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# ACCOUNTING FOR WATER

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Financial accounting concepts have a useful application to the measurement and management of Australia's dwindling water resources.

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## Introduction

The impact of Australia's water crisis has been widespread and is featured regularly in public commentary. What is not so commonly known is the potential for accountants to play a key role in the management of Australia's precious water resources.

There are many demands on our water supplies. In the future, our need for water resources will only increase as we provide for a growing population. Australian governments also appear committed to maintaining and restoring the environmental health of our rivers and this will involve reducing the amount of water we currently divert away from rivers. To make matters worse, scientists are predicting that climate change will result in reduced rainfalls in South-Eastern Australia.

In response, our major cities are searching for additional water supplies and are considering alternatives such as recycled water and the desalination of sea water. Concerned Australians are taking shorter showers, planting drought-resistant gardens and even installing their own rainwater tanks. But as accountants there is much more we can do. The emerging discipline of water accounting will play a key role in the future management of our nation's most important resource. The emerging discipline of water accounting will play a key role in the future management of our nation's most important resource.

## A New Discipline Emerges

Australian governments have recognised the need to provide enhanced water-related information. For example, a key component of the Federal Government's \$10 billion water plan was to improve the availability of water-related information and Commonwealth legislation now stipulates the annual publication of a National Water Account. The emergence of the discipline of water accounting will play an important role in water reform in Australia through the provision of relevant and reliable information for use by governments and a range of other important stakeholders. Water accounting involves the systematic measurement, recording and reporting of relevant information about water. A robust system of water accounting which produces general purpose water reports will provide support for investment decisions made by governments and private investors and will help stakeholders to more clearly assess the stewardship of the resource.

Notwithstanding the above, water accounting is in its infancy. Only a few water accounts have been produced to date in Australia. The ABS has produced three Australia-wide water accounts. The focus of these water accounts is on the movement of water from the environment into, and within, the economy. In Victoria, the Department of Sustainability and Environment is preparing its fourth State Water Report. This report differs from the Bureau of Statistics water accounts in both format and information content. The report provides information on water availability

and the allocation to, and use by, water authorities. While the past few years have seen significant advances in water accounting, there is no doubt that this new discipline can and must continue to evolve.

## Converting Dollars to Litres

There are several key similarities in the focus of water accounting and financial accounting. Both approaches record and report information on the stocks and flows of scarce resources for use by a range of interested parties. While financial accountants report in dollars, water accountants are concerned presently with the physical volumes of water.

In a water balance sheet, the assets recorded for the relevant entity would include the volume of water held in reservoirs and the volume of water stored in underground aquifers. On the credit side of the balance sheet, liabilities would show how the available water is allocated between different user groups such as urban consumers, industry, irrigators or even for environmental purposes. The volume disclosed as equity refers to the volume of water that is not earmarked for any particular use.

Comparing two successive water balance sheets will clearly indicate that the volumes of water have changed. A flow statement, prepared on an accrual basis, shows how and why the stocks have changed in much the same way as a profit and loss statement does in financial accounting. Changes are due to inflows and outflows occurring in the catchment and are analogous to revenues and expenses. Inflows consist of the rain falling on the catchment and outflows include the consumption of water by cities, industry and irrigation, evaporation and water that flows out to the ocean. In this way, robust water accounting has potential to shed light on changes in stocks and flows of water resources and in doing so, the management of the resource can be more directly understood and evaluated.

## Developing the Conceptual Framework

There is much for accountants to contribute to the developing field of water accounting. Financial accounting concepts are already being drawn upon to inform the development of a conceptual framework for general purpose water accounting. The conceptual framework will define the nature, scope and objectives of water accounting and address issues such as the appropriate reporting entity, required qualitative characteristics of the information reported, as well as setting out the definition, recognition and measurement of water accounting elements. As water accounting continues to develop as a discipline, financial accounting concepts are sure to inform the focus and content of key water accounting standards which define the nature and content of primary general purpose water accounting reports.

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