

JUST THE FACTS ABOUT OUTDOOR WATERING OF LANDSCAPES

Prepared by: Fred Liljegren, Landscape Architect, Bureau of Reclamation

The inappropriate watering of landscapes, especially turf, is a major concern in all areas of the country. Learn the facts and use outdoor water wisely.

HOW MUCH WATER DO YOU APPLY EACH TIME YOU WATER? CALCULATE IT BY USING THE SQUARE FOOT METHOD SHOWN BELOW.

Water applied per square foot by depth in inches measured in gallons:

1/4 inch application = 1/4 inch x 1 ft./12 inches x 1 ft. x 1 ft. x 7.48 gal./cu.ft. = **0.16 gallons**

1/2 inch application = 1/2 inch x 1 ft./12 inches x 1 ft. x 1 ft. x 7.48 gal./cu.ft. = **0.31 gallons**

5/8 inch application = 5/8 inch x 1 ft./12 inches x 1 ft. x 1 ft. x 7.48 gal./cu.ft. = **0.39 gallons**

3/4 inch application = 3/4 inch x 1 ft./12 inches x 1 ft. x 1 ft. x 7.48 gal./cu.ft. = **0.47 gallons**

1.0 inch application = 1.0 inch x 1 ft./12 inches x 1 ft. x 1 ft. x 7.48 gal./cu.ft. = **0.62 gallons**

Just multiply the number of square feet of landscape by the appropriate number of gallons of water for the depth of water you apply.

Example: One-tenth of an acre (4,356 square foot or about 66 feet by 66 feet) of turf, with 1/2 inch of water applied is: **4,356 sq.ft. x 0.31 gallons/sq.ft. = 1,350 gallons for each irrigation.**

Outdoor watering of landscapes, especially turf, will always be looked upon as a major source of water supply in dry periods and will always be considered an area where water is inappropriately used. The following shows you why.

Table 1

APPROXIMATE AMOUNT OF WATER USED FOR IDENTIFIED ACTIVITIES IN RELATION TO A ONE-TENTH OF AN ACRE (4,356 sq.ft.) OF LANDSCAPE (TURF) FOR EACH IRRIGATION

<u>Activity</u>	<u>1,350 gallons of water required for each irrigation</u>	<u>.</u>
100 Gallons per Car Wash.....	13.5 Car Washes	(This is equal to a car wash every week for 3.4 months)
30 Gallons per Bath.....	45.0 Baths	(This is equal to a bath every day for 45 days)
30 Gallons per Load of Laundry.....	45.0 Loads of Laundry	(This is equal to 5 loads a week for 9 weeks)
15 Gallons per Shower.....	90.0 Showers	(This is equal to a shower every day for 90 days)
15 Gallons per Load of Dishes.....	90.0 Loads of Dishes	(This is equal to a load every day for 90 days)
10 Gallons per Meal Preparation.....	135.0 Meal Preparations	(This is equal to 3 meals/day for 45 days)
4 Gallons per Toilet Flush.....	348.0 Toilet Flushes	(This is equal to 6 flushes/day for 56 days)
5 Gallons per Dripping Faucet/Day.....	270.0 Dripping Faucet/Days	(This is equal to 9 months of a drip)

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Reno-Sparks Nevada requires about 25 inches of supplemental water during an average year to grow a typical landscape. That is the equivalent of 15.5 gallons per square foot of landscape each year (.31 gallons x 50 applications). The statistics show that the average landscape manager uses double this amount or about 50 inches. That is the equivalent of 31 gallons per square foot of landscape each year (.31gallons x 50 applications x 2).

Table 2

APPROXIMATE AMOUNT OF WATER USED FOR IDENTIFIED ACTIVITIES IN RELATION TO A ONE TENTH ACRE (4,356 sq.ft. x 15.5 gallons) OF LANDSCAPE (TURF) OVER-IRRIGATED EACH YEAR

<u>Activity</u>	<u>67,520 gallons of water wasted on each acre by the average manager.</u>
100 Gallons per Car Wash.....	675 Car Washes (This is equal to a car wash every week for 13 years)
30 Gallons per Bath.....	2,250 Baths (This is equal to a bath every day for 6 years)
30 Gallons per Load of Laundry.....	2,250 Loads of Laundry (This is equal to 5 loads a week for 8.6 years)
15 Gallons per Shower.....	4,500 Showers (This is equal to a shower every day for 12.3 years)
15 Gallons per Load of Dishes.....	4,500 Loads of Dishes (This is equal to a load every day for 12.3 years)
10 Gallons per Meal Preparation.....	6,750 Meal Preparations (This is equal to 3 meals/day for 6.2 years)
4 Gallons per Toilet Flush.....	16,880 Toilet Flushes (This is equal to 6 flushes/day for 7.7 years)
5 Gallons per Dripping Faucet/Day.....	13,500 Dripping Faucet/Days (This is equal to 37 years of a drip)

If you think you are doing a good job watering your landscape, maybe you should carefully measure how much you apply and calculate how much water you are using. Remember, **efficiency is critical**. Over irrigating by just 10 percent will result in about 6,750 gallons of wasted water each year on a one-tenth (66 ft. x 66 ft.) acre of landscape (67,520 gallons x 10% = 6,750 gallons).