

# Management of Emigrant Creek Catchment

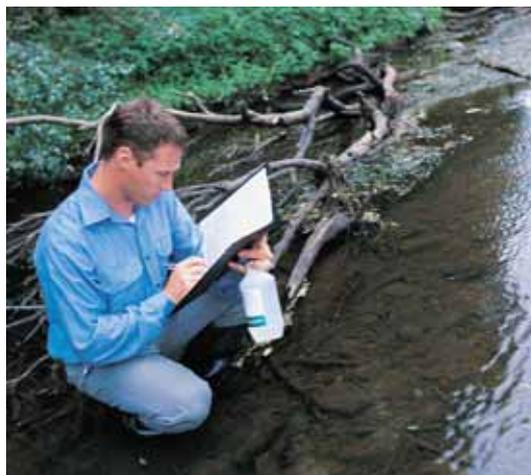
*caring for this catchment ...*

info sheet 16

Rous Water's vision for the future of the catchment for Emigrant Creek Dam is *"a healthy, productive catchment with fully functioning ecosystems that produces clean water"*.

Rous Water's vision includes:

- Water efficient homes and businesses with clean stormwater run-off.
- Healthy wetlands and creeks.
- Productive agriculture using less pesticides and fertilisers.
- Healthy rainforest ecosystems.
- Effective groundcover that minimises soil erosion.
- Clean water!



Strategies to achieve this vision include:

## RESEARCH

### *Investigating catchment health.*

Rous Water monitors the catchment for signs of poor water quality, soil erosion, loss of vegetation and general catchment health. Research projects are undertaken in order to understand the impacts of activities in the catchment on water quality and to develop improved management practices. This includes river health assessment projects and surveys of terrestrial, riparian and aquatic flora and fauna communities.

### **Monitoring water quality.**

Rous Water samples and analyses water in Emigrant Creek at a series of sites from the top of the catchment all the way to the water entering the dam, water contained in the dam itself, and water in Emigrant Creek downstream of the dam. Water is analysed for a broad range of physico-chemical, nutrient and bacteriological indicators for comparison with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality for the protection of aquatic ecosystems and drinking water.

Knowing the state of the catchment allows accurate feedback on current land-use and management practices.



### **REGULATION**

#### **Planning controls for development.**

All land within the catchment of Emigrant Creek Dam is zoned '7C Environmental Protection – Water Catchment' by the Ballina Local Environmental Plan (1987). The intention of this planning control is to prevent development which would adversely affect the quality or quantity of the water supply.

#### **Regulation of activities.**

Under the *Local Government Act* (1993), Rous Water can prohibit and restrict activities to areas where they will not harm the catchments or impact on water quality. In order to protect water quality in the dam itself, swimming, fishing, boating and camping are prohibited within the Emigrant Creek Dam reserve. In addition, Rous Water works together with the relevant agencies to enforce environmental regulations and to ensure that activities conducted within the water catchment area do not impact on water quality.



### **ECOSYSTEM RESTORATION**

#### **Rainforest regeneration.**

Trees play many important roles in the water cycle, particularly in the maintenance of good water quality. Rous Water is managing water in partnership with nature by regenerating rainforest and other natural habitat areas in the catchment. (See *Info Sheet 6: Regenerating Rainforests*)

#### **Riparian restoration.**

This type of regeneration is particularly important on the edges of the catchments' creeks and the edges of the dam itself. (See *Info Sheet 11: Riparian Vegetation*)

#### **Catchment protection.**

Other actions to restore and protect the catchment include investigating and monitoring on-site wastewater disposal systems within the catchment, collecting and improving the surface runoff draining from the Pacific Highway, containing spills to avoid contamination, reviewing the use of farm chemicals including intensive monitoring for their presence in catchment streams, developing best management practice with industry, and working with landholders and community groups to improve water quality through remedial works on the land.

### **WANT TO GET INVOLVED?**

Rous Water recognises the contributions being made by people and organisations living and working in the water catchment area of Emigrant Creek Dam. For this reason Rous Water has established the 'Healthy Catchments Program' which enables these landowners to obtain some level of support for the planning, implementation and maintenance of catchment rehabilitation activities. The Healthy Catchments Program is funded through the sale of quality bulk water. This means that consumers are contributing directly to the maintenance and rehabilitation of catchment lands and creek systems that are the source of our regional water supply.

It is only by working together that we can hope to achieve the vision for the catchment's future.



