidence across the five organisations was “Less Reliable”.</p>	<p>There has been a lot of pipeline renewals activity happening, and continues to happen, which should see a reduction in the number of poor and very poor condition pipelines.</p> <p>We recommend that this measure be included in next year’s audit to see how noticeable the reduction in poor and very poor condition pipelines is.</p>
Organization	Percentage													
Ashburton	36.0%													
Carterton	32.3%													
Horowhenua	10.0%													
Selwyn	7.2%													
South Wairarapa	7.6%													

Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations										
<p>WSA13c: Percentage of above ground assets that have received a condition grading</p>  <table border="1"> <caption>Condition Grading Data</caption> <thead> <tr> <th>Region</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0%</td> </tr> <tr> <td>Carterton</td> <td>20%</td> </tr> <tr> <td>Horowhenua</td> <td>0%</td> </tr> <tr> <td>Selwyn</td> <td>100%</td> </tr> </tbody> </table>	Region	Percentage	Ashburton	0%	Carterton	20%	Horowhenua	0%	Selwyn	100%	<p>Previously, this measure asked if a condition grading had been done, but for this year's audit, the definition has been changed and now aligns with WSA2f.</p> <p>All organisations were able to report data values, and none reported having any problems.</p> <p>The average data confidence across the four organisations that did provide a rating was "Reliable".</p>	<p>We recommend that this measure be included in next year's audit, as it goes hand in hand with measures WSA2d+WSA2g below.</p>
Region	Percentage											
Ashburton	0%											
Carterton	20%											
Horowhenua	0%											
Selwyn	100%											
<p>WSA2d+WSA2g: Percentage of above ground assets in poor or very poor condition</p>  <table border="1"> <caption>Assets in Poor or Very Poor Condition Data</caption> <thead> <tr> <th>Region</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0%</td> </tr> <tr> <td>Carterton</td> <td>10.0%</td> </tr> <tr> <td>Horowhenua</td> <td>0%</td> </tr> <tr> <td>Selwyn</td> <td>33.0%</td> </tr> </tbody> </table>	Region	Percentage	Ashburton	0%	Carterton	10.0%	Horowhenua	0%	Selwyn	33.0%	<p>This measure is a combination of two previous measures that both asked for 1 to 5 gradings.</p> <p>With this, and other measures, it can be unclear whether to leave a data value blank or enter 0%. Depending on the context entering 0% can be misleading which turned out to be the case with this measure and corrections were required.</p> <p>The average data confidence across the four organisations that did provide a rating was "Less Reliable".</p>	<p>Due to the uncertainty around the use of blanks and 0% we recommend that this measure be included in next year's audit.</p>
Region	Percentage											
Ashburton	0%											
Carterton	10.0%											
Horowhenua	0%											
Selwyn	33.0%											

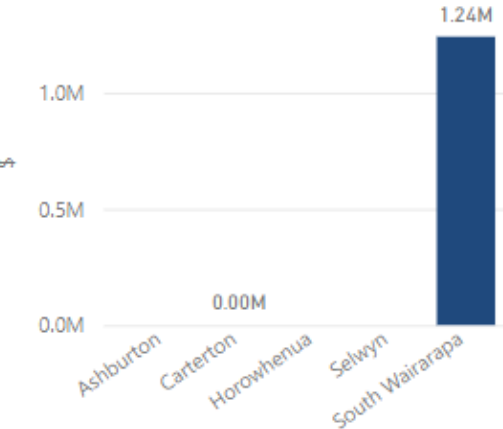
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WST8: Has a reference level for water pressure</p> <table border="1" data-bbox="190 430 716 622"> <tr><td>Ashburton</td><td>No</td></tr> <tr><td>Carterton</td><td>No</td></tr> <tr><td>Horowhenua</td><td>Yes</td></tr> <tr><td>Selwyn</td><td>Yes</td></tr> <tr><td>South Wairarapa</td><td>Yes</td></tr> </table>	Ashburton	No	Carterton	No	Horowhenua	Yes	Selwyn	Yes	South Wairarapa	Yes	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>It is a relatively straightforward measure, and all five organisations were able to report a data value.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year's audit.</p>		
Ashburton	No													
Carterton	No													
Horowhenua	Yes													
Selwyn	Yes													
South Wairarapa	Yes													
<p>WSS11: Number of days water restrictions applied</p>  <table border="1" data-bbox="190 702 716 1125"> <caption>WSS11: Number of days water restrictions applied</caption> <thead> <tr> <th>Region</th> <th>Number of Days</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>365</td> </tr> <tr> <td>Carterton</td> <td>65</td> </tr> <tr> <td>Horowhenua</td> <td>148</td> </tr> <tr> <td>Selwyn</td> <td>0</td> </tr> <tr> <td>South Wairarapa</td> <td>365</td> </tr> </tbody> </table>	Region	Number of Days	Ashburton	365	Carterton	65	Horowhenua	148	Selwyn	0	South Wairarapa	365	<p>Previously this measure reported (properties x days), but now just requires number of days.</p> <p>It is a relatively straightforward measure, and all five organisations were able to report a data value.</p> <p>The average data confidence across the five organisations was "Reliable".</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year's audit.</p>
Region	Number of Days													
Ashburton	365													
Carterton	65													
Horowhenua	148													
Selwyn	0													
South Wairarapa	365													

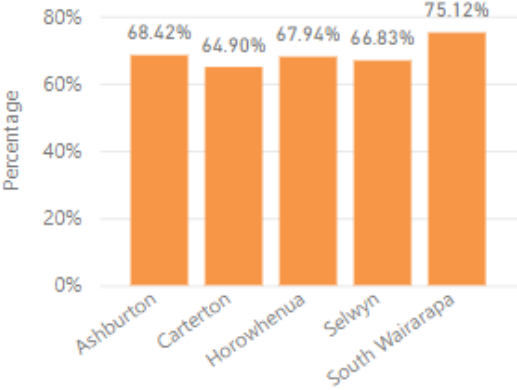
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WST9: Number of connections affected by restrictions</p>  <table border="1"> <caption>Data for WST9: Number of connections affected by restrictions</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>1.3%</td> </tr> <tr> <td>Carterton</td> <td>100.0%</td> </tr> <tr> <td>Horowhenua</td> <td>75.0%</td> </tr> <tr> <td>Selwyn</td> <td>0.0%</td> </tr> <tr> <td>South Wairarapa</td> <td>100.0%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	1.3%	Carterton	100.0%	Horowhenua	75.0%	Selwyn	0.0%	South Wairarapa	100.0%	<p>This measure is now the second part of what used to be included in WSS11 but is also now reported as a %.</p> <p>It is a relatively straightforward measure, and all five organisations were able to report a data value.</p> <p>The average data confidence across the four organisations that did provide a rating was “Reliable”.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year’s audit.</p>
Organization	Percentage													
Ashburton	1.3%													
Carterton	100.0%													
Horowhenua	75.0%													
Selwyn	0.0%													
South Wairarapa	100.0%													
<p>WSE1a: Estimated total network water loss</p>  <table border="1"> <caption>Data for WSE1a: Estimated total network water loss</caption> <thead> <tr> <th>Organization</th> <th>Estimated total network water loss (m³/year)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>1.93M</td> </tr> <tr> <td>Carterton</td> <td>0.22M</td> </tr> <tr> <td>Horowhenua</td> <td>1.74M</td> </tr> <tr> <td>Selwyn</td> <td>1.28M</td> </tr> <tr> <td>South Wairarapa</td> <td>0.69M</td> </tr> </tbody> </table>	Organization	Estimated total network water loss (m³/year)	Ashburton	1.93M	Carterton	0.22M	Horowhenua	1.74M	Selwyn	1.28M	South Wairarapa	0.69M	<p>The definition for this measure has been re-worDED slightly but is essentially requiring the same data.</p> <p>None of the organisations appeared to have any problems reporting a data value.</p> <p>The average data confidence across the five organisations was between “Less Reliable” and “Reliable”.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year’s audit.</p>
Organization	Estimated total network water loss (m³/year)													
Ashburton	1.93M													
Carterton	0.22M													
Horowhenua	1.74M													
Selwyn	1.28M													
South Wairarapa	0.69M													

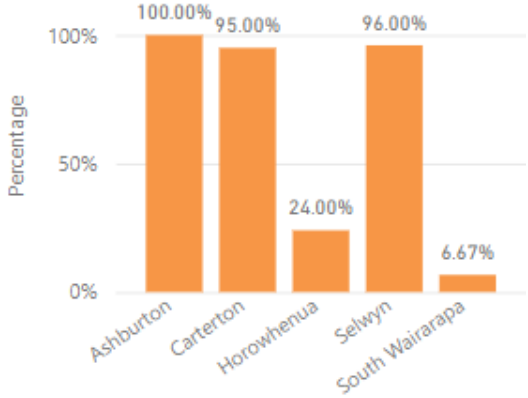
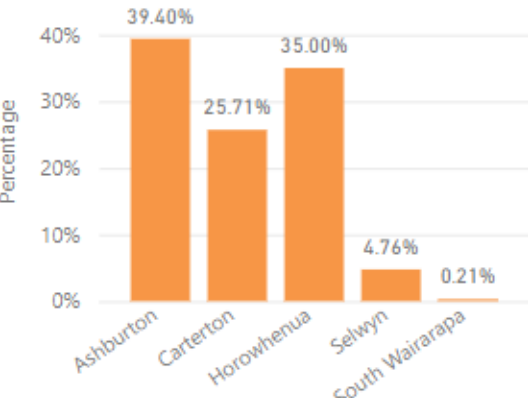
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations														
<p>WSB8: Average Daily Residential Water Consumption</p>  <table border="1" data-bbox="190 459 716 885"> <caption>WSB8: Average Daily Residential Water Consumption</caption> <thead> <tr> <th>Region</th> <th>Consumption (L/day/connection)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>1041.6</td> </tr> <tr> <td>Carterton</td> <td>455.1</td> </tr> <tr> <td>Horowhenua</td> <td>565.3</td> </tr> <tr> <td>Selwyn</td> <td>914.1</td> </tr> <tr> <td>South Wairarapa</td> <td>352.2</td> </tr> <tr> <td>Median (Red Line)</td> <td>650.0</td> </tr> </tbody> </table>	Region	Consumption (L/day/connection)	Ashburton	1041.6	Carterton	455.1	Horowhenua	565.3	Selwyn	914.1	South Wairarapa	352.2	Median (Red Line)	650.0	<p>This calculated measure was audited last year. It was recommended that it be kept as an audit measure, as it highlights the correctness or otherwise of a range of other contributing data values.</p> <p>There may have been some confusion this year as the measure description says L/day/connection whereas the unit column says L/person/day. One organisation had changed the calculation back to L/person/day.</p> <p>Overall, the calculated measure did not highlight any data issues.</p> <p>The 650 red line value represents the median consumption across all NPR participants in this year's audit.</p>	<p>We recommend that this measure be kept as an audit measure, as it is a useful indicator of the correctness or otherwise of a range of other contributing data values.</p>
Region	Consumption (L/day/connection)															
Ashburton	1041.6															
Carterton	455.1															
Horowhenua	565.3															
Selwyn	914.1															
South Wairarapa	352.2															
Median (Red Line)	650.0															
<p>WST10: Is there a water conservation programme in place</p> <table border="1" data-bbox="190 981 728 1173"> <tbody> <tr> <td>Ashburton</td> <td>Yes</td> </tr> <tr> <td>Carterton</td> <td>Yes</td> </tr> <tr> <td>Horowhenua</td> <td>Yes</td> </tr> <tr> <td>Selwyn</td> <td>Yes</td> </tr> <tr> <td>South Wairarapa</td> <td>Yes</td> </tr> </tbody> </table>	Ashburton	Yes	Carterton	Yes	Horowhenua	Yes	Selwyn	Yes	South Wairarapa	Yes	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>It is a relatively straightforward measure, and all five organisations were able to report a data value.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year's audit.</p>				
Ashburton	Yes															
Carterton	Yes															
Horowhenua	Yes															
Selwyn	Yes															
South Wairarapa	Yes															

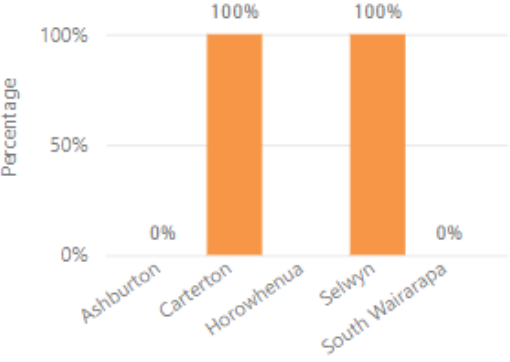
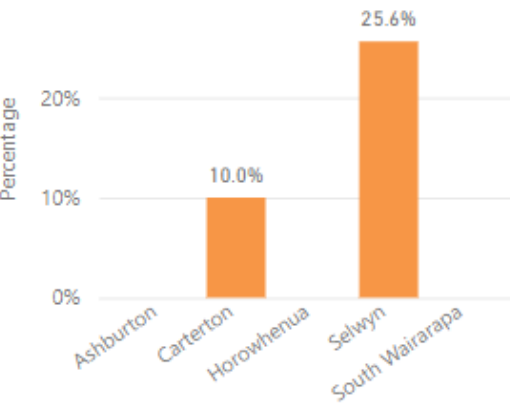
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WSE3: Water supply grid electricity use</p>  <table border="1"> <caption>WSE3: Water supply grid electricity use (kWh)</caption> <thead> <tr> <th>Organization</th> <th>Value (kWh)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>2.3M</td> </tr> <tr> <td>Carterton</td> <td>0.5M</td> </tr> <tr> <td>Horowhenua</td> <td>1.6M</td> </tr> <tr> <td>Selwyn</td> <td>4.4M</td> </tr> <tr> <td>South Wairarapa</td> <td>0.2M</td> </tr> </tbody> </table>	Organization	Value (kWh)	Ashburton	2.3M	Carterton	0.5M	Horowhenua	1.6M	Selwyn	4.4M	South Wairarapa	0.2M	<p>Previously this measure included electricity use from all sources including fuel but now only relates to grid electricity use.</p> <p>There were no real issues with this measure although one organisation (Horowhenua) could only provide last year's data value.</p> <p>The average data confidence across the five organisations was "Reliable".</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year's audit.</p>
Organization	Value (kWh)													
Ashburton	2.3M													
Carterton	0.5M													
Horowhenua	1.6M													
Selwyn	4.4M													
South Wairarapa	0.2M													
<p>WSE3a: Water supply energy use from other fuels</p>  <table border="1"> <caption>WSE3a: Water supply energy use from other fuels (kWh)</caption> <thead> <tr> <th>Organization</th> <th>Value (kWh)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>21.7</td> </tr> <tr> <td>Carterton</td> <td>0.0</td> </tr> <tr> <td>Horowhenua</td> <td>0.0</td> </tr> <tr> <td>South Wairarapa</td> <td>0.0</td> </tr> </tbody> </table>	Organization	Value (kWh)	Ashburton	21.7	Carterton	0.0	Horowhenua	0.0	South Wairarapa	0.0	<p>This measure has been separated out from WS3 and the audit highlighted that organisations may struggle to provide this data.</p> <p>Standby generators are mainly used in an emergency and recording how much energy has been generated would be secondary to the emergency itself.</p> <p>The average data confidence across the four organisations that did provide a rating was "Reliable".</p>	<p>We recommend that this measure be included in next year's NPR audit. Energy use, particularly from fuels such as diesel, are becoming a big issue and it is important that organisations monitor, and be able to quantify, such use.</p>		
Organization	Value (kWh)													
Ashburton	21.7													
Carterton	0.0													
Horowhenua	0.0													
South Wairarapa	0.0													

