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Referrals Section (EPBC Act)  
Approvals and Wildlife Division  
Department of the Environment and Heritage  
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August 2<sup>nd</sup> 2010

Dear Director,

I refer to the referral by the South Australian Department for Environment and Heritage to the Minister under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) titled: **Request for Reconsideration of Particular Matter Decision – Flow Regulators in the Goolwa Channel and tributaries, and pumping from Lake Alexandrina, South Australia (EPBC 2009/4833)**

While I am appalled at the likelihood of serious damage to the fish and other species of the Lakes and Coorong environment, I believe that this proposal is a means of making the Clayton Regulator a permanent management feature of the Lower Lakes. The proposal has no indication of water volumes to be used, nor a time frame for operation. No consideration is given to the removal of the structure which itself stops the movement of water in the Lakes system and therefore migration of fish species to fresher waters of the Lakes and Murray River itself. No mention is made of the operation of the other barrages and fish passages in the area as the Lake level increases.

The problem is a result of overallocation of resources of the whole Murray Darling Basin. That must be addressed. We have seen the revival of the ecosystems along the shores of Lake Alexandrina. Dunn's Lagoon, a site of major concern only a few months ago is now very healthy, a haven for birds and other creatures.

Comments on sections of the proposal:

“ · allow for diadromous species, listed in the ecological character description (ECD) of the Lower Lakes Ramsar site, to complete important stages in their lifecycle;  
· prevent the imminent local extinction of congolli, a species listed in the ECD of the Ramsar wetland;”

What about the fish on the Lake side of the other Barrages – Tauwitcherie, Ewe Island, Mundoo?

What about the fish on the upstream side of the Clayton Regulator. Will they be transferred to the Goolwa Pool by pumping?

“ · export salt from the Goolwa Channel project area to facilitate conditions for a freshwater refuge in 2010-2011;”

Salinity of the Goolwa channel has increased since the Regulator was closed. See Appendix 1 - graphs from the Department's own monitoring sites, as reported on their telemetry web site. Current salinity is ~ 20000 EC generally ~ half seawater. To

reduce this to “fresh” would require the replacement of nearly all the water in the pool! and that doesn’t allow for the natural inflow of salinity from the sea.

“ · create estuarine conditions on the downstream side of the Goolwa barrage that may help prevent the collapse of estuarine invertebrate communities.”

How much water will that require? Is the half-sea water from the Goolwa pool going to do that?

“The Proposal

A variation of the NCA-PM conditions is now sought to enable the pumping of additional environmental allocated waters into the Goolwa Channel pool from Lake Alexandrina to achieve environmental objectives within the Channel and allow water releases through the Goolwa barrage for ecological purposes.”

1. The original proposal was supposed to “achieve environmental outcomes” using the waters of the Finniss and Currency Creek. Why has that changed?
2. How much water is proposed? The amount allocated to the fringing wetlands of the channel? How is the Finniss and Currency Creek water factored into this? It was understood in the original proposal that “excess” water from those tributaries be returned via siphons to Lake Alexandrina. Is this still the case?
3. What is the time frame for this action? The original proposal was very light on the conditions for removal of the Clayton Regulator. This proposal appears to extend its life forever.

“Monitoring of the outcomes from releases will be undertaken; this includes monitoring the success of fish movement and recruitment by South Australian Research Development Institute (SARDI).”

If this is successful, will this mean the pumping will be indefinite? if unsuccessful, will it stop?

“Increased salinity and reduced nutrients in the Goolwa Channel has increased stress on the freshwater species surviving in that area, including Murray hardyhead. More recently, the construction of the temporary flow regulator at Clayton has reduced salinity levels in the Goolwa Channel weir pool.”

The salinity has NOT reduced in the Goolwa pool since the regulator was built. Salinity levels at the Department’s own monitoring points on Currency Creek, Lower Finniss and Clayton indicate an increase from ~ 5,500 EC before the regulator to ~17,000 EC today. If the Regulator had reduced salinity, then why is it necessary to export it through the Goolwa Barrage?

