Public submission into Longterm Water Resource Assessment
Sharing our water

Submitted via Engage Victoria
30 November 2019

Overview

Thank you for the opportunity to provide comment on *sharing our water*.
I am an agricultural advocate and farmer living in the hub of Victoria's power generation in Latrobe Valley.
My ongoing purpose is to advocate for good governance and mining reform to inform good planning for our future well-being and prosperity.
This includes updating policy settings to protect our potable water and sustainable agricultural areas.
Given the States duty to protect and improve the environment, the State must do more to reverse the future hydrology complications and subsequent economic risks/impacts caused by poor regulatory frameworks, compliance and enforcement of existing and past mining legacy.

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Do you have any additional comments or information you feel should be included in the assessment?

- If sustainable water strategies (SWSs) identify and manage threats to the future supply and quantity of a region's water resources to improve waterway health then the strategies need to include sediment testing of our waterways in acknowledgment of legacy contamination of our Gippsland waterways.
- If long-term reduction in water availability needs to be shared more equitably between consumptive users and the environment then how can the Water department allow Earth Resources department to override existing rights to quality water and upset the balance whilst reducing red and green tape meaning compliance and enforcement places water secondary.

- Likewise, if water-sharing arrangements need to respond to a deterioration in waterway health related to changes in flow why would the water department allow the granting of more mining in Gippsland that competes with existing consumptive uses while further depleting the available percentage of environmental flows in certain catchment areas. The water minister would be creating more stress to an already overstressed river system. This goes against all common-sense and good planning.
- Now the technical assessments have been completed and identified long-term declines that need to be shared equally between consumptive uses and the environment, it is imperative that the water and planning departments ensure over-extraction of available water is not further compromised in particular basins through inappropriate land-use approval. To do so would be irresponsible.

How water sharing will be impacted in the future is the big question.

For this review to be successful a monetary value needs to be put on water that is reflective of its worth and economic impact on long-term viable agri-business, tourism and cultural assets.

Water for consumptive use

Where coal power stations required water for their construction, everyday operation, and dewatering of open cut mines to maintain batter wall stability in the extraction of coal, they now also require water for future rehabilitation with the proposed and preferred option to rehabilitate the Latrobe Valley open cut coal mines as full or partial pit lake.
The water footprint from the winning of coal is significant with the availability of water in the Latrobe catchment already noted to be in decline -

> *This is a 3 per cent increase in the proportion of the total resource for consumptive users and a corresponding 3 per cent decrease in the proportion of the total resource for the environment.*

With an increasingly variable climate, over-allocation for consumptive use at the expense of the environment is the challenge and whether it can be justified particularly given the Gippsland catchment supports numerous Ramsar sites, wetlands and significant tourism assets essential to Gross Regional product.

While this assessment acknowledges the decline in the deeper confined aquifers are due to dewatering around the Latrobe Valley coal mines and, near the coast, offshore oil and gas extractions which are connected to the lower aquifer, it also notes this is

unlikely to have impacts on waterways as confined aquifers are not connected to waterways. But the assessment ignores that over-extraction of any aquifer could result in subsurface compaction leading to real surface subsidence. This in turn can change the tilt of the land affecting surface water runoffs which our waterways are so dependent on.

> *Groundwater levels have declined in the deep aquifers associated with groundwater depressurisation of the Latrobe Valley coal mines. Groundwater levels in the deep confined aquifers have declined in some areas by > 2 m.*

