Desert Lawn Care
Maintaining a healthy, beautiful, and water-efficient lawn

August 25, 2016

City of Phoenix Water Conservation and Efficiency

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Overview

- Grass in Phoenix
- Types of Grasses
- Maintaining a Healthy Turf
- A Beautiful Lawn
- Water Efficient Grass
Grass in Phoenix
Alternatives to Grass

- Replace lawn with hardscape or minimize the area
  - Create a vegetable garden
  - Use desert adapted plants (Landscape Plants for the Arizona Desert book)
  - Create an outdoor cooking area
  - Build a patio area
  - Install artificial turf
  - Construct a walkway
  - Put down gravel
Types of Grasses

- **Warm Season Grasses:**
  - Perennial; do not need to be reseeded every year
  - Typically comes from warmer or drier climates
  - Bermuda grass, St. Augustine grass, Buffalo grass

- **Cool Season Grasses:**
  - Annual; must be reseeded every year
  - Typically comes from cooler or wetter climates
  - Perennial ryegrass (not perennial in Phoenix!), Annual ryegrass, Kentucky Bluegrass, Tall Fescue
Types of Grasses:  
**Warm Season Grasses**

**Bermuda Grass:**
- Heat and drought tolerant
- Mow from 1.5” to 2”
- Relatively low water use
- Active April – October, dormant November - March
Types of Grasses:
Warm Season Grasses

St. Augustine Grass:
- Shade and sun tolerant
- Mow from 1.5” to 3”
- Dormant in the winter
- Does not take to being over-seeded with cool season grasses
Types of Grasses:
Warm Season Grasses

Buffalo Grass:

- Heat and drought tolerant
- Does not thrive in shade
- Mow from 2.5” to 3.0”
- Does not take to being over-seeded with cool season grasses
Types of Grasses:
Cool Season Grasses

Perennial Ryegrass:

- High maintenance (watering, mowing, fertilizing, and pest management)
- Shade tolerant
- Mow from 1.5” to 2.5”
- Least drought tolerant grass
Types of Grasses:
Cool Season Grasses

Annual Ryegrass:
- High maintenance
- May be used to overseed Bermuda grass during cooler months
- Mow from 1.5” to 3.0”
- Not drought tolerant
Types of Grasses:
Cool Season Grasses

Kentucky Bluegrass:

- Mow from 2.0” to 3.0”
- Grows best during the fall, winter, and spring
- Prefers full sun, but will tolerate some shade
- Deep bluish green in color
Types of Grasses:
Cool Season Grasses

Tall Fescue:

- More heat tolerant than Ryegrass
- More drought tolerant than Bluegrass
- Establishes from seed in early October
- Does well in either partial shade or sun
Maintaining Healthy Turf

- Mowing
- Dethatching
- Aerating
- Controlling weeds
- Managing disease
Maintaining Healthy Turf:

Mowing

- Avoid scalping your grass
- Keep mower blades sharp
- Mow to recommended height
- Increase the mowing height by 25% in shady areas
- Change up mowing pattern
- Mow when turf is dry

Mow High for Low Maintenance

Mow Low for High Maintenance
Maintaining Healthy Turf: Dethatching

**Thatch:** A mat of plant material that includes dead and living shoots, grass stems, and roots

- Excessive thatch - caused by over-watering and over-fertilizing
- Remove thatch with a vertical mower or a power rake
- Dethatch during summer months
Maintaining Healthy Turf:

Aerating

**Aerating:** Piercing the soil with small holes to allow air, water, and nutrient to penetrate the grass roots

- Aerate when soil is hard and compact
- Prevents runoff and puddling
- Aerate after a rainfall event or irrigation
- Manually aerate small properties and mechanically aerate large areas
Maintaining Healthy Turf: Weeds

**Weeds:** Unwanted plants growing out of place that interfere with desirable plants

- Hand-pulling is often your best option
- Proper mowing, aerating, and dethatching promotes healthy turf and prevents weed growth
Maintaining Healthy Turf: 

Weeds

Annual Weed

Chickweeds (Winter Annual)

Perennial Weed

Quackgrass
Brown Patch:

- Circular patches of thinned, light brown grass
- Affects both warm and cool season grasses
- Caused by fungi
Dollar Spot Fungi:

- Cluster of round, small, light brown patches
- Carried by wind, water and turf equipment
- Triggered by low soil moisture, thatch, low nitrogen fertility, and scalping the grass during hot temperatures
- Active in warmer temperatures
Maintaining Healthy Turf: Diseases

Fairy Ring: Lawn Mushrooms:

- Fungus growth in a circular pattern with mushrooms at the surface
- Appears after rain events
- Feeds in the thatch layer or the soil organic matter
- Destroys grass root cells
A Beautiful Lawn:

Fertilizing

Fertilizing:
- Guidelines
- Types of Fertilizers
- Fertilizing Tips
A Beautiful Lawn: Fertilizing Guidelines

- Apply ½ pound of nitrogen per 1,000 square feet
- Use slow-release nitrogen fertilizer
- Use a rotary spreader to apply quickly and evenly
- Apply the fertilizer to dry grass and then water afterwards
- Use the only the required amount of fertilizer

Growth, Color, & Resiliency!
A Beautiful Lawn: Types of Fertilizers

- Complete and Incomplete
- Soluble and Insoluble
- Organic and Inorganic
A Beautiful Lawn: Types of Fertilizers

- **Complete fertilizer** contains all three primary plant nutrients.

