

Upper Hunter

RIVER REHABILITATION INITIATIVE

UHRRI Update

No. 7, March 2007

From the Project Manager

Welcome to the March 2007 UHRRI Update. As the UHRRI project enters its final year, the main thrust of 2007 will be the completion of research projects, monitoring of revegetation and communication of results.

The El Niño event present over the summer of 2006 has ended. The Bureau of Meteorology has reported that neutral conditions have once again returned to the Pacific Basin and has indicated that the probability of a La Niña event forming during 2007 is higher than the long-term average. La Niña events often bring wetter than normal conditions over the eastern half of the continent from autumn. Given the persistent dry conditions over the past several years the prospect of a wetter autumn is welcome news. We keep our fingers crossed!

February 27 marked the final day of occupancy of the Muswellbrook Research House on Racecourse Road. The house had been a focal point for researchers working along the UHRRI reach and within the upper Hunter catchment since early 2003. During that time many scientists, students and technical staff spent time there, sharing ideas over a cold beer after a long day in the field. From early 2007, with most fieldwork completed and the project entering its final phase of data analysis and write-up, permanent accommodation at Muswellbrook was no longer required.

Dan Keating
Project Manager, Upper Hunter River Rehabilitation Initiative

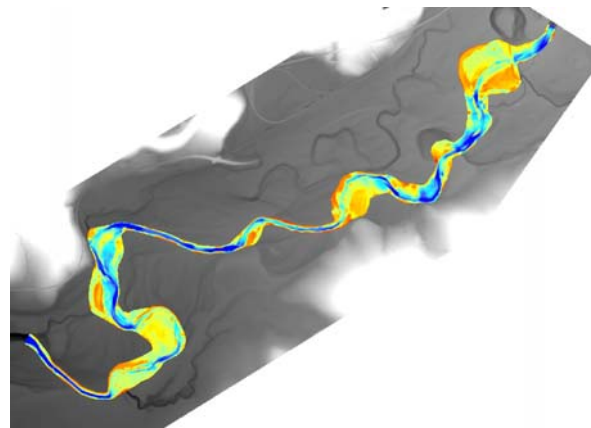
Revegetation

In November 2006, the May-June 2006 plantings at Michael Chudyks were monitored. The height and condition of 332 plants at the two sites was recorded. Preliminary results indicate high levels of mortality across both sites. This is likely to be a result of well below average rainfall over the last half of 2006 and the inability to irrigate due to severe cuts in water allocations. Nevertheless, at this stage the site is producing some interesting results. Of the 18 species planted, a handful are showing good survival given the unusually dry conditions. A further monitoring exercise will take place in May 2007. This data will form the basis of a report due for completion in mid 2007.

ARC-Linkage Research

The PhD students, having largely completed fieldwork, are continuing with data processing, sample analysis and writing up of results. All aim to finish their theses during 2007.

Jo Hoyle has been working on developing hydraulic models of the study reach at different timeslices. She has completed a model for the contemporary system that generates the distribution of velocity and depth for different flood events and is close to finalising the model for the pre-European system.



1 in 100 year flood velocity model of the UHRRI study reach (Jo Hoyle).

Alex Spink received first class honours for her Masters Honours thesis submitted in 2006, titled; An interdisciplinary perspective of river rehabilitation and management activities in the upper Hunter catchment, NSW, Australia. Alex is currently collating revegetation project data for the upper Hunter with the aim of revisiting sites to monitor mortality rates and examine its relationship to geomorphology.

Conceptual Modelling Workshop

Over two days in mid December, the UHRRI/ARC research team held a workshop at the National Marine Science Centre at Coffs Harbour. Two exhausting but highly productive days were spent developing a conceptual model of the Hunter riparian system encompassing the ARC research projects and their many interlinkages. This has provided the framework for a paper now in its draft stages, focussing on the application of conceptual modelling to

better manage riparian systems. This will be published later in 2007.



Developing a conceptual model of the Hunter riparian system at the NMSC in December 2006.

Woody Debris Technical Manual



In late 2006, Land and Water Australia published *Design guidelines for the reintroduction of wood into Australian streams* by Dr Andrew Brooks. The publication is a technical manual aimed at river managers to assist them in the design of successful wood reintroduction strategies. A number of examples featured in the guide are drawn from the UHRRI project. A digital copy of the manual is available online and can be downloaded as a pdf from the link below. Hard copies can also be ordered from the same address. The

manual is free of charge in either format. http://www.lwa.gov.au/products_details.asp?pc=PX061171

Presentations & Awards

Dr Kirstie Fryirs won a prestigious Australian Government Young Tall Poppy Science Award in 2006 recognising an outstanding contribution to science and outreach including contributions to the UHRRI/ARC project.

Coming Up

UHRRI staff will attend the Muswellbrook Energy Expo and Show on March 23 and 24. UHRRI will also be participating at the 2007 Enviro Youth Forum at Muswellbrook on April 26.

The ARC research group are meeting on May 1 & the UHRRI Executive Committee are meeting on May 2.

UPPER HUNTER RIVER REHABILITATION INITIATIVE, C/- NSW DEPARTMENT OF NATURAL RESOURCES
PO Box 297, LEVEL 2, 160 BRIDGE STREET, MUSWELLBROOK NSW 2333 TEL: (02) 6542 4432 FAX: (02) 6543 4164
EMAIL: DAN.KEATING@DNR.NSW.GOV.AU WEB: WWW.HCR.CMA.NSW.GOV.AU/UHRRI

