

## **DIVISION 6. LANDSCAPING REQUIREMENTS**

### **Sec. 4-10-246. Purpose:**

The purpose of this Chapter is to set minimum requirements for landscape and irrigation standards for properties with Multiple-Family and nonresidential land uses within the corporate limits of the city. The following regulations are designed to:

- 1) Preserve the value of property while promoting and enhancing the visual appearance of the City;
- 2) Reduce the negative effects of noise, glare, air pollution, and urban heat islands;
- 3) Reduce soil erosion and encourage the reduction of water run-off by decreasing large expanses of impervious area; and
- 4) Promote water conservation and water efficiency by incorporating drought-tolerant plant selections in properly designed landscape areas and using proper irrigation systems;

### **Sec. 4-10-247. Definitions:**

*Building Footprint:* A Structure which is covered by a roof or canopy and is not open to the sky. This definition is not intended to include Carports.

*Building Official:* Head of the Department of Building Safety for the City of Amarillo.

*Evergreen Tree:* A tree with foliage that persists and remains green year round.

*Excess Vegetation:* Whether living, dormant, or dead:

- i) All grasses, weeds, and other plants in excess of eight (8) inches in height that are cultivated and growing in rank profusion; or
- ii) Noxious weeds; or
- iii) Uncultivated brush or weeds in excess of eight (8) inches in height; or
- iv) Shrubs and tree limbs that overhang or obstruct public sidewalks, streets, or alleys in violation of other provisions of this Code of Ordinances.

Provided however, the term Excess Vegetation shall not include cultivated flowers, gardens, and lawns.

*Groundcover:* Living landscape materials or low-growing plants, other than turf grasses, installed in such a manner so as to provide a continuous cover of the ground surface, and which upon maturity normally reach the average maximum height of 24 inches.

*Hardscape:* including but not limited to building foundation, concrete, asphalt, pavers, or stones set with mortar.

*Living Landscape Materials:* Living flowers, Groundcover, ornamental grasses, turf, shrubs, vines, and trees.

*Multiple-Family Land Use:* A use which is designated to occupy three (3) or more Housing Units or Apartments or which is occupied as a home or place of Residence by three (3) or more Families living in independent Housing Units.

*Non-Living Landscape Materials:* Natural or man-made material free of uncultivated vegetation that is intended to reduce or eliminate watering, growth of Excess Vegetation, and inhibit water runoff while maintaining a pleasant aesthetic appearance. Examples of acceptable materials include: Boulders, wood chips, artificial turf, mulch, crushed or decomposed granite, gravel, cobblestone, crushed rock, sand, ornamental glass, and lava rock. A permeable weed barrier shall be installed under all Non-Living Landscape Materials.

*Ornamental Tree:* A deciduous tree thirty (30) feet or less in height at maturity, planted primarily for its ornamental value such as flowers, leaf color, size, or shape.

*Parking Lot Island:* An area, protected by standard curb, and typically surrounded on at least two (2) sides by parking spaces or drive aisle.

*Recommended Plant List:* A list of perennials, Groundcover, ornamental grasses, turf, shrubs, vines, and trees specified in the Appendix XXI, Sec. 4-10-1003. The Planning Director may amend this list from time to time.

*Shade Tree:* A deciduous tree exceeding thirty (30) feet in height at maturity, planted for its high crown of foliage or overhead canopy.

*Street Frontage:* The property line where a Lot, Tract, or Parcel of land fronts right-of-way.

*Total Required Landscaped Area:* Ten percent (10%) of Building Footprint

*Trash:* Debris such as cans, glass, cartons, construction waste, dead tree stumps, dead trees, as well as other items as defined in Section 4-3-2(a) of the Amarillo Municipal Code.

*Turf Grass:* Cultivated grass typically used for lawns which require regular watering and mowing to maintain a desired height, color, and aesthetic appearance.

*Zoning Board of Adjustment:* Appointed by the City Council, this board is authorized to make special exceptions, in appropriate cases and subject to appropriate conditions and safeguards, to the terms of this Chapter in harmony with its general purpose and intent and in accordance with general or specific rules contained herein.

#### **Sec. 4-10-248. Applicability:**

Landscaping is required as follows:

- 1) Multiple-Family and nonresidential land uses located on any Lot, Tract, or Parcel of property and adjacent right-of-way in the R-1, R-2, R-3, MD, MF-1, MF-2, MH, O-1, O-2, NS, GR, CB, and LC Districts. This includes:
  - a. All new construction.
  - b. Redevelopment resulting in an increase of 3,000 square feet and 35% or more of the gross floor area of buildings on a site.
  - c. Expansion of existing parking lot area by more than 35% but less than 50% requires landscaping for the new area.

- d. Expansion of existing parking lot area by 50% or more, landscaping is required for the entire site.
- 2) Multiple—Family and nonresidential land uses located on any Lot, Tract, or Parcel of property and adjacent right-of-way in the HC District shall meet the requirements of subsection (1) when the property fronts or sides on a freeway, expressway, State highway, or designated section line Arterial Street.
- 3) Nonresidential land uses located on any Lot, Tract, or Parcel of property and adjacent right-of-way in the I-1 and I-2 Districts shall meet the requirements of subsection (1) when the property fronts or sides on a freeway, expressway, or State highway.
- 4) Landscaping of property located within the Downtown Amarillo Urban Design District shall be subject to the Downtown Amarillo Urban Design Standards adopted in Division 3 of this chapter.

