Government of South Australia

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MURRAY FUTURES
Lower Lakes & Coorong Recovery

Community update

March 2012

This email newsletter is published by the Department of Environment and Natural Resources (DENR) 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.

Highlights

- Revegetation opportunities for CLLMM landholder
- Lower Lakes native fish species fight back!
- Planting Day at Meningie
- New community group to guide CLLMM projects
- Monitoring and Research
- ABC "7.30 SA" program features CLLMM Program zooplankton monitoring

Revegetation opportunities for CLLMM landholders

Expressions of Interest are being sought from Coorong, Lower Lakes and Murray Mouth landholders who are interested in revegetation and other restoration opportunities for their properties.

The Vegetation Program aims to revegetate, rehabilitate and restore habitats around the Coorong and Lower Lakes region, as well as combating environmental issues such as acidification and soil erosion.

The Department of Environment and Natural Resources' CLLMM Program is looking for landholders interested in undertaking native revegetation, fencing, and pest and weed control as part of the Vegetation Program.

The Vegetation Program provides an opportunity for local landholders to become directly involved in the collaborative effort to secure a healthy and resilient future for the region.

Further information and the Expression of Interest form are available from the Department of Environment and Natural Resources website – click here to access the forms.

Or contact Nikki Brookman on (08) 84637694 or email nikki.brookman@sa.gov.au

Expressions of Interest submissions close 5pm 4th May 2012.

Habitat restoration

Lower Lakes native fish species fight back!

There are early signs that the re-introduction of native fish species into the Coorong and Lower Lakes region has been a success.

A male southern pygmy perch (© Michael Hammer)

Last November, Premier Jay Weatherill and Sustainability, Environment and Conservation Minister Paul Caica helped to return around 1000 Southern Pygmy Perch bred in captivity to their natural habitat on Hindmarsh Island.

Last month, samples taken at some of the Hindmarsh Island sites found a number of the fish that had been released in November, indicating the re-introduced fish are surviving.

Adam Watt, from the Coorong, Lower Lakes and Murray Mouth Program's Critical Fish Habitat Project, says the recent drought had a severe impact on the region's native fish species.

"The lack of freshwater inflows during the drought resulted in critical wetlands and fish habitats drying out, and this had a severe impact on populations of native fish throughout the region," says Adam.

"The fish that remained were rescued for breeding programs, with the intention of returning the fish bred in captivity to their natural habitat once the water returned.

"The fish we returned to Hindmarsh Island last November were treated with calcein – a harmless fluorescent dye – so that we could identify them during our regular monitoring activities.

"Sure enough, we found some of the treated Southern Pygmy Perch during sampling on Hindmarsh Island last month, and although it was only a small number, it's a good indication that the species has survived the first few months after being released.

"The fish we found looked to be in good health. The site we checked is thick with submerged vegetation, which is excellent habitat for the fish, and should provide them with plenty of food.

"Along with the Southern Pygmy Perch, we also found some of the Southern Purple Spotted Gudgeon released in the region during November last year," says Adam.

The effort to save the CLLMM region's native fish species has been a collaboration between the Department of Environment and Natural Resources' CLLMM Program, Flinders University, the Department for Water, Aquasave, the South Australian Research and Development Institute, the Department of Primary Industries and Regions SA, the SA Murray-Darling Basin NRM Board, the SA Museum, and Native Fish Australia (SA).

Get involved

Planting Day at Meningie

Join the Friends of Meningie, the Meningie Progress Association and Ngarrindjeri in planting approximately 2,000 plants along Meningie's lakefront on Monday 23 April 2012.

Landscaping of the culvert has been completed and it is ready for the final stage of transformation from a broken concrete drain that carried polluted stormwater into Lake Albert to a functioning wetland corridor that provides water filtration and habitat to local native flora and fauna.

The planting day will help restore habitat along the foreshore for local wildlife and will help to improve Lake Albert's health in the Meningie area. The project will also make the lakefront more attractive for the community and visitors to enjoy.

Elsewhere at the project site, weed matting and mulch will soon be installed in the recently sprayed area between the Meningie Sailing Club and the Town Jetty, and also in Lions Park between the path and the Lake. Weed matting and mulch will assist in the suppression of weeds, soil stabilisation, moisture retention and aesthetics. Approximately 20,000 additional plants will be planted in these areas in May 2012.

Construction of the viewing platforms, beach stabilisation seating and the bird hide will commence in early April.

If you are interested in helping with the planting, or becoming involved in the Friends of Meningie Group, please contact Andrew Dawes at the Meningie Lakes Hub on 8575 1830, via meningie@lakeshub.com or visit the Lakes Hub at 79 Princess Highway, Meningie.

