

What is wastewater?

Wastewater is water that's been used by humans.

It's also called sewage, but the term wastewater is more meaningful, and avoids confusion between the different words sewer, sewage and sewerage.

Wastewater contains soap, urine, faeces, chemicals and food scraps.

People shouldn't flush anything other than the 'three Ps' pee, pooh and toilet paper, but sanitary items such as wet wipes, cotton buds, and tampons often end up in wastewater as well – and can cause blockages.

Untreated wastewater is harmful to humans and the environment.

Treated wastewater, if it's been properly managed, is safe to return to the environment. Depending on the treatment method, treated wastewater can safely be returned to water or land, or re-used in the home. It can even be treated so it's good enough to drink.

For more information go to wellingtonwater.co.nz/fwp

What is wastewater treatment?

Wastewater treatment uses biological and other processes (such as ultraviolet light and filtration), to clean wastewater before it is returned to the environment.

There are a lot of possible ways to treat wastewater, and to return the wastewater to the environment. Treatment also produces a substance known as sludge – the solids remaining after treated wastewater is taken away. There are a lot of different ways of dealing with sludge as well.

Treatment processes and the associated plant and equipment required often depend on how and where the final treated product is returned to the environment.

There are a lot of treatment process options, but after all is said and done, there are three basic pathways by which treated wastewater returns to the environment – via:



Land



Water



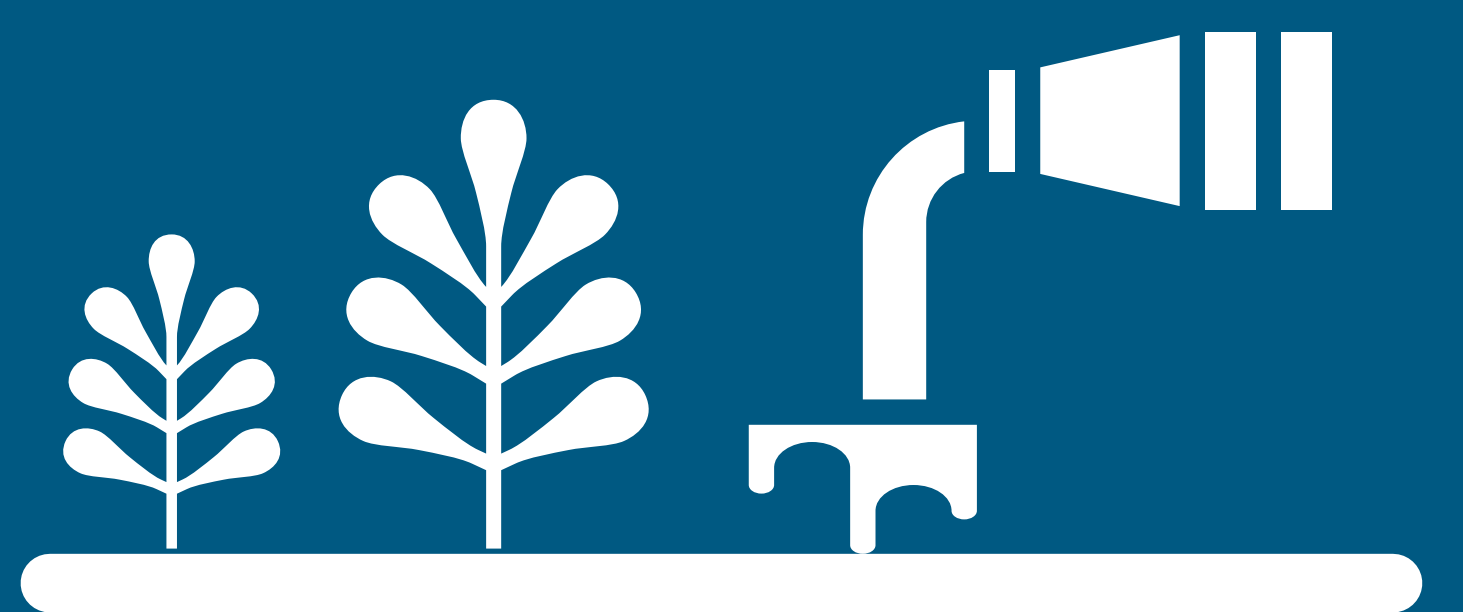
Re-used

Looking after your wastewater

Our wastewater system is only designed for poo, pee and toilet paper.



