

Water quality for the Arrow Basin area

Find out:

- What the water quality is like in the Arrow Basin.
- Where the Arrow Basin SOE water quality testing sites are.
- Where your local representative flow site is located. This shows real time flow and the median flow.
- What SOE testing means for you.



This information sheet gives you details about the quality of the water in your catchment.

The Otago Regional Council carries out monthly State of the Environment (SOE) water quality testing. Our SOE sampling sites around Otago generally focus on areas at the bottom of catchments so we can make informed decisions about the wider catchment area.

SOE monitoring results are based on five years of data taken when the flow site was at or below median flow, and the results for the Arrow Basin area are shown in the table below:

Rivers	Nitrogen (NNN mg/l)	Ammonium (NH ₄ -N mg/l)	Dissolved phosphorus (DRP mg/l)	Bacteria E.coli (cfu/100ml)	Turbidity NTU
Mill Creek at Fish Trap (Water Plan limit)	0.360 (0.075)	0.0136 (0.10)	0.008 (0.010)	404 (260)	3.7 (5.0)
Lakes	Nitrogen (TNmg/l)	Ammonium (NH ₄ -N mg/l)	Phosphorus (TP mg/l)	Bacteria E.coli (cfu/100ml)	Turbidity NTU
Lake Hayes (Water Plan limit)	0.426 (0.55)	0.0582 (0.10)	0.057 (0.033)	18 (126)	2.16 (5.0)

The figures in red show results that exceed the river or lake water quality limit. In this area, Mill creek at Fish Trap exceeds the water quality limits for Nitrogen and E.coli. Lake Hawea exceeds limits for Phosphorus.

What is the water tested for and why?

NUTRIENTS	
Nitrite-nitrate nitrogen (NNN)	Can cause nuisance plant/algae growth, which can affect stream life, block water intakes and make water unpleasant for swimming and drinking Can be toxic to fish
Ammoniacal nitrogen (NH ₄ -N)	
Dissolved reactive phosphorus (DRP)	
BACTERIA AND TURBIDITY	
Escherichia coli (E.coli)	E.coli is an indicator of the suitability for swimming or stock drinking water. Turbidity is a measure of the cloudiness of water, which may affect stream ecosystems
Turbidity	

Where is the flow site for the Arrow Basin area?

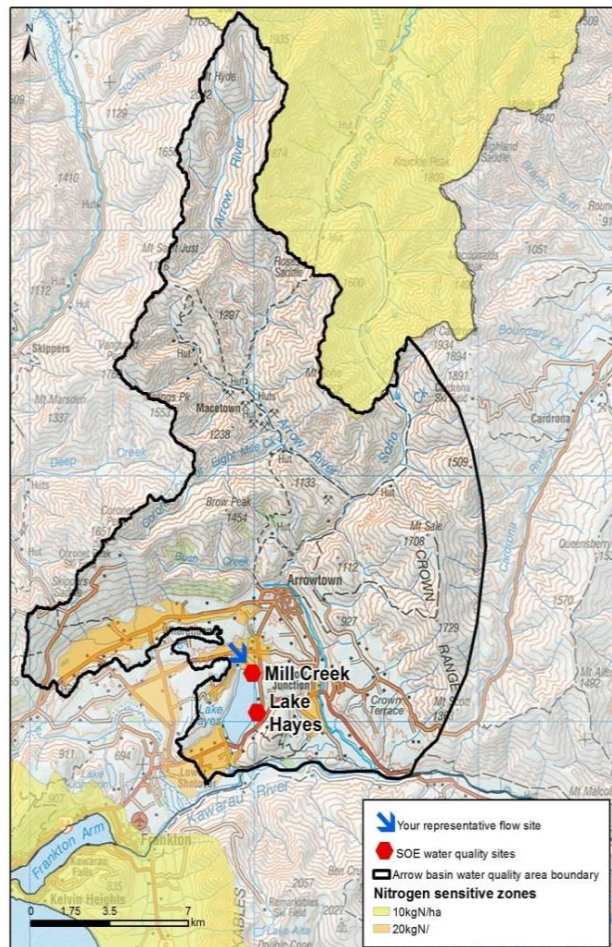
The local representative flow site is Mill Creek (see the blue arrow in the map).

Why do I need to know where the flow site is?
The flow site measures the volume of water flow, and shows what it is in relation to the median flow.

This information will help you decide if you should be testing any water discharge from your property.

Both SOE testing, and any testing you may need to do as part of the Water Plan rules, should only take place if the representative flow site is at or below median flow.

**YOU CAN FIND THE REAL TIME FLOW DATA AT:
WATER.ORG.GOV.T.NZ/WATERINFO**



What does SOE water testing mean for me?

ORC is responsible for managing Otago's natural and physical resources.

State of Environment (SOE) monitoring and reporting informs ORC decision-making and policy development by showing us where environmental management has been effective, and also providing warnings about areas where there are environmental problems that need to be addressed.

Contaminant limits have been set to measure the health of Otago's lakes and rivers, and these are set out in the Regional Plan: Water for Otago. SOE water quality testing compares the results against these limits (Schedule 15). The Schedule 15 limits are different from the Schedule 16 thresholds, which are relevant for land owners who need to make sure any discharge from their land meets the thresholds.

SOE monitoring is a requirement for local authorities under the Resource Management Act (RMA).

To keep up to date with water quality and quantity information, sign up to our e-newsletter On-Stream by emailing water@orc.govt.nz and like our Facebook page, Good Water in Otago – ORC

