

RICHMOND FLOODPLAIN NEWS

A NEWSLETTER ABOUT NATURAL-RESOURCE MANAGEMENT ON THE RICHMOND FLOODPLAIN

ISSUE 18

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WELCOME

Welcome to the Richmond Floodplain newsletter, an initiative of the Richmond River County Council.

Council's longstanding commitment to restoration of degraded areas through natural-resource management was showcased with release of the Ecohealth report for the Richmond River.

While the over-all river health result of D+ was disappointing, the report received valuable media attention and the recommended improvements are possible.

Congratulations to all partners and consultant BMTWBM for delivering an interactive flood website, which is an invaluable resource for the Northern Rivers community. Development is continuing. Watch this space!

We hope to continue to deliver creative ideas, solutions and support for the Northern Rivers community through initiatives, such as the new mitigation floodway in Lismore, which will help in flood situations.



Launching the Ecohealth report at Ballina are, from left, RRCC general manager Kyme Lavelle, report author Professor Darren Ryder, LLS team leader Peter Boyd and RRCC chairman David Wright.

CATCHMENT SCORES D+ IN REPORT

Waterways in the Richmond River catchment are in poor condition, but there is some hope for improvement.

The catchment scored an over-all rating of D+ in the year-long Ecohealth aquatic ecosystem check, conducted by researchers from the University of New England (UNE).

Representatives of the Richmond River County Council (RRCC), Local Land Services (LLS) and the UNE project team released the Ecohealth report during a function at the Fishery Creek boat ramp, at Ballina, on July 24.

RRCC general manager Kyme Lavelle said the results of the study were not a surprise and it would certainly guide the council in the future.

RRCC chairman David Wright said the council had needed a bench-

mark to assess the catchment's water quality.

"There is only so much that a small organisation can do," Cr Wright said.

"The constituent councils, Ballina, Lismore and Richmond Valley, along with RRCC, have put in money to start a riparian repair program and that is already in place."

Cr Wright said that taking the report in combination with the council's blackwater studies, he was quite certain council would be able to work on the problem.

Local Land Services team leader Peter Boyd said LLS and the Office of Environment and Heritage were proud to sponsor the report.

It had set a fantastic benchmark and showed exactly what could be done in the different subcatchments.

Continued, another picture, next page.



ECOHEALTH REPORT

RICHMOND RIVER CATCHMENT HEALTH SCORES D+

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"What it may not show though is the amount of work and input that has gone into rehabilitation of the creeks and catchments over the past 10 years," Mr Boyd said.

"I used to work with the catchment management authority and through state and federal funding it spent more than \$500,000 in the Richmond catchment alone on things like riparian restoration, working with local land holders, Landcare groups and industries ... dairy, beef, macadamias ... trying to protect their riparian zones and the health of the river.

"In the past three years alone we have spent more than \$210,000 of state and federal funding on the lower Richmond and the upper Richmond catchment."

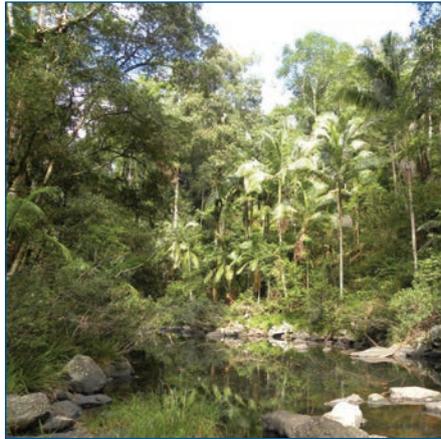
Mr Lavelle said that with state government support, RRCC was putting together an annual \$280,000 program for river bank restoration works in the Richmond estuary which would be implemented quickly once it was approved.

"We have other studies under way too into blackwater and with river-bank restoration, this report identifies these as major factors in addressing some of the health issues of the river," he said.

Mr Lavelle said the release of the Ecohealth report was an important milestone.

"We now have enough information to progress the restoration of the river, which is in very poor condition at the moment," he said.

Professor Darren Ryder, of the UNE School of Environmental and Rural Science, said the report allowed the areas that needed work to be prioritised.



The Terania Creek headwater scores a B.

"The river is what connects the valley," Prof Ryder said.

"Things we do at the top of the catchment affect what happens here in Ballina and what happens in Ballina affects the people up at Coraki, Lismore and Casino, as the tide pushes the impacts upstream and the fresh water pushes the impacts back downstream.

"The connectivity and getting all these councils talking to one another is going to be one of the best outcomes for the river and the people that live near the river."

Lowest score

Prof Ryder said the Richmond Ecohealth score was the lowest of the North Coast rivers.

