



# Australian Rainfall and Runoff Revision Projects

## Context

Since its first publication in 1958, Australian Rainfall and Runoff (ARR) has remained one of the most influential and widely used guidelines published by Engineers Australia. One of the major responsibilities of the National Committee on Water Engineering of Engineers Australia is the periodic revision of ARR. A recent and significant development has been that the revision of ARR has been identified as a priority in the COAG endorsed National Adaptation Framework for Climate Change.

Funding for Stages 1 and 2 of the ARR revision projects has been provided by the Federal Department of Climate Change. Funding for Stages 2 and 3 of Project 1 (Development of intensity-frequency-duration information across Australia) has been provided by the Bureau of Meteorology. The update will be completed in three stages over four years. This will be the first major revision of ARR since 1987. There have been significant technological advances in many areas of rainfall runoff assessment since the 1987 update as such 21 revision projects will be undertaken with the aim of filling knowledge gaps. The outcomes of the projects will assist the ARR editorial team compiling and writing of the chapters of ARR. Steering and Technical Committees have been established to assist the ARR editorial team in guiding the projects to achieve desired outcomes. The 21 projects are to be undertaken over four years. The full list of projects is:

ARR Project No.	Project Title	Starting Stage
1	Development of intensity-frequency-duration information across Australia	1
2	Spatial patterns of rainfall	2
3	Temporal pattern of rainfall	2
4	Continuous rainfall sequences at a point	1
5	Regional flood methods	1
6	Loss models for catchment simulation	2
7	Baseflow for catchment simulation	1
8	Use of continuous simulation for design flow determination	2
9	Urban drainage system hydraulics	1
10	Appropriate safety criteria for people	1
11	Blockage of hydraulic structures	1
12	Selection of an approach	2
13	Rational Method developments	1
14	Large to extreme floods in urban areas	3
15	Two-dimensional (2D) modelling in urban areas.	1
16	Storm patterns for use in design events	2
17	Channel loss models	2
18	Interaction of coastal processes and severe weather events	1
19	Selection of climate change boundary conditions	3
20	Risk assessment and design life	2
21	IT Delivery and Communication Strategies	2

Visit [www.arr.org.au](http://www.arr.org.au) for information on the ARR update process, proposed books and chapters, revision projects or to subscribe for updates on the whole process or individual topic areas including proposed workshops.

**Australian Rainfall and  
Runoff Revision  
Draft Chapters  
(As at June 2009)**

<b><i>BOOK I - SCOPE AND PHILOSOPHY</i></b>	1 2 3	INTRODUCTION RANGE OF APPLICATIONS RISK BASED DESIGN
<b><i>BOOK II - APPROACHES TO FLOW ESTIMATION</i></b>	1 2 3 4	INTRODUCTION HYDROLOGIC DATA RANGE OF TECHNIQUES SELECTION OF AN APPROACH
<b><i>BOOK III RAINFALL ESTIMATION</i></b>	1 2 3 4	INTRODUCTION SYNTHETIC RAINFALL BURSTS SYNTHETIC STORMS CONTINUOUS RAINFALL SEQUENCES
<b><i>BOOK IV - PEAK FLOW ESTIMATION</i></b>	1 2 3	INTRODUCTION AT-SITE FLOOD FREQUENCY ANALYSIS REGIONAL METHODS
<b><i>BOOK V - HYDROGRAPH ESTIMATION</i></b>	1 2 3 4	INTRODUCTION EVENT BASED MODELS CONTINUOUS RUNOFF ESTIMATION HYDROLOGIC MODELS
<b><i>BOOK VI - FLOW HYDRAULICS</i></b>	1 2 3 4 5	INTRODUCTION BASIC ASPECTS OF OPEN CHANNEL HYDRAULICS HYDRAULIC STRUCTURES UNSTEADY FLOW AND NUMERICAL MODELS ISSUES IN APPLICATION OF HYDRAULIC MODELS
<b><i>BOOK VII – APPLICATION OF CATCHMENT MODELLING SYSTEMS</i></b>	1 2 3 4	INTRODUCTION CATCHMENT MODELLING PRINCIPLES PARAMETER ESTIMATION TECHNIQUES UNCERTAINTY DETERMINATION
<b><i>BOOK VIII – LARGE TO EXTREME FLOOD ESTIMATION</i></b>		
<b><i>BOOK IX – RUNOFF IN URBAN AREAS</i></b>	1 2 3 4 5 6 7 8 ?	INTRODUCTION ASPECTS OF URBAN HYDROLOGY URBAN DRAINAGE CONCEPTS ESTIMATION OF STORM FLOWS DRAINAGE SYSTEM HYDRAULICS RUNOFF DETENTION AND RETENTION SAFETY DESIGN CRITERIA URBAN DRAINAGE MODELLING RATIONAL METHOD

**For More Information**

For more information on the ARR Revision Projects please contact [arr\\_admin@arr.org.au](mailto:arr_admin@arr.org.au) or visit [www.arr.org.au](http://www.arr.org.au) for information on the ARR update process, proposed books and chapters, revision projects or to subscribe for updates on the whole process or individual topic areas including proposed workshops.