



Environmental Flow Determination for the Tarago and Bunyip Rivers

June 2006

Project Description

Melbourne Water is in the process of developing environmental water requirements for the rivers and streams in the Bunyip River catchment. The project will recommend the flows required to achieve a 'healthy ecosystem', as defined in the Victorian River Health Strategy.

The Department of Sustainability and Environment will use the results of the project to inform the Central Region Sustainable Water Strategy. This is an *Our Water Our Future* initiative that looks at re-balancing water supply demand needs and river health requirements, considering the range of water supply options available. A draft of this Strategy is available for comment until 23rd June 2006.

The study area covers the Bunyip River catchment, which lies to the east of Melbourne. The catchment includes two main sub-catchments: the Tarago River on the eastern side, including the Tarago water supply Reservoir, and the Bunyip River draining the western part. These two rivers meet near Longwarry North, to form the Bunyip Main Drain which flows south-west to enter Western Port at Koo Wee Rup.

What is an Environmental Flows Study?

The flow of water is what makes us define a river or creek. Many rivers and creeks in Australia including those within the Bunyip River catchment have highly variable flow. This means that they can have very low flows in dry periods, and we have also learnt to live with large floods.

Through the settlement of land and the development of agriculture and urbanisation we have had two main impacts on the catchment. We have changed the nature of the landscape through the removal of vegetation to build farms, houses and roads and we have taken water from the rivers and creeks to meet the demands for human consumption and the demands of industry.

The environmental flow study aims to understand the nature of the rivers and creeks in the catchment and answer questions such as:

- What was the natural flow like in these waterways?
- What environmental values are present in the waterways such as fish, vegetation, good water quality and fauna and what flow regime do they need to survive?
- What other parts of the landscape such as floodplains, wetlands and estuaries rely upon river flow?

Ultimately the Central Region Sustainable Water Strategy will seek to achieve a balance between water for consumptive purposes (domestic, industry and agriculture) and water for the environment. The environmental flow study will assist in understanding how much water the environmental values need and how best to deliver that water throughout the seasons of the year.

The Study Structure

An *Expert Panel* of independent scientists that has been employed for this project will ultimately make the environmental flow recommendations. The *Expert Panel*, lead by consultants Earth Tech, will provide the technical expertise to the project.

An *Advisory Group* has been established to help the river's key stakeholders be involved in the study. The *Advisory Group* is comprised of a cross section of community interests and will provide local knowledge to compliment the technical aspects.

A *Steering Committee* comprised of Melbourne Water, Department of Sustainability and Environment, Southern Rural Water and Gippsland Water representatives oversees the project to ensure that it meets its deadlines and to make day-to-day project management decisions.



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Project Components

1. Information collection and assessment of all relevant data.

The *Expert Panel* will review the hydrology, biodiversity value, ecological processes and the operation of the system. The output will be a list of the flow dependent environmental assets and a broad description of the flows and other ecological processes that will sustain or improve these assets.

2. Identification of reaches and sites.

An assessment of the entire system, dividing the river into representative reaches and sites where specific environmental flows will be recommended.

3. Develop an Issues Paper.

This paper will outline the current biodiversity values, ecological processes, significant environmental values and major flow related issues within the catchment. This paper will also outline environmental flow objectives.

4. Develop Final Recommendations.

This report outlines the final recommendations and the process used to develop the environmental flow and waterway works recommendations.

Have your say

We are currently searching for passionate and knowledgeable community members to be a part of the Advisory Group for this project. Do you have views on:

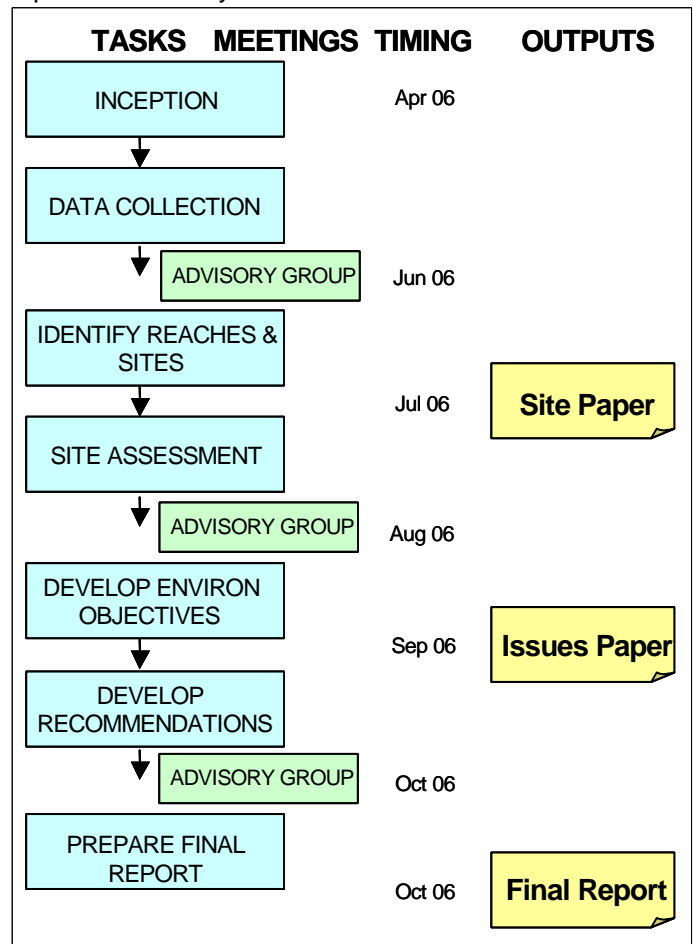
- What environmental, social and economic values would you like to see protected or restored?
- What do you consider the key threats along the river?
- What would a successful environmental flow outcome for your area of the River look like?
- Are there any particular sites we should visit to see the river's important environmental values?

If so, get involved! The first meeting will be held on Tuesday 27th June so be quick.



Steps in the project

As this project progresses there will be several opportunities for Advisory Group members to provide us with your views and be involved.



If you would like to be involved please contact the Melbourne Water project manger.

More Information

For more information on this project please contact Christine Hughes at Melbourne Water christine.hughes@melbournewater.com.au or 9235 2104.



Melbourne Water