#### **Sec. 4-10-249. Landscaping Standards:**

Landscaping elements may include a combination of Living and Non-Living Landscape Materials. All landscape materials shall be resistant to wind and water erosion as well as growth of Excess Vegetation. Landscaping shall not be used which would conflict in any way with the sight distance requirements or sight restriction requirements of Chapter 16-3, Article III.

##### **1) Landscaping Area Requirements.**

- a) An area equal to ten percent (10%) of the Building Footprint per Street Frontage shall be landscaped. Landscaping shall be located on that portion of the Lot situated between the proposed Building Line and the property line or lines adjacent to a Street and shall be permanently maintained. Where Section 4-10-170 does not require a Front Yard Setback for a Building, the Building must be set back to accommodate the required Landscaping.
- b) Right-of-way between back of curb or edge of pavement to property line must be landscaped. However, in no case shall there be less than a 10-foot wide landscaped area.
- c) Any landscaped area in the right-of-way in excess of ten (10) feet in width may be credited toward the Total Required Landscaped Area requirement.
- d) The combined total of Non-Living Landscape Materials shall not exceed fifty percent (50%) of Total Required Landscape Area.

##### **2) Tree Requirements.**

- a. All Shade and Ornamental Trees shall have a minimum caliper size of two (2) inches when measured one (1) foot above ground level. In lieu of the caliper requirement, Evergreen Trees shall have a minimum height of six (6) feet above ground level at time of planting.
- b. No tree shall be placed or allowed to grow untrimmed in such a manner as to create a hazard or nuisance to vehicular or pedestrian traffic.
- c. *Street front trees.* Trees shall be provided within the front yard at the equivalent of one (1) tree per forty (40) linear feet of Street Frontage,

or a fraction thereof. If no front yard is required, then trees shall be placed within 15 feet of the property line parallel to the right-of-way. Trees planted in the right-of-way shall be no closer than 6 feet from back-of-curb or edge of pavement. In instances where overhead utilities exist, Ornamental Trees shall be used to minimize interference.

- d. *Parking lot trees.* Trees shall be required in parking areas at a minimum rate of one (1) tree per twenty (20) parking spaces. Trees shall be planted within Parking Lot Islands, with a minimum area of thirty-six (36) square feet with no interior dimensions less than four (4) feet measured at 90 degrees to the interior edges. Such trees shall be placed throughout the parking area to become an integral part of the parking design. Trees shall not impede the distribution of light throughout parking lot.

Number of Parking Spaces	Number of Parking Lot Trees Required
19 or fewer spaces	0
20 to 39 spaces	1
40 to 59 spaces	2
60 to 79 spaces, etc.	3, etc.

**e) Irrigation System Requirements.**

- a. Irrigation systems shall be designed and installed per applicable state law and Chapter 4-5 of the Amarillo Municipal Code.
- b. To ensure long-term viability, required landscape areas shall be irrigated by one or a combination of the following methods:
  - i. An automatic underground system,
  - ii. A drip irrigation system,
  - iii. An accessible water source located within 50 feet of each landscaping area.
- c. Drip systems shall be required in confined spaces of 4 feet or less between Hardscape surfaces.
- d. No irrigation shall be required for undisturbed natural areas or undisturbed existing trees or shrubs.
- e. The source of irrigation water, whether potable or reclaimed, shall be indicated on the landscape plan.
- f. All sprinkler systems shall be designed in such a manner as to minimize water runoff and to eliminate overspray into adjacent right-of-way, driveways, and parking areas.

**Sec. 4-10-250. Landscaping and Irrigation Plan:**

Prior to the issuance of a building permit or paving permit, an electronic copy of a landscape and irrigation plan shall be submitted to the Department of Building Safety for review and

approval. The plan shall be drawn to scale, including the following details and all additional information necessary to illustrate compliance with the regulations of this Chapter:

**1) Project Description**

- a. Project name, address and designers contact information
- b. Statement of Acknowledgement for site maintenance

**2) Site Elements**

- a. Property lines
- b. Setback lines
- c. Building, driveway, sidewalk, and parking locations
- d. Public utility easements locations (Xcel, Atmos, Suddenlink, etc.)
- e. Overhead power lines
- f. Existing tree locations
- g. Proposed plant material and tree locations
- h. Type and placement of irrigation systems

**3) Landscape Legend**

- a. Plant material names, symbols, sizes and quantities
- b. Tree names, symbols, caliper of ornamental and shade trees, height of evergreen trees, and quantities

**4) Landscape Ordinance Compliance Schedule.**

*Landscaping Requirements*

- a. Total lot area
- b. Total Building Footprint
- c. Total Required Landscaped Area
- d. Total area of living landscape required
- e. Total area of living landscape provided
- f. Total area of non-living landscaping provided

*Street Tree Requirements*

- g. Total length of Street Frontage
- h. Total number of trees required per Street Frontage
- i. Total number of trees provided per Street Frontage

*Parking Lot Tree Requirements*

- j. Total number of parking spaces
- k. Total number of trees required per parking spaces
- l. Total number of trees provided per parking spaces

**Sec. 4-10-251. Landscape Point System:**

All submitted landscape and irrigation plans as required under Section 4-10-250 must achieve a score of at least 20 points in order to be approved. Points are awarded for the following items:

