

# CASE STUDY: The History of Water Supply on the Central Coast

## 21. The Worst Drought on Record

During the late 1980s and 1990 Mangrove Creek dam filled rapidly during significant wet weather events. With lower than predicted demand and higher than average rainfall there was little perceived need to proceed rapidly in the construction of new large scale water supply infrastructure. If put to the test, public opinion at that time may well have regarded such expenditure as an unnecessary extravagance.

However, like human population growth, rainfall is a fickle thing. In the years since 1993, the Central Coast and much of the rest of Australia has experienced the worst drought on record as a result of 15 years of below average rainfall and stream flows (see Appendix 12). By mid February 2007, the amount of water stored in Mangrove Creek Dam had fallen to as low as 10.3%, and in the three storage dams taken together (Mangrove Creek, Mardi and Mooney Mooney), to 12.8% of capacity. As the crisis developed particularly over the period 2004 to 2007, the Gosford/Wyong Councils' Water Authority responded step by step with a wide range of measures aimed at conserving water and exploring previously untapped water resources.

Actions taken to manage the drought
<b>1. System Upgrades</b> <ul style="list-style-type: none"><li>• increase in the capacity of Wyong River pump station</li><li>• construction of a new transfer system from Mardi Dam to Mardi water Treatment Plant</li><li>• construction of a new high lift pumping station to Mardi dam</li><li>• raising the Mardi dam wall to increase its storage capacity</li><li>• construction of a connection from the lower Mangrove Creek Weir to Mooney Mooney Dam</li></ul>
<b>2. Reduction in Demand</b> <ul style="list-style-type: none"><li>• stringent mandatory water restrictions</li><li>• extensive community education (including a schools program)</li><li>• provision of rebates for rainwater tanks, efficient washing machines and greywater systems</li><li>• provision of subsidised REFIT kit (shower heads, tap aerators and toilet cistern weights)</li><li>• increased use of stormwater, treated wastewater etc for sports fields and public facilities</li><li>• active leak detection and water pressure management program</li><li>• significantly reduced water use by Gosford City and Wyong Shire Councils</li></ul>
<b>3. Accessing more Water</b> <ul style="list-style-type: none"><li>• construction of the \$37 million Hunter Connection able to deliver 30 ML drinking water /day</li><li>• development of seven Central Coast groundwater bore fields - up to 9 ML drinking water /day</li><li>• investigations into use of temporary mobile desalination units</li></ul>
("WaterPlan 2050 – A long term water supply strategy for the central Coast" Adopted Plan, August 2007, Gosford-Wyong Councils' Water Authority. p 3.)

### ACTIVITY: Responding to drought

Visit the Gosford/Wyong Councils' Water Authority website <http://gwcwater.nsw.gov.au/> and click on *Restrictions* in the Menu, examine its content and then click on *Rebates* in the same Menu.

### QUESTIONS:

1. What level of Water Restrictions affect householders in the Central Coast at the present time? List **three** specific restrictive measures that apply to your own household at the present time.

2. From the list of possible rebates that Central Coast households may qualify for, to reduce their water usage write down any that your household has actually taken advantage of. Then for each of the other potential rebates, write down the reason why your household may/may not wish to carry out the particular water-conserving practice that the rebate addresses.



CENTRAL COAST

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