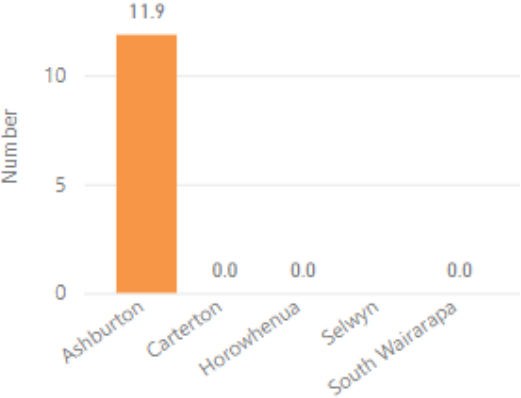
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations										
<p>WST11: Has an assessment been undertaken to identify critical assets</p> <table border="1"> <tr><td>Ashburton</td><td>Yes</td></tr> <tr><td>Carterton</td><td>Yes</td></tr> <tr><td>Horowhenua</td><td>Yes</td></tr> <tr><td>Selwyn</td><td>Yes</td></tr> <tr><td>South Wairarapa</td><td>Yes</td></tr> </table>	Ashburton	Yes	Carterton	Yes	Horowhenua	Yes	Selwyn	Yes	South Wairarapa	Yes	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>Unsurprisingly, all five organisations responded with a “Yes”.</p> <p>The dilemma though is that the average data confidence across the five organisations was “Reliable” which is not reflected in just a “Yes” data response.</p>	<p>We recommend that consideration be given to trying to reflect the data confidence of the assessments into the “Yes” data responses – maybe a “Yes1 to Yes5.</p> <p>If the recommendation is acted on and depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year’s audit.</p>
Ashburton	Yes											
Carterton	Yes											
Horowhenua	Yes											
Selwyn	Yes											
South Wairarapa	Yes											
<p>WSCC1: Has a climate change risk assessment been undertaken for water supply networks</p> <table border="1"> <tr><td>Ashburton</td><td>No</td></tr> <tr><td>Carterton</td><td>No</td></tr> <tr><td>Horowhenua</td><td>Yes</td></tr> <tr><td>Selwyn</td><td>Yes</td></tr> <tr><td>South Wairarapa</td><td>No</td></tr> </table>	Ashburton	No	Carterton	No	Horowhenua	Yes	Selwyn	Yes	South Wairarapa	No	<p>This was a new measure and all organisations were able to provide a data value. Those organisations that reported “No” do consider climate change in aspects of other work such as design.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>We recommend that this measure be included in next year’s NPR audit, to see if there is any trend towards actually doing formal assessments.</p>
Ashburton	No											
Carterton	No											
Horowhenua	Yes											
Selwyn	Yes											
South Wairarapa	No											
<p>WSCC2: Is there a climate change adaption plan in place for water supply networks</p> <table border="1"> <tr><td>Ashburton</td><td>No</td></tr> <tr><td>Carterton</td><td>No</td></tr> <tr><td>Horowhenua</td><td>No</td></tr> <tr><td>Selwyn</td><td>Yes</td></tr> <tr><td>South Wairarapa</td><td>No</td></tr> </table>	Ashburton	No	Carterton	No	Horowhenua	No	Selwyn	Yes	South Wairarapa	No	<p>Similar commentary as for WSCC1 above.</p>	<p>Similar commentary as for WSCC1 above.</p>
Ashburton	No											
Carterton	No											
Horowhenua	No											
Selwyn	Yes											
South Wairarapa	No											

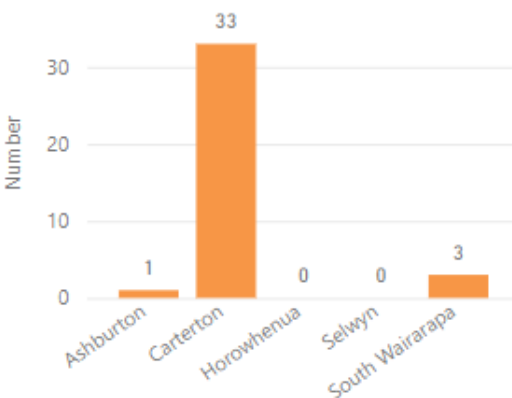
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WSCC3: Has an emissions baseline been set for forecast water supply investments</p> <table border="1" data-bbox="197 464 698 639"> <tr><td>Ashburton</td><td>No</td></tr> <tr><td>Carterton</td><td>No</td></tr> <tr><td>Horowhenua</td><td>No</td></tr> <tr><td>Selwyn</td><td>No</td></tr> <tr><td>South Wairarapa</td><td>No</td></tr> </table>	Ashburton	No	Carterton	No	Horowhenua	No	Selwyn	No	South Wairarapa	No	<p>This was a new measure and all organisations responded with a definite “No”.</p> <p>One organisation has a baseline, but it wasn’t used for forecast water supply investments. Another organisation was in the process of developing a baseline.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>As for WSCC1 and WSCC2, we recommend that this measure be included in next year’s NPR audit, to see if there is any emerging trend.</p>		
Ashburton	No													
Carterton	No													
Horowhenua	No													
Selwyn	No													
South Wairarapa	No													
<p>WSF11: Council Contract Management Costs: Water Supply</p>  <table border="1" data-bbox="197 751 698 1182"> <thead> <tr> <th>Region</th> <th>Cost (\$M)</th> </tr> </thead> <tbody> <tr><td>Ashburton</td><td>0.00M</td></tr> <tr><td>Carterton</td><td>0.00M</td></tr> <tr><td>Horowhenua</td><td>0.00M</td></tr> <tr><td>Selwyn</td><td>1.24M</td></tr> <tr><td>South Wairarapa</td><td>1.24M</td></tr> </tbody> </table>	Region	Cost (\$M)	Ashburton	0.00M	Carterton	0.00M	Horowhenua	0.00M	Selwyn	1.24M	South Wairarapa	1.24M	<p>Last year there was a certain amount of confusion (or difficulty) with this measure, which has continued this year.</p> <p>Some organisations cannot easily separate out their costs for managing contractors, but these costs are included in WSF10.</p> <p>The average data confidence across the three organisations that did provide a rating was “Highly Reliable” which may be slightly misleading.</p>	<p>There has been some discussion on whether to continue with this measure or remove it and emphasise that the costs be included in WSF10.</p> <p>In its current form, the question does not appear to add any real value.</p> <p>If the measure is kept, we recommend that it is included in next year’s NPR audit.</p>
Region	Cost (\$M)													
Ashburton	0.00M													
Carterton	0.00M													
Horowhenua	0.00M													
Selwyn	1.24M													
South Wairarapa	1.24M													
<p>Wastewater</p>														

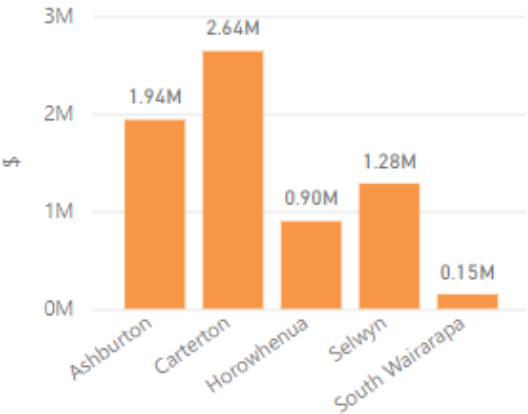
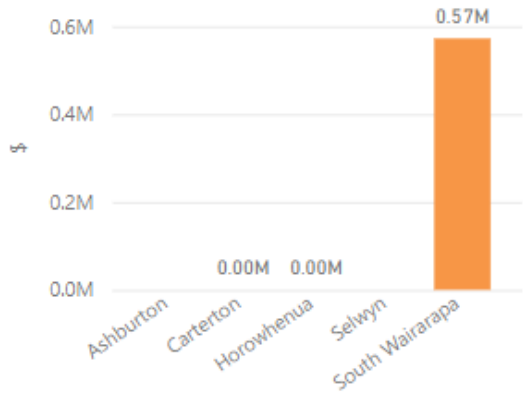
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WWE4g: Wet weather overflow regulation approach</p> <table border="1" data-bbox="197 467 701 671"> <tr> <td>Ashburton</td> <td>No regulatory approach</td> </tr> <tr> <td>Carterton</td> <td>Resource consent held for wet weather discharges</td> </tr> <tr> <td>Horowhenua</td> <td>Treated as emergency discharge</td> </tr> <tr> <td>Selwyn</td> <td>Treated as emergency discharge</td> </tr> <tr> <td>South Wairarapa</td> <td>No regulatory approach</td> </tr> </table>	Ashburton	No regulatory approach	Carterton	Resource consent held for wet weather discharges	Horowhenua	Treated as emergency discharge	Selwyn	Treated as emergency discharge	South Wairarapa	No regulatory approach	<p>The inclusion of the measure was recommended from last year's audit, mainly based on the lack of data confidence that was expressed.</p> <p>This year data confidence was not required to be reported but one organisation was unsure about the data value they provided.</p>	<p>We recommend that this measure be included in next year's NPR audit to keep a watch on how confident organisations are when reporting against this measure. It is also important to see how many organisations still do not have a regulatory approach to overflows.</p>		
Ashburton	No regulatory approach													
Carterton	Resource consent held for wet weather discharges													
Horowhenua	Treated as emergency discharge													
Selwyn	Treated as emergency discharge													
South Wairarapa	No regulatory approach													
<p>WWB1b: Wastewater Service Coverage</p>  <table border="1" data-bbox="197 770 712 1161"> <caption>Wastewater Service Coverage Data</caption> <thead> <tr> <th>Region</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>68.42%</td> </tr> <tr> <td>Carterton</td> <td>64.90%</td> </tr> <tr> <td>Horowhenua</td> <td>67.94%</td> </tr> <tr> <td>Selwyn</td> <td>66.83%</td> </tr> <tr> <td>South Wairarapa</td> <td>75.12%</td> </tr> </tbody> </table>	Region	Percentage	Ashburton	68.42%	Carterton	64.90%	Horowhenua	67.94%	Selwyn	66.83%	South Wairarapa	75.12%	<p>There were no issues with this calculated measure.</p>	<p>As with last year, this is a good audit measure to have – as well as being informative, it is a useful sensibility check on other data values. We recommend it be kept as an audit measure.</p>
Region	Percentage													
Ashburton	68.42%													
Carterton	64.90%													
Horowhenua	67.94%													
Selwyn	66.83%													
South Wairarapa	75.12%													

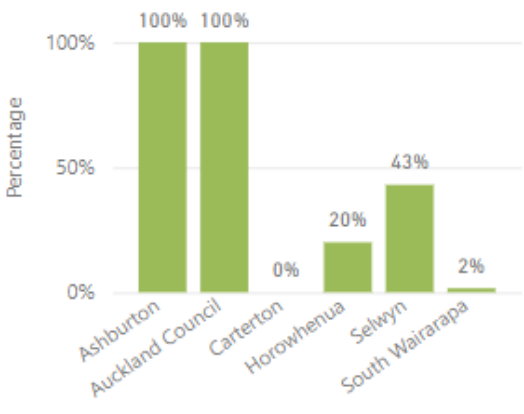
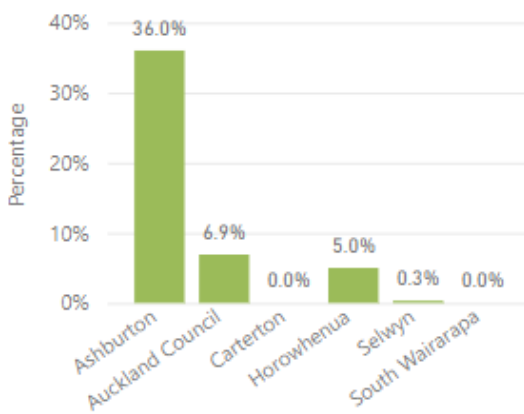
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WWA2f: Percentage of pipelines that have received a condition grading</p>  <table border="1" data-bbox="190 470 716 869"> <caption>Percentage of pipelines that have received a condition grading</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>100.00%</td> </tr> <tr> <td>Carterton</td> <td>95.00%</td> </tr> <tr> <td>Horowhenua</td> <td>24.00%</td> </tr> <tr> <td>Selwyn</td> <td>96.00%</td> </tr> <tr> <td>South Wairarapa</td> <td>6.67%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	100.00%	Carterton	95.00%	Horowhenua	24.00%	Selwyn	96.00%	South Wairarapa	6.67%	<p>The definition for this measure has been turned around and organisations were asked to report on the % of pipelines that had received a condition grading rather than the % that had not received a condition grading.</p> <p>All organisations were able to report data values, and the predominant method of condition grading was from CCTV.</p> <p>The average data confidence across the five organisations was “Less Reliable”.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year’s audit.</p>
Organization	Percentage													
Ashburton	100.00%													
Carterton	95.00%													
Horowhenua	24.00%													
Selwyn	96.00%													
South Wairarapa	6.67%													
<p>WWA2d: Percentage of pipelines in poor and very poor condition</p>  <table border="1" data-bbox="190 981 716 1380"> <caption>Percentage of pipelines in poor and very poor condition</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>39.40%</td> </tr> <tr> <td>Carterton</td> <td>25.71%</td> </tr> <tr> <td>Horowhenua</td> <td>35.00%</td> </tr> <tr> <td>Selwyn</td> <td>4.76%</td> </tr> <tr> <td>South Wairarapa</td> <td>0.21%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	39.40%	Carterton	25.71%	Horowhenua	35.00%	Selwyn	4.76%	South Wairarapa	0.21%	<p>The definition for this measure was changed from requiring 1 to 5 gradings.</p> <p>All organisations were able to report data values and the predominant method of condition grading was from CCTV.</p> <p>The average data confidence across the five organisations was “Less Reliable”.</p>	<p>There has been a lot of pipeline renewals activity happening and continues to happen, which should see a reduction in the number of poor and very poor condition pipelines.</p> <p>We recommend that this measure be included in next year’s audit to see how noticeable the reduction in poor and very poor condition pipelines is.</p>
Organization	Percentage													
Ashburton	39.40%													
Carterton	25.71%													
Horowhenua	35.00%													
Selwyn	4.76%													
South Wairarapa	0.21%													

