

Draft Wastewater Strategy 2011



12 April 2011

This newsletter outlines the draft long-term strategy for upgrading South Wairarapa District Council's treatment of wastewater. It also explains where you can find more information, have your questions answered and have your say.

The issue

Wastewater from Greytown, Martinborough and Featherston is treated in oxidation pond systems which were built in the early 1970s. Treated effluent from these is discharged into our rivers and streams.

The discharge of treated effluent to our rivers and streams is of concern to our community, and may have a negative impact on the environment and public health and safety. To ensure that our wastewater system is sustainable now and into the future, we need to look at new solutions which address these concerns.



What's happened so far

Since 2008, Council has been consulting about future wastewater management with representatives of Ngati Kahungunu ki Wairarapa, Rangitane o Wairarapa, Wairarapa Public Health, Department of Conservation, Fish and Game, Greater Wellington Regional Council and community boards.

Committees from Featherston and Greytown have met several times to discuss and progress scheme upgrades, consider options for the future, and recommend the preferred type of upgrade and timeframes for action. These committees have now been combined and include Martinborough representatives.

The draft strategy

This is a major strategy with short, medium and long-term components which build on each other towards a long-term goal. These stages are outlined in more detail over the page. It is important to note that this is a broad strategy and much of the detail has not yet been decided.

We need to investigate and develop effluent treatment and discharge options to a reasonable degree of certainty before committing resources. Resource consents will be phased to reflect the time needed to achieve this.

Timing and costs

We need to do this project once and do it right. To get something this big to run smoothly requires a lot of planning, consultation and negotiation.

It is expected that the proposed wastewater upgrade will take more than 30 years to complete. The total cost is estimated at more than \$17 million. While this is a lot, it is far less than more sophisticated and complex treatment plants would cost. We plan to spread the cost over many years so the upgrade is affordable to the limited number of wastewater ratepayers funding the three schemes.

There will be a fine line between finding the best environmental solution and what is affordable to ratepayers. Only those ratepayers who are connected to or have access to a community wastewater scheme will pay for the upgrade.

Your feedback

We invite your feedback on this draft strategy proposal. It will be taken to Council to help shape and finalise the wastewater strategy ahead of the imminent resource consent renewal applications for each scheme. Meetings and open days (details on the back) are planned to help answer any questions you may have.



Adrienne Staples
Mayor



What is wastewater?

Wastewater includes sewage from toilets, hand basins, water from washing machines, sinks, the shower & bath and trade wastes.

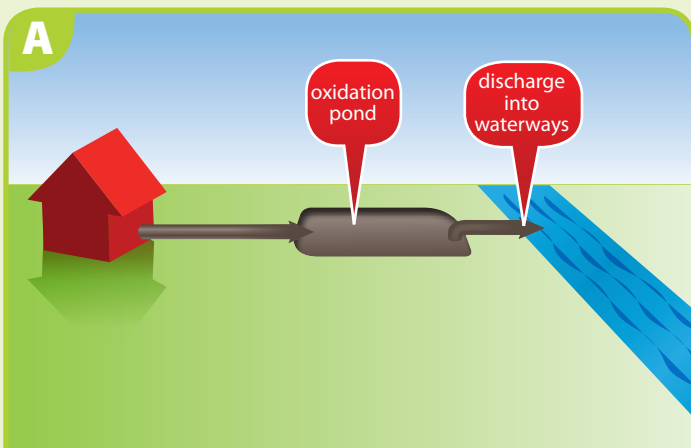
Our goal for wastewater

"To collect, treat and discharge wastewater from the urban areas of Featherston, Greytown and Martinborough and the coastal settlement of Lake Ferry so as to provide public health protection with minimal effects on the environment."

The current system (A)

Greytown, Featherston and Martinborough all use separate oxidation pond systems for the treatment of wastewater. These systems all discharge into nearby streams and rivers.

An oxidation pond's first task is to settle out all the solids that come in with wastewater. It uses sunlight, algae, phytoplankton and good bacteria combined with time to 'eat up' the contents in the wastewater.



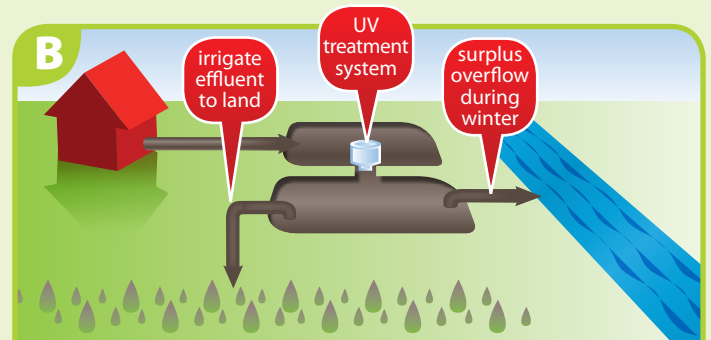
Wastewater from connected users is delivered by pipe to the oxidation pond. Treated effluent from the pond is then discharged into rivers and streams.

