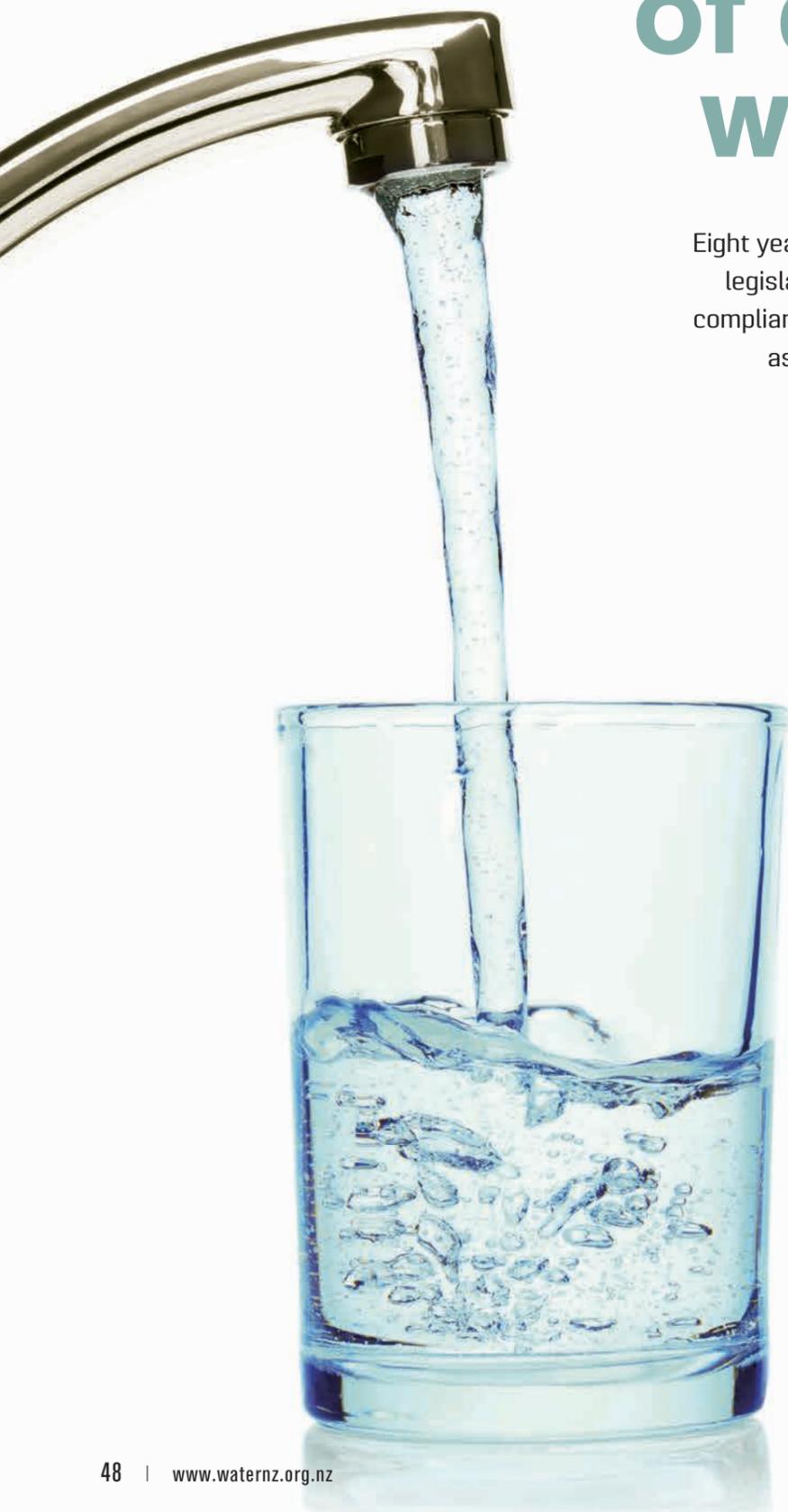


# Hitting the hard end of drinking water law



Eight years down the track, 2007 drinking water legislation has finally got to the pointy end of compliance – and small suppliers are struggling, as Opus principal environmental scientist **Jim Graham** explains.

**I**t seems that we have finally got to the pointy end of complying with the 2007 drinking-water legislation. The part that some Councils warned about, back when the legislation was being passed. The costs per person to upgrade supplies which provide water to communities of 500 people or less are very high. And many communities are not keen to pay.

There wasn't too much of a problem in July 2012 when large supplies serving more than 10,000 people were required to take all practicable steps to comply with the drinking-water standards. Most of them already did and Water Safety Plans (PHRMP's at the time) were being written.

