



# Waitaki

DISTRICT COUNCIL  
TE KAUNIHERA Ā ROHE O WAITAKI



Read about  
the options  
we want your  
feedback on

## LAKE OHAU ALPINE VILLAGE WATER SUPPLY UPGRADE

**IMPORTANT INFORMATION**  
about your water supply, the  
planned upgrade and how it will  
impact on your rates

## Public meeting

We're holding a public meeting to discuss the water supply upgrade and answer any questions you have:

### WATER SUPPLY UPGRADE MEETING

3 January 2019, 11am

Lake Ohau Lodge

Following the meeting, we'll send you a survey (which can also be completed online) so you can tell us what level of service you want delivered through the upgrade.

If you have any questions before the meeting or would like more information (including frequently asked questions):

Visit [www.waitaki.govt.nz](http://www.waitaki.govt.nz)

Email [ohauwaterupgrade@waitaki.govt.nz](mailto:ohauwaterupgrade@waitaki.govt.nz)

## Why we need to upgrade the supply

New drinking water legislation came into force in 2007, meaning water suppliers were required to take all practical steps to comply with the New Zealand Drinking Water Standards. Information about how drinking water supplies are regulated and monitored in New Zealand can be found at <https://www.health.govt.nz/our-work/environmental-health/drinking-water>

Since that time, Council has been progressively upgrading its drinking water supplies throughout the Waitaki District.

The Lake Ohau Village Water Supply is one of the last non-compliant supplies in Waitaki. It's now deemed to be high risk and we must complete the upgrade next year to meet our legal obligations. There are heavy penalties for non-compliance with the Drinking Water Standards.

The need for the upgrade is also increasingly urgent in light of the Havelock North contamination event and resulting Government inquiry. This reinforced the importance of protecting our communities from the threat of water supply contamination and has placed safe drinking water back on the Government's agenda as a priority.



## The current supply

Lake Ohau Village's water supply system was constructed during the development of the village, which is a 136-lot subdivision, in 1981. Currently around half of the sections have been built on.

The supply draws water from an un-named stream (assumed to be a minor branch of Freehold Creek) located around 2km west of the village. The water is gravity-fed from the stream to eight concrete storage tanks and is then gravity fed from these into the village.

The water from the stream is currently untreated, can easily become contaminated, and there is a permanent boil water notice in place.

The supply was originally designed as a restricted supply, however there are some on-demand connections within the village.

**ON-DEMAND SUPPLY** - provides unlimited water as needed directly from the point of supply

**RESTRICTED SUPPLY** - currently provides 600 litres per day to a storage tank on the property through a flow control device (restrictor) over a 24 hour period

## Issues with the current supply

In planning for this upgrade, we've had to consider the following issues:

### Water source and storage

- ▶ The water source (the stream), supply intake and storage are on private land and can only be accessed by 4WD
- ▶ There is uncertainty around future access
- ▶ The water levels in the existing storage tanks can't be measured
- ▶ The tanks are 35 years old and showing signs of deterioration

### Water quality and reliability

- ▶ The water source experiences high levels of turbidity and E.coli contamination
- ▶ Currently, the community must boil their water, and there a high risk of holiday makers not being aware of the boil water notice and drinking unsafe water
- ▶ The stream is impacted by drought and unlikely to meet future demands from the village

- ▶ Restricted connections are unable to obtain water during a power back-out unless they have their own power generator

### Water delivery and supply volume

- ▶ The system has been designed as a restricted supply but there is currently a mixture of on-demand and restricted connections
- ▶ Restricted connections in the village provide 600 litres per day, which is not considered to be an adequate volume for most households
- ▶ There are limited sites around the village that have enough elevation to provide a gravity-fed supply

### Monitoring and maintenance

- ▶ The village is remote from operational staff, who are based in Oamaru, and the water supply is only visited and inspected every three months. A new water treatment plant needs to be automated and remotely monitored, and visited weekly

## The upgrade solution

Engineers looked at several options for upgrading the supply. Only two of these were viable for meeting the Drinking Water Standards.

The upgrade solution decided by engineers involves:

*Sourcing water from a new bore supply and treating it with filtration and UV at a new treatment plant (to be constructed and located on easily-accessed public land close to the village)*

*Installing new storage tanks and reticulation pumps at the same site as the treatment plant*

This upgrade solution offers more benefits overall than the other option considered – including a cleaner water source that is easier to treat, sufficient capacity to meet current and future demand, and supply security during droughts.

Although the two options considered are similar in cost, the selected option will be the most cost-effective to operate and maintain over the longer term.

## What we'll be surveying the community on in January 2019

The upgrade solution has been decided based on what will achieve compliance with the Drinking Water Standards and secure the supply over the long term. However, there are still choices to be made on what level of service will be delivered to the community.

