LANDSCAPE WATERING 101

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75 MINUTES

*My goal is to help you understand how to efficiently water your landscape* ....

- Know how much water your plants need.

- Know how much water each part of your watering system provides.

- Match your watering system’s output to your plants needs.
Where do you use the most water in the home?
Where do you use the most water in the home?

Up to 70% of household water goes into our landscapes!

*Nationwide average is 30%.*
It’s hot here!
As much as **50 percent** of the water we use outdoors is wasted from inefficient watering methods and systems.

**Curb your water waste!**
Examples of Runoff

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Examples of Runoff
Why water efficiently?

*Reasons to water efficiently:*

- It’s an easy method to save a lot of water.
- Keep your landscape plants healthy and beautiful.
- Reduce (NOT eliminate) maintenance.
- Use water wisely – It’s a desert!
What You’ll Need to Reach Irrigation Efficiency

• One weekend morning
• Book: Landscape Watering by the Numbers
• Plant Irrigation Worksheet or Online Tool
STEP 1: KNOW HOW MUCH AND HOW OFTEN YOUR PLANTS NEED WATER
Why do plants need water?

• To make food
• To dissolve chemicals and minerals
• To maintain strong and sturdy leaves
• Transport the food it makes
• Cool itself down
Plants Lose Water While Making Food

![Diagram of basic photosynthesis](image)

How Stuff Works
Plants Lose Water While Making Food

- Oxygen
- Carbon Dioxide
Soil Also Loses Water

Soil Evaporation + Plant Transpiration

H₂O  H₂O
Transpiration

- Water evaporates from leaf surface
- Water travels through plant
- Water absorbed by roots

Transpiration is the process by which water is released from the leaves of plants into the atmosphere. It plays a crucial role in the water cycle and helps regulate the temperature of the plant and its environment.
We’re watering roots, not plants!

- How deep do roots grow?
- How wide do roots grow?
- Which part of the root absorbs the most water?
How deep do roots grow? 1-2-3 Rule (page 4)
How deep do roots grow? 1-2-3 Rule (page 4)

- **1 foot** – small plants (groundcovers, cacti, annuals)
- **2 feet** – medium plants (shrubs)
- **3 feet** – large plants (trees)

What about grass?
- **6 – 10 inches**
How deeply to water?
How deeply to water?
How *deeply* to water?
How *deeply* to water?
How *deeply* to water?
How *deeply* to water?
How *deeply* to water?

6-10 inches!
Easy Method to Check Watering Depth

Using a soil probe, sharpened piece of rebar, or a very long screw driver, you can test your watering depth at the dripline. Here is how to do it:

1. Measure after all irrigation is complete.
2. Pierce the soil with the rod, making sure not to damage the root ball.
3. Remove the rod, and measure how deep the rod penetrates.
4. Adjust watering to reach the proper depth.
How do roots absorb water?

- Located at tips of plant roots
- Invisible
- Short-lived
The Dripline – How Nature Waters

Watch during and right after a good rain. Canopy collects water, and it drips off the edge.
Water at the Dripline

Root system can be 1.5 to 3 times as wide as the canopy, most within the top 2’ to 3’.
How often to water?

Evaporation + Transpiration = evapotranspiration

• Solar radiation
• Wind
• Humidity
• Temperature
How much water do your plants need, how frequently? (page 12)

![LANDSCAPE WATERING GUIDELINES](image)

You can reduce your landscape watering 30 to 50 percent by adjusting your irrigation each season!
How much water do your plants need, how frequently? (page 12)

- For best results, adjust watering frequency monthly for turf

<p>| TABLE B: MONTHLY FREQUENCY (DAYS BETWEEN WATERING) FOR WARM AND COOL SEASON GRASSES |
|-----------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|</p>
<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bermuda</td>
<td>30</td>
<td>21</td>
<td>14</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Rye</td>
<td>14</td>
<td>10</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>— grass dies out —</td>
<td>3</td>
<td>10</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
STEP 2: FIND OUT HOW MUCH WATER DOES EACH PART OF YOUR WATERING SYSTEM APPLIES
10 gallons of water, 3 methods

- 2 minutes through a watering hose
- 10 minutes with a 1-gallon per minute bubbler
- 600 minutes (10 hours) with a 1-gallon per hour drip emitter

