

The Lakes Hub is an initiative of the Milang and District Community Association Inc. funded by the Australian Government and the South Australian Government's Murray Futures program.

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Forecasting, planning and planting...

Those of us who attended the long range weather forecasting session in May got a detailed insight into the complexities of weather forecasting, along with some of the new tools the Bureau of Meteorology is developing, to assist with community use of data. We also learnt that we have reasonable odds of above-average rainfall over winter.

As a number of CLMM recovery activities draw to a close and others commence implementation, the seasons breaking rains signals the start of a busy time around the Lakes and Coorong Region. The community nurseries and planting teams are now in full swing with planting underway. This winter, approximately 160,000 community nursery grown plants will be planted by various commercial and community groups. Since the commencement of the project in 2010, over 1,360,00 community grown plants of different sizes will have been planted around the lakes and tributaries.

Community members are reporting that this has made a difference in the environment, particularly the number of native birds and different species spotted in the region. It will be exciting to see how all these sites will look in the next twenty years.

The Lakes Hub team has been assisting DEWNR with organizing the 2016 Coorong and Lakes Environment Forum on the 17th June. Due to the huge attendance last year, it will now be held at Signal Point in Goolwa. RSVPs are required due to it being a catered event.

I look forward to seeing you all at either the Environment forum or at the Murray Musical performances in June.

Faith Coleman



Lakes Hub in the news: The image below was taken by Casey Gregory, from the Murray Valley Standard. The Standard has been very proactive in covering environmental events or issues this year. Click on the image for full article.



Coorong and Lakes Environment Forum

Friday 17th June 2016

Signal Point Gallery, The Wharf,
Goolwa

9:30 am - 4:00 pm

Lunch provided please RSVP by 10th June to Lakes Hub

Past, present and future - A day of sharing knowledge and ideas with
scientists, managers and community.

Come along and listen to presentations, join in open panel discussions and
learn more about the health of the Coorong and Lower Lakes - a unique part
of the world.

For further information & to RSVP:

Email: info@lakeshub.com or (08) 8537 0808.

Programs will be available at www.lakeshub.com



The Lakes Hub is an initiative of
the Milang and District
Community Association Inc.
funded under the Coorong,
Lower Lakes and Murray
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the South Australian
Government's Murray Futures
program.



Government of South Australia
Department of Environment,
Water and Natural Resources



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Reducing Australia's Carp Invasion

(Source: CSIRO website)

CSIRO scientists are undertaking rigorous tests to determine the safety and suitability of the candidate biocontrol agent *Cyprinid herpesvirus 3* (CyHV-3) in managing European carp numbers in Australia.

The Challenge



A European carp. Image: Dirk-Jan Kraan/Flickr

European carp (*Cyprinus carpio*) is a pest that adversely affects the health of our rivers and wetlands. It was first introduced to Australian waterways more than 100 years ago and has since established in every state except the Northern Territory. Able to tolerate a wide range of conditions and habitats, including low-oxygen and brackish water, it is considered one of the country's major aquatic pests since it massively spread through the Murray-Darling Basin in the late 1980s.

Previously held in check by the drought, recent years of flooding rains have brought our river systems back to life, and as a result the carp population has again expanded. This puts increasing pressure on our waterways and native wildlife.

CSIRO Response

A recently identified candidate biological control agent may one day keep carp numbers in check. Our scientists are currently investigating a highly specific viral disease called *cyprinid herpesvirus-3*, also known as *koi herpesvirus* (KHV), to help manage carp numbers in Australia. The virus first appeared in Israel in 1998, and spread rapidly throughout much of the world, although not to Australia or New Zealand.

It causes high death rates in common carp and in the ornamental koi carp. No other species of fish, including goldfish, are known to be affected by the virus.

We are undertaking our research within the world's most sophisticated high containment facility - the CSIRO Australian Animal Health Laboratory, where we are performing rigorous tests to determine the safety and suitability of the virus for controlling carp.

The Results

We have identified that CyHV-3 does kill Australian pest carps, and it kills them quickly. Current research has also shown that the virus does not develop in native Australian or any other introduced species of fish.

Over the next few years we'll continue to test the susceptibility of other fish and amphibian species to CyHV-3 and address questions regarding the safety of possible widespread distribution of the virus, both for people and other animal species.

This work is supported by the Invasive Animals Cooperative Research Centre and the release program is led by the New South Wales Department of Primary Industries.

We will also continue to consult widely with conservation groups, recreational fishers and resource managers.

News for May 2016: On the 1st May 2016 the Australian Government announced \$15 million in funding over two and a half years to develop the National Carp Control Plan to undertake further research, approvals, and consultation to develop a comprehensive plan for a potential release of *Cyprinid herpesvirus* (carp herpesvirus) by the end of 2018.

A National Coordinator will work with stakeholders from across governments, industry, community and environmental groups, and research organisations to understand the issues and bring together a comprehensive plan, underpinned by research, risk assessment and a sound understanding of community views.

The plan will focus on maximising the reduction of carp populations while minimising disruption to industries, communities and the environment should a carp herpesvirus release go ahead.

For further information visit the following [website](#)

National Reconciliation Week 2016

27 May to 3 June

OUR HISTORY, OUR STORY, OUR FUTURE

As Australians, we are all here, woven into this country

As part of our reconciliation journey, there are truths to tell, stories to celebrate, and relationships to grow

Reconciliation is at the heart of our nation's future

Join us on our nation's journey at www.reconciliation.org.au/nrw and make reconciliation part of your future.



What to Plant in Your Garden to Help Save Bee's

Did you know that Australia has over 1,500 species of native bee which are non-aggressive, and some of them do not even sting! And there are over 25,000 species of bee worldwide with new ones being recognised every day



Author: Libby Baker

Source: <http://www.onegreenplanet.org/lifestyle/what-to-plant-in-your-garden-to-help-save-the-bees/>

It isn't easy being a bee these days. With the introduction of genetically modified crops, stronger, more powerful, and prevalent pesticides, and a rapidly changing climate, bee colonies are quickly disappearing.

