

WINRAP News

Wilson Inlet Catchment Committee Inc.

From the Chair

Mike Lanigan, Mt Barker farmer and WICC Chairman

The Wilson Inlet Nutrient Reduction Action Plan (WINRAP) funding will soon be finishing. Property owners within the Wilson Inlet catchment only have until the end of June 2009 to utilise the funds!

Any property owners within the catchment who are interested in fencing off waterways and remnant vegetation, as well as revegetation are encouraged to contact the WINRAP project officer, Elissa Stewart.

Ground works that may be funded include: fencing, stock crossings, alternative watering points, revegetation, point

source nutrient reduction works and soil testing subsidies.

Post June 2009 a number of avenues are being explored to continue the good works but at this stage nothing can be confirmed so don't miss out on current funding!

The WINRAP project officer Elissa Stewart can be contacted on 98482955 or by email at elissas@southcoastnrm.com.au



Mike Lanigan



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Interstate CEOs visit

Recently the Wilson Inlet Catchment was visited by CEO's from NRM regional groups across Australia. The CEO from the local regional body, South Coast NRM Inc, had chosen to tour our Catchment due to the on going success at achieving significant on ground results.

The tour of the catchment started at the quaint Narrikup Country Store. The first site visited was Jeff Jennings property in the Upper Hay Catchment project. Jeff has established deep rooted perennial pastures (Tall Fescue and Kikuyu), fenced to exclude stock from the waterway and revegetated some riparian vegetation. The next site at Barry Dowse's property demonstrated how the integration of surface water management, perennial pasture and revegetation of the natural and man made waterways can alleviate water logging and salinity.

The final site was the best practice

demonstration site for Water Corporation Drain management at Paul Anderson's property on Stanley Rd. This project aims to ensure the required drainage function is maintained while minimising nutrient and sediment exportation into the Wilson Inlet. The project also enhances the landscape and provides wildlife corridors.



Visiting interstate CEO's at the Anderson's Best Management of a Water Corporation drain demonstration site. (pictured above and below)



The Eastern States CEO's were impressed with the sites that were showcased and recognise the great efforts made by the landowners within the Catchment. Well Done!

Nutrient cycle in Wilson Inlet investigated

In October 2008 the Department of Water employed Geoscience Australia to investigate nutrient fluxes between sediments and the water column at a number of South Coast estuaries including Walpole/Nornalup, Irwin Inlet, Parry Inlet and Wilson Inlet to assess the impacts of sediment-water interactions on water quality. The study was a part of a broader investigation being conducted by the Department of Water (Water Science Branch) to develop resource condition indicators in estuaries.

A number of sites were chosen in each inlet where benthic chambers (see picture) were deployed and sediment pore water was extracted to measure ammonia (NH_4^+), nitrate and nitrite (NO_x), phosphate (PO_4^{3-}), silicate (SiO_4^{4-}) and total carbon dioxide (TCO_2). Oxygen and carbon dioxide fluxes within the chambers were also calculated to determine the respiration and photosynthetic activities of benthic organisms and plants or algae. Bottom and surface water nutrients were also collected at each site for

comparison. Complimentary to the nutrient flux investigations sediment cores were also taken where nutrients and porosity (measure of air spaces in the sediment) were analysed.

In conjunction to the nutrient investigation, an underwater video camera was deployed over the side of a boat to video submerged aquatic vegetation including seagrass and macroalgae. The video was slowly moved along transects in each Inlet and the

benthic characteristics filmed and described. In future this method may assist in rapidly accessing the condition and changes in aquatic vegetation and used as a means of mapping submerged vegetation.

The report on the findings will be due out soon. If you would like further details on this project please contact the Department of Water on (08) 98425 760.



Benthic chambers to measure sediment nutrient fluxes (left), soil coring (right)



The Ecological Value of Denmark's Rivers

An ecological study of rivers and creeks across the south coast was recently completed by the Centre for Excellence in Natural Resource Management (University of Western Australia), on behalf of the Department of Water and South Coast NRM.

, diversity and rarity.