New community group to guide CLLMM projects

The first meeting of the new Community Advisory Panel (CAP) for the Coorong, Lower Lakes and Murray Mouth region will be held on Monday 2 April.

The CAP has been established to feed community knowledge and advice into projects being undertaken in the region by the Department of Environment and Natural Resources and the Department for Water.

Previously, separate community groups and committees were formed to provide advice on individual projects in the region.

The aim of the CAP is to provide on-going community input into the wide range of State and Commonwealth government-funded projects in, and planned for, the CLLMM region during the next few years.

The new CAP has 15 self-nominated members, and must include at least one elected member of local government and at least one member of an NRM Board. Membership is voluntary, with the inaugural members initially appointed for a one-year term.

Monitoring and research

Ecological, soil and water monitoring is continuing in the Lower Lakes, with the aim of assessing the region's ecological response to the transition from drought to flow conditions.

The monitoring includes aquatic macroinvertebrates, zooplankton, fish and birds, plants such as ruppia tuberosa, surface and ground water (for salinity, pH, metals, nutrients and algae), and soils.

Fairy Tern chick, Photo: Pamela Gillen

Water Quality Monitoring

A water quality monitoring program is continuing to check acidification risks and recovery. The program includes fortnightly/monthly surface water and quarterly groundwater monitoring undertaken by the Environment Protection Authority (EPA) to examine the quality of the water against ANZECC and state government guidelines.

Surface water in two creeks on Hindmarsh Island and one marginal area of Lake Alexandrina continue to display low levels of residual acidity, and groundwater monitoring continues to indicate low pH and high acidity levels at two sites – one in Lake Alexandrina and the other in Lake Albert.

Soil Monitoring

The CSIRO continues to conduct monitoring of acid sulfate soil recovery in the Lower Lakes region, with findings to be released in July this year.

This project is a continuation of acid sulfate soil monitoring in Lakes Alexandrina and Albert conducted between November 2010 and June 2011. The monitoring will continue to record the recovery of acid sulfate soil sites around the margins of the lakes, thereby providing a better understanding of the environmental impacts of acidification events.

Lower Lakes Water Quality Monitoring Webpage

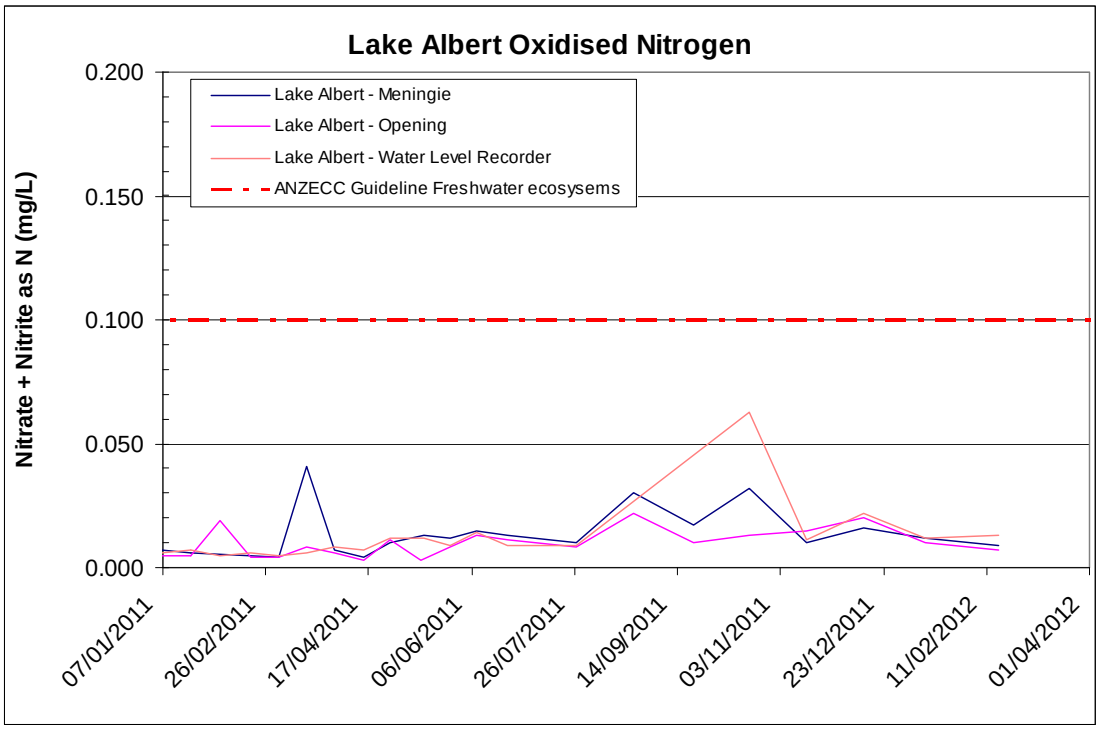
The EPA website has been updated, and now presents ambient (lake-wide) water quality monitoring data within a month of sampling. Groundwater, event-based (localised water quality monitoring) and benthic ecology information will be presented within coming months.

