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SIGNATURE LANDSCAPES DESIGN MANUAL

Addendum
**Organization of This Manual**

The *Landscape Code & Policy Manual* is organized into four units and a non-regulatory, supplemental *Signature Landscapes Design Manual*.

**Unit One - General Information** contains the objectives and definitions; information about the applicability of the Code; and plan, submittal and compliance requirements.

**Unit Two - Plan Requirements** for Signature Landscapes contains the Signature Landscapes framework and plan requirements pertinent to all development sites.

**Unit Three - Site Category Requirements** specifies the requisite site categories to be landscaped and the quantitative requirements for each.

**Unit Four - Appendices** contains plant lists, maps, planting details, formats, submittal forms, and affidavits.

The *Signature Landscapes Design Manual* consists of non-regulatory, supplemental descriptions, maps, graphic charts, plant community lists, design tools, and resource information.

**Document Layout**

This manual contains the Landscape Code ("Landscaping Standards") from Article 4, Part 3 of Chapter 7 – Planning, Development and Building. Landscape Code excerpts are identified by Code Section numbers and are printed in serif type. The landscape policies, procedures, standards, and related details for each issue or site category are designated by Policy numbers that correspond to Code Section numbers of the Landscape Code, and are printed in sans serif type.

**Introduction**

The development pressures of the last decade have had a marked effect on the livability of the City and the awareness of its citizens about the combined issues of growth, transportation impacts, open space preservation, and infrastructure needs. The rapid development of our lands, especially undisturbed areas, has increased the community's concern for the loss of our indigenous landscapes. The current challenge is to link our rapidly disappearing natural setting with the developing urban context; and to identify and implement such a vision for our community in its "built out" state.

Colorado Springs is situated in a semiarid area of the American West between the western edge of the Great Plains and the Front Range of the Rocky Mountains. Due to the changes in elevation within the City limits, which ranges from approximately 5,500 feet to 7,500 feet above sea level, this setting provides distinctive topographic features and rich ecological diversity. The widely varied local plant communities are indicators of that diversity.

In order to provide a framework for understanding the local natural environment and to facilitate landscape design that references and reinforces our regional character, this manual contains policies, procedures, standards, maps, explanatory graphics, and plant lists that are embodied by the term "Signature Landscapes". The manual supplements the Landscape Code and should serve as a catalyst for innovative approaches to landscape design.

It is the premise of the Signature Landscapes framework that landscape development consistent with the climatic and soil conditions of this region will be the most successful and sustainable. It follows that these landscapes will reflect the prevailing semiarid conditions and therefore the policies, with respect to required plan submittals, are consistent with the principles of Xeriscape.

The 1998 Landscape Code and Policy Manual revisions are responsive to community concerns that have been expressed in the Water Resources Plan for 2040, an ongoing public process. The community objectives of water conservation, landscape sustainability and the protection of regional character can be accomplished through preservation of landforms and indigenous plant communities; and through the development of landscapes that evoke the qualities of our regional character, and yet provide the benefits valued in urban settings.

The *Landscape Code & Policy Manual* contains the Landscape Code and all policies with regard to required landscaping of applicable public and private property, and public rights-of-way. It is one of several recent environmentally based regulations developed by the City. The principles and standards included are valid for all landscape design; however, this document does not apply to individual single or two-family residential lots. Additionally, a non-regulatory, supplemental *Signature Landscapes Design Manual* is enclosed that provides more detailed design resources.
UNIT ONE — GENERAL INFORMATION
UNIT ONE

GENERAL INFORMATION

INTENT AND PURPOSE

Chapter 7, Article 4, Section 301

The purpose of this Part is to establish requirements for the design, installation and maintenance of landscapes that contribute ecologically and aesthetically to the growth and economic prosperity of the City; that achieve healthy, attractive, and safe environments according to recognized water conservation principles; and that conserve, protect and promote the unique natural identity and environment of the City.

OBJECTIVES

Chapter 7, Article 4, Section 302

A. Water Conservation:
Conservate potable and nonpotable water resources through:
1. The use of Xeriscape principles;
2. The use of site-specific plant material matched to the soil type and microclimate;
3. The conservation of indigenous plant communities;
4. The promotion of landscapes that require minimal supplemental irrigation; and,
5. The establishment of minimum standards for the selection, installation and maintenance of landscape materials, and for site grading and irrigation systems.

B. Aesthetics:
Enhance the regional landscape character of the City through:
1. The incorporation of native and compatible introduced plants, plant communities and ecosystems into landscape design;
2. Encourage the incorporation of open space in ways that harmonize and enhance the natural and built environment;
3. Enhance the streetscapes along the City’s public rights-of-way with an emphasis on trees;
4. Define and separate vehicular and pedestrian traffic areas;
5. Screen the appearance of motor vehicle lots from public rights-of-way and adjacent properties;
6. Screen objectionable and higher intensity uses from lower intensity uses; and,
7. Enhance the appearance of structures.

C. Environmental Quality
Improve environmental quality through the beneficial effects of landscaping, which include:
1. Air purification, oxygen regeneration, wind reduction, groundwater recharge, stormwater detention, and permeable land surface maintenance.
2. Mitigation of the urban heat island effect through evapotranspiration and the creation of shade; and
3. The reduction of heat and glare through biological filtering.
5. Reduction of soil erosion caused by storm water runoff.
6. Reduction of air, water and noise pollution through the reduced mowing and fertilization requirements of limited turf areas.
7. Provision of ecological diversity and richness that furnishes habitat for species not otherwise found in urban environs.
8. Minimization of fire danger through improved design and maintenance.

D. Horticultural Sustainability
Design, install and maintain landscapes suited to local soil, climatic, and on-site conditions for improved plant growth and survivability.

E. Human Values
Make the City more attractive through the physical and psychological benefits of landscaping that softens the visual harshness of urban development; by stimulating pride in the City's natural heritage, and by protecting the public health, safety and general welfare.

F. Land Values and Investment
Safeguard and enhance the value of land and public and private investment through incorporation of landscaping into development; and retain and enhance the City's natural beauty, an important factor in attracting economic development.

G. Nuisance Species Control
Control certain exotic plant species that have a negative effect on public health or degrade native ecosystems.

H. Improved Design
Create an awareness of regional plant communities, soils, and practices that contribute to water and energy efficiency; and encourage innovative, long-range and cost-conscious approaches to landscape design.

I. Administration and Enforcement
Establish procedures for the administration of revised landscape regulations, and provide knowledgeable staff review and assistance. Provide efficient and timely review of plans and enforcement of requirements, and ensure fairness and due process.
DEFINITIONS

Chapter 7, Article 4, Section 303

American Society of Landscape Architects: A national membership organization formed to advance the professional practice of landscape architecture.

As-built plans: Revised plans reflecting the actual conditions of a landscape or irrigation system installation.

Bachelor or higher degree: A four-year degree or master or doctorate degree from an accredited college or university in the United States.

Berm: An earthen mound designed to provide visual interest on a site, screening of undesirable views, noise reduction, etc.

“Borrowed” native plant: A species that is indigenous to a regional native plant community, however, it does not occur naturally in that same community within the Colorado Springs City limits.

Canopy (also known as overstory): The upper vegetative cover of a tree or plant grouping.

Certified Irrigation Designer: A person who has completed the Certified Irrigation Designer Program of The Irrigation Association.

Compatible plant: A species with genetic or ornamental properties and physiographic requirements that closely resemble those properties and requirements of a plant in a specific regional native plant community or of a plant that is historically adapted to that community.

Critical root zone: The ground area around a tree trunk determined by a radius of one foot (1’) for each one inch (1") of trunk diameter.

Cultivated vegetation: Living plant cover that is fostered for horticultural purposes and is suited to the growing conditions of Colorado Springs.

Deciduous: A plant with foliage that is shed annually.

Double frontage lot (also known as through lot): A lot having frontage on two (2) parallel or approximately parallel streets.

Dripline: A vertical line extending from the tips of the outermost branches of a tree to the ground.

Ecosystem: A characteristic assemblage of plant and animal life within a specific physical environment, and all interactions among species, and between species and their environment.

Evapotranspiration (ET): A measure of water depletion from the soil due to evaporation from the soil surface and transpiration through plant foliage.

Evergreen: A plant with foliage that persists and remains green year-round.

Ground cover: Plants, other than turf grass, normally reaching an average maximum height of not more than twenty-four inches (24") at maturity.

High-water-use turf: Turfgrass that requires fifty to eighty percent (50% - 80%) of reference evapotranspiration to maintain optimum appearance; or turfgrass that has an exceptionally high water requirement to prevent dormancy, typically twenty-five inches (25") of supplemental irrigation during each annual growing season in Colorado Springs.

Historically adapted plant: A self-propagating species that is not indigenous to the regional native plant community it occupies, but was likely introduced by early settlers and is now so prevalent as to appear indigenous.

Hydrozone: A portion of a landscape area having plants with similar water needs that are either not irrigated or irrigated by a circuit or circuits with the same schedule.

Hydrozoning: The design practice of grouping plants by similar water requirements to maximize potential efficiency of irrigation.

Introduced plant: A plant that is not indigenous to Colorado Springs, but is used in landscaping due to its adaptable qualities. It is generally a nursery trade cultivar or variety, or a native to the region, but does not naturally occur in the City limits.

Irrigation Association: A non-profit, North American organization formed to improve the products and practices used to manage water resources and to help shape the business environment of the irrigation industry.