"There are many reasons for that," he said. "It's a tourist hotspot, it has intensive agriculture and it's got a very large floodplain relative to the size of the catchment.

"In the top of the catchment of the Richmond we have some excellent places with very good water quality and very good riparian vegetation and very good health.

"As we head down the catchment, impacts tend to accumulate, so by the time we get to Coraki, where

we have the Richmond and Wilson rivers meeting plus the influence of the tide pushing the impacts from down here [Ballina] upstream, the reason that that area gets an F is because of where it is. It gets the impacts from here pushed upstream and the impacts from upstream pushed down and because that's where the river flattens out and it doesn't flow so fast, that's where all the issues accumulate.

"We have urban areas as well and they need to be sustainable. One of our outcomes is to try to guide management into riparian restoration and river bank restoration and how we can sustain local and regional communities and improve the river at the same time."

The Ecohealth report summary said that 48 study sites were selected across the Richmond catchment; 23 fresh-water sites and 25 estuarine sites and these were sampled monthly (estuarine) or bi-monthly (fresh water) over a 12-month period in 2014 to contribute to the assessment of the ecological condition of the catchment.

The Richmond catchment was divided into five hydrologic units for reporting; Richmond River main stem; Wilsons River; Eden and Iron Pot Creeks and Shannon Brook; Bungawalbin, Myrtle and Sandy Creeks; and Emigrant, Maguires and North Creeks.

The over-all grade for the Richmond catchment was D+, ranging from an F in the Wilsons River and upper Richmond estuary to a C in the headwater streams of the catchment. Twelve of the 17 river systems recorded a score of D or less.

The upper fresh-water reaches of

[Continued, Page 5.](#)

NEWS FLOWS



FLOOD INFORMATION WEBSITE WINS AWARD

The new Richmond River flood information website took out second place in this year's Floodplain Management Association (FMA) excellence awards.

The awards were presented at the FMA national conference dinner, on May 21, at the Brisbane Convention and Exhibition Centre.

The site is a joint project of Richmond River County Council (RRCC), the NSW State Emergency Service (SES), Richmond catchment councils, state government authorities and NSW MyRoadInfo.

It was nominated for the FMA and NRMA Insurance flood risk management project of the year award.

The site integrates flood information and emergency information including SES messaging and Bureau of Meteorology weather warnings.

It also provides community education including preparedness and recovery tips, flood studies and historical information on floods.

One-stop site

When it was launched in December, RRCC general manager Kyme Lavelle said it would be a one-stop site for flood information, particularly in times of emergency.

"It integrates all the information from all the major agencies," he said.

"It identifies all the flood studies, all the flood levels. It includes information on roads. It provides information in regard to flood preparedness and flood recovery. It's a great place for people to access all that information."

Richmond-Tweed SES regional controller Kaylene Jones said the site would be useful to the SES in the planning and preparation phases



At the website launching are, from left, RRCC general manager Kyme Lavelle, Richmond-Tweed SES regional controller Kaylene Jones and Phil Buchanan, of the Office of Environment and Heritage.

of flood control as it would present real-time data and that from various flood models.

She agreed with Mr Lavelle that it probably would help reduce the number of calls to the SES, particularly for information outside times of flooding.

"It will be useful for community engagement too, encouraging people to do that planning beforehand, rather than when they are confronted by a storm or flood," she said.

"During a significant weather event or flood, you lose power, you lose phones. You can't do your planning at that time."

Ms Jones said the idea for the site came out of discussions between the SES and RRCC about river heights and changes to flood gauges on the floodplain. The main driver for establishment of the site was former RRCC floodplain services manager Michael Wood.

The \$120,000 project was funded on two-for-one basis, with \$80,000 coming from the State Government and \$40,000 from RRCC.

Excerpt from the site: "This website has been designed to make it easier for you to find information about flooding in your area. Explore the site to learn more about flooding in the local area and how it might affect you. There are resources to help you prepare and recover from flooding, information about the recent changes to some of the stream gauges, links to past flood investigations and some myth-busting answers to a few of the frequently asked questions about flooding.

"In the next few months we'll be introducing an interactive mapping page which brings together a range of flood mapping and real-time data, so you can get a better understanding of flood risk in your area.

"The site is a collaborative project between various local, state and federal agencies, including: Ballina Shire Council, Bureau of Meteorology, Floodplain Management Association, Kyogle Council, Lismore City Council, NSW Office of Environment and Heritage, NSW Office of Water, Richmond River County Council, Richmond Valley Council, NSW State Emergency Services."

Visit www.flood.rrcc.nsw.gov.au .



Former RRCC floodplain services manager Michael Wood with the site in the background.