- 1) 75% of all plant materials are water efficient as listed within the Recommended Plant List.....15 points
- 2) For all required trees, each tree size meets or exceeds 3 caliper.....2 points
- 3) All parking lot trees are planted in a Parking Lot Island greater than 64 square feet per tree.....5 points
- 4) For all areas 4 feet or less in any dimension, Non-Living Landscape Materials with a permeable weed barrier are use.....2 points
- 5) Preservation of each existing healthy tree 2 caliper inches or greater.....5 points
- 6) Subsurface irrigation is used for all Turf Grass .....10 points
- 7) Drip irrigation systems are used within all planting beds.....5 points
- 8) Landscape plan designed and sealed by a registered landscape architect.....2 points
- 9) Permeable weed barrier installed in all planting beds.....2 points
- 10) Landscaped area provided exceeds requirement by an additional 10 percent.....2 points
- 11) Installation of each additional parking lot tree above the minimum requirement....2 points
- 12) Root barriers are used to prevent Hardscape damage as trees grow.....5 points
- 13) More than 50% of Total Required Landscaped Area is Blue grass or other cool season Turf Grass. This does not include tall turf-type fescue grass varieties. —5 points
- 14) Planting of each variety of tree not listed on the Recommended Plant List.....-2 points

**Sec. 4-10-252. Installation Standards:**

All requirements of this Division shall be complete prior to the receipt of a certificate of occupancy or final approval of a parking lot permit. If weather conditions prohibit the installation of landscaping, the Building Official may issue a temporary certificate of occupancy. Such issuance shall be contingent upon the property owner or Developer filing of record in the deed records of the county where the site is located an instrument with associated Landscape Plans stating that the required Landscaping shall be installed within six (6) months of the issuance of the temporary certificate of occupancy.

Failure to timely install landscaping in accordance with the plan shall cause revocation of the temporary certificate of occupancy.

**Sec. 4-10-253. Exemptions:**

- 1) Landscaping shall not be required for a temporary use which will be in operation for a period of 180 days or less.
- 2) In cases where the desired location for landscaping for the required ten percent (10%) of Building Footprint is not within the front setback, the Planning Director or designee may provide written approval for alternative landscape locations.
- 3) In cases where the desired location for required street front trees conflict with access to the lot, the Planning Director or designee may provide written approval for alternative

placement. In no instance shall an alternate proposal result in a net reduction of the tree requirement as measured in total tree caliper inches.

- 4) Where it has been determined that site constraints exist which render conformance of a particular site to the landscape requirements impracticable, the Planning Director or designee may provide written approval for an alternate proposal, which provides for landscaping as intended by this Division, yet takes into account the constraints unique to the property in question. In determining the practicability and acceptability of the alternate proposal, the Planning Director or designee shall consider the following factors:
  - a. The configuration of the lot or tract in question;
  - b. The square footage of the property in question;
  - c. The square footage of the property being developed;
  - d. The zoning district of the property in question;
  - e. The zoning districts and landscaping on adjacent property;
  - f. The square footage of property abutting a roadway, compared with the square footage of the entire property;
  - g. The topography and soil on the property in question;
  - h. Alternate proposals of similarly situated properties; and/or
  - i. Other factors or materials relevant to the circumstances of the site in question.

An appeal of the Planning Director or designee's decision may be made to the Zoning Board of Adjustment in accordance with the requirements and procedures in Article II, Division 2 of this Chapter.

**Sec. 4-10-254. Maintenance Standards:**

The property owner shall maintain all Living and Non-Living Landscape Materials. Living Landscape Materials shall be kept in healthy and growing conditions so as to present a neat and orderly appearance, free from Excess Vegetation and Trash. Non-Living Landscape Materials shall be kept in a neat and orderly appearance, free from Excess Vegetation and Trash. Regular and normal maintenance of landscaping includes weeding, fertilizing, pruning, mowing, irrigating, and removal of trash, debris, and graffiti from Non-Living Landscape elements. It shall also be the responsibility of the property owner to maintain any landscaping in the right-of-way in accordance with Section 4-6-183.

Landscaping which dies shall be replaced by the owner no later than sixty (60) days after notification from the Building Official, with another living plant that is comparable to the existing plant or plant material specified in the approved landscape plan. The Building Official may extend this time period due to weather or other events outside of the reasonable control of the property owner.

**Sec. 4-10-255. Violation—Penalty.**

- (a) The penalty for violation of these regulations shall be in accordance with the general penalty provisions contained in Section 1-1-5 of this Code of Ordinances. Each day any violation or noncompliance continues shall constitute a separate and distinct offense.

(b) The City of Amarillo is specifically authorized to enforce this ordinance by appropriate civil action and this remedy is cumulative to the penal fine provided for above.

**Sec, 4-10-256—4-10-265. Reserved.**

**Sec. 4-10-1003. Plant List**

- A) DISCLAIMER:** Plant lists contained in the City of Amarillo Landscape Ordinance are not a guarantee of plant survival. The designer, landscape contractor, or property owner should ensure the plant material is appropriate for the site by examining soil types, microclimates, shade patterns, limitation of irrigation systems, as well as other factors affected by each site.
- B) Amendment:** The Planning Director or designee is authorized to revise this Appendix as new types of plants are developed, weather changes, heightened conservation needs, or relevant factors may warrant.