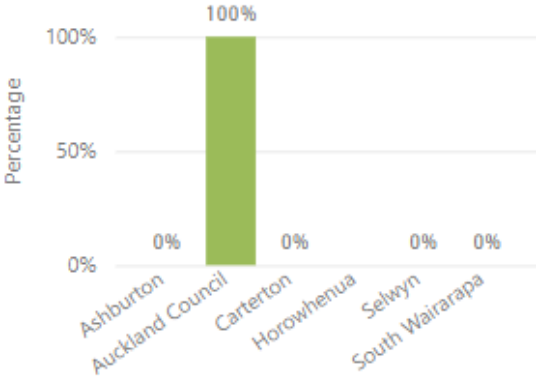
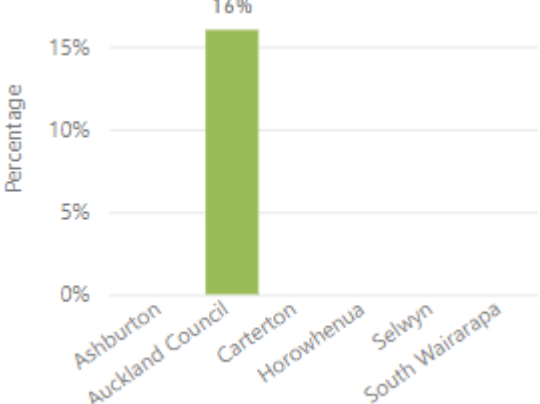
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WWA6: Percentage of above ground assets that have received a condition grading</p>  <table border="1"> <caption>WWA6: Percentage of above ground assets that have received a condition grading</caption> <thead> <tr> <th>Organisation</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0%</td> </tr> <tr> <td>Carterton</td> <td>100%</td> </tr> <tr> <td>Horowhenua</td> <td>0%</td> </tr> <tr> <td>Selwyn</td> <td>100%</td> </tr> <tr> <td>South Wairarapa</td> <td>0%</td> </tr> </tbody> </table>	Organisation	Percentage	Ashburton	0%	Carterton	100%	Horowhenua	0%	Selwyn	100%	South Wairarapa	0%	<p>Previously this measure asked if a condition grading had been done, but the definition has been changed and aligns with WWA2f.</p> <p>A mixed bag in terms of data values either 0% or 100% except for one organisation which did not know.</p> <p>The average data confidence across the four organisations that did provide a rating was "Reliable".</p>	<p>We recommend that this measure be included in next year's audit, as it is linked with WWT1 below.</p>
Organisation	Percentage													
Ashburton	0%													
Carterton	100%													
Horowhenua	0%													
Selwyn	100%													
South Wairarapa	0%													
<p>WWT1: Percentage of above ground assets in poor or very poor condition</p>  <table border="1"> <caption>WWT1: Percentage of above ground assets in poor or very poor condition</caption> <thead> <tr> <th>Organisation</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0%</td> </tr> <tr> <td>Carterton</td> <td>10.0%</td> </tr> <tr> <td>Horowhenua</td> <td>0%</td> </tr> <tr> <td>Selwyn</td> <td>25.6%</td> </tr> <tr> <td>South Wairarapa</td> <td>0%</td> </tr> </tbody> </table>	Organisation	Percentage	Ashburton	0%	Carterton	10.0%	Horowhenua	0%	Selwyn	25.6%	South Wairarapa	0%	<p>This is a new measure and the data values should align with WWA6, which they do.</p> <p>Three of the five organisations were uncertain or did not know what assets were in poor or very poor condition.</p> <p>The average data confidence across the four organisations that did provide a rating was "Less Reliable".</p>	<p>Given the level on uncertainty shown in the data values, we recommend that this measure be included in next year's audit.</p>
Organisation	Percentage													
Ashburton	0%													
Carterton	10.0%													
Horowhenua	0%													
Selwyn	25.6%													
South Wairarapa	0%													

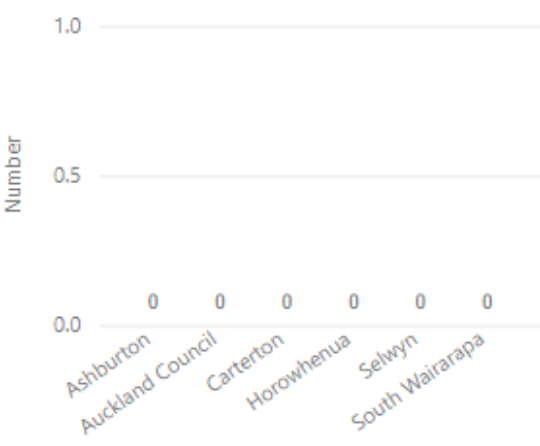
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WWT3: Wastewater energy use from other fuels</p>  <table border="1" data-bbox="197 438 716 837"> <caption>WWT3: Wastewater energy use from other fuels</caption> <thead> <tr> <th>Organization</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>11.9</td> </tr> <tr> <td>Carterton</td> <td>0.0</td> </tr> <tr> <td>Horowhenua</td> <td>0.0</td> </tr> <tr> <td>South Wairarapa</td> <td>0.0</td> </tr> </tbody> </table>	Organization	Number	Ashburton	11.9	Carterton	0.0	Horowhenua	0.0	South Wairarapa	0.0	<p>This measure has been separated out from WWE5a and most organisations were able to provide a data value.</p> <p>Standby generators are mainly used in an emergency and recording how much energy has been generated would be secondary to the emergency itself.</p> <p>The average data confidence across the four organisations that did provide a rating was "Reliable".</p>	<p>We recommend that this measure be included in next year's NPR audit. Energy use particularly from fuels such as diesel are becoming a big issue and it is important that organisations monitor and be able to quantify such use.</p>		
Organization	Number													
Ashburton	11.9													
Carterton	0.0													
Horowhenua	0.0													
South Wairarapa	0.0													
<p>WWCC1: Has a climate change risk assessment been undertaken for the wastewater networks</p> <table border="1" data-bbox="197 949 705 1125"> <thead> <tr> <th>Organization</th> <th>Response</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>No</td> </tr> <tr> <td>Carterton</td> <td>No</td> </tr> <tr> <td>Horowhenua</td> <td>No</td> </tr> <tr> <td>Selwyn</td> <td>Yes</td> </tr> <tr> <td>South Wairarapa</td> <td>No</td> </tr> </tbody> </table>	Organization	Response	Ashburton	No	Carterton	No	Horowhenua	No	Selwyn	Yes	South Wairarapa	No	<p>This was a new measure and all organisations were able to provide a data value. Those organisations that reported "No" do consider climate change in aspects of other work such as design.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>We recommend that this measure be included in next year's NPR audit to see if there is any trend towards actually doing formal assessments.</p>
Organization	Response													
Ashburton	No													
Carterton	No													
Horowhenua	No													
Selwyn	Yes													
South Wairarapa	No													
<p>WWCC2: Is there a climate change adaption plan in place for wastewater networks</p> <table border="1" data-bbox="197 1236 705 1412"> <thead> <tr> <th>Organization</th> <th>Response</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>No</td> </tr> <tr> <td>Carterton</td> <td>No</td> </tr> <tr> <td>Horowhenua</td> <td>No</td> </tr> <tr> <td>Selwyn</td> <td>Yes</td> </tr> <tr> <td>South Wairarapa</td> <td>No</td> </tr> </tbody> </table>	Organization	Response	Ashburton	No	Carterton	No	Horowhenua	No	Selwyn	Yes	South Wairarapa	No	<p>Similar commentary as for WWCC1 above.</p>	<p>Similar commentary as for WWCC1 above.</p>
Organization	Response													
Ashburton	No													
Carterton	No													
Horowhenua	No													
Selwyn	Yes													
South Wairarapa	No													

Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WWCC3: Has an emissions baseline been set for forecast wastewater investments</p> <table border="1" data-bbox="197 467 707 643"> <tr><td>Ashburton</td><td>No</td></tr> <tr><td>Carterton</td><td>No</td></tr> <tr><td>Horowhenua</td><td>No</td></tr> <tr><td>Selwyn</td><td>No</td></tr> <tr><td>South Wairarapa</td><td>No</td></tr> </table>	Ashburton	No	Carterton	No	Horowhenua	No	Selwyn	No	South Wairarapa	No	<p>This was a new measure and all organisations responded with a definite “No”.</p> <p>One organisation has a baseline, but it wasn’t used for forecast wastewater supply investments. Another organisation was in the process of developing a baseline.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>As for WWCC1 and WWCC2, we recommend that this measure be included in next year’s NPR audit to see if there is any emerging trend.</p>		
Ashburton	No													
Carterton	No													
Horowhenua	No													
Selwyn	No													
South Wairarapa	No													
<p>WWT4: Has an assessment been undertaken to identify critical wastewater assets</p> <table border="1" data-bbox="197 754 707 930"> <tr><td>Ashburton</td><td>Yes</td></tr> <tr><td>Carterton</td><td>Yes</td></tr> <tr><td>Horowhenua</td><td>Yes</td></tr> <tr><td>Selwyn</td><td>Yes</td></tr> <tr><td>South Wairarapa</td><td>Yes</td></tr> </table>	Ashburton	Yes	Carterton	Yes	Horowhenua	Yes	Selwyn	Yes	South Wairarapa	Yes	<p>This was a new measure and is based on the reporting requirements of Taumata Arowai.</p> <p>Unsurprisingly all five organisations responded with a “Yes”.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year’s audit. Also refer to WST11 Suggestions/Recommendations.</p>		
Ashburton	Yes													
Carterton	Yes													
Horowhenua	Yes													
Selwyn	Yes													
South Wairarapa	Yes													
<p>WWS4d: The authority’s response to issues with its sewerage system</p>  <table border="1" data-bbox="197 1026 707 1425"> <caption>Number of Complaints by Organization</caption> <thead> <tr> <th>Organization</th> <th>Number of Complaints</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>1</td> </tr> <tr> <td>Carterton</td> <td>33</td> </tr> <tr> <td>Horowhenua</td> <td>0</td> </tr> <tr> <td>Selwyn</td> <td>0</td> </tr> <tr> <td>South Wairarapa</td> <td>3</td> </tr> </tbody> </table>	Organization	Number of Complaints	Ashburton	1	Carterton	33	Horowhenua	0	Selwyn	0	South Wairarapa	3	<p>This has been a problematic measure in past years, in that some organisations did not fully understand that the measure is asking for the number of complaints about previously reported complaints. There did not appear to be any confusion this year.</p> <p>The average data confidence across the five organisations was “Reliable”.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year’s audit.</p>
Organization	Number of Complaints													
Ashburton	1													
Carterton	33													
Horowhenua	0													
Selwyn	0													
South Wairarapa	3													

Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>WWF11: Management Costs: Wastewater</p>  <table border="1"> <caption>WWF11: Management Costs: Wastewater</caption> <thead> <tr> <th>Council</th> <th>Cost (M)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>1.94</td> </tr> <tr> <td>Carterton</td> <td>2.64</td> </tr> <tr> <td>Horowhenua</td> <td>0.90</td> </tr> <tr> <td>Selwyn</td> <td>1.28</td> </tr> <tr> <td>South Wairarapa</td> <td>0.15</td> </tr> </tbody> </table>	Council	Cost (M)	Ashburton	1.94	Carterton	2.64	Horowhenua	0.90	Selwyn	1.28	South Wairarapa	0.15	<p>There were no immediate issues identified with this measure.</p> <p>However, when WWF12 is looked at, it appears some organisations are including contract management costs in WWF11 instead of reporting them separately, although it may not be easy to separate out those costs in some instances.</p> <p>The average data confidence across the four organisations that did provide a rating was "Reliable".</p>	<p>There is nothing in this year's audit that suggests the measure should be audited next year. However, it is an easy measure to get wrong and also can be confused with WWF12, so we recommend that this measure be included in next year's NPR audit.</p>
Council	Cost (M)													
Ashburton	1.94													
Carterton	2.64													
Horowhenua	0.90													
Selwyn	1.28													
South Wairarapa	0.15													
<p>WWF12: Councils Contract Management Costs: Wastewater</p>  <table border="1"> <caption>WWF12: Councils Contract Management Costs: Wastewater</caption> <thead> <tr> <th>Council</th> <th>Cost (M)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0.00</td> </tr> <tr> <td>Carterton</td> <td>0.00</td> </tr> <tr> <td>Horowhenua</td> <td>0.00</td> </tr> <tr> <td>Selwyn</td> <td>0.00</td> </tr> <tr> <td>South Wairarapa</td> <td>0.57</td> </tr> </tbody> </table>	Council	Cost (M)	Ashburton	0.00	Carterton	0.00	Horowhenua	0.00	Selwyn	0.00	South Wairarapa	0.57	<p>Last year there was a certain amount of confusion (or difficulty) with this measure, which has continued this year.</p> <p>Some organisations cannot easily separate out their costs for managing contractors, but these costs are included in WWF11.</p> <p>The average data confidence across the two organisations that did provide a rating was evenly split between "Reliable" and "Highly Reliable".</p>	<p>There has been some discussion on whether to continue with this measure or remove it and emphasise that the costs be included in WWF11.</p> <p>If the measure is kept, we recommend that it is included in next year's NPR audit.</p>
Council	Cost (M)													
Ashburton	0.00													
Carterton	0.00													
Horowhenua	0.00													
Selwyn	0.00													
South Wairarapa	0.57													
<p>Stormwater</p>														


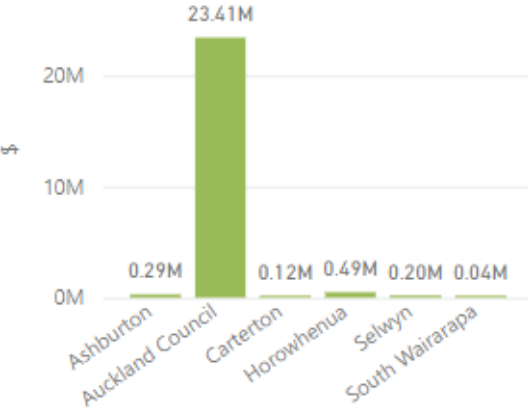
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations														
<p>SWA2f: Percentage of pipelines that have received a condition grading</p>  <table border="1"> <caption>Data for SWA2f: Percentage of pipelines that have received a condition grading</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>100%</td> </tr> <tr> <td>Auckland Council</td> <td>100%</td> </tr> <tr> <td>Carterton</td> <td>0%</td> </tr> <tr> <td>Horowhenua</td> <td>20%</td> </tr> <tr> <td>Selwyn</td> <td>43%</td> </tr> <tr> <td>South Wairarapa</td> <td>2%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	100%	Auckland Council	100%	Carterton	0%	Horowhenua	20%	Selwyn	43%	South Wairarapa	2%	<p>The definition for this measure has been turned around and organisations were asked to report on the % of pipelines that had received a condition grading rather than the % that had not received a condition grading.</p> <p>All organisations were able to report data values and there were some differences in how condition grading was done.</p> <p>The average data confidence across the five organisations was “Less Reliable”.</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year’s audit.</p>
Organization	Percentage															
Ashburton	100%															
Auckland Council	100%															
Carterton	0%															
Horowhenua	20%															
Selwyn	43%															
South Wairarapa	2%															
<p>SWA2d: Percentage of pipelines in poor or very poor condition</p>  <table border="1"> <caption>Data for SWA2d: Percentage of pipelines in poor or very poor condition</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>36.0%</td> </tr> <tr> <td>Auckland Council</td> <td>6.9%</td> </tr> <tr> <td>Carterton</td> <td>0.0%</td> </tr> <tr> <td>Horowhenua</td> <td>5.0%</td> </tr> <tr> <td>Selwyn</td> <td>0.3%</td> </tr> <tr> <td>South Wairarapa</td> <td>0.0%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	36.0%	Auckland Council	6.9%	Carterton	0.0%	Horowhenua	5.0%	Selwyn	0.3%	South Wairarapa	0.0%	<p>The definition for this measure was changed from requiring 1 to 5 gradings.</p> <p>All organisations were able to report data values and there were some differences in how condition grading was done.</p> <p>The average data confidence across the six organisations was “Less Reliable”.</p>	<p>There has been a lot of pipeline renewals activity happening and continues to happen, which should see a reduction in the number of poor and very poor condition pipelines.</p> <p>We recommend that this measure be included in next year’s audit, to see how noticeable the reduction in poor and very poor condition pipelines is.</p>
Organization	Percentage															
Ashburton	36.0%															
Auckland Council	6.9%															
Carterton	0.0%															
Horowhenua	5.0%															
Selwyn	0.3%															
South Wairarapa	0.0%															

