

Waikato progress indicators – *Tupuranga Waikato*

Summary update September 2022



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September 2022

Doc # 24407867

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1 Purpose

This document summarises latest results from the Waikato Progress Indicators (WPI) – *Tupuranga Waikato* monitoring programme, updated in August 2022. The WPI is an online dashboard of 32 environmental, social, cultural and economic indicators, see www.waikatoregion.govt.nz/wpi/.

The WPI dashboard provides an overview of the economic, social, cultural and environmental wellbeing of the Waikato region and helps gauge progress towards Waikato Regional Council's (WRC's) [10-year Strategy](#). Selected measures relevant to Council's activities are included in WRC's [Annual Report](#) and other council document.

The data and [website](#) information are refreshed annually.

This update compares the latest available data for each of the WPI indicators with 2006-07 baseline results as well as more recent trends, enabling regional progress to be assessed over more than a decade as well as over the last 3-4 years. Around half of the WPI indicators also have historical data going back to 2001 or earlier, giving a longer-term view. The aim is to inform the Waikato public, planners, and decision-makers of genuine progress against key indicators of wellbeing. Note that the Local Government (Community Well-being) Amendment Act 2019 restored the purpose of local government to be *"to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future"*.¹

The structure of this update report is:

1. Purpose
2. Latest results
3. Economic trends
4. Social and cultural trends
5. Environmental trends
6. Impacts of COVID-19
7. Overall progress (experimental indexes).

For background on the development and design of the WPI programme, including the selection of indicators, refer to Killerby and Huser (2014).²

¹ Refer www.legislation.govt.nz/act/public/2002/0084/latest/versions.aspx/

² Refer <https://www.waikatoregion.govt.nz/assets/WRC/WRC-2019/TR201444.pdf>

2 Latest results

Results from the WPI monitoring programme are presented through Indicator Report Cards; Waikato Region Scorecard; Circles of wellbeing; and comparisons with other regions and New Zealand.

The 32 indicators, and how they relate to community aspirations and outcomes, are described in Appendix 1. The results for each indicator (primary dataset 2001 to latest available data) are tabulated in Appendix 2.

2.1 Indicator Report Cards

Results for each indicator are summarised in online Report Cards, along with supporting information. These are available online at: www.waikatoregion.govt.nz/wpi/. Each of the 32 report cards includes a summary of the current state and recent changes and trends in relation to that indicator (results) and information about what the particular indicator means, why it is important and how the results were obtained (for example, by listing the data source).

2.2 Waikato Region Scorecard

The Scorecard (Figure 1) gives an overview of the Waikato region's progress towards wellbeing since approximately 2006-07.

Positive measured trends over the period approximately 2006-07 to latest available data are, in declining order (most positive trend first):

- + Increased road safety – long-run decrease in the social cost of road injury crashes from approximately \$2,200 per capita in 2007 (expressed in 2021 dollars) to \$1,200 per capita in 2020.³
- + Increase in building activity – increase in real value of new building consents issued per year from \$3,700 per capita in 2007 (expressed in 2021 dollars) to \$5,100 in 2021.
- + Improved air quality – decrease in annual exceedances per year of the regional quality guideline for particulate matter in air, from 20 in 2007 to 13 in 2020.⁴
- + Higher average incomes – increase in real median weekly household income from around \$1,500 in 2007 (expressed in 2021 dollars) up to \$1,800 in 2021.
- + Better educational attainment – increase in the percentage of school leavers with NCEA level 2 or above from 64% in 2009 to 77% in 2021.
- + Growth in regional GDP – increase in real regional GDP per capita from approximately \$49,000 in 2007 (expressed in 2021 dollars) to \$58,000 in 2021.
- + Less crime – close to record low levels of recorded victimisations, from around 800 per 10,000 population in 2007 to less than 700 in 2021.
- + Higher rate of voter turnout – increase in voter turnout for local council, DHB and regional council elections from an average of 38% in 2007 to 42% in 2019.
- + Improvement in soil quality – increase in the percentage of soil quality monitoring sites in the region meeting five or more of the seven soil quality targets, from 86% in 2007 to 92% in 2021.

³ Despite a significant improvement in road safety over the last decade, the Waikato region still has a higher cost of road crashes per person than the national average (see Table 1, Figure 3). This is influenced by the extent of open roads and substantial transit traffic through the region.

⁴ In 2021, a higher value of 49 exceedances was recorded. However, increases from around 2019/20 may be attributed to the roll-out of new optical based monitors which measure a higher number of exceedances than the older monitors. Other regions have also identified increases in the number of exceedances due to the recent introduction of these new monitors.

- + More recycling – increase in the percentage of people who said their household recycles ‘all/most of’ their waste, from approximately 66% in 2008 to 70% in 2012.⁵
- + Improved perceptions of safety – increase in the percentage of people who report feeling safe walking alone in their neighbourhood after dark, from 60% in 2006 to 63% in 2022.
- + Longer life expectancy – currently approximately 80 years for males and 83 years for females. Gains in life expectancy since the mid-1980s can be attributed to better living standards and improved health care.

Negative trends over the period approximately 2006-07 to latest available data include, in declining order (most negative trend first):

- Poorer perceptions of community engagement – decrease in the percentage of Waikato survey respondents who agreed that the public has an influence over the decisions their local Council makes, from 62% in 2006 to 31% in 2022.
- More waste to landfill – the estimated tonnage of waste to class 1 landfill per year in the Waikato region increased from approximately 220,000 tonnes in 2006 to almost 310,000 in 2020.
- Higher water use – increase in water allocation as a percentage of primary allocable flow at the Waikato River mouth during the summer months from 67% in 2007 to 90% in 2021.⁶
- Lower frequency of physical activity – decrease in the percentage of Waikato survey respondents who report having been physically active on five or more of the past seven days, from 61% in 2006 to 41% in 2022.
- Less use of public transport – decrease in public transport boardings per resident per annum from 9.1 in 2007/08 to 6.5 in 2020/21.
- More residential expansion onto highly productive land – increase in urban and rural residential use of highly productive land in the Waikato region, from 15,862 hectares in 2008 to 19,510 in 2019. The greatest amount of subdivision has been occurring on land classed as having higher productive capabilities.
- Lower levels of cultural respect – decrease in the percentage of survey respondents who agree that New Zealand becoming home for an increasing number of people with different lifestyles and cultures from different countries made their city/area a better place to live, from 51% in 2006 to 39% in 2022.
- Worse perceived health – decrease in the percentage of survey respondents who rate their overall health positively, from 90% in 2006 to 80% in 2022.
- Lower levels of social connectedness – decrease in the percentage of survey respondents who agreed that they experienced a sense of community with others in their neighbourhood, from 63% in 2006 to 57% in 2022.
- Lower levels of community pride – decrease in the percentage of survey respondents who agree they feel a sense of pride in the way their local area looks and feels, from 70% in 2006 to 64% in 2022.
- Lower levels of life satisfaction – decrease in the percentage of survey respondents who rated their overall quality of life positively, from 90% in 2006 to 86% in 2022.

The remaining WPI indicators do not show a significant change between 2006-07 and latest available data.

⁵ Frequency of this recycling question under the New Zealand General Social Survey (NZGSS, Statistics NZ) supplement framework will likely be at least 10 yearly intervals. There was no recycling question included in the 2014, 2016, 2018 or 2021 NZGSS.

