

## **Chlorination FAQ's**

### **Why does Tasman District Council chlorinate**

The Tasman District Council is required to provide a residual disinfection (chlorine) under the Water Services Act 2021, unless an exemption is granted by the Water Service Authority – Taumata Arowai.

Council elected in May 2021 to chlorinate all the community water supplies that weren't yet chlorinated. All council water supplies are now permanently chlorinated, except for Upper Takaka and Hamama.

For an exemption from chlorination to be granted, Council would need to demonstrate to Taumata Arowai that there is minimal chance of our water supplies being contaminated after the water has been treated at our water treatment plants. This would include ensuring that pipes and reservoirs are unlikely to experience pipe breaks, cross-connections, low pressure or backflow incidents, among a range of factors.

There is some information available on the Taumata Arowai website that may help explain exemptions [Exemptions | Taumata Arowai](#)

### **Why the Havelock North Drinking Water Inquiry changed how water supplies are managed**

In 2016, bacteria contaminated the source water for the Havelock North township causing illness in over 5,000 people. Following this incident, the government initiated the Havelock North Drinking Water Inquiry [Government Inquiry into Havelock North Drinking-Water - dia.govt.nz](#) whereby the commissioners researched both the cause of the Havelock North issue and water management throughout New Zealand. The 2017 final report made several recommendations for drinking water supplies, including having a residual disinfection within the reticulation.

The requirement for network (or reticulated) water supplies to have residual disinfection was mandated in the Water Services Act 2021 [Water Services Act 2021](#)

### **Why use chlorine?**

Chlorine is used to inactivate bacteria and viruses that can get into our water supplies and spread diseases.

It has been used in drinking water all over the world for over 120 years. It keeps millions of people all over the globe, including in New Zealand, safe from waterborne illness.

Chlorine is used to inactivate bacteria and viruses that may be present in the source water and acts as a residual disinfectant within the pipe network so that if contamination enters via pipe breaks, cross-connections or backflow incidents, any bacteria are inactivated and cannot cause illness.

## **How does chlorine work?**

Chlorine reacts with the cell wall (and interferes with other cellular functions) of bacteria and viruses to 'inactivate' them, meaning that they can no longer grow. If the organisms can't grow and multiply, they can't cause disease.

## **How does Tasman District Council chlorinate**

Council's water supplies are chlorinated at the treatment plants by dosing chlorine gas to the water flow. Other treatment processes can include filtration and UV, depending on the water supply. These other processes treat water only at the point of contact. Chlorine travels with the water, which means it protects the supply right through the network so that if contamination enters via pipe breaks, cross-connections or backflow incidents, any bacteria are inactivated and cannot cause illness. Chlorine is just one part of a multi-barrier risk-management approach to providing safe drinking water to customers.

The detailed description for each water supply is available on Council's website, link - [Drinking water quality and testing | Tasman District Council](#)

Chlorine levels are continuously monitored at our treatment plants and regularly checked at the reservoirs and throughout the network to ensure it is within safe levels.

You can request information on chlorine levels or a report on the water quality that is delivered to your property via Council's Customer Services.

## **What are the rules for chlorine in drinking water**

The following regulations and rules for chlorine have been issued by the Water Services Authority - [Taumata Arowai](#) under the Water Services Act 2021 -

- The Drinking Services (Drinking Water Standards for New Zealand) Regulations 2022 [Water Services \(Drinking Water Standards for New Zealand\) Regulations 2022](#) - The regulations set out the maximum amounts of substances, organisms, contaminants and residues that may be present in drinking water.
- The Drinking Water Quality Assurance Rules - The rules provide the minimum compliance requirements to ensure the drinking water complies with the Drinking Services (Drinking Water Standards for New Zealand) Regulations 2022. The rules for chlorine vary according to the size of the population being served by the water supply.

## **What if I don't want chlorinated water?**

You can purchase water, but this is expensive (and not eco-friendly), e.g. a one-litre bottle of water in the supermarket might cost \$1-\$4 versus 0.4 cents per litre for water through your meter.

Here are several options, if you are concerned or do not like chlorine in your water supply.

