

# Metric Conversions

FEMA is committed to the Federal Government's transition to the metric system; however, although the fire engineering discipline has adopted the metric system as the standard for measurement, the majority of the engineering community currently uses English units. As a result, all measurements in this report, with the exception of temperatures, are presented in English units. Because the metric system may eventually become the standard for measurement in the United States, approximate metric conversions are presented in the following table to promote familiarity with that system. A critical component of unit conversion is rounding. Readers who convert English units to metric units using the factors shown here should be aware of differences resulting from rounding.

Quantity	To Change English Units	To Metric Units	Multiply English Units By:
<b>Length</b>	inch (in)	millimeter (mm)	25.4000
	foot (ft)	meter (m)	0.3048
	mile (mi)	kilometer (km)	1.6093
<b>Area</b>	square foot (ft <sup>2</sup> )	square meter (m <sup>2</sup> )	0.0929
	acre (a)	square meter (m <sup>2</sup> )	4,046.8564
<b>Volume</b>	gallon (gal)	liter (L)	3.7854
	cubic foot (ft <sup>3</sup> )	cubic meters (m <sup>3</sup> )	0.0283
<b>Pressure</b>	psf (lb/ft <sup>2</sup> )	Pa	47.8803
	psi (lb/in <sup>2</sup> )	kPa	6.8947
<b>Weight</b>	pound (lb)	kilogram (kg)	0.4536
<b>Flow</b>	cfs (ft <sup>3</sup> /sec)	lps	28.3168
<b>Velocity</b>	fps (ft/sec)	mps	0.3048
	mph	kph	1.6093
<b>Temperature</b>	To change degrees Fahrenheit (°F) to degrees Celsius (°C) use the following formula: °C = 5/9 (F-32)		