

WINRAP NEWS

Wilson Inlet Catchment Committee Inc.

Welcome to our 2nd edition and with another year over we can look back at a very successful 2007 with the completion of many on ground works and more projects initiated for completion next year. Several successful workshops were conducted across the catchment with more planned for next year. The community will also be invited to attend a Wilson Inlet Nutrient Reduction Action Plan (WINRAP) community forum. This meeting will be looking for community input in the review of the action plan to help direct where action should be focused for the next five years.

I would like to remind everyone if you would like to get involved in natural resource management within the catchment, to give us a call to become a Wilson Inlet Catchment Committee (WICC) member. Meetings are held every two months which provide an opportunity for your input as well as a great place to meet new faces. Finally I would like to wish everyone a safe Christmas and a happy and very successful 2008.

From the Chair

Mike Lanigan, Mt Barker farmer and WICC Chairman



Wilson Inlet Catchment Committee Inc.

Environmentally Friendly Enterprise

Recently in the mid catchment, WICC assisted a local innovative farmer implement an environmental management plan for his composting enterprise. Paul Hoult converts waste product from a local abattoir into highly valued compost for the organic vegetable growing market in Manjimup.

The implementation of the environmental plan includes the construction of a hard stand platform where the abattoir waste is mixed with sawdust and allowed to compost. This area slopes gently into a large capacity holding dam which collects any potential run off from the composting operation. This prevents any nutrients leaching into the near by wetland or waterways of the Catchment. The water in the dam can then be used in the composting process hence the need for additional water is reduced via this recycling.

Paul has taken other measures to reduce the impact of this enterprise on the environment including feral animal and pest control. His innovative enterprise has been developed with the technical assistance from the Departments of Conservation and Environment; Water; Health; the EPA; and the Shire of Plantagenet. Recently the Hon Wilson Tuckey visited the site and was impressed with the recycling/value adding enterprise.

If you have an enterprise that could benefit from funding to make it more environmentally friendly contact Lynn Heppell on 98512697.



Abattoir waste composting site & holding dam

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Wilson Inlet highlighted at State Coastal Conference

During the 4th Western Australian State Coastal Conference & Awards recently held in Denmark, a bus tour carrying 45 people was conducted around Wilson Inlet Estuary. Several speakers talked about current research, estuary management and community concerns. Highlights included talks on migratory waders and the importance of Morley Beach by Brad Kneebone whilst other speakers touched on the importance of aboriginal heritage and current research. A stop was also made at the farm of John Shapland. Here people saw how a previously degraded area has been transformed into an important wetland. Following afternoon tea at Wilson's restaurant, the bus stopped at the constructed wetland near the new hospital site and finished at the Ocean Beach lookout where issues concerning the bar opening and estuary management were raised. Speakers included Dave Rushton from Department of Water and Anne Brearley (author of Swanland). All that joined the tour enjoyed themselves as they did for the entire conference which was hosted by the Shire of Denmark.



Farmer John Shapland talks about his restored wetlands

Water Wisdom

“Live Stock Management & Watering Points”

Traditional agriculture practices have often involved unrestricted access to rivers and streams as a means of providing livestock with a reliable source of water. However, unrestricted stock access to waterways causes disturbance and pollution resulting in environmental degradation and loss of farm productivity.

Problems such as loss of native fringing (riparian) vegetation, weed invasion, soil compaction, erosion, and poor water quality can be avoided or at least minimised by restricting or preventing stock access to waterways and establishing alternative water sources.

There are a variety of alternatives to direct waterway access

for watering stock. These include providing limited river access, using an alternative water supply such as a dam or piping or pumping water from the waterway into a trough

The benefits of providing alternative water sources for stock include improved water quality by limiting sedimentation and nutrient enrichment, enhanced stock health through access to cleaner water, reduced loss of productive land, reduced stock deaths, less erosion of waterway banks and improved riparian habitats. Additional information regarding alternative watering points, including advice about design guidelines, is available from the Department of Water in Albany. Funding for fencing and alternate watering points is available through WICC.



Limited river access provided by a gravel crossing



Alternate watering point provided by a trough

What’s happening in the Upper Catchment?

Land holders in the Upper Hay Catchment are receiving incentives for: soil health including soil testing and liming; engineering works for surface water management; fencing riparian and remnant vegetation to exclude stock; revegetating with natives in degraded areas and establishing deep rooted perennial pasture for improved water usage as part of the Upper Hay Strategic Catchment Plan. This plan is the community’s catchment action plan that compliments the Wilson Inlet Nutrient Reduction Action Plan by providing the strategic direction and mechanisms for implementing and coordinating activities that will contain salinity and improve the health of the Upper Hay Catchment landscape and water quality of the Wilson Inlet and its waterways.

