

# Revision Projects

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 Climate Change.

Funding for Stages 1 and 2 of the ARR revision projects has been provided by the then 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. Funding for Stage 3 has been provided for by Geoscience Australia.

The update will be completed in three stages. 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.

<b>PROJECT 1</b>	Development of intensity-frequency-duration information across Australia
<b>PROJECT 2</b>	Spatial patterns of rainfall
<b>PROJECT 3</b>	Temporal pattern of rainfall
<b>PROJECT 4</b>	Continuous rainfall sequences at a point
<b>PROJECT 5</b>	Regional flood methods
<b>PROJECT 6</b>	Loss models for catchment simulation
<b>PROJECT 7</b>	Baseflow for catchment simulation
<b>PROJECT 8</b>	Use of continuous simulation for design flow determination
<b>PROJECT 9</b>	Urban drainage system hydraulics
<b>PROJECT 10</b>	Appropriate safety criteria for people
<b>PROJECT 11</b>	Blockage of hydraulic structures
<b>PROJECT 12</b>	Selection of an approach
<b>PROJECT 13</b>	Rational Method developments
<b>PROJECT 14</b>	Large to extreme floods in urban areas
<b>PROJECT 15</b>	Two-dimensional (2D) modelling in urban areas
<b>PROJECT 16</b>	Storm patterns for use in design events
<b>PROJECT 17</b>	Channel loss models
<b>PROJECT 18</b>	Interaction of coastal processes and severe weather events
<b>PROJECT 19</b>	Selection of climate change boundary conditions
<b>PROJECT 20</b>	Risk assessment and design life
<b>PROJECT 21</b>	IT Delivery and Communication Strategies

For information on the ARR update process, proposed books and chapters, revision projects, workshops and to subscribe to the e-newsletter for latest information visit



<b>Book I</b>	SCOPE AND PHILOSOPHY	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 FUNDAMENTAL ISSUES</li> <li>3 APPROACHES TO FLOOD ESTIMATION</li> <li>4 DATA</li> <li>5 RISK BASED DESIGN</li> </ul>
<b>Book II</b>	RAINFALL ESTIMATION	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 RAINFALL MODELS</li> <li>3 IFD RELATIONSHIPS</li> <li>4 SPATIAL PATTERNS</li> <li>5 TEMPORAL PATTERNS</li> <li>6 CONTINUOUS RAINFALL SEQUENCES</li> </ul>
<b>Book III</b>	PEAK FLOW ESTIMATION	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 AT-SITE FLOOD FREQUENCY ANALYSIS</li> <li>3 REGIONAL METHODS</li> </ul>
<b>Book IV</b>	CATCHMENT SIMULATION	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 CATCHMENT MODELLING CONCEPTS</li> <li>3 TYPES OF CATCHMENT MODELLING SYSTEMS</li> <li>4 CATCHMENT MODELLING SYSTEM PROCESSES</li> </ul>
<b>Book V</b>	FLOOD HYDROGRAPH ESTIMATION	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 TYPES OF HYDROLOGIC MODELS</li> <li>3 HYDROLOGIC MODELS</li> <li>4 BASEFLOW MODELS</li> <li>5 LOSSES</li> </ul>
<b>Book VI</b>	FLOW HYDRAULICS	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 BASIC ASPECTS OF OPEN CHANNEL HYDRAULICS</li> <li>3 HYDRAULIC STRUCTURES</li> <li>4 NUMERICAL MODELS</li> <li>5 ISSUES IN APPLICATION OF HYDRAULIC MODELS</li> </ul>
<b>Book VII</b>	APPLICATION OF CATCHMENT MODELLING SYSTEMS	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 CATCHMENT MODELLING PRINCIPLES</li> <li>3 PARAMETER ESTIMATION TECHNIQUES</li> <li>4 UNCERTAINTY DETERMINATION</li> <li>5 APPLICATION FOR FUTURE CLIMATES</li> <li>6 APPLICATION TO RURAL CATCHMENTS</li> </ul>
<b>Book VIII</b>	LARGE TO EXTREME FLOOD ESTIMATION	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 PROCEDURES FOR ESTIMATION LARGE TO EXTREME FLOODS</li> <li>3 ESTIMATION OF LARGE TO EXTREME RAINFALLS</li> <li>4 ESTIMATION OF RAINFALL EXCESS</li> <li>5 SELECTION, CONFIGURATION AND CALIBRATION OF ROUTING MODELS</li> <li>6 DERIVATION OF DESIGN FLOODS</li> <li>7 SPECIAL DESIGN CONSIDERATIONS</li> </ul>
<b>Book IX</b>	RUNOFF IN URBAN AREAS	<ul style="list-style-type: none"> <li>1 INTRODUCTION</li> <li>2 ASPECTS OF URBAN HYDROLOGY</li> <li>3 ESTIMATION OF STORM FLOWS</li> <li>4 DRAINAGE SYSTEM HYDRAULICS</li> <li>5 RUNOFF DETENTION AND RETENTION</li> <li>6 SAFETY DESIGN CRITERIA</li> <li>7 URBAN DRAINAGE MODELLING</li> </ul>