



Ōpononi/Ōmāpere and Kohukohu Wastewater Treatment Hearings Wednesday 17th May 2023

Sarah Webb on behalf of Pania Greene (submission 69)

Tēnā koutou, tēnā koutou, tēnā koutou katoa.
Ko Sarah Webb toku ingoa.

I have been nominated by my friend and neighbour, Pania Greene to present on her behalf. Pania has read through this oral submission. She agrees with and endorses everything herein presented.

Pania's original submission consisted of one encapsulating line:

"No more waste water in our harbour".

This can be expanded under two themes.

- No more waste water in our harbour because other workable options have not been meaningfully considered.
- No more waste water in our harbour because it is culturally abhorrent.

Before I speak into those themes let me briefly introduce myself.

I live in South Hokianga with my husband and our two little girls, they whakapapa Māori to Waima, I am Tangata Tiriti.

We (that is Pania, our community, our whānau) believe in creating a culture of care for our natural environment. To protect it for the future generations. Often the natural environment is seen as a resource to be carelessly extracted, or available to be desecrated by our human activity. We need to have a paradigm shift in the way we as a society treat our natural environment. It is unacceptable practice to discharge human waste into the Hokianga Harbour.

The harbour is a place rich in historical, cultural, and spiritual significance. Its beauty and significance should be enhanced, not degraded by careless practices.

NO MORE WASTE WATER IN OUR HARBOUR BECAUSE OTHER WORKABLE OPTIONS HAVE NOT BEEN MEANINGFULLY CONSIDERED.

The Ōpononi/ Ōmāpere wastewater treatment plant has been non compliant with its own standards. This situation is not functioning adequately. In an extreme weather event, such as has been experienced here in recent weeks, the whole situation becomes dire. It is utterly inoperable. The Jacobs "Issues and Options Report" commissioned by the FNDC contained final recommendations which were underwhelming. The option of electrocoagulation was swept aside as though it wasn't a workable option.

Here we should expand on the value and benefits of electrocoagulation.

Wastewater scientists from NIWA, Jason Park and Rupert Craggs, have prepared a report looking at the cost effectiveness of electrocoagulation (EC for short).

They write that EC can remove suspended solids; can dissolve organic matter and nutrients, faecal indicator bacteria, heavy metals, oils, and organic contaminants (Park and Craggs 2019, 1).

The process of EC involves the release of iron and aluminium ions into wastewater. These break down to polymeric hydroxides which are coagulants. This is effective for pollutants present in wastewater. Coagulation creates flocculated particles (or flocs), which are suspended in water. The flocs settle, or float, which makes them easily removable (Park and Craggs, 1). Not only do the

polymeric hydroxides coagulate contaminants, they also disinfect; they split pollutant molecules making them ineffective.

Park and Craggs suggest that EC is cost effective and efficient, as not only does it create flocs for removal, it also disinfects the waste water, and provides a "readily dewaterable sludge". (Park and Craggs, 12).

CHEMICAL OPTIONS 4A AND 4B

As opposed to EC, options 4a and 4b in the Jacobs Report suggest the use of chemical coagulants to create flocs, or as they describe it, "chemically assisted solids removal" (Jacobs 2020, 33).

The Jacobs Report says "maintaining good chemical coagulation/ flocculation performance can be difficult, and can require ongoing adjustments and optimisation of dose rate and/or chemical. The process will require an increase in operation and maintenance complexity compared with the current system" (Jacobs 2020, 33). This indicates that options 4a and 4b will be an involved process, and therefore not an efficient option.

Biochemist Andreas Kurmann (Far North Envirolab Ltd) points out the high costs associated with chemical coagulation. He writes that "chemical coagulation is becoming less acceptable today because of the higher costs associated with chemical treatments (e.g the large volumes of sludge generated, and the hazardous waste categorization of metal hydroxides, to say nothing of the costs of the chemicals required to effect coagulation)".

He comments that the sludge generated from chemical coagulation has a "high bound water content", which is "slow to filter and difficult to dewater" (Kurmann 2020, 3).

The Jacobs Report cost predictions for options 4a and 4b are \$2.92 million and \$4.93 million respectively.

Park & Craggs show cost estimates for a small-scale EC treatment plant with a flow of 550 cubic metres per day; they suggest a capital cost of around \$1 million, with operating costs of around \$64,000 per year. (PowerPoint presentation, 2019).

The Ōpononi-Ōmāpere plant has had a consent for peak dry weather water flow of 450 cubic metres per day. Given that the Jacobs Report contains options which cost significantly higher than this, it would appear on paper that an EC plant could be much more cost effective. Additionally it could produce economically beneficial by-products.

In summary, we show that other workable options have not been taken seriously.

EC is more cost effective compared to chemical coagulation in options 4a and 4b. EC is superior because it provides disinfection and it makes an easier-to-work-with sludge that can also be further processed, through a worm farm for example, and used as a valuable fertiliser.

This is an option not to be overlooked.

NO MORE WASTE WATER IN OUR HARBOUR BECAUSE IT IS CULTURALLY ABHORRENT

Our mayor of the Far North, Moko Tepania, has said that discharge of human waste in the Hokianga Harbour, which he regards as "our kitchen, our food bowl", is "culturally abhorrent" (RNZ 2023).