Bees are one of our most valuable pollinators, responsible for pollinating 80 percent of the world's plants! That means one out of every four bites of food we eat is due to the hard work of bees. Without them, our food supply would be dramatically decreased, and life as we know it, severely altered. Additionally, the demand for honey has resulted in many commercial honey brands to streamline production by feeding bees a diet of corn syrup, rather than wildflowers. Bees love sweet, and a beekeeper once told me the story of bees who foraged left over coloured shell sugar from a nearby chocolate manufacturer, resulting in a blue honeycomb! While that may look cool and colorful, it results in sick bees and honey that is little better than the sugar used to create it. So be sure to always buy organic, wild, and local honey from trusted beekeepers whenever possible! Aside from buying organic, local honey and food from reputable sources, what else can we do to help the bees? Plant a bee-friendly garden! Here are some pollen-plenty plants to make a bee's job a little easier and maybe even save them too!

Native flowering plants

The most beneficial and easiest plants for your garden are always natives. Native plants can be found naturally in your particular region, so they are specially adapted to the local growing conditions, wildlife, and climate. Flowering natives with open blooms are the best for bees, and you can check with your local nursery to find the ideal plants for

your region.

Herbs

You can't go wrong with herbs! Not only do bees adore them, but they are edible, help control invasive insect populations, smell and look wonderful. Many herbs are self-seeding (especially if you get lots of bees in there mixing up that pollen), so make sure you plant them where you intend to keep them! Also, other herbs, such as mint and thyme, will spread like crazy, so grow them in containers, in well-edged gardens, or in large flower pots sunk under the soil level. Borage, catnip, dill, lemon balm, mint, lavender, sage, rosemary, basil, marjoram, and thyme are all popular with pollinators! Let a few of the herb plants bolt (go to flower) and plant among the vegetables in your garden to increase harvests.

Vegetables

Before becoming the produce we eat, many vegetables in the garden must flower first, attracting pollinators and ensuring a good harvest. Bees love the flowers from cucumbers, onions and chives, pumpkins and other squash, as well as all types of melons. Broccoli, radish, and cauliflower blossoms are also a hit!

Fruit

Nearly every fruit tree will attract bees when flowering, but some types, like Royal Gala Apple and Cherry trees produce an abundance of bee friendly blooms. Peach and nectarine trees, as well as fragrant citrus are also great options. Every fruit tree has different pollination requirements; some simply need pollen to be spread within their own blossoms. Others need to be cross pollinated (pollinated from other trees of the same or, as in the case with apples, different type of fruit species)! When it comes to fruit trees, the work of the bees is especially important. There's no doubt about it: modern day bees have their work cut out for them, but we can help save them (and ourselves) by planting a bee-friendly garden!

No living creature, not even man, has achieved, in the centre of his sphere, what the bee has achieved in her own: and were someone from another world to descend and ask of the earth the most perfect creation of the logic of life, we should needs have to offer the humble comb of honey." - Maurice Maeterlinck, "The Life Of The Bee", 1924

River Murray water allocation applications

The South Australian Government has announced the introduction of a cut-off date for water access entitlement holders to receive guaranteed processing and determining of River Murray allocation trade applications for the 2015-16 water year.

The cut-off date is the third Friday in June. This means for 2015-16, water allocation trade applications received by 17 June 2016 are guaranteed to be processed within the same water year.

The Department for Environment, Water and Natural Resources Customer Services Murrayland Team Leader, Frances Simes said the department is expecting a significant increase in the volume of water trading in the lead up to 30 June.

"The water market in the Southern Murray-Darling Basin has matured considerably and there is an increasing number of active participants trading in the market and increased trading activity," Ms Simes said. "Expected low water resource availability in 2016-17, coupled with the announcement that carryover will be made available in 2016-17, is predicted to significantly increase the volume of allocation trade applications in the 2015-16 late season.

"As we continue to experience dry conditions, it becomes even more critical that entitlement holders are able to efficiently plan their water use and ensure that their trades are processed in time.

"The introduction of an annual cut-off date provides the water market with greater certainty with respect to the processing of water trades.

"Water users will need to be mindful of the 17 June cut-off date if they are looking to trade water late in the water year. This includes water users who might intend buying allocations to prevent an overuse situation in 2015-16." Ms Simes said the Water Trading Rules,

introduced under the Basin Plan, ensure an efficient water market and provide more opportunities for trade.

"Water trade allows for the redistribution of water among users and is an important mechanism for managing the Murray-Darling Basin's scarce water resources," Ms Simes said. "It's important to have a sound, transparent water trading system in order to improve the quality of information in the market and help people understand the value of their water.

Use this link to see the full Media release:

http://www.environment.sa.gov.au/Home/Full_newsevents_listing/News_Events_Listing/160422-river-murray-water-allocation-applications

Bush Tucker Recipes

Stephanie's Muntries Muffins



Ingredients: 1/2 cup sugar, 1 egg, 3oz melted butter, 1tsp cinnamon, 1tsp allspice, 2cups SR flour, 1/2 cup bran, 1/2 cup wholemeal flour, pinch salt, 1 cup muntries, 1 apple, milk to mix (sloppy).

Method: Mix all dry ingredients. Add melted butter and beaten egg. Add milk until mixture is quite sloppy. Bake approximately 20 minutes at 240 degrees. Enjoy!

Helen's Smoked Coorong Mullet Dip

Ingredients: 400 grams Smoked 'Coorong' Mullet (mashed), 1 Avocado (mashed), 200 grams Cottage Cheese, Springs Onions (finely sliced), Fresh Chives (finely sliced), Tabasco Sauce (couple drops), Fresh Cracked Pepper, 1 tblspn Lemon juice.

Method: Combine all ingredients to make a smooth paste. Season to taste. Refrigerate until required.

From the Archives

Continuing our extracted article from "The Advertiser" 7th of April, 1934.

VANISHED TRIBAL LIFE of COORONG BLACKS

By NORMAN B. TINDALE,
Ethnologist, S.A. Museum.

Big Population - Like his forefathers, however, he mainly restricted his journeys to the margins of the swamps and to the Coorong. Over this area conditions were once so favourable that it was one of the most densely populated parts of aboriginal Australia, carrying a population of almost a person to the mile. The people were not truly nomadic in the same way as the people of the interior are. As shore-dwelling fishermen, each clan had its defined and restricted territory, further divided into family hunting grounds. Within these areas there were a relatively few main camps along the Coorong lagoon, where much of the year was spent by members of a particular clan. In addition, there were ocean beach camps, where temporary visits were made for the purpose of gathering the large *Donax* cockles. Great bagfuls of the meat of this shellfish would be carried to the main camps. Nowadays only the glistening white shell heaps remain to testify to the enormous number of shellfish devoured in the course of centuries of living along the ocean dunes. Swamps in the back country were visited at definite seasons when ducks were breeding, and hunting parties camped in the scrub country. Every suitable swamp lagoon had its lines of poles across the path of the prevailing winds. Upon these the U-shaped nets—with one side 6 ft. high—were set for catching ducks. Within these nets were placed captive decoy ducks, whose wing feathers had been removed. Ducks would become entangled in the trap and were often caught by hundreds.

