

# **B.C. SPRINKLER IRRIGATION MANUAL**

## **Appendix E**

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# **LIMITATION OF LIABILITY AND USER'S RESPONSIBILITY**

The primary purpose of this manual is to provide irrigation professionals and consultants with a methodology to properly design an agricultural irrigation system. This manual is also used as the reference material for the Irrigation Industry Association's agriculture sprinkler irrigation certification program.

While every effort has been made to ensure the accuracy and completeness of these materials, additional materials may be required to complete more advanced design for some systems. Advice of appropriate professionals and experts may assist in completing designs that are not adequately covered in this manual.

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# E.

# UNIT CONVERSIONS

Typical sprinkler spacings are given in ft x ft and m x m conversions as below:

ft x ft	m x m
30 x 30	9.15 x 9.15
30 x 40	9.15 x 12.2
30 x 60	9.15 x 18.3
40 x 40	12.2 x 12.2
50 x 50	15.2 x 15.2
40 x 50	12.2 x 15.2
40 x 60	12.2 x 18.3
60 x 60	18.3 x 18.3

The table below lists the conversion between Imperial and metric units used throughout this Manual.

Imperial	Metric
<b>LENGTH</b> <b>1 foot [ft]</b> = 12 inches [in]	= 0.3048 metres [m]
<b>1 inch [in]</b>	= 2.54 centimetres [cm] = 25.4 millimetres [mm]
<b>AREA</b> <b>1 acre [ac]</b> = 43,560 square feet [ft <sup>2</sup> ]	= 0.405 hectares [ha]
	<b>1 hectare [ha]</b> = 10,000 square metres [m <sup>2</sup> ]
<b>VOLUME</b> <b>1 acre-foot [ac-ft]</b> = 43,560 cubic feet [ft <sup>3</sup> ]	= 0.1233 hectare-metres [ha-m]
<b>1 acre-inch [ac-in]</b> = 27,152 US gallons [US gal]	
<b>1 US gallon [US gal]</b>	= 0.0038 cubic metres [m <sup>3</sup> ] = 3.79 litres [L] = 0.833 Imperial gallons [Imp. gal]
<b>1 cubic foot [ft<sup>3</sup>]</b> = 7.48 US gallons [US gal]	= 28.33 litres [L]
<b>1 Imperial gallon [Imp. gal]</b>	= 4.55 litres [L]
<b>FLOW</b> <b>1 US gallon per min [US gpm]</b>	= 3.79 litres per min [L/min] = 0.063 litres per sec [L/sec]
<b>1 Imperial gallon per min [Imp. gpm]</b>	= 4.55 litres per min [L/min]
<b>1 cubic foot per sec [cfs]</b>	= 1,666.6 litres per min [L/min]
<b>PRESSURE</b> <b>1 pound per square inch [psi]</b> = 2.31 feet of water [ft]	= 0.70 metres of water [m] = 6.90 kilopascal [KPa]
<b>1 foot head of water [ft]</b>	= 2.98 kilopascal [KPa]
<b>1 atmosphere [atm]</b> = 14.7 pounds per square inch [psi]	= 101.3 kilopascal [KPa]
<b>ENERGY</b> <b>1 horsepower [hp]</b>	= 0.746 kilowatts [KW]
<b>CONCENTRATION</b> <b>1 parts per millions [ppm]</b>	= 1 milligram per litre [mg/L]