⁶ While increased allocation of water up to 100% of the allocable flow is not necessarily negative, the observed trend of increasing water use towards the total allocable flow puts an added pressure on our water resources. The more rapid increase of water use compared with the economy (GDP growth) in recent years indicates that water is being used less efficiently.

Scorecard 2022

Waikato progress indicators - tupuranga Waikato



The Waikato progress indicators (WPI) measures social, economic and environmental progress in the Waikato region.

This scorecard compares latest data with baseline results for each indicator (2006 - 2007). For each of the 32 indicators, results are shown as improving trends, worsening trends or no significant change over the last 15 years. The indicators are grouped by wellbeing theme - economic, social and environmental wellbeing. For further information refer to waikatoregion.govt.nz/wpi



September 2022 (7/21)

Figure 1 WPI trends – Scorecard for approximately 2006-07 to latest available data (refer Appendix 2 for data).

Source: WPI Monitoring Programme database (Waikato Regional Council)

2.3 Circles of Wellbeing

The WPI circle of wellbeing captures trend information about many indicators in one diagram. The central circle represents the WPI score for each indicator in the Waikato region in the baseline year and the spokes show WPI score progress to latest available data. Where a spoke extends outside the circle it means regional wellbeing has improved over the past decade. Where a spoke falls within the circle, regional wellbeing has declined. The length of the spokes reflects the size of change.

It is only from 2006-07 that there is a robust enough regional data set to cover all the WPI indicators. Over time, as the WPI monitoring programme extends into the future, the diagrams below will give an increasingly accurate signal of long-term regional progress.

As per the overall WPI Scorecard (Figure 1 above), the most notable **positive trends** over the long-term period 2006-07 to latest available data as shown in Figure 2 below (left-hand circle) are, in declining order: road safety, building activity, air quality, incomes, educational attainment, regional GDP growth, crime, voter turnout, soil quality, recycling, perceptions of safety and life expectancy. The largest **negative trends** over this period are: poorer perceptions of community engagement, more waste to landfill, higher water use, lower frequency of physical activity, less use of public transport, more residential expansion onto highly productive land, lower perceptions of cultural respect, worse perceived health, and lower levels of social connectedness, community pride and life satisfaction.

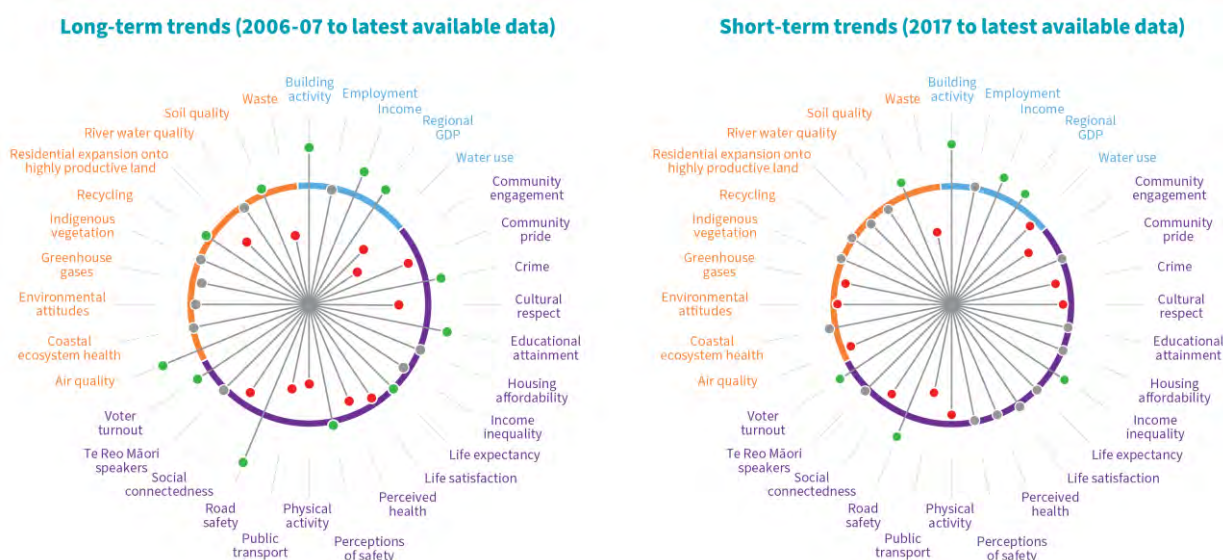


Figure 2 WPI indicator long-term (2006-07 to latest available data) and short-term (2017 to latest available data), Waikato region

Source: WPI Monitoring Programme database (Waikato Regional Council)

The right-hand circle in Figure 2 takes the same approach but focuses on the more recent trend for the Waikato region from 2017 to latest available data. Observations from these graphs and supporting WPI information include:

- While over the longer-term air quality shows an improvement, over the period 2017 to 2020 there was a slight increase in the number of exceedances per year from 12 to 13.
- Criminal offence data has improved over the longer-term, but for the shorter period 2017 to 2021 the Waikato annual regional crime rate has trended generally upward.
- The years 2016 and 2017 had particularly low levels of greenhouse gas emissions relative to historically, with latest figures showing a deterioration (i.e. increasing levels) compared to this period.
- Educational attainment of school leavers peaked in 2016 and has subsequently trended slightly downward.

2.4 Comparison of Waikato with other regions and New Zealand

Table 1 and Figure 3 below show the latest indicator comparisons between the Waikato region, selected other regions and the New Zealand average where comparable data is available. This shows that the Waikato region is behind the national average on a range of economic, social, cultural and environmental wellbeing indicators.

| Indicator | Waikato | Auckland | Wellington | Bay of Plenty | New Zealand |
|---|----------|----------|------------|---------------|-------------|
| Building activity (\$m) | \$5,078 | \$5,846 | \$3,247 | \$4,488 | \$4,906 |
| Employment | 67.1% | 69.9% | 71.7% | 64.3% | 68.2% |
| Income | \$1,812 | \$2,071 | \$2,279 | \$1,806 | \$1,880 |
| Regional GDP | \$58,056 | \$70,952 | \$75,319 | \$56,686 | \$63,955 |
| Water use | 90% | n/a | n/a | n/a | n/a |
| Community engagement | 31% | pending | pending | n/a | 28% |
| Community pride | 64% | pending | pending | n/a | 55% |
| Crime | 683 | 576 | 550 | 689 | 572 |
| Cultural respect | 39% | pending | pending | n/a | n/a |
| Educational attainment | 77.2% | 84.9% | 85.1% | 74.6% | 78.7% |
| Housing affordability | 20.2% | 22.4% | 19.6% | 19.8% | 20.5% |
| Income inequality | 0.371 | 0.441 | 0.397 | 0.357 | 0.396 |
| Life expectancy | 81.4 | 82.7 | 81.9 | 81.2 | 81.8 |
| Life satisfaction | 86% | pending | pending | n/a | 83% |
| Perceived health | 80% | pending | pending | n/a | n/a |
| Perceptions of safety | 63% | pending | pending | n/a | n/a |
| Physical activity | 41% | pending | pending | n/a | 35% |
| Public transport | 6.5 | 37.3 | 60.5 | 7.9 | 23.5 |
| Road safety | \$1,190 | \$465 | \$453 | \$1,150 | \$885 |
| Social connectedness | 57% | pending | pending | n/a | 49% |
| Te Reo Māori speakers | 5.9% | 2.4% | 3.5% | 8.6% | 4.0% |
| Voter turnout | 42.4% | 35.0% | 43.5% | 43.5% | 43.0% |
| Air quality | 13 | n/a | n/a | n/a | n/a |
| Coastal ecosystem health | 0.40 | n/a | n/a | n/a | n/a |
| Environmental attitudes | 83% | n/a | n/a | n/a | n/a |
| Greenhouse gases | 15,603 | n/a | n/a | n/a | n/a |
| Indigenous vegetation | 27.1% | n/a | n/a | n/a | n/a |
| Recycling | 70.3% | 86.1% | 79.2% | 72.6% | 80.1% |
| Residential expansion onto highly productive land | 19,510 | n/a | n/a | n/a | n/a |
| River water quality | 29% | n/a | n/a | n/a | n/a |
| Soil quality | 92% | n/a | n/a | n/a | n/a |
| Waste | 308,885 | n/a | n/a | 143,523 | n/a |

