



Australian Government
National Water Commission
Raising National Water Standards Program



HB 230—2008 Rainwater Tank Design and Installation Handbook



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Handbook

Rainwater Tank Design and Installation Handbook

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PREFACE

This Handbook provides practical information for the collection, storage and use of rainwater within private, community and commercial properties for the uses specified (excluding rainwater used in industrial processes). It draws extensively on information from State, Territory and National Guidelines and Standards across Australia for the management and use of rainwater to provide technical solutions that meet the Guidelines and Standards. This Handbook supersedes the 2006 edition.

This Handbook forms one component of a three-part package that includes the following:

- (a) *Rainwater Tank Design and Installation Handbook* (this document), which provides practical and technical information for plumbers to gain approval, install and maintain rainwater systems for single households, multi-unit dwelling, community and commercial buildings.
- (b) *Urban Greywater Installation Handbook for Single Households*, which provides practical and technical information for plumbers to gain approval, install and maintain greywater systems for single households.
- (c) The National Water Commission Waterlines publication, which provides an initial overview of necessary information for communities to understand before pursuing the installation of greywater or rainwater re-use devices in domestic settings.

The objective of this three-part package is to progress urban water reform under the commitments outlined in the National Water Initiative (NWI), including innovation in water supply, encourage re-use and recycling and increase the efficient use of water within domestic settings.

To optimise the full potential of rainwater as an alternative water resource it is recommended that the rainwater system be connected to internal plumbing connections (e.g. toilet, washing machine).

This Handbook was developed by the Australian Rainwater Industry Development Association (ARID) and the Master Plumbers and Mechanical Services Association of Australia (MPMSAA), with funding from the National Water Commission (NWC). Additional editorial and technical services were provided by Arris Pty Ltd (Dr Daryl Stevens). The Handbook outlines the minimum standards and performance criteria for all development works associated with rainwater tank installations within private and commercial properties. It applies to new rainwater tank installations as well as alterations, additions, maintenance and repairs to existing installations.

ARID was established in 2004 by the Master Plumbers and Mechanical Services Association of Australia in response to the rainwater industry's concern that there was no national body representing the installation issues of rainwater tanks. ARID's goal is to develop nationally consistent rainwater and plumbing technologies and installation recommendations.

The objective of this revision is to keep pace with emerging technology and the increased applications of rainwater use in an urban environment, and is intended to be consistent with the various regulations and requirements; however, installers are advised to check with the plumbing authority regarding local conditions and requirements.

This Handbook is not an Australian Standard and has not been developed and approved using the full transparency and consensus processes that underpin Australian Standards. As a handbook it has; however, been subject to a level of peer review. For further advice on the status of this document see Standardization Guide 13, *Publications of Lower Level of Transparency and Standards Australia Consensus*

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The National Water Initiative (NWI) is the blueprint for improving Australia's water management and use. Under the NWI all Australian Governments have committed to encouraging innovation in water supply, encourage re-use and recycling and increasing the efficient use of water within domestic settings with the aim of creating Water Sensitive Cities.

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NOTES

STANDARDS AUSTRALIA

Handbook**Rainwater Tank Design and Installation Handbook**

CHAPTER 1 PERFORMANCE OBJECTIVES

Rainwater (run-off due to rainfall on roofed areas) is recognised in Australia as an important water resource. The objectives of this Handbook are to:

- (a) Encourage the adoption of rainwater systems and better use of rainwater across Australia.
- (b) Create an alternative water resource.
- (c) Provide plumbers with up-to-date technical details for the practical installation of rainwater systems, including detailed diagrams of:
 - (i) pre- and post-storage filters;
 - (ii) plumbing requirements for the connection of rainwater within the household;
 - (iii) common uses of rainwater across Australia;
 - (iv) new technology—bladder tanks, plastic cell structures, underground tanks, rainwater treatment, constant filtrations;
 - (v) expanding the use of rainwater for additional uses (hot water, cooling towers); and
 - (vi) installation approval processes.
- (d) Provide cost-effective, easily understood information that is not unnecessarily technical.
- (e) Ensure new homes built in Australia meet new building codes and sustainability standards (e.g, rainwater ready).
- (f) Promote a high standard of installation for rainwater tanks to maintain public safety and amenities, provide water resources to maintain the environment and protect public and private infrastructure for the benefit of the community, now and in the future.

By achieving these objectives this Handbook will help ensure:

- (i) Consumers of rainwater have access to the best quality rainwater by providing optimum design, installation and ongoing maintenance procedures.
- (ii) People are safeguarded from injury or loss of amenity due to a failure of the rainwater supply as a result of poor installation, maintenance or operation of the rainwater system.
- (iii) Public health is not adversely impacted due to installation, maintenance or operational issues.
- (iv) The maintenance and enhancement of the quality of the environment by minimising any environmental impacts.



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