By July 2013, medium supplies serving 5001 to 10,000 people were required to comply. Again many of them already did comply and Councils were generally comfortable with the need to upgrade those supplies that didn't. Rating bases in these communities were such that the costs could generally be spread wide enough to make the upgrades manageable.

The minor supplies, serving 501 to 5000 people had a July 2014 compliance date and many supplies received subsidies from the Ministry of Health, significantly reducing the costs to rate payers. Not all though and many more communities that would

struggle to fund upgrading costs were not eligible for subsidies. That was even more the case after 2008 when the incoming Government tightened the subsidised criteria, reduced the amount of subsidy funding available and made the scheme less accessible.

But the July 2015 compliance date for small supplies serving 101 to 500 people has now passed and many supplies in this category don't comply with the standards. And many won't anytime soon.

The last Ministry of Health Annual Survey, covering the period July 2013 to June 2014 tells the story. Ninety percent of large supplies comply with the standards – 99 percent for bacteriological compliance and 90 percent for protozoa compliance. Ninety eight percent of medium supplies meet the bacteriological requirements and 57 percent meet the protozoa requirements. Minor supplies show similar results; 89 percent for bacteriological and 48 percent for protozoa.

The bacteriological compliance figures are good. The protozoa figures not so good. But what is the real problem here?

In many situations, it is not that protozoa barriers are not in place, it's demonstrating protozoa compliance that is difficult. For example, many of these supplies have UV systems installed but Councils are having difficulty collecting, managing and presenting the necessary continuous compliance data to demonstrate compliance. But that's another story.

## The other two percent

The situation for small supplies, I believe, is different. While 72 percent met bacteriological compliance, only 24 percent met protozoa compliance and 21 percent overall compliance.

From what I see around the country,

many supplies in this category don't have protozoa barriers installed. They are often chlorine only supplies. This is 79,700 people, only two percent of the population.

The problem for these communities is the cost of installing those protozoa barriers. Especially now that the subsidy programme has finished. Here's an example. To comply with the standards, a small supply serving 220 people and using a surface water source needs an upgrade including pressure sand filters, cartridge filters, UV, a new pump, turbidity meter, PLC, chlorine dosing, monitoring equipment, telemetry, pipework, storage, electrical, a new building etc. Total cost – around \$400,000. That is a cost per head of about \$1800. For low income people in a community with a deprivation index of 10, that is not a cost they will usually agree to pay.

So some Councils with communities like this are considering not demonstrating compliance with the standards, arguing that it is not affordable for the communities concerned. They may upgrade the supplies to some extent, but not to demonstrate standards compliance.

## How does this approach fit with the legislation?

The Health (Drinking Water) Amendment Act 2007 requires water suppliers to take all practicable steps to comply with the standards. This was a contentious issue when the Bill was discussed in the select committee.

It was agreed at that time that all practicable steps should take account of the affordability of complying with the standards. The onus is on the water supplier to demonstrate that compliance is not affordable. But it was also agreed that preparing a water safety plan for the supply,

demonstrated that all practicable steps were being taken, even if the supply did not comply with the standards.

These provisions in the Act create some ambiguity and make compliance and enforcement of the Act less than clear.

So some Councils are preparing water safety plans for small supplies which manage risks and will lead to the provision of potable water – but not standards compliance. They argue that they are taking all practicable steps and are complying with the legislation, if not the standards themselves.

The catch to this is that some Drinking Water Assessors, who are tasked with assessing compliance with the standards and Act, are not approving the plans unless they show a path to standards compliance. My view is that such a position is not correct.

The Act says that water safety plans (phrmps) must identify public health risks, critical points and mechanisms for preventing, reducing and eliminating those risks – nothing about complying with the standards. That's a different part of the Act.

Drinking Water Assessors can only assess a water safety plan against what is actually required by the Act. Nothing more, nothing less.

How this plays out over the next few years will be interesting. Small supplies, of which there are some 300 registered, might test the legislation. If upgrading is not affordable and a water safety plan is sufficient to ensure risks are managed, safe water is provided and the Act is complied with, where does standards compliance fit for those supplies?

When affordability becomes an issue, the Act is not entirely clear. I for one will watch this space with interest. **WNZ**

• *Jim Graham is a principal environmental scientist with Opus and provides advice and services to water suppliers, particularly in the area of water treatment options, managing risk, drinking-water standards and legislative compliance. Jim also teaches on the NZ Weta drinking-water certificate, diploma and other courses. Before joining Opus, Jim worked for the Ministry of Health and was involved with preparation of the Health (Drinking Water) Amendment Act, Drinking Water Standards and the Drinking Water Subsidy Programme.*