Table 1 Comparison of WPI with selected other regions and New Zealand

Source: WPI Monitoring Programme database (Waikato Regional Council)

Note: Several indicators do not have comparable regional and/or national results (n/a) because either: (1) the WPI data are from a Waikato regional-specific survey (e.g. environmental attitudes) or (2) comparable regional data are not collected or comparison is not meaningful (e.g. soil quality, river water quality) or (3) scale-related data rather than dimensionless data are being used for the WPI indicator (e.g. residential expansion onto highly productive land, greenhouse gases).

Comparisons of the Waikato region with New Zealand average for specific key indicators are shown in Figure 3 using latest available data. In this diagram, the central circle represents national average wellbeing. Where a spoke extends outside the circle it means regional wellbeing is better than the national average, and where it falls within the white circle, wellbeing is worse than the national average. For all WPI indicators not shown, directly comparable national results are not available.

The diagram shows that compared to average New Zealand the Waikato region:

- has a relatively high percentage of Te Reo Māori speakers, high frequency of physical activity, high levels of community pride and social connectedness (sense of community experienced), above-average levels of community engagement (perception of public's influence on Council decision making), slightly higher level of life satisfaction (overall quality of life), and a slightly higher value of building activity per capita; but
- is behind the national average on a range of indicators, including regional road safety, crime, recycling, GDP per person and household incomes.

Comparison of Waikato with average New Zealand

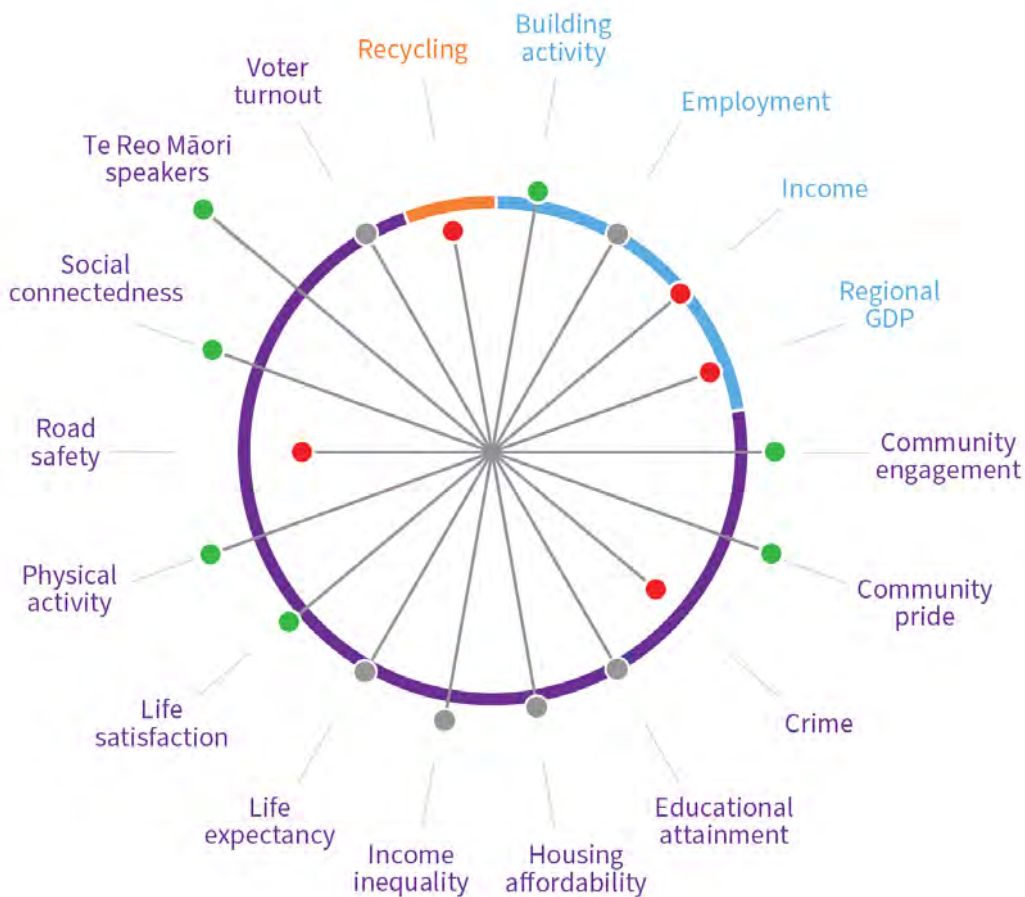


Figure 3 Comparison Waikato region with New Zealand (selected indicators only)

Source: WPI Monitoring Programme database (Waikato Regional Council)

Note: Excludes indicators that do not have comparable regional or national results. Information based on latest measured data (i.e. no imputed or estimated missing values).

3 Economic trends

Latest WPI results suggest the New Zealand economy has been relatively resilient throughout 2021 despite the COVID-19 pandemic:

- + The real value of annual new building consents per capita, a lead indicator of economic activity, hit a new record high of over \$5,000 in 2021 (Figure 4).
- + Real median weekly household income was also at record level in 2021 (Figure 5).
- + Regional GDP per person eased only slightly, from \$59,691 in 2020 (in 2021 dollars) to \$58,056 in 2021 (Appendix 2).
- + Increased economic activity is also reflected in higher water use, with an increase in water allocation as a percentage of primary allocable flow at the Waikato River mouth during the summer months from 67% in 2007 to 90% in 2021 (Appendix 2).

