

Journey of water from river to tap

This week's need to conserve water due to heavy sediment in the river presents an opportune time to take a look at what kind of journey water makes before arriving in our taps. Try to imagine what one billion litres of water looks like – difficult? That's how much water passes through the Wairoa District Council water treatment plant every year before being dispersed to households and businesses hooked on to the town supply.

The process begins at the intake point near Frasertown. A shed on the side of the road is the entrance to the underground lair at the bottom of a steep flight of stairs, where machinery is hard at work sending water hurtling through pipes up to a maximum rate of 200 litres per second, although it usually sits at around 150 litres per second.

New electric motors were recently installed at the intake under the 'bounty scheme' – an Electricity Commission initiative to encourage energy efficiency, where old motors are traded in and brand new ones purchased for a fraction of the cost. There are eight of these operating at different points around the district, two of which are located at the main intake.

Close attention is paid to the condition of the machines, which can get a particularly hard time when flood

waters push sand and silt into the system. The pumpsets are rotated every month, vibration tested every six months, and overhauled every five years to keep them in top shape. Water Treatment Plant manager Morgan Goldsmith said the aim is to keep everything running as efficiently as possible to keep energy costs down. "The power bill is one of the largest operating costs, so we work pretty hard to make sure we're getting the most efficiency for that cost," he said. Back at the water treatment plant in Frasertown is where the process gets really interesting. If council were to serve up water directly from the river, some nasty bugs could potentially make their way into your cup of tea. Fortunately there is no chance of that after going through the plant. As with most plants around the country, the water is first injected with a dose of aluminium sulphate a coagulant, and then crystalfloc is added as a flocculent – in other words, all the dirt is made to stick together and sink to the bottom of the clarifiers.

This happens as water passes through several tanks, after which the cleaner water is decanted off the top of the clarifier. That gets rid of the dirt you can see, but there are plenty of bugs invisible to the naked eye. Chlorine gas is added to take care of microscopic nasties such as E.coli, then sand filters

remove giardia and cryptosporidium. It isn't a chance thing – water quality is constantly monitored as it passes through five filters, which are linked up to an expansive computer system. The plant is controlled by demand. When the reservoirs at Tawhara and Affco get low, a message is sent to the computer at the plant to release more water. Powerful pumps push out around 14 million litres a day in the summer months and around 8 million in the winter and every drop of that can be traced, more or less. At the push of a button, staff are able to bring up details of what was happening at any particular time on any given day. "We take this very seriously, of course. It is our responsibility to protect people as best we can and make sure they have the best quality water possible," he said.

Reports are regularly made to the Ministry of Health, including potable water sample results as tested from the IANZ-accredited laboratory which is located on-site. Morgan works closely with plant operator Peter Newland, who was recently recognised for his engineering abilities in realigning the pump to the motor – precision work that normally involves bringing in outside expertise. Engineering cadet Karlton Karangaroa also spends a lot of time at the plant – learning the ropes and providing an extra set of hands when necessary.

The trio work closely with the rest of the operations team at council to make sure water is flowing through the plant, to the reservoirs and out through the expansive network of underground pipes into households and businesses.



Water Treatment Plant Manager Morgan Goldsmith under the huge sediment tanks.

Omana remembered

As Waitangi Day approaches, Wairoa District Council remembers one of the district's more influential men of the last century.

John (Jack) Ormond was born at Mahia on 18 December 1891 and was commonly known as Tiaki Omana. Tiaki was the fourth child of farmer George Canning Ormond and Maraea Kiuhiwharekete of Ngati Kahungunu. The family hapu was Ngati Rongomaiwahine. His grandfather

was John Davies Ormond, the politician and superintendent of Hawke's Bay. While attending Christ's College in Christchurch, Tiaki emerged as a dynamic rugby player, playing regularly for Mahia. Even while fighting in France with the New Zealand Maori (Pioneer) Battalion he managed to play rugby, establishing himself as a highly mobile flanker.

The young man played for Tapuae and Mahia, and represented Wairoa, Hawke's Bay and Northern Maoris. He earned one outing as an All Black in 1923, playing against a touring New South Wales team. He retired from representative rugby in 1925 but maintained an active interest in the sport as an administrator.

Tiaki was a successful sheepfarmer and runholder at Kini Kini, and in the 1930s branched into politics through the Ratana movement. He unsuccessfully contested the Eastern Maori seat in 1935 and 1938, but in

1943 won it standing as the Labour candidate, defeating Apirana Ngata, who had held it since 1905. As a politician, he raised issues closely identified with the Ratana movement, largely focused on the need for longer time periods to consider land claims, the poor quality of Maori housing and health, and what he considered to be the unequal and sub-standard service Maori soldiers experienced when

seeking assistance from the Rehabilitation Department. He also recommended that all parliamentary reports and records of proceedings be published in Maori. Tiaki served on the Board of Native Affairs and was involved in the Maori taxation commission of 1952, retiring from Parliament in 1963.

His first wife was Nellie Airini Elizabeth

Perry, with whom he had twins, a girl and a boy. The couple were divorced in 1922 and in Tiaki married Polly Gemmell. Their only child, a daughter, died in infancy. Polly died in 1949. Tiaki's third wife was a widow, Rangiwahakio Rarere (née Kemara). They married in 1962, but Rangiwahakio died that same year. Tiaki Omana was well known as a wise and kindly advocate who represented to the best of his ability the interests of his people. He died on 24 June 1970 at Napier and is buried at Mokotahi, Mahia Beach.



Jack Ormond (Tiaki Omana)

Census night draws near

A snapshot of the people that make up our district will be taken on Tuesday, March 8 when every New Zealander fills out a census form. The official count of how many people and dwellings there are in the country is carried out every five years and is used to determine how billions of dollars of government funding is spent in the community, as well as assisting council, community groups, iwi and businesses to plan for the future.

A big focus for this year is encouraging people to complete the census online after receiving an Internet Access Code from the official collector.

Paper forms will also be an option, and all Wairoa residents will automatically receive an English/Maori form because of the high Maori-speaking population. Census forms are also available in Te reo Maori online.

Filling in a census form is required by law – fines can be imposed on anyone who doesn't participate or provides false information.

Statistics New Zealand keeps all the information confidential, so while figures can be used, no one can be identified.

No other government department – including the IRD, Children and Young Persons Service, Income Support, or even the Police, can see anyone's answers.

No question is asked in the census unless the information will benefit a wide section of the population. For example, ethnicity information is used to measure educational needs and achievements of ethnic groups, while personal income information

is used to establish decile ratings for schools receiving government funding. Forms can be filled out online or on paper – the paper forms will be delivered by official census collectors in time for March 8 and will be picked up soon after. Anyone wishing to know more should visit www.census.govt.nz or call 0800 CENSUS (236 787).

For the diary:

Council meetings:

February 8
March 8
April 12
May 10
June 14
July 12
August 9
September 13
October 11
November 8
December 13

Forum dates:

February 22
March 22
April 26
May 24
June 28
July 26
August 23
September 27
October 25
November 22

Meetings are held in the Council Chambers in the Queen Street offices and are open to the public, unless otherwise specified.