We will now explain how this is culturally abhorrent in regards to the RMA(1991) and The Treaty of Waitangi.

Firstly, the Waitangi Tribunal's official report on the claim known as Te Paparahi o te Raki (Wai 1040) found that Ngāpuhi rangatira never ceded their sovereignty.

In reference to this, the published report "Ngāpuhi Speaks" (2012) states that

"It was culturally, legally and politically impossible for rangatira to alienate the mana (paramount authority, prestige) of their hapū. The Ngāpuhi hapū have inherited this mana from their tūpuna (ancestors), the atua (spiritual authorities), and their long-held relationships into the whenua (land). It cannot be given away." (Ngāpuhi Speaks, 2012: 333)

How does this relate to waste water treatment?

Hapū must be recognised as key decision makers when it comes to issues such as this.

"Ngāpuhi Speaks" asks "When will tangata whenua get the opportunity to be part of the decision making process?" (Ngāpuhi Speaks 2014, xi).

THE RESOURCE MANAGEMENT ACT 1991

The Northland Regional Council (NRC) must uphold the Resource Management Act(1991) (RMA) when making decisions on land, air and water use.

Sections in the RMA that relate to this particular issue include providing for Māori cultural relationship and traditions with water, kaitiakitanga, and the Treaty.

Section 6E of the RMA says "any persons exercising functions and powers under the RMA are required to recognise and provide for... The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga."

Tikanga advises that sewage should not enter waterways, as that is desecration of the environment and the mauri of the waterway. Moreover, the NRC must provide for (or offer workable options) that respects this law of tikanga. Put simply, laws of tikanga must be provided for. In relation to this situation, when investigating alternative options, they must meet cultural requirements, and the cultural impact should be meaningfully discussed.

Section 7a of the RMA 1991 directs that all decision makers shall have "particular regard" to kaitiakitanga. Te Aka dictionary defines 'kaitiaki' as "trustee, minder, guard, guardian, custodian, keeper" (Te Aka 2011, 53).

When the NRC makes decisions related to the RMA they must have particular regard to mana whenua as the kaitiaki, and uphold their mana as an authority on caring for the land and water.

Section 8 of the RMA directs that the NRC must be guided by the principles of the Treaty of Waitangi. These principles - partnership, duty of active protection, retention of rangatiratanga, and the duty to consult, direct that it is necessary to engage appropriately with tangata whenua, when making a decision through the RMA.

Summarising these three sections of the RMA, for the NRC to act in good faith they should engage appropriately, take into meaningful account any cultural impacts, uphold tangata whenua as kaitiaki, and uphold the Treaty principles.

JACINTA RURU ON THE LAW OF TIKANGA

Law professor Jacinta Ruru writes about how tikanga Māori relates to the RMA. She shows this especially in the cases of legislation that recognise significant natural features as their own legal person, such as Whanganui awa and Te Urewera.

She writes that these statutes relating to legal personhood "endorse Māori tribal visions for knowing and caring for lands and waters and reassert a founding place for tikanga Māori for guiding regional resource governance and management" (Ruru 2018, 215).

This emphasises that NZ law statutes recognise tikanga through means such as legal personhood. If this is possible, then tikanga should also be recognised and enacted through the RMA to the greatest extent.

Ruru writes "the Māori legal system has developed strong rules for protecting the mauri of water... It is ... abhorrent to ... mix waters with human sewage (the preference being for sewage to be treated on land" (Ruru 2018, 217).

She says that "tikanga Māori as a legal system has its very foundations in the lands and waters of Aotearoa New Zealand" (Ruru 2018, 222). Therefore, the inclusion of themes of tikanga within the RMA, such as kaitiakitanga should be highly regarded and therefore realised.

Discharging human waste into waterways is disrespectful, irresponsible, careless, and is not acceptable as a legitimate way to treat human waste.

Moreover, this practice cannot be mitigated, or remedied in ways that could make discharge of human waste into waterways acceptable.

CONCLUSION

In conclusion, not all workable options have been meaningfully considered, such as EC in particular. It is shown that EC is both efficient and cost-effective; it creates a valuable fertiliser resource, and prevents contaminants from being discharged into the harbour. It is superior to chemical coagulation as proposed in options 4a and 4b of the Jacobs Report, and it is cheaper overall. It also meets Māori cultural value requirements as it does not discharge human waste into waterways.

The Waitangi Tribunal report on Wai 1040 (Te Paparahi o te Raki), finds that Ngāpuhi never ceded sovereignty. This means that affected Ngāpuhi Hapū should at the very least be meaningfully consulted on the matter, and their mana must be upheld.

The RMA shows that Māori cultural values need to be provided for, that the principles of the Treaty must be upheld, and kaitiakitanga must be regarded.

If poo is entering the harbour, it is desecration and must be stopped.

Creating a culture of care for our environment requires a paradigm shift. It requires us to stop treating our earth as a resource to be carelessly extracted or desecrated.

We also need a paradigm shift in how we relate to our waste, to perceive the possibilities of waste as a resource when it is processed appropriately. This is just one way of many that we can begin to undo the damage that has already been done.

Let us not flush this opportunity for positive change down the drain.

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