Irrigation plan: A two-dimensional plan drawn to scale that shows the layout of irrigation components, component specifications, and hydrozones. Layout of pipes may be depicted diagrammatically, but location of irrigation heads and irrigation schedules is specified.

Irrigation system: A permanent, artificial watering system designed to transport and distribute water to landscape plants.

Landscape buffer: Land area with landscape plantings and other components used to visibly separate one use from another or to shield or block noise, lights, or other nuisances.
Landscape Code: A Part of the Zoning Code, which is part of the City Code of Colorado Springs.

Landscape setback: A required landscape planting area on private property that is adjacent to a street right-of-way; and includes the parkway; or that is adjacent to a non-street boundary of a zone district.

Landscape grading plan: A plan drawn to scale that shows the designed landscape gradient and elevation using contour lines or numeric notation of elevations.

Landscape: Any combination of living plants, such as trees, shrubs, vines, ground covers, flowers or grass; natural features such as land and water forms, rock, stone, bark chips or shavings; and structural features, including but not limited to, fountains, reflecting pools, outdoor art work, screen walls, fences, or benches.

Landscape plan: A plan drawn to scale that shows the layout of all landscape components and their specifications for a development site.

Landscape Policy Manual: A document containing policies, procedures, standards, maps, and plant lists necessary to implement the Landscape Code of the City of Colorado Springs.

Licensed Architect: A person who is currently licensed by any state government of the United States to practice the profession of architecture.

Licensed Landscape Architect: A person who is currently licensed by any state government of the United States to practice the profession of landscape architecture.

Local native plant community: A plant community that is indigenous within the Colorado Springs City limits.

Low-water-use plants: Plants that require less than thirty percent (30%) of reference evapotranspiration to maintain optimum appearance.

Microclimate: The climate of a specific place within a given area.

Motor vehicle lot: An area where motor vehicles are parked or displayed, including parking lots, vehicular display lots, rental lots, depots, and stacking lanes, but not including parking garages.

Mulch: Nonliving organic and synthetic materials customarily used in landscape design to retard erosion and retain moisture, and that provide a protective covering around plants to reduce weed growth and to maintain even temperatures around plant roots.

Native plant: A species that is indigenous within the Colorado Springs City limits and naturally occurring in one or more plant communities.

Non-potable water: Water that has not been treated to make it safe for drinking.

Ornamental tree: A tree planted primarily for its decorative value, or for screening and that typically does not exceed a height of thirty feet (30') in Colorado Springs.

Parkway (also known as parking): That portion of the public street right-of-way typically located between the curb and private property line for which the adjacent property owner has a legal responsibility to maintain for the public good.

Plant community: A natural association of vegetation that is dominated by one or more prominent species, or a characteristic physical attribute.

Practical turf areas: A landscape design and management concept promoting turf only in those areas of the landscape that are functional, and the efficient management of supplemental irrigation required in those areas.

Rain sensor or rain shutoff device: A device connected to an irrigation controller that overrides scheduled irrigation when significant precipitation has been detected.

Reclaimed water: Treated, recycled water.

Reference evapotranspiration: The evapotranspiration of a broad expanse of well-watered, 4-to-6 inch tall cool-season grass.

Regional native plant community: Any plant community with a geographic distribution indigenous to all or part of the Front Range of the Southern Rocky Mountains.

Registered Professional Engineer: A person who is currently registered by any state government of the United States as a professional engineer.

Restrictive covenant: A limitation of the use of land usually set forth in the deed or other recorded instrument.

Screen: A method of visually shielding or obscuring one abutting or nearby structure or use from another by fencing, walls, densely planted vegetation, or berms.

**Semi-arid climate**: A climate characterized by ten to twenty inches (10" - 20") of annual precipitation.

**Shade tree**: A deciduous (or rarely, an evergreen) tree planted primarily for its high crown of foliage or overhead canopy. A major shade tree at maturity reaches a height of at least fifty feet (50').

**Shrub**: A self-supporting woody perennial plant of low to medium height characterized by multiple stems and branches continuous from the base, usually not more than twelve feet (12') in height at its maturity. It may be evergreen or deciduous.

**Signature landscapes**: Landscape development consistent with local climatic and soil conditions and that evokes the aesthetic and ecological qualities of regional native plant communities.

**Signature plant**: Vegetation designated in Appendix B of the Landscape Policy Manual as native, "borrowed" native, historically adapted, or compatible in a specific regional native plant community of Colorado Springs.

**Significant vegetation**: A plant or plants recommended for retention by the City Forester because of size, indigenous character, species type(s), unique environmental benefits, or because it is difficult to provide comparable replacement vegetation.

**Site plan**: A two-dimensional representation, drawn to scale, of the total area of a development project, including building footprints, roadways, and parking areas.

**Soil amendment**: Organic and inorganic materials added to soil to improve texture, nutrients, moisture holding capacity, and infiltration rates.

**Street right-of-way**: The area of land designated for streets, sidewalks, utilities, and public use.

**Street tree**: A tree planted in the street right-of-way (parkway) between the curb or edge of road and the adjoining property line to provide shade, spatial definition, and human scale, and to enhance the street environment.

**Streetscape**: The landscape treatment of a street edge, including vegetation, sidewalks, streetlights, fencing, signs, utilities, etc.

**Sustainability, horticultural**: A characteristic of landscapes adapted to local soil and climatic conditions that results in the healthy growth and longevity of installed plant materials.

**Tree**: A large, woody plant having one or several self-supporting stems or trunks and numerous branches. It may be classified as deciduous or evergreen.

**Turf/Turfgrass**: Continuous plant coverage consisting of hybridized grasses that, when regularly mowed, form a dense growth of leaf blades and roots.

**Understory**: Assemblages of natural low-level woody, herbaceous, and ground cover plant species that exist in the area below the canopy of trees.

**Vegetation**: Plants in general or the sum total of plant life in an area.

**Water harvesting**: Design for capturing and using water runoff from natural or artificial, on-site precipitation.

**Xeriscape**: A water efficient landscape adapted to the local environment.

**Xeriscape principles**: Methods of professional landscaping that include: planning and design, soil analysis, efficient irrigation, appropriate plant selection, practical turf areas, use of mulches, and proper maintenance.

Other definitions are provided in Section 7.2.201, "Definitions", in the Zoning Code.

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**LANDSCAPE POLICY MANUAL**

**Chapter 7, Article 4, Section 304**

City Planning is hereby authorized to adopt a Landscape Policy Manual containing policies, procedures, standards, maps, plant lists and other provisions necessary to implement the provisions of Section 7.5.11 (Administrative Relief), Section 7.5.1206 (Non-Conforming Landscaping and Parking), and this Section 7.4.301 through 324 (Landscaping Standards), all of Articles 2, 3, 4 and 5 of Chapter 7 (the Zoning Code) and Chapter 4, Article 4, Section 301 through 306 (Street Tree Fee, Fund, Planting Requirements) of the City Code.
APPLICATION OF LANDSCAPING REQUIREMENTS

Chapter 7, Article 4, Section 305

Except as otherwise provided by Subsection B of this section, the landscaping requirements of this Part shall apply to all land public, institutional and private located within the City of Colorado Springs. These requirements shall specifically apply to:

1. All new construction;
2. All currently approved development plans that are changed by a major amendment subsequent to the effective date of this ordinance;
3. All construction projects that cumulatively increase the gross floor area of the lot by fifty percent (50%) or more subsequent to March 11, 1986;
4. Any relocation consisting of fifty percent (50%) or more of the existing gross floor area;
5. Any change of use that results in the conversion of single or two-family residential use to multi-family or nonresidential use;
6. The conversion of vacant land to nonresidential use that does not involve the construction of a structure; and,
7. The total redevelopment (demolition and new construction) of a lot.
8. All government and utility service property zoned PF (Public Facility).

A. Exempt Property:
None of the landscaping requirements of this Section, except as specified in Subsection C of this section, special requirements, shall apply to:

1. An individual detached single-family or two-family residential structure on its own lot;
2. Any valid, unexpired development plan approved prior to the effective date of this ordinance, for which there is neither a change of use nor a major amendment to the plan;
3. Any temporary event approved in accordance with the City Code;
4. A site on which cumulative increases to the gross floor area of an existing structure constitute less than fifty percent (50%) of the existing floor area as of March 11, 1986;

5. Bonafide agricultural activities;
6. Currently approved development plans that are changed by a minor amendment subsequent to the effective date of this ordinance;
8. Medians in arterial street rights-of-way approved by the Park and Recreation Advisory Board; and,
9. The Old Colorado City District, which is regulated by referenced Redevelopment Guidelines in the Westside Plan, adopted by the City Council on January 22, 1980. The boundaries of this special landscaping district are described by a map in an appendix titled "Old Colorado City District". These documents are on file in City Planning.

10. Utility easements.

B. Special Requirements
The following requirements shall apply to single-family and two-family residential projects on a subdivision-wide basis:

1. Restrictive Covenants Requiring Turfgrass Prohibited

The water demand of traditionally used turfgrass results in an extraordinary burden on the City’s water resources. Therefore, any restrictive covenant that becomes effective on or after November 1, 1998, and that requires cultivated vegetation on property maintained by an individual property owner, shall not specify that any portion of said vegetation must be turfgrass. This provision shall not restrict the individual and voluntary use of turfgrass on a detached single-family or two-family residential lot.

