

7th February, 2014.

The Director,  
HRSTS Review,  
Reform and Compliance Branch,  
NSW Environment Protection Authority,  
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Dear Sir,

**RE: Review of the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002 – Discussion paper.**

I would like to use this opportunity to express my support for the Hunter River Salinity Trading Scheme. I have attended your presentation in Singleton and read the Scheme documentation provided in the hard copy as well as that on your website. The HRSTS is certainly a step in the right direction and one of the very few government initiatives that evaluate the Hunter environmental problems in a more global and cumulative manner.

### **Hunter Salinity Trading Scheme**

As a Hunter Valley resident and a user of the Private Irrigation Scheme (PID) I am very concerned about the water quality of the Hunter River. As a member of the Hunter Valley Protection Alliance I fully support the conclusions expressed in the Submission [1] from this organisation. These briefly are:

- 1. The salinity targets for the Scheme should not be raised above the current 600 $\mu$ S/cm at Denman and the 900 $\mu$ S/cm at the confluence of Glennies Creek and at Singleton.*
- 2. We support the removal of the flood flow exemption to ensure that salinity credits are needed for all mine discharges, however we do not support the changing of the definition of a "high flow" event so that a discharge event can be triggered at a lower flow.*

*3. We support increased public transparency and access to information including when and where discharges occur, all available water data and the results of investigations into the health of the Hunter River system.*

*4. In view of the current CSG activity in the Broke and Bulga areas adjacent to the Wollombi Brook, which is in addition to those coal mines currently operating close to the Brook, it is submitted that there be regular and frequent assessment of the salt levels in the Wollombi Brook from Paynes Crossing through to Warkworth.*

*5. Any additional revenue generated by way of salinity credit auctions should be used for the purpose of ensuring the health of the Hunter River and its tributaries by establishing groundwater monitoring programs, and also to research and identify all other contaminants other than salt, which enter into the River system from coal mining, CSG mining or agriculture generally.*

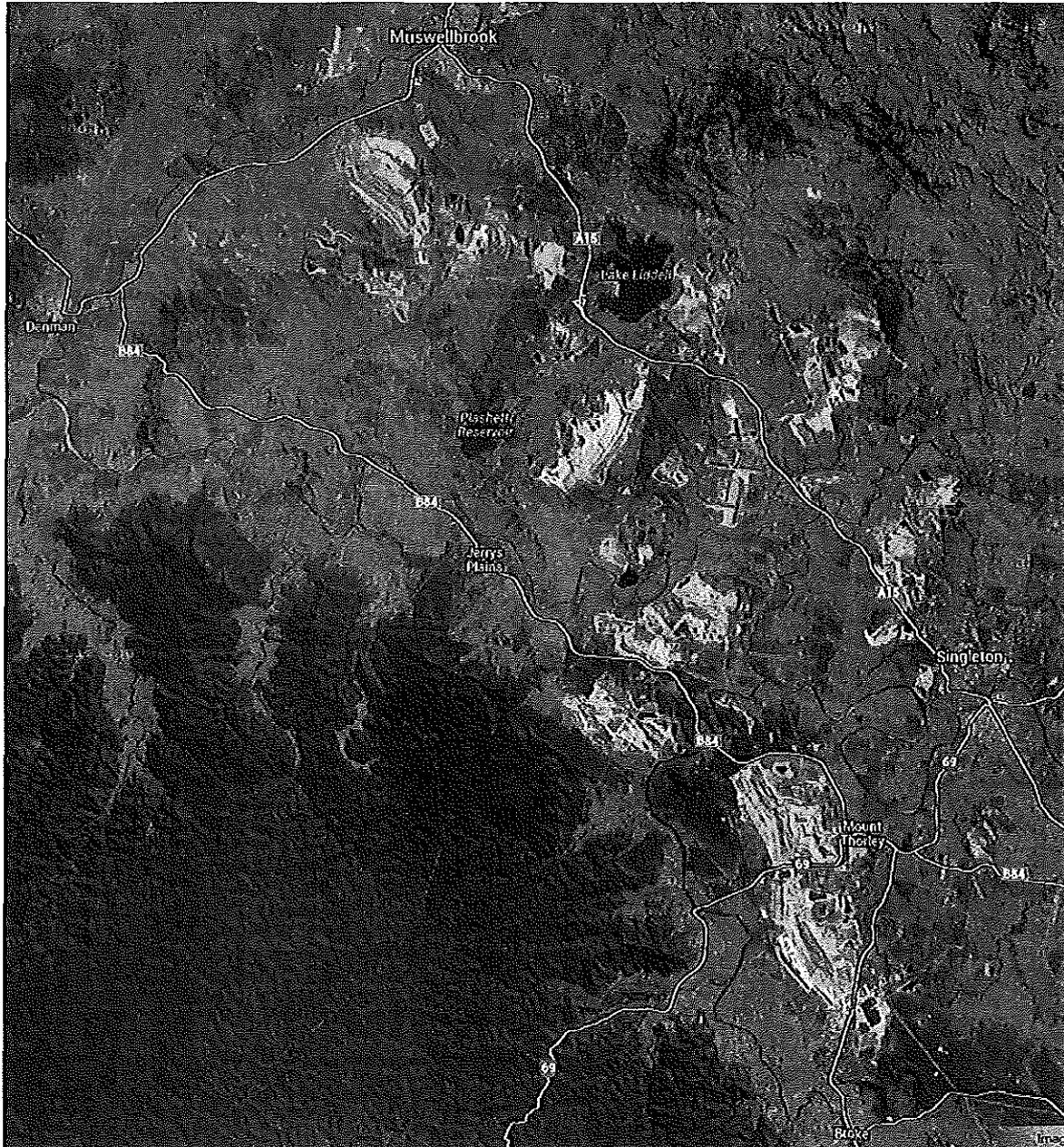
## **Wollombi Brook**

The HRSTS documentation provided gave me an excellent overview of the complexities of the Hunter River salinity problems. The HRSTS processes were described in a clear and easy-to-understand manner and the authors of the review should be congratulated. Yet, I was puzzled by the scarcity of scientific studies dealing specifically with the interaction between the mines and the River in the underground strata. Surely, there is more to the River hydrology than the mechanics of the controlling discharges of the saline water by individual mines. The following picture (see below) shows a satellite image of the coal mines Upper Hunter Valley where I live in the Wollombi Brook sub-catchment.