Sprinklers apply water in inches per minute.
How much water does your sprinkler system apply?
Estimating Sprinkler Water Output

Pop-up sprinkler
Averages .5 inches of water in 15 minutes

Impact sprinkler
Averages .2 inches of water in 15 minutes
Measuring Sprinkler Water Output:

The Can Test

What you need:

- A ruler
- 6-8 identical, shallow, flat-bottomed cans (e.g. tuna or cat food cans)

Tina Sleeper
Measuring Sprinkler Water Output: 

The Can Test

What to do:

• Spread the cans around the lawn about 4-5 feet apart.
• Water for 15 minutes.
• Turn off the sprinklers.
• Measure the depth of water in each can using a ruler.
• Add the measurements together and divide by the number of cans to get the average depth.

This number is your sprinkler number, the amount of water in inches that your sprinkler applies in 15 minutes.
Measuring Sprinkler Water Output:

The Can Test

Amount of water in cans (tenths of an inch):

Can 1 __.2__
Can 2 _____.3__
Can 3 _____.4__
Can 4 _____.35__
Can 5 _____.2__
Can 6 _____.3__

Total: ___________ ÷ no. of cans _________ = ___________

This number is your sprinkler number, the amount of water in inches that your sprinkler applies in 15 minutes.
Lawn Watering Guide

http://wateruseitwisely.com/100-ways-to-conserve/landscape-watering-guide/

Landscape Watering Guide - Lawn Watering

Enter your measurements and get watering schedule

To calculate your sprinkler number, we'll add your can test measurements together and divide by the number of cans to get the average depth. This is your sprinkler number—the average amount of water in inches that your sprinkler system applies in 15 minutes.

Enter your measurements in the boxes to the right, then press Calculate. Leave boxes empty if you did not use eight cans (do not enter a zero).

Conversions

1/8'' = 0.125
1/4'' = 0.25
3/8'' = 0.375
1/2'' = 0.5
5/8'' = 0.625
3/4'' = 0.75
7/8'' = 0.875

Depth of water in cans (in decimals, see chart)

<table>
<thead>
<tr>
<th>Can #1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Can #2</td>
<td></td>
</tr>
<tr>
<td>Can #3</td>
<td></td>
</tr>
<tr>
<td>Can #4</td>
<td></td>
</tr>
<tr>
<td>Can #5</td>
<td></td>
</tr>
<tr>
<td>Can #6</td>
<td></td>
</tr>
<tr>
<td>Can #7</td>
<td></td>
</tr>
<tr>
<td>Can #8</td>
<td></td>
</tr>
</tbody>
</table>

Calculate

= Sprinkler Number
How much water does your drip emitter system apply?
Estimating Drip Output

• Drip provides flow PER HOUR
  • Gallons per hour
  • Liters per hour
• Make sure to total the output of ALL the outputs on each plant
• Take it to a store if you’re not sure or estimate
Palo Brea
3 emitters
2 GPH flow each
Total = ____ gallons per hour
Palo Blanco
5 emitters
1 GPH flow each
Total = ____?____ gallons per hour
Ocotillo
2 emitter
2 1/2 GPH flow each
Total = ____?____ gallons per hour
Estimating Bubbler Output

- Bubblers apply $\frac{1}{2}$ to 2 gallons per minute
- May be adjustable
- Flow rate may be stamped on top

30-120 gallons per minute
Garden Hose

- Diameter: 5/8, ½, or ¾ inch
- Hose Supply Pressure (Water Pressure): 40-60 psi
- Hose length: 25-200 feet

11-44 gallons per minute
STEP 3: MATCH YOUR SYSTEM’S OUTPUT TO YOUR PLANTS’ NEEDS
Example: Lawn Irrigated with a Sprinkler System
What do we know?

• What do we know about grass?
• What do we know about sprinkler systems?
• What do we need to find out?
• How can we find out?
What do we know?

• What do we know about the plant?
  • High water use plant
  • Water needs to penetrate 6-10 inches of soil

• What do we know about the sprinkler system?
  • It applies water in inches
  • Pop-up sprinkler averages about .5 inches of water in 15 minutes

What do we need to know?

• How many inches of water does it take to penetrate 6-10 inches of soil?
• How many inches of water does this specific sprinkler system apply in 15 minutes? (The Sprinkler Number!)
How many inches of water is needed to water turf?