Don't flush wet wipes or menstrual products – put them in the rubbish bin or a sanitary bin.



Never pour cooking fats and oils down the kitchen sink – put them in your rubbish bin or garden.



Avoid using a food disposal unit – compost where you can.



Choose environmentally friendly washing machine detergents.

For more information go to wellingtonwater.co.nz/fwp

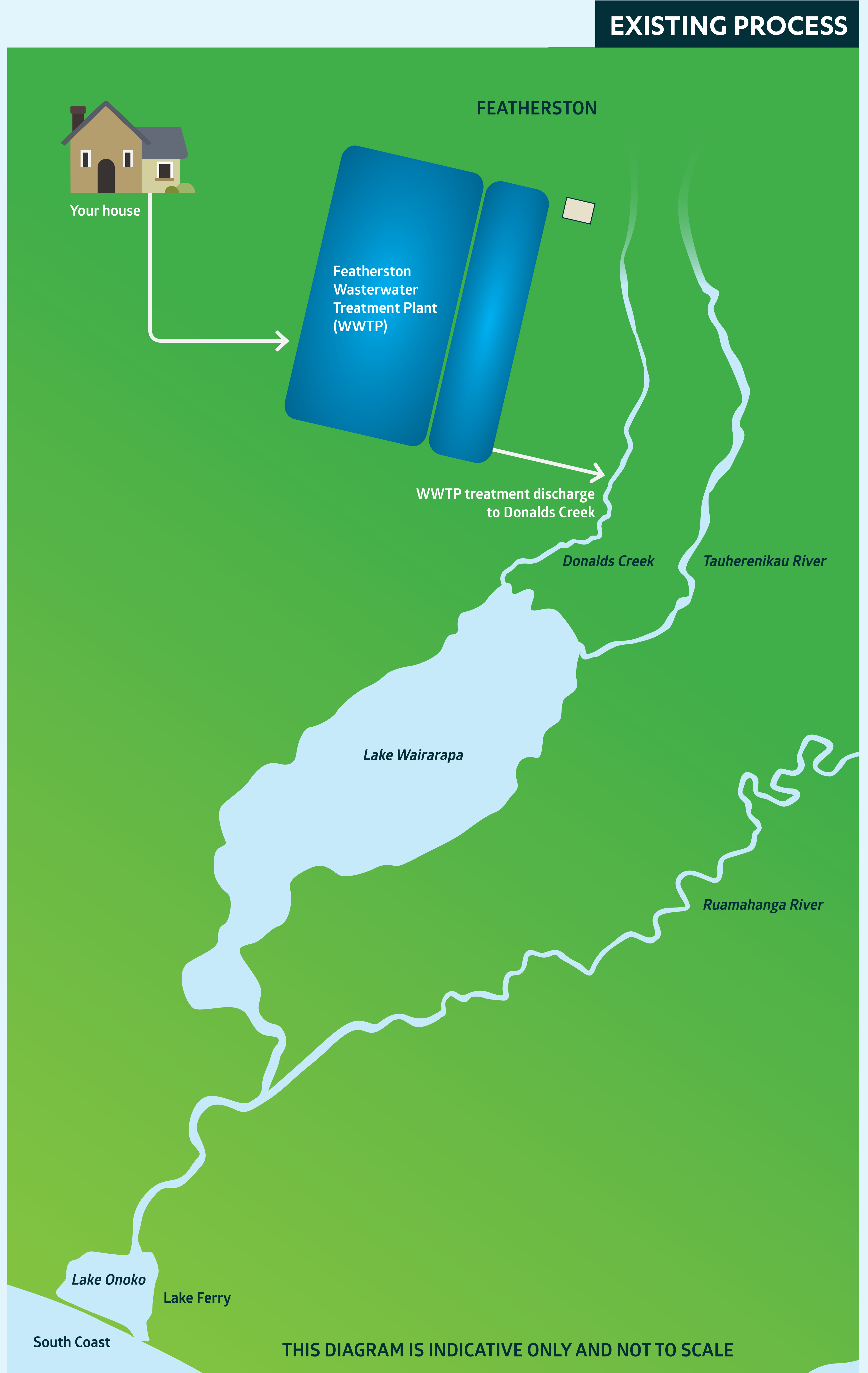
What do people think?