ECOHEALTH REPORT

UPPER ESTUARY IS IN THE POOREST CONDITION

NC5	NC4	NC3	NC2	NC1	CHC1	WC1	BYC1	WR4	WR3	WR2	WR1	COC2	COC1	TC2
D-	C-	C-	C	D+	D+	C+	D-	D	F	F	F	C+	D+	B
F	D-	D-	C-	C-	F	C-	D-	F	F	F	F	C-	D	C
D-	C-	C-	C-	F	D	B-	F	C	F	F	F	B	D+	B+
C	B-	B-	B-	C+	B-	B-	D+	D	C+	C-	D-	B-	D+	B-
						C	D-					C	D+	B+

BC3	BC2	BC1
D	D-	F
D-	D	F
C	C-	D
C-	C-	C-
D-	F	

Subcatchment Grade

Richmond Catchment

D+

D-

D+

C-

D+

WHAT YOU CAN DO TO HELP

Conserve and maintain well-vegetated riparian (riverbank) areas, particularly deep-rooted native species that help stabilise streambanks.

Revegetate streambanks that have been cleared or depleted of vegetation using a range of suitable, local native plant species.

Identify and manage weeds appropriately.

Leave woody debris and natural rock formations in waterbodies.

Reduce nutrient and pollutant run-off into streams (e.g. fertilisers, chemicals or cleaning products).

Control and manage stock access to streams by fencing riparian areas and providing off-stream stock watering points and shade areas.

Reduce soil erosion and sedimentation of streams by retaining groundcover and vegetation buffers (e.g. through rotational grazing, stubble retention and head-row buffers).

Obtain advice and necessary approvals from local or state governments before undertaking any infrastructure works near or in streams (e.g. modifying a stream crossing).

Reduce water consumption.

HEADWATER STREAMS IN BETTER SHAPE

From Page 2.

the Richmond catchment had better water quality, aquatic macro-invertebrates and geomorphic condition than the lower fresh-water reaches, but no better riparian condition.

The upper estuary (upstream of Woodburn) was consistently in the poorest condition, with very high nutrient concentrations, turbidity and algal biomass.

RRCC floodplain project officer Garry Owers said the Ecohealth study would be repeated in three years.

EC1	IPC1	ED1
D	C-	D-
D-	D+	D-
F	C	D+
C	D	D-
	C	F



RC1	TC1	LC3	LC2	LC1	MC2	MC1	EC3	EC2
B-	F	C	F	D-	C	D+	C+	D-
C	D	D	D	F	C-	D	C+	F
C+	F	D-	D-	D-	F	F	D+	F
B-	D+	C	D+	C+	B-	C	C+	C+
B	F	B-	F		C	C	C	



NEWS FLOWS

NEW FLOODWAY PROVES ITS WORTH AFTER MAY DELUGE

The newly completed South Lismore floodway proved its worth during the May flood.

The 100-metre-wide floodway runs behind the Bunnings hardware store and Masters home-improvement store, on the Bruxner Highway.

It was completed last year when it was excavated to provide site fill for the Masters store.

The Wilsons River Channel Improvement Project included removal of remnant embankment and creation of a channel to improve the passage of flood flows away from the Lismore central business district.

Richmond River County Council (RRCC) assets engineer Gillian Marchant said the floodway resulted in a 100-mm drop in the flood level around the Lismore CBD during the May flood.



This picture of the floodway was taken on May 2 after heavy rainfall of more than 150 mm across the catchment. The gauge height at Lismore was about 7.2 metres AHD. The floodway starts flowing at 5.1 metres AHD.

The Lismore flood levee prevented the water from entering the CBD.

The final component of the project is to transfer all the floodway land east of the Bunnings-Masters ser-

vice road to Lismore City Council as public lands. The floodway itself will be recorded in RRCC's asset system and treated in the same manner as the Lismore levee.

RIVERBANK VANDALISM IS REPAIRED

Lismore businesses and local government have combined to repair damage done by vandals at a riparian rehabilitation project beside the Wilson River.

Richmond River County Council (RRCC) floodplain project officer Garry Owers said trees that were planted as part of work to improve the riverbank behind the Norco factory, near the Ballina Street bridge, had been growing well up to April.

"They actually grew about three metres in one year," Mr Owers said.

"However, after the May flood we found that many had been cut down and in successive weeks more and more were cut down."

Mr Owers said that when they heard about the vandalism, Alstonville's Alpine Nursery had supplied advanced trees for replanting,



The EnviTE repair team on site.

while EnviTE provided workers and the Lismore City Council supplied mulch for the project.



Vandalised trees lie on the riverbank.

COUNCIL WARNS ON FLOODGATES

Richmond River County Council (RRCC) has warned farmers and other property owners not to interfere with floodgates.