- Apply .75” of water each time you irrigate to wet the root zone (penetrating the soil to about 6-10 inches)
Finding the Sprinkler Number

Amount of water in cans (tenths of an inch):
Can 1 ___.2__
Can 2 ___.3__
Can 3 ___.4__
Can 4 ___.35__
Can 5 ___.2__
Can 6 ___.3__

Total: 1.75 ÷ 6 = ___.3__

This number is your sprinkler number, the amount of water in inches that your sprinkler applies in 15 minutes.
Turf – Plant Needs

• Your sprinkler number determines how long to run the sprinkler system
• Can test results: .3” applied every 15 minutes

Table A: Run Time of Sprinklers to Apply .75” with Each Irrigation (page 7)

<table>
<thead>
<tr>
<th>Average can measurement (inches)</th>
<th>.1</th>
<th>.2</th>
<th>.3</th>
<th>.4</th>
<th>.5</th>
<th>.6</th>
<th>.7</th>
<th>.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes to run sprinklers</td>
<td>112</td>
<td>56</td>
<td>37</td>
<td>28</td>
<td>22</td>
<td>18</td>
<td>16</td>
<td>14</td>
</tr>
</tbody>
</table>
Example: Landscape Plants
Step 1: Group plants

- Group your plants by type and size to figure out their water needs

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**Run Time Worksheet**

<table>
<thead>
<tr>
<th>Valve No.</th>
<th>Plant Type &amp; Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8’ TREES</td>
</tr>
<tr>
<td>1</td>
<td>3’ SHRUBS</td>
</tr>
<tr>
<td>1</td>
<td>2’ SUCCELENTS</td>
</tr>
<tr>
<td>2</td>
<td>6’ CITRUS TREES</td>
</tr>
</tbody>
</table>
Step 2: List the watering method

- For each group of plants, list the number of drip emitters or bubblers and their emitter output in gallons

**Run Time Worksheet (Example)**

<table>
<thead>
<tr>
<th>Valve No.</th>
<th>Plant Type &amp; Size</th>
<th>Number of Emitters per Plant</th>
<th>Emitter Output in Gallons/HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8' TREES</td>
<td>3</td>
<td>2G/HR</td>
</tr>
<tr>
<td>1</td>
<td>3' SHRUBS</td>
<td>2</td>
<td>1G/HR</td>
</tr>
<tr>
<td>1</td>
<td>2' SUCCELENTS</td>
<td>1</td>
<td>1G/HR</td>
</tr>
<tr>
<td>2</td>
<td>6' CITRUS TREES</td>
<td>2</td>
<td>1G/MIN BUBBLER</td>
</tr>
</tbody>
</table>

\[ 3 \times 2G/HR = 6G/HR \]
Step 3: Total the water output

- For each group of plants, total the water output per hour or minute

### Run Time Worksheet (Example)

<table>
<thead>
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<th>Valve No.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8' TREES</td>
<td>3</td>
<td>2 G/HR</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3' SHRUBS</td>
<td>2</td>
<td>1 G/HR</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2' SUCCELENTS</td>
<td>1</td>
<td>1 G/HR</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6' CITRUS TREES</td>
<td>2</td>
<td>1 G/MIN BUBBLER</td>
<td></td>
</tr>
</tbody>
</table>
Step 4: List the gallons required

- For each group of plants, find how many gallons of water is required to wet the root zone (page 9)
Getting to the Run Time

You need to find out how many gallons are required to get the run time.

### Run Time Worksheet (Example)

<table>
<thead>
<tr>
<th>Valve No.</th>
<th>Plant Type &amp; Size</th>
<th>Number of Emitters per Plant</th>
<th>Emitter Output in Gallons/HR</th>
<th>Total Output in Gallons/Plant/HR</th>
<th>Gallons Required (From Table C)</th>
<th>Run Time (gal req ÷ gal per plant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8' TREES</td>
<td>3</td>
<td>2 G/HR</td>
<td>6 G/PLANT/HR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3' SHRUBS</td>
<td>2</td>
<td>1 G/HR</td>
<td>2 G/PLANT/HR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2' SUCCULENTS</td>
<td>1</td>
<td>1 G/HR</td>
<td>1 G/PLANT/HR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6' CITRUS TREES</td>
<td>2</td>
<td>1 G/MIN BUBBLER OR 12 G/PLANT/HR</td>
<td>2 G/PLANT/MIN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Gallons of Water Required to Wet Root Zone (Table C, Page 9)