That's what we'd like to know!

Māori perspectives usually prefer returning wastewater to land, rather than the sea or rivers.

Others also have strong preferences about how wastewater should be treated, how treated wastewater is returned to the environment, and what to do with the treatment byproduct known as sludge.

The Featherston community have different views about the best thing to do. Different treatment outcomes have different needs. Some factors that are important to people include the environment, odour, sustainability, use of resources, and of course cost. It's not just Featherston ratepayers that will be affected by these choices. Other ratepayers in South Wairarapa will be affected by the chosen solution.



For more information go to wellingtonwater.co.nz/fwp

Things we're thinking about as we work towards an agreed solution

Investment objectives

- The principles of Te Mana o te Wai (Freshwater National Policy Statement)
- The health and wellbeing of water bodies
- Avoiding harm to public health related to wastewater treatment and return to the environment
- Supporting sustainable use of water, land and energy resources
- Catering for the community's needs now and in the future

Cultural, Environmental and Social Impacts

- Enhancing landscape and visual amenity
- Minimising aerosols and odour impacts on people
- Providing for natural processes (plant growth or wetlands) to have contact with wastewater
- Providing for discharges to land over discharges to water
- How might it affect adjoining land uses?

Cost, Constructability and Operations

- How feasible is the option?
- How complex would the operation and maintenance be?
- Will it provide resilience against operational failures and negative environmental impacts if it did fail?
- How resilient is it to earthquakes and natural hazards?
- Can it get resource consents under the Resource Management Act?

What's Missing?



Your thoughts?

For more information go to wellingtonwater.co.nz/fwp

What do you think?

Tell us what you think about...



Treated wastewater outflow to **water**

How it works

Wastewater from Featherston's homes and businesses flows to the new or upgraded Featherston wastewater plant. The water is treated and returned to the environment by **water**.