“A number of additional research and relevant reports have been prepared relating to the importance of undertaking regular releases.”

I absolutely agree. This is a river system, it needs to flow. However the same applies to the other Barrages.

“The ability to pump environmental allocated waters into the Goolwa Channel project area will enable water to be transferred to support the use of the Goolwa barrage fish passage.”

I also note the following comment in the Department of Environment and Natural Resources “Community Update”, 30 July 2010: “The South Australian Government is seeking approval to transfer water allocated to the environment, if it becomes available, to the Coorong estuary using the fish passage in the Goolwa barrage.”

Does not the fish passage have an allocation? Why should they have to ask permission to use it?

I understand that the fish passage alone uses only a small amount of water. If this is the only use envisioned for the pumping, then surely it will have only a tiny effect on the downstream estuary. Much more of the pumped water will simply evaporate, therefore increasing salinity in the Goolwa Channel Pool!

The release of the much fresher Lake water through the existing fish passage at Tauwichee would be better, when Lake levels allow.

This proposal must not be allowed to become a permanent “fix” for the Goolwa pool, which on its own can never be a freshwater refuge.

Therefore, as permitted under the EPBC Act, I request that the Minister reject this proposal to indefinitely extend the life of the regulators and weirs in the Goolwa Channel, River Finniss and Currency Creek.

If the Minister does not decide this at this point then I submit that this action should be declared a controlled action for the purposes of the EPBC Act, an EIS be prepared and time and water volume limits for the action be imposed.

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## Appendix

Salinity in EC (uS/cm) and water level (m AHD) graphs.

All graphs drawn by the Department of Water web site on 2 August 2010 and show 1 year of data. All sites are within the Goolwa Channel Pool.

The Clayton Regulator was closed in early August 2009 and pumping began soon after. This is shown by the initial rapid rise in water level at each monitoring station. The small rise in level and variation in salinity from early June 2010 is due to small flows in the Finniss and local rainfall.