**We want you to tell us what your preferred level of service is.** The survey you get in January will offer four options, as outlined in the table below. Each option has a different estimated rates impact (note: the current water rate for Lake Ohau is \$245 per connection, per annum).

|  | Water supply description<br>(what you will receive)   | Service level choice<br>(what you COULD receive)  | Resulting estimated annual rate                              |
|--|---|---|--|
| <b>Option 1:</b>                       | An upgraded supply which meets the drinking water standards and includes power generation and fire protection | <ul style="list-style-type: none"> <li>▶ All connections on-demand</li> <li>▶ Chlorine added</li> </ul>                               | Approx. \$1,225 per connection per annum (a \$980 increase)  |
| <b>Option 2:</b>                       | An upgraded supply which meets the drinking water standards and includes power generation and fire protection | <ul style="list-style-type: none"> <li>▶ All connections on-demand</li> <li>▶ No chlorine added</li> </ul>                            | Approx. \$1,155 per connection per annum (a \$910 increase)  |
| <b>Option 3:</b>                       | An upgraded supply which meets the drinking water standards and includes power generation and fire protection | <ul style="list-style-type: none"> <li>▶ All connections restricted (increased to 1000 l/day)</li> <li>▶ Chlorine added</li> </ul>    | Approx. \$1,075 per connection per annum (an \$830 increase) |
| <b>Option 4:<br/>BASIC<br/>UPGRADE</b> | An upgraded supply which meets the drinking water standards and includes power generation and fire protection | <ul style="list-style-type: none"> <li>▶ All connections restricted (increased to 1000 l/day)</li> <li>▶ No chlorine added</li> </ul> | Approx. \$1,005 per connection per annum (a \$760 increase)  |

Refer over the page for information on chlorine and other things to consider.



## Some extra things to consider

### Rates impact:

Although we can't do anything about the cost of the upgrade, other than providing some choice around service levels, we can explore funding options which could reduce the rates impact – for example, the creation of a district-wide water rate. The rates impact won't fully come into effect until 1 July 2020, so this issue will be considered separately over the coming year. Any option proposed is likely to require extensive public consultation.

### Chlorine as an extra safeguard:

Adding chlorine to water supplies is sometimes a contentious issue. From an engineering and public health perspective, we think adding chlorine is the best and safest way to ensure the community is protected from illness caused by water contamination.

Although UV treatment is very effective in killing bacteria and pathogens as long as the water is not turbid (discoloured), it doesn't treat the water once it is in our reticulation network (our reservoirs, pumps and pipes). There is always the potential for contaminants to get into our water reticulation system - for example, through broken pipes (these are often caused by tree roots growing through pipes and unlawful connections from households where people do their own plumbing).

This is where chlorination makes an impact - it disinfects the water all the way from the intake point to your taps and kills small bugs that can get through filtration systems - such as bacteria and viruses that can't be physically removed from water.

Globally, chlorine has been used safely in the treatment of water for around 120 years. It keeps millions of people safe all over the world from waterborne illness, including most of New Zealand.

Most of the drinking water supplies in the Waitaki District are now chlorinated, and we only ever use the minimum amount needed to keep the supplies safe.

Some useful information about chlorination can be found on the Water New Zealand website:

<https://www.waternz.org.nz>

### Chlorine may soon not be a choice:

As a result of the Havelock North water contamination event, it is very likely the Government will make the addition of chlorine to water supplies mandatory in the near future. While we're offering it as a choice for this upgrade and will implement whatever the majority of the community wants, please be aware that the choice may be taken away either during or after the upgrade completion.

***Please note: Council does not add flouride to any of its water supplies. At this stage, there is no indication from Government that flouride will become mandatory in the near future.***

### Restricted supply and storage tanks:

If the community indicates it wants all connections to be on a restricted supply, then this will increase to 1000 litres per day (from the current 600 litres). Households on a restricted supply need to have tanks with capacity for at least 3 day's storage to ensure water supply in the event of a supply disruption. We understand this will be of concern for people who already receive an on-demand supply and don't have storage tanks. If the supply does become restricted, we may consider assisting with the costs of tank installation for those already connected if the supply becomes restricted.

### The DoC camping ground:

Water supplied to the Department of Conservation camping area has been raised by the community as an issue in the past. This is being addressed as part of the upgrade process.

If you have any questions or would like more information (including frequently asked questions):  
visit [www.waitaki.govt.nz](http://www.waitaki.govt.nz) or email [ohauwaterupgrade@waitaki.govt.nz](mailto:ohauwaterupgrade@waitaki.govt.nz)

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