1. Let Water Stand - Fill a clean jug with water and set it aside for several hours. A jug can be placed in the refrigerator overnight while the chlorine dissipates naturally after a few hours.
2. Use a handheld carbon filter jug for your fridge. These are available from local kitchen and department stores (as well as replacement filters). The water trickles through a filter and can be used numerous times.
3. Install a water filter – granular activated carbon filters (GAC) will remove chlorine and can be cost effective for household use.

These devices can be attached to a jug, tap, e.g. kitchen sink, installed under the sink or within a fridge or attached to the pipe coming into your home so that your entire household water system is filtered.

These systems are available from hardware supply stores and water filter companies. All filter replacements and maintenance need to be in accordance with the manufacturer's instructions.

### **Is chlorinated water safe for people with health issues and those on dialysis?**

There are no known health impacts from drinking water effectively treated with chlorine. The use of filters will mitigate any risks for those on dialysis. This will be managed by Te Whatu Ora - Health New Zealand Renal Services.

### **Skin conditions or sensitivity to chlorine**

Chlorine can irritate existing skin conditions like asthma, eczema or dermatitis. If you notice your skin becoming dry or itchy, applying a moisturizer after showering or bathing can help. Should you experience increased skin irritation, asthma symptoms or other concerns, it's important to consult your GP.

You can also contact Healthline any time for free health advice on 0800 611 116.

### **Why can I smell and taste chlorine?**

The intensity of the chlorine smell and taste can depend on the distance the treatment plant is from your household (i.e. the closer your house is to the water treatment plant the stronger the chlorine smell can be). This is because we need to retain a minimum amount of chlorine to the furthest parts of the network.

This usually means that chlorine is working as it is reacting with organic material, but it can also vary depending on the dose needed to keep water safe.

Chlorine can also react with organic matter and bacteria in your plumbing system which can create a stronger, more noticeable smell. This can lead to the formation of chloramines which have a strong chlorine odour.

Hot water can also cause chlorine to be released into the air more easily making the smell more prominent than it is in cold water.

### **What if the strong chlorine smell persists?**

A chlorine smell may be noticed first thing in the morning or after you've been away from home for a period. This issue usually resolves itself after flushing the tap. If you've been away for a longer period, you may need to flush for around 15 – 20 minutes to bring in fresh water.

If taste / odour persists, contact Council for additional advice.

### **Does chlorine affect my pipes and hot water cylinders**

There are many factors that can lead to hot water cylinders and pipes leaking and needing to be replaced. The reasons for this can include the chemical composition of the water, the age of the cylinder, the type of cylinder, whether there is any debris in the cylinder or pipes.

Because of this, the Council does not compensate property owners for leaks.

### **Water quality testing**

Chlorine levels are continuously monitored at our treatment plants and regularly checked at the reservoirs and throughout the network to ensure it is within safe levels and providing adequate disinfection.

Council manages the water quality under the *Water Services Act 2021* to the property's meter or restrictor. After this point, the water quality is the responsibility of the property owner(s) under the Building Act.

For these reasons, the Council generally does not conduct water sampling on private property when requested by homeowners.

### **Water testing laboratories**

If you decide to undertake your own water sampling, we recommend that an International Accreditation New Zealand (IANZ) laboratory is used for testing water as their practices are audited by an accredited body appointed by Taumata Arowai. The accredited laboratory register is available on Taumata Arowai's website via this link: [Laboratories · Hinekōrako \(taumataarowai.govt.nz\)](https://www.taumataarowai.govt.nz/laboratories-hinekōrako)

### **Does chlorine affect pets and fish?**

Water treated with chlorine is safe for mammals like cats, dogs and birds to drink.

It's always a good idea to consult with a local pet store or veterinary clinic for specific advice tailored to your pet's needs.

Chlorine can be toxic to fish and amphibians. This is because these animals absorb water directly into their blood stream.

If you have an outdoor pond, you can reduce water flow to a trickle (this dilutes the chlorine levels to a safe amount for your fish) or let water sit for 24 hours before using it (the UV of the sun dissipates chlorine).

For indoor tanks, fill water and let it sit for a least 24 hours and then only replace a third of this water at a time with what is already in the tank.

De-chlorination kits (like sodium thiosulfate) are available at pet stores.