

“Reclaiming our Valley”

Hunter Communities Network

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POEO (HRSTS) Regulation Review
Reform and Compliance Branch
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Review of the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002

The Hunter Communities Network (HCN) is an alliance of community based groups and individuals impacted by the current coal industry and concerned about the ongoing rapid expansion of coal and coal seam gas exploration and mining in the region.

HCN recognises the significance of the Hunter Salinity Trading Scheme (the Scheme) in improving the management of the discharge of highly saline water from mines and power stations in the Hunter region.

Prior to the implementation of the trial and pilot scheme in the early to mid 1990's, water quality in the Hunter system had deteriorated significantly to the extent that irrigated agriculture enterprises were severely impacted.

HCN appreciates the detailed background information provided by the Environment Protection Authority (EPA) in the discussion paper, flagging issues for consideration in the 10 year review of the Scheme, and in the Office of Environment and Heritage (OEH) '*Hunter Catchment Salinity Assessment*' report.

This information has been very useful in assisting HCN members to better understand the current function of the Scheme and to develop responses to the various questions and issues raised in the discussion paper.

HCN believes that the Scheme has been effective in managing the timing and volume of highly saline water discharges into the Hunter River system. The increasing value of the salinity credits demonstrates their important function.

However, the impacts of the rapid expansion of the mining industry during the 10 years of the Scheme's operation need to be better assessed and understood. The lack of any independent cumulative assessment of the current and proposed scale of mining in the region, particularly in relation to impacts on water quality and base flows to the river system, is a major concern of HCN members.

The monitoring of leachate from overburden, coarse rejects and tailings storage as components of mine rehabilitation and its impacts on surface and groundwater quality has not been raised in the discussion paper or OEH report.

It has been recognised that detailed interaction between groundwater and surface water in many parts of the Hunter River catchment still requires further research (OEH report p17).

There is also reference to the potential presence of severed hydraulic connections between creeks and water tables as a result of mining in some areas and to the potential of open-cut mine pits to alter aquifer flow and recharge characteristics.

HCN is very concerned about the issues relating to poor groundwater monitoring across the region. It seems that many of the current groundwater monitoring bores are scattered and limited, biased to alluvial areas and located in areas less impacted by mining.

It is recognised that there is an extensive dependence of water use on the groundwater resources of the Hunter River catchment that requires careful management. Many irrigation bores used for growing crops for the dairy, beef and horse industry as well as grapes, olives and other food stuffs, rely on good water quality and accessible levels.

The ability to assess the trends in groundwater level and salinity in relation to the Scheme will require a more comprehensive and representative groundwater monitoring program across the catchment. This includes access to bores that are tapping into aquifers in close proximity to mines and power stations.

The assessment of the state and trends of salinity in surface water is again impacted by the lack of a consistent and extensive monitoring program. However, it has been identified that increases in salinity levels and variability are particularly noticeable in the Hunter River section between Denman and Glennies Creek and downstream from the Wollombi Brook junction.

HCN is concerned that the intensity of mining operations in both these areas of the catchment is the possible cause of this increased salinity and that further research is needed. It is difficult to conclude that the Scheme is successful when critical areas of the river catchment are trending to increased salinity levels.

Water users in these river reaches have been impacted by salinity levels too high to make use of their surface water licences.

HCN believes that the Scheme is currently working to manage the impacts of saline water discharges on irrigators and other water users in the Hunter River catchment in its present form. However, the ongoing increase in background salinity levels, particularly near large mining operations needs to be better monitored and managed.

HCN strongly supports the OEHL and EPA recommendation that the salinity targets of 600 EC at Denman and 900 EC at the confluence of Glennies Creek and at Singleton not be lifted to a higher level. This action would further threaten the viability of key water dependent agricultural and tourism industries in the Hunter Valley and impact on diversity of economic activity in the region.

HCN proposes that the EPA consider amending the Regulation to lower the salinity targets at Glennies Creek and Singleton in recognition of the *Australian Drinking Water Guidelines* that define good quality water being between 80 -500 EC and fair quality water being between 500 – 800 EC.

Many irrigated crops also perform better at salinity levels lower than 900 EC.

HCN also supports the EPA recommendation to amend the Regulation to remove the flood flow exemption rule. With the increasing expansion of new mines to the west of the Upper Hunter and intensive extensions of existing operations, HCN believes that all discharge of mine water must be conducted through the salinity credit system generated by the Scheme.

HCN does not support the suggestion to redefine a high flow in the river to enable mine and power station water discharges into lower flow levels. This action would remove the key principle of the Scheme that saline discharges from industry can be adequately diluted by large amounts of fresh water.

The rationale behind this suggested rule change is to allow discharge where the discharge water is the same or better than the ambient water quality. This suggestion ignores the issues raised in the discussion paper around other possible pollutants contained in industrial discharge water.

More assessment and monitoring of the ionic composition of the salts and detection of metals and metalloids such as aluminium, nickel, zinc, cobalt and copper in industrial discharge water needs to be undertaken. The comparison of ambient water quality with industrial discharge water needs to take these other contaminants into consideration.

The range of water quality issues cannot be addressed by focusing only on total dissolved solids or electrical conductivity.

HCN is extremely concerned that the massive expansion of the coal industry in the Goulburn River catchment and the proposed expansion of the mining and gas industries are occurring with such limited knowledge of the water source. The lack of real time monitoring in both the upper and lower sections of the Goulburn River catchment for flow and salinity needs to be addressed.

Likewise, ongoing monitoring of high salinity levels in the Wollombi Brook at Warkworth needs to be addressed.

HCN wishes to recommend that some of the revenue generated by auctions of the Scheme salinity credits be used to substantially improve the monitoring system across the Hunter catchment and to study additional pollutants in industry discharge water.

HCN also supports the discussion in Issue 10 in regard to aspects of the Scheme becoming more transparent and accessible to stakeholders and the general public

HCN notes that 5 of the 12 years of the operation of the Scheme included one of the most significant drought periods on record. Therefore the records of use of the Scheme through the total allowable discharge (TAD) have been biased by the period of drought when mines and power stations needed to keep water on site for internal usage.

The last couple of wet years have seen a marked increase in TAD useage and an increase in the average annual salt load at Singleton attributed to Scheme discharge.

There is no discussion of the possible increase in salt load if the Scheme was used at 100% of TAD.

The OEH report notes that the increasing demand on the Scheme and the associated increasing salt load in the river needs ongoing monitoring.

HCN welcomes this opportunity to submit comments on the operation of the Scheme and the issue of salinity levels in the Hunter catchment. While agreeing that the Scheme to date appears to have been effective, there is major concern about the cumulative impact on water quality and water volume from the ongoing expansion of large scale coal mining in the region.

HCN trusts that the EPA will consider the points of discussion made in this submission and will only alter the Regulation in a manner that improves the operation for the benefit of all water users and the health of the Hunter River system.

Yours sincerely



Bev Smiles
On behalf of Hunter Communities Network