Both sides of the lower Wollombi Brook valley are occupied by huge open cut and underground coal mines. These operations create deep voids where salty water accumulates and must be constantly removed. Some of these voids go as deep as the sea level and maybe below. Surely they must encounter fault lines and permeable strata that may the mine works connect to the Wollombi Brook. These hydrological connections could explain why the Wollombi Brook at Warkworth is so saline (see Discussion Paper [2] Appendix B, page 37).

*The at times high EC levels in the Wollombi Brook at Warkworth in the mid to late 2000s (not related to flow) warrant further investigation*

I know that the area under Warkworth and even under the Brook itself was undermined by Lemington Underground Mines 1 & 2 (now closed) thirty years ago. Surely this has something to do with the increased salinity in this section of the Brook.



When I talk to oldtimers in our valley, they tell me that Wollombi Brook used to be a clear running stream. These days it is a disconnected sequence of muddy ponds filled with dirty brown water. Most of its water is percolating underground in the sandy river beds. The current state of the Wollombi Brook could serve us as an useful early warning signal. A serious hydrological study of the Wollombi Brook would be a good start for better understanding of the mines-river interactions in the whole Hunter River catchment.

## Goulburn River

Goulburn River above Kerrabee is not a part of the Hunter River Salinity Trading Scheme despite the fact that it at times generates disproportionately large salinity peaks in the Hunter. According to the discussion paper [2] page 11, the reason for this exclusion is that

*The primary reason the upper Goulburn River subcatchment is not captured by the Scheme is that it is not possible to give these mines adequate advanced warning of discharge opportunities, as they are high up in the catchment. High flows at the headwaters of the Goulburn River catchment following rainfall are also relatively short in duration.*

One could assume that these technical difficulties could be a problem under any other regulatory regime. Perhaps further expansion of coal mining in the Goulburn River catchment should be curtailed if it endangers the water quality in the Hunter. Eastern Australia has no shortage of the coal bearing sedimentary basins and could be choosy where new mines are approved.

## Mines Expansion Approval Process

The process that currently governs mining approvals is deeply flawed. Each new mine or an expansion of an existing coal mines is treated as a separate project completely self-contained and independent of the surrounding mining infrastructure. The environmental science is provided by "independent" consultants hired and paid by the proponents. They know what is expected from them and invariably conclude that any negative environmental downsides will be "minor" or "insignificant". This is hardly surprising. Most consultants operate from small companies and need to secure a stream steady work for living. The mining companies operate essentially under a regime of environmental self-regulation. Cutting the production costs is the primary consideration and, consequently, the environment is then bound to suffer. For an example of This system does not and cannot work work. See e.g. the notorious Hunter dust and noise problems! In contrast to that, HRSTS is unique in taking a cumulative approach and should be, therefore, supported as a good example of progressive thinking.

## Transparency of the Regulatory Process

The recent ICAC investigation into granting NSW coal mining and water licenses shows that corruption can reach even the highest places. We also know from history that the official corruption has never been very rare and that it particularly thrives in centralized systems where

important decisions are taken in secrecy behind the closed door. The best solution to this problem probably is a complete transparency of the regulatory process. Corruption does not thrive in direct sunlight! A good transparent system will allow every interested citizen to easily find out what is going on. In the context of the HRSTS we need to know, hour by hour, how much water is in the river, what is its quality, how much pollution is being discharged into it and by whom.

The public also needs to know about water licenses, who is pumping the water from the river, when and how much they pay. It is not beyond the capability of the department programmers to create a system like that even if it has to cross walled gardens of several government offices.

As an aside, it would be also very helpful if the authors of any documents for public discussion such as [2] and [3] placed all their literature references into some kind of internet repository in a digitalized form. This is not hard to do but would help to those of us who live "beyond the Black Stump" but fancy to do a spot of research. Some of the printed papers are quite old and obscure. They are otherwise hard to get outside the government or university libraries located in big cities.

Water is more important than coal, everybody should know that. Yet our politicians and economists talk about doubling the the size of the coal export industry and starting a new coal seam gas industry within this decade. Beside the obvious problem that both are planning to extract more fossil carbon from the Earth crust, will there be enough water for this mining expansion and for our existing towns and food production? Nobody seems to worry about it but we should. With the world population growing exponentially over seven billion, on a small planet under the climate change threat, we cannot afford to make too many mistakes.

## REFERENCES

[1] HRSTS Submission from Hunter Valley Protection Alliance. February 3, 2014.  
<http://huntervalleyprotectionalliance.com/pdf/HRSTS-HVPA-Submissio-20140203.pdf>

[2] Review of the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002. Discussion paper, November 2013.  
<http://www.epa.nsw.gov.au/resources/licensing/hrsts/13771hrstsdp.pdf>

[3] Hunter Catchment Salinity Assessment. Final Report. November 2013.  
<http://www.epa.nsw.gov.au/resources/licensing/hrsts/130787HCSalinityAssFull.pdf>

Thank you for the opportunity to have input into the Review.  
Yours faithfully,

George Tlaskal

