

Information for private drinking-water supply owners in Hawke's Bay



August 2016

This information sheet is for people who have a private drinking-water supply, are not connected to a council, or town, reticulated supply and who may be concerned about their water quality following the Havelock North water supply campylobacter outbreak.

For the latest information on the campylobacter outbreak go to: [Hastings District Council \(HDC\) website](#), the [Hawke's Bay District Health Board \(HBDHB\) 'Our Health Hawke's Bay' website](#) and the [Ministry of Health \(MoH\) website](#).

How can I find out what supply I am connected to?

If you're not sure if your home is connected to a council or town supply [contact your local Council](#). Your home may be on an individual household drinking-water supply or a private supply. If you are in a rental property you could also contact your landlord to find out where the water comes from.

If I am not connected to a council supply, who is responsible for it?

The owner of the supply is responsible for ensuring the water is safe to drink. Owners of individual household supplies and private supplies have a responsibility to provide safe (potable) drinking-water as described in the [Building Act 2004](#) and its amendments. For more information [click here](#).

Is my water supply at risk?

To date the only water supply that has shown to be contaminated with [Campylobacter](#) is the [Havelock North drinking water supply](#).

If you are worried about your own supply it is recommended that you read the advice and information provided in the Ministry of Health information booklets listed below. These are designed to help people who aren't on council, or town, reticulated supply ensure their water is safe. You could also arrange to have your water supply tested.

Where can I get my water supply tested?

For the contact details of Ministry of Health recognised water testing laboratories in Hawke's Bay [click here](#). A laboratory representative will give you instructions on where to go, how to take water samples and how much testing will cost. The laboratory will also provide you with containers for the samples and can provide advice on water analysis and interpretation.

What do I do if *E. coli* is detected in my water supply?

You should take immediate action to protect people drinking/using this water by treating the water or using an alternative safe supply. You will need to identify what has caused the contamination then correct it and conduct follow-up clearance sampling. For your information we have attached our 'Guidelines for responding to a drinking-water contamination event (or transgression)'. You can also contact the Hawke's Bay District Health Board on-call Health Protection Officer on 06 878 8109 for further information and advice.

Links to Ministry of Health information booklets:

- [Household Water Supplies](#)
- [Groundwater \(bores and wells\) Information Sheet](#)
- [Water Collection Tanks Information Sheet](#)

Other useful links:

- [Additional Ministry of Health resources and publications](#)
- [General information on New Zealand drinking-water supplies, who looks after them and what processes are in place to ensure clean, safe water](#)
- [FAQs on managing New Zealand drinking-water](#)
- [Legislation regarding drinking-water In New Zealand](#)
- [Drinking-water Standards for New Zealand 2005 \(Revised 2008\)](#)
- [The Guidelines for Drinking-water Quality Management for New Zealand](#)

Guidelines for responding to a drinking-water contamination event (or transgression)

August 2016

These guidelines provide information on responding to microbiological contamination (*E.coli*) in a drinking-water supply. This is also known as a transgression.

The response actions in this guideline are summarised in the flow diagram on page three of these guidelines and are based on the Drinking-Water Standards for New Zealand 2005 (Revised 2008) (DWSNZ2005/08).

Response action to a transgression should be undertaken quickly to minimise the risk to people. If you have any immediate questions or concerns contact should be made with the Hawke's Bay District Health Board on-call health protection officer phone 06 878 8109 (24/7).

Drinking-water contamination

There are a number of early warning signs that may indicate the drinking-water has become contaminated:

- *E. coli* detected in routine monitoring of the drinking-water supply. The laboratory will report this as *E. coli* 'present' or *E. coli* at levels of 1 or more and this indicates that faecal (poo) contamination has been found in the sample. The detection of *E. coli* can mean that pathogenic (disease causing) organisms (such as cryptosporidium and giardia) may also be present. These organisms have the potential to cause waterborne illness with symptoms of vomiting and diarrhoea.
- Complaints or observations of an unusual taste, smell or colour in the water.
- A detectable chlorine residual cannot be obtained during testing (for chlorinated supplies only).
- Reports of illness that may be linked to the water supply.

Take immediate action to protect people using or drinking the water

It is important to act quickly before the contamination makes people sick. To make the water fit for human consumption (while the source of contamination is being found and corrected) it is important that the water be disinfected. This can be done by chlorination or boiling. Using another source of safe (potable) water, for example bottled water, may also be considered. If your supply has an approved Water Safety Plan (WSP – formerly known as a Public Health Risk Management Plan) then this should be referred to as it should contain a plan of action for contamination events.