2. Double Frontage Lot Streetscapes: Double frontage (through) lots are regulated by the Subdivision Code. The required setbacks and landscaping are prescribed in this Part and the Landscape Policy Manual. Where double frontage lots are approved as part of a development plan or plat, installation of the required streetscape, including irrigation system, plant material, fence and sidewalk shall be the responsibility of the developer. Maintenance shall be the responsibility of a homeowners’ association of a special improvement maintenance district (SIMD) and shall be so noted in the recorded covenants and on the subdivision plat(s). Establishment of a landscape easement with individual lot owner responsibility shall not be acceptable.
3. Common Areas

Landsaped common areas, such as entrances and non-arterial medians in single-family and/or two-family residential projects shall be the responsibility of an SMD or homeowners association, and shall be so noted in the recorded covenants and on the subdivision plat(s).

LANDSCAPE ADMINISTRATIVE RELIEF

Chapter 7, Article 4, Section 306

The purpose of this Section is to provide for flexibility in the application of landscaping regulations when a standard is inapplicable or inappropriate to a specific use or design proposal, or when a minor problem arises with the strict application of development standards. Some degree of administrative relief may be anticipated in those districts noted in the Landscape Policy Manual. Should findings justify the granting of administrative relief, the findings and relief shall be consistent with Administrative Relief, of this Zoning Code, and with the policies and procedures of the Landscape Policy Manual.

Policy 306.

1. The written request for Administrative Relief in conjunction with a development plan, minor development plan, or building permit site plan shall be submitted to the City planner reviewing the plan.

2. City Planning shall not render a decision on Administrative Relief. City Planning shall limit their review to compliance with the Zoning Code requirements.

3. The designated planner shall render a decision on an Administrative Relief request within three (3) days after receipt of the request and complete information.

4. City Planning recognizes that the specific landscape requirements in the Zoning Code and Landscape Policy Manual cannot and do not anticipate all possible landscape situations.

5. Compliance with the requirements should not be forced into a site design. For both visual effect and ease of maintenance, relatively few and larger landscape spaces integrated with the other elements of the site design are generally encouraged. Relatively numerous and smaller landscape spaces not integrated with the other elements of the site design are generally discouraged.

6. The granting of Administrative Relief should not always mean that a requirement is reduced without compensation. For example, the granting of a reduced setback depth should be compensated by the planting of additional shrubs or other plants.

7. A decision regarding Administrative Relief may be appealed to the Hearing Officer in conformance with the requirements of 7.5.907 of the Zoning Code.

8. Some degree of administrative relief may be anticipated in the following districts:

   Central Business District:

   The Central Business District shall be subject to the landscape requirements of the Zoning Code and Landscape Policy Manual. However, standards or requirements that may be inapplicable or inappropriate may be reviewed by the City for flexibility in the application of administrative relief.

   Hillside Area Overlay District:

   Section 7.3.504 of the Zoning Code contains additional objectives and requirements that are specific to certain areas of the City that are characterized by significant natural features, which include ridgelines, bluffs, rock outcroppings, vegetation, natural drainage ways, wildlife habitat, geologic conditions and slopes that contribute to the attractiveness of the community. Administrative relief may be necessary to provide for flexibility and compliance that is consistent with the intent of the Code.

   Historic Preservation Overlay District:

   The City recognizes the value of historic resources both in terms of structures and cultural landscapes that reflect a historic period, the work of a notable designer or a site of historic importance. Administrative relief may be granted for individual projects in historic districts and in the redevelopment of historically or culturally significant projects. Administrative relief shall be granted consistent with Section 7.3.505. Historic Preservation Overlay, of the Zoning Code.

9. An example of requests for Administrative Relief is provided in Appendix L.
ALTERNATIVE COMPLIANCE

Chapter 7, Article 4, Section 307

The regulations, standards and policies contained in the Landscape Code and Policy Manual are to facilitate development that is consistent with the City's landscape objectives. The requirements are intended to foster creative design, but not to invoke an inordinate hardship where compliance as outlined in the Landscape Code and Policy Manual is either impractical or impossible. The procedure and criteria for Alternative Compliance are established in the Landscape Policy Manual.

Policy 307

1. Alternative compliance is a procedure that enables a development to occur where the intent of the Code is met through an alternative design. It is not a waiver of regulations, rather it permits a site-specific plan that results in a better design, while meeting the intent of the Landscape Code.

2. A pre-submittal conference is required to determine the preliminary response from City Planning. Should the development/site plan include a request for approval of Alternative Compliance, sufficient explanation and justification, both written and/or graphic shall accompany the submittal.

3. An application for Alternative Compliance, as a comprehensive form of Administrative Relief, may be submitted provided the proposal meets one or more of the following criteria:
   
   A. The site conditions, including but not limited to topography, soils, natural water features, significant vegetation, wildlife habitat, or issues of environmental quality may be better addressed and the intent of the Code better realized through the alternative proposal.
   
   B. The landscape areas of the project site are unusually shaped so as to result in space limitations that are deleterious to the health or growth of plants, safety and/or visibility, or for which alternative construction and installation techniques must be used.
   
   C. The neighborhood context, historical setting or vegetative quality of the site will be better served by an alternative design.
   
   D. The alternative compliance proposal meets the Objectives of Zoning Code 7.4.302 in a manner equal to or better than compliance with the regulations contained in the Code and Policy Manual.

4. Alternative Compliance shall apply to the specific project for which Administrative Relief is requested and does not establish a precedent for assured approval of other requests.

REQUIRED PLAN SUBMITTALS AND REVIEW

Chapter 7, Article 4, Section 308

A. Required Plans

When landscape, landscape grading, and irrigation plans are required as part of the development application, the plans shall contain the information listed below, and any additional information as determined by City Planning, Hearing Officer, City Planning Commission, or City Council to enable them to determine whether the plans should be approved.

B. Application of Requirements

Documents shall clearly and completely describe the design and any techniques and features provided to implement the design and Landscape Code requirements.

Where a calculation of a requirement results in a fractional number (such as 14.2 required trees), the requirement shall be considered the next greatest whole number (such as 15 required trees).

Where two (2) different landscape requirements apply (for example, a buffer and a landscaped setback), the greater requirement shall be met (for example, the buffer).

C. Conflicts

If any provision of this Part conflicts with any other ordinance or regulation, the more stringent requirement shall govern to the extent of the conflict.

D. Submittal and Review Process

Landscape plans reviewed as part of the development plan or minor development plan process shall meet review criteria contained in Section 7.5.03 and 504 of the Zoning Code.

E. Submittal Requirements

Submittal requirements listed below and described in detail in this Part, include the following:

1. Final Landscape Plan
2. Landscape Grading Plan
3. Irrigation Plan
4. Inspection Affidavit
E. Additional Requirements
Additional submittal requirements are listed below, where applicable:

1. Preliminary Landscape Plan (without Irrigation Plan)
2. Irrigation Management Plan
3. Application for Administrative Relief
4. Application for Alternative Compliance
5. Significant vegetation retention plan (voluntary for landscape credit)
6. Acceptable financial assurance of installation for double frontage lot streetscape or common area, or for development plan approval for a change of use without construction of a structure.
7. Financial assurance of maintenance

G. Plan Approval as a Prerequisite for Building Permit or Change of Use
All landscape submittal requirements shall be met and plans approved by the City’s reviewing authorities prior to issuance of a building permit, or prior to final development plan approval for the conversion of vacant land to nonresidential use that does not involve the construction of a structure.

H. Review Authorities
The development/site plan submittal and review process is administered by City Planning. Landscape Plan requirements may be subject to review by City Council, the City Planning Commission and the Hearing Officer in compliance with Article 4, Part 2 of the Zoning Code. All tree plantings in the public right-of-way are subject to review and permit by the City Forester. Landscape plans may be subject to review by City Forestry, Parks and Recreation, Engineering, Police, Fire, Transportation, and Utilities.

I. Compliance with Policies and Standards
In addition to compliance with this Landscape Code, all required plans shall comply with the policies and standards of the Landscape Policy Manual.

Policy 308.
Figure 1 outlines the Submittal Sequence of Required Plans.
Figure 2 indicates the Professional Qualifications Needed to Prepare Required Plans.

Figure 1

<table>
<thead>
<tr>
<th>Permit or Approval:</th>
<th>Requirement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Development Plan, Minor Development Plan or Site Plan</td>
<td>Preliminary Landscape Plan or Final Landscape Plan</td>
</tr>
<tr>
<td></td>
<td>Landscape Grading Plan* or Grading and Erosion Control Plan</td>
</tr>
<tr>
<td></td>
<td>Preliminary Drainage Report</td>
</tr>
<tr>
<td>2. Development Plan for change of use of vacant land without building construction</td>
<td>Final Landscape Plan</td>
</tr>
<tr>
<td></td>
<td>Landscape Grading Plan* or Grading and Erosion Control Plan</td>
</tr>
<tr>
<td></td>
<td>Irrigation Plan*</td>
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<td></td>
<td>Drainage Report</td>
</tr>
<tr>
<td>3. Building Permit</td>
<td>Final Landscape Plan</td>
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<td></td>
<td>Grading and Erosion Control Plan</td>
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<td>Irrigation Plan*</td>
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<tr>
<td>4. Certificate of Occupancy</td>
<td>Inspection Affidavits* or Financial Assurance for Maintenance*</td>
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</table>

Note:
1. Landscape Grading Plan must substantially comply with the Preliminary Drainage Report.
2. At Building Permit, the Grading and Erosion Control Plan must substantially comply with grading indicated on the Landscape Grading Plan and Drainage Report. If the Grading and Erosion Control Plan does not substantially comply with the Landscape Grading Plan and Drainage Report, then the Development Plan, Minor Development Plan or Site Plan must be amended to reconcile them.
FIGURE 2

PROFESSIONAL QUALIFICATIONS NEEDED TO PREPARE REQUIRED PLANS

Note: Only one qualification (Yes) is needed in order to prepare the specific type of plan.