How do we propose to do this?

1. Progressively reduce discharges into waterways in a sustainable and affordable way.
2. Introduce an irrigation system to help discharge treated effluent onto land, particularly over the drier summer months, boosting the productivity of the irrigated land and using the wastewater as a valuable resource.

The proposed improvement plan (B)

1. Retain existing oxidation ponds but with improved treatment technology including UV (short-term).
2. Reduce plant inflow volumes by repairing the worst-condition sewer mains and drainage defects on private property.
3. An irrigation system to discharge treated effluent onto land (medium and long-term).
4. Construction of additional effluent storage ponds on Council-owned land (long-term strategy).



New technology in oxidation ponds results in cleaner effluent. Some of the treated effluent irrigates farmland, resulting in less going into waterways and a better use of a resource that is currently wasted. Irrigation is initially between November to March when discharge to waterways would otherwise have the most impact and the demand for irrigation is high. New ponds hold the wastewater that cannot be irrigated over winter. As more land is secured the irrigation period increases.

Advantages and disadvantages of the existing system

Advantages	Disadvantages
<ul style="list-style-type: none"> • enhances natural processes • little mechanical equipment required • uses very little energy or man hours • no adding of chemicals 	<ul style="list-style-type: none"> • cannot effectively remove nutrients like nitrogen & phosphorus • a 'closed system' – algae and plankton take up nutrients but when they die the nutrients are released back into the water • high levels of nutrients are discharged into rivers and streams which can contribute to algal blooms • potential to discharge 'bad bugs' which could be toxic for humans or fish



Improving water quality – progress to date

- Installation of UV technology at Featherston to reduce bacteria is underway.
- Construction of new channel and rock filter to bypass Papawai Stream at Greytown.
- 2 options are now being trialled at Featherston and will be assessed for later improvements (see below).

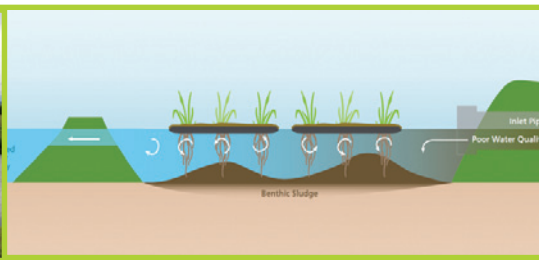
Trials to improve pond treatment to a level that will allow the effluent to be irrigated onto pasture are underway at the Featherston oxidation pond. Once these trials are complete (by 2012), Council be able to decide the most effective system for stage 2 improvements and begin

planning installations for each town.

A small (approx.12.5ha) area of land adjoining the Featherston oxidation pond has been purchased for potential use for additional treatment/storage



Trickling filters traditionally work by passing partially treated sewage over a rock and gravel bed. The surface of the rocks get covered in a slime-like coating which then captures most of the algae and suspended solids. The trial system has received modifications that should allow it to remove algae and suspended solids from oxidation pond wastewater, allowing the UV system to run more effectively.



Floating Treatment Wetlands are being trialled to measure their success in removing algae and other suspended solids from wastewater leaving the SWDC oxidation ponds. As the wastewater moves through the root system, algae and solids become trapped and fall to the bottom where they decompose.

The Proposal

Below is an outline of the three stages of the proposed strategy. While it is going to take some years to reach the final goal, there will be significant improvements along the way.