**PERENNIALS**

**Ajaga** (*Ajuga reptans*): Hardiness Zone 4-10, perennial, moderate water, groundcover, 4-9 in tall, 6-18 in spread, full/part sun & shade *mature plants may cover up to 2 sq ft per plant*

**Barrenwort** (*Epimedium*): Hardiness Zone 4-8, perennial, thrives in dry shade, 6-18 in tall, 1-2 ft spread, shade *mature plants may cover up to 3 sq ft per plant*

**Beardtounge** (*Penstemon Riding Hood Hot Pink*): Hardiness Zone 5-8, perennial, grows best in dry average soil, 18-24 in tall, 18 in spread, full sun *mature plants may cover up to 2 sq ft per plant*

**Black-eyed Susan** (*Rudbeckia hirta*): Hardiness Zone 3-9, perennial, low water usage, soil pH of 5.5 to 7.7, 2-10 ft tall, 1-3 ft spread, easy to grow, full sun *mature plants may cover up to 7 sq ft per plant*

**Blanket Flower** (*Gaillardia x grandiflora*): Hardiness Zone 3-11, perennial, drought tolerant, well-drained soil, 1-3 ft tall, ½-2 ft spread, full sun *mature plants may cover up to 3 sq ft per plant*

**Blue Fortune Hyssop** (*Agastache*): Hardiness Zone 5-10, perennial, low water, well-drained soil, 3 ft tall, 2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Blue Mist Flower** (*Eupatorium*): Hardiness Zone 6-9, perennial, drought/heat tolerant, well-drained soil, 1-3 ft tall, 2-3 ft spread, full/part sun *mature plants may cover up to 7 sq ft per plant*

**Blue Star** (*Amsonia blue ice*): Hardiness Zone 5-8, annual/perennial, drought tolerant, moderate watering, 1-2 ft tall, 2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Blue Woolly Speedwell** (*Veronica pectinata*): Hardiness Zone 4-7, perennial groundcover, drought tolerant, average soil, less than 6 in tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Butterfly Bush** (*Buddleia davidii*): Hardiness Zone 5-9, perennial, moderate watering, 3-6 ft tall, 4 ft spread, full sun *mature plants may cover up to 12 sq ft per plant*

**Butterfly Weed** (*Asclepias tuberosa*): Hardiness Zone 3-9, perennial, drought tolerant, 2-4 ft tall, 2-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Catmint** (*Nepeta cataria*): Hardiness Zone 3-9, perennial, low water usage, average, well-drained soil, 4-36 in tall, 1-2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Cheddar Pink** (*Dianthus*): Hardiness Zone 3-9, perennial, low watering, 6-12 in tall, 6-12 in spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Circus Coralbells** (*Heuchera*): Hardiness Zone 4-9, perennial, moderate watering, well-drained soil, 1-2 ft tall, 1-2 ft spread, shade/part shade *mature plants may cover up to 3 sq ft per plant*

**Coral Canyon Twinspur** (*Diascia integerrima*): Hardiness Zone 5-9, perennial, moderate watering, 12-15 in tall, 15-18 in spread, full/part sun *mature plants may cover up to 2 sq ft per plant*

**Daylily** (*Hemerocallis*): Hardiness Zone 3-10, perennial, low water, average soil, 1-3 ft tall, 1-2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Dazzleberry** (*Sedum dazzelberry*): Hardiness Zone 4-9, drought tolerant, average soil, 6-8 in tall, 18 in spread, full sun *mature plants may cover up to 2 sq ft per plant*

**Desert Marigold** (*Baileya multiradiata*): Hardiness Zone 6-9, annual/perennial, low water, well-drained soil, 1 ft tall, 1 ft spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Desert Purple Sage** (*Salvia dorrii*): Hardiness zone 5-9, perennial, low/medium water, well-drained alkaline soil, 1-3 ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Diamonds are Forever** (*Hosta*): Hardiness Zone 4-9, perennial, moderate watering, 8-12 in tall, 1-2 ft spread, shade/part shade *mature plants may cover up to 3 sq ft per plant*

**European Pasque Flower** (*Pulsatilla vulgaris*): Hardiness Zone 5-8, perennial, low water, well-drained sandy loam soil, 12-15 in tall, full/part sun *mature plants may cover up to 1 sq ft per plant*

**Fire Alarm Coralbells** (*Heuchera*): Hardiness Zone 4-9, perennial, drought & heat tolerant, well-drained soil, 1 ft tall, 2 ft spread, shade/part shade *mature plants may cover up to 3 sq ft per plant*

**Four-never Daisy** (Tetraneuris): Hardiness Zone 5-8, perennial, drought tolerant, 10-14 in tall, 12-18 in spread, full/part sun *mature plants may cover up to 2 sq ft per plant*

**Garden Phlox** (Phlox): Hardiness Zone 4-8, perennial, moderate watering, moderately fertile, 3-6 in tall, 1 ft spread, full/part sun *mature plants may cover up to 1 sq ft per plant*

**Grassleaf Mat Daisy** (Hirpicium armerioides): Hardiness Zone 4-7, perennial, low water, 3-4 in tall, 1-2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Indian Paintbrush** (Castilleja Mutis): Hardiness Zone 4-7, perennial, uses other plants as hosts, well-drained soil, 1 ft tall, 1 ft spread, full/part sun *mature plants may cover up to 1 sq ft per plant*

**Lambs Ear** (Stachys byzantina): Hardiness Zone 5-8, perennial, drought tolerant, low/moderate moisture, 1 ft tall, 2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Lavender** (Lavandula): Hardiness Zone 5-9, perennial, drought/heat/wind tolerant, well-drained soil, 1-3 ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Lenten Rose** (Helleborus Ballerina Ruffles): Hardiness Zone 4-9, winter/early spring blooming, perennials, moderate watering, 1-2 ft tall, 2 ft spread, shade/part shade *mature plants may cover up to 3 sq ft per plant*