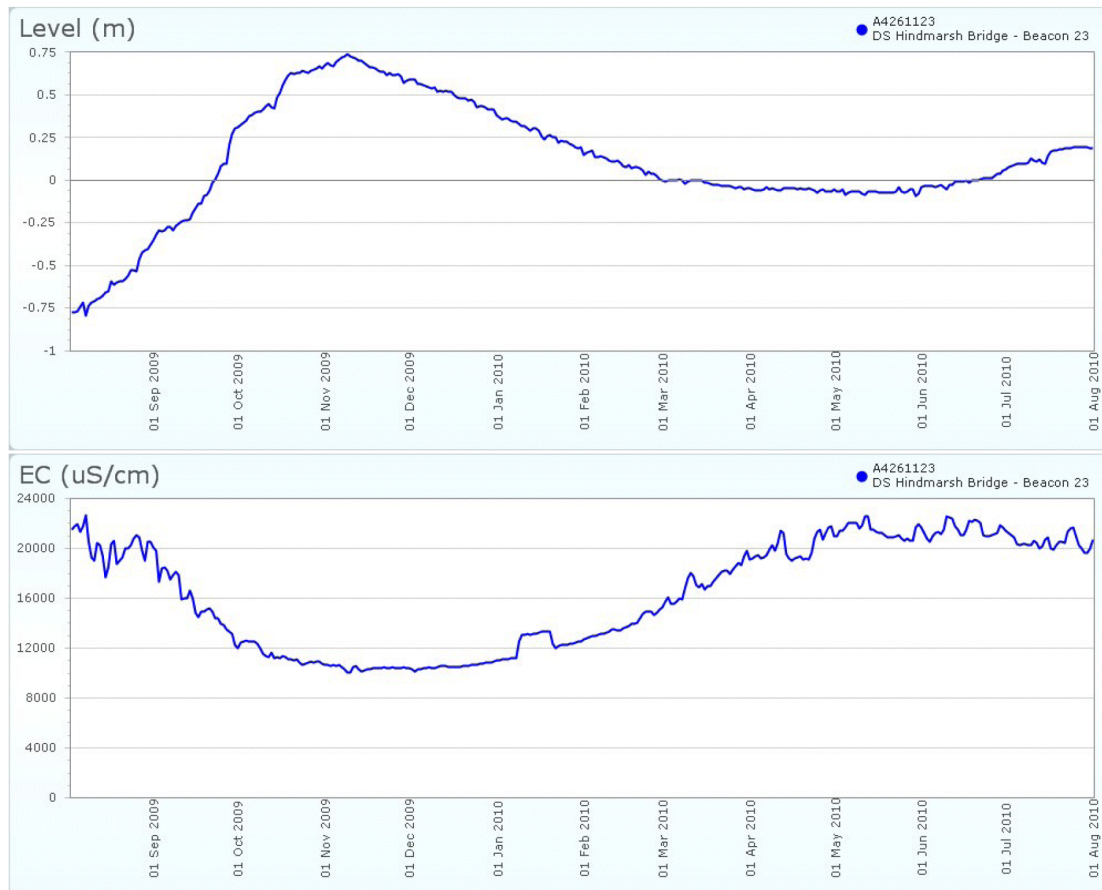


Figure 1: Hindmarsh Island Bridge Beacon 23. This is close to the Goolwa Barrages. The salinity level has started at ~23000 EC, dropped to ~11000 EC and has now returned to its original level.