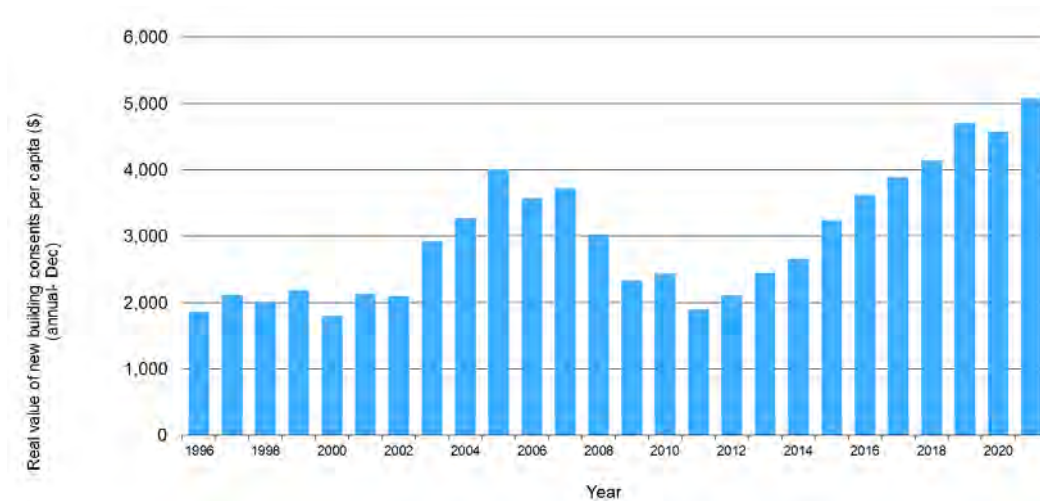


Figure 4 Real value of new building consents authorised per capita (\$) (annual – Dec)

Source: WPI Monitoring Programme database (Waikato Regional Council)

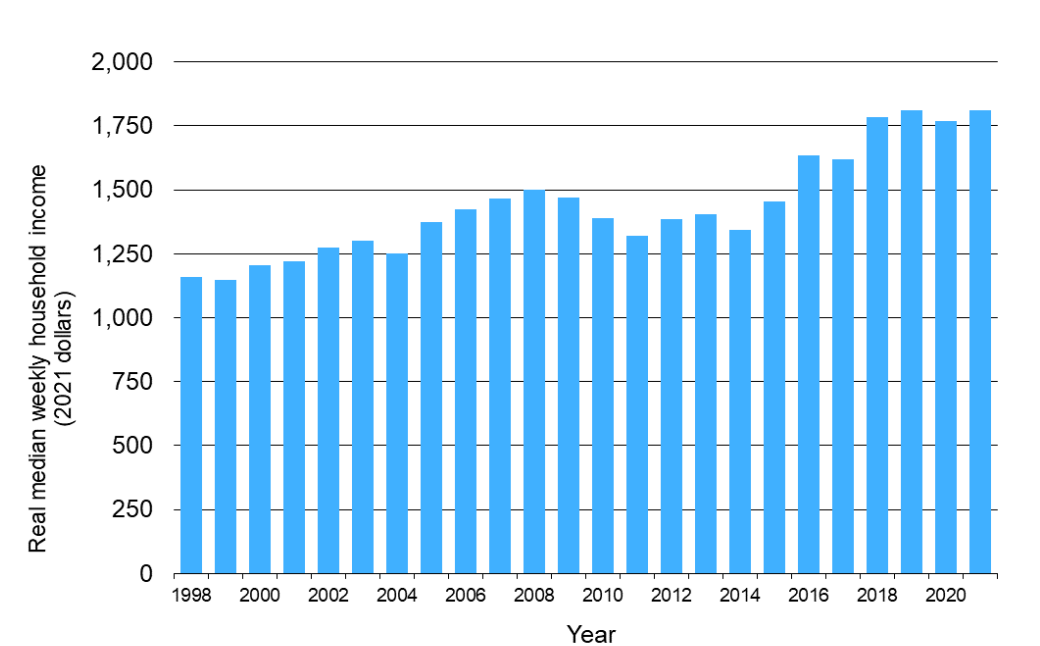


Figure 5 Real median weekly household income (2021 dollars)

Source: WPI Monitoring Programme database (Waikato Regional Council)

4 Social and cultural trends

A difference compared to last year's WPI update is that overall life satisfaction is characterised as having a worsening trend. Following an apparent recovery in the measure of Waikato people's overall quality of life in recent surveys (2018, 2020), the 2022 survey results showed a decline (Figure 6). Compared to 2006, a lower percentage of Waikato regional survey respondents rated their overall quality of life positively (86% in 2022 compared to 90% in 2006).

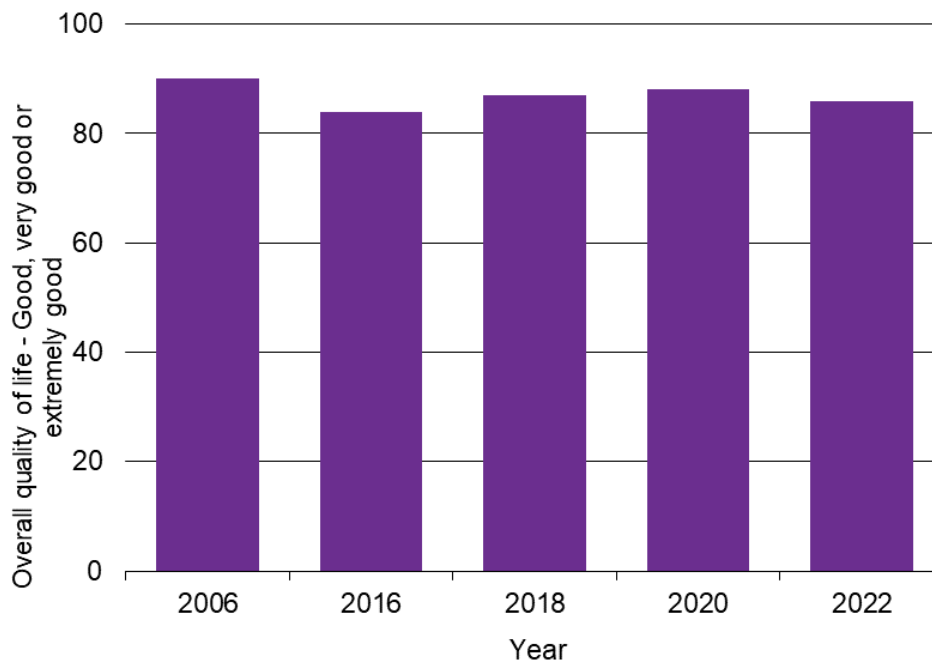


Figure 6 Percent of people who rate their overall quality of life as being positive

Source: WPI Monitoring Programme database (Waikato Regional Council)

Overall, the latest WPI results show a mix of positive and negative social and cultural trends over the past decade.

Positives include:

- + Decrease in the social cost of road injury crashes.
- + Increase in the percentage of school leavers with NCEA level 2 or above.
- + Reduction in annual reported rate of criminal victimisations.
- + Increase in voter turnout for local council, DHB and regional council elections.
- + Increase in the percentage of people who report feeling safe walking alone in their neighbourhood after dark.
- + Longer life expectancy.

Negative social and cultural trends include decreases in the percentage of people who:

- Agree the public has an influence over the decisions their local Council makes.
- Are physically active on a regular basis.
- Use public transport.
- Agree that New Zealand becoming home for an increasing number of people with different lifestyles and cultures from different countries makes their city/area a better place to live.
- Rate their overall health positively.
- Experience a sense of community with others in their neighbourhood.
- Feel a sense of pride in the way their local area looks and feels.
- Rate their overall quality of life positively.

5 Environmental trends

Latest WPI results show a mix of positive and negative environmental trends over the past decade.

Positives include:

- + Decrease in the number of annual exceedances per year of the regional air quality guideline for particulate matter.⁷
- + Improved soil quality, with 92% of soil quality monitoring sites in the Waikato region meeting five or more soil quality targets in 2022 compared to 86% in 2007 (Figure 7).
- + Increase in recycling between 2008 and 2012 (most recent data available).

Negatives include:

- Increased volume of waste to landfill, from an estimated 220,000 tonnes in 2006 to almost 310,000 in 2020.
- Increase in urban and rural residential expansion onto highly productive land.