**Maximillian Sunflower** (Helianthus): Hardiness zone 4-9, perennial, low/medium water, well-drained soil, 6 ft tall, 3 ft spread, full/part sun *mature plants may cover up to 7 sq ft per plant*

**May night salvia** (Salvia): Hardiness Zone 5-9, perennial, low/medium watering, well-drained soil, 1-3 ft tall, 1-3 ft spread, full/part sun *mature plants may cover up to 7 sq ft per plant*

**Monch Aster** (Frikartii aster): Hardiness Zone 5-8, perennial, dry to medium soil moisture, unknown soil type, 1-3 ft tall, 1 ft spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Mongolian Bells** (Clematis integrifolia): Hardiness Zone 3-9, perennial, low water, loam soil, 1 ft tall, 1-2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Pincushion flower** (Scabiosa): Hardiness Zone 3-11, perennial, drought tolerant, well-drained alkaline soil, 10-36 in tall, 9-24 in spread, full sun *mature plants may cover up to 3 sq ft per plant*

**Pine Leaf Penstemon** (Penstemon pinifolius Compactum): Hardiness Zone 3-9, low water usage, well-drained soil, 1-6 ft tall, 1-2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Poppy Mallow** (Callirhoe involucrate): Hardiness Zone 4-8, perennial, drought tolerant, average soil, up to 3 ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Prairie Jewel** (*Penstemon grandiflorus*): Hardiness Zone 3-9, perennial, drought tolerant, low water, dry average soil, 1 ft tall, 1 ft spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Purple Coneflower** (*Echinacea purpurea*): Hardiness Zone 3-8, perennial, drought tolerant, well-drained soil, 3-6ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Red Hot Poker** (*Kniphofia uvaria*): Hardiness Zone 5-9, perennial, drought tolerant, humus-rich well-drained soil, 3-5 ft tall, 1-2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Red Hyssop** (*Agastache*): Hardiness Zone 4-11, perennial, low water, well-drained soil, 3-6 ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Red Valerian** (*Centranthus ruber*): Hardiness Zone 5-8, perennial, drought tolerant, prefers alkaline soils, 1-3 ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Red Yucca** (*Hesperaloe parviflora*): Hardiness Zone 6-11, thornless perennial, low water, drought tolerant, well-drained soil, 1-3 ft tall, 3-6 ft spread, full sun *mature plants may cover up to 28 sq ft per plant*

**Russian Sage** (*Perovskia*): Hardiness Zone 4-9, perennial, drought tolerant, well-drained soil, 3-5 ft tall, 3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Silver Blade Evening Primrose** (*Oenothera macrocarpa*): Hardiness Zone 4-9, perennial, drought tolerant, low water, loamy soil, 4 in tall, 1 ft spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Smoky Hills Prairie Skullcap** (*Scutellaria resinosa*): Hardiness Zone 6-9, perennial, drought tolerant, low water, average soil, 8-12 in tall, 1 ft spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Soapwort** (*Saponaria officinalis*): Hardiness Zone 3-9, perennial groundcover, drought tolerant, alkaline soil, 3-24 in tall, 6-30 in spread, full/part sun *mature plants may cover up to 5 sq ft per plant*

**St. John's Wort** (*Hypericum perforatum*): Hardiness Zone 5-9, shrub, low/medium water, most any soil type, 1-3 ft tall, 1-3 ft spread, full/part sun *mature plants may cover up to 7 sq ft per plant*

**Stonecrop** (*Sedum Autumn Joy*): Hardiness Zone 3-11, autumn/winter blooming, perennial, moderate water usage, moderately fertile, 1-3 ft tall, 1-3 ft spread, full/part sun *mature plants may cover up to 7 sq ft per plant*

**Sulfur Buckwheat** (*Eriogonum umbellatum*): Hardiness Zone 3-8, low water, well-drained soil, 1 ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Sundrops** (*Oenothera macrocarpa*): Hardiness Zone 3-8, perennial, spread easily and may need control, drought tolerant, low water, 1-3 ft tall, 1-2 ft spread, full sun *mature plants may cover up to 3 sq ft per plant*

**Texas Betony** (*Stachys coccinea*): Hardiness Zone 6-9, perennial, water 2-3 times weekly until established, soil type unknown, 1-3 ft tall, 1-2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Tickseed** (*Coreopsis*): Hardiness Zone 4-9, perennial, drought-tolerant, most soil types, 10-18 in tall, 1-2 ft spread, full sun *mature plants may cover up to 3 sq ft per plant*

**West Texas Mist Flower** (*Conoclinium Greggii*): Hardiness Zone 6-9, perennial, low water, average soil, 18-24 in tall, 15-20 in spread, full/part sun *mature plants may cover up to 2 sq ft per plant*

**Whirling Butterflies** (*Gaura lindheimeri*): Hardiness Zone 5-9, perennial, heat & drought tolerant, sandy/loam soil, 1-2 ft tall, 1 ft spread, full/part sun, self-sows freely *mature plants may cover up to 1 sq ft per plant*