<table>
<thead>
<tr>
<th>PROFESSIONAL QUALIFICATION NEEDED</th>
<th>Landscape Plan*</th>
<th>Landscape Grading Plan*</th>
<th>Irrigation Plan**</th>
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<tr>
<td>1. Licensed Landscape Architect</td>
<td>Yes</td>
<td>Yes</td>
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<td>2. Full Member of American Society of Landscape Architects (ASLA)</td>
<td>Yes</td>
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<tr>
<td>3. Bachelor or higher degree in Landscape Architecture or Landscape Design</td>
<td>Yes</td>
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<td>4. Associate Member (except Student Associate) of ASLA or bachelor or higher degree in Horticulture</td>
<td>Yes</td>
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<td>5. Registered Professional Engineer</td>
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<td>6. Licensed Architect</td>
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<td>7. Bachelor or higher degree in Agricultural Engineering</td>
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<td>8. Bachelor or higher degree in Civil Engineering</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>9. Certified irrigation Designer certified by The Irrigation Association</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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</table>

INSTALLATION, VERIFICATION, AND DEFERRAL

Chapter 7, Article 4, Section 309

A. Administration and Enforcement

The requirements of this Section are administered and enforced by City Planning in compliance with Article 5, Part 10 Zoning Enforcement, of this Zoning Code as deemed necessary and desirable to protect the public health, safety and welfare. As such, all steps regarding abatement or enforcement of remedies shall be consistent with the legal measures available to the Development Review Manager.

B. Installation

All landscaping, irrigation system and other site work shown on the approved landscape and irrigation plans shall be properly installed and stabilized against soil erosion and/or financially assured, prior to issuance of a Certificate of Occupancy, or prior to issuance of a building permit in the case of a double frontage lot streetscape requirement or common area, or prior to final development plan approval for the conversion of vacant land to non-residential use that does not involve the construction of a structure.

C. Required Verification

The owner or developer shall provide an inspection affidavit executed by both the qualified landscape plan designer and the qualified irrigation plan designer, which certifies that all components have been properly installed in conformance with the approved plans. In lieu of the provision of a properly executed inspection affidavit, City Planning shall inspect and verify the initial landscape and irrigation system installation subject to compliance with this Part.

D. Deferral of Installation

In cases where all or some portion of the required landscaping, irrigation system or other site work can not be installed due to seasonal conditions that would jeopardize the health of plant materials or prohibit the installation of the irrigation system or plant materials; or due to the unavailability of plant material, or to construction activities, the owner or developer may make the following arrangements in order to secure a Certificate of Occupancy:

1. An acceptable financial assurance shall be posted with the Development Review Manager. Acceptable financial assurances shall include cash, certificates of deposit, irrevocable letters of credit, performance bonds and escrow accounts. Said assurance shall be accompanied by a description of the uncompleted landscaping, irrigation system and/or site work and an estimate of the cost required to complete the same. The
assurance shall be an amount equal to the cost estimate.

2. The owner or developer shall agree in writing that he or she, or any successor or assigns, shall complete the required landscaping, irrigation system, and/or site work within one year or less from the date of issuance of the Certificate of Occupancy.

3. The financial assurance shall be released once all of the required landscaping, irrigation system, and/or site work has been installed, and verified in compliance with this Part.

Policy 309.

1. Where seeding is permitted, it shall be financially assured and the assurance shall not be totally released until the seeding is considered to be established in a healthy state by City Planning.

2. Inspection affidavit forms Appendix J and Appendix K shall be available from City Planning.

3. A functional test of the irrigation system shall be performed by the installer and verified by the qualified designer, or be verified by City Planning in conformance with 7.4.310.B of the Landscape Code.

4. Financial assurances shall contain the basic provisions of the acceptable forms for financial assurances available from City Planning.

5. Installation Standards:
   A. In motor vehicle lot planting areas compacted by site grading, soil shall be structurally renovated (tilled), or removed and replaced, to a depth of thirty inches (30"").
   B. All plants shall meet or exceed standards established by the Colorado Nursery Act, and the "American Standard of Nursery Stock". All plants shall be typical of their species, healthy, free of disease, insect pests and mechanical injuries, have adequate root systems, and otherwise be consistent with the intent of the Landscape Code and Landscape Policy Manual.
   C. Installation shall be in accordance with the Planting Details in Appendix H with regard to planting hole depth, size and shape, root ball preparation, construction of water basins, appropriate staking and guyin, mulching and watering.
   D. Seeded landscape areas shall have no bare areas larger than six inches by six inches (6" x 6") after germination.

MAINTENANCE ASSURANCE

Chapter 7, Article 4, Section 310

A. Compliance Inspection
City Planning shall perform a landscape compliance inspection two (2) years after the initial landscape installation is verified in conformance with Section 309.C of this Part.

B. Alternative to Inspection Affidavit
When a properly executed inspection affidavit is not provided as required by this Part, the owner or developer shall post an acceptable financial assurance with the Development Review Manager for a two (2) year period that guarantees the maintenance in good condition of all required landscaping components, except irrigation system components, and the replacement or repair of said components. City Planning will then inspect and verify the initial landscape and irrigation system installation.

C. Type and Amount of Assurance
Acceptable financial assurances shall include cash, certificates of deposit, irrevocable letters of credit, performance bonds and escrow accounts. The amount of the assurance shall be established in the Landscape Policy Manual. Said assurance shall be reduced in conformance with the procedures established in the Landscape Policy Manual.

Policy 310.

1. The amount of the financial assurance for maintenance shall be ten percent (10%) of the cost of the required landscape installation. No financial assurance shall be required for the irrigation system.

2. The amount of the financial assurance for maintenance may be reduced by the cost of verified, required plant replacements, on a one-time basis, during the two-year assurance period.

D. Release of Assurance
The financial assurance shall be released once City Planning verifies that all of the required landscaping has been maintained in compliance with the requirements and standards of this Landscape Code and the Landscape Policy Manual for a period of two (2) years from the date of verification of the initial landscape installation.
UNIT TWO — REQUIRED PLANS FOR SIGNATURE LANDSCAPES
SIGNATURE LANDSCAPES

Chapter 7, Article 4, Section 311

A. Compliance with Signature Landscapes Framework
A detailed explanation of the Signature Landscapes framework is provided in the Landscape Policy Manual. The landscape plan shall comply with the framework as set forth in the Policy Manual.

B. Expression of Plant Communities
The landscape plan shall present a site-adapted design with regard to soil type, microclimate, vegetative cover, efficient water use, grouping of signature plants into plant communities, and use of all other landscape components. The predominant landscape theme shall be expressed through the selection of plant species and their designed distribution on the site.

C. Retention of Significant Vegetation and Topography
Where reasonable, the design shall retain significant vegetation and shall limit alteration of unique or characteristic topography to the extent practicable within the grading requirements of the development project.

D. Ecological Basis for Landscape Plans
Where reasonable, the landscape plan shall reflect the ecological context of the site by the use of diverse plant species indicative of local plant communities indigenous or potentially adaptable to the conditions of the site. A landscape plan that consists of minimum percentages of signature plants shall be required in conformance with the Signature Landscapes framework of the Landscape Policy Manual.

Policy 311.

1. Framework
Signature Landscapes is a framework for landscape design developed to facilitate water-efficiency and the inclusion of regional plant communities and landscape qualities into proposed developments. Plant selection and horticultural and maintenance practices within the framework are suited to local conditions. The framework also requires consistency with the principles of Xeriscape (see Figure 3).

2. Local Conditions:
The local conditions of Colorado Springs reflect a wide variability in microclimate, soil type, altitude, solar exposure, annual precipitation, average length of growing season, and wind exposure.

A. Constraints include high solar intensity, drying winter winds, low to non-existent soil organic matter content, extreme fluctuations in temperatures, hail, sharply differented slope aspects, alkaline soils, extremely porous sandy soils or extremely tight clay soils, and erosion caused by grading disturbances.

B. Average annual precipitation is 16.2 inches; approximately 13.2 inches occurs during the typical growing season that averages 148 days.

C. Developable lands lie within an altitude range of approximately 5,500 to 6,800 feet above sea level.

D. Soils within Colorado Springs range from gravels to sands, loams and clays. Rock outcroppings, mesas and valleys and rolling plains typify the topography. The geologic history of the area includes glacial action, uplift, landslides and alluvium and eolian dispersal of decomposed granites and sandstones. The landforms are indicative of the underlying soils. Variability of soils can be extreme, often within a given site.

Any plants that are not adapted to these local conditions will require supplemental water through irrigation, soil amendments and some protective measures.

