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Backflow Group
WATER NEW ZEALAND

# Backflow Group Newsletter

The Water New Zealand Backflow Group quarterly e-Newsletter

Kia Ora! As stated in the last missive, the main focus of the Committee for the next few months will be planning for the 2023 Conference which will hopefully be in August in Auckland. One of the big drivers for the next year will be compliance. As the new regime from Taumata Arowai comes into effect, suppliers of all sizes will face a steep learning curve about what can be done and what needs to be done to meet the new rules and standards. I'd encourage everyone to reach out to fellow suppliers and share the knowledge that will benefit us all.

## Annual Testing Matters

When I was growing up there was a local bad joke that if you wanted to get your garden dug over, you would simply tip off the police that you have some contraband buried there and they will do it for free.

In NZ I have heard that if you want to actually hide a body (man, Kiwis are *dark*) then you bury it under native plants so it becomes a red-tape nightmare to get investigated. One plucky person has taken this a step further an applied it to backflow valves.

When was this last tested, do you think?

**WHAT'S NEW**



water NEW ZEALAND
The New Zealand Water & Wastes Association Wai ora Aotearoa

# Keeping Mum for Clean Water

We all take clean water for granted. The granddaughter of Committee Member Kevin Healy is going one better and raising money for the World Vision 40 Hour Famine.

Eight-year-old Sky Wallace was inspired by seeing her teacher promoting the school's action to fundraise for people without clean, safe drinking water in third world countries. Though her parents strictly forbade her from the food famine she decided to have a talking famine and remained silent from 8pm Friday to 12pm on Sunday. Anyone with a child knows just how hard of a feat this is so it seemed doomed to failure.

Despite also doing gymnastics and going to the ballet, Sky kept her 40 hour promise and raised $326, which is enough to give three children long term clean water from a pump close to their home. This is a truly amazing achievement and we can all learn a lot from Sky's generosity and her outlook to help those who go without some of the basics we take for granted.

The Water Now it's your turn to get involved, if you would like to have a crack at the famine yourselves:

www.worldvision.org.nz/connect/40-hour-famine/

Well done, Sky, you are an inspiration to us all. Now if I can just get my cats to keep quiet for 40 hours…

# Committee Spotlight – Paul van den Berg

A very long time ago, on a dairy farm in the Eastern Bay of Plenty coastal town of Matata,

Paul caught his first kahawai.

He's been hooked on fishing ever since and his passion for trout fishing led him to miss many English and Social Study lessons during his high school years at Kawerau College.

In 1977 he joined the Royal New Zealand Airforce, training in Avionics and loved every minute of the military life. However, he decided to follow another career (and Kathy, his wife to be) to the bustling metropolis of Hamilton and took on a roll as an Engineering cadet in the Natural Gas Division, of Hamilton City Council.

Kathy and Paul built their first house in Hamilton, raised their two children and both developed their careers in the Waikato. It is here where he gained a wide variety of network pipeline, project and management experience. Leading projects such as, high pressure pipeline construction at Huntly Power Station and township, trunk gas pipelines across country to Hamilton North and renewal of the entire distribution network in Hamilton CBD.

In the late 1980's Australian Gas Light Industry, bought out the Natural Gas Corporation so Paul took on a senior role, based in Rotorua to manage the company's southern region (from Tauranga to Kapiti Coast).

It is during this time in Paul's career, which gave him the opportunity to take a secondment to develop NZQA training modules and deliver training to Gas Distribution Operators throughout the country, but it also provided an opportunity for a change. Kathy and Paul moved onto their "piece of paradise", a Paengaroa country property where they breed Golden Retrievers, graze beef, grow Kiwifruit and enjoy their native bush reserve.

Paul's career in the Water industry started with joining Tauranga City Council on a 4 year contract to manage the installation of 39,000 water meters and backflow devices through the city, Mount Maunganui and Papamoa.

He then took on the role as Water Network Operations Manager at Duffill, Watts and King, the professional services provider for Western Bay of Plenty District Council. The Western Bay has been an area of high growth for many years and this meant a higher demand on water sources and infrastructure. In 2008, he moved into the role as Water - Infrastructure Engineer, an in-house position with Western Bay of Plenty District Council, for strategic planning, asset management and infrastructure development. He took Western Bay through the journey of "District wide water metering" and was awarded a "Hynds Silver Paper of the year" at Water NZ Conference in 2011. It was during this time, where he became involved with many facets of the water industry (including joining the Water New Zealand Backflow Group) as he believes backflow prevention is fundamentally important to delivery of safe drinking water. He sees the water industry as one with many challenges, changes and opportunities facing New Zealand and wants to encourage young people to get into it so that the next generation of Kiwis are in safe hands.

# Group Workplan Update

1. WS-014 / WS-023

Richard Aitken has fed back to the group and there are some ongoing matters concerning flexible hoses and rainwater storage systems. The latter is a particularly hot topic in NZ with the new Taumata Arowai legislation and the lack of clarity in design.

2. G12 Update

The group has met with Ross Wakefield and noted that Section 25 remains a grey area for IQP training. Most private dwellings remain exempt from some annual testing regimes even though they may pose a risk to the public network.

3. Code of Practice

Brian Brown is heading up a working group to re-work this to make it truly fit for purpose. It should serve as a backbone for any national policy. New drawings are being developed for the work and the Committee hopes to have this all signed off and ready by February.

4. Survey Unit Standards

Rob Hill and Kevin Healy have put together a survey training framework. Discussions are underway regarding how soon a device must be installed and if short cuts to the consent process could be used in the event of high-risk sites.