Trapping Fish - Watching on high points along the Coorong fishermen scanned the waters for schools of fish, while old men sang magical songs to make them approach and be caught. Walls of limestone boulders and of water weeds

led the fish to large traps made of matting, in which the smaller fry were trapped, and parties of men worked with nets and captured the shoals of mullet and other larger fish. Spearmen attacked the mulloway as they sought their way across the shallow reaches of the Coorong water to spawn. It has been placed on record that about the year 1840 there were more than 600 Tangane fighting men who met together and attacked the people to the north-west. Nearly 2,000 people must have lived in the Coorong in the heyday of its productivity. Every bay and point in the Coorong had its name and its peculiar supply of food to offer. Of these places, Milerum remembers only a portion, but even so his names are scattered along every half-mile of that long stretch of territory. Many of the names indicate the potential value of the place as a food produce; for example:—"mullet trapping place," "moulting duck place," "eel lagoon," etc.

The Two Canoes - Other places are believed to represent sites made by the movements or activities of ancestral totemic beings. Two considerable hills on the right of the road from Ashville to the Waltowa Swamp Causeway on the main road to the Coorong are the two canoes of Ngurunderi, the ancestor who made the Murray by driving a gigantic Murray cod down-stream from the Darling River. Ngurunderi left his canoes there while he went on foot through the South-East, as far as Cape Jaffa, performing various herculean tasks. One evilly disposed black fellow encountered near Kingston he killed after much trouble, and his blood congealed as deposits of red ochre in some of the lakes near Cantara and as outcrops of red porphyry and red stained granite in other places, for example, at the eleven mile post near Kingston. The Pipeclay Lake beside the road a mile beyond Salt Creek, where there are several small round islands, represents the place where Waak, a totemic ancestor, who afterwards became a crow, was challenged by the Owl and the Mopoke.

Who were also men in that distant "dream" time. The Crow was the person who first brought the returning boomerang into the country. The Owl and the Mopoke said they would allow him to live at Salt Creek only if he could throw five consecutive boomerangs in complete circles, otherwise they would kill him. The Crow threw four of them successfully, but the fifth was caught by the wind and fell short. Thus today in the lake there are four complete islands and the fifth is a peninsula connected to the shore by a tongue of land. The men of the tribe held boomerang throwing competitions there until recent times. The Owl and Mopoke, true to their word, threw spears at the Crow, who crawled away for some miles in a south-easterly direction through the scrub.

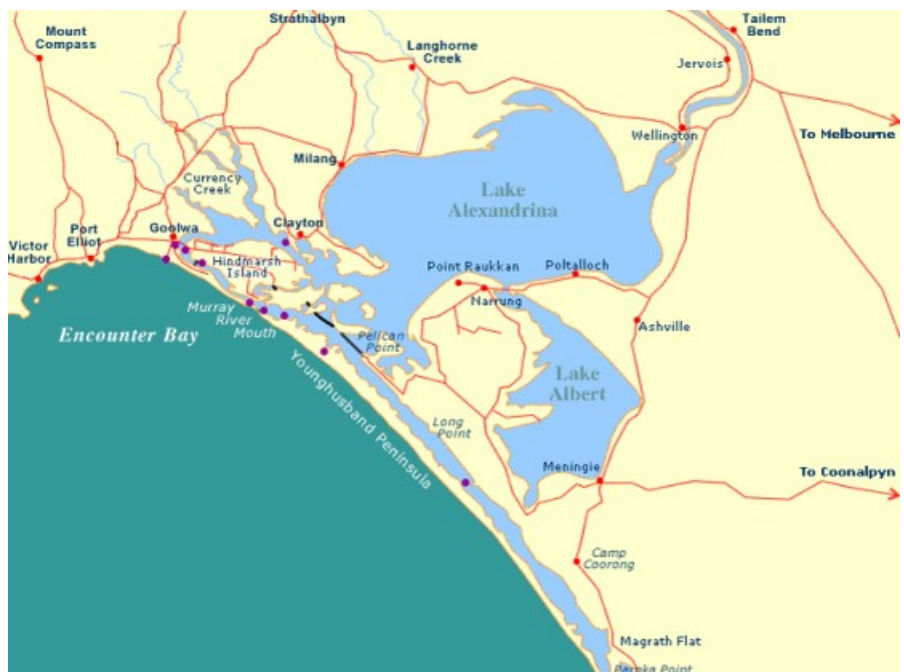
His tracks remain as a long line of pipeclay lakes, probably an abandoned meander of Salt Creek. Just beside the Coorong he noticed that he was not being pursued, so stood up, thrust his spears in the ground, and looked about, and then travelled away south to cause mischief in other clans. The site of the holes made by the spears in the limestone cliffs has recently been quarried away for use as road metal.

Identities Changed - Other strange legends tell of how the seal once had dog's teeth and lived on the land, while the dog had seal's teeth and swam about in the sea. One day they met and, after having talked it over, exchanged identities.

The Coorong is from one to two miles wide, shallow in many places, but possessing a deep channel of varying width in the middle. For crossing the deep parts rafts were employed. These were sometimes made of yacca stems lashed together with grass rope, and some times of reed stems. Placing their belongings, children and infirm ones on a raft, the blacks swam and waded across the Coorong. One

interesting sideline of the detailed study of the usual crossing places along the Coorong is the indication that there are relatively few possible places where the survivors of the famous wreck of the Maria could have crossed the Coorong.

