# Lake Ohau Alpine Village water supply upgrade: FAQs

## Selected upgrade option

**Q: Why didn't the community get a say in which upgrade solution was chosen?**

**A:** As mentioned above, upgrading the supply is non-negotiable for Council. Although there are some choices in how we do it from an engineering perspective, these are constrained by the what the Drinking Water Standards (the Standards) require.

Engineers investigated a range of upgrade solutions but only two of these were viable. They selected the upgrade solution that will best meet the Standards, reduce the risk of contamination, and also deliver a wider range of benefits to the community for around the same level of investment.

Although the upgrade solution has been selected, the community does have choice around the level of service the upgrade delivers – that is, whether it is restricted or on-demand and whether or not chlorine is added.

**Q: Why aren't you going to use the current water source? Is it really a problem?**

**A:** Yes, unfortunately the current water source is a problem for the following reasons:

- It's prone to E. coli contamination (view the Lake Ohau water sampling results here);
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- The stream is a surface water of variable water quality which makes it more challenging to get consistent treatment and manage the risk of contamination;
- The stream is on private land and only accessible by 4WD, creating uncertainty over long term site access;
- The amount of water the stream can supply is limited and can easily be impacted by drought.

**Q: Why does drinking water even need to be treated at all?**

**A:** No matter what water source we use, or how clean it is perceived to be, there is always a contamination risk. Any water source must be treated in order to meet the Standards and keep our communities safe. The Havelock North water supply contamination was a good example of why we need to be vigilant about both the water source and how it's protected and treated.

## Cost and rates

**Q: Why is the upgrade so costly?**

**A:** The main purpose of the upgrade is to provide the Ohau community with water that meets the NZ Drinking Water Standards and complies with the law. Meeting the Standards is non-negotiable and our number one priority.

Council needs to consider several things when upgrading any supply to meet the Standards, regardless of how many people are on the supply - including how easily the water source can be treated, how reliable the treatment method is, and how well we can manage re-contamination risks.

Getting it right is crucial - and it is costly. But if we don't make the right investment now, it will cost the community more in the future. We have aimed to make the upgrade as cost-effective as possible with consideration given to both up-front costs and longer term operational and maintenance costs.

Because it is a big investment for the community, we've ensured the selected upgrade solution delivers as many other benefits as possible – such as providing enough water during times of drought and to cater for future demand, improving the longevity of the infrastructure, and making the supply more cost-effective to operate and maintain over the long term.

**Q: How do you know this will be the actual cost? Could it end up being more expensive?**

**A:** At this stage, we can only estimate the cost of the upgrade as some factors subject to change – such as the cost of materials. Although it is an estimate, it is based on our experience with other comparable upgrade projects. To allow for unforeseeable cost increases, we have made allowance for this in the overall upgrade cost estimate. All going well, the upgrade will end up costing less than estimated.

**Q: Is there a way the rates impact can be reduced?**

**A:** 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. As mentioned on the previous page, 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.

**Q: What about vacant sections? Will they be contributing to the upgrade cost?**

**A:** People who own vacant sections at Lake Ohau and are connected to the water supply already pay an 'availability charge' (which is half the full rate for water supply). This charge will increase in proportion to the increase made to the full charge following completion of the upgrade.

Owners of vacant sections will pay the full rate once they build on their section, in addition to making a development contribution (in accordance with Council's Development Contributions Policy).

## Supply volume

**Q:**
**Why is Council proposing to increase the amount of water supplied to each household?**

**A:**
Most households on the Lake Ohau supply receive a *Restricted Supply*. A Restricted Supply provides an agreed volume of water to a storage tank on the property through a flow control device (restrictor) over a 24-hour period. Each connection in Ohau currently gets 600 litres per day.

As part of the upgrade, Council is offering the community two options for how water is supplied in the future – either restricted (as it is now, but increased to 1000 litres per day), or *on-demand* (an On-Demand Supply provides unlimited water as needed directly from the point of supply).