3. Framework Utilization
A. Three climate zones are delineated on the Climate Zones for Signature Landscapes map (see Figure 4). They are derived from the USDA-SCS General Soil Map Units of El Paso County, Colorado. The three climate zones that occur in Colorado Springs are:
   1. Cold, subhumid to semiarid foothills
   2. Mild, semiarid foothills and plains
   3. Mild, semiarid to arid plains

B. The Signature plant communities listed in Figure 4 are derived from the “potential natural vegetation” characterized for Major Land Resource Areas in USDA-SCS Agriculture Handbook 296. The eight plant communities that naturally occur in Colorado Springs are:
   1. Semiarid Shrublands
   2. Pinon-Juniper Woodlands
   3. Prairie
   4. Lower Elevatio Riparian
   5. Foothill Shrublands
   6. Ponderosa Pine Forest
   7. Upper Elevatio Riparian
   8. Douglas-fir Forest

C. The three climate zones mapped in Figure 4 are also arranged in a matrix with their corresponding Signature Landscape
plant communities (potential natural vegetation). The matrix indicates that six (6) plant communities have potential for establishment in each climate zone, while two (2) do not.

D. Refer to Figure 4, to identify the climate zone and corresponding six (6) potential plant communities for the project location, and to identify riparian areas, if applicable.

E. Conduct a site analysis to identify soils, topography, microclimates, slopes, potential vegetation to be conserved, and off-site conditions that may impact on the landscape plan.

F. If applicable, contact City Forestry to estimate credit for conservation of significant vegetation.

G. Utilize site data and Xeriscape principles of Figure 3 to develop a site-specific design that meets site category requirements, can be reasonably hydrozonized for irrigation system design, exhibits practical turf areas, if utilized, and is consistent with the drainage, grading and erosion control plans for the project.

H. Determine the plant community or communities to be used in the landscape design. Native plant communities and their constituent plants are listed in Appendix A.

1. Adjacent native plant communities typically blend into each other. Similar blends are encouraged where needed to fit the site microclimate(s) or to meet design objectives.

2. Riparian communities may be applied to entire sites within any 500-foot floodplain or within 500 feet of any 100-year floodplain.

3. The upper elevation riparian community should ordinarily be used only in the foothills west of Interstate Highway 25.

I. Develop a Schematic Landscape Diagram of the site (approximately to scale) that shows the general location and type of each plant community and hydrozone to be used. The diagram must be submitted on the Appendix E form provided by City Planning or be shown clearly/separately on the landscape plan using the abbreviations from Appendix E.

J. Utilize Appendix B to select plants for the site in substantial conformance with

---

**FIGURE 3**

**XERISCAPE PRINCIPLES**

**Planning and Design**

Develop a plan that takes into account both the regional climate and the microclimate of the site, existing vegetation and topography, the proposed use of the property, and grouping plants by their water needs.

**Soil Analysis**

Analyze several samples of soil to determine the soil type(s) of the site so that appropriate amendments can be added. Soil amendments will aid plant growth by improving water penetration and retention.

**Appropriate Plant Selection**

Select plants for their adaptability to the site and their design characteristics. If water conservation is a design objective, choose native or low-water use plants.

**Practical Turf Areas**

Determine the function of high-water-use turf on the site and limit it to high traffic or recreational areas, drainage swales or other appropriate uses. Avoid narrow areas and steep slopes where irrigation will be inefficient and mowing difficult.

**Efficient Irrigation**

Water only when plants need it and deeply to encourage root growth for a healthier, more drought tolerant landscape. Grouping plants by water need will allow the most water-efficient design of an irrigation system. Management of the system will be as important as its design.

**Use of Mulches**

Apply and maintain organic mulches at appropriate depths in planting beds to assist soils in retaining water, reduce weed growth, and prevent erosion.

**Proper Maintenance**

Preserve the beauty and water efficiency of the landscape through regular pruning, weeding, mulching, and irrigation system maintenance.
the project's Schematic Landscape Diagram. The water requirement, associated plant communities, and several design characteristics are noted for each plant in Appendix B.

K. Develop a project plant list from Appendix B to satisfy site category requirements. At least sixty percent (60%) of the trees and sixty percent (60%) of the shrubs (or equivalent grasses) chosen from Appendix B must be signature plants (classified as N, B, H, or C in Appendix B) for the chosen plant communities. Cultivars and hybrids of the indicated plant species may be included in this calculation.

L. All signature plants in Appendix B are listed by plant communities in the non-regulatory, supplemental Signature Landscapes Design Manual. Joint use of the Design Manual with Appendix B plant information will greatly facilitate application of the framework.

M. The project plant list may be completed with up to forty percent (40%) of the remaining required plants being chosen from any of those contained in Appendix B, provided they are matched to the appropriate hydrozone. Cultivars and hybrids of the listed plant species may be included in this calculation. As such, design flexibility is retained and a substantial appearance of Signature Landscapes for the development is ensured.

N. Utilization of plants not included in Appendix B may be approved through administrative relief, provided that such plants are suited to the local conditions of Colorado Springs.

4. Naturalized and Restored Landscapes
   The Signature Landscapes framework does not require naturalized landscaping, nor the exclusive use of native plants, nor the literal restoration of formerly existing landscapes. Rather it provides principles that will result in landscapes that are reflective of the region, water-efficient and horticulturally sustainable.

5. Alternative Landscape Designs
   The Signature Landscapes framework seeks the conservation of indigenous plant communities and the inclusion of regional plant species and qualities in landscape design. It recognizes, however, that designs may employ introduced, non-native plant materials to express those qualities, and that some designs may be consistent with the overall intent of the Landscape Code and yet depart from a methodical application of the framework. See Policy 307, Alternative Compliance.

6. Signature Landscapes Design Manual
   More detailed text, maps, and graphic design resources pertaining to the framework are included in the non-regulatory, supplemental Signature Landscapes Design Manual.

**LANDSCAPE PLAN**

**Chapter 7, Article 4, Section 312**

A. Qualifications to Prepare Plan
   The required landscape plan shall be prepared by a person who meets the qualifications established in the professional qualifications standards of the Landscape Policy Manual, and who is knowledgeable of Colorado plant material, plant communities, local soils, and landscape and irrigation practices.

Policy 312.

1. Qualified Designer
   The person who prepares the landscape plan shall meet the qualifications established in Figure 2, Professional Qualifications Needed to Prepare Required Plans, of Policy 308. Qualifications shall be certified and submitted with the plan on Appendix I, Certification of Professional Qualifications.

2. Non-Qualified Designer
   A. For a single specific project, a non-qualified designer may apply to the City Planning Manager for administrative relief from the professional qualifications in Figure 2. Such relief must be approved prior to the official submittal of a complete development or site plan application that contains a plan prepared by the non-qualified designer. The application for administrative relief from professional qualifications shall contain the following information:
      1. A written resume of the non-qualified designer's education, design and inspection experience that demonstrates the knowledge required by the Landscape Code and equivalency with the professional qualifications required in Figure 2.
      2. Submission of all required landscape plans and information for the specific project that are
B. General Requirements
The landscape plan, through graphic symbols and notes, shall comply with the planting and site criteria specified by this Landscape Code, and with the policies, procedures, standards, Selected Plants list (Appendix B) and all other requirements of the Landscape Policy Manual and City application forms.

C. Site Categories
The following site categories are required to be landscaped and labeled:

1. Landscape setbacks for double frontage lot streetscapes.
2. Motor vehicle lots.
3. Internal landscaping.
4. Landscape buffers and screens.
5. Street trees in parkways.

D. Plant Selection
Plants shall be selected from Appendix B of the Landscape Policy Manual. Signature plants, suited to the conditions of the site, shall be grouped to express ecological and plant community compatibility in conformance with the Signature Landscapes framework of the Landscape Policy Manual. Non-signature plants selected shall also be suited to the soil and microclimates of the site.

E. Hydrozones
Plants with similar water needs within each site microclimate (shade, west facing, toe of slope, etc.) shall be zoned or grouped together for efficiency of water application, to prevent water waste and to provide optimum application of water to the plants.

F. Numerical Requirements
The locations and quantities of plants shall comply with the requirements established for the various site categories in this Part and with the policies and standards of the Landscape Policy Manual.

G. Requirements are Cumulative
The site categories and minimum number of trees are cumulative. Areas or trees provided to meet each site category requirement may not consist of areas or trees that are proposed to meet the minimum requirements of other site categories, except as specifically provided in the Landscape Policy Manual.

H. Ground Plane Treatment
Ground cover and turf requirements that pertain to the site categories are found in this Part, Ground Plane and Turf, and the Landscape Policy Manual.

3. Plan Requirements
All plan information shall be provided as required in the Figure 5, Landscape Plan Checklist, to be submitted with each plan application.

4. A Schematic Landscape Diagram (Appendix E), drawn approximately to scale, shall be submitted with the landscape plan or be shown clearly/separately on the landscape plan using the abbreviations from Appendix E. It shall illustrate the selected plant communities and hydrozones to be used on the site.

5. Each plant shall be shown on the plan within the range of mature size indicated in Appendix B.

6. Hydrozones shall be identified and labeled on the landscape plan by amount of water applied (very low, low, moderate, or high) and method of application (drip, spray, etc.) for groupings of plants with similar water needs. Appendix B gives the water requirement of each plant species that may be selected.

7. The calculation of site category requirements and how they are met shall be noted on the plan in conformance with Appendix F, Site Category Calculation Formats.

8. Plant materials shall be listed on the plan in conformance with Appendix G, Plant Schedule Format.

9. Tree, shrub, perennial and ground cover planting details shall be shown on the plan as prescribed in Appendix H, Planting Details.

10. The landscape plan shall be designed to meet the Objectives of 7.4.302 and all other applicable requirements and criteria of the Landscape Code and Landscape Policy Manual.