**White Jupiters Beard** (*Centranthus ruber*): Hardiness Zone 5-8, perennial, drought tolerant, low watering, alkaline soil, 1-3 ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Wine Cups** (*Callirhoe involucrate*): Hardiness Zone 3-9, perennial groundcover, drought tolerant, loamy soil, 6 in tall, 30 in spread, full/part sun *mature plants may cover up to 5 sq ft per plant*

**Yarrow** (*Achillea millefolium*): Hardiness Zone 3-9, perennial, drought tolerant, well-drained soil, 1-3 ft tall, 1-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Yellow Columbine** (*Aquilegia flavescens*): Hardiness Zone 3-9, perennial, medium moisture, well-drained soil, 1-2 ft tall, 2 ft spread, shade/part shade *mature plants may cover up to 3 sq ft per plant*

## GROUNDCOVER

**Atlas Daisy** (*Anacyclus depressus*): Hardiness Zone 4-8, perennial, April & May flowering, low water, drought tolerant, 2-4 in tall, 8-12 in spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Bearberry Cotoneaster** (*Cotoneaster dammeri*): Hardiness Zone 5-7, shrub, low water usage, most soil types, 6-12 in tall, 3-6 ft spread, full/part sun *mature plants may cover up to 28 sq ft per plant*

**Blue Spruce Sedum** (*Sedum reflexum*): Hardiness Zone 5-10, perennial groundcover, low water, average soil type, 6 in tall, 1 ft spread, full/part sun *mature plants may cover up to 1 sq ft per plant*

**Candytuft** (*Iberis sempervirens*): Hardiness Zone 4-9, perennial, low water, drought tolerant, 8-10 in tall, 1-2 ft spread, full sun *mature plants may cover up to 3 sq ft per plant*

**Colorado Gold Gazania** (*Gazania linearis*): Hardiness Zone 4-8, perennial, drought tolerant, low water, loamy soil, 3 in tall, 10 in spread, full/part sun *mature plants may cover up to 0.5 sq ft per plant*

**Creeping Liriope** (*Liriope spicatum*): Hardiness Zone 6-10, perennial, low/moderate water, ground cover, 6-12 in tall, 1-3 ft spread, part/full shade *mature plants may cover up to 7 sq ft per plant*

**Creeping Thyme** (*Thymus praecox*): Hardiness Zone 5-10, low water, well-drained soil, 2-10 in tall, 18 in spread, full/part sun *mature plants may cover up to 2 sq ft per plant*

**Hens & Chicks** (*Sempervivium*): Hardiness Zone 3-11, perennial, low water usage, soil type unknown, 6-12 in tall, 6-12 in spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Persian Stonecress** (*Aethionema schistosum*): Hardiness Zone 4-8, Perennial, low water, drought/heat tolerant, 6-8 in tall, 1-2 ft spread, full sun *mature plants may cover up to 3 sq ft per plant*

**Pink Hardy Ice Plant** (*Delosperma cooperi*): Hardiness Zone 5-10, perennial groundcover, low water, sandy loam well-drained areas, 4-8 in tall, 1-2 ft spread, full sun *mature plants may cover up to 3 sq ft per plant*

**Snow in Summer** (*Cerastium tomentosum*): Hardiness Zone 3-10, perennial, drought tolerant, low water, 4-10 in tall, 10-18 in spread, full sun *mature plants may cover up to 2 sq ft per plant*

**Turkish Speedwell** (*Veronica liwanensis*): Hardiness Zone 3-10, perennial groundcover, moderate watering, average soil type, 1 in tall, 18 in spread, full/part sun *mature plants may cover up to 2 sq ft per plant*

**Valley Lavender Plains Verbena** (*Verbena bipinnatifida*): Hardiness Zone 4-8, perennial groundcover, moderate watering, average soil type, 6 in tall, 18 in spread, full sun *mature plants may cover up to 2 sq ft per plant*

## ORNAMENTAL & TURF GRASSES

**Alkali Sacaton** (*Sporobolus airoides*): Hardiness Zone 6-9, alkaline heavy clay soils, drought tolerant, low water, 3-4 ft tall, 2-3 ft spread, full/part sun *mature plants may cover up to 7 sq ft per plant*

**Bermuda Grass** (*Cynodon dactylon*): Warm season grass, drought resistant, low water, full sun

**Blue Grama Grass** (*Bouteloua gracilis*): Hardiness Zone 3-9, warm season grass, most soil types, drought tolerant, low water, full sun

**Buffalo Grass** (*Buchloe dactyloides*): Warm season grass, drought resistant, low water, full sun

**Diamond Grass** (*Calamagrostis brachytricha*): Hardiness Zone 4-10, low water, average soil, 4 ft tall, 18-24 in spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Giant Sacaton** (*Sporobolus wrightii*): Hardiness Zone 5-8, Grass, drought tolerant, low water, average soil, 6 ft tall, 4 ft spread, full sun *mature plants may cover up to 12 sq ft per plant*

**Hamel Dwarf Fountain Grass** (*Pennisetum alopecuroides*): Hardiness Zone 5-8, moderate watering, 1-2 ft tall, 2 ft spread, full sun *mature plants may cover up to 3 sq ft per plant*

**Pink Flamingo Muhly Grass** (*Muhlenbergia pink flamingo*): Hardiness Zone 6-10, Grass, low water, heat loving, 4-5 ft tall, 1-2 ft spread, full sun *mature plants may cover up to 3 sq ft per plant*