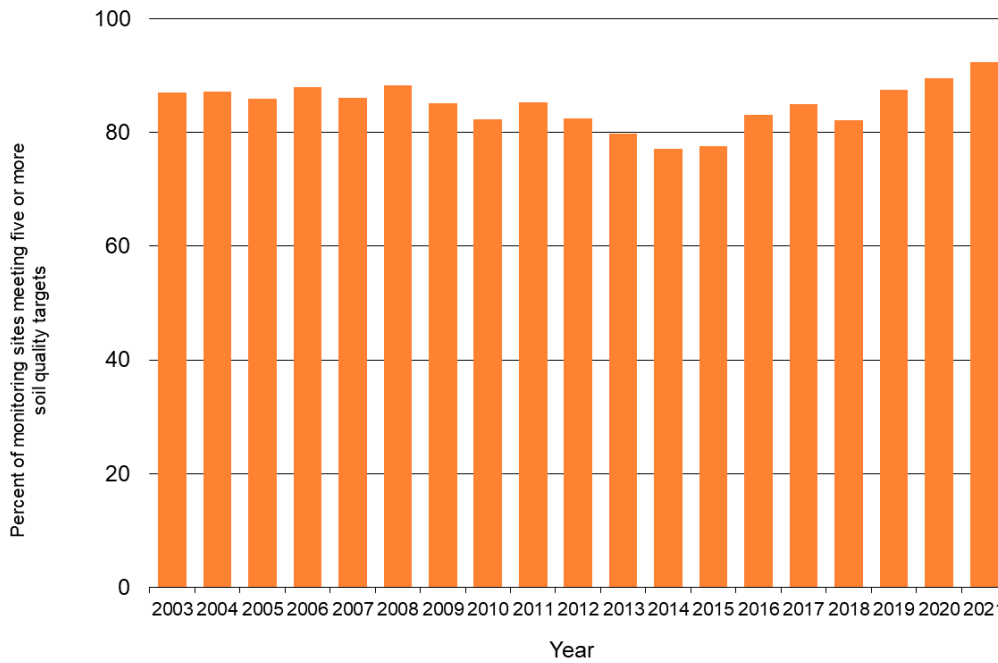


Figure 7 Soil quality – Percent of monitoring sites meeting five or more soil quality targets

Source: WPI Monitoring Programme database (Waikato Regional Council)

⁷ In 2021, a higher value of 49 exceedances was recorded. However, increases from around 2019/20 may be attributed to the roll-out of new optical based monitors which measure a higher number of exceedances than the older monitors. Other regions have also identified increases in the number of exceedances due to the recent introduction of these new monitors.

6 Impacts of COVID-19

The WPI is a long-term comprehensive initiative that provides an overall picture across all the four well-beings. It is not designed to analyse and report on specific events such as COVID-19. However, the impact of COVID-19 on communities is reflected in some of the latest WPI data.

Timeliness of data availability is a significant issue for responsive and evidence-based decision-making, especially time lags associated with environmental data. The COVID-19 crisis has triggered the analysis and publishing of real-time data portals, especially economic data:

- [Statistics NZ](#) – Latest available data for key economic, health and social indicators.
- [Treasury](#) – Weekly economic dashboard.
- [Ministry of Business and Employment](#) – Data for industry sectors and regions.
- [Hamilton City Council](#) – Economic dashboard.
- [Impacts on transport](#) – information related to transport.

COVID-19 had considerable economic impacts in some industries such as tourism, hospitality, and the international education sector. The long-term social and economic impacts remain uncertain.

The COVID-19 health Impacts have been most severe amongst elderly people and people with underlying medical conditions. The effective management of COVID-19 in New Zealand means that impacts on life expectancy and (perceived) health have been minimal.

The pandemic has fundamentally changed aspects of our society, such as increased working from home and use of technology, and reduced use of public transport. More difficult to predict is the pandemic's long-term impact on measures such as social connectedness, community pride and cultural respect.

7 Overall progress (wellbeing index)

Work has been undertaken to investigate methods for deriving a composite index using the WPI dataset (Huser *et al.* 2016).⁸ This has involved combining all 32 WPI indicators into a single composite number (index). Approaches explored to derive an experimental Waikato Wellbeing Index have included Principal Components Analysis (PCA) and the Canadian Index of Wellbeing (CIW) reference-year method (Michalos *et al.* 2011). Both approaches show a common pattern.

As illustrated below (Figure 8), the gap between GDP and the Wellbeing Index grew from 2003 to 2009, then narrowed and eventually grew again as the economy rebounded after the global financial crisis (GFC). By 2019 there was a sizeable gap between the regional GDP measure and WPI overall wellbeing index. Based on provisional data, this gap decreased in 2021.

In summary, while real GDP per capita has generally increased over the past decade, overall community wellbeing as measured using the WPI indicators increased at a slower pace and has slightly declined in recent years.

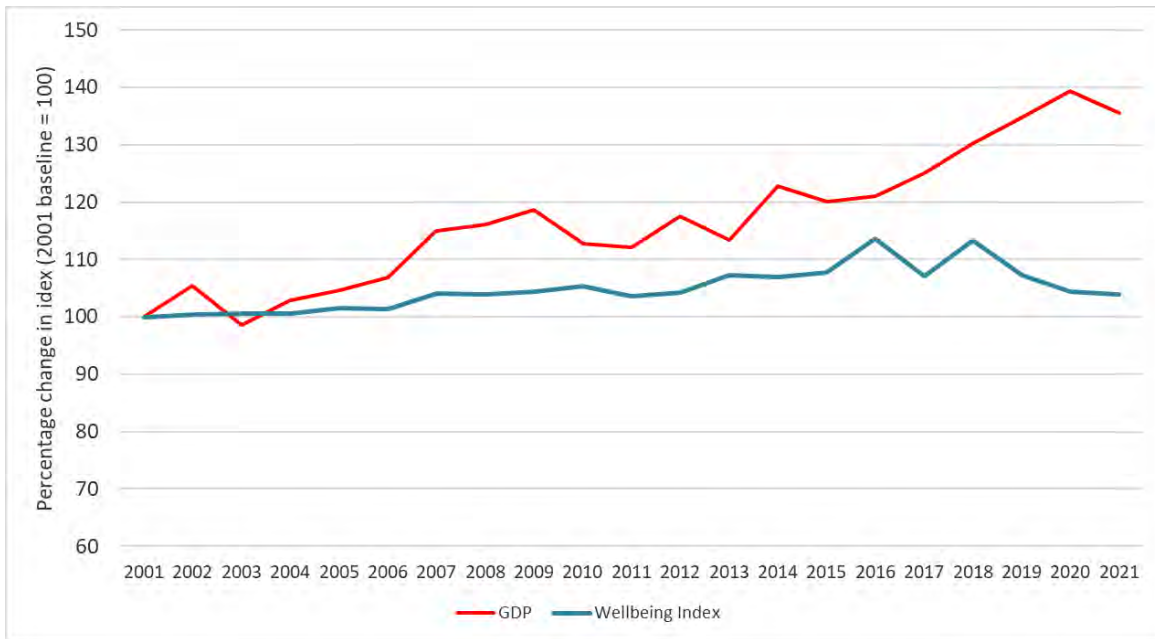


Figure 8 GDP vs Waikato Wellbeing Index (CIW method) 2001-2021 (provisional)

Source: WPI Monitoring Programme database (Waikato Regional Council)

Note: Based on actual and imputed data (2020 index is provisional).