The Upper Hay catchment plan has incorporated the findings of research studies to address nutrient export from the catchment. With the Hay River having the largest catchment of all the rivers that flow into the Wilson Inlet, addressing nutrient and salinity issues in the Upper Hay will have a significant impact on the health of the Wilson Inlet. The Upper Hay Catchment Plan provides for expenditure on projects which will enable on ground work and actions to be undertaken to deal with issues at priority locations as recommended in the Wilson Inlet Catchment Compendium (1999).

This catchment plan represents only one step in a longer term vision for the catchment. Key areas will be tackled to give land-holders an accelerated start for implementation of works to tackle nutrient, salinity, soil and biodiversity issues. Perhaps more importantly however is the focus on long term planning and implementation. This plan will establish demonstration sites to look at key soil health and nutrient management issues with a view to driving practice change. It will also develop long term farm business plans that will be fully costed and based on the latest soil, hydrological and nutrient management information. The aim is to have a long term plan that can be implemented by the landholder over a realistic time frame.



Project Officer Murray Hollingworth discusses stock crossing design with the land owner and engineer from the Ag Department

Activity	Completed	In progress
Soil testing	15	125
Liming (prior to establishing deep rooted perennial pasture)	256 ha	1600 ha
Deep rooted perennial pasture	800 ha	2700 ha
Fencing to exclude stock from waterways	37 km	190 km
Stock crossings	12	48
Alternate water points	4	48
Revegetation	2.1 ha	160 ha
Engineering	10.6 km	84 km
Work completed so far by 56 landholders		

Current Research

Denmark River Fish Assemblages

by Paul Close & Dave Tunbridge (CENRM Fish Research)

The University of Western Australia's Centre of Excellence in Natural Resource Management (CENRM) recently undertook surveys of fish populations in the Denmark River Catchment. Craig Carter (WICC Project Officer) joined Paul Close and David Tunbridge for two days of electrofishing surveys at three sites on the Denmark River and one site on Scotsdale Brook. These surveys were undertaken as a component of a Department of Water project (funded through South Coast NRM) addressing the environmental water requirements (EWRs) for the Denmark River. EWRs are the water regimes required to maintain important ecological values and processes at a low level of risk. Examples of the water dependant ecological values identified in the Denmark River include fish spawning, and the maintenance of in-stream habitat, channel form and water quality. The surveys aimed to gain important knowledge on the species of fish in the Denmark River catchment, and more particularly their distribution and relative abundance. State of the art electrofishing equipment was used to collect fish from representative reaches (60m in length). This highly effective sampling technique uses pulses of electrical current to attract fish toward a handheld net, and momentarily stun them, allowing for their collection. All fish were identified and counted before being released into the habitats from where they were collected.



Paul Close & Dave Tunbridge Electrofishing the Upper Reaches of the Denmark River

Seven fish species were collected from the Denmark River catchment including Balston's pygmy perch (*Nannatherina balstoni*). The collection of Balston's pygmy perch is an important finding as they have not been previously reported from the Denmark River. Other species collected included nightfish (*Bostockia porosa*), western pygmy perch (*Edelia vittata*), western minnow (*Galaxias occidentalis*) and pouched lamprey (*Geotria australis*). Two exotic species were also collected, namely rainbow trout (*Oncorhynchus mykiss*) and mosquito fish (*Gambusia holbrooki*). These data show that native species dominated assemblages both in terms of species richness and relative abundance. Interestingly, the exotic species were only collected from the lower reaches of the Denmark River in relatively low abundances. No exotic species were collected from Scotsdale brook or the upper reaches of the Denmark River.



This newly acquired knowledge will be used in combination with existing knowledge of the habitat requirements and ecology of individual species, to critically assess the environmental water requirements of the Denmark River and Scotsdale Brook. These assessments will form one component of the Denmark Water Management Plan which, in consultation with the community, seeks to share water between environmental, socio-cultural and economic interests within the catchment. For more information on the Denmark Water Management Plan or the fish surveys, contact Sharon Stratico (Department of Water: 9842 5760) or Paul Close (UWA: 98420833).