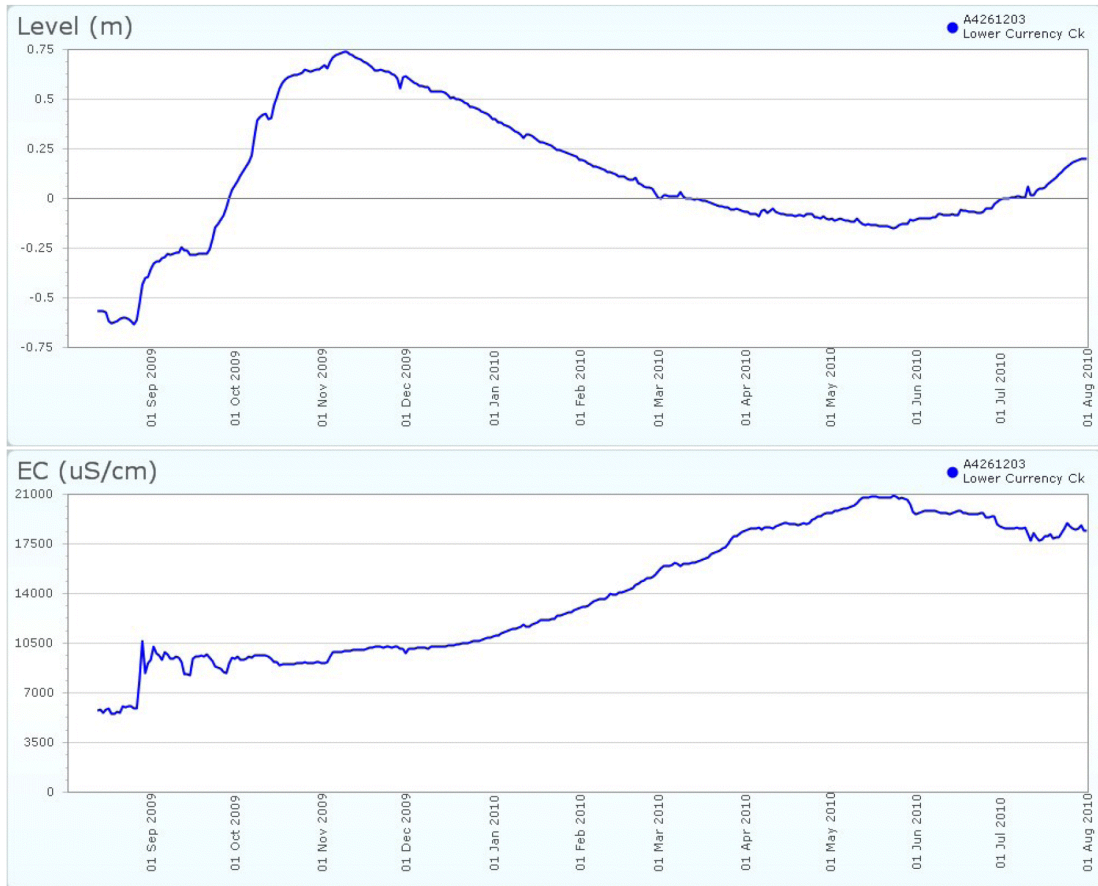


Figure 2: Lower Currency Creek

Salinity started at ~5000 EC, jumping suddenly in early September when the level in the Goolwa Pool reached the level of the weir across the river at North Goolwa and water flooded into the Currency estuary. (it was not filled by water from Currency Creek itself). Salinity gradually increased until late May 2010 and has now dropped slightly to ~18000 EC.

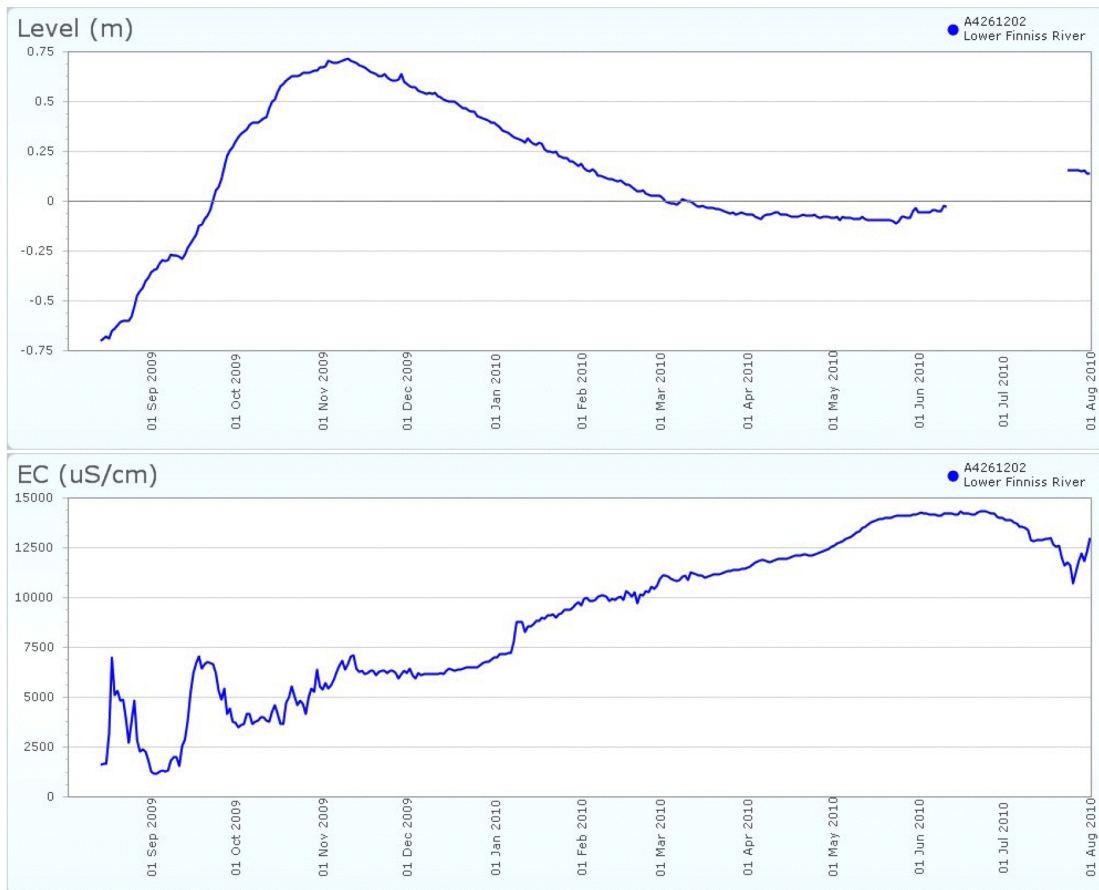


Figure 3: Lower Finiss.