⁸ Towards a wellbeing index for the Waikato Region. New Zealand Planning Quarterly, Issue 200, March 2016.

8 Next steps

The results of the WPI programme provide a robust basis for discussing regional challenges and opportunities and identifying priorities for actions and closer collaboration and partnerships. Results from the WPI help monitor and inform Council's strategic direction and other region-wide initiatives, such as the [Waikato Plan](#), [economic development](#) and [Future Proof](#) And other growth strategies and spatial plans. Selected individual indicators that reflect Waikato Regional Council's functions and roles are included as performance measures in Council's Long-Term Plan and Annual Report, and other relevant council documents. Such multiple use of the WPI data ensures cost effective and consistent use of information.

In addition to the 32 high level measures, the WPI programme compiles secondary indicators and data by territorial authority (where available) to support more detailed analysis and develop 'progress stories' about how and why levels of wellbeing are changing over time in the Waikato region. This includes information about distributional aspects, such as by age, gender, ethnicity, income, or locality.

The biennial Waikato Quality of Life survey provides information about people's views and perceptions at the district council level. The 2022 survey was recently completed, and high-level regional results have been incorporated into WPI reporting. More detailed reporting is forthcoming including territorial authority results.

The WPI wellbeing framework and measures build on and are aligned with relevant national initiatives. Treasury has developed a [Living Standards Framework and associated Dashboard](#) to monitor intergenerational wellbeing and support Government's Wellbeing Budgets. In 2020, the Public Finance Act (1989) was amended to require the Treasury to produce a [Wellbeing Report](#) (at least once every four years), the first report being released in November 2022. This is underpinned by Statistics NZ's set of wellbeing indicators ([Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand](#)).

A priority for the WPI monitoring programme in the coming year (2022/23) will be to continue working with Treasury, Statistics NZ and Local Government NZ/Taituarā to further align national, regional and local data and indicators. Work is ongoing towards indicator improvements, better accessibility and communication of indicator results and more harmonised monitoring in New Zealand. This includes working with other regional councils through the Land, Air, Water Aotearoa (LAWA) organisation⁹, and with the Ministry for the Environment and Statistics NZ on environmental reporting.¹⁰

A continuing and increasing focus for the WPI programme will be to share data, align indicators and in particular how to turn information into insights by engaging with strategic regional and local partners and combine their knowledge. Partners include Iwi, Hamilton City Council, district councils, Waikato Mayoral Forum, Waikato Plan, Waikato District Health Board, Te Waka: Waikato's Economic Development Agency and other business and sector groups, New Zealand Transport Agency, The Treasury, Statistics New Zealand, Ministry for the Environment, Ministry of Social Development, Ministry of Business, Innovation and Employment, universities and Crown Research Institutes, community trusts (WEL Energy Trust, Trust Waikato, Momentum/Vital Signs¹¹) and other non-government organisations.

Regional data is highly aggregated which can mask local trends, therefore data/information at the community level is critical, for example the mix of drivers for deprivation differ

⁹ Land, Air, Water Aotearoa (LAWA): <https://www.lawa.org.nz/about/>

¹⁰ Environmental indicators: <https://www.stats.govt.nz/information-releases/new-zealands-environmental-reporting-series-environment-aotearoa-2022/>

¹¹ Waikato Vital Signs® identifies and communicates key priorities and aspirations of Waikato communities: <https://momentumwaikato.nz/vital-signs>

considerably across the territorial authorities. The report *Socioeconomic Deprivation in the Waikato Region – using the Index of Multiple Deprivation* (Chiang, Colbert and Exeter, 2021) shows that some areas within the Waikato region rank among the most deprived areas in New Zealand. Similar results are found from the New Zealand Index of Multiple Deprivation (IMD), released by the University of Auckland, which measures deprivation at the neighbourhood level (average 712 people per data zone) across 28 indicators grouped into seven domains of deprivation: employment, income, crime, housing, health, education and access to services. There is considerable value in undertaking additional analysis of the high level WPI data to provide local insights and how specific groups of people are doing compared to the average.

At the global level, the Sustainable Development Goals (SDGs)¹² adopted in 2015 by all the 193 UN member countries, provide a yardstick to evaluate, assess and measure progress from now to 2030. The SDGs include 17 Goals, 169 targets and over 230 indicators. The SDGs aim to support efforts to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda with specific targets to be achieved by 2030. Governments, communities, corporates, and business are adopting the SDGs to demonstrate their relevance and value. The WPI monitoring programme will continue to work with the Waikato Wellbeing Project¹³, a collaborative initiative to achieve a cleaner, greener, fairer Waikato by 2030. Phase One of the project, the development of a defined set of widely agreed wellbeing targets for the Waikato based on the UN Sustainable Development Goals, was completed in February 2020.¹⁴ An Executive Director for the Waikato Wellbeing Project was appointed in January 2021 to progress the project's operating model and a Kaitiaki Advisory Board has been established to guide the project and to assist the implementation of the approved wellbeing targets.

¹² Sustainable Development Goals (SDGs): <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

¹³ Waikato Wellbeing Project: <https://www.waikatowellbeingproject.co.nz/>

¹⁴ <https://www.waikatowellbeingproject.co.nz/waikato-wellbeing-summit>

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Appendix 1 The Waikato Progress Indicators

| Key questions | Topic | Indicator | Definition (current as at August 2022) |
|--|----------------------|------------------------|--|
| Economy | | | |
| How prosperous is our region? How are we planning for a prosperous future? | Wealth and income | Building activity | Real value of total new building consents issued per annum (year to December) |
| How many people have a job? How many are unemployed - and how long | Employment | Employment | Employment rate - the proportion of total working age population who are employed |
| How wealthy are we? | Wealth and income | Income | Real median weekly household income |
| How prosperous is our region? How are we planning for a prosperous future? | Economic growth | Regional GDP | Real (inflation adjusted) regional Gross Domestic Product (GDP) per capita |
| How do we use our natural resources? How much water do we use? How much have we got? | Resource use | Water use | Water allocation as a percent of primary allocable flow – Waikato River mouth during summer months |
| Society | | | |
| Are we satisfied with our opportunity to participate in (council) decision making? | Civic engagement | Community engagement | Percentage of people who agree that the public have 'large' or 'some' influence over the decisions that their local Council makes |
| Are we proud about where we live and our community? | Social connectedness | Community pride | People's reported sense of pride in the way their city/town looks and feels |
| How safe are we? | Community safety | Crime | Rates of recorded victimisations per 10,000 population (year to December) |
| Do we know and respect other cultures? | Cultural identity | Cultural respect | Level of agreement by survey respondents that New Zealand becoming home for an increasing number of people with different lifestyles and cultures from different countries makes their area a better place to live |
| What are the educational opportunities How qualified and skilled is our workforce? Are education opportunities accessible and adequate | Education | Educational attainment | Percentage of school leavers with NCEA level 2 or above |

