



Climate Change Group
WATER NEW ZEALAND

2024 AUTUMN NEWS

Welcome to the first newsletter from this very active technical group. Since its inception in 2019, the Climate Change special interest group has grown significantly and produced important technical information for the industry. It has helped to set the future direction for climate change in our sector, and tirelessly communicated best practice from around the globe.

The pressures on our climate will continue to challenge us socially and politically. So, our group is continuing to focus on practical steps to mitigate and adapt to climate change.

We've set an ambitious work plan for 2024, and we'd love you to join us and contribute. We have five active subgroups, focused on: Climate Adaptation, Emissions Mitigation, Capital Carbon, Policy and Advocacy, and Knowledge Sharing.

Some of the key outputs this year will include:

- Guidance on direct measurement of process emissions from wastewater treatment plants;
- Publishing a portfolio of climate adaptation case studies and best practice from New Zealand and globally;
- Publishing an FAQ on the basics of embodied carbon measurement and reduction strategies;
- Building relationships and better engagement with mana whenua and local authorities;

Opportunities to get involved

To support the activities undertaken by this group, and ensuring these make their way to a wider audience, we are looking for volunteers to support knowledge sharing activities within the Climate Change Group.

If you are interested in water and climate issues, this is a great way to give back, as well as to stay up to date with developments across the sector. Responsibilities will include development of a delivery plan to disseminate information from each of the sub-groups, as well as leading delivery of the climate change groups conference workshop.

To express your interest, or find out more about what's involved contact: [Lesley Smith](#)

Tawara o te Wai podcast series

One of the ways in which we have been sharing knowledge over the last 12 months or so is through our podcast series – Tawara o te Wai. This has been co-hosted by climate change group members Hannah Edmond and Jon Reed and has investigated a range of different topics relevant to Water New Zealand members and climate change. We particularly enjoyed speaking to experts from around the world about mitigation and adaptation in the water industry, and just how to get some things done!

The podcast series is on Spotify and is available from the Water New Zealand website here: <https://www.waternz.org.nz/podcasts>

Since the start of 2024, we have broadened the scope of the podcast series to address a wider range of issues, although many of these include a climate change angle such as the most recent podcast about water resilience and drought.

Key messages for climate change policy and advocacy

Over the last 12 months, Policy and Advocacy subgroup have been interpreting, responding to and adapting to the changes in central government policy direction and priorities. We prepared a six-monthly 2024 plan to lay out upcoming proactive and reactive programme of works. We are strengthening our advocacy arm to make sure that the climate voice is well represented and considered in legislative changes.

Last year, we drafted a list of key contacts and communication levers for our public and private sector stakeholders. We will be working to build relations with the Freshwater Iwi Leaders forum over the next few months. We have refreshed our key messages document which summarises the long-standing issues and solutions for climate change mitigation and adaptation in water services throughout Aotearoa New Zealand.

We will continue sharing these messages through submissions and open letters to the relevant audiences to build a strong voice for climate action in water services sector.

CH₄ and N₂O emissions monitoring guidelines Part 2

In 2021, Water New Zealand published (via this group) the “Carbon accounting guidelines for wastewater treatment: CH₄ and N₂O”. The guidelines were published to assist wastewater treatment plant owners/operators, or their agents who are responsible for the management of sewage treatment assets, to prepare a greenhouse gas (GHG) inventory using standardised approaches and principles.

The methodology for GHG accounting follows the updates published by the Intergovernmental Panel on Climate Change (IPCC, 2019), which describes different levels of assessment depending upon the quality and extent of plant data available, and provides some default values and emission factors that can be used in the absence of a comprehensive monitoring campaign.

The 2021 Guidelines note that there is high uncertainty in many of the emission factors described. Emissions of CH₄ and N₂O vary in wastewater processes temporally and spatially. The choice of treatment process can affect emissions, but equally how a process is operated, and the wastewater characteristics will also have a significant bearing on the GHG flux.

To improve estimates of wastewater emissions, site specific monitoring is needed to develop process specific emission factors. Hence, a supplementary guideline has been prepared, intended to provide technical guidance to wastewater treatment providers on how to undertake the direct measurement of wastewater emissions through various methods.

The document should be read in conjunction with other documents produced by the group, and available on the Water New Zealand website, including Navigating to Net Zero: Aotearoa’s water sector low-carbon journey, and Carbon Accounting Guidelines for Wastewater Treatment: CH₄ and N₂O.