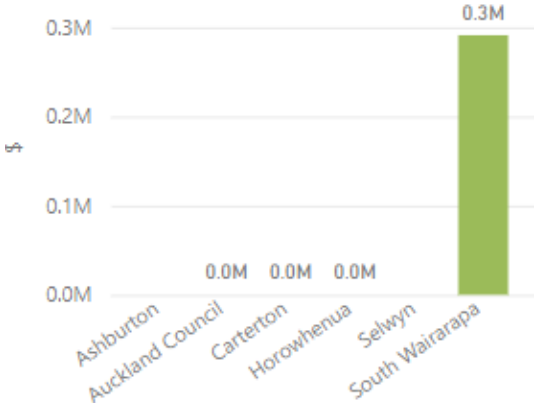
Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations														
<p>SWA5c: Percentage of above ground stormwater assets that have received a condition grading</p>  <table border="1"> <caption>SWA5c Data</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0%</td> </tr> <tr> <td>Auckland Council</td> <td>100%</td> </tr> <tr> <td>Carterton</td> <td>0%</td> </tr> <tr> <td>Horowhenua</td> <td>0%</td> </tr> <tr> <td>Selwyn</td> <td>0%</td> </tr> <tr> <td>South Wairarapa</td> <td>0%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	0%	Auckland Council	100%	Carterton	0%	Horowhenua	0%	Selwyn	0%	South Wairarapa	0%	<p>Previously this measure asked if a condition grading had been done, but the definition has been changed to align with SWA2f.</p> <p>As can be seen from the chart, only one organisation is undertaking condition assessments of above ground assets.</p> <p>The average data confidence across the five organisations that did provide a rating was "Reliable".</p>	<p>We recommend that this measure be included in next year's audit, as it is linked with SWA5d below.</p>
Organization	Percentage															
Ashburton	0%															
Auckland Council	100%															
Carterton	0%															
Horowhenua	0%															
Selwyn	0%															
South Wairarapa	0%															
<p>SWA5d: Percentage of above ground assets in poor or very poor condition.</p>  <table border="1"> <caption>SWA5d Data</caption> <thead> <tr> <th>Organization</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0%</td> </tr> <tr> <td>Auckland Council</td> <td>16%</td> </tr> <tr> <td>Carterton</td> <td>0%</td> </tr> <tr> <td>Horowhenua</td> <td>0%</td> </tr> <tr> <td>Selwyn</td> <td>0%</td> </tr> <tr> <td>South Wairarapa</td> <td>0%</td> </tr> </tbody> </table>	Organization	Percentage	Ashburton	0%	Auckland Council	16%	Carterton	0%	Horowhenua	0%	Selwyn	0%	South Wairarapa	0%	<p>This is a new measure and the data values should align with SWAA5c, which they do.</p> <p>Except for Auckland Council the other organisations were uncertain or did not know what assets were in poor or very poor condition.</p> <p>The average data confidence across the six organisations was "Reliable".</p>	<p>Given the level on uncertainty shown in the data values, we recommend that this measure be included in next year's audit.</p>
Organization	Percentage															
Ashburton	0%															
Auckland Council	16%															
Carterton	0%															
Horowhenua	0%															
Selwyn	0%															
South Wairarapa	0%															

Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations														
<p>SWT1: Stormwater energy use from other fuels</p>  <table border="1" data-bbox="190 422 728 869"> <caption>SWT1: Stormwater energy use from other fuels</caption> <thead> <tr> <th>Organization</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0</td> </tr> <tr> <td>Auckland Council</td> <td>0</td> </tr> <tr> <td>Carterton</td> <td>0</td> </tr> <tr> <td>Horowhenua</td> <td>0</td> </tr> <tr> <td>Selwyn</td> <td>0</td> </tr> <tr> <td>South Wairarapa</td> <td>0</td> </tr> </tbody> </table>	Organization	Number	Ashburton	0	Auckland Council	0	Carterton	0	Horowhenua	0	Selwyn	0	South Wairarapa	0	<p>This measure has been separated out from SWE5 and all organisations were able to provide a data value albeit '0'.</p> <p>The audited organisations either did not have a stormwater requirement for electricity or only used grid supply.</p> <p>The average data confidence across the five organisations that did provide a rating was "Reliable".</p>	<p>Depending on what the responses look like across the other participating organisations, we suggest this measure not be included in next year's audit.</p>
Organization	Number															
Ashburton	0															
Auckland Council	0															
Carterton	0															
Horowhenua	0															
Selwyn	0															
South Wairarapa	0															
<p>SWE6: Has a climate change risk assessment been undertaken for your stormwater network</p> <table border="1" data-bbox="190 981 705 1204"> <thead> <tr> <th>Organization</th> <th>Response</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>No</td> </tr> <tr> <td>Auckland Council</td> <td>No</td> </tr> <tr> <td>Carterton</td> <td>No</td> </tr> <tr> <td>Horowhenua</td> <td>Yes</td> </tr> <tr> <td>Selwyn</td> <td>Yes</td> </tr> <tr> <td>South Wairarapa</td> <td>No</td> </tr> </tbody> </table>	Organization	Response	Ashburton	No	Auckland Council	No	Carterton	No	Horowhenua	Yes	Selwyn	Yes	South Wairarapa	No	<p>This was a new measure and all organisations were able to provide a data value. Some organisations that reported "No", although they do consider climate change in aspects of other work such as design. Other organisations are in the process of doing a risk assessment.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>We recommend that this measure be included in next year's NPR audit to see if there is any trend towards actually doing formal assessments.</p>
Organization	Response															
Ashburton	No															
Auckland Council	No															
Carterton	No															
Horowhenua	Yes															
Selwyn	Yes															
South Wairarapa	No															

Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>SWE7: Is there a climate change adaptation plan in place for your stormwater network</p> <hr/> <table border="1"> <tr><td>Ashburton</td><td>No</td></tr> <tr><td>Auckland Council</td><td>No</td></tr> <tr><td>Carterton</td><td>No</td></tr> <tr><td>Horowhenua</td><td>No</td></tr> <tr><td>Selwyn</td><td>Yes</td></tr> <tr><td>South Wairarapa</td><td>No</td></tr> </table>	Ashburton	No	Auckland Council	No	Carterton	No	Horowhenua	No	Selwyn	Yes	South Wairarapa	No	<p>Similar commentary as for SWE6 above.</p>	<p>Similar commentary as for SWE6 above.</p>
Ashburton	No													
Auckland Council	No													
Carterton	No													
Horowhenua	No													
Selwyn	Yes													
South Wairarapa	No													
<p>SWE8: Have you developed an emissions baseline (including operational and capital carbon) for forecast stormwater investments</p> <hr/> <table border="1"> <tr><td>Ashburton</td><td>No</td></tr> <tr><td>Auckland Council</td><td>No</td></tr> <tr><td>Carterton</td><td>No</td></tr> <tr><td>Horowhenua</td><td>No</td></tr> <tr><td>Selwyn</td><td>No</td></tr> <tr><td>South Wairarapa</td><td>No</td></tr> </table>	Ashburton	No	Auckland Council	No	Carterton	No	Horowhenua	No	Selwyn	No	South Wairarapa	No	<p>This was a new measure and all organisations responded with a definite “No”.</p> <p>One organisation has a baseline, but it wasn’t used for forecast stormwater investments.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>As for SWE6 and SWE7, we recommend that this measure be included in next year’s NPR audit, to see if there is any emerging trend.</p>
Ashburton	No													
Auckland Council	No													
Carterton	No													
Horowhenua	No													
Selwyn	No													
South Wairarapa	No													
<p>SWE9: Attenuation storage requirements for new developments</p> <hr/> <table border="1"> <tr><td>Ashburton</td><td></td></tr> <tr><td>Auckland Council</td><td>other</td></tr> <tr><td>Carterton</td><td>None</td></tr> <tr><td>Horowhenua</td><td>Unknown</td></tr> <tr><td>Selwyn</td><td>-</td></tr> <tr><td>South Wairarapa</td><td>N/A</td></tr> </table>	Ashburton		Auckland Council	other	Carterton	None	Horowhenua	Unknown	Selwyn	-	South Wairarapa	N/A	<p>This was a new measure and no organisation provided a data value in line with the definition i.e. L/m².</p> <p>The average data confidence across the four organisations that did provide a rating was between “Reliable” and “Less Reliable”.</p>	<p>We recommend that this measure be re-thought – we believe it could be broken down into sub-elements which represent the different ways organisations specify storage requirements.</p>
Ashburton														
Auckland Council	other													
Carterton	None													
Horowhenua	Unknown													
Selwyn	-													
South Wairarapa	N/A													

Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>SWE10: RCP scenario (s) new stormwater systems are designed to</p> <hr/> <table border="0"> <tr> <td>Ashburton</td> <td>6</td> </tr> <tr> <td>Auckland Council</td> <td>Other</td> </tr> <tr> <td>Carterton</td> <td>2.6</td> </tr> <tr> <td>Horowhenua</td> <td></td> </tr> <tr> <td>Selwyn</td> <td>8.5</td> </tr> <tr> <td>South Wairarapa</td> <td>Other</td> </tr> </table>	Ashburton	6	Auckland Council	Other	Carterton	2.6	Horowhenua		Selwyn	8.5	South Wairarapa	Other	<p>This was a new measure and all but one organisation provided a data value.</p> <p>Data confidence was not required to be reported for this measure.</p>	<p>We recommend that this measure be included in next year's NPR audit. It seems that aligning with the standard RCP scenarios may be a work in progress. It would therefore be good to monitor if that does actually happen.</p>
Ashburton	6													
Auckland Council	Other													
Carterton	2.6													
Horowhenua														
Selwyn	8.5													
South Wairarapa	Other													
<p>SWE11: Time horizon (s) new stormwater systems are designed to</p> <hr/> <table border="0"> <tr> <td>Ashburton</td> <td>2090</td> </tr> <tr> <td>Auckland Council</td> <td>2090</td> </tr> <tr> <td>Carterton</td> <td>2032</td> </tr> <tr> <td>Horowhenua</td> <td></td> </tr> <tr> <td>Selwyn</td> <td>2081-2100</td> </tr> <tr> <td>South Wairarapa</td> <td>2100</td> </tr> </table>	Ashburton	2090	Auckland Council	2090	Carterton	2032	Horowhenua		Selwyn	2081-2100	South Wairarapa	2100	<p>This was a new measure and all but one organisation provided a data value.</p> <p>One organisation (Carterton) was unsure about the data value they provided.</p> <p>The average data confidence across the three organisations that did provide a rating was "Reliable".</p>	<p>We recommend that this measure be included in next year's NPR audit, to make sure the definition is being correctly interpreted.</p>
Ashburton	2090													
Auckland Council	2090													
Carterton	2032													
Horowhenua														
Selwyn	2081-2100													
South Wairarapa	2100													

Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations														
<p>SWS1: Stormwater Charge</p>  <table border="1"> <caption>Stormwater Charge Data</caption> <thead> <tr> <th>Council</th> <th>Charge (\$)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>132.81</td> </tr> <tr> <td>Auckland Council</td> <td>253.22</td> </tr> <tr> <td>Carterton</td> <td>100.94</td> </tr> <tr> <td>Horowhenua</td> <td>184.06</td> </tr> <tr> <td>Selwyn</td> <td>113.00</td> </tr> <tr> <td>South Wairarapa</td> <td>0.00</td> </tr> </tbody> </table>	Council	Charge (\$)	Ashburton	132.81	Auckland Council	253.22	Carterton	100.94	Horowhenua	184.06	Selwyn	113.00	South Wairarapa	0.00	<p>This is often a problematic measure, as typically stormwater charges are embedded in rates and can be difficult to separated out.</p> <p>This year there didn't appear to be any issues. South Wairarapa was the exception, but that is because stormwater either goes to tanks or soakage pits.</p> <p>The average data confidence across the five organisations that did provide a rating was "Reliable".</p>	<p>We recommend that this measure be included in next year's NPR audit, as it is worthwhile monitoring if other organisations do struggle to separate out stormwater charges from rates etc.</p>
Council	Charge (\$)															
Ashburton	132.81															
Auckland Council	253.22															
Carterton	100.94															
Horowhenua	184.06															
Selwyn	113.00															
South Wairarapa	0.00															
<p>SWF7: Management Costs: Stormwater</p>  <table border="1"> <caption>Management Costs Data</caption> <thead> <tr> <th>Council</th> <th>Cost (\$M)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0.29M</td> </tr> <tr> <td>Auckland Council</td> <td>23.41M</td> </tr> <tr> <td>Carterton</td> <td>0.12M</td> </tr> <tr> <td>Horowhenua</td> <td>0.49M</td> </tr> <tr> <td>Selwyn</td> <td>0.20M</td> </tr> <tr> <td>South Wairarapa</td> <td>0.04M</td> </tr> </tbody> </table>	Council	Cost (\$M)	Ashburton	0.29M	Auckland Council	23.41M	Carterton	0.12M	Horowhenua	0.49M	Selwyn	0.20M	South Wairarapa	0.04M	<p>There were no immediate issues identified with this measure.</p> <p>When SWF8 is looked at though, it appears some organisations are including contract management costs in SWF7, instead of reporting them separately, although it may not be easy to separate out those costs in some instances.</p> <p>The average data confidence across the four organisations that did provide a rating was "Reliable".</p>	<p>There is nothing in this year's audit that suggests the measure should be audited next year. However, it is an easy measure to get wrong and also can be confused with SWF8. We therefore recommend that this measure be included in next year's NPR audit.</p>
Council	Cost (\$M)															
Ashburton	0.29M															
Auckland Council	23.41M															
Carterton	0.12M															
Horowhenua	0.49M															
Selwyn	0.20M															
South Wairarapa	0.04M															

Measure	Issues, Observations and Commentary on Audit Measures	Suggestions/Recommendations												
<p>SWF8: Council Contract Management Costs: Stormwater</p>  <table border="1"> <caption>Council Contract Management Costs for Stormwater</caption> <thead> <tr> <th>Council</th> <th>Cost (\$M)</th> </tr> </thead> <tbody> <tr> <td>Ashburton</td> <td>0.0M</td> </tr> <tr> <td>Auckland Council</td> <td>0.0M</td> </tr> <tr> <td>Carterton</td> <td>0.0M</td> </tr> <tr> <td>Horowhenua</td> <td>0.0M</td> </tr> <tr> <td>South Wairarapa</td> <td>0.3M</td> </tr> </tbody> </table>	Council	Cost (\$M)	Ashburton	0.0M	Auckland Council	0.0M	Carterton	0.0M	Horowhenua	0.0M	South Wairarapa	0.3M	<p>Last year there was a certain amount of confusion (or difficulty) with this measure, which has continued this year.</p> <p>Some organisations cannot easily separate out their costs for managing contractors, but these costs are included in SWF7.</p> <p>The average data confidence across the three organisations that did provide a rating was “Highly Reliable”.</p>	<p>There has been some discussion on whether to continue with this measure or remove it and emphasise that the costs be included in SWF7.</p> <p>If the measure is kept, we recommend that it is included in next year’s NPR audit.</p>
Council	Cost (\$M)													
Ashburton	0.0M													
Auckland Council	0.0M													
Carterton	0.0M													
Horowhenua	0.0M													
South Wairarapa	0.3M													

4.0 Summary

4.1 Audit Process

This year followed the same process as last year, with audits being conducted remotely and using “Teams” to hold online audit meetings. We continued with the approach of asking organisations to respond in writing to a set of audit questions prior to having online meetings. Receiving written answers first still appears to be the most efficient approach, as it allows time to review and understand the answers and then explore them further during the online meetings. This process worked well for all six organisations.