The western south coast area, from Albany westward, encompassed 18 river systems including the Denmark, Hay and Sleeman Rivers. The rivers w

The project aimed to determine the 'ecological value' of 33 river systems and rank them in order of value. The ecological value of the systems was determined by the degree of naturalness ranked 6th, 10th and 16th in their degree of ecological value, respectively.

The study highlighted several in-

teresting facts such as:

Hay River appeared to be a 'hotspot' for total species richness and endemism.

A new species of macro invertebrate was discovered in the Quickup and Mitchell Rivers.

The Balston's Pygmy Perch, which is listed as 'vulnerable' under the *Environment Protection Band Biodiversity Act 1999* (EPBC Act), was found in the Denmark River. This species is regarded as the rarest of all the endemic freshwater fishes of south-west Australia. The perch inhabits areas of shallow water with tall sedge thickets and inundated riparian vegetation as is found through out the Denmark River.

The Hay River, was found to be home to the Mud Minnow, which is

listed as 'restricted' by the Australian Society for Fish Biology, and was only found in three other river systems. The species occurs in swift flowing streams within karri forests and is typically found near submerged vegetation, occasionally in the still water of



Photo: Balston's Pygmy Perch (Google images)

ponds, swamps and roadside drains, and often inhabiting darkly tannin-stained water.

The report 'Ecological Values of Waters in the South Coast Region' has been drafted and will be published in the coming weeks. For further information please contact DoW River-care Officer Kirsten Murray on (08) 98410 120.

Dairy Effluent Management Assistance

The Ringwould Dairy and Cheesery is an organic farm currently milking 2 cows, 70 sheep and 70 goats with plans to expand to up to 6 cows, 200 sheep and 200 goats over a two year period. The owners consulted Tom Long from Dairy-catch then approached the Wilson Inlet Catchment Committee for assistance to manage the dairy effluent to ensure the impact of the operation on the environment was minimal with the Blue Gum Creek only 300 metres north of the milking shed. The daily amount of manure produced by goats and sheep is generally 5% of their body weight. Using this estimate and a maximum number of 400 animals on this farm, the calculated amount of manure produced by the herd will be 1,500 kg/day. Hence this enterprise has the potential to impact on the quality of the waterway. A trafficable sump has been constructed to collect and separate the solid and liquid waste from the dairy and holding yards. The sump is located so wash-down water and contaminated run-off from the yard flows to it by gravity. It will be capable of retaining up to 7 days of effluent loading and saves labour because a two wheel drive tractor can clean it.

The liquid effluent will be used to irrigate forage crops, deep rooted perennials and to graze horses, rather than the sheep and goats. The nutrients in the effluent will eventually replace the need for applying inorganic fertiliser on about two hectares of pasture. Most of the solid manure will be incorporated into the soil at nutrient deficient areas of the property.

Cheese making separates proteins from milk, creating whey, a valuable food product. The milk supply for many larger cheese factories comes from distant herds, making it too difficult to recover the food value of the whey by feeding back to the herd. In those cases, whey is a waste product which adds to the organic strength of the effluent. However, this herd will be close to this facility so the food value of whey can be easily and efficiently recovered. The whey will be transported directly to a feeding trough and will not be part of the effluent.

The young stock must be kept clean, warm and dry at all times as they have no body fat reserves needing shelter from cold, damp and draughts. Therefore a shelter has been constructed next to the milking shed to protect the young stock. A layer of wood chips will be used as bedding and changed be-

fore and following winter. This material will be composted by aerobic windrowing in a well drained location. The high temperatures generated by the composting process, kill weed seeds and pathogens. After composting the material it will be incorporated into soil where summer crops are grown to maintain the herd. The solids removed from the sump will be added to this compost pile. The composted material will be incorporated into soil on nutrient deficient paddocks of the farm.

Contact the Wilson Inlet Catchment Committee if you have an enterprise you would like to make more environmentally sustainable.



Works on the trafficable sump

Soil and Plant Fertility Workshop

A workshop on soil and plant fertility was held on the 10th of March 2009 at the Denmark Agricultural College. The workshop included speakers from the Department of Agriculture and Food covering the topics of: Soil testing – how, when and what to test for as well as analysis interpretation and plant tissue testing (as above) and its relationship with soil testing.