Stage 1 – Short-term	Stage 2 – Medium-term	Stage 3 – Long-term
<ul style="list-style-type: none"> • Address immediate resource consent requirements • Ensure that all stages of the upgrade are compatible with and form a permanent part of the long-term solution • Complete investigations, model, & undertake inflow & infiltration repair works to reduce excess inflow • Programme high-benefit inflow and infiltration reticulation control works, initially for Featherston & Greytown. Martinborough to be reviewed • Install UV treatment systems in each oxidation pond to remove or reduce risk of spreading disease from wastewater to humans & fish that use waterways near the discharge • Trial low-cost, high-benefit treatment technology that removes material (mostly algae), to allow the quality of the final effluent to be more suited to irrigation onto land 	<ul style="list-style-type: none"> • Install high-benefit inflow & infiltration reticulation repair & control works, initially at Featherston & Greytown • Investigate potential sites for irrigation, both seasonal and year-round, as an option for future discharge • Obtain consents & irrigate some or all of the treated effluent onto Council-owned land during summer • Establish lease agreements over suitable & available private land • Install optimised treatment technology at all 3 wastewater sites • Prepare resource consent applications, taking account of environmental & economic sustainability • To begin with, discharge any remaining wastewater not used for irrigation to local waterways when the weather is wet & the rivers are running high 	<ul style="list-style-type: none"> • Complete remaining high priority/high-benefit reticulation inflow & infiltration works • Supplement irrigation on Council land with full summer discharge over suitable, available Council-owned or leased private land, remote from Council's treatment ponds • Work towards removing discharge of treated effluent to streams in winter. Construct wet-weather storage, subject to affordability & secure long-term lease arrangements for irrigation on private land • Establish any storage requirements on Council-owned land to lessen the risk associated with the potential change of use of leased land for irrigation • Structure any future resource consent to allow discharge to streams as a contingency option during high-flow times, or when operational or capacity limitations are exceeded, or land-use arrangements are suspended

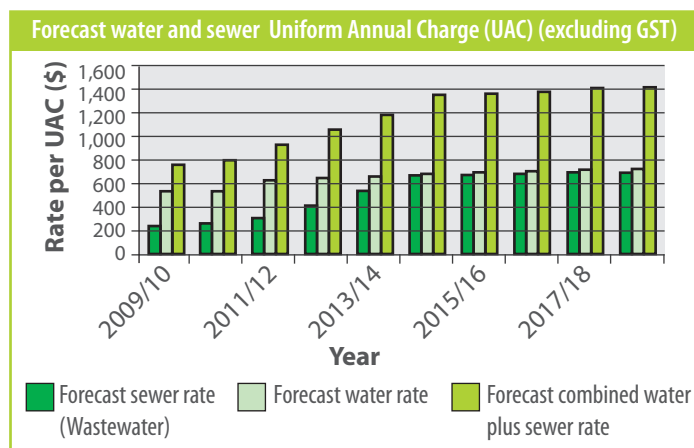


What will it cost?

The water and wastewater activities are major parts of Council expenditure. Most wastewater ratepayers are also connected to a town water supply at Featherston, Martinborough or Greytown. Upgrading work is required at each of these water supply schemes to achieve compliance with the new drinking water standards that will come into effect in 2014.

The graph below shows the expected increase in the water and wastewater rates until 2019, the end of the current long-term council plan period. On top of this will be the other Council rates plus the Greater Wellington Regional Council rates.

The sewer rates shown below correspond to the approximate \$9 million capital cost of the wastewater upgrade over the same period. There will be further cost increases, up to the estimated \$17 million, after that period over the next 30 years.



How can I help?

There are some simple things that you can do around the house to help improve the quality of your wastewater and so improve the quality of the effluent at each of the treatment plants:



House waste pipes entering a damaged gully trap

- Use phosphate-free detergents and soaps, these will commonly display an "NP" on the packaging.
- Don't use in-sink food disposal: composting for your garden is a much better use of food scraps.
- Conserve water: clean tap water gets treated before it reaches your house AND after it goes down the drain. Using less clean water means money can be saved by not having to treat it again.

How can I have my say?

Council will meet to finalise its wastewater strategy later this year. Consideration of your feedback will be an essential part of that process. Please let us know your views on Council's draft strategy. You can do this by:

Email: wastewater@swdc.govt.nz

Letter: PO Box 6, Martinborough 4751
or drop into 19 Kitchener St Martinborough

Fax: 06 306 9373

Phone: 06 306 9611

When can I have my say?

You have until 6 May 2011 to send us your written feedback/submissions.

Council will hear submissions on the draft strategy on 19 & 20 May 2011.

Where can I get more information?

- **Website:** www.swdc.govt.nz
A dedicated "Wastewater" tab has been added for news on this strategy
- **Open day - 30 April 2011**
Featherston wastewater treatment site

The Featherston site is now running trials of new technology and details of these and the proposed improvements to the oxidation ponds will be explained.

Please call SWDC at the number below to register interest and receive an information pack including directions to the site open day. *Note that due to health and safety reasons, the site open day will have restricted numbers and children under the age of 16 will not be able to attend.*

Public meetings

Martinborough 18 April 7 – 9pm
Council building (Kitchener Street)

Featherston 19 April 7 – 9pm
Anzac Hall

Greytown 20 April 7 – 9pm
Greytown Town Centre building

Depending on the level of public interest shown in this draft strategy, Council is open to holding more frequent public meetings to help update and answer questions on progress.