| Key questions | Topic | Indicator | Definition (current as at August 2022) |
|--|------------------------|--------------------------|--|
| Are we satisfied with our housing? How accessible, adequate and affordable is our housing? | Housing | Housing affordability | Ratio of housing costs to household disposable income |
| Wealth and income | Wealth and income | Income inequality | Gini coefficient – a measure of the concentration of income within the region |
| How healthy are we? | Health | Life expectancy | Life expectancy at birth (from Life Tables estimated using Census data) |
| Are we generally happy with our life? How satisfied are we with our work life balance? | Life satisfaction | Life satisfaction | Percentage of people who rate their overall quality of life positively |
| How do we feel about our health and wellbeing? | Health | Perceived health | Percentage of people who rate their overall health good, very good or excellent |
| Do we feel safe? | Community safety | Perceptions of safety | Percentage of adults who feel safe walking alone in their neighbourhood after dark |
| How much do we participate in sports, leisure and arts? | Leisure and recreation | Physical activity | Percentage of people who say they were physically active on five or more of the past seven days |
| Does our infrastructure cope with current and increasing demand? What services are available? | Infrastructure | Public transport | Public transport volumes per capita – average number of passenger transport boardings per resident per annum |
| How safe are we? | Community safety | Road safety | Estimated annual social costs of road injury crashes per capita |
| How well connected are we with our family, neighbourhood and community? | Social connectedness | Social connectedness | Percentage of people who agree or strongly agree that they experience a sense of community with others in their neighbourhood |
| Do we recognise and protect our cultural heritage and distinctive identity? How comfortable do we feel about expressing our cultural practices? | Cultural identity | Te Reo Māori speakers | Percentage of Te Reo Māori speakers in the total population |
| Are we involved in our community? How much do we participate in decision making? | Civic engagement | Voter turnout | Average voter turnout in local council, DHB and regional council elections |
| Environment | | | |
| How clean is our air? | Air and climate | Air quality | Urban air quality – number of exceedances per year of the regional guideline for particulate matter (all monitoring sites total) |
| How healthy is our coastal and marine environment? | Coastal and | Coastal ecosystem health | Traits Based Index (TBI) of the biological traits of sediment-dwelling animal |

| Key questions | Topic | Indicator | Definition (current as at August 2022) |
|--|----------------------|---|---|
| How safe are our beaches for swimming? | marine | | communities in three estuaries the southern Firth of Thames, Whaingaroa (Raglan) Harbour, and Tairua Harbour |
| How much do we value or environment? Can we sustain a healthy environment <u>and</u> grow our economy? What do we value most? What are the threats to our environment? | Environmental values | Environmental attitudes | Average regional NEP (New Environmental Paradigm) Scale score |
| Is the climate changing? | Air and climate | Greenhouse gases | Reginal annual total greenhouse gas emissions – from the Waikato Region Comprehensive Greenhouse Gas Inventory |
| How much of our environment is protected? What is the health and condition of our ecosystems? | Biodiversity | Indigenous vegetation | Extent of indigenous vegetation on land |
| How much of our waste do we recycle? | Waste | Recycling | Self-reported prevalence of household recycling |
| How much land is sub-divided/paved every year? How much of this is fertile soil? | Land and water | Urban and rural residential expansion onto highly productive land | Area (hectares) of highly productive land (Land Use Capability classes 1-3) in urban and rural residential use in the Waikato Region |
| How good is our water quality? | Land and water | River water quality | River water quality for ecological health – percentage of unsatisfactory river water samples for ecological water quality in Waikato rivers and streams (all sites average) |
| How healthy are our soils? How resilient are we to food production? | Land and water | Soil quality | Percentage of soil monitoring sites meeting five or more soil quality targets - Waikato Region |
| How much pollution and waste do we produce? What sort of waste do we produce? How much per GDP/product? | Waste | Waste | Estimated tonnage of waste to landfill per annum |

Appendix 2 WPI time series data 2001 to 2022

Key:

Grey cell indicates imputed or extrapolated data

White cell indicates measured data

Note that the trend direction for some of these indicators has a negative interpretation (e.g. crime).

| Indicator | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Building activity | \$2,127 | \$2,102 | \$2,920 | \$3,279 | \$4,003 | \$3,576 | \$3,724 | \$3,033 | \$2,335 | \$2,434 |
| Employment | 61.4% | 64.1% | 64.8% | 65.4% | 64.1% | 67.1% | 66.7% | 66.7% | 65.0% | 62.6% |
| Income | \$1,220 | \$1,273 | \$1,301 | \$1,251 | \$1,375 | \$1,425 | \$1,467 | \$1,500 | \$1,469 | \$1,389 |
| Regional GDP | \$42,853 | \$45,148 | \$42,263 | \$44,102 | \$44,826 | \$45,761 | \$49,307 | \$49,737 | \$50,863 | \$48,322 |
| Water use | 67% | 67% | 67% | 67% | 67% | 67% | 67% | 65% | 64% | 69% |
| Community engagement | 62% | 62% | 62% | 62% | 62% | 62% | 60% | 59% | 57% | 56% |
| Community pride | 70% | 70% | 70% | 70% | 70% | 70% | 70% | 70% | 69% | 69% |
| Crime | 832.5 | 840.7 | 780.6 | 720.6 | 769.9 | 833.6 | 797.9 | 760.6 | 828.9 | 803.0 |
| Cultural respect | 51% | 51% | 51% | 51% | 51% | 51% | 50% | 49% | 49% | 48% |
| Educational attainment | 64.2% | 64.2% | 64.2% | 64.2% | 64.2% | 64.2% | 64.2% | 64.2% | 64.2% | 66.4% |
| Housing affordability | 20.5% | 20.5% | 20.5% | 20.5% | 20.5% | 20.5% | 20.5% | 18.6% | 20.5% | 17.7% |
| Income inequality | 0.360 | 0.360 | 0.360 | 0.360 | 0.360 | 0.360 | 0.360 | 0.415 | 0.326 | 0.362 |
| Life expectancy | 78.5 | 78.8 | 79.0 | 79.3 | 79.5 | 79.8 | 80.0 | 80.1 | 80.3 | 80.5 |
| Life satisfaction | 90% | 90% | 90% | 90% | 90% | 90% | 89% | 89% | 88% | 88% |
| Perceived health | 90% | 90% | 90% | 90% | 90% | 90% | 89% | 89% | 88% | 88% |
| Perceptions of safety | 60% | 60% | 60% | 60% | 60% | 60% | 61% | 61% | 62% | 62% |
| Physical activity | 61% | 61% | 61% | 61% | 61% | 61% | 60% | 58% | 57% | 55% |
| Public transport | 4.2 | 4.3 | 4.5 | 4.9 | 5.1 | 5.5 | 7.3 | 9.1 | 11.1 | 11.0 |
| Road safety | 1,670 | 1,670 | 1,670 | 1,670 | 2,014 | 1,762 | 2,190 | 1,887 | 1,655 | 1,542 |
| Social connectedness | 63% | 63% | 63% | 63% | 63% | 63% | 63% | 63% | 64% | 64% |
| Te Reo Māori speakers | 6.4% | 6.3% | 6.2% | 6.0% | 5.9% | 5.8% | 5.7% | 5.7% | 5.6% | 5.5% |
| Voter turnout | 37.6% | 37.6% | 37.6% | 37.6% | 37.6% | 37.6% | 37.6% | 38.9% | 40.2% | 41.5% |
| Air quality | 17 | 17 | 27 | 50 | 38 | 47 | 20 | 28 | 38 | 22 |
| Coastal ecosystem health | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 |
| Environmental attitudes | 77% | 77% | 77% | 77% | 79% | 81% | 83% | 86% | 86% | 87% |
| Greenhouse gases | 14,609 | 14,609 | 14,609 | 14,609 | 14,609 | 14,609 | 14,609 | 16,337 | 15,223 | 14,215 |
| Indigenous vegetation | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% |
| Recycling | 66.2% | 66.2% | 66.2% | 66.2% | 66.2% | 66.2% | 66.2% | 66.2% | 68.9% | 71.5% |
| Residential expansion onto highly productive land | 11,976 | 11,976 | 12,624 | 13,271 | 13,919 | 14,567 | 15,214 | 15,862 | 16,140 | 16,419 |
| River water quality | 29.0% | 29.0% | 29.0% | 29.0% | 29.0% | 29.0% | 29.0% | 29.0% | 29.0% | 29.0% |
| Soil quality | 87% | 87% | 87% | 87% | 86% | 88% | 86% | 88% | 85% | 82% |
| Waste | 222,000 | 222,000 | 222,000 | 222,000 | 222,000 | 222,000 | 222,815 | 223,629 | 224,444 | 225,258 |

