

The Community Alliance for Positive Solutions Inc (CAPS)

Comments on Alcoa Wagerup current and projected water use

(In reference to ENVIRON's Water Supply Study, Alcoa's Wagerup Refinery Unit 3, ERMP Appendices cd)

It appears that both Alcoa (Alcoa 1978) and the Dept of Works (now Department of Environment and Conservation) were not fully aware of the impact of global warming on water yield in this part of the region. Catchments and aquifers are now drying up, in comparison to when Alcoa was given their water allocation in the late 70's.

Alcoa agree that "sizable high quality ground water" does not exist at Wagerup (1. Background pgh 3).

Existing water supply is limited and decant of supplementary sources into Alcoa's existing system is required considering the projected expansion of the plant at Wagerup. **Alcoa have been drawing water from our surface catchments systems for more than 20 years! This roughly equates to refilling the Swan River and Canning Rivers about 1.8 times (that's more than 55 GL)!**

Since recordings of rainfall began 25 years ago (Alcoa, 1977) the average amount of rainfall in the Wagerup area alone has more than halved. **Alcoa still want 14.6 GL per annum with the upgrade, independent of environmental conditions. This suggests that this industry will use more water in a drier climate!**

The Wagerup refinery sits on the Yoganup Formation, a highly permeable sandy formation. **This means any onsite contamination from hydrocarbons of acids may leach quickly and effectively into our ground water systems.**

In this part of the region industry has been given a licensed water allocation of 10 GL. With the expansion Alcoa want more (14.6 GL pa) for Wagerup. **This means that Alcoa want more than the total amount of water already allocated to industry.**

What does this mean to potable water supply? **With the expansion, Alcoa will consume just under half (36.7%) of the total amount of water allocated for public supply** (Water Corporation).

Wagerup refinery has a licensed allocation of water of 9.05 GL per annum (Table 6.1) but last year used 9.46 GL. That amounts to about 5% more water than they were allowed to use. Inline with the projected water requirements (i.e. 14.6 GL per annum (Table 7.1)), errors in the amount of water used could be as high as 0.73 GL pa. That means more pressure on our fragile systems if they require more.

Section 8.1 contradicts the statement in section 1 Background, pgh 3, where Alcoa state "***The availability of groundwater was examined and the advice of the Western Australian Government's Geological Survey at the time was that sizable high quality groundwater supplies (such as had been developed for the Pinjarra refinery) were unlikely in the Wagerup area. This was confirmed by some preliminary investigations commissioned by Alcoa (Layton Groundwater Consultants, 1980)***".

In light of news that the Water Corporation and Harvey Water have gained efficiencies in water use through the efficient water initiatives, Yarloopian's and many other regional towns and cities are faced with water restrictions. **Yet Alcoa want more water! This means they want access to the water we, as residents, have saved** (Section 8.8).

Alcoa will use treated waste water at their Pinjarra refinery (ca 2.4 GL per annum).

- What does that involve?
- Will this water, once used, then be discharged into aquifers or surface waters?

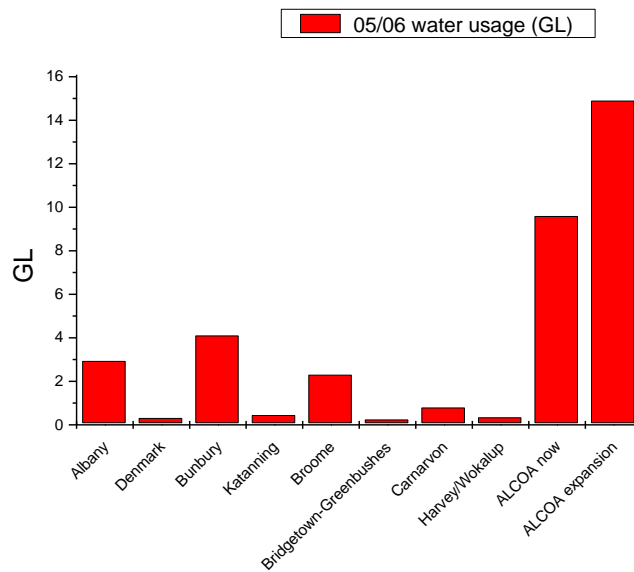
- Will environmental monitoring include detection and quantification of viruses, pathogenic microorganisms, endocrine disrupting chemicals, organics (Total organic carbon, dissolved organic carbon, biodegradable organic carbon, heavy metals, radio nucleotides, inorganic chemicals – lead, copper, mercury, arsenic)?

Section 9.1 Alcoa indicate they are not in a position to achieve further efficiency in water savings using existing technologies. **How long will this technological legacy burden our water resources because of economics – what is the profit/bottom line here!?!**

Also, based on vapour recovery tests Alcoa recycle less than 3% of their water last year. Perhaps industry should only be allowed to use recycled water rather than our governments push for the general public to accept it as their primary water source.

A lot of what is proposed in the ERMP is based on anecdotal evidence as offered by staff at Alcoa and staff at the AgWA. More rigour is required to validate things such as how much water is lost in the Harvey irrigation water distribution system.

Alcoa's Water Consumption vs Regional Water Use



The graph above shows the total GLs of water consumed in a number of regional towns and cities. It also shows the GLs of water consumed by Alcoa prior to and the projected total consumed following the expansion (15 Gigalitres = 500,000 backyard swimming pools). Interestingly, the combined populations of Albany, Bunbury, Broome, Bridgetown-Greenbushes, Carnarvon, Denmark, Harvey/Wokalup in 2004 was 120,556 (ABS, 2004). Alcoa currently consume enough water to supply around 94,000 people a year. With the expansion this means enough water to supply approximately 150,000 people a year with water.

So why are the people of Western Australia being educated and “nursed” into acceptance of drinking desalinated and recycled waste water whilst industries like this are sucking our precious clean natural resources?



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