

## WATER CONVERSION CHART

| VOLUME         | <u>gallons</u> | <u>cubic feet</u> | <u>acre-feet</u> | <u>M gallons</u> |
|----------------|----------------|-------------------|------------------|------------------|
| 1 gallon =     | 1              | 0.1337            | 0.0000307        | 0.0000010        |
| 1 cubic foot = | 7.48051        | 1                 | 0.00002296       | 0.0000075        |
| 1 acre-foot =  | 325,851        | 43,560            | 1                | 0.32585          |
| 1 M gallons =  | 1,000,000      | 133,680           | 3.0689           | 1                |

### ESTIMATED PEAK USE / SOURCE REQUIREMENTS (in gpd)

|   | <u>Culinary</u> | <u>Waste-Water</u> |
|---|-----------------|--------------------|
| Per Equivalent Residential Connection (ERC) | 800             | 400                |
| Recreational Home                           | 400             | 400                |
| High School Student                         | 25              | 25                 |
| Hospital Bed                                | 250             | 250                |
| Restaurant Seat                             | 35-50           | 35                 |
| Skier                                       | 10              | 5                  |
| Swimmer                                     | 10              | -                  |

Source: Utah Admin Rules R309-510-7 and R317-5-1

| FLOW                              | <u>gallons</u> | <u>cubic feet</u> | <u>acre-feet</u> | <u>M gallons</u> |
|-----------------------------------|----------------|-------------------|------------------|------------------|
| 1 gallon per minute (gpm) =       |                |                   |                  |                  |
| Second                            | 0.01667        | 0.002228          | -                | -                |
| Minute                            | 1              | 0.13368           | 0.000003         | 0.000001         |
| Hour                              | 60             | 8.0208            | 0.000184         | 0.000060         |
| Day                               | 1,440          | 192.5             | 0.004419         | 0.001440         |
| 30-day month                      | 43,200         | 5,775             | 0.132576         | 0.043200         |
| 365-day year                      | 525,600        | 70,262.5          | 1.613007         | 0.525600         |
| 1 cubic foot per second (cfs) =   |                |                   |                  |                  |
| Second                            | 7.48051        | 1                 | 0.000023         | 0.000007         |
| Minute                            | 448.83         | 60                | 0.001377         | 0.000449         |
| Hour                              | 26,930         | 3,600             | 0.082626         | 0.026925         |
| Day                               | 646,316        | 86,400            | 1.983            | 0.6463           |
| 30-day month                      | 19,389,482     | 2,592,000         | 59.49            | 19.389           |
| 365-day year                      | 235,905,363    | 31,536,000        | 723.97           | 235.905          |
| 1 acre-foot per year (af/yr) =    |                |                   |                  |                  |
| Second                            | 0.01033        | 0.001381          | -                | -                |
| Minute                            | 0.61996        | 0.08287           | 0.000002         | -                |
| Hour                              | 37.1976        | 4.9726            | 0.000114         | 0.000037         |
| Day                               | 892.7425       | 119.342           | 0.002740         | 0.000893         |
| 30-day month                      | 26,782         | 3,580             | 0.082192         | 0.026782         |
| 365-day year                      | 325,851        | 43,560            | 1                | 0.3259           |
| 1 million gallons per day (mgd) = |                |                   |                  |                  |
| Second                            | 11.574         | 1.54722           | 0.000036         | 0.000012         |
| Minute                            | 694.45         | 92.833            | 0.002131         | 0.000694         |
| Hour                              | 41,667         | 5,570             | 0.127875         | 0.041667         |
| Day                               | 1,000,000      | 133,680           | 3.069            | 1                |
| 30-day month                      | 30,000,000     | 4,010,400         | 92.07            | 30               |
| 365-day year                      | 365,000,000    | 48,793,200        | 1,120.18         | 365              |

| ESTIMATED ANNUAL USE            | <u>acre-foot</u> | <u>gallons</u> |
|---------------------------------|------------------|----------------|
| Per Family                      | 0.450            | 146,633        |
| Cow, Horse or ELU               | 0.028            | 9,123.8        |
| Pig, Sheep, Goat, Elk or Moose  | 0.0056           | 1,824.8        |
| Ostrich or Emu                  | 0.0036           | 1,173.1        |
| Llama                           | 0.0022           | 716.9          |
| Deer, Antelope, Mtn. Goat/Sheep | 0.0014           | 456.2          |
| Chicken, Turkey or Sage Hen     | 0.00084          | 273.7          |
| Mink or Fox (caged)             | 0.00005          | 16.3           |

Source: Utah Division of Water Rights

### DUTY VALUES FOR IRRIGATION by County

Duty is the maximum amount of water that can be beneficially used to irrigate one acre of land.

