

## Climate Change Strategy Implementation Plan: Summary of progress to date - *Performance Measures*

Objectives	Performance measures	Level of GWRC control or influence	Trend at 2017	Comment for 2017 Summary of Progress
Mitigation	Reduced energy consumption (kilowatt hours per capita)	GWRC cannot directly control energy consumption in the region but can exercise indirect influence through supportive policies in the RPS (policies 7, 9, 10, 11, 45, 55, 56, 57, 65 and 67) as well as providing a rating framework and promoting community awareness.	Data not available	<p>The most recent data available is from 2015, the same year the climate change strategy was adopted.</p> <p>The 2016 Regional GHG inventory provides time series data from 2001 to 2015 and demonstrates that per capita emissions from energy (stationary energy and transport emissions combined) reduced from 5 tCO<sub>2</sub>-e in 2001 to 4 in 2015. The total amount of electricity consumed within the region reduced by 1% between 2001 and 2015. It is interesting to note that since 2013 electricity use in the region decreased by 6%.</p> <p>Transport emissions increased by 2% between 2001 and 2015 and represented about 39% of gross emissions in the Wellington region in 2015. Petrol related emissions decreased by 8% over the period, yet diesel emissions increased by 19%. Emissions from domestic air travel (considered Scope 3 emissions in the inventory) out of Wellington International Airport increased by about 11%. During the 2000/01 to 2014/15 period, the regional population increased by 13 percent.</p> <p>This performance measure relates to energy in a general sense, incorporating transport fuels and stationary energy sources such as electricity and natural gas (it is understood that the intention of this perf. measure was to cover all types of energy when the Strategy was adopted, because the RPS policies cited in brackets covered all energy types). Therefore, tonnes of CO<sub>2</sub> equivalent is a better metric than kWh because it enables all the different energy types to be analysed as a collective whole. tCO<sub>2</sub>-e has been used to calculate the observations provided above. Officers recommend that CO<sub>2</sub>-e is used rather than kWh in future progress summaries/reports.</p>
	Reduced private vehicle kilometres travelled per capita	GWRC can influence through improvements to the regional public transport network as expressed through the Regional Public Transport Plan, policies in the RPS (9, 10) and the Regional Land Transport Plan, as well as advancing a regional integrated approach to spatial planning	Data not available	<p>Ministry of Transport provide total vehicle kilometres travelled (VKT - no differentiation between commercial and private) for the region on an annual basis. Data currently available is up to June 2015 (2015/16 data due in September 2017). The GWRC Climate Change Strategy was adopted in October 2015 and so these performance measures relate to the period after that.</p>

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				Over the last ten years the trend for VKT per capita has shown little change overall. A minor trend developed between 2010 and 2014 when the VKT decreased but levels in 2015 returned to 2009 VKT levels. In 2015 VKT per capita was 7462 Km/person. In 2014 VKT per capita was 7166 Km/person.
	Increased (%) active and public transport mode share	GWRC can influence through improvements to the regional public transport network as expressed through the Regional Public Transport Plan, objectives in the Regional Land Transport Plan and promotion of active transport through school and workplace travel programmes.	Data not available	<p>2015 data for Active travel (cycling &amp; walking) and Public Transport mode share is provided by Ministry of Transport. Data for 2015 is currently not available, but is expected to be published in Oct/Nov 2017.</p> <p>The GWRC Climate Change Strategy was adopted in October 2015 and so these performance measures relate to the period after that.</p>
	Increased energy efficiency of public transport fleet	Within the control of GWRC and public transport providers Kiwi Rail, Mana-Newlands and NZ Bus	Data not available	<p>The new Public Transport Operating Model came into law in 2013. PTOM is a new way of procuring and delivering train, bus and harbour ferry services. It aims to build long-term commercial partnerships between regional authorities and public transport operators, to improve services and grow patronage.</p> <p>GWRC aims to deliver a high quality service to customers that encourage them out of cars and onto public transport, especially in peak times. GWRCs approach to PTOM bus procurement was the first in New Zealand to incentivise operators to provide low emission bus fleets and will accelerate the replacement of older diesel buses with newer vehicles with better fuel economy and therefore reduced emissions. GWRCs new contracts are designed to ensure that operators provide well-maintained vehicles at all times and the PTOM contract with Tranzit includes the phase in of 32 electric buses from July 2018.</p>
	GWRC's corporate emissions are measured and reported and a reduction in council emissions is demonstrated	GWRC has significant control over emissions generated through its own activities and, to a lesser degree, its investments	tCO <sub>2</sub> -e reduced by 3.8% between 2014/15 and 2015/16 (1171 to 1126 tCO <sub>2</sub> -e)	A corporate emissions inventory has been developed and is updated on an annual basis (corporate emissions include the GWRC vehicle fleet, electricity used to power our offices, depots and infrastructure, waste, staff commutes and work-related travel). 2014/15 is the baseline year. Corporate emissions reduced by 3.8% between 2014/15 and 2015/16.