Milerum identifies the various points with such assurance and backs them so concretely with native names, that it seems likely that the crossing place near where the Maria murders took place can be accurately determined. The story of the wreck of the Maria and of the murder of the passengers and crew has often been told. Simpson Newland in "Paving the Way," Taplin, and many others, have dwelt on the dramatic happenings and their mysterious conclusion. It may be interesting to relate the story as it survives in the minds of descendants of the people responsible for their fateful end. Native tradition is fairly unanimous in its statement of the reasons for the killing of the Maria survivors. They were escorted safely from boundary to boundary, and safely passed on from clan to clan all the way from the vicinity of Lacepede Bay to the northern boundary of the Karagari Clan. It is said that formerly there was a particularly dense belt of coastal scrub just south of Palgarang, the point opposite Dodd's Landing (known to the blacks as Yerangulung). Here several of the sailors took a favourable opportunity of interfering with some native women. They were attacked and killed, then the other people who



White Girl's Escape - In the native tradition one white girl escaped and made her way north along Young husband Peninsula to the Murray mouth. Standing on the point of land at the Murray mouth she appeared to the natives of the Murray Mouth clan as a "maldarpi" or evil spirit being, and the men, in great fear, picked up their spears and shields to go and kill her. The wife of the "rupuli," or chief old man, shouted out, "Where are you going? She is a woman," and scolded them into putting their weapons away. The white girl dropped on her knees and made signs with her hands. The old woman beckoned to her and led her away. Later, the old men had a "court" to allot the girl to a husband, but nobody would have her; all were frightened that her color—white is a sign of mourning—might adhere to them. She wandered about with the women folk for "two years." One day she accompanied a party of women who went to Krabul, a place on the north side of the Murray Mouth, to gather herbs for food. A party of police approached in a whaleboat, seized her, and despite her cries and protests, took her away to Goolwa. Later, they went up the Coorong in a boat with a native named Brady as interpreter, and rounded up many people. The rest of the story may be tersely put in the informant's own words:—"Who bin killem white- fella? Didn't hang all the guilty ones. You come here! Gallows for three. When the ropes went round their necks they hung them. After that no trouble."

Buried Treasure? - Stories of buried treasure from the Maria wreck are still commonly related in fishermen's camps along the Murray. Some years ago natives found two old silver coins, and one has spent years of his leisure time in hunting for this supposed buried treasure. His only finds, though, are pieces of iron supposed to be parts of the gallows upon which the murderers were hanged. The Coorong of today is a vastly different place to that of Milerum's youth. Cattle and rabbits destroyed the covering of the coastal dunes, causing the whole landscape to change,

and replacing the dark green line of vegetation by mile after mile of drifting sand. Most of the coastal "sucks" were buried and the camping places overwhelmed. The very hills of the totemic legends have blown away.

Vast Changes - The Toolach wallaby, the native companion, and a host of small mammal species have vanished and of the other birds and animals only ducks and swans remain as potential food resources. Rabbits, cattle, and sheep have eaten out the native herbs, so that over miles it is not possible to find a specimen. Even the fish have been affected by the vastly changed river and lake conditions. Lake Albert has become salty, and a mile wide belt of weed covered shallows along the shores of Lake Alexandrina, in which the fish bred, has been destroyed, thus causing rapid erosion of the banks of the lakes and the obliteration of the lakeside camping mounds and islands. Is it any wonder that the few survivors remember a phrase used by their legendary ancestor Ngurunderi in one of the stories? His saying, "Beware of the ants" is now interpreted by them as a prophesy warning them of the coming of the white man.



Clarence (Milerum) Long

Working Group: Long-nosed fur seals in the Coorong and Lower Lakes

Direct Copy of Communiqué No. 7

The seventh meeting of the working group was held on Wednesday, 11th May 2016 in Adelaide. In attendance were:

- Sandy Pitcher, Chief Executive, DEWNR as Chair;
- Prof. Gavin Begg, Research Chief, SARDI Aquatic Sciences;
- Prof. Simon Goldsworthy, Sub Program Leader Pelagic Ecosystems, SARDI Aquatic Sciences;
- Neil MacDonald, Executive Officer, Southern Fishermen's Association (SFA);
- Deana Mildren, member, SA Murray-Darling Basin NRM Board;
- Michael Shelton, Coordinator Barrages, SA Water;
- Neville Jaensch, Mayor, Coorong District Council (CDC);
- Craig Wilkins, Chief Executive, Conservation Council of SA (CCSA);
- Barry Featherston, Councillor, Alexandrina Council;
- Dr. Matthew Ward, a/Executive Director Conservation and Land Management, DEWNR;
- Michael Garrod, Director Community Engagement, DEWNR;
- Mike Greig, Senior Ecologist Abundant Species, DEWNR;
- Renate Velzeboer, Ecologist - Marine Interactions & Wildlife Biosecurity;
- Miranda Leckie, Administration support and minute taker.
- PIRSA Fisheries and Aquaculture, South Australian Museum and the South Australian Tourism Commission were an apology for this meeting.

Community Engagement

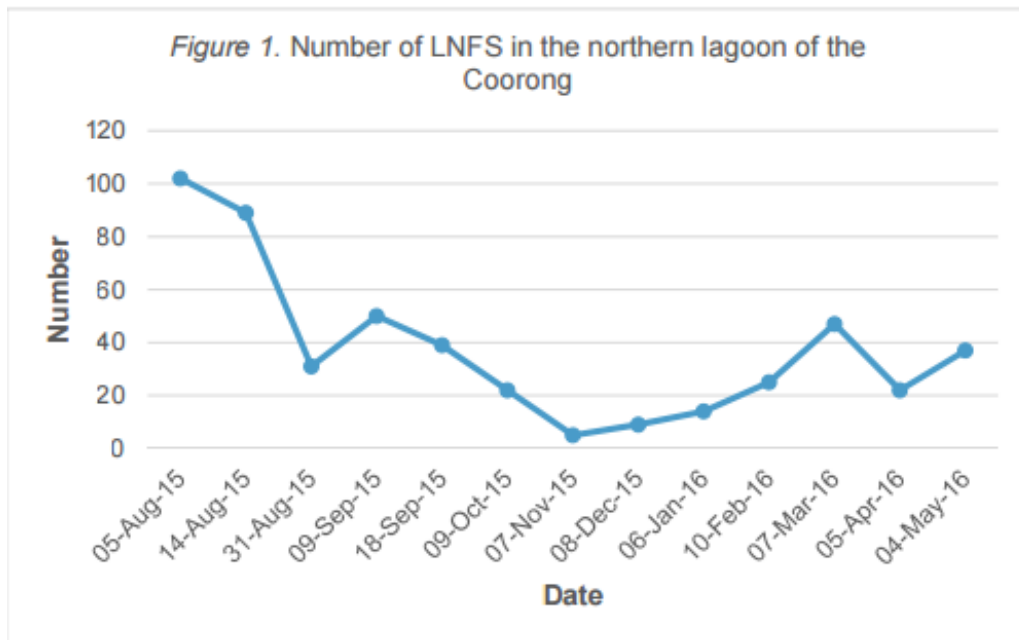
DEWNR reported that a series of upcoming community engagement events adjacent to the Goolwa Wharf markets has commenced. Two events have been held on the 17th April and the 15th May. The community and DEWNR shared information on the issues and nonlethal actions taken or proposed by the South Australian government to mitigate the impact of Long-nosed fur seals (LNFS') in the Coorong and lower lakes. The next event will be held on Sunday 19th June at Signal Point next to the Goolwa Wharf Market.