The warning comes after several instances of incorrect floodgate operation leading to damage.

RRCC asset engineer Gillian Marchant said in one case a tractor had been used to open large floodgates without permission.

She urged farmers not to risk illegal operation of the gates as the damage to floodgate infrastructure was very costly and there was a risk of injury or fatality.

WHAT'S WHAT

ON THE RICHMOND FLOODPLAIN

There are many groups involved in the natural resource management in the floodplain. The following is a list designed to help you improve your floodplain networks. If you know of other groups that should be included, or if any of the details appearing below need updating, please contact: **The General Manager (02) 6621 8314** or email floodplain@rrcc.nsw.gov.au.

BALLINA FISHING CO-OPERATIVE

Regulates the sale of professional fishers' catch.
Contact: General manager
Ballina Fishermen's Co-operative
phone: (02) 6686 2533

BUNGAWALBYN CATCHMENT MANAGEMENT GROUP

Formed to source funding, implement on-ground works and demonstrate better management of the Bungawalbyn sub-catchment.
email: garry.owers@rrcc.nsw.gov.au

DRAIN WATCH

Drain watch groups are being set up by the sugar industry to monitor water quality. This is an outcome of the sugar industry's three-year program developing best management practices for improving water quality in drains.
Contact: Broadwater Sugar Mill
phone: 6620 8200

ENVIRONMENTAL TRAINING AND EDUCATION INC (ENVITE)

Provides training and education to unemployed young people. Engages in environmental works around the catchment.
Contact: General manager
phone: 6621 9588
email: envite@bigpond.net.au

FAR NORTH COAST WEEDS

Works with a wide range of stakeholders to combat the spread of noxious weeds in the Northern Rivers region of NSW.
Contact: Chief Weeds Officer
phone: 6623 3833
email: fncw@fncw.nsw.gov.au

NORTH COAST LOCAL LAND SERVICES

North Coast Local Land Services is a part of the NSW Department of Industry and Investment. It provides catchment management, natural-resource management, biosecurity, agricultural production advice and emergency management. Its strategies are consistent with ecologically sustainable development and total catchment management.
phone: 6626 5659
email: admin.northcoast@lls.nsw.gov.au

NSW DEPARTMENT OF PRIMARY INDUSTRIES (AGRICULTURE AND FISHERIES)

Agriculture: Soil and water investigations, acid-sulfate soil research, best management practices for backswamps.
phone: (02) 6626 1200
email: nsw.agriculture@dpi.nsw.gov.au

Fisheries: Protect and enhance aquatic habitat in natural waterways within the estuarine reaches of the floodplain.
phone: 6626 1200
email: information-advisory@dpi.nsw.gov.au

Floodplain and Acid Sulfate Soils Network: Provides an avenue for flood mitigation authorities, research bodies, government organisations to exchange ideas and information.
email: information-advisory@dpi.nsw.gov.au

NSW SUGAR MILLING CO-OPERATIVE, BROADWATER

Regulates and processes sugar cane production on the Far North Coast.
phone: 6620 8200

OFFICE OF ENVIRONMENT AND HERITAGE

Estuary Northern NSW:
Floods Northern NSW:
email: info@environment.nsw.gov.au

WHAT'S WHAT ON THE RICHMOND FLOODPLAIN

RICHMOND LANDCARE INC.

Supports and represents local Landcare groups and works in partnerships with others in the community to protect, manage and enhance natural resources in the Richmond River catchment.

phone: 02 6619 1582

email: info@richmondlandcare.org

RICHMOND RIVER CANE GROWERS ASSOCIATION

Body representing cane growers on the Richmond River.

phone: 6683 4205

email: richmondcane@gmail.com

RICHMOND RIVER COUNTY COUNCIL (RRCC)

Responsible for flood mitigation, drain maintenance and water quality in the Ballina, Lismore and Richmond Valley areas.

Contact: General manager

phone: 6621 8314

email: floodplain@rrcc.nsw.gov.au

WETLAND CARE AUSTRALIA

Concerned with rehabilitation of drained wetlands, and reinstatement of wetlands and their ecological functions.

phone: 6681 6069

email: ballina@wetlandcare.com.au

WILSON'S RIVER LANDCARE GROUP

The main focus of the group is river bank restoration and enhancing riparian vegetation at sites along the Wilson River at Lismore.

phone: 6624 7979 or 6624 5500

email: eco_nsw@bigpond.net.au



MORE INFO

RICHMOND RIVER COUNTY COUNCIL FLOODPLAIN MANAGEMENT WEBSITE

[HTTP://WWW.RRCC.NSW.GOV.AU/](http://www.rrcc.nsw.gov.au/)