Chlorinate

Drinking-water storage tanks can be manually chlorinated using household bleach. Refer to Appendix II and III of these guidelines for information on recommended dosing levels. All drinking-water outlets need to be flushed until free available chlorine can be detected in water coming from them. Chlorine monitoring equipment such as the ones used to monitor swimming pool water can be used if necessary. Continue to monitor free available chlorine until the source of the contamination has been identified and corrected.

Boil

Boil water for one minute. This may not always be practical (for example for wash hand basins at schools where water may be consumed or drinking-water fountains) therefore chlorination is our recommended method of treatment.

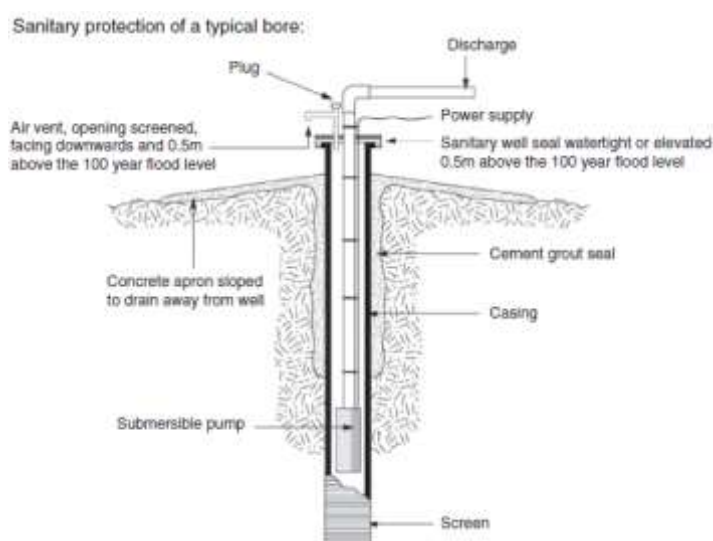
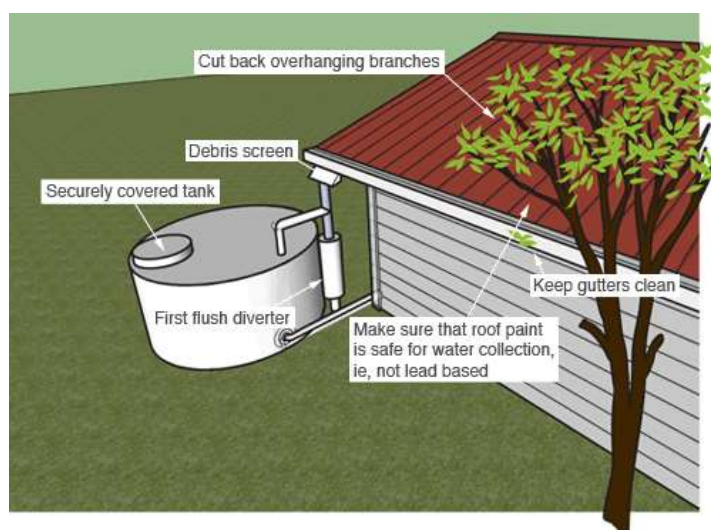
Use an alternative drinking-water supply

Stored water that has become contaminated can be replaced with water from a safe (potable) source (for example [registered water carrier](#) or a potable back up supply). Alternatively it may be best that bought bottled water is provided or people at the facility bring their own drinking-water from home until safe water can be provided again.

Identify what has caused the contamination then correct it

Depending on the water supply the following may assist you identify the contamination cause:

- Check that nothing has entered the storage tank(s) and that these are securely covered. Consider how something came to enter the tank(s) for example do over hanging trees need to be cut back? Have people accessed the tank and tampered with it?
- Check to see if the storage tank(s) needs cleaning – is there large amount of sludge at the bottom of the tank? When was the tank(s) last cleaned? We recommend that tanks are inspected annually and cleaned if necessary.
- **Ground water:** Ensure the bore-head is sealed, secure and is protected from surface runoff/animals/vandalism.
- **Surface water:** Check the stream and surrounding catchment for anything that may have contributed to contamination i.e. dead animal in the stream, farm animals have accessed the catchment area.
- **Roof water:** Check to see if the roof and guttering system need cleaning. Are there overhanging trees that need to be cut back from the roof/guttering area? Is the first flush diverter blocked?
- Check the entire water supply system for leaking or broken pipes.
- Using the manufacturer's instructions and your maintenance contractor (if applicable), ensure the treatment system is operating properly.
- Ensure the people taking the drinking-water samples are adequately trained. The sample may have been contaminated due to poor sampling techniques. Contact us if you would like information on how to take a sample.



If the contamination is a more permanent problem, you may need to investigate an alternative supply and/or treatment system.