### Gallons of Water Required to Wet Root Zone (Table C, Page 9)

<table>
<thead>
<tr>
<th>Plant Type</th>
<th>1'</th>
<th>2'</th>
<th>3'</th>
<th>4'</th>
<th>5'</th>
<th>6'</th>
<th>7'</th>
<th>8'</th>
<th>9'</th>
<th>10'</th>
<th>11'</th>
<th>12'</th>
<th>13'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trees</td>
<td>1.5</td>
<td>5</td>
<td>11</td>
<td>16</td>
<td>22</td>
<td>26</td>
<td>38</td>
<td>59</td>
<td>85</td>
<td>115</td>
<td>150</td>
<td>190</td>
<td>235</td>
</tr>
<tr>
<td>Shrubs</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>17</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundcover/Cacti</td>
<td>.5</td>
<td>2</td>
<td>3.5</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Run Time Worksheet

**Step 1:** List your plant types and sizes by valve (columns 1 & 2)

**Step 2:** For each plant type on each valve, list the number of emitters and emitter output in gallons per hour (columns 3 & 4)

**Step 3:** Multiply the number in column 3 by the number in column 4 and write the results in column 5.

**Step 4:** Look up the water required for each plant type and size from Table C and write it in column 6.

**Step 5:** Divide the number in column 6 by the number in column 5 to determine the run time.

**Metric conversions:** 1 liter per hour (LPH) = .25 gallons per hour (GPH), 2 LPH = .5 GPH, 4 LPH = 1 GPH, 8 LPH = 2 GPH, 16 LPH = 4 GPH

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>8' TREES</td>
<td>3</td>
<td>2 G/HR</td>
<td>6 G/PLANT/HR</td>
<td></td>
</tr>
<tr>
<td>1*</td>
<td>3' SHRUBS</td>
<td>2</td>
<td>1 G/HR</td>
<td>2 G/PLANT/HR</td>
<td></td>
</tr>
<tr>
<td>1*</td>
<td>2' SUCCELENTS</td>
<td>1</td>
<td>1 G/HR</td>
<td>1 G/PLANT/HR</td>
<td></td>
</tr>
<tr>
<td>2*</td>
<td>6' CITRUS TREES</td>
<td>2</td>
<td>1 G/MIN BUBBLER OR 12 G/PLANT/HR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Step 5: Do the Math to Find the Run Time!

**Run Time Worksheet**

**Step 1:** List your plant types and sizes by valve (columns 1 & 2)
**Step 2:** For each plant type on each valve, list the number of emitters and emitter output in gallons/hour (columns 3 & 4)
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<td>3</td>
<td>2 G/HR</td>
<td>6 G/PLANT/HR</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3' SHRUBS</td>
<td>2</td>
<td>1 G/HR</td>
<td>2 G/PLANT/HR</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2' SUCCELENTS</td>
<td>1</td>
<td>1 G/HR</td>
<td>1 G/PLANT/HR</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6 CITRUS TREES</td>
<td>2</td>
<td>1 G/MIN BUBBLER OR 2 G/PLANT/HR</td>
<td>2 G/PLANT/HR</td>
<td>2 G/PLANT/HR</td>
<td></td>
</tr>
</tbody>
</table>

**EXAMPLE**
Make Adjustments

- Aim to finish watering between 2-6 hours
- Water trees, shrubs, and succulents on different valves
- Change up the emitters?

