

Wungong

Whispers

Volume 1 – July 2006

Welcome to the very first edition of *Wungong Whispers*, a quarterly newsletter designed to update you on the progress of the Water Corporation's Wungong Catchment Environment and Water Management Project. More details about the project can be found at www.watercorporation.com.au/wungong.

Collaboration the key to increasing knowledge

A group of leading WA researchers came together at the inaugural Wungong Research Seminar in May to share ideas, identify collaborative opportunities and obtain feedback on their Wungong research projects from an expert audience.

More than 60 people attended from a wide range of organisations and academic institutions including the Department of Environment and Conservation*, the Department of Water, the CSIRO, the University of Western Australia, Murdoch University, Curtin University of Technology and the Water Corporation. A number of independent, expert consultants also attended and presented.

Forum Chair and Principal Planning Engineer at the Water Corporation, Graeme Hughes said the forum provided many useful ideas about integrating the different aspects of the research and identifying opportunities for future collaboration.

"The outcomes of this multi-faceted research will assist the project team to better understand any changes in the environment as a result of the thinning program," he said.

"This information is essential in determining whether future catchment thinning projects should proceed and will

make a significant contribution to developing policies and guidelines for forest management within water catchments."

The research and monitoring program for the Wungong project spans a broad range of topics and is being undertaken by leading Western Australian researchers.

Research and monitoring projects recently commissioned include:

- investigations into the impacts of thinning on flora and fauna;
- FORESTCHECK- an integrated monitoring system developed to provide information to forest managers in the south-west about any changes and trends in key elements of forest biodiversity associated with a variety of forest management activities;
- measuring changes in aquatic biodiversity as result of increased stream flows;
- monitoring dieback prevalence and forest health;
- researching impacts of thinning on water quality; and
- hydrological modeling.

The Water Corporation is also developing further research and monitoring proposals that include investigations into Carnaby's Black Cockatoo, birds and ground



A collaborative approach will help WA researchers and the Water Corporation identify changes in the environment as a result of the Wungong trial (Photo by Colin Terry).

vertebrates by the WA Museum, social perceptions of catchment thinning, landscape and visual impacts of catchment thinning and the measurement of transpiration by sap flows.

Another research forum is planned to be held later this year. This forum will be open to the public as well as all stakeholders.

* Formerly two separate agencies, the Department of Environment and the Department of Conservation and Land Management.



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Wungong trials undergo extensive public and environmental reviews

Since inception, the Wungong Catchment Environment and Water Management Project has undergone a series of public and environmental reviews. These reviews have assisted the project team to refine and further develop the project to work towards achieving environmental benefits as well as increased water flows.

The State Water Strategy, released in 2003 after extensive community consultation, gave consideration to more extensive catchment thinning in water

catchments to increase water supplies for Perth in the drying climate. The Strategy supported the development of the Wungong project.

In early 2005, the Conservation Commission of Western Australia and the Department of Conservation and Land Management (now the Department of Environment and Conservation) agreed that the Wungong project was consistent with the Conservation Commission's Forest Management Plan 2004-2013.

The Water Corporation also presented the project to the Environmental Protection Authority (EPA) on 24 February 2005. The EPA provided advice on the project after the Water Corporation's eight-week public review period (26 April 2005 to 22 June 2005).

The EPA released its advice to the Minister for the Environment in September 2005. EPA Chairman Dr Wally Cox said that the Wungong project should proceed as an experimental trial subject to the Water Corporation implementing the EPA's advice and recommendations.

"Given the drying climate in Western Australia, there is merit in undertaking an experimental trial to determine whether silvicultural treatments can be applied for water production purposes without having adverse impacts on forest ecosystems and water quality," Dr Cox said.

The Water Corporation is committed to ongoing communication with government agencies, stakeholders and the community to ensure the project benefits from appropriate feedback.