5. Backflow Rules

The Chair is putting together a matrix for all Acts and Statutes that concern backflow. This will be used as a companion piece to the Rules.

6. National Backflow IQP Register

Training of IQPs will be a key facet of this work but as yet there is no clear direction on who should "own" and manage the register.

7. 2023 Conference Planning

The current feeling is to have the next Conference in Auckland due to the high availability of venues and ease of access. A call for abstracts will be made in January/February.

# Update From the Chair

Paul van den Berg (Chair)

Kia ora

The new 'Drinking Water Supply Operational Compliance Rules' came into effect on November 15th.

For all suppliers, there are a raft of compliance requirements that must be met to demonstrate that maximum allowable values (MAVs) are not being exceeded as set out in the New Zealand Drinking Water Standards.

Included are the Distribution System Compliance Monitoring section, are the Large Supply Backflow Protection Rules.

In summary this section includes rules for the:

- Preparation and implementation of a backflow prevention programme to protect their network
- Periodic surveys of medium risk and high-risk customer premises
- The requirement to determine and upgrade inadequate backflow protection at premises
- Annual testing of all testable devices
- To have a detailed register of all testable devices with test results
- To have suitably trained and qualified people doing surveys, testing, installations, repairing and inspecting of devices
- Restricted access to Hydrants for Emergency Services and for the legitimate water supply activities.

No doubt the emphasis on preventing contamination in networks resulting from a backflow event, though the installation and management of backflow devices through out the country is a priority.

The workplan tasks the Backflow Group is working on is very current and relevant.

With requirements being set for small and very small supplies, I have no doubt that there is a lot more work to be done in the Backflow Protection space over the coming years.

A strong emphasis on training, qualifications and resourcing is needed within the industry to meet these challenges.

# Tanks A Lot

There is an old saying; "Give a man a fish and he'll eat for a day but each a man to fish and he'll sit in a boat and drink beer all day".

The lesson here is that self-reliance comes with a very human risk of flexible self-governance and outright chaos.

As we reach a point where the climate is altering to the point where predictive modelling becomes a guessing game, we are likely to see more and more home use water tanks installed across this great nation. And, as a person who has a water tank at home, I can tell you that clean water comes at a cost to implement and maintain.

My own tank is fitted with wo filters and a UV sterilizer because prior to this I had the water tested by a colleague who advised that the tank had an E.coli reading of 16 MPN/100mL and total coliforms count of >200 MPN/100mL.

I'll be honest here and say that at this point in my career, water quality was something akin to quantum mechanics to my puny brain. As I looked at her with my head cocked to one side like a dog being lectured about the quantum entanglement of neutrinos, she took pity on my and said simply "Lister, dummy, you need to boil your water. And probably burn your tank."

Harsh words, but fair.

So, what's the risk to the property owner and the public from a water tank? Well, there is a definite coliform risk with any roof capture water but decaying vegetation, metal/paint flecks, soot and vermin infestation are also issues to contend with. Normally this is something that affects the property owner or occupier alone but, in the case, where a top up supply is connected to the reticulated network then others are also at risk from these factors.

And think of this from a water quality perspective; an illness complaint from a compromised tank connected via a top up supply means that the water supplier has to investigate the situation to ensure their water is not the cause of the issue. This means a cost to investigate, a cost to manage the complaint and a cost to mitigate it going forward. This brings a two-tier approach,

First there is the knowledge base. All water tanks should be recorded somewhere and in a ideal world, the local Council would share the consent process with the water utility so they can capture the tanks on a database as soon as they are installed. Should a complaint come from the property or adjoining properties, the water utility can then pinpoint the tank as a potential source for the investigation and factor that in. however, some Councils have simplified the consent process for tanks to the point where new tanks are no longer captured unless they are part of a brand-new build. This is a worrying gap that will only grow as usage becomes core commonplace.

Second there is risk management. As with most cases, a registered air gap is the gold standard for protection but over time the air gap needs to be monitored (we have all seen ball valves begin to fail and air gaps compromised by radical plumbing solutions) and this simply is not accounted for.

A testable backflow preventer is also a good option between the house and the tank. But this also comes with a caveat; how does it get tested once it is in place? With no Building Warrant of Fitness required for private dwellings, there is no legal mechanism to compel the property owner to test the device. This presents a huge risk to all involved and leaves the water utility with little choice other than to install a testable device at the boundary.

This means an added cost to the water supplier (and the property owner) plus a potential pressure loss if two devices are present on the line. For some this is firmly in the "too hard" basket.

Testing the boundary device gives assurance to the public network but does nothing to help the property owner, who may still contact the water supplier with an illness complaint. And this puts the device installer in an odd position.

Last year I had a call from an IQP who was installing such a device between the tank and the house. He had called me in a bit of a state as his conscience told him that though he was required to install the device in that location, he knew that it would not be tested as soon as he left the site. Instead, he wanted to install at the boundary where he knew that the device would be picked up for testing, but I advised him not to do that because the reasoning above would leave him liable for any illness as he has failed to install in the correct place.

Another IQP, in much the same position, installed around 300 devices over a year and then contacted each customer 11 months later to let them know that were due for testing. Only around 10 took up the offer to have their devices retested.

So, there we have it, water tanks are a known risk that all of us are choosing not to deal with seriously. And, like shaking our heads at a man sitting in a boat surrounded by empty bottles of beer, we are quite happy to leave it this way.

We have to do better.

WATER NEW ZEALAND