WILSON INLET GROUNDWATER NUTRIENT STUDY

The need to monitor nutrients from urban groundwater sources, in particular the unsewered areas of Weedon Hill, Little River and Minsterly Road, is identified in the WINRAP as a priority action. Subsequently, a monitoring program was conducted from May 2006 to April 2007 to investigate nutrient concentrations in groundwater collected from a series of bores along the north-western foreshore of Wilson Inlet, from Poddyshot boat ramp to Denmark Earthmoving on Inlet Drive. The following is a summary of the data collected during this program.

Of the monthly nutrient data collected, just under 80% of the samples registered moderate to very high total nitrogen (TN) concentrations in accordance with the Australian and New Zealand Environment and Conservation Council (ANZECC) Guidelines for Fresh and Marine Water Quality. A relatively large proportion (approximately 50%) registered very high TN (>2 mg/L).

Samples collected from monitoring bores along Inlet Drive & Minsterly Road consistently measured exceedingly high nitrogen concentrations, peaking at 12 mg/L. To put this into context, background nitrogen concentrations measured in groundwater samples collected from 'The Cove', a pristine native bush block on Payne Road, were very low (between 0.19 and 0.38 mg/L).

Generally results revealed that for most monitoring locations across the project area, phosphorous is less significant with only about 20% of samples registering high to very high concentrations. Findings of this project will hopefully help provide the impetus for these areas to be considered for the Water Corporation's Sewer Infill Program.



Dave Rushton from the Department of Water collects water samples from a monitoring bore on Inlet Drive

An update from the WINRAP Project Officer: Craig Carter

Projects are progressing well with many due for completion over summer. This will be followed by site preparation ready for planting over 20 hectares of plants next winter. The recent formation of a farmers group at Youngs Siding has been met with enthusiasm with 20 people having attended meetings. The next meeting is planned for early February which you are welcome to attend. Discussions are aimed at highlighting funding available, current projects, sustainable farming practices as well as being a great place to swap ideas and gain knowledge from other farmers and experts who can attend when requested.



Workshops are planned for next year with a tissue testing/pasture management workshop and a fencing construction field day planned for February. As of December 2007, WINRAP has seen funding allocated for 105km of fencing waterways of which 60km have been completed. This includes funding for over 60 stock crossings, 50 watering points and 82 hectares of plants for revegetation.

Please contact us if you have any questions about funding or natural resource management. Upper catchment landholders can contact Lynn Heppell at Mt Barker. If you live between the catchment boundary and Walpole, please contact Emanuel Ganser on 98482589.

E.P.A Holds Off Sandbar Opening

The Water Corporation's proposal to breach the Wilson Inlet sand bar on 8th October 2007 at approximately 0.8 metres Australian Height Datum (AHD) was referred to the Environmental Protection Authority (EPA) by the Denmark Environment Centre for consideration. Consequently, the EPA determined that the likely environmental impacts of an opening at that level were sufficient enough to warrant formal assessment under the provisions of the *Environmental Protection Act*. This decision means that before breaching of the bar at less than 1.05m AHD, Water Corporation must formally explain their proposal to the EPA. The decision was largely based on consequences of the opening in October 2006 at similarly low water levels, whereby there was insufficient scouring of the channel and the bar closed within 2 months, although the opening was only really effective for 3 weeks. This resulted in record low water levels over summer leading to, amongst other things, drying out of extensive seagrass habitat.

The expected outcomes of the decision are that inlet water levels should not be significantly lowered over summer, apart from some minor evaporation. With the first winter rains, levels should rise to the preferred opening height of 1.1m AHD by about July. Historically, the inlet should stay open for at least 6 months enabling good water exchange between the inlet and the ocean and marine/estuary fish recruitment.



Rudgyard Beach, March 2007

Obviously there are issues (drainage/flooding) associated with the decision by EPA. Therefore it is important that all stakeholders, including Department of Water, Shire of Denmark, Water Corporation and community work closely together not only to resolve these issues for this year but try to develop an appropriate management system for future openings. Ultimately, it is highly likely this situation will change the way South Coast estuaries generally are managed to deal with lower rainfall and decreased river flows in a continuing drying climate. *By Dave Rushton (Department of Water).*

Who is involved in the action plan?

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, Department of Water, Shire of Denmark, City of Albany, Department of Agriculture and Food WA, Fisheries WA, Water Corporation, Wilson Inlet Management Advisory Group.

QUICK CONTACT DETAILS

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LHeppell@agric.wa.gov.au

Website

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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 \$2500/km in the priority sub-catchments (Sleeman, Cuppup, Lake Saide and Sunny Glenn) and up to \$2000/km in the rest of the catchment.
- **Stock crossings & watering points**
Up to \$700 for a crossing and \$300 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**
A 50% 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.