**Prairie Dropseed** (*Sporobolus heterolepis*): Hardiness Zone 3-8, perennial, drought tolerant, well-drained soil, 2-3 ft tall, 2-3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Tara Compact Prairie Dropseed** (*Sporobolus heterolepis tara*): Hardiness Zone 4-8, Grass, drought tolerant, 2 ft tall, 1 ft spread, full sun *mature plants may cover up to 1 sq ft per plant*

**Zebra Grass** (*Miscanthus sinensis*): Hardiness Zone 4-9, perennial, drought tolerant, well-drained soil, 4-7 ft tall, 3-5 ft spread, full sun *mature plants may cover up to 20 sq ft per plant*

## SHRUBS & VINES

**Apache Plume** (*Fallugia paradoxa*): Hardiness Zone 6-8, shrub, drought tolerant, very low water, well-drained soil, 4-6 ft tall, 4-6 ft spread, full sun *mature plants may cover up to 28 sq ft per plant*

**Belinda's Dream Rose** (*Rosa belenda's dream*): Hardiness Zone 5-9, perennial, disease tolerant, 4 ft tall, 3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Bridal Wreath** (*Spiraea prunifolia*): Hardiness Zone 6-9, perennial, low water, well-drained soil, 4 ft tall, 4 ft spread, full sun *mature plants may cover up to 12 sq ft per plant*

**Broom Snakeweed** (*Gutierrezia sarothrae*): Hardiness Zone 6-8, shrub, drought tolerant, very low water, 1-2 ft tall, 12-18 in spread, full/part sun *mature plants may cover up to 2 sq ft per plant*

**Burningbush** (*Euonymus alatus*): Hardiness Zone 4-9, shrub, low water usage, most soil types, 5-7 ft tall, 5-7 ft spread, full/part sun *mature plants may cover up to 38 sq ft per plant*

**Chieftain Manzanita** (*Arctostaphylos*): Hardiness Zone 5-8, Shrub, drought tolerant, low water, well-drained loam soil, 2 ft tall, 6 ft spread, full/part sun *mature plants may cover up to 28 sq ft per plant*

**Fernbush** (*Chamaebatiaria millefolium*): Hardiness Zone 4-8, Shrub, drought tolerant, low water, average soil, 4 ft tall, 4 ft spread, full/part sun *mature plants may cover up to 12 sq ft per plant*

**Forsythia** (Forsythia): Hardiness Zone 5-8, shrub, low water usage, most soil types, 8-10 ft tall, 10-12 ft spread, full/part sun *mature plants may cover up to 113 sq ft per plant*

**Glossy Abelia** (Abelia): Hardiness Zone 6-9, shrub, low water, fertile, well-drained soil, 10 ft tall, 12 ft spread, full/part sun *mature plants may cover up to 113 sq ft per plant*

**Grandma's Yellow Rose** (Rosa chinensis): Hardiness Zone 6-9, perennial, medium water, 4-5 ft tall, 3 ft spread, full sun *mature plants may cover up to 7 sq ft per plant*

**Honeysuckle** (Lonicera): Hardiness Zone 4-9, perennial, medium water, needs staking, 10-15 ft tall, vine, full/part sun *mature plants may cover up to 78 sq ft per plant*

**Juniper** (Juniperus communis): Hardiness Zone 3-9, shrub, low/moderate water, drought tolerant, up to 20 ft spread, full/part sun *mature plants may cover up to 314 sq ft per plant*

**Knock Out® Rose** (Rosa radrazz): Hardiness Zone 5-9, perennial, moderate water, well-drained soil, 3-4 ft tall, 3-4 ft spread, full sun *mature plants may cover up to 12 sq ft per plant*

**Lilac** (Syringa): Hardiness Zone 4-9, low water, well-drained soil, up to 30 ft tall, up to 20 ft wide, full sun *mature plants may cover up to 314 sq ft per plant*

**Mock Orange** (Philadelphus): Hardiness Zone 4-7, extremely drought tolerant, well-drained soil, 3-15 ft tall, 6 ft spread, full/part sun *mature plants may cover up to 28 sq ft per plant*

**Pineapple Broom** (Cytisus kewensis): Hardiness Zone 5-8, drought tolerant, average soil, 1-2 ft tall, 4-6 ft spread, full/part sun *mature plants may cover up to 28 sq ft per plant*

**Powis Castle** (Artemisia): Hardiness Zone 4-9, perennial, low water usage, well-drained soil, 2-3 ft tall, 2-3 ft spread, evergreen, full/part sun *mature plants may cover up to 7 sq ft per plant*

**Rabbitbrush** (Chrysothamnus): Hardiness Zone 4-9, shrub, drought tolerant, low water, average well-drained soil, 2 ft tall, 2 ft spread, full/part sun *mature plants may cover up to 3 sq ft per plant*

**Trumpet Vine** (Campsis grandiflora): Hardiness Zone 4-9, grow with trellis or fence away from buildings and trees, requires regular pruning, low water, nearly any soil condition, 30-40 ft tall, 10 ft spread, full/part sun *mature plants may cover up to 78 sq ft per plant*

**Winter Gem Boxwood** (Buxus microphylla): Hardiness Zone 6-8, shrub, moderate water, 4 ft tall, 5 ft spread, full/part sun *mature plants may cover up to 20 sq ft per plant*

## ORNAMENTAL TREES

**Aristocrat Pear Tree** (Pyrus calleryana): Hardiness Zone 4-8, fast growth rate, moderate watering, heat resistant, grows in most soil types, 30ft tall, 30 ft spread, full sun