Another opportunity for the community to get engaged in sharing information is through the fortnightly phone link-up with DEWNR. Anyone with an interest in the LNFS' in the Coorong and Lower Lakes can ring in by dialing the free call number 1800 151 624 followed by the pin number 675 372 479#. Please contact Natural Resources SAMDB on 8532 9100 to find out when the next phone link-up will be held. DEWNR is looking into organising other events to engage the community once the Goolwa Wharf markets have finished.



Distribution and abundance of LNFS'

- DEWNR provided an update on the long-nosed fur seal (LNFS) distribution and abundance in the Northern lagoon of the Coorong. The number of LNFS counted was 37 in May 2016. This was an increase from the 22 LNFS' found in April (See Figure 1). The majority of LNFS' were found near Goolwa barrage, which might indicate that the modifications made at Tauwitchere barrage and fishway by SA Water has minimised the number of LNFS' hauling out in this area. LNFS' prefer to haul out on hard surfaces, such as fish ways and barrages and monitoring the trend in distribution and abundance has therefore focused on the Northern lagoon of the Coorong, where most of these man-made structures are found. This area also includes the Murray Mouth where the LNFS' enter and leave the Coorong and lower lakes. A community member from Meningie assisted DEWNR with the monitoring. DEWNR has conducted monitoring since August 2015.
- Information from community monitoring of other areas within the Coorong and lower lakes is shared with DEWNR to further enhance the understanding of LNFS distribution and abundance.



Managing seal-fisher interactions

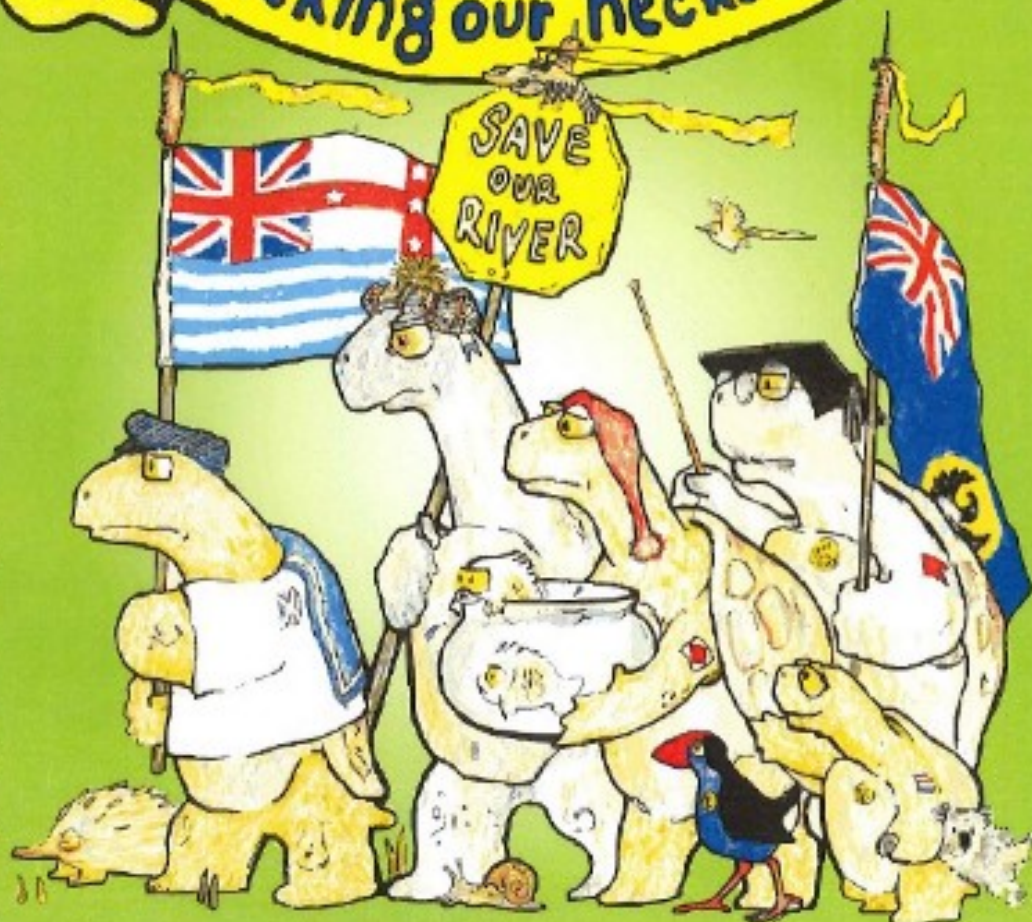
- The Lakes and Coorong fishers with SARDI and DEWNR staff started the underwater seal deterrent trials in late April to measure LNFS interactions with the fishing gear and the behaviour of the LNFS upon deployment of an underwater seal deterrent. The aim of deploying an underwater seal deterrent is to frighten away the LNFS' from the gill net. Five trials have been conducted in the Goolwa area. There were numerous seal interactions at the net and underwater seal deterrents were deployed in approximately 40% of the interactions. Further trials have been planned for the Goolwa area and in the Meningie area for May and June. The results will be made available when the trials have finished and the results have been analyzed.

Further information

- Frequently asked questions, an option for the community to raise a question and the previous Communiques from the LNFS working group can be found on the DEWNR website: www.environment.sa.gov.au/seals.
- The next meeting of the LNFS working group is scheduled for the 9th June 2016.

Murray the Musical

Sticking our necks out!



A Musical for All Ages

Friday June 24 at 2pm & 7.30pm

Saturday June 25 at 7.30pm

Written by Silver Moon and Friends

Director Susie Skinner Music Director Charlotte Robinson

Tickets: eventbrite.com.au or MOSHCC 85370687

Milang Institute All Welcome.

**UNITING
COMMUNITIES**
East Coast Community Development


Centacare

The production will be promoted by MDCA supported by the
Uniting Communities Drought Assistance Package
funded by the Australian Government Department of Social Services.


