

Drinking Water Safety Planning Template

For Small Supplies: Supplying 26–100 people



Name of owner:	Pigeon Rock Water Supply Company LTD	
Name of operator (if different to owner):		
Supply name:	Pigeon Rock Water Supply	
Supply location:	Main Pump Lat: -45.068321 Long: 169.193070	
Unique supply identifier:	PIG300	
Emergency contact name:	John M Carr	
Emergency contact phone number:	021 950 204	
Supply type:	Networked Supply	Population: 32
Drinking Water Quality Assurance Rules category:	<input checked="" type="checkbox"/> Networked supplies <input type="checkbox"/> Self-supplied buildings	

Please refer to the **Drinking Water Safety Planning Guidance for Small Supplies – Supplying 26-100 people** as you complete this template.

▲ Question 1: How are you giving effect to Te Mana o te Wai?

How are you managing your water supply to protect the health and wellbeing of your water, the wider environment, and the community?

Water is taken from a borehole into a water tank through to a filtration system and then distributed to customers. Each year an Annual Plan is produced by the company setting supply terms and costs, this plan is then loaded onto our website, and consumers are notified of this. We also post all water test results and related documentation on our website to ensure complete transparency with our consumers.

The company now has a total of 8 tanks in the Domestic system, two at the pump shed and swiz at Tank Farm B, equating to 240 m3 of storage.

Permits issued by ORC (Otago Regional Council) to withdraw water expires on September 30, 2028.

Irrigation draws run from September 1 to April 30 every year.

This permit shall only be used for irrigation and domestic supply from September 1 to April 30, and the amount of abstraction authorized during this period shall not exceed the following:

20 liters per second, 1530 cubic meters per day; 10,710 cubic meters per week; 45,900 cubic meters per month, and 372,600 cubic meters per year.

At other times of the year, the following amounts may be taken for domestic supply:

20 litres per second; 45 cubic meters per day; 315 cubic meters per week; 1350 cubic meters per month; 5,500 cubic meters per year.

PRWSC.com list our annual plan and test results are posted regularly.

▲ Question 2: What makes up your drinking water supply?

What are the components of your drinking water supply?

Include all infrastructure and processes used to abstract, store, treat, or transmit drinking water.

A. Water sources - tick relevant boxes

Bore (including well)

Description: Water is abstracted from the bore and stored at the main tank; from there, it is pumped through a filtration system to our tank farms, and from there, it is distributed to various consumers. The bore is 90 meters deep, constructed by Washington Exploration Limited

Spring

Description:

Lake (include dam)

Description:

River / stream / creek

Description:

Roof (rainwater)

Description:

Carted water (e.g. from a water carrier)

Description:

From other drinking water supply

Description:

B. Treatment

- | | |
|---|--|
| <input type="checkbox"/> Pre-treatment (e.g., first flush diverter) | <input type="checkbox"/> UV disinfection |
| <input checked="" type="checkbox"/> Cartridge filtration | <input type="checkbox"/> None |
| <input type="checkbox"/> Chlorination (e.g., sodium hypochlorite) | <input type="checkbox"/> Other - specify: <input type="text"/> |

C. Distribution

- | | |
|---|--|
| <input checked="" type="checkbox"/> Storage/header tank | <input checked="" type="checkbox"/> Pumps |
| <input checked="" type="checkbox"/> Pipes | <input type="checkbox"/> Other - specify: <input type="text"/> |

D. Population and supply volume

1. How many consumers does this supply normally provide drinking water to?

32

2. What is the anticipated daily minimum and maximum (peak) volume of drinking water provided to that population?

1 m3 up to and not exceeding 1530 cubic meters per day

3. Does this population increase significantly at different times of the year?

There is a very slight increase during the Christmas-New Year Season

4. If **Yes** to Question 3, what is the maximum number of consumers you supply water to?

Approx 80

5. If **Yes** to Question 3, is your supply capable of supplying sufficient water to the maximum number of consumers?

Yes

6. If **No** to Question 5, how will you supplement your drinking water supply to ensure sufficient drinking water is supplied at all times?