## STRATEGIC PLANNING

### *Coordination of Actions.*

In order to achieve the vision for the catchment's future, it is important to make action plans that work towards all the goals (ie, fully functioning ecosystems, productive, clean water). These action plans need to be coordinated in terms of who is responsible for taking each action and when the actions need to be taken.

### *Contingency Planning.*

The action plans need to be based on achieving specific targets. Meeting, or not meeting, these targets then 'triggers' new actions that need to be taken. This way, we move closer and closer to the goals of the vision, based on feedback about the effectiveness of our actions to date.



## WORKING IN PARTNERSHIP

It is only by working together that we can hope to achieve the vision for the catchment's future. Rous Water works in partnership with landholders, community groups, Ballina Shire Council and other government agencies in cooperative management of the catchment.

Government agencies that are involved include the Department of Primary Industries,

NSW Health, Roads and Traffic Authority and the Department of Environment and Climate Change.

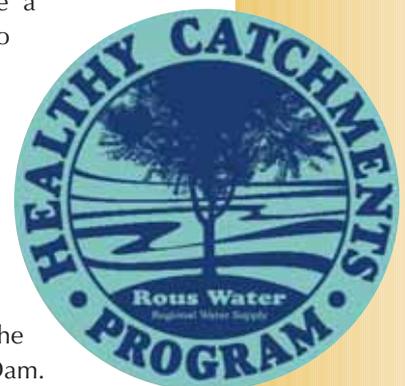
There are many people involved in caring for this catchment including community groups such as the Bundjalung Nation Stormwater Project, Rainforest Rescue, the Upper Emigrant Creek Catchment Landcare Group, the Emigrant Creek Environmental Protection and Landcare Association and the Big Scrub Rainforest Landcare Group. There are also many landholders assisting in the restoration of the catchment by looking after the ecosystems on their own property. Together these efforts make a big difference.

In order to better understand catchment behaviour, Rous Water has a research partnership with Southern Cross University.



## EDUCATION

- The more that we all understand the nature of the water cycle and how catchments operate, the easier it will be to achieve the vision for the future of this particular catchment. Knowing our place in 'the bigger picture' and knowing what actions we can take to make 'the bigger picture' a healthier one, makes it easier to take positive action.
- Rous Water is working with schools, community groups, farmers and other businesses, and with Ballina Shire Council to increase everyone's understanding of sustainable management practices within the catchment of Emigrant Creek Dam.



By learning things on this walk,  
you are helping Rous Water care  
for the catchment.



## TRY THIS!

### Learn with your ...



*"List all the different things that you think could be done to care for this catchment. Just list them down without looking at the fact sheet. Keep listing until you run out of ideas. You can make them as big or small, as sensible or crazy as you like."*



*"Remember a time when you have worked together with a group of people to get something done. What did that feel like? What did you enjoy about it? What was difficult about it? Imagine working together with a group of people to care for the catchment of Emigrant Creek Dam, or the catchment that you live in. Who would you like to get together with to help care for the catchment? How do you feel about that possibility?"*



*"Looking out from the viewing platform, what different land uses can you see? Can you see any actions that have been taken to help care for the catchment? What are they? Can you think of any improvements that can be made? What else could be done?"*

**Learning objective:** To understand the vision that Rous Water has for the future of the catchment for Emigrant Creek Dam; the strategies that Rous Water has in place to achieve this vision; the importance of partnerships and cooperation, education, on-the-ground actions, strategic planning; the concept of ecological restoration creating clean water.

This Water Walk is an example of the education programs that Rous Water is promoting.

- *It is **in** the environment.*  
You are 'on-site' and able to directly experience many of the things you are learning about.
- *It is **about** the environment.*  
You are gaining knowledge about how the catchment and the water supply system works.
- *It is also **for** the environment.*  
You are learning what you can do to help care for the catchment, the water supply and creeks downstream.



(Sources; 'Emigrant Creek Dam – Dam Strengthening Works, Review of Environmental Factors' prepared by The Environment Works (2000) for NSW DPWS on behalf of Rous Water ; 'A Rehabilitation Manual for Australian Streams' by I Rutherford, K Jerie & N Marsh (1999), Land & Water Resources Research & Development Corporation, Canberra & CRC for Catchment Hydrology, Vic; brochure produced by Sydney Catchment Authority (ISBN1-876951-07-9)



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These information sheets were prepared for Rous Water by Sustainable Futures Australia in liaison with Widjabul elders. © Rous Water & Sustainable Futures Australia, 2007. This is an educational project for the protection of water and land, and for reconciliation.

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