Appendix 2 cont.

| Indicator | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Building activity | \$1,897 | \$2,110 | \$2,442 | \$2,656 | \$3,240 | \$3,629 | \$3,886 | \$4,142 | \$4,708 | \$4,576 |
| Employment | 64.7% | 63.0% | 63.1% | 63.2% | 64.6% | 65.4% | 67.7% | 70.0% | 68.1% | 66.7% |
| Income | \$1,319 | \$1,384 | \$1,403 | \$1,344 | \$1,453 | \$1,636 | \$1,621 | \$1,786 | \$1,810 | \$1,769 |
| Regional GDP | \$48,034 | \$50,356 | \$48,580 | \$52,588 | \$51,475 | \$51,860 | \$53,578 | \$55,827 | \$57,744 | \$59,691 |
| Water use | 72% | 76% | 87% | 86% | 86% | 86% | 85% | 86% | 85% | 83% |
| Community engagement | 54% | 52% | 51% | 49% | 48% | 46% | 41% | 36% | 37% | 37% |
| Community pride | 69% | 69% | 69% | 68% | 68% | 68% | 65% | 62% | 65% | 67% |
| Crime | 807.0 | 739.1 | 722.3 | 652.7 | 582.6 | 624.7 | 624.7 | 589.1 | 658.7 | 624.4 |
| Cultural respect | 47% | 46% | 45% | 45% | 44% | 43% | 42% | 41% | 44% | 47% |
| Educational attainment | 69.5% | 72.0% | 73.6% | 76.1% | 77.6% | 79.6% | 78.6% | 79.1% | 78.3% | 79.1% |
| Housing affordability | 18.3% | 20.1% | 17.2% | 20.3% | 18.9% | 20.4% | 19.9% | 20.2% | 19.6% | 20.5% |
| Income inequality | 0.405 | 0.424 | 0.353 | 0.388 | 0.454 | 0.413 | 0.417 | 0.395 | 0.382 | 0.382 |
| Life expectancy | 80.6 | 80.8 | 81.0 | 81.0 | 81.1 | 81.2 | 81.3 | 81.4 | 81.4 | 81.4 |
| Life satisfaction | 87% | 86% | 86% | 85% | 85% | 84% | 86% | 87% | 88% | 88% |
| Perceived health | 87% | 86% | 86% | 85% | 85% | 84% | 82% | 79% | 79% | 79% |
| Perceptions of safety | 63% | 63% | 64% | 64% | 65% | 65% | 65% | 64% | 63% | 62% |
| Physical activity | 54% | 53% | 51% | 50% | 48% | 47% | 44% | 40% | 38% | 35% |
| Public transport | 10.4 | 10.6 | 10.2 | 10.1 | 9.8 | 9.0 | 8.6 | 8.4 | 8.3 | 7.1 |
| Road safety | 1,514 | 1,362 | 1,048 | 1,205 | 1,439 | 1,420 | 1,430 | 1,461 | 1,344 | 1,190 |
| Social connectedness | 64% | 64% | 64% | 65% | 65% | 65% | 64% | 62% | 59% | 56% |
| Te Reo Māori speakers | 5.4% | 5.4% | 5.3% | 5.4% | 5.5% | 5.7% | 5.8% | 5.9% | 5.9% | 5.9% |
| Voter turnout | 40.9% | 40.3% | 39.7% | 38.8% | 37.8% | 36.9% | 38.7% | 40.6% | 42.4% | 42.4% |
| Air quality | 20 | 17 | 12 | 11 | 10 | 5 | 12 | 2 | 5 | 13 |
| Coastal ecosystem health | 0.40 | 0.40 | 0.38 | 0.38 | 0.38 | 0.41 | 0.40 | 0.39 | 0.36 | 0.40 |
| Environmental attitudes | 88% | 88% | 89% | 89% | 88% | 88% | 88% | 87% | 87% | 86% |
| Greenhouse gases | 14,569 | 15,764 | 14,837 | 14,745 | 14,508 | 14,001 | 14,090 | 14,518 | 15,603 | 15,603 |
| Indigenous vegetation | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% | 27.1% |
| Recycling | 70.9% | 70.3% | 70.3% | 70.3% | 70.3% | 70.3% | 70.3% | 70.3% | 70.3% | 70.3% |
| Residential expansion onto highly productive land | 16,697 | 16,975 | 17,337 | 17,699 | 18,061 | 18,424 | 18,786 | 19,148 | 19,510 | 19,510 |
| River water quality | 29.0% | 29.0% | 29.0% | 28.0% | 27.9% | 28.0% | 28.0% | 29.0% | 29.0% | 29.0% |
| Soil quality | 85% | 82% | 80% | 77% | 78% | 83% | 85% | 82% | 88% | 90% |
| Waste | 226,073 | 226,887 | 227,499 | 228,111 | 228,723 | 224,732 | 220,741 | 250,122 | 279,504 | 308,885 |

| Indicator | 2021 | 2022 |
|---|----------|-------|
| Building activity | \$5,078 | |
| Employment | 66.6% | 67.1% |
| Income | \$1,812 | |
| Regional GDP | \$58,056 | |
| Water use | 90% | |
| Community engagement | 34% | 31% |
| Community pride | 66% | 64% |
| Crime | 682.6 | |
| Cultural respect | 43% | 39% |
| Educational attainment | 77.2% | |
| Housing affordability | 20.2% | |
| Income inequality | 0.371 | |
| Life expectancy | 81.4 | |
| Life satisfaction | 87% | 86% |
| Perceived health | 80% | 80% |
| Perceptions of safety | 63% | 63% |
| Physical activity | 38% | 41% |
| Public transport | 6.5 | |
| Road safety | 1,190 | |
| Social connectedness | 57% | 57% |
| Te Reo Māori speakers | 5.9% | |
| Voter turnout | 42.4% | |
| Air quality | 49* | |
| Coastal ecosystem health | 0.40 | |
| Environmental attitudes | 84% | 83% |
| Greenhouse gases | 15,603 | |
| Indigenous vegetation | 27.1% | |
| Recycling | 70.3% | |
| Residential expansion onto highly productive land | 19,510 | |
| River water quality | 29.0% | |
| Soil quality | 92% | |
| Waste | 308,885 | |

Note * From around 2019/20, increases in the number of air quality exceedances may be attributed to the roll-out of new optical based monitors which measure a higher number of exceedances than the older monitors. Other regions have also identified increases in the number of exceedances due to the recent introduction of these new monitors.