

Featherston Wastewater Treatment Plant proposal

Frequently Asked Questions

What is South Wairarapa District Council wanting to do at the Featherston Wastewater Treatment Plant?

We are proposing to progressively move to discharging the town's wastewater to land rather than to waterways. Right now all wastewater is discharged into freshwater waterways. Our proposal is to reduce the discharge to waterways by 54% within 2 years, 68% within 5 years and 94% after 13 years at the latest.

Where does Featherston's wastewater go now?

Currently all of Featherston's treated wastewater goes into Donald's Creek and eventually into Lake Wairarapa/Wairarapa Moana in a more diluted form.

Why do we need to change what we are doing now?

The way we do it now pollutes the waterways and is not good for the environment. The government has recognised this and asked local authorities to find more environmentally acceptable ways to dispose of their wastewater.

Why do you want to irrigate wastewater to land?

Land treatment schemes are encouraged under the Wellington Regional Plans. Wastewater is treated with oxidation ponds and UV disinfection before being irrigated to land. In South Wairarapa we have already started using this method at our Martinborough and Greytown wastewater treatment plants.

Why did you withdraw the previous resource consent application?

The previous consent application by Council was for a high-rate treatment plant with discharge to Donald's Creek. This consent was made at a time when the land for discharging to was not available to Council.

Why did you choose Longwood Road?

The Longwood Road site was chosen following a land suitability study which was undertaken in 2012 and identified land adjacent to the Featherston Wastewater Treatment Plant as suitable for wastewater irrigation. At the time no land was available for purchase, however when Hodder Farm on Longwood Road came on the market, Council purchased the land due to its suitable soils and proximity to the Featherston Wastewater Treatment Plant

Being slightly downhill from town, the system utilises gravity to transport the wastewater from the town to the treatment plant. Using gravity, rather than pumping the wastewater, as well as its proximity to town, saves on electricity and reduces the system's carbon footprint.

What other options were looked at?

Numerous other options were investigated such as constructing a high-rate treatment plant with discharge to Donald's Creek, with a small amount being discharged to a 6-hectare block; or utilising the existing wastewater treatment plant with enhanced treatment and piping to the Ruamahanga River and Tauherenikau River.

A report that investigates 21 variations of treatment is included in SWDC's resource consent application, covered in three PDFs, on GWRC's website.

Here are the links to these documents: <http://www.gw.govt.nz/assets/Resource-Consents/Featherston2-WWTP/F2WWTP-Application-documents/Appendix-2-Part-1-Consideration-of-Alternative-Treatment-and-Disposal-Options.pdf>

<http://www.gw.govt.nz/assets/Resource-Consents/Featherston2-WWTP/F2WWTP-Application-documents/Appendix-2-Part-2-Consideration-of-Alternative-Treatment-and-Disposal-Options.pdf>

<http://www.gw.govt.nz/assets/Resource-Consents/Featherston2-WWTP/F2WWTP-Application-documents/Appendix-2-Part-3-Consideration-of-Alternative-Treatment-and-Disposal-Options.pdf>

How long will it take to remove wastewater from waterways?

With a goal to discharge 100 percent of treated wastewater to land, except when soil moisture and conditions are not suitable. Featherston’s scheme has been designed to reduce wastewater to waterways by 94 percent within the next 13 years. We propose reviewing this at the eight-year mark, at which point we may be able to speed up the process and reach 94% reduction in less than 13 years.

The table below outlines how the scheme will be staged to achieve this:

Stage	Stage description	Wastewater to land, % of total	Start time from consent approval
Stage 1 (1A and 1B)	Plant optimisation and minor capital works; discharge of treated wastewater to 8ha of Site A and 70ha of Site B; and start of Sewerage Network Rehabilitation Programme	54%	2 years (commencing November of that year)
Stage 2A	Discharge of treated wastewater to up to 116ha of Site B (without deferred storage) and completion of Sewerage Network Rehabilitation Programme	68%	5 years
Stage 2B	Discharge of treated wastewater to up to 116ha of Site B with deferred storage	94% (average)	13 years

Will the wastewater smell?

For most of us when we think of waste we think of bad smells, especially when we think about what is going down our drains. However the disinfected wastewater we are proposing to discharge to land is treated to such an extent that it is mostly odourless when being discharged at the end of the process.

What measures are in place to stop wastewater from getting on neighbouring properties?

It’s our objective to eliminate any potential effects to neighbouring properties. There will be at least a 25-metre buffer zone from the wastewater treatment to property boundaries and 150-metre separation distance from neighbouring dwellings and occupied buildings.

