Table 5.24. Some notable point rainfall totals recorded in Australia (Australian Bureau of Meteorology, 1994, as amended 1996)

Date	*Location*	*Duration*	*Rainfall (mm)*
3 May 1942	Adelaide, South Australia	2 minutes	11
26 October 1960	Tamborine Village, Queensland	4 minutes	18
25 June 1901	Karridale, Western Australia	5 minutes	22
15 January 1977	Tewkesbury, Tasmania	12 minutes	32
22 December 1960	Fairbairn, Australian Capital Territory	15 minutes	20
3 March 1969	Croker Island, Northern Territory	15 minutes	42
24 December 1959	Sunbury, Victoria	18 minutes	40
25 March 1974	Cunliffe, South Australia	20 minutes	61
11 November 1969	Bonshaw, New South Wales	40 minutes	174
30 March 1961	Deer Park, Victoria	60 minutes	102
2 March 1983	Dutton, South Australia	2 hours 15 minutes	228
2 March 1983	North Dutton, South Australia	3 hours	330
6 January 1980	Binbee, Queensland	4 hours 30 minutes	607
18 February 1984	Wongawilli, New South Wales	6 hours	515
4 January 1979	Bellenden Ker Top, Queensland	24 hours	960
5 January 1979	Bellenden Ker Top, Queensland	2 days	1 947
8 January 1979	Bellenden Ker Top, Queensland	8 days	3 847

map. The spatial distribution diagram is overlayed on the catchment outline and move it to obtain the best fit by the smallest possible ellipse. This ellipse is now the outermost ellipse of the distribution.

(b) The area of catchment lying between successive ellipses is determined ($C_{i\text{ (between)}}$, where the i^{th} ellipse is one of the ellipses A to J).
Where the catchment completely fills both ellipses, this area is the difference between the areas enclosed by each ellipse as given in Table 5.25:

$$C_{i(\text{between})} = \text{Area}_i - \text{Area}_{i-1}$$

Where the catchment only partially fills the interval between ellipses, a geographic information system (GIS), planimetering or a similar method is used to determine this area.

(c) The area of catchment enclosed by each ellipse is determined ($C_{i\text{ (enclosed)}}$) by:

$$C_{i(\text{enclosed})} = \sum_{k=A}^{i} C_{k(\text{between})}$$

The area of the catchment enclosed by the outermost ellipse will be equal to the total area of the catchment.

(d) The initial mean rainfall depth enclosed by each ellipse is obtained using the x-hour initial mean rainfall depth (IMRD_i) for each area enclosed by successive ellipses ($C_{i\text{ (enclosed)}}$) from (c).
Where the catchment completely fills an ellipse ($C_{i\text{ (enclosed)}} = \text{Area}_i$), the x-hour initial mean rainfall depth for this area is determined from Table 2.3. Where the catchment only partially fills an ellipse ($C_{i\text{ (enclosed)}} < \text{Area}_i$), the x-hour initial mean rainfall depth for that area is determined from the appropriate depth–area–duration (DAD) curves (Figure 5.64).
Note that no initial mean rainfall depths are required for ellipses I and J because the areas of these ellipses are greater than 1 000 km^2 which is the areal limit of the DAD curves.

(e) The adjusted mean rainfall depth (AMRD_i),is obtained by multiplying the IMRD_i by the moisture adjustment factor (MAF) and the elevation adjustment factor (EAF):

$$\text{AMDR}_i = \text{IMRD}_i \# \text{MAF} \# \text{EAF}$$

The adjusted mean rainfall depth for the area enclosed by the outermost ellipse will be equal to the (unrounded) PMP for the whole catchment.

(f) The volume of rain enclosed by each oval is determined by multiplying the area of the catchment enclosed by each ellipse ($C_{i\text{ (enclosed)}}$) from (c) by the AMRD_i for that area from (e) to obtain the volume of rainfall over the catchment and within each ellipse ($V_{i\text{ (enclosed)}}$):

$$V_{i(\text{enclosed})} = \text{AMRD}_i \# C_{i(\text{enclosed})}$$