The number of measures audited this year was 55 compared with 50 last year, although other one-off measures were included as well. Excluding Auckland Council which had only 20 measures, on average 59 measures were audited per organisation.

4.2 Audit Measures

The pre-defined set of measures that were used for the audit were quite broad. 12 of the 55 measures were repeats from last year's audit. The audit also included several new measures, as well as measures where the definition had been updated.

As a result of the audits, a number of data changes (and additions) were made which generally resulted from the audit questions being asked and the subsequent online discussion. Some organisations also made data changes (and additions) to other measures that were not part of the audit.

4.2.1 Common Measures

Only two common measures were audited - CB10 and CB10a. These relate to the number of internal staff and associated vacancies. None of the six audited organisations had a problem with these two measures. Interestingly, there were no significant differences between this year's data values and last year's data values.

4.2.2 Water Supply Measures

25 water supply measures were audited, largely driven by the inclusion of a number of new measures related to reporting for water supply systems under the Taumata Arowai drinking water network environmental performance measures. These new measures themselves didn't create any real problems but highlighted a lack of information in some areas and a lack of action in other areas. Two of the five audited organisations have not done a condition assessment of above ground assets and only one of the five organisations had assessed all their above ground assets. Regarding climate change, the three measures audited indicated very little activity in this area across the five organisations. Pleasingly, all five organisations have done a criticality assessment of their water supply assets.

The reporting of Council Contract Management Costs (WSF11) is still a problem, as it has been in past years, and as mentioned in Section 3.0. It may be time to consider dropping this measure from the NPR. While there is benefit in being able to compare what different organisations are paying, it seems it is too difficult for organisations to be able to separate out the costs.

4.2.3 Wastewater Measures

14 wastewater measures were audited, and it was a relatively even mix on new measures, redefined measures and repeat measures. The Taumata Arowai influence was carried over into wastewater and again highlighted a lack of information in some areas and a lack of action in other areas. Three of the five organisation have not done a condition assessment of above ground assets, although the other two had assessed all the above ground assets. Regarding climate change, the three measures audited indicated very little activity in this area across the five organisations. Pleasingly, all five organisations have done a criticality assessment of their wastewater assets.

As with water supply, reporting of Council Contract Management Costs (WWF12) is still a problem, as it has been in past years. See 4.2.2 above for more comment.

4.2.4 Stormwater Measures

14 stormwater measures were audited, most of which were new measures. The bulk of the new measures are to do with climate change, and as with water supply and wastewater, there is very little activity happening across the six audited organisations. Selwyn is the notable exception across all three waters. The three new system performance related measures all received varying responses and it is hard to make a summary statement other than organisations seem to be doing things differently from each other. Why? is the interesting question.

As with water supply and wastewater, reporting of Council Contract Management Costs (SWF8) is still a problem, as it has been in past years. South Wairarapa is the notable exception across all three waters. See 4.2.2 above for more comment.

4.3 Outcomes

As well as a number of data changes and data additions, the NPR audit has resulted in some suggestions/recommendations for Water NZ to consider which are not too onerous. Most of the recommendations relate to whether to continue auditing some of the measures, or not.

Of interest this year was the introduction of several new measures to reflect those required to be reported for water supply systems under the Taumata Arowai drinking water network environment performance measures. These new water supply measures were also translated into corresponding new measures for wastewater and stormwater where applicable. As highlighted in Section 4.2, these new measures indicated a lack of information on the condition of above ground assets, which is surprising given that it is easier to assess assets you can see unlike those below ground that you cannot see. These new measures also highlighted a lack of activity around climate change, which is interesting given how topical and critical this issue is right now. It will be interesting to see if this trend is evident across the other NPR participants.

New Zealand is arguably well on its way to water reform and, rightly or wrongly, the impression going into the NPR audit was that there would be a good level of preparedness evident in the data returns from organisations i.e. organisations would be getting their houses in order in terms of data and understanding their assets and also having an understanding of the organisations themselves as in what they are doing and not doing. The impression from this audit is that there does not appear to be a good level of preparedness (yet) and it will be interesting to see if this trend is evident across the other NPR participants.

4.4 Data Quality

At the conclusion of the audit, and just focusing on the 55 pre-defined measures, the number of missing data values per organisation ranged from a minimum of zero values (0%) to a maximum of ten values (18%), with an overall average of four values (7%). For a performance review of this nature, we believe the overall average should be around 3-4% if not lower, to generate the confidence needed when making use of the NPR results.

Similarly, the number of corrected data values ranged from a minimum of zero values (0%) to a max of 9 values (16%) with an overall average of 7%. The audit process does seem to generate or facilitate data corrections, which is good from the point of view of those being audited but raises a question about those organisations not being audited. Taking the overall average of 7% corrected data at face value, we believe this is too high and should be around 5%, if not lower, to have confidence in making use of the overall NPR results.

4.5 General Feedback

The general feedback gathered from organisations was quite varied and is summarised as follows:

- Not really that different or harder than last year even with the Taumata Arowai measures added.
- Still have the same internal (organisational) issue of not having data to respond to some measures.
- Thought that the guidelines needed to be improved. Finance staff in particular found some of the finance related measures and their explanations confusing.

- Found the audit questions inciteful but again thought it might be useful to have that sort of information in the guidelines.
- Were glad to see the Taumata Arowai influence coming through in the NPR – makes people start to think about the data that is going to be needed.
- Found that needed data sources were mostly available.
- Find the NPR a useful tool.
- Was a rushed exercise and doesn't help if there are not enough resources to help.
- A missed opportunity that all councils were not made to participate. The DIA or someone could have put up funding for councils to participate – both to cover the Water NZ cost and the cost of council resources.
- First time involved in the NPR – reasonably time consuming.
- Some commonality with exiting organisational KPI's.
- Worthwhile doing the NPR, especially as it starts to align with Taumata Arowai requirements. Has us thinking about data collection now to satisfy those requirements.
- Helpful responses from Water NZ in clarifying questions on certain measures including those that needed input from Taumata Arowai.
- Shared document on questions and answers was useful.
- Would be useful to know what is planned for next years in terms of benchmarking especially as Taumata Arowai continues to develop new performance measures.
- There are lots of duplicate measures that councils are having to report on. Would be nice/useful if that duplication could be reduced.

5.0 Disclaimer

This report is based on information provided by participating organisations, both in writing and verbally, to address a series of questions asked about a subset of specific measures.

AECOM has used all reasonable endeavours to ensure that the written and verbal responses have been transposed accurately into this report. No responsibility is assumed for any inaccuracies in the transposing by AECOM.

AECOM has not physically verified the information provided by the participating organisations (unless specifically noted otherwise) and we assume no responsibility and make no representations with respect to the adequacy, accuracy, or completeness of such information.

AECOM does not accept any liability, whether directly or indirectly, for any liability or loss suffered or incurred by any party placing any reliance on this report, in part or in full. Any party that relies on the detailed findings in Appendix A does so entirely at its own risk.

Appendix A

Detailed Findings

Appendix A Detailed Findings

Note that **Red** data values in the following tables indicate changes or additions to the original data.

Table 3 Ashburton District Council

Code	Measure	Units	Data	Audit Comments	Audit Response
CB10	Internal staff	FTE	11.5	Overall it appears the number of FTE's has reduced from last year. Have some roles been disestablished or merged? Any response/comment on the question above?	A big project finished and not all staff needed to be retained.
CB10a	Staff vacancies	FTE	1		
WST1	Drinking water networks	Number	12	Assume the 12 names represent the 12 networks. Is that correct? Are all 12 networks independent and not interconnected?	Yes all networks are independent of each other.
WST2	Drinking water abstraction points	Number	20	Okay	
WST3	Drinking water network source type	Selection	Other (include detail in comments field)	Wondering if Methven, Methven Springfield and Mt Somers should be "Other" instead of "Bore"? Will let Lesley decide.	That's fine - ECan treats an infiltration gallery as a shallow horizontal bore if that's any help! Interesting - never heard of a shallow horizontal bore before.
WSB2	Residential connections in the drinking water network	Number	9835	Any reason this year for the data confidence being "Less Reliable"? Last year it was "Reliable".	I had a bit more trouble accessing the rating information for the connected properties this year due to timing of running reports and when the rates were struck.
WSB3	Non-residential connections in the drinking water network	Number	1037	Any reason for the reduction in connections? Also any reason this year for the data confidence being "Less Reliable"? Last year it was "Reliable".	Last year I think all billed connections were included in this number. This year it does not include our rural residential connections that are billed. Does this mean the rural residential number is included in the residential number now or are they not included at all? Rural residential are included in the residential number.
WSB1a	Total population served by the drinking water network	Number	25099	The population has dropped yet the number of residential connections has gone up. Is that correct?	Probably a different way it was calculated. I think last year it pre-populated based on a formula from another

Code	Measure	Units	Data	Audit Comments	Audit Response
					tab. This year I have put in the approximate scheme populations.
WST4	Number of resource consents that are held	Number	16	Okay	
WST5	Type of resources consent	Selection	Water permits - take, use, dam, and divert	Okay	
WSA2f	Percentage of pipelines that have received a condition grading	%	100%	Okay	
WSA2d	Percentage of pipelines in poor or very poor condition	%	36%	Has the desktop work been sense checked? 42% is quite high.	Only 1% is the estimate for grade 5 (Pipes greater than 70 years), but we have rather a lot estimated at grade 4 - mainly due large lengths of pipe all installed at roughly the same time (e.g. most of the Chertsey scheme was installed in the 1970s and is small diameter PE that we've had problems with). Grade 4 pipes were "Pipes greater than 40 years and less than or equal to 70 years have condition 4" plus a few Pipe diameter/type/age and scheme default wide conditions = 41%. By changing this to "Pipes greater than 50 years and less than or equal to 70 years" but keeping the scheme default conditions for small PE pipe, the grade 4 pipes have reduced to 35% . This change will be adopted as it seems more representative as we're not having heaps of pipe failures in the network. Data change noted.
WSA13c	Percentage of above ground assets that have received a condition grading	%	0%	It could be argued that the data confidence should be "Highly Reliable" if there is 100% certainty that no above ground assets have received a condition grading.	Changed to highly reliable.

Code	Measure	Units	Data	Audit Comments	Audit Response
WSA2d+ WSA2g	Percentage of above ground assets in poor or very poor condition	%		Maybe better to leave this measure blank as the 0% could be misleading.	Yes this can be left blank.
WST8	Has a reference level for water pressure been set	Yes/No	No	Are there any issues with pressure?	No
WSS11	Number of days water restrictions applied	Number	365	Okay	
WST9	Number of connections affected by restrictions	%	1.30%	1.3% is quite low. Are the networks connected to the 3 waters supplies quite small?	Yes very small - only 137 properties connected total have permanent hosing bans.
WSE1a	Estimated total drinking water network water loss	m ³ /year	1,934,300.00	A significant reduction since last year. Is it possible to explain the difference?	Last year this measure was estimated using the minimum night flow on each scheme rather than the water loss benchmark spreadsheet. I have removed both Methven Springfield and Montalto from this exercise as we do accurate data on water usage as these are farms that not metered and they have varying stocking types/rates throughout the year so we can't do a meaningful estimate of stockwater usage to then fill in the Benchloss spreadsheet. Data change noted.
WSB8	Median residential water consumption (L/day/connection)	L/person/day	1041.6	Has the median consumption supplied been listed per connection or per person? (seems quite low per connection) Lesley - the units need to be changed to L/day/connection as this helps explain the increase. IN say that should something be done with the values provided in the network columns?	Yes it's Litres/connection/day.
WST10	Is there a water conservation education programme in place	Yes/No	Yes	Okay	
WSE3	Water supply grid electricity use	kWh	2296849	Okay	
WSE3a	Water supply energy use from other fuels	GJ	22	Okay	

Code	Measure	Units	Data	Audit Comments	Audit Response
WST11	Has an assessment been undertaken to identify critical water supply assets	Yes/No	Yes	Okay	
WSCC1	Has a climate change risk assessment been undertaken for water supply networks	Yes/No	No	Is it planned to undertake a climate change risk assessment?	No formal plans at this stage. We do climate change assessments through designs for specific projects.
WSCC2	Is there a climate change adaptation plan in place for water supply networks	Yes/No	No	Is it the intention to do a plan for water supply?	No formal plans at this stage.
WSCC3	Has an emissions baseline been set for forecast water supply investments	Yes/No	No	Is it planned to set an emissions baseline?	No
WSF11	Council contract management Costs : water supply	\$		Are the costs for managing ACL still embedded in WSF10? If so then maybe leave the data value blank unless the cost can be separated out.	Yes management of the ACL contract is in WSF10. Will make blank.
WWE4g	Wet weather overflow regulation approach	Selection	No regulatory approach	Okay	
WWB1b	Wastewater Service Coverage	%	68.4%	Okay	
WWA2f	Percentage of pipelines that have received a condition grading	%	100%	Okay	
WWA2d	Percentage of pipelines in poor or very poor condition	%	39%	Okay	
WWA6	Percentage of above ground assets that have received a condition grading	%	0%	It could be argued that the data confidence should be "Highly Reliable" if there is 100% certainty that no above ground assets have received a condition grading.	Okay have changed.
WWT1	Percentage of above ground assets in poor or very poor condition	%		Maybe better to leave this measure blank as the 0% could be misleading.	Okay have changed.