MOSHC
COMMUNITY CENTRE

World Environment Day 5th June



World Environment Day (also called WED) has been started as an annual event on every 5th of June since 1973 in order to raise the global awareness about the importance of the healthy and green environment in the human lives, to solve the environmental issues by implementing some positive environmental actions as well as to make the public aware, worldwide, that everyone is responsible for saving his environment and not only governments, or organizations working for or with the government.

Established by the United Nations General Assembly and United Nations Environment Programme (UNEP) in the conference on Human Environment which ran from 5th to 16th of June 1972. WED was first celebrated in 1973 with the particular theme "Only one Earth". Since 1974, World environment day has been hosted in different cities around the world.

It is a big annual event started by the United Nations General Assembly to engage people from different countries around the globe as well as draw the attention of political and health organizations to implement some effective actions.

World Environment Day Activities

Different countries plan a variety of activities for this great event and to encourage more people to think more about taking care of the environment. News services take part in an active way in covering the news and distributing messages about the environment

among the public. So that through the various news and media publications, effective and positive changes towards the environment, are made to help solve environmental issues.

Some of the national and international level activities include street rallies, tree plantings, garbage recycling, surrounding areas clean-up, (e.g. Clean up Australia Day), and many other activities in order to draw people's attention towards a wide range of environmental issues as well as making a difference. People of all age groups can be actively involved in the effort to help save the environment.

Youth are especially encouraged to take part in the event through many activities such as clean up campaigns, art exhibitions, motivating people for tree-planting, themed dance activities, recycling garbage, film festivals, community events, essay writing, poster competitions, social media campaigns. Awareness campaigns can be run at schools, colleges and other educational institutions to help motivate students to be involved in environmental programs.

By organizing various activities in the public venues, the general public can be made aware about the real causes of environment degradation as well as let them know what steps can and should be taken to solve such environmental issues.

Theme for 2016

As mentioned earlier in this article, each year a theme is selected as well as a host country. This year's theme is "**Zero Tolerance for the Illegal Wildlife Trade.**" And the host country is **Angola**. Which is doing its best both to rebuild their country after over 25yrs of civil war, drought and unrest. And are also trying to preserve their natural wildlife and biodiversity

To find out more click [here](#)

There are Benefits in Revegetation

Sources—GWLAP website

Over the last few weeks we have seen some very positive reports on the benefits of revegetating a site. Going from a bare windswept paddock to an area with local native vegetation and the return of native wildlife as a result. Take for example the recent reports of the sighting of Mount Lofty Ranges Southern Emu Wren, both a male & female bird (possible breeding pair) at a revegetated site on the Finnis River.



Landholders, Kathy & Damon bought the property in 2010, when the river and Lake levels were still low. Then with the help of the Goolwa to Wellington Local Action Planning group, who co-ordinated 5 local community groups, a total of 12,660 plants spread over 52 local species have been planted over the last few years. With more to be planted this year as well.

Not only has the local environment benefited from the re-planting of native species, but the community groups have also benefited in that they have been able to raise funds that have been used to benefit their groups and communities.

Kathy, an avid bird watcher, said that in the early days when it was just bare paddock, it was a big deal to see any birdlife in the area. Now there are trees 12 -15 feet tall and a variety of native plants which has seen a return of birdlife to the area, especially in the last few months.

Over the last few months, Kathy has seen, Honeyeaters, Ducks, Chats, Lapwings, Willy Wagtails, Harriers, Kites, a Peregrine Falcon, & Blue Wrens. Kathy said that The Mt Lofty Ranges Southern Emu Wrens have been on her Bucket list, and seeing them in her own backyard has been the icing on the cake, so to speak.



With the increasing diversity of not only plants and birdlife but also the diversity of insects being found in the area as well. It just shows the benefits of revegetating an area and also caring for and nurturing the same, can achieve. Going from a barren bare paddock to an area that is more picturesque and diversity of both Fauna and Flora in the area.

Full article on GWLAP website found [here](#)



Landmark agreement signed between Commonwealth and Ngarrindjeri Nation

The Commonwealth Water Holder and the Ngarrindjeri Nation have sealed a partnership that will give the local Indigenous group a say in the management of environmental water in the Lower Murray region.

It's the first of agreement of its kind between the Commonwealth Water Holder and an Aboriginal organisation.

Rick Hartman from the Ngarrindjeri Regional Authority said the agreement would mean environmental assets in areas such as the Coorong and Lower Lakes will be cared for according to the cultural practices of the Ngarrindjeri People.

"Ngarrindjeri people have been calling for an agreement with the Commonwealth Government for some time now and this agreement enables us to have some input into water planning around the delivery of environmental water into the River Murray, Lower Lakes, Coorong area", Mr Hartman said.

"It's really important that the environmental water goes to wetlands that Ngarrindjeri people have access and enables Ngarrindjeri people to get back onto their country and participate in their cultural activities," he said.

"Ngarrindjeri People have lived along the river, lakes and Coorong as well as the southern ocean for thousands of years and all of our cultural practices have evolved around living around the water and in order for us to continue our culture, we need to have water into these spaces so they are healthy."

"If these places are healthy Ngarrindjeri people can be healthy as well."

The priority regions have not been identified yet but areas such as Sugar Shack and wetlands are one region.

The Ngarrindjeri people were critical of a recent Senate Inquiry into the Murray Darling Basin plan but Mr Hartman said this agreement went some way to addressing the concerns.

"It gives the Ngarrindjeri people an opportunity to have an involvement in water planning. We have always been involved and living on the river so we really needed to be put into a position where we could have some say in water planning."

Commonwealth Environmental Water Holder David Papps said he hoped more of these partnerships would be possible.

"Really at the heart of it is an attempt to marry the best of science around environmental watering with the cultural knowledge of indigenous communities, in this case the Ngarrindjeri Indigenous people, to get the best possible outcome for those wetlands to which our water goes," Mr Papps said.

Mr Papps said there were two main outcomes from this agreement.

"The cultural knowledge of the Ngarrindjeri and the local community gets plugged into a decision making so there are a lot of intersections between the environmental outcomes that we need to deliver for the plan and the very strong ties to country that the Ngarrindjeri have and that will play out in the decision making," Mr Papps said.

"For example making sure the communities totemic species are in good health."

