

## WATER CONVERSION CHART

VOLUME	gallons	cubic feet	acre-feet	M gallons
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

FLOW	gallons	cubic feet	acre-feet	M gallons
<b>1 gallon per minute (gpm) =</b>				
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
<b>1 cubic foot per second (cfs) =</b>				
Second	7.48051	1	0.000023	0.000007
Minute	448.83	60	0.001377	0.000449
Hour	26,930	3,600	0.082626	0.02693
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
<b>1 acre-foot per year (af/yr) =</b>				
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
<b>1 million gallons per day (mgd) =</b>				
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 PEAK USE / SOURCE REQUIREMENTS (in gpd)		
	Culinary	Waste-Water
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	20	-
Source: Utah Admin Rules R309-510-7 and R317-5-1		

ESTIMATED ANNUAL USE	acre-foot	gallons
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.	
<b>3 acre-feet duty per acre</b>	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*
<b>4 acre-feet duty per acre</b>	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*
<b>5 acre-feet duty per acre</b>	Carbon,* Emery,* Grand,* Kane,* Salt Lake,* San Juan,* and Washington*
<b>6 acre-feet duty per acre</b>	Emery,* Grand,* San Juan,* and Washington*
*County has different duty limits for various portions of the County.	

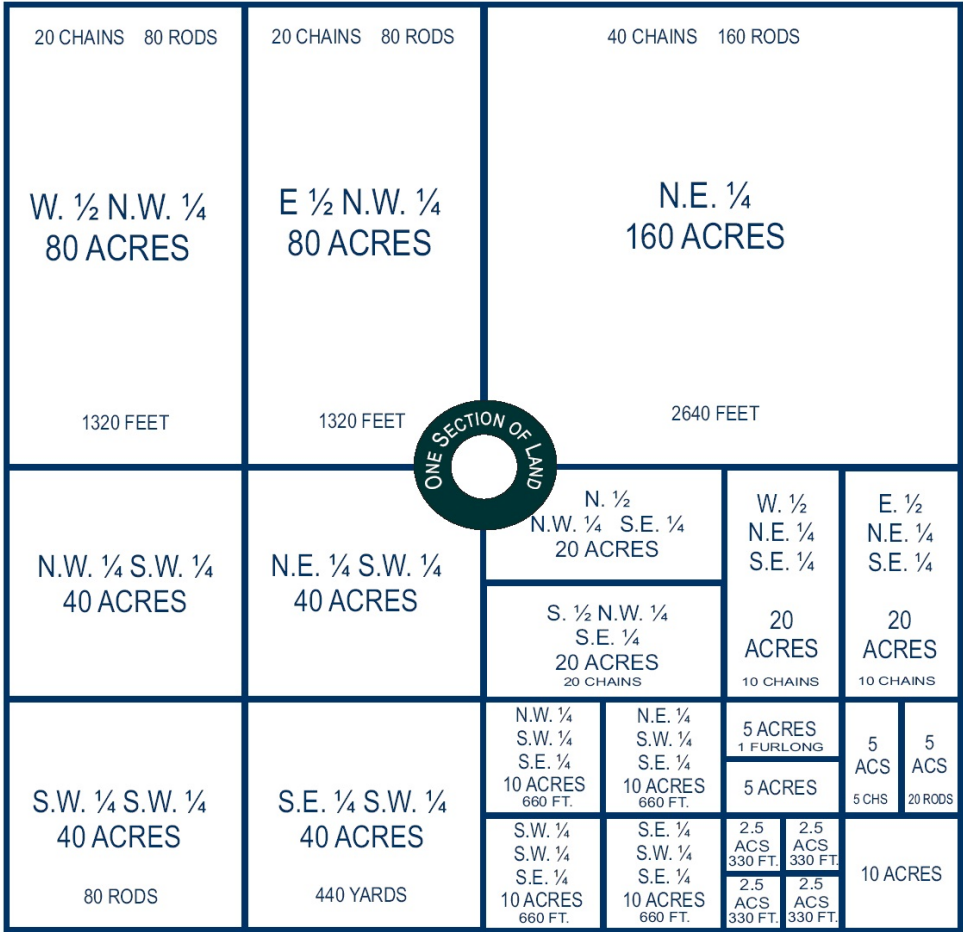
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# S M I T H | H A R T V I G S E N PLLC

ATTORNEYS AT LAW

## LAND MEASUREMENT CHART



### Section Numbering System within a Township

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

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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