**LANDSCAPE PLAN CHECKLIST**

(To be submitted in conformance with Policy 312)

**Name of Project:**

Complete the following checklist by checking all completed requirements under **APPLICANT** column, indicating conformance with the Zoning Code and Landscape Policy Manual.

The plan shall include:

<table>
<thead>
<tr>
<th>APPLICANT</th>
<th>REVIEWER COMMENT</th>
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</table>
Site elements to be indicated:

______ 20. All structures and light standards.
______ 21. Exterior parking and loading areas, and vehicular drives.
______ 22. Pedestrian walks or paths and pedestrian-oriented areas.
______ 23. All retaining walls, screening walls, and fences by type and height.
______ 24. Existing major vegetation to be retained and to be removed, by size and species.
______ 25. Existing grade elevations of plants to be retained.
______ 26. Location of trees, shrubs and equivalent ornamental grasses labeled by quantity, species, and site category, with species in substantial conformance with the Schematic Landscape Diagram.
______ 27. Proposed plants shown within ranges of mature width indicated in Appendix B.
______ 28. Ground plane treatment, by species of plant, manner of establishment, and/or type and depth of mulch, etc.
______ 29. Plants not required by Code or for administrative relief labeled as “extra”.
______ 30. Any non-living materials.
______ 31. Delineation of corner visibility triangle(s).
______ 32. Natural features, such as rock outcrops, ponds, lakes, and streams.
______ 33. Existing and proposed storm water management ponds.
______ 34. Height and slope of all berms.
______ 35. Areas of slope protection.
______ 36. Reclamation and erosion control areas labeled.
______ 37. Locations of existing and proposed utilities and utility easements.
______ 38. Overhead powerlines clearly labeled.
______ 39. Screening of refuse collection areas from adjacent streets and properties.
______ 40. Screening of loading and utility service areas, vehicle repair bays, and vehicle fueling areas from adjacent streets and properties.
______ 41. A detailed design of screening structures.

I hereby acknowledge that the information indicated in this Landscape Plan submittal checklist is correct, and that any incomplete and/or incorrect information will cause a delay in review.

Name (print)_________________________________ Signature________________________________ Date_______
UNIT TWO

REQUIRED PLANS FOR SIGNATURE LANDSCAPES

I. Plant Substitutions

Minor revisions to an approved landscape plan may be requested due to lack of plant availability or seasonal planting constraints. Substitutions may be permitted in conformance with criteria in the Landscape Policy Manual.

11. Criteria for Plant Substitutions

A. The quantities of provided plants are not reduced.
B. The size of plant material and location is not altered.
C. The replacement plant material is equal to the plant being substituted in terms of the plant community and design characteristics, cultural and water requirements, and maintenance.
D. The replacement plant material is hardy, adaptable to site-specific conditions and chosen from Appendix B or otherwise approved by City Planning.

J. Optional Preliminary Landscape Plan

A preliminary landscape plan (without irrigation plan), with information as required in the Landscape Policy Manual, may be submitted as part of a development plan under review with the condition that a final landscape plan (with irrigation plan) shall be submitted for review and approval prior to the issuance of a building permit or change of use. When the preliminary landscape plan information is not sufficient to assure that the development plan will avoid (or acceptably mitigate) an adverse impact on a surrounding property, part or all of the final landscape plan information may be required.

12. Preliminary Landscape Plan

A preliminary landscape plan (without irrigation plan) shall consist of all information required in the Figure 5, Landscape Plan Checklist, and Figure 6, Landscape Grading Plan Checklist, except that only the general location, type and size of major existing plant materials and only the general location and type (not species) of proposed plant materials must be shown. Plant communities and hydrozones shall be indicated, but plant species and standard planting details are not required. This information shall be sufficient to ensure that the various landscape requirements can be met on the final landscape plan.

13. Mix of Species

Groupings of plants rather than single plantings are encouraged. Species selection shall reflect canopy, understory and ground cover plants that are compatible. Refer to plant community lists in Appendix A, and to Appendix B for information regarding natural plant associations, water requirements, soil tolerances, and design characteristics.

14. Tree Spacing and Location

A. All spacing of trees shall conform to the range of average mature spread for each respective species in Appendix B. Design flexibility is allowed for the spacing of trees on private property that results in a twenty percent (20%) reduction in spacing.

B. In all cases, the natural form of the plant shall be accommodated when planting near paved areas such as streets, sidewalks, driveways, and motor vehicle lots. This will normally require a minimum five foot (5') setback for deciduous trees and an eight to fifteen foot (8'-15') setback for evergreen trees, depending on the species and variety selected.

15. Plant Material Specifications

Minimum planting/installation sizes of plant materials shall conform to the criteria below:

A. Deciduous shade trees
   One and one-half inch (1.5") caliper measured six inches (6") above ground.

B. Deciduous ornamental trees
   One-inch (1") caliper measured six inches (6") above ground or multi-stemmed clump form with a minimum height of four feet (4') above ground.

C. Evergreen trees
   Six feet (6') in height above ground.

D. Evergreen and deciduous shrubs
   One (1) or five (5) gallon size.

E. Ornamental grasses
   One (1) or five (5) gallon size.

F. Ground covers and vines
   Two and one quarter inch (2.25") or four inch (4") flat-type container, one (1) gallon, or five (5) gallon size.

16. Tree Requirements and Restrictions

A. At least forty percent (40%) of site trees shall be trees that will exceed thirty feet (30') in height at maturity.

B. Use of trees with brittle or hazardous characteristics, as indicated in Appendix B, shall only be used where those characteristics are not problematic.

17. Prohibited and Invasive Species

A. Remarks regarding plants that are restricted or recommended with caution
are found in the “comments” column of Appendix B.

B. Riparian tree species with invasive roots and brittle branches shall be planted at least twenty-five feet (25') from public wastewater, water, and drainage lines, and streets, curbs and sidewalks. These species include Elder (Sambucus), Willow (Salix) and Cottonwood (Populus).

C. Invasive species that are not typically permitted include Tamarisk (Tamarix parviflora and T. ramosissima), Siberian Elm (Ulmus pumila), Ox-eye Daisy (Chrysanthemum leucanthemum), Purple Loosestrife (Lythrum salicaria).

LANDSCAPE GRADING PLAN

Chapter 7, Article 4, Section 313

A. Qualifications to Prepare Plan

The required landscape grading plan shall be prepared by a person who meets the qualifications established in the professional qualifications standards of the Landscape Policy Manual, and who is knowledgeable of local soil conditions and hydrology, the landscape implications of disturbance of soil horizons, adjustments to existing grades and grade change tolerances of plant species to be retained, the planting and irrigation/water runoff impact associated with varying degrees of slope and berms, the principles of water harvesting and on-site ground water recharge through pervious surfaces, the implications of compaction and fill materials on soil as a growing medium for plants, erosion control, conservation of topsoil and A horizon soils, and alterations in permeability as a result of grading operations.

Policy 313.

1. Qualified Designer

The person who prepares the landscape grading plan shall meet the qualifications established in Figure 2, Professional Qualifications Needed to Prepare Required Plans, of Policy 308. Qualifications shall be certified and submitted with the plan on Appendix I, Certification of Professional Qualifications.

2. Non-Qualified Designer

A. A non-qualified designer may apply to the City Planning Manager for recognition as a qualified designer for any project meeting criteria 2.A.1-4 above after obtaining administrative relief to design and inspect several diverse projects, and after having demonstrated competent knowledge in the design and inspection of those projects.

B. General Requirements

The landscape grading plan shall provide all information necessary to clearly indicate existing and proposed site conditions including, but not limited to: contour intervals, existing and proposed contours, top and toe...
of manufactured slopes, retaining walls with top of wall elevations and finish grade on each side, and general intent of site drainage.

C. Coordination with Landscape and Irrigation Plans

The landscape grading plan shall be consistent with the landscape and irrigation plans and shall ensure:

1. The provision of adequate and proper drainage for survival of plant material
2. The stockpiling and redistribution of beneficial topsoil;
3. The mitigation of slopes that are difficult to vegetate or irrigate, or that would result in water runoff onto paved surfaces;
4. The provision of water harvesting where beneficial and feasible;
5. The protection of landscaping from flooding or contaminated runoff;
6. Aesthetically and functionally placed berms; and,
7. General contouring of the ground plan to create forms that are aesthetically pleasing and that contribute to the intent of the landscape design.

D. Consistency with Grading and Erosion Control Plan Contents and Review

The landscape grading plan shall be consistent with the Grading and Erosion Control Plan reviewed by City Engineering.

3. Plan Submittal

A landscape grading plan shall be submitted in lieu of a grading and erosion control plan for development plans, minor development plans and site plans. A landscape grading plan does not substitute for a grading and erosion control plan at building permit application (see Figure 1). All plan information shall be provided as required in the Figure 6, Landscape Grading Plan Checklist, to be submitted with each plan application. In lieu of contour intervals, equivalent spot elevations may be indicated on the landscape grading plan.

E. Slope Standards

The landscape grading plan shall conform to the slope standards established in the Landscape Policy Manual.