"The second this is a chance for the Ngarrindjeri and the local community to be involved in the monitoring and decision making and to acquire some particular skills around that that will help them manage their land," he said



Source <http://www.abc.net.au/news/2016-04-20/ngarrindjeri-partnership/7339714>

Fat Tailed Dunnart

(*Sminthopsis crassicaudata*)



The Dunnart is a small marsupial which inhabits grasslands, woodlands, shrub lands and also unimproved pasture or farmland.

is a species of mouse-like [marsupial](#) of the [Dasyuridae](#), the family that includes the [little red kaluta](#), [quolls](#), and the [Tasmanian devil](#). It has an average body length of 60–90 millimetres (2.4–3.5 in) with a tail of 45–70 millimetres (1.8–2.8 in). Ear length is 14–16 millimetres (0.55–0.63 in). Its weight varies between 10–20 grams (0.35–0.71 oz), it is one of the smallest carnivorous marsupials. The tail becomes fat a few mm from the anus and right up to the tip of the tail.

The fat-tailed dunnart's diet includes insects such as beetles, spider larvae, small reptiles, and amphibians. It stores fat reserves in its carrot-shaped tail for times of food shortage.

This species breeds from July to February, with the young in the pouch from July to April. Gestation is for 13 days and the young remain in the pouch for 70 days with litter size on average approximately 8 with a 33% infant death rate. They generally have two litters per year with females not breeding for the first year. The average life span of the females is 18 months, and males 15 months.

Fat-tailed Dunnarts have been sighted at both Narrung, Cook Plains and also in the Murray mallee area. In fact all around the Coorong and Lakes region.



Fat-tailed dunnart range

Record rabbit activity in RabbitScan How to use RabbitScan in 2016

RabbitScan is a free resource for landholders, the community and pest controllers to record and map rabbit activity, warrens, rabbit damage, and control activities in their local area. Use data recorded in your region to help decide where to undertake rabbit control.

1. [Register your details here](#)
2. [Start Mapping Rabbits](#)
3. [Learn more before starting](#)

Get involved in the Release of RHDV K5 (external site)

Time is running out for landholders and communities to nominate to be involved in the release of RHDV K5 early in 2017.

[Learn about a RHDV K5 rabbit-control release](#)

[Get involved in ,monitoring or release \(Submit an Expression of Interest here no later than 31th May 2016\)](#)

Boosting Rabbit biocontrol: RHDV K5 national release - How you can get involved

Register a site in your local area - [Download fact sheet \(PDF\)](#)

European red fox (*Vulpes vulpes*)

The European red fox was deliberately introduced into Australia for hunting purposes. Foxes quickly became established following releases in the 1870's in southern Victoria. Foxes colonised rapidly; by 1893, foxes were a nuisance in north-eastern Victoria and by 1930 they occupied most of southern Australia. Next to wild dogs, the fox is the largest land-dwelling carnivorous mammal in Australia. Foxes are well-adapted to a variety of different habitats, ranging from deserts to urban environments. However, foxes are not found in tropical Australia. Foxes are mainly carnivorous and feed on sheep (mainly as carrion), mice, rabbits and native animals including the Sleepy Lizard, Mallee Fowl, Tammar Wallaby, Yellow-Footed Rock Wallaby, Numbat, Brush-Tailed Bettong, Bilby and eggs in tortoise nests. They also feed on insects and fruit and are known to raid rubbish bins in urban areas. The fox is Australia's number one predator.

Reproduction and population growth

Foxes breed once a year in winter with cubs born in spring. The fox's gestation period is 51–53 days. Cubs are generally born in burrows (dens) but litters have been found in hollow trees, rock crevices, under houses or in log piles. Litter size ranges from 4–10. Red foxes have generally been considered monogamous, communal denning as well as the presence of 'helpers' at the den has been recorded. Australian studies suggest there are very few non-breeding females in fox populations. As a result, fox populations can withstand high yearly mortality rates (~65%) and recover to pre-control population levels. Recovery rates are



dependent on immigration rates and breeding success.

Behaviour Foxes

Foxes generally disperse from where they were born in autumn at 6–9 months of age. Dispersal behaviour varies between males and females and between individuals of the same litter. Males typically disperse further than females and distances of 300 km have been recorded. Foxes are most active from dusk till dawn and usually rest during the day in an earth den (often an enlarged rabbit burrow), thicket, hollow log or log pile. Foxes may also hunt and scavenge during the day.

Predation on livestock

Red foxes are noted for 'surplus killing' and can kill multiple easy prey animals despite an abundance of available food. Foxes usually attack the throat of lambs and kids, although some are killed by multiple bites to the neck and back. Foxes do not have the size and strength to hold and immobilise large prey like adult sheep or goats, or to crush large bones; therefore, repeated bites may be required to subdue prey. One way to distinguish fox kills from wild dog attacks is that foxes rarely cause severe bone damage to stock. Poultry or other small prey can, however, be badly damaged through fox attacks.

Control methods

Control by shooting, den fumigation and coordinated baiting, Poisoning Sodium fluoroacetate, commonly called 1080 (ten-eighty), is the only poison registered for fox control in South Australia. Foxes are extremely susceptible to this poison. However, due to the risk of poisoning other animals such as dogs, its use is highly regulated. The poison cannot be used on properties less than 5 ha in size, or in high risk situations such as the metropolitan area and other urban or urban fringe areas. Landholders can only access 1080 through local Natural Resources Management Boards.

Note that the use of steel-jawed traps and snares is prohibited.

Malpu Wiru Good Friends @ Signal Point Gallery 3 Jun to 10 Jul



This stunning exhibition is especially programmed for NAIDOC celebrations in 2016 and will bring together art and culture from remote Aboriginal people to local suburban artists. Helen Johnson the Director of Kiri Kiri Gallery is in a unique position as ex Art Centre Manager of Iwantja Arts to source a diverse range of art work from the Central Desert to the Fleurieu Peninsula. There will be paintings, prints, sculpture, weavings and crafts. Anangu from the APY Lands and Ngarrindjeri will join together in celebrating with this special event.

Signal Point Gallery

Goolwa Wharf, Goolwa SA 5214 Goolwa
South Australia

Gallery hours: Mon to Fri 11am-4pm, Sat and Sun
10am-4pm

Enquiries: Arts & Cultural Development Officer
8555 7289 leah.grace@alexandrina.sa.gov.au

INVADES BUSHLANDS, CROPS AND VINEYARDS

Gazania *Gazania* ssp. Native to Sth Africa

Perennial herb forming tussocks or with creeping stems. Leaves are simple and narrow, or deeply divided; dark green above and felted with white hairs below. Large daisy flowerheads in yellow, white, orange or pink.



Weed control

Spray with glyphosate with actively growing.

