

Council's current climate change response

May 2020



Council services and programs that regulate, maintain and build infrastructure, economic, social and environmental asset resilience contribute actively to our response to climate change.

To guide Council's actions to manage the impacts of climate change into the future, Council has prepared the *draft Climate Change Policy – Net Zero by 2030* which has been on exhibition for public comment until 18 May 2020. A report will be provided to Council in July 2020.

In a 2015 report to Council about Tweed Shire Council's response to climate change, a range of key response areas were identified as needed to ensure Council makes an urgent and high priority response to climate-related natural disasters and greenhouse emissions reductions.

The following table highlights progress made in key response areas:

Key response areas:	Relevant progress
Overarching	
<ul style="list-style-type: none"> • Advocacy to bring assistance, advice, research, resources and collaborations to the Tweed 	<p>Successful grant applications have included:</p> <ul style="list-style-type: none"> • \$108,000 for the 'Tackling Mozzies Together' program to develop a regional response to a potential new mosquito-borne disease outbreak, and to test the effectiveness of public engagement techniques. • \$6.6 million for the Industry Central Land Swap • State funding for Tweed Voluntary House Purchase and Raising Schemes.
<ul style="list-style-type: none"> • Education and awareness raising within Council and across the community about future climate scenarios and greenhouse gas reduction opportunities 	<p>Emergency management: Tweed residents are provided with links, useful information and contacts in an emergency via the Emergency Dashboard.</p> <p>Council is helping the community to reduce greenhouse gas emissions from grid electricity use with energy saver workshops and promotions at public events. In the past three years, participants' energy saver pledges are equivalent to avoiding over 300 tonnes of CO₂-e per year.</p>
<ul style="list-style-type: none"> • Evaluation of climate-related risks 	<p>Council is supporting local solar uptake: Council promotes its Solar Buyers' Guide at public events such as World Environment Day, Home Expo, Seniors Week and the Agricultural Show to enable smart owners to make a smart investment in solar with locally established installers. At March 2020, nearly 40% of Tweed households have solar installed, with over 60,000kW solar capacity installed across the community.</p> <p>Council is reducing waste to landfill by increasing the diversion of over 7,200 tonnes of food and organic waste (greenhouse gas emissions reduction calculation is currently underway).</p> <p>EarthCheck Sustainable Destinations Program: An application for \$165k from the Federal Bushfire Recovery Fund seeks to:</p> <ul style="list-style-type: none"> • benchmark the Tweed Shire as a sustainable tourism destination • map climate hazards, risks and opportunities for tourism in the region, and develop tactical plans and targets for mitigation and adaptation responses • support and certify 30 – 40 tourism operators in decarbonising their operations to create a sustainability cluster



<ul style="list-style-type: none"> • Review of the adequacy of climate-related risk controls 	<p>An overarching review has not been conducted, however issue-specific responses have developed as need dictates or resources allow e.g.:</p> <ul style="list-style-type: none"> • Council is responding to the continuing risk that Tweed's raw water supply at Bray Park Weir may be overtopped by tidal salt water during high tide and sea level anomaly events for the foreseeable future. Under the guidance of a Project Reference Group of community stakeholders, a specialist water consultant has been engaged to assess engineering and non-engineering solutions to the problem. • Grant-funded 'Tackling Mozzies Together' regional response program described above.
<ul style="list-style-type: none"> • Monitor advice from state and federal agencies e.g. Bureau of Meteorology scenarios 	<p>Council's climate change webpage hosts climate change related information from state and federal agencies relevant to the Tweed.</p>
<p>Reducing greenhouse gas emissions</p>	
<ul style="list-style-type: none"> • Prepare an Energy Management Strategy to identify a feasible path to meeting Council's resolution to be self-sufficient in renewable energy 	<p>Council's Renewable Energy Action Plan describes energy efficiency and renewable energy projects at Council facilities as well as offsite purchase of renewable energy to reduce grid electricity use by 25% by 2022, and 50% by 2025. A 14% reduction Council's corporate emissions since 2016/17 is estimated from completed or in-progress initiatives.</p>
<ul style="list-style-type: none"> • Update Council's Climate Change Action Plan and carbon emissions reduction target 	<p>No progress</p> <p>Staff resources have been focused on tangible actions such as progressing the Renewable Energy Action Plan projects, so no progress has been made in updating Council's overarching climate change action strategy.</p>
<ul style="list-style-type: none"> • Quantifying the impact of eligible tree planting 	<p>No progress</p>
<p>Adapting to climate change</p>	
<ul style="list-style-type: none"> • Data and modelling about future climatic conditions and impacts on built and natural environments and the community 	<p>The Tweed Estuary Catchment model has developed detailed tidal inundation mapping to describe peak water levels for a range of future scenarios based on the existing flood model of the Tweed Valley, sea level rise projections, and king tides.</p> <p>Vulnerability assessments are now needed to review the impact of tidal inundation scenarios on Council assets, development, mosquito breeding habitat and communities, and to develop adaptation and communication strategies.</p>