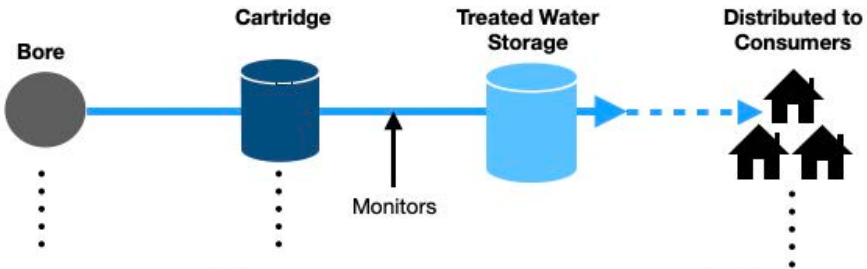
▲ Question 3: What does your supply look like?

Provide a flow diagram or schematic and photos of your supply

Please take a photo of the drawn picture of your supply and provide it with other photos of your supply.

Confirmation of attachments – tick relevant boxes

- Your drawn picture (flow diagram or schematic) is included below or attached (a scan or photograph is fine).
- Photos of my supply are attached to this Drinking Water Safety Plan.



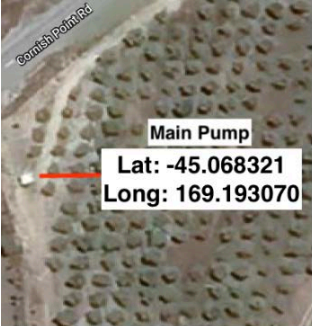
Bore **Cartridge** **Treated Water Storage** **Distributed to Consumers**

Monitors


Barrier:
Ground water abstracted from the bore provides a partial barrier to source water contamination

Barrier:
Cartridge filters provide a barrier to particulates and protozoa contamination


Barrier:
All consumers tanks are above ground and fed from the top creating an automatic back flow step.




Main Pump
Lat: -45.068321
Long: 169.193070



Top Olive Tanks
Lat: -45.070783
Long: 169.206630

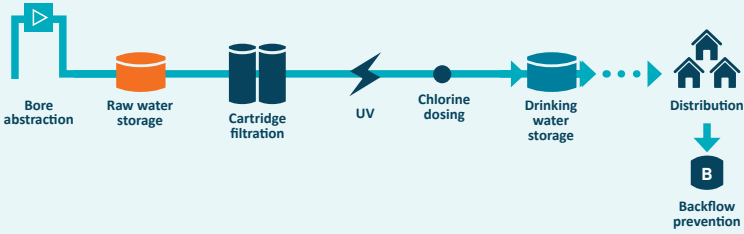


Tank Farm A
Lat: -45.072752
Long: 169.198362



Tank Farm B
Lat: -45.081797
Long: 169.196599

Example only



Bore abstraction → Raw water storage → Cartridge filtration → UV → Chlorine dosing → Drinking water storage → Distribution → Backflow prevention

▲ Question 4: What can go wrong?

What are the risks to your water supply and how will you control them?

Below are some common risks which can cause rapid outbreaks of illness for consumers..

- Pathogenic bacteria
- Protozoal contamination
- Loss or reduction of source of water supply

Potential hazards

- A. Bore water** – contamination through bore head

Likelihood of occurrence: High Medium Low

How will you control the risk?

- Bore head fenced at least 5m away
 - Bore head on hard standing apron with concrete surround
 - Bore head maintained in good condition
 - Other:
-

- B. Rainwater** – contamination through roof, guttering, pipes and other elements used in rainwater collection

Likelihood of occurrence: High Medium Low

How will you control the risk?

- First flush diverter installed
 - Other:
-

- C. Hazards potentially present in untreated water**

Likelihood of occurrence: High Medium Low

How will you control the risk?

- Filtration (rated at a minimum of 5 micron or less nominal pore size)
- UV disinfection (at least 40mJ/cm²)
- Chlorination
- Other:

D. Remaining contamination due to inadequate treatment

Likelihood of occurrence: High Medium Low

How will you control the risk?