- Each number indicates the pounds of:
  - **N** – Nitrogen: first number on the bag
  - **P** – Phosphorous: second number on the bag
  - **K** – Potassium: third number on the bag

A soil test is needed to help determine which nutrient your soil needs.
A Beautiful Lawn: Types of Fertilizers

- **Nitrogen** promotes lush green color and rapid growth. Nitrogen can be either quick release, or slow release.

- **Phosphorus** stimulates healthy roots.

- **Potassium** helps store food, supports stress tolerance, assists with disease resistance and protects from drought.

- **Incomplete fertilizer:**
  - At least one of the major plant nutrient is not included.
    - For example: **22-0-15**; Phosphorus is excluded.

Over fertilized lawn requires more water.
A Beautiful Lawn:
Types of Fertilizers

Soluble Fertilizer:

- Water soluble for quick release
- Nitrogen available immediately
- Costs less
- Frequently applied
- Could raise soil salt levels
- Examples of quick release
  - Ammonium nitrate
  - Urea
A Beautiful Lawn:  
Types of Fertilizers

- Insoluble Fertilizer:
  - Slow release fertilizer
  - Nitrogen available gradually
  - Contains both synthetic materials and natural organic materials
  - Lasts longer
  - Save money and time in the long run
A Beautiful Lawn: Types of Fertilizers

- **Organic:**
  - Plant or animal sources
  - Takes a long time to break down
  - Nutrients release slowly
  - No salts present
  - Promotes stronger root growth
A Beautiful Lawn: Types of Fertilizers

- Inorganic:
  - Grass quickly absorb nutrients
  - Provides immediate boost to grass
  - Leaves behind salts that the grass cannot absorb
  - Too much salts can harden the soil
A Beautiful Lawn: Fertilizing Tips

- Over-fertilized lawns require more water and mowing
- Do not apply nitrogen at the end of the growing season
- Use “slow release” fertilizer
- Fertilize once per month during active growing season
Water Efficient Grass

- When to Water
- How Often to Water
- How Much to Water
- Over-seeding
- Watering Tips
Water Efficient Grass:
When to Water

- Water at night or during cool morning hours to minimize evaporation
- Avoid peak water consumption hours at 4-9 pm

When it rains, reduce irrigation accordingly
Water Efficient Grass
How Often to Water

- Irrigation frequency depends upon the weather, the turf type, and the soil type
- Water turf once every three days in the summer
- Water established rye grass once a week in the winter and three days per week in the spring
Water Efficient Grass:
How Much to Water

- Two factors:
  - How quickly your sprinklers put water on your lawn.
  - The amount of water your grass needs to stay healthy. Plant water use varies greatly throughout the year.

- Test to determine if water is needed:
  - Push a 6" long screwdriver shaft into the ground. If it goes in easily, don't water.

Please adjust your watering times throughout the year!
Water Efficient Grass: Watering Tips

- Irrigate for shorter periods if you have run-off
- Hand water dry grass areas instead of increasing the overall watering time
- Water shaded areas approximately 30% less than sunny areas
- Reduce irrigation accordingly when it rains
Water Efficient Grass: Overseeding

- During the winter, warm season Bermuda grass becomes dormant
- Overseeding - seeding ryegrass directly into Bermuda grass during the fall
- Ryegrass - better suited to cooler weather; remains green throughout the winter
- Warmer spring temperatures cause ryegrass to die out and the Bermuda grass (a perennial) will naturally re-establish itself.

Save water, time and money – consider not overseeding at all!
References

- Arizona Municipal Water Users Association (AMWUA) Desert Lawn Care Guide.  

- University of Arizona College of Agriculture and Life Sciences Cooperative Extension. Desert Turf School Guide.  
  http://turf.Arizona.edu

- University of Arizona College of Agriculture and Life Sciences Cooperative Extension. Phoenix Lawn Watering Guide.  
  http://ag.arizona.edu/azmet/phx/lawnfaqs.htm
Additional Resources

- City of Phoenix Water Services Website: [https://www.phoenix.gov/waterservices/](https://www.phoenix.gov/waterservices/)
- Water Use It Wisely: [www.wateruseitwisely.com](http://www.wateruseitwisely.com)
- Arizona Municipal Water Users Association (AMWUA): [www.amwua.org](http://www.amwua.org)
- Maricopa County Cooperative Extension: [http://cals.arizona.edu/maricopa/garden/html/general/hort.htm](http://cals.arizona.edu/maricopa/garden/html/general/hort.htm)
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Any Questions?

THANKS for ATTENDING

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