



Community update February 2014

This email newsletter is published by the [Department of Environment, Water and Natural Resources](#) (DEWNR) to update the community about work being done to secure the future of the Coorong, Lower Lakes and Murray Mouth (CLLMM) region as a healthy, productive and resilient wetland of international importance.

The CLLMM Recovery Project is part of the South Australian Government's Murray Futures program, funded by the Australian Government's Water for the Future initiative.

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Currency Creek Regulator Removal Update

When on-water work for the removal of the Currency Creek Regulator finished in August 2013 local conditions made it difficult to complete total clean-up of the site with access tracks and paddocks inundated. While site is still wet in places work commenced in December on spreading the sand material at the on-land disposal site.

Next week a local earth moving company will start to remove the rock material from site. The contractor will then complete the final site clean-up tasks including removal of the hard lay down areas and the section of access road on crown land. The site will be left to regenerate naturally but will be monitored.

The work will be centered around Myrtle Grove Rd so the community is to be aware of heavy vehicles working in the area. There will be no impact for water users in Currency Creek.

Acid Sulfate Soils Research

Research into the impacts of acid sulfate soils on the ecosystem of the Coorong and Lakes Alexandrina and Albert Ramsar site will continue in 2013/14.

The research will assist management of the Ramsar site by further improving our understanding of the impacts from prolonged exposure, oxidation and rewetting of acid sulfate soils upon the ecosystem. It will focus on locations in Lakes Alexandrina and Albert, and Finniss River.



The research will examine interactions between sediment, water, macroinvertebrates (such as mussel larvae and bugs), plant and some small bodied fish to provide a deeper understanding of environmental connectivity and resilience.

It will investigate the mobilisation and uptake of metals at the lower end of the food web and in different organisms. This knowledge is essential to assessing both the present and future risks posed by acid sulfate soils to the ecological function and ecosystem services provided by the Coorong and Lakes Alexandrina and Albert wetland.

The findings from the research will be used to inform water level management and the restoration of wetland function. The information can also highlight the ecological consequences of drought and water over-allocation, and the benefits of avoiding degrading or unsustainable practices to ensure the wise use of Murray-Darling Basin resources. A final report will be made available on the DEWNR website.



Photos: Deployed cages of shrimps and yabbies in the Lower Lakes for the in-situ assessment as part of investigating uptake of metals in the lower end of the food web. (Source: CSIRO 2013)

The research is being undertaken by CSIRO, Southern Cross Geoscience, the SA Environment Protection Authority and the Department of Environment, Water and Natural Resources as part of Coorong, Lower Lakes and Murray Mouth (CLLMM) Recovery Project.

Ecosystem Benefits and Community Values Survey Raffle Winner

In October and November 2013 a community survey was distributed to seek perspectives on the benefits that are provided by the Coorong, and Lakes Alexandrina and Albert Ramsar wetland. Those who participated went into the draw to win a \$200 basket of regional produce and other goodies.

Run online by CSIRO on behalf of DEWNR, the *Ecosystem Benefits and Community Values Survey* received over 80 responses from community members. This is a fantastic result that will provide a wealth of insights to contribute to an update of the *Ecological Character Description* for the site.

An *Ecological Character Description* of Ramsar wetlands is required to be developed by national governments that are signatories to the *Ramsar Convention for Wetlands of International Importance*. Over 160 countries have signed the Convention to protect the world's wetlands.

The last *Ecological Character Description* for the Coorong and Lakes Alexandrina and Albert Ramsar wetland was released in 2006. DEWNR is presently updating the *Ecological Character Description* for



the wetland in accordance with national and international guidelines and will provide an updated snapshot of the wetland through drought and recovery.

The Ecological Character Description will include information on:

- **ecosystem components** – those elements, such as fish, vegetation and nutrients, that make up the character of the wetland,
- **ecosystem processes** – the ecological relationships within the wetland such as breeding and hydrological processes
- **ecosystem services** – benefits (i.e. goods and services) that the wetland provides to the community such as recreation, aquatic foods and water supply.

The results of the survey distributed in late 2013 will be useful in understanding how the local community perceives and values the Coorong and Lakes Alexandrina and Albert site, as well as what specific benefits the community receives from it.

The survey raffle was drawn by the CLLMM Community Advisory Panel at their 12 December Meeting and the lucky winner – Daryl Owen – was able to collect his prize just in time for Christmas!



Daryl Owen is presented with his prize by project officer Sophie Hansen (DEWNR 2013).

Lake Albert Scoping Study Nearing Completion

The Lake Albert Scoping Study Project that commenced in January 2013 is nearing completion. The Study is looking into the feasibility of a range of potential management actions to improve water quality in Lake Albert, with salinity a main focus.

Computer modelling has been carried out for all management actions to show how each may perform under a range of climatic scenarios. The results of this modelling has revealed two preferred management actions and were presented to the Meningie Narrung Lakes Irrigators Association and at a Talking Heads session at the Meningie Hub in December 2013.

Both of these sessions were well attended and provided a good opportunity for the community to ask questions of the project team.



Dredging Narrung Narrows, installation of a permanent water regulating structure in Narrung Narrows, removal or modification of Narrung Causeway, lake level manipulation (lakes cycling) and the installation of a pipe/channel between Lake Albert and the Coorong (also known as the Coorong Connector) have been investigated over the past year.

A Community Reference Group has provided valuable input to the study and will be making a submission to the project Steering Committee for consideration.

Modelling has shown that dredging Narrung Narrows and removal or modification of Narrung Causeway are predicted to have negligible benefit to Lake Albert salinity. The model was run with the Causeway removed and the Narrows 'dredged' to a maximum depth and width. Despite the increased passage between the lakes, salinity did not improve much from the base case of 'do nothing'.