Code	Measure	Units	Data	Audit Comments	Audit Response
WWT3	Wastewater energy use from other fuels	GJ	12	Okay	
WWCC1	Has a climate change risk assessment been undertaken for wastewater networks	Yes/No	No	Is it planned to undertake a climate change risk assessment?	No formal plans at this stage. We do climate change assessments through designs for specific projects.
WWCC2	Is there a climate change adaptation plan in place for wastewater networks	Yes/No	No	Is it the intention to do a plan for wastewater?	No formal plans at this stage.
WWCC3	Has an emissions baseline been set for forecast wastewater investments	Yes/No	No	Is it planned to set an emissions baseline?	No
WWT4	Has an assessment been undertaken to identify critical wastewater assets	Yes/No	Yes	Okay	
WWS4d	The authority's response to issues with its sewerage system	Number	1	Okay	
WWF11	Management Costs: Wastewater	\$	\$1,937,224	Any particular reason for the ~50% reduction?	Was missing one natural account expenditure on sum. Corrected now. Data change noted.
WWF12	Councils Contract Management Costs: Wastewater	\$		Are the costs for managing ACL still embedded in WWF11? If so then maybe leave the data value blank unless the cost can be separated out.	Yes management of the ACL contract is in WWF11. Will make blank
SWA2f	Percentage of pipelines that have received a condition grading	%	100%	Okay	
SWA2d	Percentage of pipelines in poor or very poor condition	%	36%	Okay	
SWA5c	Percentage of above ground stormwater assets that have received a condition grading	%	0%	It could be argued that the data confidence should be "Highly Reliable" if there is 100% certainty that no above ground assets have received a condition grading.	Ok have changed.

Code	Measure	Units	Data	Audit Comments	Audit Response
SWA5d	Percentage of above ground assets in poor or very poor condition	%		Happy with the blank data value?	Ok have changed.
SWT1	Stormwater energy use from other fuels	GJ	0	Okay	
SWE6	Has a climate change risk assessment been undertaken for stormwater networks	Yes/No	No	Is it planned to undertake a climate change risk assessment?	No formal plans at this stage. We do climate change assessments through designs for specific projects.
SWE7	Is there a climate change adaptation plan in place for stormwater networks	Yes/No	No	Is it the intention to do a plan for stormwater?	No formal plans at this stage.
SWE8	Has an emissions baseline been set for forecast stormwater investments	Yes/No	No	Is it planned to set an emissions baseline?	No
SWE9	Attenuation storage requirements for new developments	L/m2		Okay	
SWE10	RCP scenario (s) new stormwater systems are designed to	Selection	6	Okay	
SWE11	Time horizon (s) new stormwater systems are designed to	Year	2090	Okay	
SWS1	Stormwater Charge	\$	\$132.81	Okay	
SWF7	Management Costs: Stormwater	\$	\$294,796	Any reason for the 65% increase from last year?	With the Ashburton global discharge consent being activated, additional costs have been incurred for consent compliance (monitoring, reporting and review).
SWF8	Council Contract Management Costs: Stormwater	\$		Are the costs for managing ACL still embedded in SWF7? If so then maybe leave the data value blank unless the cost can be separated out.	Yes management of the ACL contract is in SWF7. Will make blank.

Table 4 Auckland Council

Code	Measure	Units	Data	Audit Comments	Audit Response
CB10	Internal staff	FTE	178.7	Are there any activities undertaken by staff that are not directly related to the delivery of stormwater services in Auckland? If yes, then is it possible to separate out and remove those staff numbers from the 1787.7 total?	No
CB10a	Staff vacancies	FTE	20	As above, if there are vacancies not directly related to the delivery of stormwater services then remove those staff numbers from the 20 total.	No
SWA2f	Percentage of pipelines that have received a condition grading	%	100%	Can you explain more why the data source is asset valuation - it seems an unusual data source. Has the data come from somewhere else and been used in the valuation to determine remaining life? Is it correct to say the data confidence is highly reliable when extrapolated data has been used? Just Reliable is probably more appropriate.	For asset valuation, we needed to update all condition data for all asset types. Since the asset valuation is the latest holistic report we prepared in HW, I preferred to use it as the most updated report as data source.
SWA2d	Percentage of pipelines in poor or very poor condition	%	6.9%	Can you explain more why the data source is asset valuation - it seems an unusual data source. Has the data come from somewhere else and been used in the valuation to determine remaining life? As above should the data confidence just be Reliable?	For asset valuation, we needed to update all condition data for all asset types. Since the asset valuation is the latest holistic report we prepared in HW, I preferred to use it as the most updated report as data source.
SWA5c	Percentage of above ground stormwater assets that have received a condition grading	%	100%	Is 100% correct given the comment below about "30% of ponds have been physically inspected"? Has there been some data extrapolation?	Yes, there was. Should the data confidence be "Less reliable" then if there has been some data extrapolation? Confident about the data for the 30% so believe that the data extrapolation is reliable.
SWA5d	Percentage of above ground assets in poor or very poor condition	%	16%	Okay	
SWT1	Stormwater energy use from other fuels	GJ	0	Okay	
SWE6	Has a climate change risk assesment been undertaken for stormwater networks	Yes/No	No	The "No" is surprising given all the network performance modelling includes changes to rainfall	No, the comment were provided by Zero Carbon team manager.

Code	Measure	Units	Data	Audit Comments	Audit Response
				including climate change impacts on frequency and intensity. Any comment?	
SWE7	Is there a climate change adaptation plan in place for stormwater networks	Yes/No	No	Is it the intention to do a plan for stormwater?	No answer.
SWE8	Has an emissions baseline been set for forecast stormwater investments	Yes/No	no	Is it planned to set an emissions baseline?	No answer.
SWE9	Attenuation storage requirements for new developments	L/m2	other	Is there a typical or average flow rate or does the value vary from development to development?	No answer.
SWE10	RCP scenario (s) new stormwater systems are designed to	Selection	Other	Okay	
SWE11	Time horizon (s) new stormwater systems are designed to	Year	2090	Okay	
SWS1	Stormwater Charge	\$	\$253.22	Is it correct the charge has gone down? Thought an additional targeted rate was added for water quality.	It is confirmed by the finance team.
SWF7	Management Costs: Stormwater	\$	\$23,409,000	Does this cover all internal costs?	No answer.
SWF8	Council Contract Management Costs: Stormwater	\$	\$0	Does HW have any external stormwater contractor/s it manages? If so what are the costs associated with managing those contractors? If the costs are embedded in SWF7, please try and separate out the costs.	No answer.

Table 5 Carterton District Council

Code	Measure	Units	Data	Audit Comments	Audit Response
CB10	Internal staff	FTE	11	Are the 11 FTEs only involved in three waters?	Yes, operators, retic, PM, asset manager, Ops manager, compliance.

Code	Measure	Units	Data	Audit Comments	Audit Response
CB10a	Staff vacancies	FTE	1	Is the 1 staff vacancy just for a three waters position?	Yes, team leader retic.
WST1	Drinking water networks	Number	2	So 2 distinct/separate networks?	Yes, one to Carterton, then separate industrial area fed from Masterton.
WST2	Drinking water abstraction points	Number	4	How is the water sourced for network 2? Is it from 1 of the 4 sources also?	Kaipatangata and Frederick fed Carterton. Waingawa industrial supplied from Masterton. Does 1 of the sources have 2 abstraction points i.e. how do you get 4? Kaipatangata has a surface water take and Frederick has 3 bores so that is the 4. The question though is Waingawa which is fed from Masterton, should this be considered a 5th abstraction point?
WST3	Drinking water network source type	Selection	Other (include detail in comments field)	Okay	
WSB2	Residential connections in the drinking water network	Number	2946	No residential connections in network 2 - is that correct?	Yes, only industrial.
WSB3	Non-residential connections in the drinking water network	Number	125	Okay	
WSB1a	Total population served by the drinking water network	Number	5860	Why '0' in Network 2?	Only industrial, 58 connections - the majority will live in Masterton, so double counting for population. Though I could work out a PE. The 5860 should be okay unless there are people living in the industrial area.
WST4	Number of resource consents that are held	Number	2	Is this 1 consent for each network?	For each source, surface and groundwater.
WST5	Type of resources consent	Selection	Water permits - take, use, dam, and divert	Okay	

Code	Measure	Units	Data	Audit Comments	Audit Response
WSA2f	Percentage of pipelines that have received a condition grading	%	95%	Any idea how old the condition gradings are?	2019 during infrastructure strategy for LTP.
WSA2d	Percentage of pipelines in poor or very poor condition	%	32%	Given the uncertain basis for condition ratings, is it correct here that the data confidence is reliable?	Change to less reliable.
WSA13c	Percentage of above ground assets that have received a condition grading	%	20%	Okay	
WSA2d+ WSA2g	Percentage of above ground assets in poor or very poor condition	%	10%	Okay	
WST8	Has a reference level for water pressure been set	Yes/No	No	Are there any issues with pressure?	Anecdotal low pressure at top end of town.
WSS11	Number of days water restrictions applied	Number	65	Okay	
WST9	Number of connections affected by restrictions	%	100.00%	Okay	
WSE1a	Estimated total drinking water network water loss	m ³ /year	215701	Okay	
WSB8	Median residential water consumption (L/day/connection)	L/person/day	455.1190842	Has an analysis ever been undertaken of water usage to provide median usage? Lesley - the units need to be changed to L/day/connection as this helps explain the increase.	No, but could be done from water meter readings. Does the calculated value seem about right?
WST10	Is there a water conservation education programme in place	Yes/No	Yes	What are some of the initiatives to encourage water conservation?	Website, radio messaging, newspaper.
WSE3	Water supply grid electricity use	kWh	534870.00	Okay	
WSE3a	Water supply energy use from other fuels	GJ	0.0000	No use of any standby generators?	There is emergency gen onsite only. Do you know if they were run in the last year? Only run for testing purposes.

Code	Measure	Units	Data	Audit Comments	Audit Response
WST11	Has an assessment been undertaken to identify critical water supply assets	Yes/No	Yes	I believe (and correct me if I am wrong) AssetFinda just records criticality ratings - how were those ratings determined in the first instance?	Asset manager review for infrastructure strategy.
WSCC1	Has a climate change risk assessment been undertaken for water supply networks	Yes/No	No	Is it planned to undertake a climate change risk assessment?	Not a climate change risk assessment. As part of the water source project, climate change is assessed.
WSCC2	Is there a climate change adaptation plan in place for water supply networks	Yes/No	No	Is it the intention to do a plan for water supply?	See above.
WSCC3	Has an emissions baseline been set for forecast water supply investments	Yes/No	No	Is it planned to set an emissions baseline?	There is an emissions baseline - it isn't used to forecast water supply investments.
WSF11	Council contract management Costs : water supply	\$	\$0	Does Carterton have any external water supply contractor/s it manages? If so what are the costs associated with managing those contractors? If the costs are embedded in WSF10, please try and separate out the costs.	No, all inhouse staff.
WWE4g	Wet weather overflow regulation approach	Selection	Resource consent held for wet weather discharges	Okay	
WWB1b	Wastewater Service Coverage	%	64.9%	Are there a number of properties using septic tanks?	Yes, rural is approx. 40% to district.
WWA2f	Percentage of pipelines that have received a condition grading	%	95%	Any idea how old the condition gradings are? What was the approach to determine the condition gradings e.g. was it age based?	Predominantly age based, with some CCTV footage, inspections. 2020 last valuation by WSP.
WWA2d	Percentage of pipelines in poor or very poor condition	%	26%	Okay	
WWA6	Percentage of above ground assets that have received a condition grading	%	100%	Any idea how old the condition gradings are?	See comment WWA2f.

Code	Measure	Units	Data	Audit Comments	Audit Response
WWT1	Percentage of above ground assets in poor or very poor condition	%	10%	Okay	
WWT3	Wastewater energy use from other fuels	GJ	0	No use of any standby generators?	There is standby, but water is priority. Was the standby used at all for wastewater in the last year? This is a mobile plant but was only connected up and run for testing purposes.
WWCC1	Has a climate change risk assesment been undertaken for wastewater networks	Yes/No	No	Is it planned to undertake a climate change risk assessment?	Not in near future.
WWCC2	Is there a climate change adaptation plan in place for wastewater networks	Yes/No	No	Is it the intention to do a plan for wastewater?	Incorporate into I&I plan. Treatment side, yes LTP 100% discharge to land.
WWCC3	Has an emissions baseline been set for forecast wastewater investments	Yes/No	No	Is it planned to set an emissions baseline?	There is emissions baseline, but not used currently for investments.
WWT4	Has an assessment been undertaken to identify critical wastewater assets	Yes/No	Yes	I believe (and correct me if I am wrong) AssetFinda just records criticality ratings - how were those ratings determined in the first instance?	Set by previous asset manager as I understand. Plant then based on pipe size.
WWS4d	The authority's response to issues with its sewerage system	Number	33	Okay	
WWF11	Management Costs: Wastewater	\$	\$2,640,572	Does this cover all internal costs?	Yes
WWF12	Councils Contract Management Costs: Wastewater	\$	\$0	Does Carterton have any external wastewater contractor/s it manages? If so what are the costs associated with managing those contractors? If the costs are embedded in WSF10, please try and separate out the costs.	All internal.
SWA2f	Percentage of pipelines that have received a condition grading	%	0%	N/A? See comment against SWF7.	Update, as didn't save in final version.

Code	Measure	Units	Data	Audit Comments	Audit Response
SWA2d	Percentage of pipelines in poor or very poor condition	%	0%	N/A? See comment against SWF7.	As above.
SWA5c	Percentage of above ground stormwater assets that have received a condition grading	%	0%	N/A? See comment against SWF7.	As above.
SWA5d	Percentage of above ground assets in poor or very poor condition	%		N/A? See comment against SWF7.	As above. Should be blank.
SWT1	Stormwater energy use from other fuels	GJ	0	Okay	
SWE6	Has a climate change risk assesment been undertaken for stormwater networks	Yes/No	No	N/A? See comment against SWF7.	As above.
SWE7	Is there a climate change adaptation plan in place for stormwater networks	Yes/No	No	N/A? See comment against SWF7.	As above.
SWE8	Has an emissions baseline been set for forecast stormwater investments	Yes/No	No	N/A? See comment against SWF7.	As above.
SWE9	Attenuation storage requirements for new developments	L/m2		N/A? See comment against SWF7.	As above. Leave blank.
SWE10	RCP scenario (s) new stormwater systems are designed to	Selection	2.6	N/A? See comment against SWF7.	As above.
SWE11	Time horizon (s) new stormwater systems are designed to	Year	2032	N/A? See comment against SWF7.	Do you know if there is a "designed to" year? 10 years out from now (not sure if this is a correct interpretation of what is required here).
SWS1	Stormwater Charge	\$	\$100.94	Depends on the response to the comment below. If the network in place is not considered to be roading related but is part of the stormwater activity, how is the funding sourced - is it from rates? If so, what is the value for the	Data value added.