Lake Albert Oxidised Nitrogen Levels

The latest Lake Albert water quality monitoring undertaken by the Environment Protection Authority (EPA) shows that oxidised nitrogen (nitrate and nitrite) levels are between 0.003 and 0.06 mg/L (see graph below of the last year's data). These levels are well within Australia New Zealand Environment Conservation Council (ANZECC) guidelines for protection of aquatic ecosystems (red dashed line on figure below) and livestock health.

These oxidised nitrogen levels were measured by the Australian Water Quality Centre's NATA accredited independent laboratory.

The EPA advises that given the regular wind mixing and seiching of water within Lake Albert, it would be unlikely that localised oxidised nitrogen levels around the edges of the lake would differ greatly from those found in the main lake water body (shown on the graph below).



Lake Albert oxidised nitrogen from February 2011 to February 2012 (EPA 2012)

Latest water quality results for Lower Lakes

In mid March, the average water level in Lake Alexandrina was about 0.68 metres above sea level and Lake Albert was about 0.6 metres above sea level[1].

The latest reports on water quality monitoring and River Murray water resources are now available:

- River Murray Flow Advice
- River Murray Data website
- EPA water quality monitoring

[1] River Murray Flow Advice, 23 March 2012

ABC “7.30 SA” program features CLLMM Program zooplankton monitoring

On Friday March 9, ABC TV’s “7.30 SA” program featured a segment about the zooplankton monitoring conducted by the CLLMM Program in the Coorong and Lower Lakes region.

CLLMM Program staff members Sorell Lock and Ewa Ciechorska, along with senior environmental adviser Russell Seaman, explained why the zooplankton monitoring is an important tool for gauging the health of the system.

Zooplankton are microscopic animals that are a good indicator of water quality, as well as providing information on the source of the water flowing into the Lower Lakes and Coorong. Zooplankton species native to southern Queensland have been found by CLLMM Program staff in the Lower Lakes.

Some new species of zooplankton were discovered by CLLMM Program staff in the region last year.

Sorell, Ewa and Russell spent a few hours at Tolderol with the ABC crew being interviewed about the monitoring program, as well as displaying their monitoring techniques.

Russell says monitoring these tiny animals provides critical information for the CLLMM Program’s drought recovery work.

“Hopefully the ABC TV story will serve as a showcase for the good work being done in the Coorong, Lower Lakes and Murray Mouth region, and will help people throughout the region understand some of the science behind our work,” he says.

The ABC “7.30 SA” story can be viewed at: http://www.abc.net.au/news/2012-03-09/signs-of-life-found-in-floods/3881048

National Acid Sulfate Soils Conference

The third National Acid Sulfate Soils Conference was held in Melbourne in early March.

The conference provided an opportunity for scientists and environmental managers from around the country to exchange information and experiences about the management and remediation of acid sulfate soils.

Key staff from the Department of Environment and Natural Resources and the Environment Protection Authority represented South Australia at the conference, and shared our State’s experience in managing the acid sulfate soil threat in the Coorong and Lower Lakes region.

Among the topics presented to the conference by the SA representatives were:

- air quality in the Lower Lakes during a hydrological drought
- assessing acidification risks during rapid water level decline, and strategies used in the Lower Lakes
- assessment of lake acidification risks associated with acid sulfate soils in the Lower Lakes
- managing acidification risk using GIS
- the consequences of reduced water flows to the Lower Murray region.

More information

Funding

Developing and implementing the Long-Term Plan is part of the South Australian Government's up to $610 million *Murray Futures* program, funded by the Australian Government's *Water for the Future* initiative and the South Australian Government.

The Lakes Hubs have been funded through a grant made to the Milang and Districts Community Association as part of the Coorong and Lower Lakes Recovery *Murray Futures* project.

Find out more

To find out about the Department of Environment and Natural Resources' work in the Coorong and Lower Lakes region, visit www.environment.sa.gov.au/cllmm or contact us at:

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