For further information visit:

- https://www.healthed.govt.nz/system/files/resource-files/HE4602_1.pdf (Household Water Supplies Resource)
- <https://www.healthed.govt.nz/resource/secure-groundwater-bores-and-wells-safe-household-water> (Groundwater (bores and wells) Information Sheet)
- <https://www.healthed.govt.nz/resource/water-collection-tanks-and-safe-household-water> (Water Collection Tanks Information Sheet)

Contact Us

Please contact a member of the Drinking Water Team if you have any questions.

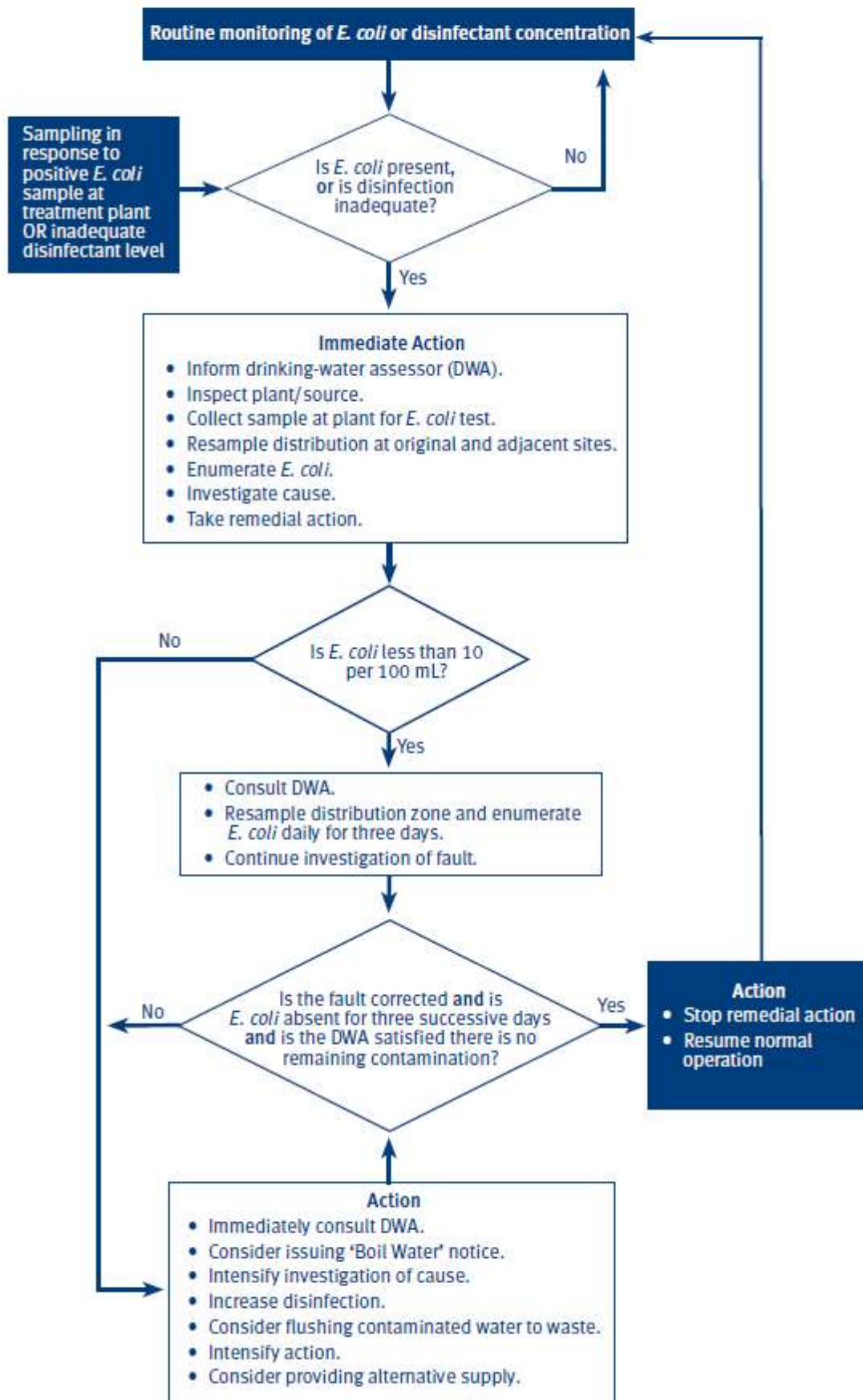
Phone: 06 834 1815

Fax: 06 834 1816

Email: DWAUnit@hawkesbaydhb.govt.nz

Post: Central North Island Drinking Water Assessment Unit, Napier Health,
PO Box 447, Napier 4140

Response to a transgression in a drinking-water supply distribution zone



APPENDIX II: DISINFECTION USING SODIUM HYPOCHLORITE (PLAIN HOUSEHOLD BLEACH)

Table 9 gives the number of millilitres to add ($1 \text{ g/m}^3 = \text{mg/L}$).