Modelling indicated that the permanent water regulating structure would make salinity worse in Lake Albert as such a structure would prevent wind-driven water exchange and hence salt export from the lake. Manipulating lake levels (lakes cycling) was shown to have some benefit when compared to the base case. The Coorong Connector was found to be the most feasible management action in terms of reducing salinity in Lake Albert and maintaining a lower salinity level.

As a result the engineering feasibility of dredging Narrung Narrows and the Coorong Connector is presently underway, as is a Cost Benefit Analysis. An Options Paper is being prepared to summarise the various reports and studies undertaken as part of the lake Albert Scoping Study Project and is expected to be completed in March 2014.

For further information on the project or management actions, please contact Andrew Dawes at the Meningie Lakes Hub on (08) 8575 1830 or at meninige@lakeshub.com.



Monitoring of river club-rush plantings

River club-rush (*Schoenoplectus validus*) is a large native perennial sedge that grows to 2 to 3 metres high in water up to 1.5 metres deep. It is a common plant around the edges of Lake Alexandrina and Lake Albert.

Over the last 8 years the River club-rush has been planted by the community around the lakes to combat shoreline erosion and increase native plant and animal diversity. For the last two years, the CLLMM Vegetation Program have built upon the great work that the community had started in collaboration with community organisations.

River club-rush is planted because it is relatively easy to propagate and plant, is able to withstand and reduce wave energy and can be planted in deep water.

Despite the work that has gone into establishing River club-rush there has been little monitoring to evaluate the survivorship, density and extent of the planting, or to evaluate the benefits of it on the aquatic plant community.

In May 2013, the South Australian Research and Development Institute (SARDI) undertook a River club-rush monitoring project on behalf of DEWNR to address these data deficiencies.

The aims were to assess survivorship, density, height and extent of river club-rush plantings in lakes Alexandrina and Albert and investigate the effect of River club-rush planting on the aquatic environment by comparing the plant community in planted and not-planted areas.

A total of seven sites where River club-rush had been planted were monitored including Wellington Lodge, Raukkan, Dummandang, Lake Albert Road, Meningie Foreshore and Nurra Nurra Point. Control sites with no plantings were established adjacent to or near each site. Assessment was undertaken along a 100 m section of shoreline at each of these sites.

Results showed that the River club-rush had survived the period of low water levels in the Lower Lakes and had recolonised (from rhizomes that persisted through the drought) at all old planted sites monitored, and survived transplanting well at recently planted sites.

Three out of the four sites with plantings older than 6 years, there was a higher abundance and larger area of native aquatic species compared to the adjacent control sites. In the newer planted sites (less than 1.5 years) native aquatic species were present at two of the three sites and absent at all of the control sites. This indicated that planting river club-rush benefits the aquatic plant community by providing a sheltered area where other native plants are able to colonise and persist. This study provides evidence that the river club-rush can reduce shoreline erosion and facilitate natural colonisation and the establishment of species rich wetland plant communities.



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CLLMM Community Advisory Panel welcomes two new members

The Coorong, Lower Lakes and Murray Mouth (CLLMM) Community Advisory Panel welcomed two new members, Mr Paul Harvey and Ms Lorraine Leese in 2013, after the retirement of Ms Felicity Turner and Mr Don Richardson. Paul and Lorraine were successful following a call for expressions of interest from the local community, with the remaining CAP electing the successful candidates from a strong field of nominations.

Paul and Lorraine bring a wide range of skills to the Community Advisory Panel in assisting community management of the wetland and improving community resilience in the remaining time of the CLLMM Recovery Project to June 2016.

Lorraine Leese and her husband Joe come from a farming background, having previously run a successful dairy and stud property 'Jolrae' situated on the Narrung Peninsula. Due to the drought their 'Jolrae' was forced to be re-located to Kongorong, in the South East, and it is now owned and operated by their son Michael & daughter-in-law. As true conservationists their farming practices **have** always been mindful of the environment with their motto being 'protect the environment and it will protect you'.

Through her involvement in the CAP Lorraine hopes to ensure the wellbeing of the unique region of Lakes Albert, Alexandrina and the Coorong for future generations. She is passionate about showcasing the site and its cultural and environmental values to the world, and a resident of Meningie seeks to keep her local community informed. Lorraine is also a member of the Meningie Narrung Lakes Irrigators Association.

Paul Harvey has worked in water resources management and natural resources management across many areas of the state for over 35 years in State Government, as leader of a major Commonwealth Government Regional Catchment Management Initiative and as a private consultant. This has included over 30 years involvement in issues associated with the management of the River Murray downstream of Lock 1.

Paul spends a considerable proportion of his time at Goolwa and has a very strong affiliation with the local community. He is particularly interested in making sure that the best possible use is made of the water that is available to South Australia to deliver improved environmental, economic and social outcomes in the region through informed and responsive management of our water resources. Paul is also a member of the Lower Lakes and Coorong Tourism and Environment Group.



Merger of River Murray Operations and Major Projects

On 6 December 2013 the Chief Executive of Department of Environment Water and Natural Resources (DEWNR), Mr Allan Holmes announced the amalgamation of the River Operations and Major Projects branches within the agency. The consolidated approach will build on the expertise and achievements of the two branches. It will help deliver a 'whole of River Murray system' approach and continued strong outcomes for the various projects the branch is responsible for.

Mr Andrew Beal has been appointed as the Director of River Murray Operations and Major Projects, with Ms Janice Goodwins providing Senior Management overview in the new team.