Automatic shut-off if UV dose not met

Alarm

Other:

E. Contamination of treated water due to, for example, cracks or holes in water tanks/reservoirs, pipes breaking

Likelihood of occurrence: High Medium Low

How will you control the risk?

Chlorination

Backflow protection at:

Regular maintenance:

Pressure monitoring: We have a 3rd party monitoring and alarm system

F. Chemicals which may be a hazard to your supply

These chemicals may arise from either the environment (such as nutrient run-off, industrial wastewater, or naturally occurring minerals such as manganese and arsenic) or due to treatment error (such as incorrect dosage levels).

Likelihood of occurrence: High Medium Low

How will you control the risk?

No treatment/control yet

Aeration and settlement

Scouring

Ability to switch to alternate source

Use bottled or stored water when this is an issue

Appropriate storage of chemicals

Incorrect dosage levels

How will you control the dose?

G. Contamination of or changes to your catchment affecting your source water

Likelihood of occurrence: High Medium Low

How will you control the risk?

This could include developing good relationships with upstream users, the power company, the owner of the source water, whānau, hapū (in respect of rāhui), iwi Māori, farmers (in respect of pesticides), regional/district council

H. Other potential hazards (please specify):

Likelihood of occurrence: High Medium Low

What are the risks arising from these hazards?

How will you control the risks?

How will you know your controls are working?

Ways of checking your water supply is healthy

- Sampling and having my water supply tested every three months (mandatory)
- Making regular visual inspections of my water supply
- Recording regular maintenance and cleaning of machinery, etc
- Monitoring my water supply's treatment process
- Other (please specify):

Can you make any improvements and what is the timeframe for those?

How can the supply be improved to control the risk/s?

We are in the process of looking for a supplier to install a UV filtration system in addition to our cartridge system.

Timeframes for improvements to the supply

We hope to have this done within the next year.

▲ Question 5: How will you respond when an incident occurs?

What would be an urgent situation for your drinking water supply?

Incident type – tick all relevant boxes

- Power cuts/loss of electricity supply
- Damage to or problems with your supply
- Failed sample
- Rāhui
- Inability of you or a back-up person to address any problems (through prolonged absence)
- Natural disaster
- Outbreak of illness in the community (which could be an indicator of potential waterborne contamination)
- Other (please specify):

How will you respond to an incident?

For example, where you think your drinking water is or may be unsafe or does not comply with Drinking Water Standards.

Responses proposed in your plan – tick relevant boxes (more than one may apply)

- Take test samples and send them to an accredited laboratory for analysis
- Investigate the source or cause of the incident and address it as soon as possible
- Notify Taumata Arowai of the incident
- Notify consumers of the incident
- Provide advice to your consumers on what to do until the safety of their drinking water is confirmed
- Take measures to ensure the problem does not re-occur
- Other (please specify):

▲ Question 6: When will you review your plan?

Triggers for review

- Routine review of safety plan effectiveness and update as required

Reviewer: John M Carr

Timeframe: Annually

- Water has been unsafe or there was an incident or event, including a test analysis indicating a [Maximum Acceptable Value \(MAV\) non-compliance?](#)

Reviewer: John M Carr

Timeframe: Immediately when it occurs

- There has been a change to your water source:

- There has been a change in who looks after your water source and/or supply:

- Other (please specify):

▲ Approval by drinking water supply owner or representative

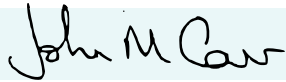
Approver's name:

John M Carr

Date:

31/10/2022

Signature:



▲ Next steps

Please return your completed Drinking Water Safety Plan to Taumata Arowai, by either:

- **Website:** submit via [Hinekōrako](#) on the Taumata Arowai website
- **Email:** info@taumataarowai.govt.nz
- **Post:** Level 2, 10 Brandon Street, PO Box 628, Wellington 6140, New Zealand

Store a copy of this plan in a place that is easily accessible to you (and any others involved in managing or operating the drinking water supply).

Questions?

Refer to the Drinking Water Safety Plan Guidance or the Taumata Arowai website: [Drinking water safety planning | Taumata Arowai](#) or contact your Taumata Arowai Regional Team [Regulatory Team | Taumata Arowai](#) for more information.