Responses to Extreme and High Climate Risks

The following table provides an overview of Council's current actions to adapt to Tweed's most significant climate risks according to a combined Tweed and Byron Shires 2009 climate change risk analysis and adaptation action plan.

Extreme and High Climate Risks	Council's current controls
Present	
Introduction or proliferation of exotic species	<p>Tackling Mozzies Together</p> <ul style="list-style-type: none"> • Regional rapid response network formed to stage a mock outbreak and conduct extensive community engagement. • Vector monitoring added as a standing item to the quarterly Northern Rivers

Extreme and High Climate Risks	Council's current controls
	<p>Environmental Health Forum.</p> <p>Tilapia in Cudgen Lake and Bogangar canal</p> <ul style="list-style-type: none"> Public education and fishing tournaments
<p>Increased flood level and frequency</p> <p>Note that most of our flood prone population are at significant risk now, which will get worse with climate change. So current day risk management recommendations apply.</p>	<ul style="list-style-type: none"> Voluntary House Purchase and Raising. Increased design flood levels for greenfield subdivision in DCP A3 and Council's Floodplain Risk Management Studies. Self-sufficient evacuation / shelter now required in new development and rezoning proposals. Flood resilient design advice provided via Council's Development Assessment Panel (DAP) and on Council's website. Tidal inundation risk assessment in development. Flood resilience of new structures increased to take account of future anticipated flood levels (e.g. Byrill Creek Bridge, South Murwillumbah levee) Flood study updates for ARR19 and climate change projections added to mapping and floodplain risk management considerations. Flood study extended to include hinterland villages to inform new planning control, emergency management measures, better flood warning capability, and to build community resilience to more intense and more frequent flood events.
Additional risks from 2030	
Loss of current or existing biodiversity	<ul style="list-style-type: none"> Council programs targeting bushland management, providing support for 45 threatened species and communities, and reducing threats to biodiversity.
Effect on freshwater supply	<ul style="list-style-type: none"> Council resolved to raise the wall of Clarrie Hall Dam to meet the demands of the shire's growing population and address the anticipated effects of climate change on the amount of water available to meet demand, particularly during severe drought. Council has community stakeholders and technical expertise engaged to review options for protecting the Tweed's raw water source from tidal inundation of Bray Park Weir. Council is reviewing our ongoing work to augment the water supply and improve the outcomes of water saving and drought management initiatives in line with industry best-practice.
Coastal erosion	<p>Sand nourishment and revegetation works aim to buffer Tweed's coastal dune systems against future coastal erosion events.</p>
Additional risks from 2070	
Increased bushfire events/intensity	<p>A network of Asset Protection Zones (APZs) is maintained by Council to provide a reduced fuel zone adjacent to assets (people, property and the environment) to reduce the potential impact of bushfire and provide a defensible space for fire-fighters and their vehicles.</p>
Higher evaporation and longer drought	<p>Council is raising the wall of Clarrie Hall Dam to meet the demands of the shire's growing population and address the anticipated effects of climate change on the amount of water available to meet demand, particularly during severe drought.</p>
Decline in the local economy	<p>The Industry Central Land Swap assists businesses within the high-risk flood zone in the South Murwillumbah industrial precinct to relocate to land above the</p>

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	1 in 100 year flood level via a conditional land swap agreement. Council has appointed the Tweed Tourism Company to lead the Tweed's marketing, experience and tourism development, major event promotions and visitor information services.
Habitat displacement	Council is targeting bushland management, providing support for threatened species and communities, and reducing threats to biodiversity.
Impacts on coastal development	Council provides guidelines for minimising coastal hazard risks to land development on the Tweed Coast.