Salinity has increased since the closure of the regulator. Initial variations are from flows in the Finiss River, before pumping commenced in late September. The effect of fresh flows in the Finiss can also be seen during July 2010.

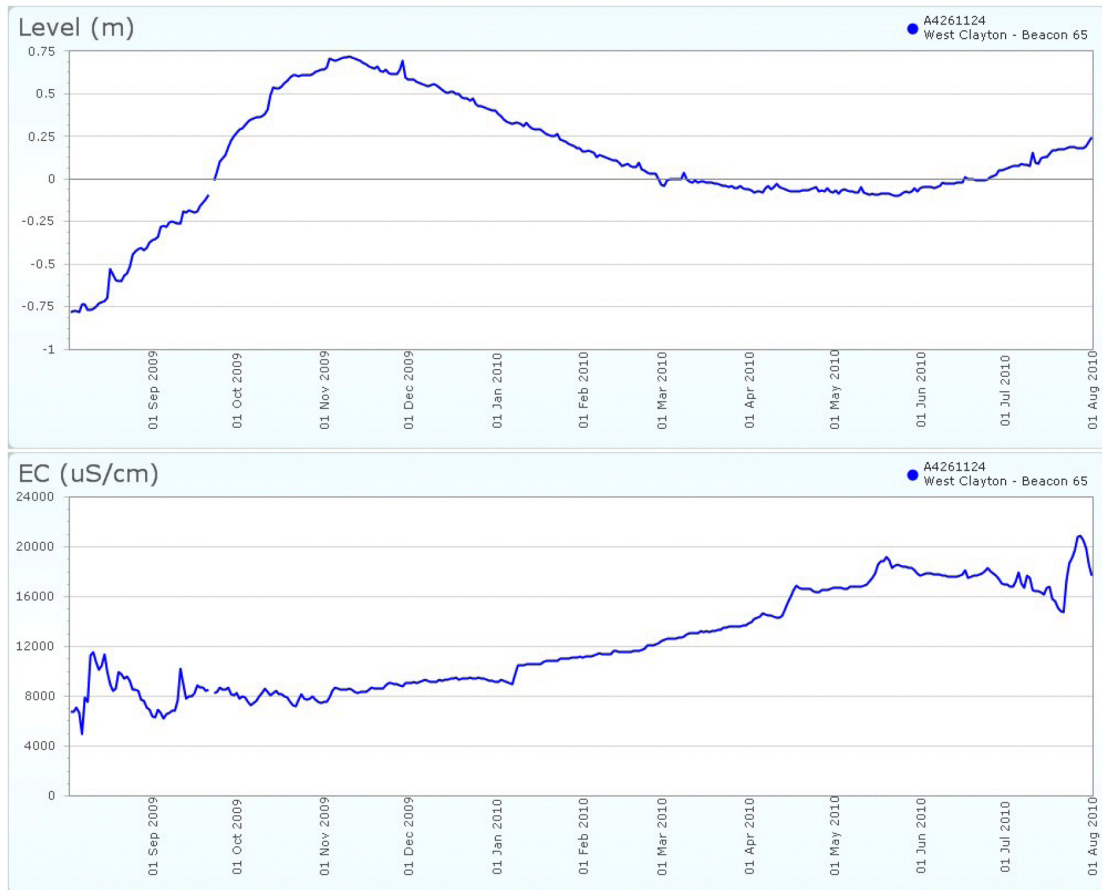


Figure 4: West Clayton.  
Salinity has increased following the closure of the regulator.