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				<p>The corporate emissions inventory is currently being updated and results for 2016/17 will be available in September 2017.</p> <p>For information about the corporate emissions reduction targets that were adopted in principle by GWRCs Executive Leadership Team in Feb 2016 see action 1.4.B.</p>
	Steps are taken to divest GWRC of investment in fossil fuel and coal companies	Within GWRC control	An appropriate metric to demonstrate a trend does not exist – work is ongoing	During 2016 Officers determined that GWRC has no direct investments in fossil fuel extraction industries, and began correspondence with relevant banks to investigate existing non direct investment (with a view to preventing future investment where practical). This work is ongoing.
	Increased rates of afforestation and reforestation in ways that enhance carbon sequestration and indigenous biodiversity	GWRC has a significant role in biodiversity management in the region, as well as owning and managing large areas of park and forest land. GWRC can also exercise some influence over tree-planting activities on private land through the work of the Land Management department	An appropriate metric to demonstrate a trend does not exist – work is ongoing	<p>During the 2015-2017 period the Biodiversity department worked with the community to plant over 4000m<sup>2</sup> in indigenous vegetation.</p> <p>The Biodiversity department budgeted \$37,500 (2015/2016) and \$36,000 (2016/2017) for revegetation in Key Native Ecosystem sites</p>
Adaptation	A policy of assessing climate change implications of all council projects/proposals is implemented	Within GWRC control		This process has been implemented, and is applied to all new initiatives via the Project Management Office imitative scoping process and to all decisions being progressed via the functions of Council and Committees. A guide which sets out the process to be followed by staff has been developed.
	Increased participation in adaptation planning workshops among officers and councillors	Within GWRC control		Officers have participated in the Adaptive Pathways game and an organisation wide competition for the aqua republican game was conducted in early 2017 (for more info about these initiatives see action 2.2.B).