An infield demonstration completed the workshop with a demonstration of a simple, user friendly in field diagnosis method for ascertaining soil fertility.

The workshop was well attended with a mixture of land owners ranging from hobby farmers to grazers and horticulturists.

Free soil testing kits are available from the WICC Denmark and Mt Barker offices. Contact either Elissa or Lynn for more details.

WINRAP Forum

The Wilson Inlet Report to the Community took place on Thursday 20th November 2008. The evening saw several speakers from the Wilson Inlet Catchment Committee, Department of Water, Murdoch University and Water Corporation talk about the research and monitoring that has occurred in the Wilson Inlet catchment. A summary of WINRAP over the past five years and the future direction for WINRAP was also given.

After the speakers there were numerous questions and healthy discussion about the Wilson Inlet by members of the community. Overall feedback from attending people was positive. Many found the night to be informative and commented that the forum answered many of their questions.

Changes to WINRAP project officer

November 2008 saw the change of the WICC WINRAP project officer from Craig Carter to Elissa Stewart. Elissa used to reside in the Chittering Valley and moved down to Denmark in 2008. Her previous roles included NRM officer for Oyster Harbour Catchment Group and prior to that Water Quality Co-ordinator for the North Metropolitan Area under Swan Catchment Council.

Craig Carter is still working within the natural resource sector as regional community engagement officer. His area runs between Young's Siding to Walpole along the lower coastal areas and the aim of his role is to try get more of the community involved in running their daily lives in a more sustainable manner and having less impact on the environment.

This would include being more energy efficient and water wise at home to managing their property and livestock in a way that doesn't impact on the natural environment and makes them more productive.

Several Workshops are planned covering native gardens & propagation, nesting boxes, horse management, small property planning, vineyard management, Growing fruit trees, fungi identification and field walk.

If you would like more information or to be put on an email list to receive flyers about workshops please contact Craig on 9848 1019.

Update from the WINRAP project officer

We are sadly coming into the final phase of the current 5 year WINRAP program. Land owners are still busy completing fencing and revegetation projects. With the sunny weather fencing projects are progressing well.

Following the Soil and Plant Fertility workshop in March there has been a good uptake of the free soil testing kits. There are still some kits left and if you are within the Wilson Inlet Catchment and would like one please contact either Lynn or Elissa.

To date WINRAP has engaged over 100 land owners and as of March 2009 groundwork activities are as follows:



Soil workshop

Activity	Completed	Allocated
Fencing drainage district	45.55km	59.65km
Fencing waterways	49.6km	77km
Fencing remnant vegetation	19.4km	26.4km
alternative water points	30	61
stock crossings	39	71
revegetation drainage district	39.7 ha	52.85 ha
revegetation waterways	52.4 ha	52.55 ha
Deep rooted perennial pastures	401.5 ha	423.5 ha
Point source pollution projects	4	4

QUICK CONTACT DETAILS

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Financial assistance:

Through the Wilson Inlet Nutrient Reduction Action Plan we can help you build your farm to be more environmentally responsible.

Waterway protection

- **Fencing of drains and creeks**
Up to \$2000/km of fencing
- **Stock crossings & watering points**
Up to \$1000 for a crossing depending on construction and \$1400 for a watering point
- **Vegetated buffers**
\$450/ha to provide bank stabilisation, nutrient removal and wildlife habitat.

Production

- **Deep Rooted Perennial Pastures**
\$60 per hectare is available to help establish suitable deep rooted perennial pasture species.
- **Soil Testing**
Subsidy for soil testing is available. Don't Guess...Soil Test

Point Source Nutrient Control

More intensive industries, such as dairies, viticulture or intensive horticulture, often need specialised assistance to help reduce their nutrient export. Contact us to talk about how we can help.

The success of the WINRAP relies on the cooperation of all of us who live or work in the catchment. However, the plan identifies a number of key groups who have pledged their cooperation in implementing the Wilson Inlet Nutrient Reduction Action Plan:

Wilson Inlet Catchment Committee, South Coast Natural Resource Management Inc., Department of Water, Shire of Denmark, Department of Agriculture and Food WA, City of Albany, Water Corporation, Wilson Inlet Management Advisory Group, Fisheries WA.