Tree planting around the perimeter of the irrigation scheme will not only be visually appealing, but will also act as a further buffer while the irrigator is in use. The irrigation system is also fitted with wind cut-off restrictions and irrigation will stop when the wind increases to a certain level. This will mean 99.9% of the spray will be maintained within the boundary.

Will disposing of wastewater to land rather than to Donald's Creek mean that the land will become contaminated?

Wastewater is first treated in oxidation ponds then UV disinfected in the treatment plant to kill bacteria and viruses before being irrigated to land. Treated wastewater is only irrigated when soil

conditions are suitable and there is no strong breeze. Close monitoring and adjustments will manage the water quality that is irrigated to land. The crop growth on the land is part of the process, with the plants chosen to optimise the absorption of nutrients. There will be an annual assessment of the soil health as well to maintain the health of the crops.

Why can't Council stop putting wastewater into Donald Creek now?

The original solution was to discharge to Donald's Creek via a new high rate treatment plant, due to there being no availability of land. Having to buy land and prepare new consent applications and assessment of environmental effects has taken some time. To irrigate wastewater to land we need to obtain a resource consent from GWRC and because we are changing the way we dispose of wastewater, it needs to be approved by the independent consents hearing panel (on behalf of GWRC). An important part of the application is the reduction of additional water, inflow and infiltration (I&I), getting into the pipe network, which needs to be reduced by over 35%.

What is inflow and infiltration?

Inflow and infiltration is the process of liquids other than wastewater entering the wastewater network. Infiltration refers to the entry to the network of groundwater, through defective pipe joints and broken pipes, tree root infiltration and degradation of the sewer pipe materials.

Water entering sanitary sewers from inappropriate connections is called inflow. Examples of sources include sump pumps and drains from individual properties; roof drains, cellar drains, and yard drains where urban features prevent surface runoff.

Why does SWDC think this way to treat wastewater is the best option?

The proposed land treatment scheme will have significant positive impacts to Donald Creek and Lake Wairarapa/Wairarapa Moana by treating and disposing of the wastewater to land in a sustainable manner. Irrigating treated wastewater to land is considered good practice and is generally encouraged from a cultural perspective.

How will private bores be affected?

We have written to 26 landowners including registered bore owners and surrounding landowners to also try and identify any unregistered bores. Of the registered bores, some are shallow and already at risk of bacteria and viruses (pathogens) from their existing land use. Testing will establish their current groundwater quality and identify if there are any additional risks that will need resolving if the proposal to irrigate wastewater to land goes ahead.

Where are things at? Is Council going to change the scope of its Resource Consent application?

Currently we are carrying out further, more detailed scientific investigations, including looking into tertiary treatment, which removes the pathogens from the water before it is irrigated to land. Scientists are investigating the effects of the treated wastewater on the receiving environment, including looking at what level of treatment is necessary to remove potential pathogens. Until this work is completed, we won't have the scientific evidence to support the need for tertiary treatment and therefore a change in scope of our current application.

Scientific experts for both SWDC and Greater Wellington Regional Council are currently working together to gain a clear picture of the science.

Technical input and assessments currently being undertaken by SWDC and their experts

- Quantitative microbial risk assessment (QMRA / public health risk assessment)

- A technical feasibility assessment for “add-on” modern wastewater treatment technology (such as a tertiary polishing system) so that the WWTP can deliver the appropriate dose to provide the required disinfection identified from the QMRA.
- Groundwater monitoring (pathogens and other relevant parameters) and effects assessment
- Analysis of pathogens (bacterial and viral) in the wastewater treatment plant before and after UV disinfection
- Soil survey interpretation

What is happening to the feedback being collected at the community drop-in sessions?

All the feedback gathered from the community at these six drop-in sessions is being compiled for SWDC staff and consultants to consider and address. Your feedback will be used to assist the council in finding the best way forward, which could be the path we are or on, or modifying our approach. It also helps us understand the public’s concerns and address these through providing further information to the community.

What’s the difference between HRT and tertiary treatment?

People are giving feedback that they would like the water treated to a higher level than has currently been proposed. Higher rate treatment [HRT] and tertiary treatment are both terms that have been used. HRT (biological) typically refers to a treatment option that removes nutrients (phosphorus and nitrogen, which are vital for grass growth), whereas tertiary treatment typically refers to the removal of pathogens (bacteria and viruses). The higher level of treatment you go to the more it costs and the more expensive it is to run. Council has some estimates on these higher level treatment options and is currently modelling what impact these would have on rates. Information on this will be released in due course.