Dire - art and science on land rivers sea

Gallery hours: Wed to Fri 11am-4pm, Sat and Sun 10am-4pm

Dire is the fourth in a series of exhibitions inviting artists to interpret both the threats to and the beauty of the South Australian gulfs. Over seventy artists representing many genres have exhibited their work in the first three exhibitions. All have asked the viewers to see and understand the severe risks ahead in managing the living environment so that it is not degraded to a point where it cannot recover. This exhibition, presented by the Centre for Culture Land and Sea, expands in three directions. It is now biennial. Artists will be invited to workshops with scientists early in 2016 to fully engage with the threats to the land, rivers and sea. Scientists will offer analyses for the current challenges and suggest ways around the current crises. Workshops will also develop skills in decoding messages from government and other organisations saying 'Trust us, it is all under control'. New artists are invited to participate in this series of workshops, to prepare for the fourth exhibition, Dire, at the South Coast Regional Art Centre.

Location: South Coast Regional Art Centre
(Old Goolwa Police Station)

Opening event: Fri 24 June at 5.30pm
Runs till 24th July Entry free

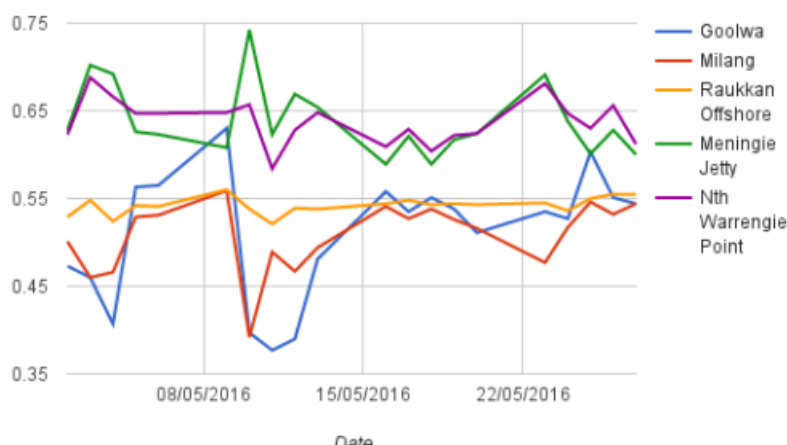
Enquiries: Ruth Trigg Centre for Culture Land and Sea Inc CCLS ruth.trigg@westnet.com.au 8558 3371 or
0437 456 489

"The only way forward, if we are going to improve the quality of the environment, is to get everybody involved".

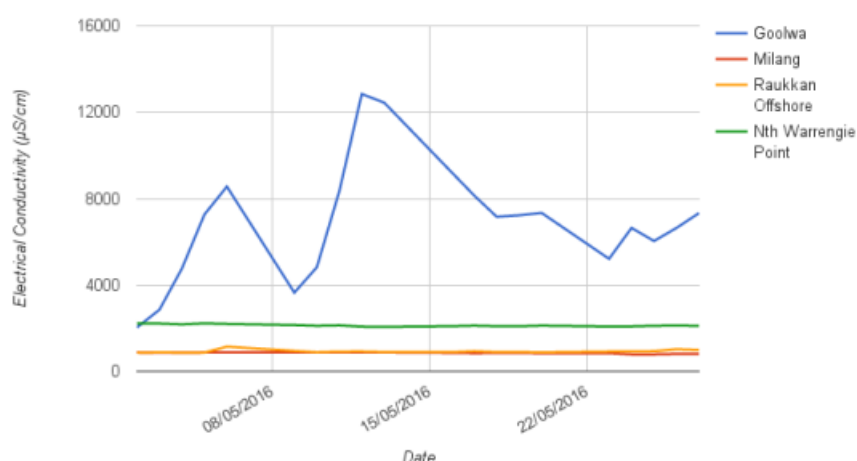
– Richard Rogers

On the Level

Goolwa, Milang, Raukkan Offshore, Meningie Jetty and Nth Warrengie Point



Salinities



Some electrical conductivity ranges	
Water type	Electrical conductivity (µS/cm)
Deionised water	0.5-3
Pure rainwater	<15
Freshwater rivers	0 - 800
Marginal river water	800 - 1600
Brackish water	1600 - 4800
Saline water	> 4800
Seawater	51 500
Industrial waters	100 - 10000

Source: Suttar S., *Ribbons of Blue Handbook*. Scitech, Victoria, 1990.

Electronic versions of these charts are available from the Lakes Hub [website](#).

A spreadsheet of data is available on request from the Lakes Hub Coordinator.

Data received from:

www.waterconnect.sa.gov.au/RMWD/Pages/default.aspx

Please note: salinity levels in the Goolwa Channel can be influenced by tidal ingress.

River Murray – Weekly Flow Advice

For weekly flow / level reports on the River Murray and Lakes go to the following website:
www.waterforgood.sa.gov.au

Up-to-date River Murray flow and water level information can be accessed at the Department for Water, SA Water and Murray-Darling Basin Authority websites: [Water Connect](#),

[Daily Flow Report](#), [River Murray Storage Data](#)

Details of river height and rainfall information in the River Murray within Victoria and New South Wales are available at the Bureau of Meteorology website: <http://www.bom.gov.au/vic/flood>

Information on the discharge of acid drainage water into the Lower River Murray can be accessed online at: www.waterforgood.sa.gov.au

For the latest River Murray Flow Report and Water Resources Update - 16th November 2012 visit: <http://www.waterconnect.sa.gov.au>

Contributions to the Bulletin

The Bulletin comes out on the fourth Friday of each month. We are always looking for Coorong and Lower Lakes events and articles of interest. Contributions must reach the Lakes Hub Coordinator (info@lakeshub.com) by the start of business, the Tuesday prior to release.

CALENDAR OF EVENTS *for more info contact the Lakes Hub*

If you have any relevant community event or courses that you would like added to the Calendar of Events please contact the Lakes Hub.

	June
1	
2	
3	Malpu Wiru Good Friends @ Signal Point Gallery 3 Jun to 10 Jul
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5	World Environment Day
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17	Corrong, Lakes and Environment Forum; Signal Point, Goolwa
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24	Dire - art and science on land rivers sea. Exhibition opening. South Coast Regional Art Centre
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Disclaimer

All the links and articles in this Bulletin are provided as a courtesy to recipients. While I try and keep these links and articles as up-to-date as possible, I can't guarantee their accuracy, adequacy, timeliness, or completeness.