Some possible treatment processes

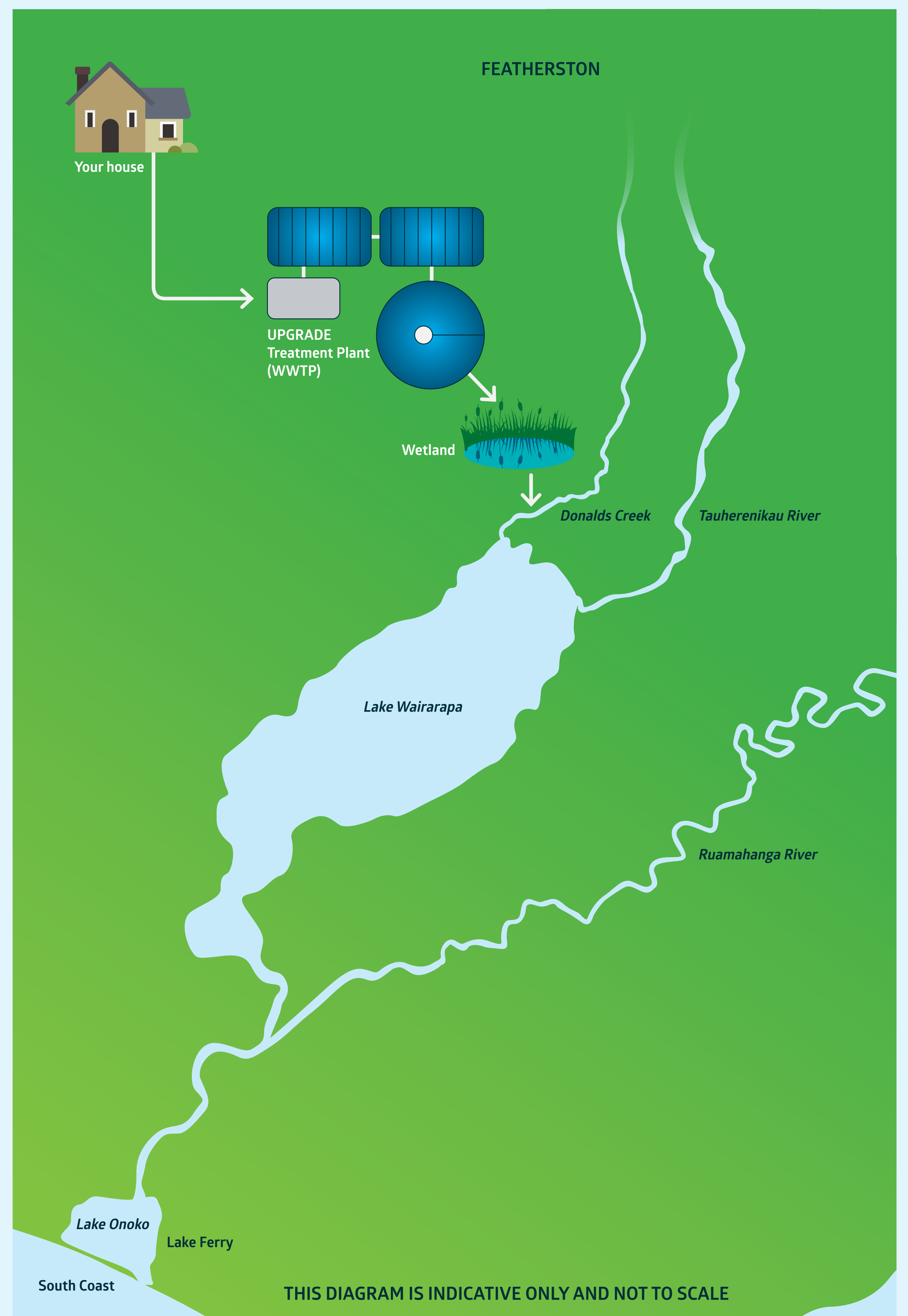
Biological treatment and UV light, or
 Biological membrane and UV light, or
 Ponds and UV light.

Treated water is returned by;

A new wetland, or
 A rock filter bed.

Where the treated water is returned

Donalds Creek (via wetland), or
 Tauherinikau River (via rock filter bed), or
 Ruamahanga River (via rock filter bed), or
 To Sea (pumped via a long pipe), or
 Lake Wairarapa (via rock bed or wetland).



Your thoughts?

Is there something here you'd like more information on?

What else do you need to know to contribute to the decision?

For more information go to wellingtonwater.co.nz/fwp

What do you think?

Tell us what you think about...



Treated wastewater outflow to **land**

How it works

Wastewater from Featherston's homes and businesses flows to the new or upgraded Featherston wastewater plant. It is treated and the treated water is returned to the environment by **land**.

Some possible treatment processes

Settling ponds and UV treatment, or Biological (activated sludge) treatment and UV, or