Table 9

TANK VOLUME LITRES / (GALLONS)	CHLORINE DOSE REQUIRED			
	1 g/m ³	2 g/m ³	5 g/m ³	10 g/m ³
50	2	3	8	12
100	4	7	17	33
150	5	10	25	50
200	7	13	33	67
250	9	17	42	83
300	10	20	50	100
350	12	23	58	117
400	13	27	67	133
450 (100)	15	30	75	150
500	17	33	83	167
600	20	40	100	200
700	23	47	117	233
800	27	53	133	267
900	30	60	150	300
1000	33	67	167	333
2000 (440)	67	133	333	667
3000	100	200	500	1000
4000	133	267	667	1333
5000 (1100)	167	333	833	1667
6000	200	400	1000	2000
7000	283	467	1167	2333
8000	267	533	1333	2667
9000	300	600	1500	3000
10000	333	667	1667	3333
20000	667	1333	3333	6667

To use table

- 1 Calculate volume of tank in litres (see Section 9, page 12 and select this on the left-hand side column).
- 2 Select dose rate required at top of the table:
 - 1 g/m³ routine disinfection for clean water
 - 2 g/m³ routine disinfection for reasonably clean water
 - 5 g/m³ period disinfection for tanks and pipes
 - 10 g/m³ superchlorination for biological contaminated tanks. Remove contamination, allow water to sit for 24 hours before drawing. Boil before drinking.
- 3 Read the amount of sodium hypochlorite (in millilitres) to be added where the dose required corresponds to the volume of the tank.
- 4 Add required millilitres of fresh plain household bleach and mix in thoroughly.

Taken from the appendix of the Ministry of Health publication 'Household Water Supplies'.

APPENDIX III: DISINFECTION USING CALCIUM HYPOCHLORITE (SWIMMING POOL CHLORINE)

Table 10 gives the number of grams to add (1 g/m³ = mg/L).

Table 10

TANK VOLUME LITRES / (GALLONS)	CHLORINE DOSE REQUIRED			
	1 g/m ³	2 g/m ³	5 g/m ³	10 g/m ³
50	0.08	0.15	0.4	0.8
100	0.15	0.3	0.8	1.5
150	0.2	0.5	1.2	2.3
200	0.3	0.6	1.5	3.1
250	0.4	0.8	1.9	3.9
300	0.5	0.9	2.3	4.6
350	0.5	1.1	2.7	5.4
400	0.6	1.2	3.1	6.2
450 (100)	0.7	1.4	3.5	6.9
500	0.8	1.5	3.9	7.7
600	0.9	1.9	4.6	9.2
700	1.1	2.2	5.4	10.8
800	1.2	2.5	6	12
900	1.4	2.8	7	14
1000	1.5	3	8	15
2000 (440)	3	6	15	30
3000	5	9	23	46
4000	6	12	30	60
5000 (1100)	8	15	40	80
6000	9	20	45	90
7000	10	20	50	110
8000	12	25	60	120
9000	14	30	70	140
10000	15	30	77	155
20000	30	60	154	310

To use table

- 1 Calculate volume of tank in litres (see Section 9, page 12, and select this on the left-hand side column).
- 2 Select dose rate required at top of the table:
 - 1 g/m³ routine disinfection for clean water
 - 2 g/m³ routine disinfection for reasonably clean water
 - 5 g/m³ period disinfection for tanks and pipes
 - 10 g/m³ superchlorination for biologically contaminated tanks. Remove contamination, allow water to sit for 24 hours before drawing. Boil before drinking.
- 3 Read the amount of calcium hypochlorite (in grams) to be added where the dose required corresponds to the volume of the tank.
- 4 Add weighed amount of calcium hypochlorite to a bucket of clean water and allow to dissolve for 6 hours.
- 5 Pour off the liquid from the top of the bucket.
- 6 Bury the sludge from the bottom of the bucket.

CAUTION:

Calcium Hypochlorite is a highly reactive and poisonous chemical. It should be stored by itself in a secure, dry area and on no account must it be allowed to come into contact with organic liquids such as petrol, diesel, or lubricating oils and hydraulic fluids.

Ensure that the chemical you are using is Calcium Hypochlorite at 65 percent available chlorine, with no other additives.

Taken from the appendix of the Ministry of Health publication 'Household Water Supplies'.