



RE: Petition No 79 – Proposed Chlorination of Busselton’s Water Supply

Dear Committee Members,

The following is my submission in relation to Petition 79. Please be advised I have not taken this complaint to the Parliamentary Commissioner for Administrative Investigations (**Ombudsman**).

The issues raised in the Petition are in two categories, as follows:

1. This decision has been made without consultation with the community

In February 2010 Busselton Water (BW) entered into an agreement with Water Corp that has been at least 5 years in the making, to supply raw water to Dunsborough. In March Busselton rate payers (only) received a letter from BW regarding “Changes to the Disinfection Method of Busselton’s Water Supply”. It said that within twelve months full-time chlorination of Busselton’s water supply would occur.

Contrary to the Australian Drinking Water Guideline (ADWG) recommendations and stipulations in BW’s Operating License (with the Economic Regulation Authority (ERA)) the community were given no opportunity to have input into the decision. ADWG states in its Introduction: “**These determinations need to consider the diverse array of regional or local factors, and take into account economic, political and cultural issues, including customer expectations and willingness and ability to pay.**” BW’s Operating License states: **Customer Consultation General Clauses 4.1 The licensee must establish ongoing customer consultation processes which both inform customers and proactively solicit customer opinion on the licensee’s operations and delivery of services.**

Busselton’s water is of great local and culturally significance to this community. Until recently the eight water storage tanks throughout Busselton read “Proudly community owned!” The people of Busselton have a reverence for their water. They know how privileged they are to have Yarragadee water as their source. It is arguably the best water in the world. Until now BW Boards have opposed those who suggested that chemicals be added to this pure water source. To ensure compliance and protect public health they searched worldwide for chemical free disinfection methods. BW was ahead of their time in the introduction of its UV disinfection plant, commissioned in 1999. BW was aligned with the move worldwide to reduce chlorine and chemical use because of its detrimental health effects. Overseas countries are implementing UV disinfection as part of their multi-barrier disinfection approach. New York recently completed the commissioning of its UV system which took 7 years to fully implement and cost \$43 million. They are the largest water supplier in the world, supplying 9 million people. The Busselton community are proud of their water and their chemical free disinfection stance. This community has never had chemical disinfection and have defended that position.

The chlorination announcement came 3 months after BW claimed the following, in December 2009: **Annual Report Overview Summary “Disinfection of the water supply is undertaken with ultra-violet (UV) irradiation in preference to methods such as chlorination. This method has offered Busselton excellent protection of its water supply for many years and with vigilant monitoring and controls in place, Busselton Water is well equipped to react quickly to any problems that may arise. Both the Board and customers, as represented in successive annual surveys, are strongly committed to this “chemical free” approach.”**

Post decision, BW held four Information Forums. At the commencement of the Forums the community were told the sessions were not a debate, the decision was final and would not be reversed. They were told verbally and in forum handouts to direct complaints to the Dept of Water or Health. This is not the correct procedure.

The community feel deceived and betrayed. They were not consulted, have subsequently been told that the community no longer own the authority and have received generic responses from the Ministers to complaints that should have been addressed to and by BW. The two members of BW that are Shire Councillors (including BW Chairman) voted against Motions to acknowledge the community’s concerns. After disguising the correct complaints procedure, they refuse to meet with or speak with the community. The Chairman in response to requests to meet with him has said he has nothing further to say. It is suspected but not known whether this decision is connection to the raw water agreement with Water Corp. Regardless of why the decision has been made it has been without consultation and has not considered the real risks to the community.

2. The real threats and risks to Public Health and implications for the community have not been evaluated. BWB has not demonstrated valid reasons as to why Busselton's unique, natural, chemical free water supply should now require chlorination.