■ **Early involvement: field trip participants at Jarrahdale old growth site back in September 2002 (Photo by Colin Terry).**

Summary of Key EPA Recommendations implemented by the Water Corporation

EPA RECOMMENDATION	WATER CORPORATION RESPONSE
Research should aim to confirm the predicted environmental benefits of the project.	A range of monitoring and research programs has commenced – see article on page 1 for a summary.
Priority should be given to research proposals which address the ecological uncertainties of undertaking thinning.	Current research and monitoring emphasis is on ecological studies. Social and aesthetic issues will also be considered.
Information from research and monitoring should be made available to the community, relevant stakeholders and Government agencies.	A research seminar has been held and a public seminar is planned. The Water Corporation is currently looking at a number of ways to make the information publicly available.
Continued liaison with the Department of Water in relation to water quality monitoring and water protection.	Agreement has been reached in regards to the monitoring program and there is continued involvement by the Department of Water.
The first project review be brought forward and submitted to the Conservation Commission in 2008.	Noted.
Supports the Conservation Commission's recommendations that further testing on a range of thinning options is required.	A range of thinning options is being developed in consultation with the Department of Environment and Conservation and the Forest Products Commission. Some demonstration trials are also being planned.

Farewell to Colin Terry

No more the familiar sight of bare male legs in the dead of winter! Colin (who had a penchant for wearing shorts no matter what the season) packed up his family and possessions to return home to Tasmania after a successful sojourn with the Water Corporation. During his time in the west, Colin impressed all, colleagues, clients and the community alike with his intellectual capacity, endeavour and willingness to achieve outcomes.

These characteristics were amply demonstrated over a period of 4 years on the Wungong project. Colin provided terrific leadership in shepherding this project through the maze of prerequisites such as parliamentary briefings, Water Corporation milestones, community and stakeholder concerns and expectations,



■ **Fond memories: Colin speaking to television news reporters at the launch of the Wungong project public review period.**

agency roles and regulatory controls.

Colin was able to achieve this outcome because of his engaging manner, his preparedness to listen and his ability to argue in familiar terms. Colin's grasp of forestry and biodiversity issues enabled the Corporation to progress the project to the stage where works are now proceeding in the catchment.

Having played such a role, it would be easy for the Corporation to be

concerned at Colin's departure.

However, because of Colin's good work, there is reason to be positive. He has left the project in good stead and has indicated his ongoing interest in the Wungong program.

Colin is now ensconced in his new role as a partner in a Tasmanian engineering consultancy. He and his family are home, welcomed by their extended family and doting grandparents. We wish them all well.

Field operations mindful of environmental impacts

Field work is underway in the Wungong catchment, which will see select areas of regrowth forest thinned to help maintain drinking water supplies by increasing runoff into the Wungong dam.

Work has now commenced within Treatment Area 1, which includes both native forest and areas of 'pre-1988' bauxite mining that has been rehabilitated with a mixture of species

that are mainly 'exotic' (not native) to the high rainfall jarrah forest.

The process involves a series of steps to ensure the thinning has minimal impact on local ecology. The process begins with identifying dieback infestations, conducting prescribed burns where required to reduce fuel load and then identifying and marking the trees to be retained.

Treemarking was carried out by Department of Environment and Conservation (DEC) staff in accordance with existing guidelines. Trees more than 70 centimetres in diameter which are likely to contain or form hollows for nesting birds and other animals are also retained and are referred to as habitat trees.

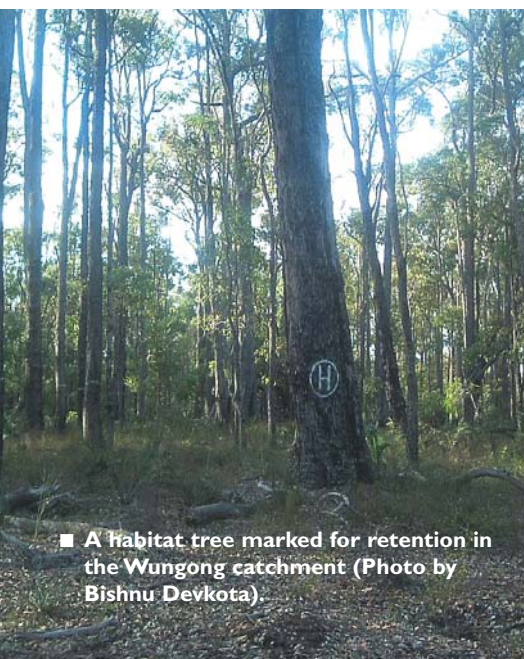
This process was rigorously followed for a section of Treatment Area 1, which was interpreted and demarcated for dieback by trained interpreters before a prescribed burn was conducted. This was quite a difficult burn to implement as the fuels were mostly older than 15

years and smoke management was a key factor.

