WATER MANAGEMENT INC.

Equivalent Full Load Cooling Hours / Year				
Location	**School**	**Office**	**Retail**	**Hospital**
Atlanta, GA	690-830	1080-1360	1380-1860	2010-2850
Baltimore, MD	500-610	690-1080	880-1480	1350-2340
Bismarck, ND	150-250	250-540	340-780	540-1290
Boston, MA	300-510	450-970	610-1380	1020-2330
Charleston, WV	430-570	620-1140	820-1600	1260-2560
Charlotte, NC	650-730	1060-1340	1350-1830	1990-2820
Chicago, IL	280-410	420-780	550-1090	870-1780
Dallas, TX	830-890	1350-1580	1660-2090	2320-3100
Detroit, MI	230-360	390-820	530-1170	870-1950
Fairbanks, AK	26-54	64-200	110-320	210-600
Great Falls, MT	130-224	210-490	290-710	500-1210
Hilo, HI	1360-1390	2440-2580	2990-3370	4060-4910
Houston, TX	940-1000	1550-1770	1870-2290	2510-3320
Indianapolis, IN	380-560	560-1000	730-1410	1120-2250
Los Angeles, CA	780-910	1280-1670	1740-2350	2740-3770
Louisville, KY	550-670	770-1250	1000-1720	1480-2690
Madison, WI	210-310	320-640	420-900	680-1490
Memphis, TN	700-830	1090-1350	1350-1780	1910-2680
Miami, FL	1260-1300	1980-2150	2350-2740	3110-3890
Minneapolis, MN	200-300	320-610	430-870	680-1420
Montgomery, AL	840-910	1260-1510	1550-1990	2170-2950
Nashville, TN	570-740	830-1280	1030-1710	1490-2620
New Orleans, LA	920-990	1500-1720	1820-2240	2500-3280
New York, NY	360-550	540-1040	720-1480	1160-2440
Omaha, NE	310-440	480-820	610-1130	920-1780
Phoenix, AZ	950-1020	1340-1610	1630-2090	2220-3040
Pittsburgh, PA	300-530	440-920	600-1310	960-2160
Portland, ME	190-300	310-630	410-900	700-1520
Richmond, VA	630-730	880-1310	1110-1770	1650-2760
Sacramento, CA	680-850	1080-1430	1460-2020	2250-3180
Salt Lake City, UT	410-710	510-1090	660-1520	1060-2470
Seattle, WA	260-460	440-1200	710-1860	1340-3270
St. Louis, MO	460-550	680-1100	850-1500	1260-2330
Tampa, FL	1050-1110	1800-2000	2170-2580	2910-3710
Tulsa, OK	580-770	830-1300	1030-1730	1470-2630

There are 8,760 hours in a year. The table means that of the 8,760 hours, the equipment use rate was equal to full ton capacity for the hours indicated. Full ton capacity is what we get when we ask for total cooling tons for a building. Buildings will install more tons that needed so they have backup if part of the system goes down.

For example: a hospital in Sacramento CA has a total AC capacity of 3,750 tons. They have three 1,000 units and three 250 ton units. One of the 1,000 ton units is for back-up. This means that peak design load is actually 2,750 tons. Assume that the hospital operates 2,800 hours a year at full capacity. This equals 2,750 tons X 2,800 hours = 7.7 million ton hours. If the tower has 3.0 cycles of concentration under most conditions, it will need approximately 2.4 gallons per ton hour of water so water use is (7,700,000 X 2.4) = 18.5 million gallons a year.