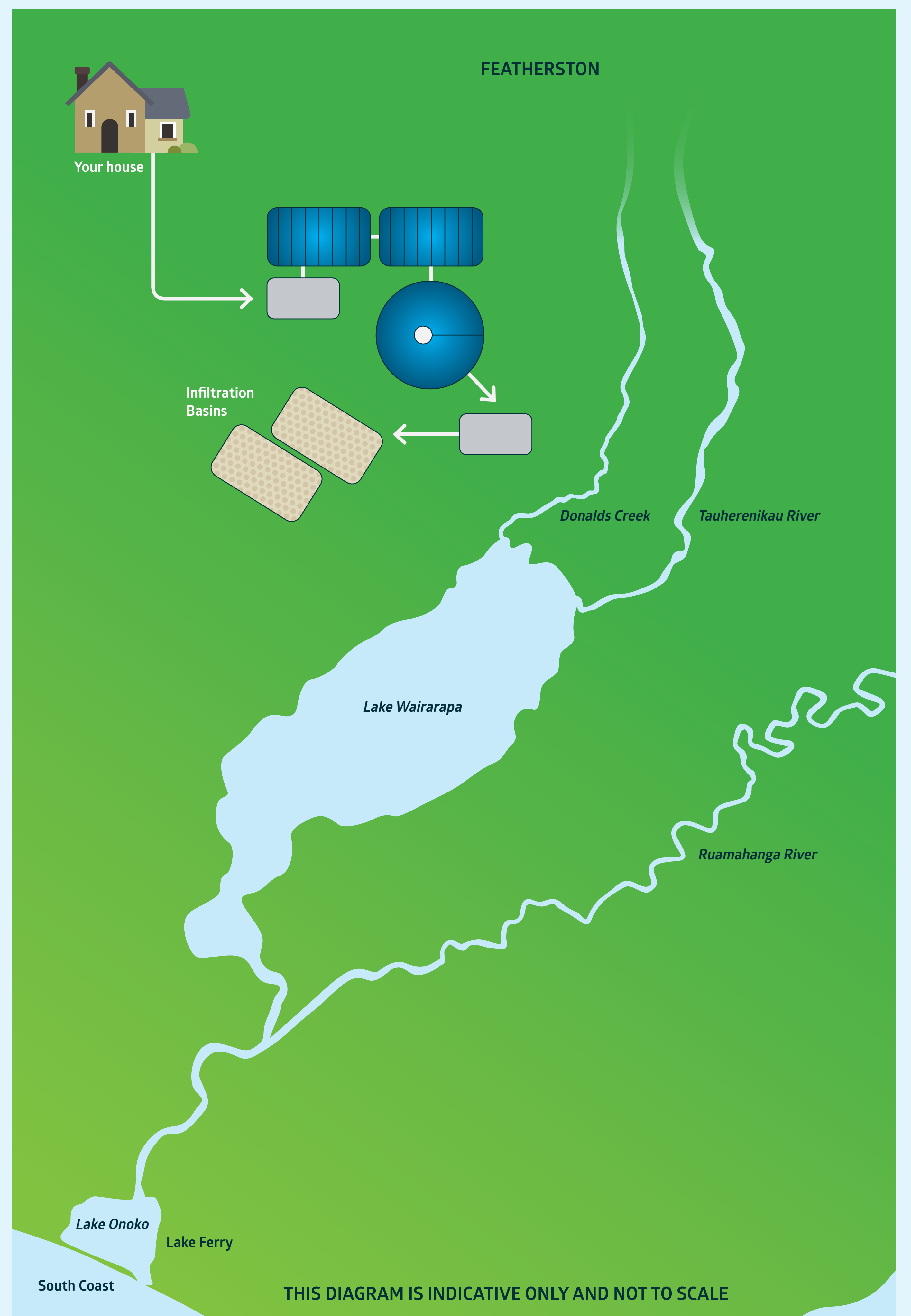
Membrane filtration with biological and UV treatment.

Treated water is returned by;

Surface or subsurface irrigation, infiltration through trenches or soakage from large basins. During wet conditions excess wastewater is held in storage ponds.

Where the treated water is returned

Over large areas of land near the treatment plant.



Your thoughts?

Is there something here you'd like more information on?

What else do you need to know to contribute to the decision?

For more information go to wellingtonwater.co.nz/fwp

What do you think?

Tell us what you think about...



Treated wastewater outflow to **land and water**

How it works

Wastewater from Featherston's homes and businesses flows to the new or upgraded Featherston wastewater plant. It is treated and the treated water is returned to the environment by a mixture of **land and water**.

Some possible treatment processes

Biological treatment and UV.