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	Downscaling of climate projections to the regional and local level is completed and this information is used to inform strategic planning	This is contingent on the delivery of work being undertaken by the Ministry for the Environment and NIWA		<p>More officers will engage in workshops focused on adaptive pathways planning as part of the Long Term Plan review throughout 2017 and in early 2018. Regional level downscaling for all relevant variables (other than sea level rise) has been commissioned from NIWA and will be released in August 2017. This work will support a range of adaptation activities across all departments as the variables can be mapped in GIS at a Whaitua (catchment) scale.</p> <p>In regards to sea level rise, GWRC is currently waiting for MfE to publish the updated Coastal hazards guidance (which was expected in 2016 but as yet has not been delivered). A range of other GWRC commissioned papers are currently utilised to provide advice in regards to coasts, these include:</p> <p>NIWA 2012 Sea level variability and trends: Wellington Region  NIWA 2011 Joint probability of storm tide and waves on the open coast of Wellington  NIWA 2009 Modelling of the 2 February 1936 storm tide in Wellington Harbour</p>
	Improved resilience of infrastructure to climate change impacts, informed by outcomes from the UN-Habitat Making Cities resilient campaign*	GWRC can improve the resilience of its own infrastructure assets and can exercise some influence over the climate-resilience of regional infrastructure through policies in the Regional Policy statement		<p>The implementation of the Climate Change Consideration process ensures that GWRC will progressively adopt an adaptive pathways planning approach to its management of infrastructure. The methods used will evolve over time and will incorporate not just the work that came out of the UN-Habitat Making Cities resilient campaign, but a range of other initiatives including the Deep South Science Challenge, the Victoria University led Impacts and Implications programme and the central government led Adaptation Technical Working Group.</p>
	Reduced vulnerability of communities to climate-related events	GWRC can exercise some influence on community preparedness and resilience, largely through the Wellington Region Emergency Management Office (WREMO)		<p>The Wellington Region Natural Hazards Management Strategy has been prepared by GWRC in partnership with the councils of the Wellington Region (except Wairarapa) and WREMO. The Strategy seeks to provide a regional framework for consistent approaches to natural hazards management in district and regional plans, asset management plans and long term plans. The Strategy aims to assist councils when considering natural hazards in their district and in their efforts to manage risks, enhance resilience, and prepare for emergencies. It is expected that the Strategy will enhance land use and subdivision planning in</p>

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				any future District Plan reviews. Participating councils are currently working through their individual processes to endorse the Strategy and its implementation approach. It is expected this process will be complete by the end of August 2017.
Awareness	Increased knowledge is derived through participation in regional, national, and international climate change forums	Within GWRC control		Staff have been participating in forums, workshops and seminars as appropriate to their roles.
	More climate change and resilience focussed stories are shared with the community	Within GWRC control		GWRC staff and Councillors have participated in a number of forums and public meetings to discuss resilience and climate change adaptation. Notable news articles include the Dec 2015 <a href="#">“How sea level rise will affect the Wellington region and possible solutions”</a> .
	Increased mobilisation of venture capital for development of new enterprises in the region supporting mitigation and adaptation	GWRC can have some limited influence in this area, mainly through the work of the Wellington Regional Strategy office and WREDA		WREDA yet to demonstrate action in regards to climate change.
	Increased number of cross-council climate resilience collaborations in the region	Within GWRC control, though is contingent on the ability and willingness of other councils to collaborate		See notes on Natural Hazards Strategy above.
	Collaborations established with the finance sector to design and implement new financing tools that redistribute investment/performance risk and make regional investment in mitigation and adaptation more feasible and attractive	The ability to initiate connections lies largely within GWRC control, though design and implementation of new financing tools lies largely outside of GWRC control		It has become clear that effective implementation of initiatives of this type will require some degree of central government influence. The advent of the Minister's Technical Working Group on Climate Change Adaptation provides a more suitable mechanism for initial progress. Officers have provided information in response to the working group's initial questionnaire and are ready to participate further, including facilitating regional connections, as opportunities evolve.
	Ongoing collaborations are established with tertiary institutions to engage students in climate change research projects	This is largely within GWRC control, though does rely on availability of students and partnership opportunities with learning institutions		Officers have had an active participation with the Victoria University led Climate Change Impacts and Implications programme, providing research inputs and collaborating on the development of community engagement tools relating to flooding, adaptive planning and coastal risks. Officers have lectured to the Economics of Disaster class at Victoria University and during Massey University's Hazards Management class fieldtrip to the Kapiti coast. Strategy group had intended to make an internship opportunity available

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				over the 2016/17 summer but the earthquake damage to Shed 39 reduced seating capacity and so the opportunity has been postponed.

\* The United Nations office for Disaster Risk Reduction. 2012. Making Cities Resilient Campaign – Strategy 2012-2015

If there is no entry in the “Trend at 2017” column, an appropriate metric to demonstrate a trend does not exist, and the work is ongoing