4. Slope Standards

A. Slopes shall provide for adequate drainage.
B. All planting areas shall have a minimum slope of two percent (2%).
C. Slopes shall ensure positive drainage away from structures.
D. Slopes that cause irrigation runoff onto paved areas are prohibited.
E. No slope shall exceed 2:1, without terraces or retaining walls.
F. Slopes adjacent to conservation areas shall not significantly alter historic drainage patterns or create additional runoff.
G. Slopes to be planted shall have rough or scarified surface to slow runoff and collect moisture for plants.
H. Native grasses as revegetation are permitted on all slope gradients.
I. Ground plane plantings for slopes with a gradient greater than 4:1 shall consist of ground covers, native grasses and/or shrubs.
J. Revegetated slopes that exceed a slope of 3:1 shall require a mix of plant species with deep, variable rooting systems.

5. Berm Standards

A. Berms shall be graded to have naturalistic forms.
B. Slope of berms shall not exceed 3:1.
C. Top of berm shall be at least three feet (3') wide for any berm steeper than 4:1.
D. Toe of berm shall have a minimum three foot (3') landing to mitigate water runoff. Landing gradient shall not exceed 6:1.

IRRIGATION PLAN

Chapter 7, Article 4, Section 314

A. Qualifications to Prepare Plan

Effective two years from the date of final passage of this ordinance, any required irrigation plan shall be prepared by a person who meets the qualifications established in the professional qualifications standards of the Landscape Policy Manual, and who is knowledgeable of conservation and water efficient design principles, ET rates, irrigation system components and maintenance, hydrology, local soil classifications, textures, infiltration rates, and their implications for irrigation design; degree and orientation of slopes, and locally used plant materials and their respective water needs.

Policy 314.

1. The person who prepares the irrigation plan shall meet the qualifications established in Figure 2, Professional Qualifications Needed to Prepare Required Plans, of Policy 308, Qualifications shall be certified and submitted with the plan on Appendix I, Certification of Professional Qualifications.
LANDSCAPE GRADING PLAN CHECKLIST

(To be submitted with Landscape Grading Plan, in lieu of a Grading and Erosion Control Plan.)

Name of Project: ________________________________

Complete the following checklist by checking all completed requirements under APPLICANT column, indicating conformance with the Zoning Code and Landscape Policy Manual.

The plan shall include:

<table>
<thead>
<tr>
<th>APPLICANT</th>
<th>REVIEWER COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>______ 1. Appendix I, Certification of Professional Qualifications, attached.</td>
<td></td>
</tr>
<tr>
<td>______ 2. North arrow and vicinity map.</td>
<td></td>
</tr>
<tr>
<td>______ 3. Notation of scale, with bar scale.</td>
<td></td>
</tr>
<tr>
<td>______ 4. Dimensioned property lines.</td>
<td></td>
</tr>
<tr>
<td>______ 5. Location, name, and classification of abutting streets.</td>
<td></td>
</tr>
<tr>
<td>______ 6. Delineation of 100 year floodplain and nontidal wetlands, as applicable.</td>
<td></td>
</tr>
</tbody>
</table>

Site elements to be indicated:

| ______ 7. Natural features, such as rock outcrops, ponds, lakes, and streams. |                  |
| ______ 8. Existing and proposed storm water management ponds.                |                  |
| ______ 9. Existing grade elevations of plants to be retained.               |                  |
| ______ 10. Existing and proposed topography at two foot (2') contour intervals or equivalent spot elevations. |                  |
| ______ 11. Top soil stockpiling area(s).                                    |                  |
| ______ 13. Top and toe of manufactured slopes.                             |                  |
| ______ 15. Height and slope of all berms.                                   |                  |
| ______ 16. Slopes greater than 4:1 labeled.                                 |                  |
| ______ 17. Retaining walls with top of wall elevations, and finish grade on each side. |                 |
| ______ 18. Areas of slope protection.                                      |                  |
| ______ 19. Reclamation and erosion control areas labeled.                   |                  |
| ______ 20. General intent of site drainage.                                |                  |
| ______ 21. Water harvesting and ground water recharge areas.               |                  |

I hereby acknowledge that the information indicated in this Landscape Grading Plan submittal checklist is correct, and that any incomplete and/or incorrect information will cause a delay in review.

Name (print) _____________________________ Signature _____________________________ Date ____________________________
B. General Requirements

1. The irrigation plan shall be submitted and approved prior to the issuance of a building permit, or prior to final development plan approval for the conversion of vacant land to nonresidential use that does not involve the construction of a structure.

2. The irrigation plan shall graphically and through notes depict a water-efficient design consistent with the landscape and grading plans.

3. The irrigation plan shall show and note hydrozones. The hydrozones shall take into account like water demand plants, slopes, microclimates, environmental factors, and water pressure.

4. Irrigation systems shall conform to the irrigation standards and all other provisions of the Landscape Code and Landscape Policy Manual.

2. Due to the semiarid climate and drying winds, evapotranspiration exceeds natural precipitation in Colorado Springs. Except for the most drought tolerant plantings, supplemental irrigation will therefore be required. Efficiency of water usage is critical both in the design and management of such irrigation systems.

3. Provide all plan information required in Figure 7, Irrigation Plan Checklist, to be submitted with each plan.

4. The irrigation zones on the irrigation plan shall substantially correspond to the hydrozones on the landscape plan and be labeled by precipitation rates and method of water application (drip, spray, etc.).

5. Irrigate as necessary for high usage recreation areas such as athletic fields, golf courses, playgrounds, and high pedestrian traffic areas.

C. As-built Plans Required

As-built plans are required when the installation of the irrigation system does not comply with the approved irrigation plan. As-built drawings shall be prepared by a person who meets the qualifications established in the professional qualification standards of the Landscape Policy Manual.

D. System Test Required

A functional test of the irrigation system shall be performed by the installer and verified by the qualified designer or by City Planning in conformance with this Part.

E. Irrigation Management Information

City Planning may require the formulation of an irrigation management plan in conformance with the standards of the Landscape Policy Manual for large, complex projects. Implementation of the management plan shall be the responsibility of the property owner.

6. An irrigation management plan, if required, shall include recommended irrigation schedules for the plant establishment period of two years, and seasonal or monthly irrigation schedules for the duration of the landscape. A copy of the approved plan shall be posted adjacent to the automatic controller for the project.

7. Irrigation Management Plan Standards

Where required, the irrigation management plan shall contain the following information:

A. Site specific conditions including soil type, slope, winds, ambient temperatures, and humidity.

B. Irrigation system information required in Figure 7, Irrigation Plan Checklist, and any additional information needed to sufficiently describe the system.

C. Use of non-potable and reclaimed water shall be indicated. Any other site features that affect water usage such as fountains shall be described.

D. Protection plan for any significant vegetation to be retained.

E. Recommended watering data for each of the following periods:

- During plant establishment (a minimum of 30 days)
- Monthly water during the typical growing season (April to October), based on typical ET and precipitation data for each month
- Winter watering after establishment
- Temporary or manual irrigation

F. The following information for each watering period itemized above:

- Run time per cycle for each control valve (zone)
- Frequency of cycle for each control valve

G. Schedule of system inspections.
**Figure 7.**

**IRRIGATION PLAN CHECKLIST**

(To be submitted in conformance with Policy 314)

Landscape Plan File No. ____________________ Name of Project ____________________

Complete the following checklist by checking all completed requirements under APPLICANT column, indicating conformance with the Zoning Code and Landscape Policy Manual.

The following individual site conditions have been addressed:

<table>
<thead>
<tr>
<th>APPLICANT</th>
<th>REVIEWER COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>_____ 1. Prevailing winds</td>
<td></td>
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<tr>
<td>_____ 2. Slope aspect and degree of slope</td>
<td></td>
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<td>_____ 3. Soil type and infiltration rate</td>
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<td>_____ 4. Vegetation type</td>
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<td>_____ 5. Microclimates</td>
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<td>_____ 6. Expansive or hazardous soil conditions</td>
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<tr>
<td>_____ 7. Water harvesting potential</td>
<td></td>
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<tr>
<td>_____ 8. Available water supply, including non-potable and reclaimed water</td>
<td></td>
</tr>
</tbody>
</table>

All pertinent system information is indicated, including:

| _____ 9. Irrigation zones substantially corresponding to hydrozones on the landscape plan and labeled by precipitation rates and method of application |
| _____ 10. Water meters                                                   |                  |
| _____ 11. Tap-in location                                                |                  |
| _____ 12. Static water pressure at the point of connection               |                  |
| _____ 13. System controller                                              |                  |
| _____ 14. Rain sensors                                                  |                  |
| _____ 15. Backflow preventers                                            |                  |
| _____ 16. Shut-off valves and zone control valves                        |                  |
| _____ 17. Main line and lateral piping                                  |                  |
| _____ 18. Sprinkler heads                                               |                  |
| _____ 19. Bubbler and drip irrigation tubing runs                       |                  |
| _____ 20. Type and size of main irrigation system components             |                  |
| _____ 21. Graphic depiction of the locations of irrigation system components |                |
| _____ 22. Manufacturer stated precipitation rates                        |                  |
| _____ 23. Total required operating pressure for each control valve/zone  |                  |
| _____ 24. Any supplemental stormwater and/or runoff harvesting           |                  |
System design is in conformance with the following standards:

25. Appendix I, Certification of Professional Qualifications, attached (effective November 1, 2000).
27. Equipment installed flush with grade for safety.
28. Compliance with local codes.
29. Overspray onto impervious areas minimized.
30. Low volume, underground and low trajectory spray nozzles used where appropriate.
31. Method of irrigation matched to size and shape of area and plant material, and for uniformity of coverage.
32. System designed in conformance with manufacturer’s recommendation for efficiency.
33. Water pressure regulated with valves.
34. Water hammer and line and head drainage prevented.
35. Pressure compensating outlets used where pressure varies more than 20 percent or 20 p.s.i. from design operating pressure.
36. Adequate backflow protection installed.
37. Rain sensing devise installed for automatically controlled system.
38. Controller has accurate timer, multiple program capability, multiple repeat cycle, a 7 to 14 day program calendar, and one remote control valve per station.
39. Irrigation lateral contains matched precipitation rates for sprinkler arcs.
40. Irrigation tap sized to irrigate site in the maximum time allowed for operation of the zones.
41. Irrigation component detail sheet provided.