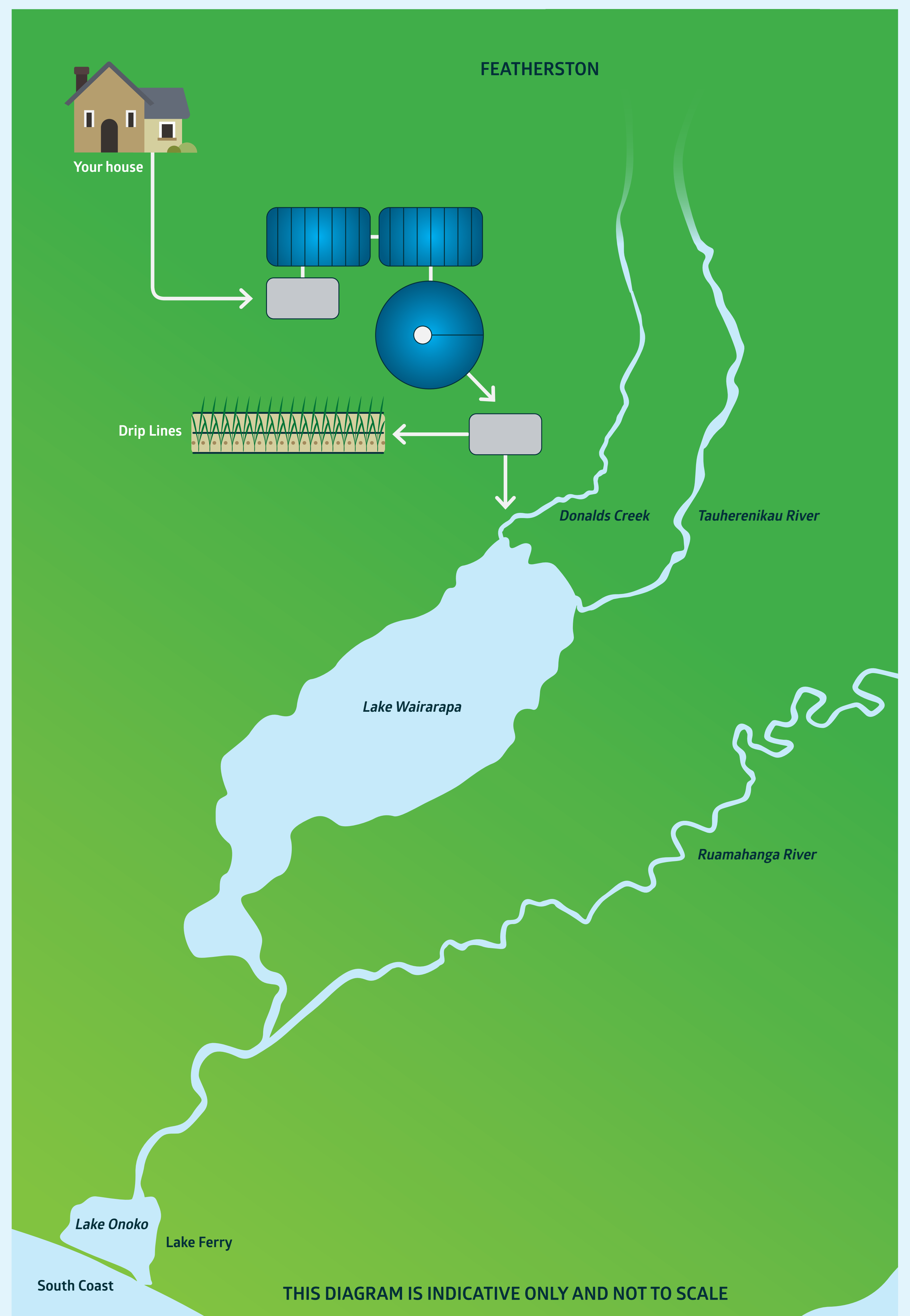
Treated water is returned by;

Normal treated water flow is returned to land via irrigation. Excess flows are discharged to water, via pumps and pipelines and/or specially built basins.

Where the treated water is returned

Over large areas of land near the treatment plant and one of the streams or rivers.

This has the potential to combine all flows from all South Wairarapa treatment plants into one, or pump to Martinborough WWTP.



Your thoughts?

Is there something here you'd like more information on?

What else do you need to know to contribute to the decision?

For more information go to wellingtonwater.co.nz/fwp

What do you think?