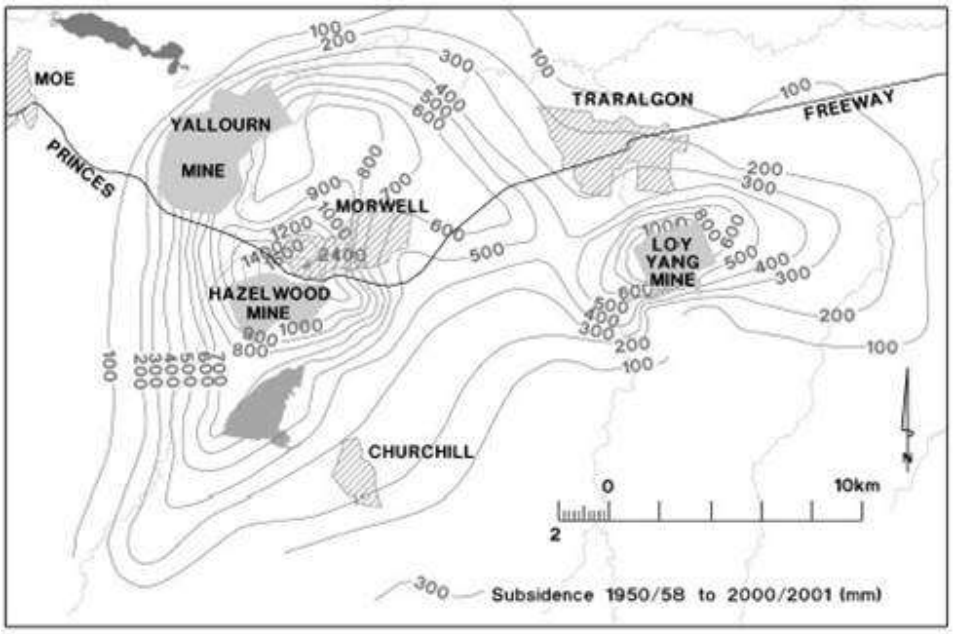

Figure 1: Regional Subsidence Contours

Source: The Potential for Artificial Recharge of the Tertiary Aquifers of Latrobe Valley Depression, Victoria, Australia **2001**

Waterway health

Large volumes of water from Latrobe Valley industries are returned to the Latrobe River as EPA licenced wastewater discharges. However, the quality of these discharges and the impact they have on the receiving environment has not been adequately addressed in the 2018 **State Environment Protection Policy (Waters)** Summary of Comment and Response Report nor has it been addressed anywhere in this Long-term Water Resource Assessment. Industry wastewater discharges into the waterways is a significant factor in poor water quality through heavy metal and contaminant pollution downstream of industry/mining use.

If this study is talking about water flows it also needs to recognise the flow path and where contamination started from, where it moves to and where it ends up.

Otherwise waterway health is incomplete which is already noted in the comment "incomplete data'.

It has to be noted that the Victorian Government have never acted on reform of the Environment Effects Statement Process (EES) from the 2011 Environmental and Natural Resources Committee Inquiry.

The Victorian Government Response to the Report acknowledged,

> *the Inquiry recommended comprehensive reform, noting that the need for reform is both widely recognised and overdue.*
>
> *…determined that reform would establish much-needed legislative clarity and provide a more robust basis for protecting Victoria's environment.*

Yet since 2012 every project that impacts the environment and potential waterway health has been evaluated on an agreed ineffective and outdated assessment process.

It is glaringly obvious that effective sediment assessment has not been included in waterway health as high flows in floods and turbidity stirs up the industrial and legacy heavy metals in the riverbeds downstream of industry or mining.

Was sediment testing conducted?

This is particularly relevant for downstream beneficial uses and ecosystems of the Latrobe Valley, the Tambo River and the Mitchell River basin if the Kalbar mineral sands mine is approved. The health of Gippsland waterways downstream of industry is entirely dependent on sufficient inflows to reduce pollutant concentrations ensuring dilution of discharged industrial wastewaters.

This assessment is an indicator of poor government oversight and lack of investment in monitoring resources as the studies could not effectively determine waterway health because the appropriate data monitoring has never been in place. I am also disappointed in lack of recognition or acknowledgment as to how and why our waterway health is poor. It appears that bushfires is the sole culprit for the causal effects that is associated with poor waterway health.