Code	Measure	Units	Data	Audit Comments	Audit Response
				rates related charge and can an average value be provided?	
SWF7	Management Costs: Stormwater	\$	\$118,326	It would appear that the stormwater network in place is for roading with properties discharging to soak pits or storage tanks. Could these management costs be considered as roading related costs?	There is separate roading charge, and this is collected as rates for stormwater. Are these management costs expended by 3 waters staff? Yes
SWF8	Council Contract Management Costs: Stormwater	\$	\$0	Depends on the response to the comment above. If the network in place is not considered to be roading related but is part of the stormwater activity, does Carterton have any external stormwater contractor/s it manages? If so what are the costs associated with managing those contractors? If the costs are embedded in SWf7, please try and separate out the costs.	All inhouse staff.

Table 6 Horowhenua District Council

Code	Measure	Units	Data	Audit Comments	Audit Response
CB10	Internal staff	FTE	7	If the vacancies are 4 does this mean the data value should be 7?	Yes Changed the 11 to 7 - is this okay? Yes
CB10a	Staff vacancies	FTE	4	What do you mean by the comment "Internal staff only"?	HDC staff only - not contractors.
WST1	Drinking water networks	Number	5	Okay	
WST2	Drinking water abstraction points	Number	8	Okay	
WST3	Drinking water network source type	Selection	Other (include detail in comments field)	Okay	

Code	Measure	Units	Data	Audit Comments	Audit Response
WSB2	Residential connections in the drinking water network	Number	12547	Okay	
WSB3	Non-residential connections in the drinking water network	Number	833	Okay	
WSB1a	Total population served by the drinking water network	Number	29641	Why is the data confidence "Less Reliable"?	I would suggest that the information is Reliable based on the information we have. Okay - changed the data confidence to Reliable.
WST4	Number of resource consents that are held	Number	14	Okay	
WST5	Type of resources consent	Selection	Other (include detail in comments field)	Okay	
WSA2f	Percentage of pipelines that have received a condition grading	%	10%	Okay	
WSA2d	Percentage of pipelines in poor or very poor condition	%	10%	This value should be a percentage of all pipelines, not a percentage of pipelines that have received a condition assessment. So perhaps 3% if only 10% have been assessed?	Let's talk on Teams. Noted Based on 30% of pipes are AC and 10% are in poor condition.
WSA13c	Percentage of above ground assets that have received a condition grading	%	0%	0% or unknown?	0 Have added 0% - is this okay? Yes
WSA2d+ WSA2g	Percentage of above ground assets in poor or very poor condition	%		0% or unknown?	0 Have added 0% - is this okay? Yes Should actually be blank.
WST8	Has a reference level for water pressure been set	Yes/No	Yes	Okay	
WSS11	Number of days water restrictions applied	Number	148	0 or unknown?	Data value provided. Is last year's value though.

Code	Measure	Units	Data	Audit Comments	Audit Response
WST9	Number of connections affected by restrictions	%	75.00%	0 or unknown?	Probably around 10,000 What would this work out to as a percentage? 10,000/13380=75%.
WSE1a	Estimated total drinking water network water loss	m ³ /year	1,744,204	The losses have gone up - is that because of more accurate monitoring or is it just because there is more actual water loss? Any reason why the data confidence is "Less Reliable"?	More monitoring.
WSB8	Median residential water consumption (L/day/connection)	L/person/day	565.2759869	Any idea if the number calculated feels about right? Lesley - the units need to be changed to L/day/connection as this helps explain the increase.	It feels on the high side, it is around 370 or less. Noted
WST10	Is there a water conservation education programme in place	Yes/No	Yes	Okay	
WSE3	Water supply grid electricity use	kWh	1610763.37	Is it not possible to get this data?	Can be provided. Last year's value provided.
WSE3a	Water supply energy use from other fuels	GJ	0	0 or unknown? No use of any standby generators?	0 Okay - have entered '0'.
WST11	Has an assessment been undertaken to identify critical water supply assets	Yes/No	Yes	What was the nature of the criticality assessment?	Yes, at a high level only.
WSCC1	Has a climate change risk assessment been undertaken for water supply networks	Yes/No	Yes	Okay	
WSCC2	Is there a climate change adaptation plan in place for water supply networks	Yes/No	No	Is it the intention to do a plan for water supply?	Yes, and incorporating climate aspects in projects informally.
WSCC3	Has an emissions baseline been set for forecast water supply investments	Yes/No	No	Is it planned to set an emissions baseline?	Not at this stage.

Code	Measure	Units	Data	Audit Comments	Audit Response
WSF11	Council contract management Costs : water supply	\$		Does Horowhenua have any external water supply contractor/s it manages? If so what are the costs associated with managing those contractors? If the costs are embedded in WSF10, please try and separate out the costs.	Yes So the costs are embedded in WSF10 - is that correct? Yes - too hard to separate out.
WWE4g	Wet weather overflow regulation approach	Selection	Treated as emergency discharge	Okay	
WWB1b	Wastewater Service Coverage	%	67.9%	Are there a number of properties using septic tanks?	Yes, rural properties.
WWA2f	Percentage of pipelines that have received a condition grading	%	24%	What about the pipes that have received an extrapolated grading? The 35% value below suggests the value of 24% should be higher.	They were not included. Noted
WWA2d	Percentage of pipelines in poor or very poor condition	%	35%	Okay	
WWA6	Percentage of above ground assets that have received a condition grading	%		0% or unknown?	Unknown Okay - will leave blank.
WWT1	Percentage of above ground assets in poor or very poor condition	%		0% or unknown?	Unknown Okay - will leave blank.
WWT3	Wastewater energy use from other fuels	GJ	0	0 or unknown? No use of any standby generators?	0 Okay - have entered '0'.
WWCC1	Has a climate change risk assesment been undertaken for wastewater networks	Yes/No	No	Is it planned to undertake a climate change risk assessment?	Not in near future however it is incorporated into projects informally.
WWCC2	Is there a climate change adaptation plan in place for wastewater networks	Yes/No	No	Is it the intention to do a plan for wastewater?	Not at this stage.
WWCC3	Has an emissions baseline been set for forecast wastewater investments	Yes/No	No	Is it planned to set an emissions baseline?	Not at this stage.

Code	Measure	Units	Data	Audit Comments	Audit Response
WWT4	Has an assessment been undertaken to identify critical wastewater assets	Yes/No	Yes	Yes/No or unknown?	Yes, partially. Okay - have entered Yes as at least you have done something which is better than nothing.
WWS4d	The authority's response to issues with its sewerage system	Number	0	Was this value easy to determine?	It may be less reliable Okay changed the data confidence to Less reliable.
WWF11	Management Costs: Wastewater	\$	\$897,000	Does this cover all internal costs?	Does
WWF12	Councils Contract Management Costs: Wastewater	\$	\$0	Does Horowhenua have any external wastewater contractor/s it manages? If so what are the costs associated with managing those contractors? If the costs are embedded in WWF11, please try and separate out the costs.	Is it the same answer as for water? Yes - too hard to separate out.
SWA2f	Percentage of pipelines that have received a condition grading	%	20%	Was any extrapolation done with the CCTV results?	No
SWA2d	Percentage of pipelines in poor or very poor condition	%	5%	So none of the CCTV's pipes were in poor condition - is that correct?	Yes, very little percentage in SW pipe network, let say less 5%. Have entered 5% - is that okay? Yes
SWA5c	Percentage of above ground stormwater assets that have received a condition grading	%		0% or unknown?	Regular inspection of open drains are not in place yet, only cleaned reactively. Noticed that some have been infilled. Okay - will leave blank.
SWA5d	Percentage of above ground assets in poor or very poor condition	%		How is this known? Roughly how many above ground assets are there?	See above response. Should the data value be unknown then? Yes
SWT1	Stormwater energy use from other fuels	GJ	0	0 or unknown?	Electricity only. Okay - have entered '0'.
SWE6	Has a climate change risk assesment been undertaken for stormwater networks	Yes/No	Yes	Okay	

Code	Measure	Units	Data	Audit Comments	Audit Response
SWE7	Is there a climate change adaptation plan in place for stormwater networks	Yes/No	No	Is it the intention to do a plan for wastewater?	Some assessments are undertaken (I&I study) and future WWTP studies would incorporate climate change too.
SWE8	Has an emissions baseline been set for forecast stormwater investments	Yes/No	No	Is it planned to set an emissions baseline?	Not at this stage.
SWE9	Attenuation storage requirements for new developments	L/m2	Unknown	Okay	
SWE10	RCP scenario (s) new stormwater systems are designed to	Selection		Unknown?	Unknown at this stage.
SWE11	Time horizon (s) new stormwater systems are designed to	Year		Unknown?	Unknown at this stage.
SWS1	Stormwater Charge	\$	\$184.06	A reduction from last year. Is that correct?	I would go with this figure. Noted
SWF7	Management Costs: Stormwater	\$	\$491,000	A significant increase from last year - was last year's value incorrect? Does this cover all internal costs?	This seems more reasonable, previous figure seems far too low. Noted
SWF8	Council Contract Management Costs: Stormwater	\$	\$0	Does Horowhenua have any stormwater external contractor/s it manages? If so what are the costs associated with managing those contractors? If the costs are embedded in SWF7, please try and separate out the costs.	Included in above cost.

Table 7 Selwyn District Council

Code	Measure	Units	Data	Audit Comments	Audit Response
CB10	Internal staff	FTE	19	Okay	

Code	Measure	Units	Data	Audit Comments	Audit Response
CB10a	Staff vacancies	FTE	2	Wondering if the data value should be 2 as this measure goes hand in hand with CB10 i.e. relates to Council employees?	Changed to 2 (Just SDC Vacant).
WST1	Drinking water networks	Number	27	Okay	
WST2	Drinking water abstraction points	Number	51	Okay	
WST3	Drinking water network source type	Selection	Other (include detail in comments field)	Okay	
WSB2	Residential connections in the drinking water network	Number	20858	So a reasonably amount of growth in the last year. Is that correct?	Yes, and also has been an update of tool (Power BI). In previous years some valuations ID were not identified as a residential ("blank"-before) and now has been classified. Are you using Power BI to report the connections data? Power BI sits on top of exported rating data. There has also been some improvements to the rating data as well.
WSB3	Non-residential connections in the drinking water network	Number	1426	Okay	
WSB1a	Total population served by the drinking water network	Number	50113	Any reason for the decrease from last year's value? Seems odd since the number of residential connections has increased. Maybe last year's value was not correct?	Last year's value in the water NZ spreadsheet is an automatically calculated cell, based on number of residential properties * household occupancy factor. This year data was extracted by the most accurate between 3 different analysis. The value reported in the AMP, reported in the water safety plans and # connections by scale factor - habitants per household. background document available.
WST4	Number of resource consents that are held	Number	46	Are the consents effectively recorded as an asset in the AMS?	Yes, Each consent has an assigned Asset ID in AMS. A good way of managing consents. Do you value them as well? Consents are valued.

Code	Measure	Units	Data	Audit Comments	Audit Response
WST5	Type of resources consent	Selection	Water permits - take, use, dam, and divert	Okay	
WSA2f	Percentage of pipelines that have received a condition grading	%	95%	Was just the Opus formula used or was it a combination of formula and task method?	Just the Opus formula was reported. The task method results are available too in the background document. Can you explain if possible just the high level philosophy behind the Opus formula? Don't have any information on how the Opus formula works.
WSA2d	Percentage of pipelines in poor or very poor condition	%	7%	As above.	Opus formula was used.
WSA13c	Percentage of above ground assets that have received a condition grading	%	100%	Okay	
WSA2d+ WSA2g	Percentage of above ground assets in poor or very poor condition	%	33%	Okay	
WST8	Has a reference level for water pressure been set	Yes/No	Yes	What is the reference level?	It varies between each scheme and is detailed in the AMP.
WSS11	Number of days water restrictions applied	Number	0	Okay	
WST9	Number of connections affected by restrictions	%	0.00%	Okay	
WSE1a	Estimated total drinking water network water loss	m ³ /year	1,281,361	That is a reasonably improvement on last year's value. Has there been a concerted effort to reduce water losses?	We have improved the accuracy of reporting and focus on AC pipe renewals over this period.
WSB8	Median residential water consumption (L/day/connection)	L/person/day	914.1386571	Okay Lesley - the units need to be changed to L/day/connection as this helps explain the increase.	

Code	Measure	Units	Data	Audit Comments	Audit Response
WST10	Is there a water conservation education programme in place	Yes/No	Yes		
WSE3	Water supply grid electricity use	kWh	4395065.00	Okay	
WSE3a	Water supply energy use from other fuels	GJ		No use of any standby generators?	Only Diesel use in emergency generators. We may provide this information next year. Have made the data cell blank instead of 0. Is that okay? Yes.
WST11	Has an assessment been undertaken to identify critical water supply assets	Yes/No	Yes	Okay	
WSCC1	Has a climate change risk assessment been undertaken for water supply networks	Yes/No	Yes	Okay	
WSCC2	Is there a climate change adaptation plan in place for water supply networks	Yes/No	Yes	Okay	
WSCC3	Has an emissions baseline been set for forecast water supply investments	Yes/No	No	Is it planned to set an emissions baseline?	Yes.
WSF11	Council contract management Costs : water supply	\$		Do you mean the costs are included in WSF9a & b or included in WSF10? The cost that should go against this measure is the cost that Council is incurring themselves in managing the contractual relationship with Corde. Relatively easy if there are dedicated contract manager/s but harder if there are multiple staff involved.	This is included in WSF10.
WWE4g	Wet weather overflow regulation approach	Selection	Treated as emergency discharge	Okay	
WWB1b	Wastewater Service Coverage	%	67%	Okay	

Code	Measure	Units	Data	Audit Comments	Audit Response
WWA2f	Percentage of pipelines that have received a condition grading	%	96%	Are the condition gradings from CCTV?	No. The Opus formula was reported. The task method results are available too in the background document. Included CCTV.
WWA2d	Percentage of pipelines in poor or very poor condition	%	5%	As above.	Opus formula was used.
WWA6	Percentage of above ground assets that have received a condition grading	%	100%	Okay	
WWT1	Percentage of above ground assets in poor or very poor condition	%	26%	Okay	
WWT3	Wastewater energy use from other fuels	GJ		No use of standby generators?	Only Diesel use in emergency generators. May provide information next year. Have made the data cell blank instead of 0. Is that okay? Yes.
WWCC1	Has a climate change risk assesment been undertaken for wastewater networks	Yes/No	Yes	Okay	
WWCC2	Is there a climate change adaptation plan in place for wastewater networks	Yes/No	Yes	Okay	
WWCC3	Has an emissions baseline been set for forecast wastewater investments	Yes/No	No	Is it planned to set an emissions baseline?	Yes.
WWT4	Has an assessment been undertaken to identify critical wastewater assets	Yes/No	Yes	Okay	
WWS4d	The authority's response to issues with its sewerage system	Number	0	Okay	
WWF11	Management Costs: Wastewater	\$	\$1,284,885	Okay	

Code	Measure	Units	Data	Audit Comments	Audit Response
WWF12	Councils Contract Management Costs: Wastewater	\$		Do you mean the costs are included in WWF9 & 10 or included in WWF11? The cost that should go against this measure is the cost that Council is incurring themselves in managing the contractual relationship with Corde. Relatively easy if there are dedicated contract manager/s but harder if there are multiple staff involved.	It is included In WWF11.
SWA2f	Percentage of pipelines that have received a condition grading	%	43%	Okay	
SWA2d	Percentage of pipelines in poor or very poor condition	%	0.32%	Okay	
SWA5c	Percentage of above ground stormwater assets that have received a condition grading	%	0%	Okay	
SWA5d	Percentage of above ground assets in poor or very poor condition	%		Maybe better to leave this measure blank as the 0% could be misleading.	Changed.
SWT1	Stormwater energy use from other fuels	GJ	0	This measure had been deleted. Have added it back in. Can you complete?	No SW sites.
SWE6	Has a climate change risk assesment been undertaken for stormwater networks	Yes/No	Yes	Okay	
SWE7	Is there a climate change adaptation plan in place for stormwater networks	Yes/No	Yes	Okay	
SWE8	Has an emissions baseline been set for forecast stormwater investments	Yes/No	No	Is it planned to set an emissions baseline?	Yes
SWE9	Attenuation storage requirements for new developments	L/m2	-	Okay	

Code	Measure	Units	Data	Audit Comments	Audit Response
SWE10	RCP scenario (s) new stormwater systems are designed to	Selection	8.5	Okay	
SWE11	Time horizon (s) new stormwater systems are designed to	Year	2081-2100	Okay	
SWS1	Stormwater Charge	\$	\$113.00	Okay	
SWF7	Management Costs: Stormwater	\$	\$197,936	Okay	
SWF8	Council Contract Management Costs: Stormwater	\$		Do you mean the costs are included in SWF6a & b or included in SWF7? The cost that should go against this measure is the cost that Council is incurring themselves in managing the contractual relationship with Corde. Relatively easy if there are dedicated contract manager/s but harder if there are multiple staff involved.	This is included in SWF7.