Tell us what you think about...



Treated wastewater **re-use** or **re-distribution**

How it works

Wastewater from Featherston’s homes and businesses flows to an advanced wastewater treatment plant that can produce water to a range of treatment standards – e.g. from non-potable (not for drinking) greywater use, to non-food crop irrigation or even purified recycled water for drinking.

Some possible treatment processes

The overall treatment depends on the use of the reclaimed water. It may require an advanced treatment process following a new wastewater treatment facility at Featherston.

Membrane biological treatment and advanced treatment, or

Treatment at homes or businesses, or

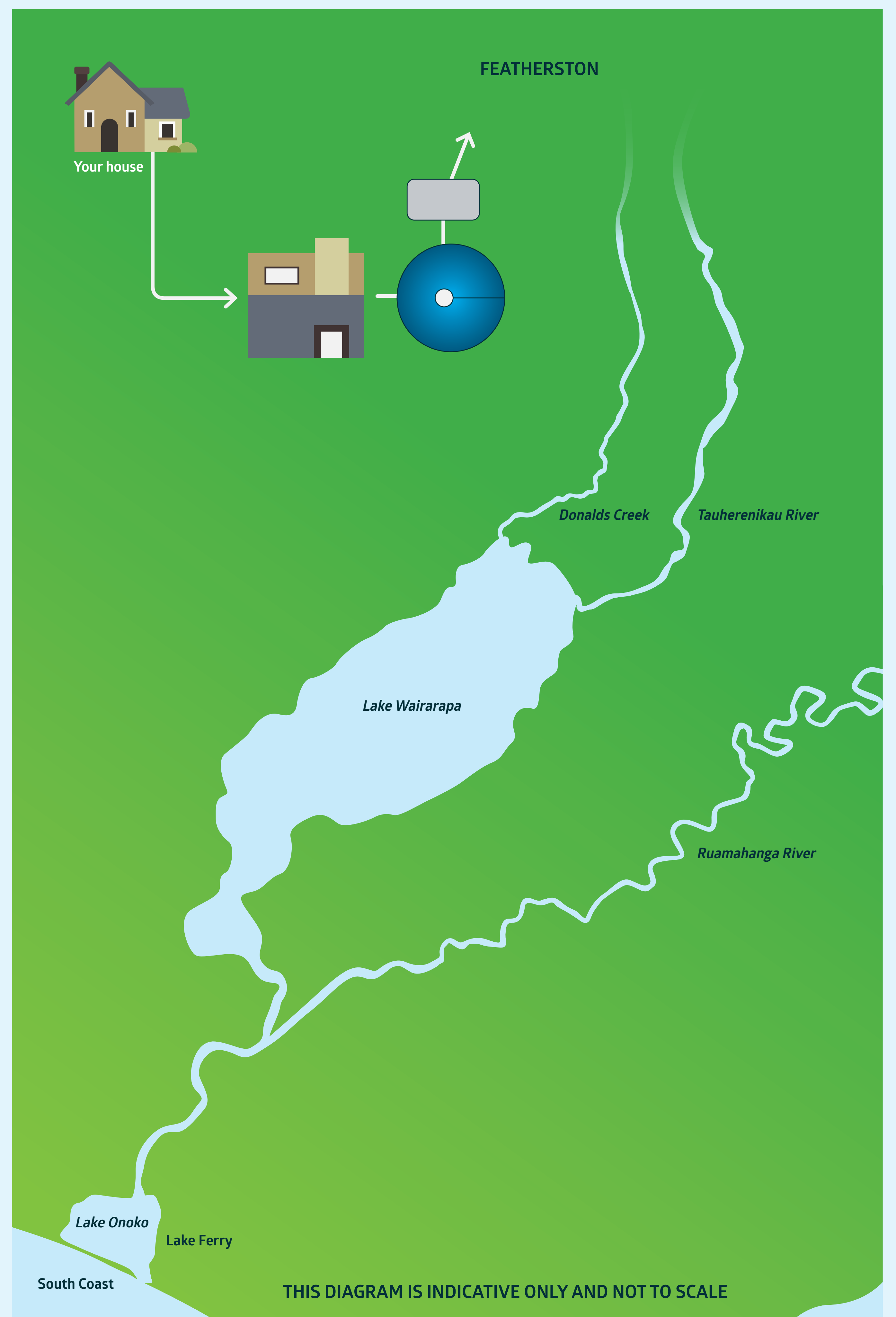
Treatment at Martinborough plant.