The SEPPS review noted -

> *It is important to note that the environmental quality objectives in the SEPP do not set mandatory limits for regulated activities, such as licensed discharges. Rather, these discharges are intended to be used in a risk management framework, whereby if water quality is assessed as not meeting these objectives, then this can indicate a potential risk to beneficial uses.*
>
> State Environment Protection Policy (Waters) Summary of Comment and Response Report p13

The Tambo catchment is an excellent example of where the assessments fail what we already know as *'there is insufficient data to perform an assessment of long-term groundwater availability in the area.'*
While some data sets are not >20 years this is no reason to not consider their impact and what sediment building and holding means to freshwater ecosystems.

Baillieu linked to mine debacle - LIBERAL Party leader Ted Baillieu has been linked to one of Victoria's most damaging environmental debacles through his shareholding in a collapsed mining company. The company, Denehurst, went bust in 1998, leaving the state government with a $6.9million clean-up bill at the Benambra Mine, in Victoria's fareast.

> *'Denehurst had left the Benambra mine littered with equipment and potentially hazardous materials, including a dam full of tailings laced with lead, zinc and copper.'*[1]

This tailings dam has been leeching contaminants into the Tambo River for years with the mine to be reopened again (Stockman project) using a greatly expanded tailings dam.
According to environmental engineer and copper-mine specialist, Associate Professor Gavin Mudd, the normal concentration levels for copper or zinc in freshwater ecosystems should be about .001 or .002 milligrams per litre or parts per million.

> *"A lot of freshwater ecosystems would have about that, so any concentrations above that and you can start to cause significant impacts to aquatic biodiversity."*[2]

But according to Earth Resources webpage[3] there is enough data to show that the contaminants and pollutants that have escaped the mine site are present to a significant amount in the Tambo River.

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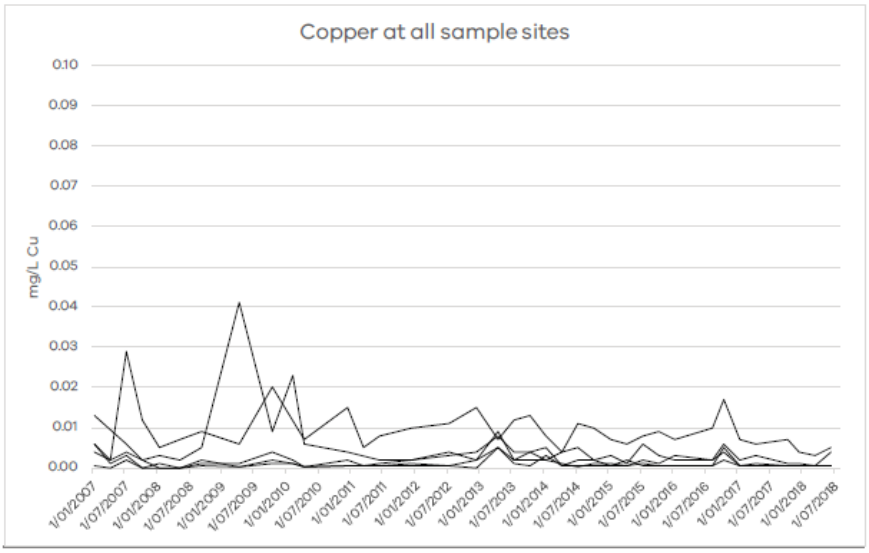
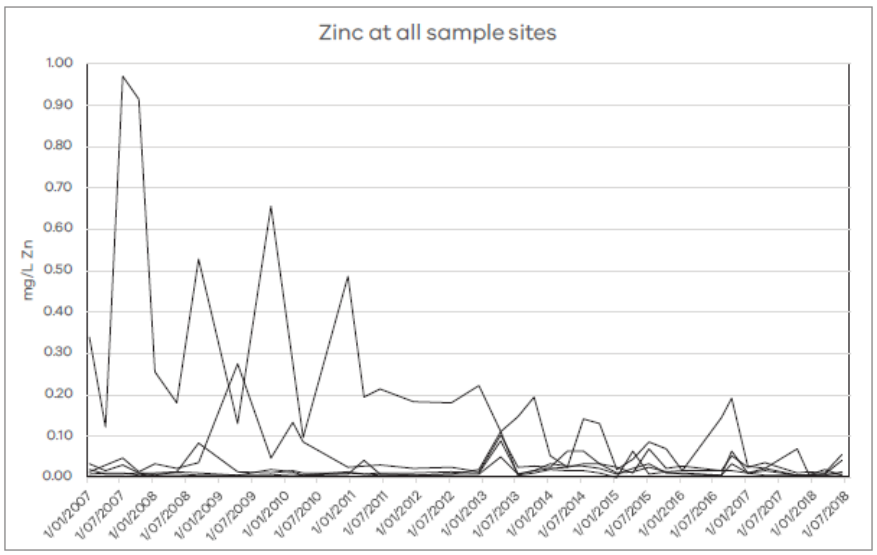
[1] http://www.theaustralian.com.au/news/nation/baillieu-linked-to-mine-debacle/story-e6frg6nf-1111112492922
[2] https://www.abc.net.au/news/2019-08-18/balla-balla-creek-poisoned-by-upstream-copper-mine/11379570
3 https://earthresources.vic.gov.au/community-and-land-use/key-site-updates/stockman-project/tailings-storage-facility