Table 8 South Wairarapa District Council

Code	Measure	Units	Data	Audit Comments	Audit Response
CB10	Internal staff	FTE	6	Are the 6 staff 100% dedicated to three waters?	The 6 included here are the 6 FTE's located in South Wairarapa. Most of WWL staff will spend some of their time (but likely less than 50% of their overall time) so we have not included this in South Wairarapa submission. We have included these figures in the Wellington Water NPR submission. What is the nature of the work the 6 FTE's do? Operations technicians work on water and wastewater treatment plants. Plus a team leader and a Maintenance Operator (Water Races).
CB10a	Staff vacancies	FTE	0	Okay	OK
WST1	Drinking water networks	Number	4	Interesting question - are the networks in the four towns all interconnected?	No. Just Featherston and Greytown. The Waiohine WTP can supply both by gravity, and there is a control

Code	Measure	Units	Data	Audit Comments	Audit Response
					valve prior to Greytown that closes and allows a supply bore within Greytown to pressurise that network. That bore cannot supply Featherston however. My answer would be 3 but will be interesting to see what Taumata Arowai say. Still waiting an answer from TA. Have followed up today (31/10).
WST2	Drinking water abstraction points	Number	9	The 1 bore dedicated for a farmer is not being counted - is that correct?	Correct. 4x Waiohine WTP (Featherston/Greytown), 1 x Memorial Park (Greytown), 3x Martinborough, 1 x Pirinoa only. However perhaps it should be since it's an asset owned and operated by SWDC (and therefore a cost), though it has no real beneficial public supply use. Would the bore for the farmer be used as a backup supply or is it well away from the public network? In theory it could be. But would be very unlikely to be required.
WST3	Drinking water network source type	Selection	Bore	Can you put "Bore" in each of the columns O, P, Q and R under the town names?	Done
WSB2	Residential connections in the drinking water network	Number	4241	So very little growth? Any multi-unit dwellings that have had to be accounted for?	2020/21 data was incorrect - should be 4172. (not 4233). Noted. Missed a question - any multi-unit dwellings that have had to be accounted for? SWDC rate by connection.
WSB3	Non-residential connections in the drinking water network	Number	574	Is the increase totally due to the change in estimation method or has there been growth?	The increase due to the change in estimation method this year.
WSB1a	Total population served by the drinking water network	Number	7740	Does it seem correct that the population had dropped from last year or is it due to the change in method of population estimation?	The drop of population number this year due to the change in estimation method this year.
WST4	Number of resource consents that are held	Number	4	Okay	OK

Code	Measure	Units	Data	Audit Comments	Audit Response
WST5	Type of resources consent	Selection	Water permits - take, use, dam, and divert	Okay	Ok
WSA2f	Percentage of pipelines that have received a condition grading	%	11.86%	What is the nature of the VHCA programme?	VHCA = Very High Criticality Assets. Wellington Water undertook a targeted condition assessment programme over the past 18 months to physically (and desktop assess) the condition of assets that were considered the most important across the three waters network. Reporting on results was simple given the programme wrapped around it. For BAU condition assessments, WWL does not have a process in place to centrally record condition (and therefore has not included it in the WNZ submission).
WSA2d	Percentage of pipelines in poor or very poor condition	%	7.63%	Okay	Ok
WSA13c	Percentage of above ground assets that have received a condition grading	%	38%	Okay	OK
WSA2d+ WSA2g	Percentage of above ground assets in poor or very poor condition	%	26%	Okay	OK
WST8	Has a reference level for water pressure been set	Yes/No	Yes	Are there any known issues with pressure?	No high pressure issues as SWDC topography is level. Our Customer Service Engineer is not aware of any low pressure issues.
WSS11	Number of days water restrictions applied	Number	365	Okay	OK
WST9	Number of connections affected by restrictions	%	100.00%	In all 4 towns?	Correct – all water supply connections in SWDC towns were affected by restrictions.
WSE1a	Estimated total drinking water network water loss	m ³ /year	688745	Any known reason for the increase in water loss?	The increase in Water Loss due to the change in calculation method from Mass Balance method to Minimum Night Flow method this year

Code	Measure	Units	Data	Audit Comments	Audit Response
WSB8	Median residential water consumption (L/day/connection)	L/person/day	352.2288941	Slight drop but t that is okay.	OK
WST10	Is there a water conservation education programme in place	Yes/No	Yes	Any plans for a co-ordinated programme especially given the water restrictions?	It turns out WWL do spread the water conservation messaging to SWDC as part of the regional summer demand communication. Answer changed to Yes and comment has been updated.
WSE3	Water supply grid electricity use	kWh	187631.00	Okay	OK
WSE3a	Water supply energy use from other fuels	GJ		Are there any backup generators that could be used if needed?	Yes, mobile trailer mounted generators. Were they used at all in the 2021/2022 period? Yes. There were several power cuts. The power supply in SWDC is vulnerable to outages. Would be difficult to get energy use though.
WST11	Has an assessment been undertaken to identify critical water supply assets	Yes/No	Yes	Okay	OK
WSCC1	Has a climate change risk assessment been undertaken for water supply networks	Yes/No	No	Is it planned to undertake a climate change risk assessment?	WWL are looking at alternative water sources for some SWDC sources and climate change assessment will be included as part of that.
WSCC2	Is there a climate change adaption plan in place for water supply networks	Yes/No	No	Is it the intention to do a plan for water supply?	Not currently. Adaptation plan would have to follow the climate change risk assessment plan.
WSCC3	Has an emissions baseline been set for forecast water supply investments	Yes/No	No	Okay	OK
WSF11	Council contract management Costs : water supply	\$	\$1,240,949	Based on the comments it seems that WSF10 and WSF11 may have got crossed over. WSF10 should be all the internal costs and WSF11 should be the costs that are incurred for the management of external contractors. Just not sure about the where the fee Wellington Water charges Council should sit.	Yes, that's what we discussed with Lesley. It seems the definition may have changed from last year. We have reported it the same as last year to be consistent but hope to have clarification for next year (if required). Confused - will discuss. Includes allocation of council overheads to water supply. Rates that are allocated. Catchall of expenditure not covered elsewhere.

Code	Measure	Units	Data	Audit Comments	Audit Response
					Formula use to work out what is left over from the other measures and then value populated here.
WWE4g	Wet weather overflow regulation approach	Selection	No regulatory approach	Okay	OK
WWB1b	Wastewater Service Coverage	%	75.1%	Does this number feel about right?	Yes it does. SWDC has 4 urban areas where the houses are connected to the Wastewater network. It also has a high number of rural and lifestyle blocks that use their own septic tanks not connected to the wastewater network.
WWA2f	Percentage of pipelines that have received a condition grading	%	6.67%	What is the nature of the VHCA programme?	VHCA = Very High Criticality Assets. Wellington Water undertook a targeted condition assessment programme over the past 18 months to physically (and desktop assess) the condition of assets that were considered the most important across the three waters network. Reporting on results was simple given the programme wrapped around it. For BAU condition assessments, WWL does not have a process in place to centrally record condition (and therefore has not included it in the WNZ submission).
WWA2d	Percentage of pipelines in poor or very poor condition	%	0.21%	Okay	OK
WWA6	Percentage of above ground assets that have received a condition grading	%	0%	Okay	OK
WWT1	Percentage of above ground assets in poor or very poor condition	%		Maybe better to leave this measure blank as the 0% could be misleading.	OK
WWCC2	Is there a climate change adaptation plan in place for wastewater networks	Yes/No	No	Is it the intention to do a plan for wastewater?	A plan is not programmed, however, we are working with the regional council on a climate change adaption plan that could be useful for planning for the networks. What would be some typical impacts of climate change on wastewater networks - would it be things like increased infiltration because of increased rainfall?

Code	Measure	Units	Data	Audit Comments	Audit Response
					Yes - this would be the main impact for SWDC as we don't have coastal impacts.
WWT3	Wastewater energy use from other fuels	GJ	0	No use of standby generators?	No standby generators installed in SWDC. Would bring in mobile generators if needed. Do you know if any were brought in? Martin Gronback may know?
WWCC3	Has an emissions baseline been set for forecast wastewater investments	Yes/No	No	Is it planned to set an emissions baseline?	Yes, we are currently working on completing a baseline with the 2020/21 data and should be completed by 2023.
WWT4	Has an assessment been undertaken to identify critical wastewater assets	Yes/No	Yes	Okay	OK
WWS4d	The authority's response to issues with its sewerage system	Number	3	Okay	OK
WWCC1	Has a climate change risk assesment been undertaken for wastewater networks	Yes/No	No	Is it planned to undertake a climate change risk assessment?	A risk assessment is not programmed, however, we are working with the regional council on a climate change risk assessment and adaption plan that could be useful for planning for the networks.
WWF11	Management Costs: Wastewater	\$	\$149,354	Based on the comments it seems that WWF11 and WWF12 may have got crossed over. WWF11 should be all the internal costs and WWF12 should be the costs that are incurred for the management of external contractors. Just not sure about the where the fee Wellington Water charges Council should sit.	Yes, that's what we discussed with Lesley. It seems the definition may have changed from last year. We have reported it the same as last year to be consistent but hope to have clarification for next year (if required). Confused - will discuss. Treated the same as prior years so it's consistent. WWL management and advisory fee that has been applied to Water. Not applied directly to a capex or opex work.
WWF12	Councils Contract Management Costs: Wastewater	\$	\$572,436	Based on the comments it seems that WWF11 and WWF12 may have got crossed over. WWF11 should be all the internal costs and WWF12 should be the costs that are incurred for the management of external contractors. Just not sure about the where the fee Wellington Water charges Council should sit.	Yes, that's what we discussed with Lesley. It seems the definition may have changed from last year. We have reported it the same as last year to be consistent but hope to have clarification for next year (if required). Confused - will discuss. Includes allocation of council overheads to water

Code	Measure	Units	Data	Audit Comments	Audit Response
					supply. Rates that are allocated. Catchall of expenditure not covered elsewhere. Formula use to work out what is left over from the other measures and then value populated here.
SWA2f	Percentage of pipelines that have received a condition grading	%	1.63%	What is the nature of the VHCA programme?	VHCA = Very High Criticality Assets. Wellington Water undertook a targeted condition assessment programme over the past 18 months to physically (and desktop assess) the condition of assets that were considered the most important across the three waters network. Reporting on results was simple given the programme wrapped around it. For BAU condition assessments, WWL does not have a process in place to centrally record condition (and therefore has not included it in the WNZ submission).
SWA2d	Percentage of pipelines in poor or very poor condition	%	0%	Okay	OK
SWA5c	Percentage of above ground stormwater assets that have received a condition grading	%	0%	Okay	OK
SWA5d	Percentage of above ground assets in poor or very poor condition	%		Maybe better to leave this measure blank as the 0% could be misleading.	Changed to "No Data available". Changed to blank so as to work with reporting.
SWT1	Stormwater energy use from other fuels	GJ	0	Okay	OK
SWE6	Has a climate change risk assesment been undertaken for stormwater networks	Yes/No	No	Okay	OK
SWE7	Is there a climate change adaptation plan in place for stormwater networks	Yes/No	No	Okay	Ok
SWE8	Has an emissions baseline been set for forecast stormwater investments	Yes/No	No	Okay	Ok

Code	Measure	Units	Data	Audit Comments	Audit Response
SWE9	Attenuation storage requirements for new developments	L/m2	N/A	Okay	OK
SWE10	RCP scenario (s) new stormwater systems are designed to	Selection	Other	Okay	OK
SWE11	Time horizon (s) new stormwater systems are designed to	Year	2100	Okay	Ok
SWS1	Stormwater Charge	\$	\$0.00	Is there any funding collected for stormwater? If so, what is the nature of that funding e.g. rates?	It's included in the general rates. Is it possible to separate out the stormwater component? No.
SWF7	Management Costs: Stormwater	\$	\$40,733	Based on the comments it seems that SWF7 and SWF8 may have got crossed over. SWF7 should be all the internal costs and SWF8 should be the costs that are incurred for the management of external contractors. Just not sure about the where the fee Wellington Water charges Council should sit.	Yes, that's what we discussed with Lesley. It seems the definition may have changed from last year. We have reported it the same as last year to be consistent but hope to have clarification for next year (if required). Confused - will discuss. Treated the same as prior years so it's consistent. WWL management and advisory fee that has been applied to Water. Not applied directly to a capex or opex work.
SWF8	Council Contract Management Costs: Stormwater	\$	\$291,172	Based on the comments it seems that SWF7 and SWF8 may have got crossed over. SWF7 should be all the internal costs and SWF8 should be the costs that are incurred for the management of external contractors. Just not sure about the where the fee Wellington Water charges Council should sit.	Yes, that's what we discussed with Lesley. It seems the definition may have changed from last year. We have reported it the same as last year to be consistent but hope to have clarification for next year (if required). Confused will discuss. Includes allocation of council overheads to water supply. Rates that are allocated. Catchall of expenditure not covered elsewhere. Formula use to work out what is left over from the other measures and then value populated here.

