

Water shortage and water restrictions FAQs

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Every year we are warned of tighter water restrictions and a water shortage, but nothing happens – what make this year different?

Demand for water in the Wellington region is at an all-time high, mainly because of increasing leaks, the relatively high rate of water use, and population growth.

Current estimates show that the Wellington metropolitan region is losing around 45% of drinking water due to leaks, both on the public network and on private properties. The increasing number of leaks is a result of aging pipes – old pipes burst and leak more frequently. There is a significant backlog of renewals (replacing old pipes) across the region as investment into replacing pipes has historically not kept pace with the number of pipes nearing and exceeding the end of their operational lives.

Water usage is another significant factor; the Wellington metropolitan region has relatively high water use compared to other large cities in Aotearoa and around the world (see graph and table below). We also use more water in summer when river levels are at their lowest, when it hasn't been raining much, which adds extra pressure when the available water supply is lower.

On the supply side and treatment side, region's drinking water supply system has a finite capacity. This means that we can only treat and supply a certain amount of safe drinking water on any given day. This includes a "buffer" that allows for varying levels in daily water usage, unplanned outages, or planned maintenance work.

However, the increase in leaks in the network means the available 'buffer' is becoming increasingly tight.

In recent years, the region has come close to Level 3 water restrictions (a total outdoor water ban) but we've been lucky and this was avoided due to unexpected heavy rainfall boosting supply (ex-cyclones Gabrielle and Dovi). We can't assume that this will be the case this year.

Wellington Water's modelling shows that if we experience an average summer this year (e.g. without significant rainfall) then our councils will have to put in place tighter water restrictions for longer periods of time to avoid the risk of an acute water shortage (e.g. asking the public to restrict their indoor water use, what we call "Level 4 Water Restrictions").

How we compare with other cities

Wellington households use more water than other cities



City	Litres per person per day
Wellington metro	200
Auckland	145
Melbourne	160
UK	110
Copenhagen	95

What is Wellington Water doing to prepare for potential water shortages this summer?

To be prepared for an acute water shortage with Level 4 Water Restrictions, we are working with our council owners to prepare an emergency response plan. This will outline how we (councils and Wellington Water) will manage the situation and engage with businesses, other public agencies, and the public should this occur. We are currently working on finalising the plan with Wellington Water.

We are also letting the public know early of the risks this year so they can be prepared and understand what actions they can take to reduce their water use - this will help to reduce the risk of tighter water restrictions this year.

Why don't you guys just fix the leaks and then we wouldn't be faced with a water shortage?

Wellington Water, on behalf of councils, has dedicated teams out working as efficiently as possible to find and fixing leaks every day.

But there are a lot of leaks, and we simply can't fix them all within the current resources and funding available to us. So, we must prioritise where crews go to make the best use of resources and focus on fixing the most important leaks first. Generally, these are ones that are losing the biggest volume of water or are impacting water supply to customers, many of which are underground and hard to spot.

When we find leaks on private properties, we let homeowners know so they can fix them (as these are outside of councils' and Wellington Water's remit).

We have created a clear [prioritisation process](#) to ensure our work is as effective as possible.

We understand residents' frustration and we are working hard to do as much as we can.

What are councils and Wellington Water doing to fix the problem?

In the short term, we are focusing on fixing the most significant water leaks (those that have the most impact to water supply) and replacing pipes. We are making the most of our available resources, within the funding levels set by councils in the region.

We are also doing all we can to optimise our activities within current funding and prepare for the possibility of a water shortage this summer. Our three focus areas in response to this summer are:

- Water loss management
- Monitoring and advice on restrictions
- Water shortage emergency response planning

We have been clear with our councils and the public that we are unable to mitigate the risk of an acute water shortage this year with the current capacity to treat and store water, the state of the network and with current funding and resourcing levels. To be prepared for an acute water shortage with Level 4 Water Restrictions, we are working with our council owners to prepare our response to this summer. This will outline how we will manage the situation and engage with our councils, other public agencies, businesses, and the public should this occur.

We are also part way through a big capacity upgrade project at the Te Mārua Water Treatment Plant in Upper Hutt. This plant provides close to 50% of all drinking water to the Wellington region on average. This upgrade will allow the region to treat more water and draw more from the storage lakes, helping to increase available water supply on a daily basis. This project is on track to be delivered by late 2024/early 2025.