<table>
<thead>
<tr>
<th>Valve No.</th>
<th>Plant Type &amp; Size</th>
<th>Number of Emitters per Plant</th>
<th>Emitter Output in Gallons/Hr</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8’ Trees</td>
<td>5</td>
<td>2 G/HR</td>
<td>10 G/PLANT/HR</td>
<td>38</td>
<td>3.8 HR</td>
</tr>
<tr>
<td>1</td>
<td>3’ Shrubs</td>
<td>2</td>
<td>1 G/HR</td>
<td>2 G/PLANT/HR</td>
<td>8</td>
<td>4 HR</td>
</tr>
<tr>
<td>1</td>
<td>2’ Succulents</td>
<td>1</td>
<td>0.5 G/HR</td>
<td>0.5 G/PLANT/HR</td>
<td>2</td>
<td>4 HR</td>
</tr>
</tbody>
</table>
### PLANT WATERING GUIDE

**LANDSCAPE WATERING GUIDE - Plant Watering**

Enter your measurements and get watering schedule

<table>
<thead>
<tr>
<th>Valve No.</th>
<th>Plant Type</th>
<th>Plant Size (Cone, Diameter or Width)</th>
<th>Optional Plant Description (for your reference)</th>
<th>Number of Emitters per Plant</th>
<th>Emitter Output (Gallons/Min)</th>
<th>Run Time (in Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select Plant Type</td>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select Plant Type</td>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select Plant Type</td>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select Plant Type</td>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select Plant Type</td>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Input the measurements from your worksheet to estimate the run time for each area of your landscape.

If you have bubblers that are measured in Gallons per Minute, multiply this number by 60 to get Gallons per Hour. Example: 1 Gallon per Minute equals 60 Gallons per Hour.

Your numbers will not be saved after you leave this screen. Be sure to click Calculate, then print your run times and watering schedule before exiting.

PUT IT ALL TOGETHER
One Weekend Morning with a Good Book

1. One weekend morning

   - Group your plants by type and size to figure out their water needs
     - Low-water use (large, medium, small)
     - High-water use (large, medium, small)
   - Find out how much water your watering system provides (per minute or per hour)
   - Match the two!

2. Maintain your watering system.

3. Adjust watering frequency at least four times per year.
ADJUST FOR YOUR UNIQUE LANDSCAPE
Check Your Watering Depth and Adjust as Needed

Using a soil probe, sharpened piece of rebar, or a very long screwdriver, you can test your watering depth at the dripline. Here is how to do it:

1. Measure after all irrigation is complete.
2. Pierce the soil with the rod, making sure not to damage the root ball.
3. Remove the rod, and measure how deep the rod penetrates.
4. Adjust watering to reach the proper depth.
Adjust Your Frequency

You can reduce your landscape watering 30 to 50 percent by adjusting your irrigation each season!

**LANDSCAPE WATERING GUIDELINES**

<table>
<thead>
<tr>
<th></th>
<th>Seasonal Frequency — Days Between Waterings</th>
<th>Water This Deeply (Typical Root Depth)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How Much &amp; How Often</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desert adapted</td>
<td>14-30 days Mar - May</td>
<td>24-36 inches</td>
</tr>
<tr>
<td></td>
<td>7-12 days Mar - May</td>
<td></td>
</tr>
<tr>
<td>High water use</td>
<td>7-12 days May - Oct</td>
<td>24-36 inches</td>
</tr>
<tr>
<td>Shrubs</td>
<td></td>
<td></td>
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<td>Groundcovers &amp; Vines</td>
<td></td>
<td></td>
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<td>Desert adapted</td>
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</tr>
<tr>
<td>Cacti and Succulents</td>
<td></td>
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<tr>
<td></td>
<td>21-45 days Mar - May</td>
<td>8-12 inches</td>
</tr>
<tr>
<td></td>
<td>14-30 days May - Oct</td>
<td></td>
</tr>
<tr>
<td>Annuals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-7 days Mar - May</td>
<td>8-12 inches</td>
</tr>
<tr>
<td></td>
<td>2-5 days May - Oct</td>
<td></td>
</tr>
<tr>
<td>Warm Season Grass</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4-14 days Mar - May</td>
<td>6-10 inches</td>
</tr>
<tr>
<td></td>
<td>3-6 days May - Oct</td>
<td></td>
</tr>
<tr>
<td>Cool Season Grass</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-7 days Mar - May</td>
<td>6-10 inches</td>
</tr>
<tr>
<td></td>
<td>none Mar - May</td>
<td></td>
</tr>
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<td></td>
</tr>
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<td></td>
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</tbody>
</table>

These guidelines are for established plants (1 year for shrubs, 3 years for trees). Additional water is needed for new plantings or unusually hot or dry weather. Less water is needed during cool or rainy weather. Drip run times are typically 2 hours or more for each watering.

