Water Needs of Trees

Q: How much water does a tree need per week?
A: One inch of water covering the entire area within the drip line.

Here's how to figure it:

1. Measure the distance from the trunk to the drip line to get the radius in feet.
2. Multiply the radius by itself to get radius squared.
3. Multiply the radius by pi, which is 3.14, to get the area of the circle in square feet.
4. Multiply the number of square feet by 144 to get the number of square inches in the circle.
5. Divide the square inches by 231, which is the number of cubic inches in a gallon, to get the number of gallons of water needed per week.

Here's a chart showing the gallons of water needed for trees of various sizes.

Radius in ft	Radius squared	*Pi* 3.14	Area in sq feet	Area in sq inches	# cubic inches per gallon	Gallons of water needed
1	1	3.14	3.14	452.16	231	2
2	4	3.14	12.56	1,808.64	231	8
3	9	3.14	28.26	4,069.44	231	18
4	16	3.14	50.24	7,234.56	231	31
5	25	3.14	78.50	11,304.00	231	49
6	36	3.14	113.04	16,277.76	231	70
7	49	3.14	153.86	22,155.84	231	96
8	64	3.14	200.96	28,938.24	231	125
9	81	3.14	254.34	36,624.96	231	159
10	100	3.14	314.00	45,216.00	231	196
11	121	3.14	379.94	54,711.36	231	237
12	144	3.14	452.16	65,111.04	231	282
13	169	3.14	530.66	76,415.04	231	331
14	196	3.14	615.44	88,623.36	231	384
15	225	3.14	706.50	101736.00	231	440

For more information, please contact the Hemlock Help Line℠ 706-429-8010, e-mail donna@savegeorgiashemlocks.org, or visit our web site www.savegeorgiashemlocks.org.