The disinfection investigation analysis and options prepared by BW's consultants, Hunter Water (HW) are incorrect and incomplete. The identified risks have been exaggerated and real risks omitted. The decision was made by BW Board Members and senior management after workshopping a range of multi-criteria, for half a day. No technical or scientific information was used in this process. Instead HW used a software programme that collates brainstorming results (guestimates), which they market as unique to them. The multi-criteria focusec on mitigating litigation of Nagleria fowleri and E coli outbreak, not on a full range of risks to public health. The decision to implement full-time chlorination was not based on scientific or technical information. The analysis has not considered the implication of decommissioning the existing UV disinfection plant. It has not considered that there are a range of disinfection options available or the risk associated with the implementation of full-time chlorination. The consequence of this incomplete, questionable analysis is that the community will be exposed to real health risks. There has been incomplete, unsubstantiated or omitted risk assessment on the following:

- 1. Nagleria fowleri and E Coli and their ability to infect the water supply (never detected in Busselton)**
- 2. Cross contamination of the closed reticulation system as a risk factor for pathogenic infestation**
- 3. Reticulation system and asset condition (pipes, infrastructure and UV plant)
Consequences of decommissioning the UV Plant eg. the risk of Giardia, Cryptosporidium and water-borne viruses which are chlorine resistant**
- 5. Proximity of chlorination plants to homes, schools and businesses (appropriate buffer zones)**
- 6. Transport, storage, handling of chlorine and emergency capacity of BW employees and plant**
- 7. Environmental impact on our wetlands, Important Birds Area of Australia, unique and endangered fauna (frog species, the ring tail possum and other marsupials) and flora in our A Class reserves**
- 8. Immediate and long term effect on the community's physical and mental health**

Our immediate concern is that decommissioning the UV system will expose the community to pathogens and water-borne viruses, which the existing UV disinfection plant safe guards against. *Cryptosporidium* and *Giardia* are such pathogens and are responsible for numerous infections in Australia every year, yet these protozoa are not considered what-so-ever in the Hunter Water report. The amount of chlorine that BW proposes to put in the water supply is 0.5 milligrams per litre. This will be completely inadequate in controlling *Cryptosporidium*, *Giardia* and water-borne viruses which are chlorine resistant. This oversight will have serious consequences.

As the process undertaken is questionable and a comprehensive risk analysis has not been conducted it is difficult to accept that the decision is valid. Chlorine disinfection appears an odd choice because Water Corp states that they continue to have problems with Nagleria in water that is chlorinated. The incidence of Nagleria infection causing Primary Amebic Meningoencephalitis, according to the Hunter Water report: **"There have been cases of proven and medically possible PAM in Australia in the 26 years from 1955 to 1981, with only one survivor"**. 11 of the 14 cases were from chlorinated water. None of the 330 cases worldwide were from ground water. The risk of contracting an infection is miniscule if it is in the water. It is not and has never been in the water supply. Medscape state: **"The risk of infection has been estimated at one case per 2.6 million exposures to N fowleri."** Most cases are from recreational activities and occur when water goes up the nose. I is not contracted from drinking the water. Unlike chlorine, UV disinfection is effective against Nagleria. It damages the DNA rendering the organism unable to replicate and survive. The other oddity is that Rockwater, who commissioned the UV plant in 1999 and continue to sample the water, were not involved in the decision.

To date this issue has largely been ignored because chlorination is a standard practice in Australia. The Department of Health also endorse the use of Fluoride a known carcinogen and neurotoxin which has been found not to reduce tooth decay. Fluoride is banned in numerous countries overseas. Australia used DDT, Heptachlor and Dieldren long after their use was prohibited overseas. Implementing chlorination is incongruent with worldwide moves to reduce chemical use due to the overwhelming scientific evidence that chlorine by-products and other chemicals cause cancer, other debilitating illnesses and death. This issue is not only about whether Busselton should adopt the standard disinfection practice, it is about whether there has been due diligence. In the immediate I ask that this decision be revoked because there is indisputable evidence that the proposed plan of decommissioning the UV plant and using a chlorine dose of 0.5 mg/l will expose this community to pathogens that they are currently protected against. I ask that a parliamentary enquiry be conducted to ensure that the wide spread concerns of this small but proud community be considered fully.

Yours sincerely