A successful burn was achieved that has greatly reduced the risk of damage from summer wildfire. Trees in the native forest patches were marked for retention by DEC staff and notching (injecting select trees with an approved herbicide) by DEC crews commenced in mid-April.

The DEC, with relevant input from the Water Corporation, is currently responsible for dieback interpretation and demarcation, prescribed burning, demarcation of stream buffers (to protect water quality) and other reserved areas such as fauna habitat zones, treemarking to an approved prescription (including habitat trees) and then notching of the remaining trees with an approved herbicide.

Research and monitoring programs have also commenced to assist the Water Corporation in identifying and monitoring changes in ecology as a result of the thinning program.



■ **A habitat tree marked for retention in the Wungong catchment (Photo by Bishnu Devkota).**

Meet the Team!

The success of the Wungong project relies on the hard work and expertise of many people in the Water Corporation and in the Department of Environment and Conservation.

This issue introduces you to a few of our key players at the Water Corporation.



Chris Botica
Project Manager

Chris' role as project manager is to ensure the project achieves its stated objectives and deliverables within the targeted time and cost constraints. This is a challenge given the number of partners involved in the Wungong project.

To achieve these outcomes Chris will rely heavily on the ability of the project team to provide support across the range of specialist areas including communications, silviculture, research management, catchment management, hydrography, water quality and security.



Peter Coghlan
Supervising Engineer

Peter has recently joined the project team following the departure of Colin Terry and is responsible for planning for new water sources. For the past five years, Peter's main focus has been working with the Department of Water to develop drinking water source protection plans for all of the Corporation's public drinking water sources across Western Australia. This work is closely related to land use changes proposed for the Wungong project.

Peter will monitor progress on the Wungong project and opportunities it may present for forest management of surface water sources elsewhere.



Frank Batini
Project Consultant

Frank is a consultant in natural resource management with extensive experience in forest and catchment management and research. His involvement in this catchment commenced in 1970 with studies related to dieback ecology as well as the economics of water, timber and bauxite mining.



Keith Barrett
Planning Consultant

Keith brings his extensive experience in hydrology, catchment research and water planning to the Wungong Catchment Environment and Water Management Project.

Having been a leader in water resources assessment, Keith is now enjoying his role of coordinating the rainfall and streamflow monitoring requirements for this project.



Bishnu Devkota
Engineer

Bishnu is a Civil and Environmental Engineer and has more than 10 years experience in hydraulics, hydrology, water resources engineering, planning, design and contract/project management of water supply, sewerage, drainage and water/wastewater treatment systems.

In the Wungong project, Bishnu has responsibility for planning and co-ordination of research, monitoring and on-ground works, hydrologic data analysis and modelling, developing project management plans and informing the community and stakeholders about research and monitoring outcomes.



Mike Canci
Senior Research Officer

Michael has worked in the spatial information industry for over 20 years both as a systems developer and as a geospatial analyst. He is a research officer within the Strategic Issues/Drought Response Planning Section.

In the Wungong project Michael carries out geospatial analysis and map production tasks to support the analysis and modelling activities of the project team. He also provides advice on the use of geospatial technology, including remote sensing, within the planning activities.



Jeff Doust
Environmental Officer

Jeff represents the Water Corporation's catchment operations group. This group is responsible for implementing catchment management strategies in the Wungong catchment (and Perth's other drinking water catchments) including catchment surveillance, by-law enforcement and sampling of streams and reservoirs.



Louisa Kinnear
Communications Officer

Louisa has recently joined the Water Corporation and has experience in developing and implementing community engagement programs, particularly in relation to environmental and natural resource management projects.

She has responsibility for communications planning and advising on stakeholder and community engagement activities for the project.

Contact Details

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