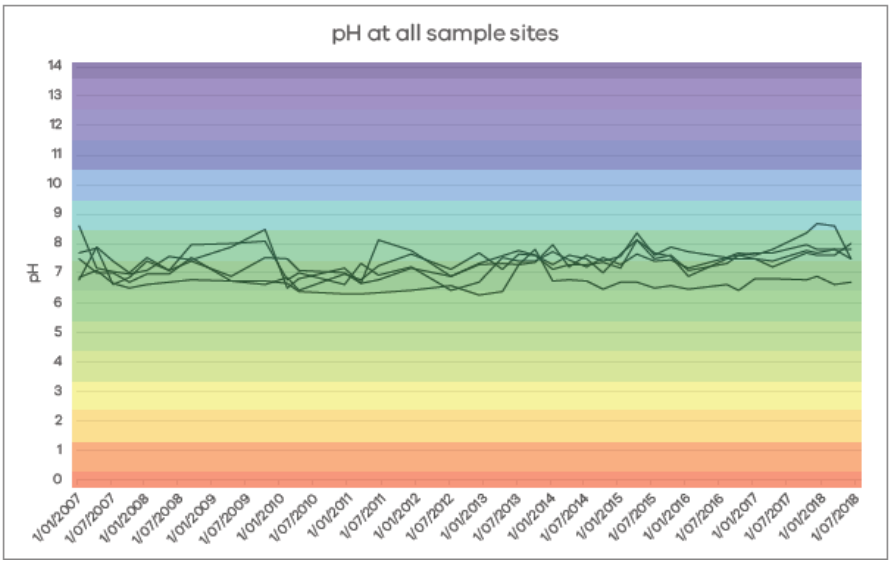
Yet because the study is not over a 20year period should that mean that this LTWRA ignores this information. In dry periods, the contaminants remain insitu until high flows disturb and mobilise sediment form the river bed.



Benambra Tailings Storage Facility Water Sampling Results – **Copper**



Benambra Tailings Storage Facility Water Sampling Results - **Zinc**



Benambra Tailings Storage Facility Water Sampling Results – **pH**

So, can we just assume that the new tailings dam, even though the existing is still leeching, will hold its integrity into perpetuity?

All we have to give us surety is a 2014 Environment Effects Statement (EES) process that concluded the project should proceed subject to recommendations *to 'monitor data during and post-mining operations so that water quality standards can be set to maintain existing background conditions in the upper Tambo River.'*

Whilst this assessment celebrates some *on-ground achievements* -

> *In the Thomson basin, one such project is facilitating the migration of Australian grayling with environmental flows.*

it does not come without potential future risks from mercury disturbance in the river bed excavation to accommodate the diversion.[4]

4 https://www.latrobevalleyexpress.com.au/story/5802850/horseshoe-bend-work-fears/