Increasing the restricted supply to 1000 litres per day is consistent with standard design guidelines and is considered to provide reasonable access to water for a household (based on four people per house).

Although the amount of water available to households will increase with either option, we will still encourage water conservation where possible to keep ongoing operational costs (including energy use) down for the supply.

## Chlorine

**Q: Why would you want to add chlorine to the supply? Won't the new treatment plant provide clean water that meets the Drinking Water Standards?**

**A:** Adding chlorine is widely accepted as the best and safest way to ensure the community is protected from illness caused by contamination of water after it leaves a treatment plant.

Although UV treatment is very effective in killing bacteria and pathogens as long as the water is not turbid (cloudy), 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 network after it leaves the treatment plant - for example, through broken pipes (often caused by tree roots growing through pipes or 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://12240-console.memberconnex.com/Attachment?Action=Download&Attachment_id=3078

**Q: Why are you giving us a choice about chlorine?**

**A:** We recognise that adding chlorine to a water supply can be a contentious issue, despite the fact that it is regarded as safe and is widely used around New Zealand and the world to keep water supplies safe. Although we think it would be the best option, we want to give the community the opportunity to decide for itself.

It is important to note, however, that 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.

**Q: Will you add fluoride to the supply?**

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

## New water source, treatment plant and water storage location

**Q: Where will the new water come from?**

**A:** The water will be drawn from bores adjacent to Lake Ohau north east of the village. A bore supply is more cost-effective to treat, has more consistent water quality and is less affected by drought conditions.

The new bores, along with the new treatment plant and storage tanks, will be located on reserve land owned by the Council. An aerial photo of the location can be viewed here

**Q: Why does the location of the water supply storage tanks need to be changed?**

**A:** The current storage tanks are 35 years old, are showing signs of deterioration, and we can't measure the water levels in them. In addition, they are located on private land so there is uncertainty around future access to them.

We need to replace the tanks, and it makes sense to move them to the same location as the new bores and treatment plant. This will make them more accessible and cost-effective to monitor and maintain over the long term.

**Q: Where will the new treatment plant and water storage be located?**

**A:** The new treatment plant and storage tanks will be located on reserve land owned by the Council, along with the bores which supply the water. An aerial view of the location can be viewed here

**Q: Won't locating the bores, treatment plant and storage tanks near the village create an eyesore?**

**A:** The new bores, treatment plant and tanks will be designed to have minimal visual impact. Council will also landscape and beautify the area once construction is complete. Residents may wish to be involved with this, which is something we will discuss with the community as the upgrade work progresses.

**Q: Will locating the new water treatment plant and bore pumps close to the village cause noise issues for neighbours?**

**A:** In recent years we have completed several similar upgrades around the district where treatment plants and pumps are located close to residential areas. These haven't created any noise issues for neighbours.

The pumps required for this upgrade will be smaller than anything we have used for other upgrades, which further reduces the likelihood of any noise or vibrations being transmitted beyond the plant. The treatment plant building will also be designed to minimise noise.

The treatment plant building will be around the size of a standard garage and there will be around 6-8 tanks situated beside the building. We will endeavour to make the building sympathetic to the surroundings, and install bunding and plantings to help disguise the building and tanks.

Tree planting and screening is very effective in reducing noise, and can be developed further at any time.

In summary, we are conscious of the beauty and serenity of the Lake Ohau environment and will make every effort to ensure the new plant does not have any negative impact.

## Next steps following consultation with the community

**Q: What will happen once the community has completed the survey?**

**A:** Once the survey has been completed, the final upgrade project (including service levels and design) will be confirmed by Council by March 2019.

In the interim, engineers will be investigating groundwater flow, drilling bores and testing bore water to confirm they will supply water to the desired standard and completing detailed design work.

Once the service levels and design are confirmed in March, construction will begin and is expected to be completed by the end of 2019.