**3 acre-feet duty per acre** Box Elder,\* Cache,\* Daggett, Duchesne,\* Emery,\* Garfield,\* Iron,\* Juab,\* Kane,\* Millard,\* Morgan, Piute, Rich, Sanpete,\* Sevier,\* Summit, Uintah\* (3.7 in some places), Utah,\* Wasatch,\* Washington,\* Wayne,\* and Weber\*

**4 acre-feet duty per acre** Beaver, Box Elder,\* Carbon,\* Cache,\* Davis, Duchesne,\* Emery,\* Garfield,\* Grand,\* Iron,\* Juab,\* Kane,\* Millard,\* Salt Lake,\* San Juan,\* Sanpete,\* Sevier,\* Tooele, Weber,\* Uintah,\* Utah,\* Wasatch,\* Washington,\* Wayne,\* and Weber\*

**5 acre-feet duty per acre** Carbon,\* Emery,\* Grand,\* Kane,\* Salt Lake,\* San Juan,\* and Washington\*

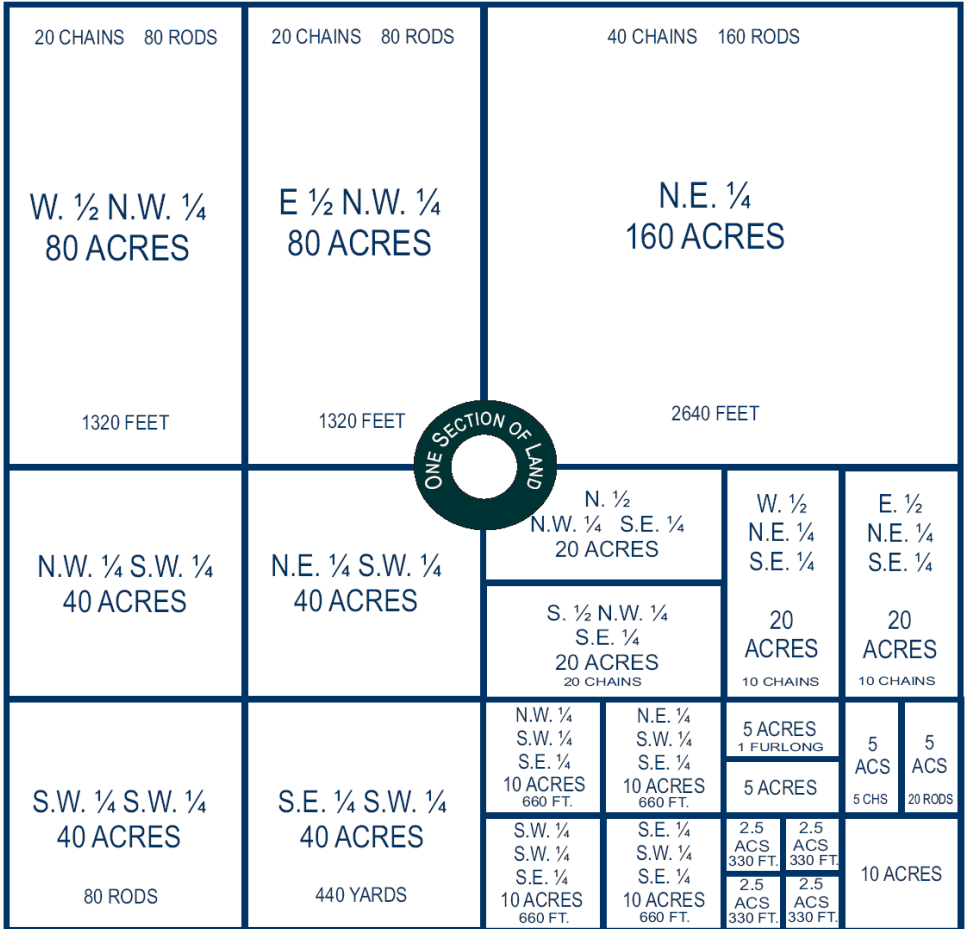
**6 acre-feet duty per acre** Emery,\* Grand,\* San Juan,\* and Washington\*

\*County has different duty limits for various portions of the County.

# SMITH HARTVIGSEN PLLC

## ATTORNEYS AT LAW

### LAND MEASUREMENT CHART



#### Section Numbering System within a Township

|    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 36 | 31 | 32 | 33 | 34 | 35 | 36 | 31 |
| 1  | 6  | 5  | 4  | 3  | 2  | 1  | 6  |
| 12 | 7  | 8  | 9  | 10 | 11 | 12 | 7  |
| 13 | 18 | 17 | 16 | 15 | 14 | 13 | 18 |
| 24 | 19 | 20 | 21 | 22 | 23 | 24 | 19 |
| 25 | 30 | 29 | 28 | 27 | 26 | 25 | 30 |
| 36 | 31 | 32 | 33 | 34 | 35 | 36 | 31 |
| 1  | 6  | 5  | 4  | 3  | 2  | 1  | 6  |

Shaded Sections are Sections in Adjacent Townships

1 LINK = 7.92 INCHES

1 ROD = 25 LINKS = 5.5 YARDS = 16.5 FEET

1 CHAIN = 4 RODS = 100 LINKS = 22 YARDS = 66 FEET

1 FURLONG = 10 CHAINS = 40 RODS = 220 YARDS = 660 FEET

1 MILE = 8 FURLONGS = 80 CHAINS = 320 RODS = 5,280 FEET

1 SQUARE ROD = 30¼ SQUARE YARDS = 272¼ SQUARE FEET

1 ACRE = 160 SQUARE RODS = 43,560 SQUARE FEET (208.7 FT X 208.7 FT)

1 SECTION = 1 SQUARE MILE = 640 ACRES

1 TOWNSHIP = 36 SECTIONS = 36 SQUARE MILES



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