

# APPENDIX E

## GUIDE TO THE METRIC SYSTEM

| <b>Length</b> |                                |                                    |
|---------------|--------------------------------|------------------------------------|
| <b>Unit</b>   | <b>Number of Square Meters</b> | <b>Approximate U.S. Equivalent</b> |
| Myriameter    | 10,000                         | 6.214 miles                        |
| Kilometer     | 1,000                          | 0.621 mile                         |
| Hectometer    | 100                            | 109.361 yards                      |
| Decameter     | 10                             | 32.808 feet                        |
| Meter         | 1                              | 39.370 inches                      |
| Decimeter     | 0.1                            | 3.937 inches                       |
| Centimeter    | 0.01                           | 0.394 inch                         |
| Millimeter    | 0.001                          | 0.039 inch                         |

  

| <b>Area</b>       |                                |                                    |
|-------------------|--------------------------------|------------------------------------|
| <b>Unit</b>       | <b>Number of Square Meters</b> | <b>Approximate U.S. Equivalent</b> |
| Square kilometer  | 1,000,000                      | 0.386 square mile                  |
| Hectare           | 10,000                         | 2.477 acres                        |
| Are               | 100                            | 119.599 square yards               |
| Deciare           | 10                             | 11.960 square yards                |
| Centare           | 1                              | 10.764 square feet                 |
| Square centimeter | 0.0001                         | 0.155 square inch                  |

  

| <b>Volume</b>    |                                |                                    |
|------------------|--------------------------------|------------------------------------|
| <b>Unit</b>      | <b>Number of Square Meters</b> | <b>Approximate U.S. Equivalent</b> |
| Decastere        | 10                             | 13.079 cubic yards                 |
| Stere            | 1                              | 1.308 cubic yards                  |
| Decistere        | 0.01                           | 3.532 cubic feet                   |
| Cubic Centimeter | 0.000001                       | 0.061 cubic feet                   |

| <b>Metric Conversion Chart - Approximations</b> |                    |                 |
|---|--------------------|-----------------|
| <b>When You Know</b>                            | <b>Multiply By</b> | <b>To Find</b>  |
| <b>Length</b>                                   |                    |                 |
| Millimeters                                     | 0.0                | inches          |
| Centimeters                                     | 40.39              | inches          |
| Meters  | 3.28               | feet            |
| Meters  | 1.09               | yards           |
| Kilometers                                      | 0.62               | miles           |
| Inches  | 25.40              | millimeters     |
| Inches  | 2.54               | centimeters     |
| Feet  | 30.48              | centimeters     |
| Yards   | 0.91               | meters          |
| Miles   | 1.61               | kilometers      |
| <b>Area</b>                                     |                    |                 |
| Square Centimeters                              | 0.16               | square inches   |
| Square Meters                                   | 1.20               | square yards    |
| Square Kilometers                               | 0.39               | square miles    |
| Squares(10,000m <sup>2</sup> )                  | 2.47               | acres           |
| Square Inches                                   | 6.45               | sq. centimeters |
| Square Feet                                     | 0.009              | square meters   |
| Square Yards                                    | 0.84               | square meters   |
| Square Miles                                    | 2.60               | sq. kilometers  |
| Acres   | 0.40               | hectares        |
| <b>Mass and Weight</b>                          |                    |                 |
| Grams   | 0.035              | Ounce           |
| Kilograms                                       | 2.21               | Pounds          |
| Tons  | 1.10               | Short Tons      |
| Ounces  | 28.35              | Grams           |
| Pounds  | 0.45               | Kilograms       |
| Short Tons (2000lb)                             | 0.91               | Tons            |

| <b>Metric Conversion Chart - Approximations</b> |  |                                   |
|---|--|-----------------------------------|
| <b>When You Know</b>                            | <b>Multiply By</b>                                     | <b>To Find</b>                    |
| <b>Volume</b>                                   |  |                                   |
| Milliliters                                     | 0.20   | Teaspoons                         |
| Milliliters                                     | 0.06   | Tablespoons                       |
| Milliliters                                     | 0.03   | Fluid Ounces                      |
| Liters  | 4.23   | Cups                              |
| Liters  | 2.12   | Pints                             |
| Liters  | 1.06   | Quarts                            |
| Liters  | 0.26   | Gallons                           |
| Cubic Meters                                    | 35.32  | Cubic Feet                        |
| Cubic Meters                                    | 1.35   | Cubic Yards                       |
| Teaspoons                                       | 4.93   | Milliliters                       |
| Tablespoons                                     | 14.78  | Milliliters                       |
| Fluid Ounces                                    | 29.57  | Milliliters                       |
| Cups  | 0.24   | Liters                            |
| Pints   | 0.47   | Liters                            |
| Quarts  | 0.95   | Liters                            |
| Gallons   | 3.79   | Liters                            |
| Cubic Feet                                      | 0.03   | Cubic Meters                      |
| Cubic Yards                                     | 0.76   | Cubic Meters                      |
| <b>Speed</b>                                    |  |                                   |
| Miles/Hour                                      | 1.61   | Kilometers/Hour                   |
| Kilometers/Hour                                 | 0.62   | Miles/Hour                        |
| <b>Temperature</b>                              |  |                                   |
| Celsius temp.<br>(exact) Fahrenheit temp.       | $9/5 \cdot +32$<br>$-32 \cdot 5/9 \times$<br>remainder | Fahrenheit temp.<br>Celsius temp. |

Temperatures in degrees Celsius, as in the familiar Fahrenheit system, can only be learned through experience. The following temperatures are ones that are frequently encountered:

|       |                                 |
|-------|---------------------------------|
| 0°C   | Freezing point of water (32°F)  |
| 10°C  | A warm winter day (50°F)        |
| 20°C  | A mild spring day (68°F)        |
| 30°C  | A hot summer day (86°F)         |
| 37°C  | Normal body temperature (98.6°) |
| 40°C  | Heat wave conditions (104°F)    |
| 100°C | Boiling point of water (212°F)  |