Treated water is returned by;

Pumps and pipes, storage reservoir for local distribution.

Where the treated water is returned

Reticulation into a greywater system into homes and businesses and non-food crop irrigation.



Your thoughts?

Is there something here you'd like more information on?

What else do you need to know to contribute to the decision?

For more information go to wellingtonwater.co.nz/fwp

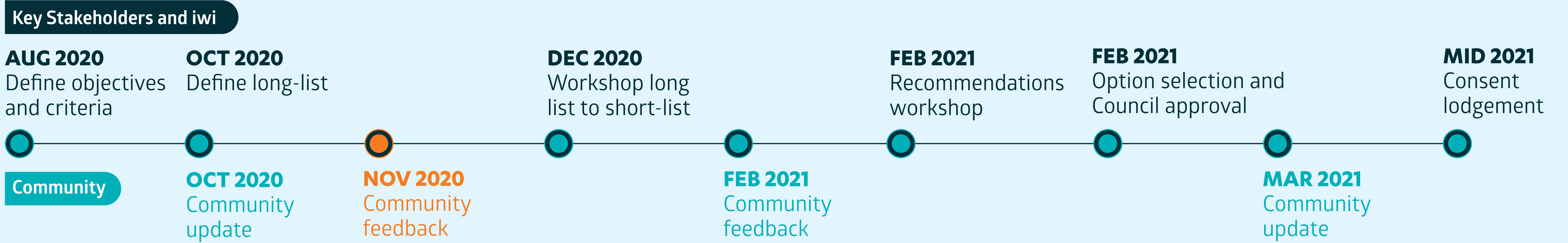
Long list of ideas

1	New Waste Water Treatment Plant (WWTP) and continue discharge to Donalds Creek	See poster 5
2	New WWTP and discharge to Tauherenikau River	See poster 5
3	Upgraded WWTP and Discharge to Ruamahanga River	See poster 5
4	New WWTP and Discharge to Lake Wairarapa	See poster 5
5	Upgraded WWTP and Full flow to land discharge with large storage	See poster 6
6	New WWTP and Combined land discharge and high rate trenches (minimal effluent storage)	See poster 6
7	Upgraded WWTP and combined land and water discharge via small rapid infiltration basins 7a Donalds Creek, 7b Tauherenikau River, 7c Ruamahanga River or 7d Lake Wairarapa	See poster 7
8	New WWTP and combined land and water discharge via small rapid infiltration basins, quality suitable for reuse (non drinking water) 8a Donalds Creek, 8b Tauherenikau River, 8c Ruamahanga River or 8d Lake Wairarapa	See poster 7
9	Indirect Potable Water for drinking water augmentation	See poster 8
10	Greywater Reuse	See poster 8
11a	Groundwater shallow bore discharge	See poster 5
11b	Groundwater deep bore discharge	See poster 5
12	Onsite Wastewater Systems e.g. composting toilets	See poster 8
13	Locally treated at Featherston WWTP then pump to another scheme for effluent disposal (land/water)	See poster 8
14	Existing Ponds and Ocean outfall	See poster 5
15	Combined Wairarapa Scheme – a new WWTP, servicing Greytown, Martinborough and Featherston	See poster 7
16	Emerging treatment solutions – e.g. Organica or Aerobic Granular Sludge.	See poster 8
17	Other ideas	

For more information go to wellingtonwater.co.nz/fwp

Timelines and processes

Project Timeline



Who's doing what?

- Community**
Letting us know what their preferences are
- Council**
Final decision makers
- Wellington Water**
Advisors and facilitators
- Greater Wellington**
Resource consent



For more information go to wellingtonwater.co.nz/fwp