In the long term, we have recommended three key actions to our councils to reduce the risk of water shortages in future years. These are:

- increased investment in water loss management and pipe renewals
- the development of additional water storage at Te Mārua; and
- the introduction of smart water meters to reduce demand and help find leaks more efficiently both in private property and within the public network.

These actions are being considered as part of councils' long-term planning process.

What else are you doing to fix the problem?

We are also undertaking pressure management testing, to see how we can reduce water pressure without affecting residents' day-to-day activities. High water pressures increase stress on the water network, which causes more leaks. Optimising network pressures helps reduce leaks, and the amount of water lost through the leaks when they do occur. This helps to extend the lifespan of the water pipes in the region, driving down costs associated with repairs and reducing disruptions to our customers.

We are also working with our councils to help people understand water conservation best practice and tips. For example, there's a useful [Water Calculator](#) on our website where people can find out more about their household's average water usage and understand what can be done to reduce this.

Wellington Water and councils are closely monitoring the situation during the summer and if the situation worsens, we will likely have to increase water restrictions across the region to help limit the demand for water and ask the public to significantly reduce their water use.

But we've had all this rain, how could we be short of water?

Unfortunately, excess rain in the winter months doesn't reduce the risk in summer. We are limited by how much water we can treat, and how much water we can store.

We store as much water as we can when it is plentiful during the winter months in the Macaskill Lakes at Te Mārua, so that it is available to treat and supply in the summer months. In the summer when we have warm dry weather, demand goes up at the same time that river levels drop, and we rely on the Macaskill Lakes storage together with the water from the Waiwhetu aquifer to get the region through summer.

The key system constraints are how much safe and healthy drinking water the region's treatment plants can produce on a daily basis, and the available supply from rivers, the storage lakes, and the aquifer.

Why can't you just take more water?

The metropolitan Wellington region sources all its drinking water from rivers and the Waiwhetu aquifer that runs beneath Lower Hutt and the Wellington Harbour.

How much we can take from the rivers and aquifer is limited by consents. These consent limits are needed to make sure we protect the ecology, flora and fauna of the rivers, and to make sure we do not allow saline intrusion (sea water) to be drawn into the aquifer.

Wellington Water carefully monitors how much water is taken from our rivers and aquifer and stores a backup supply of water (the storage lakes) to help guard against the need to draw more than we are allowed to.

Why can't you buy bring more water in?

This is not an option available to us. We can't feasibly bring more water into the region at a rate that would realistically be effective and affordable for the community.

When do water restrictions begin?

Water restrictions are now in place for the 2023/24 summer period. Level 1 restrictions began at the start of daylight savings for all councils in the Wellington metropolitan region and apply all year round in Upper Hutt and South Wairarapa.

We'll let you know once the restrictions are lifted – this is usually close to the end of the daylight savings period, but the actual time they are lifted depends on a number of factors including the demand for water and weather conditions.

Here's where you can see what water restrictions apply in [your area](#) and what this means for you.

How can you ask me to restrict my water use, when we're losing so much water because of leaks?

We understand that the amount of water lost through leaks is frustrating, especially when we have to ask residents to conserve water. Wellington Water has crews working 7 days a week, and often the night too, to find and fix leaks on the public network. Unfortunately, with the resources currently available, not all the leaks can be fixed.

With a real risk of a water shortage this summer, the best chance we have of reducing our water restrictions is to work together and bring down our water use.

The public can do their bit by finding and fixing leaks on their property, following water restrictions, and adopting taking simple ways actions to reduce water use at their place.

I've heard that water can get contaminated when the water pressure in the pipes is low during periods of low water supply. Is that right?

This is only a potential risk in an extreme case scenario of an ongoing water shortage.

In this scenario, if water use exceeds the treatment plants' ability to supply on an ongoing basis (several days for example), there is a risk that the water levels and pressure in the network may drop. If network pressure gets too low, there is a risk contaminants could be drawn into the drinking water network, which means we would have to issue a boil water notice to minimise the risk to public health.

But this is the worst-case scenario, and Wellington Water and councils will do all we can to avoid getting to the stages of a boil water notice.