**Chinese Pistache** (Pistacia chinensis) (male only): Hardiness Zone 6-9, medium growth, various well-drained soils, withstands heat and drought, 25-35 ft tall, 25-35 ft spread, full sun

**Chitalpa** (*Chitalpa tashkentensis*): Hardiness Zone 6-9, fast growth rate, flowers throughout the summer months, drought/heat tolerant, 30 ft tall, 30 ft spread, full/part sun

**Desert Willow** (*Chilopsis linearis*): Hardiness Zone 6-9, medium growth, extremely drought tolerant, cannot grow in wet or heavy soil, 15-25 ft tall, 10 ft spread, full sun

**Gambel Oak** (*Quercus gambelii*): Hardiness Zone 3-9, moderate growth rate, spreads by underground stems, adapted to dry, rocky, alkaline sites, drought tolerant, 20-30 ft tall, 15 ft spread, full sun

**Nellie Stevens Holly** (*Ilex*): Hardiness Zone 6-9, moderate growth rate, well-drained slightly acidic soil, moderate water, 30 ft tall, 15 ft spread, full/part sun

**Netleaf Hackberry** (*Celtis Reticulata*): Hardiness Zone 5-8, medium growth rate, various soil types, heat/drought tolerant, 30 ft tall, 35 ft spread, full sun

**New Mexican Privet** (*Forestiera neomexicana*): Hardiness Zone 6-9, large shrub/small tree, extremely drought tolerant, average soil, 10-20 ft tall, 8-10 ft spread, full/part sun

**Red Hawthorn** (*Crataegus*): Hardiness Zone 4-8, medium growth rate, most soil types, 25-30 ft tall, 25 ft spread, full sun

**Texas Redbud** (*Ceris texensis*): Hardiness Zone 4-9, medium growth rate, low water, 20-30 ft tall, 30 ft spread, partial shade preferred in windy, dry areas

**Washington Hawthorn** (*Crataegus phaenopyrum*): Hardiness Zone 4-8, medium growth, colorful thorned tree, drought resistant, 25 ft tall, 15-25 ft spread, full sun

**Western Soapberry** (*Sapindus drummondii*): Hardiness Zone 6-9, medium growth, tolerates winds, drought, and compact soil conditions once established, low water, 25-30 ft tall, 25-40 ft spread, full/part sun

## SHADE & EVERGREEN TREES

**Austrian Pine** (*Pinus nigra*): Hardiness Zone 4-7, medium growth rate, evergreen, heat/drought tolerant, alkaline soil, 60 ft tall, 20-40 ft spread, full sun

**Bald Cypress** (*Taxodium distichum*): Hardiness Zone 5-10, medium growth rate, heat tolerant, acidic soil, medium water requirement, 50-70 ft tall, 20-30 ft spread, full/part sun

**Bur Oak** (*Quercus macrocarpa*): Hardiness Zone 3-8, slow growth rate, resistant to heat stress, long-lived tree, moderate water, 70-80 ft tall, 80 ft spread, full sun

**Cedar Elm** (*Ulmus crassifolia*): Hardiness Zone 6-9, medium growth, drought tolerant once established, various soil, 50-70 ft tall, 40-60 ft spread, full sun

**Colorado Blue Spruce** (*Picea pungens*): Hardiness Zone 2-7, slow/medium growth rate, tolerates drought, most soil types, 50-75 ft tall, 10-20 ft spread, full sun

**Eastern Red Cedar** (*Juniperus virginiana*): Hardiness Zone 2-9, medium growth, evergreen, tolerates heat, salt and other adverse soil conditions, 40-50 ft tall, 8-20 ft spread, full sun

**Goldenraintree** (*Koelreuteria paniculata*): Hardiness Zone 5-9, medium/fast growth, 30-40 ft tall, 35 ft spread, various soil conditions, full sun

**Hackberry** (*Celtis occidentalis*): Hardiness Zone 3-9, medium/fast growth, tolerates strong winds, low water, 40-60 ft tall, 40-60 ft spread, full sun

**Honeylocust** (*Gleditsia triacanthos*): Hardiness Zone 3-9, fast growth rate, withstands drought and poor soil conditions, 30-70 ft tall, 30-70 ft spread, full sun

**Kentucky Coffeetree** (*Gymnocladus dioica*): Hardiness Zone 3-8, slow/medium growth, drought tolerant, most soil types, 60-75 ft tall, 40-50 ft spread, full sun

**Lacebark Elm** (*Ulmus parvifolia*): Hardiness Zone 5-9, medium/fast growth, tolerates drought, very durable tree, 40-50 ft tall, 35-45 ft spread, full sun

**Mondell Pine** (*Pinus eldarica*): Hardiness Zone 6-9, fast growth, evergreen, drought tolerant, alkaline soil, 50 ft tall, 30 ft spread, full sun

**Pinyon Pine** (*Pinus cembroides*): Hardiness Zone 6-8, slow growth, evergreen, tolerates drought, needs well-drained soil, low water, 25-50 ft tall, 20-40 ft spread, full sun

**Rocky Mountain Juniper** (*Juniperus scopulorum*): Hardiness Zone 4-9, slow growth rate, tolerates drought, needs well drained soil, 30-40 ft tall, 10-15 ft spread, full sun

**Shumard Oak** (*Quercus shumardii*): Hardiness Zone 5-9, medium growth rate, drought tolerant, well-drained soil, 40-60 ft tall, 40-60 ft spread, full sun