You can reduce your landscape watering 30 to 50 percent by adjusting your irrigation each season!
How much water do your plants need, how frequently?

- Plant type
- Plant size
- Soil Type
- Plant Establishment

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Water to the outer edge of the plant’s canopy and to the depth indicated. Watering frequency will vary depending on season, plant type, weather and soil.
Variable: Plant Type

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Variable: Plant Size

- small
- medium
- large
Variable: Soil Type

- Sandy soil – less water, more frequently
- Clay – more water, less frequently
Variable: Plant Establishment

<table>
<thead>
<tr>
<th>Watering Schedule for Newly Planted Desert Adapted Plants</th>
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<tbody>
<tr>
<td><strong>Weeks 1 &amp; 2</strong></td>
</tr>
<tr>
<td><strong>Weeks 3 &amp; 4</strong></td>
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<tr>
<td><strong>Weeks 5 &amp; 6</strong></td>
</tr>
<tr>
<td><strong>Weeks 7 &amp; 8</strong></td>
</tr>
<tr>
<td><strong>After week 8</strong></td>
</tr>
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*New plantings need to be watered more frequently.*
People save water, not plants (or irrigation timers)!

Understanding proper watering strategies leads to efficient use of water and healthy plants!

• Know how much water your plants need.
• Know how much water each part of your watering system applies.
• Match your system’s output to your plants needs.
  • Schedule a water evaluation each year.
  • Adjust frequency of watering at least four times a year for landscape plants and at least monthly for grass.
WATER WISDOM
Go Native in Plant Selection
Plant the Right Plant in the Right Place

- Functions (multiple!)
- Form
- Microclimate
- Allergies
- Pet-friendly
- Child-friendly
- Zones

Tina Sleeper
Consider the “Zones” of Your Yard

Zone 1 • Frequently used areas

Zone 2 • Occasional observation

Zone 3 • Wild zone
Just the Right Amount: Water & Fertilizers

- The more you water, the more the plant will grow (and require pruning and mowing)
- The more fertilizers are applied, the more water consumption is needed

Apply the minimum needed for the results you want
Water at the Right Time

• Use sprinklers early in the morning, 1-3 hours before sunrise during the summer

• Avoid watering when it is windy

• Reduce watering during the cooler temperature
Reducing Evaporation with Mulch

Inorganic Mulch

Organic Mulch
Desert Lawns

• Use purposefully
• Pick one type of grass and water it one season
• Stop or reduce watering when grass is dormant
• Use proper care (see “Desert Garden” brochure)
Plant the Rain

• When it rains, turn off your irrigation
  • Place a rain gauge in your yard. If you receive at least ½” of rain, skip your next irrigation cycle

• Harvest rainwater using earthworks
  • Contour your yard with small berms, channels, or swales to direct water runoff to your plants.
Perform an Annual Landscape Walk-Through

• Your plants will grow and their water needs will change

• Evaluate water needs each year and change the system as needed
RESOURCES FOR YOU
More Resources: City of Phoenix

- [https://www.phoenix.gov/waterservices/](https://www.phoenix.gov/waterservices/)
- Click on “Water Resources and Conservation”
- Learn about:
  - Drought
  - Water resources
  - Saving water at home
  - Saving water at a business
- Order
  - Literature
  - Activity books

We also offer workshops to the community and classroom visits for schools!
Water – Use it Wisely

- http://wateruseitwisely.com/

Keeping conservation on the forefront of people’s minds!
More Resources: AMWUA

• Arizona Municipal Water Users Association (AMWUA) since the 1970’s [www.amwua.org](http://www.amwua.org)

• 10 cities and towns
  • Phoenix
  • Gilbert
  • Avondale
  • Tempe
  • Chandler
  • Gilbert
  • Scottsdale
  • Glendale
  • Mesa
  • Goodyear
More Resources: Maricopa County Cooperative Extension

- [http://cals.arizona.edu/maricopa/garden/html/general/hort.htm](http://cals.arizona.edu/maricopa/garden/html/general/hort.htm)
- Gardening Hotline
  (602) 827-8201
  MaricopaCountyPlantHotline@gmail.com
Thank you for attending!

• Please fill out the evaluation!

• On the back, please let me know what other topics you’d like to learn about.
Thank you for attending!

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