Where applicable, system design conforms to the following landscape plan elements:

42. Separate zones provided for different equipment or water requirements based on exposure, plant selection, and slope.
43. Drainage not altered within existing plant communities to be conserved.
44. Existing non-irrigated plant communities to be retained are not irrigated.
45. Temporary irrigation provided for newly established native plant areas.
46. High water-use-turf areas zoned separately from shrubs and trees.
47. Irrigation provided where natural rainfall is not adequate to ensure germination and establishment of hydroseeded areas.

I hereby acknowledge that the information indicated in this Irrigation Plan submittal checklist is correct, and that any incomplete and/or incorrect information will cause a delay in review.

Name (print)________________________________________ Signature____________________________________ Date_________
CONSERVATION OF SOIL AND DRAINAGE

Chapter 7, Article 4, Section 315

A. Purpose
Urban growth and development have altered topography, soil, and drainage patterns, changing the microclimates of the City. The requirements of this section are intended to allow conservation of these natural systems and to mitigate the negative impacts of the development process.

B. Soil Conservation and Analysis
Topsoil shall be stockpiled during construction for use in landscape areas prior to planting. In order to develop a planting plan suited to the site, a soil analysis shall be conducted by an established soil analysis laboratory. The soil analysis report shall contain at a minimum the soil texture, percentage of organic matter, pH, total soluble salts, and recommended amendments where appropriate. A copy of the report shall be submitted as either:

1. Part of the Final Landscape Plan; or,
2. At the completion of landscape work. A signed affidavit attesting to the soil amendments incorporated to correct deficiencies shall be included with the soil analysis prior to the issuance of a Certificate of Occupancy. The Applicant shall include at the time of Final Landscape Plan submittal a written Statement of Justification for deferral of the Soil Analysis. The Staff Landscape Architect may, in certain situations, require that a Soil Analysis be performed in conjunction with the Final Landscape Plan review if it is determined that the explanation for deferral is not valid or that soil conditions are not representative of the native soils. This would typically occur in urban conditions where soil disturbance was evident. If a Soil Analysis is not included with the Landscape Plan submittal, the plan shall be prepared using the “General Vegetation and Soil Associations” map included in the Landscape Code and Policy Manual. The plant materials specified shall be compatible with the Soils Classifications identified on this map with the Soil Association identified on the Landscape Plan; or,

3. Waiver Request: A written request for Waiver of the Soil Analysis may be appropriate under certain conditions. This may be approved where landscape improvements are minimal and the Applicant demonstrates sufficient measures will be undertaken to amend the existing soil to provide an acceptable growing medium. (Ord. 99-91)

Policy 315.
1. The conservation of topsoil and the mitigation of disturbance of soil horizons will ensure that plants adapted to the site can be established and maintained.

C. Soil Amendments and Preparation
Soil amendments to improve water drainage, moisture penetration or retention, and nutrient availability shall be provided as determined by the soil analysis. Tilling of the soil to incorporate amendments and counter any compaction or soil consolidation shall be required for all landscape planting areas. Soil preparation shall be consistent with the cultural needs of the plant species proposed for each site category.

2. For landscape purposes the primary concerns are relatively low organic matter of local soils, high shrink/swell capacity of clay soils and geologic hazard areas, percolation rate and slopes associated with each soil type, and changes due to grazing, farming, mining and urban development that may have resulted in overturned soil horizons, compaction, and a minimal topsoil layer.

3. Plants shall be matched to the site-specific soil types and/or soils shall be amended to provide an acceptable growing medium for the species indicated for installation.

4. Required Soil Improvement Areas
In motor vehicle lot planting areas compacted by site grading, soil shall be structurally renovated (tilled) or removed to a depth of thirty inches (30”) and replaced with an acceptable growing medium for the species indicated for installation.

D. Drainage
All drainage shall comply with the City Code and Landscape Policy Manual. Where existing native plant communities are to be retained, drainage shall not be altered so as to be detrimental to the viability of the plants.

5. Ephemeral streams, washes, creeks, drainageways, wetlands, marshes, ponds, riparian woodlands, and bodies of water are valuable natural resources and comprise an extensive network in Colorado Springs. Both lower elevation riparian (elevation 5,500’ -
6,200') and upper elevation riparian (elevation 6,200' - 7,500') occur locally. These water features provide recreational and visual amenities in the urban area and serve as habitat for approximately 85 percent of the birds and wildlife of the region. As such, the policies regarding these areas are as follows:

A. Protect and retain existing riparian vegetation where practical.

B. Maximize groundwater recharge.

C. Restore vegetation disturbed as a result of development where possible.

D. Naturalistic solutions to engineered drainage requirements shall be investigated to mitigate the loss of existing vegetation and wildlife, and the degradation of water quality.

E. Erosion Control and Slope Revegetation

All disturbed site areas shall be revegetated and slopes stabilized in conformance with the City Code and Landscape Policy Manual.

6. All disturbed areas shall be revegetated and slopes stabilized in conformance with City Engineering standards and the slope revegetation standards established herein.

7. Slope Revegetation Standards

A. Seeding shall occur within 30 days of grading or at the earliest practical time for germination and operation of irrigation systems.

B. Slope stabilization shall be achieved and slope area shall be covered within thirty (30) days of completion of grading with approved geotextile material, mulch or netting to control surface soil erosion.

C. Irrigation shall be provided during the vegetation establishment period.

B. Preservation Areas

The preservation of natural plant communities is provided for in the Zoning Code 7.3.504 (Hillside Overlay) and 7.4.102.E (Prohibited Activities in Preservation Areas). Allowable trimming and maintenance must comply with the Wildfire Fuels Management Ordinance, 8.4.105 of the City Code. Zoning Code 7.4.207 provides flexibility in the application of parking requirements in order to save valuable existing trees.

C. "Oasis" Plant Communities

The "oasis" concept shall allow existing indigenous plant communities to be retained in their entirety, with canopy trees, understory plants, and ground covers left intact and undisturbed as credit toward required landscaping on development/site plans. In this manner, protection of characteristic plant communities serves to retain a "sense of place" and to fulfill landscaping requirements.

Policy 316.

1. Vegetation growing under different spatial conditions will have different structures and biological adaptations. Plant communities are structures with distribution patterns that differ based on the species. Some plant groupings can be reduced or thinned with reasonable expectation of survival, while others depend on the protection of edge layers and understory to be effectively preserved. Many mature trees, depending on the species, are not resilient to site changes, grade changes, and alterations in drainage patterns.

D. Plant Conservation and Credit toward Tree Planting Requirements

1. The general location and species of existing significant vegetation shall be shown on the preliminary landscape plan.

2. The accurate location, existing ground elevation, species, and size of vegetation to be retained shall be shown on the final landscape plan.

3. The City Forester shall determine if the proposed vegetation to be retained is viable, if sufficient protection measures can be assured, if the species and size of the plant warrant the protection measures that will be required, and the credit equivalent of the plant(s).

2. City Forestry oversees the inspections, protective measures, and review procedures of administrative relief in order to give credit for retention of trees and other vegetation.

3. Where conservation credit is to be requested, the City Forester shall be contacted prior to submittal of the development plan and prior...
to siting the building and vehicular service areas in order to assess the value and potential for conservation of significant vegetation.

4. Criteria for determination of conservation potential include existing and proposed grading, species type, its age and condition, and the location of proposed site improvements and utilities.

5. Critical areas of steep slopes, wetlands, floodplains and unique rock outcroppings shall be considered for conservation and a general inventory of plants conducted if necessary.

6. Plant lists indicating the species that comprise the eight regional plant communities found in Colorado Springs are provided in Appendix A. These regional species are given priority in consideration for conservation.

7. If the site or plant grouping is significantly altered, or edge plantings are removed, the altered conditions, i.e. exposure to sun and wind or loss of vegetative cover of the soil, may be so great as to cause the decline or death of remaining plants. These conditions shall be considered in the determination of conservation potential.

8. Species rooting patterns may affect conservation potential, as well as the location of feeder roots and their proximity to the soil surface.

9. Should the development and site improvements cause the structural or feeder roots to be cut or removed such that instability or insufficient intake of nutrients and water occur, the plant will not be considered to have good conservation potential.

10. Invasive or problematic species may not be considered, regardless of size. As such, the largest specimens on a site may not necessarily have good conservation potential.

11. No credit shall be given if the plant proposed for conservation is dead or dying. Should any plants used for credit die subsequent to development, replacement plants shall be installed equal to the credit given.

12. Where applicable, a site-specific tree protection plan shall be incorporated into the final landscape plan. Grading plan and building permit approvals may be withheld prior to implementation of the tree protection plan.

13. During the construction process, the site may be disturbed and grading may occur. Where revegetation of manufactured slopes or disturbed areas is planned, the slope revegetation standards of Policy 315 shall be met.

E. Tree Retention Standards

Specifications, plans and construction practices regarding the retention of significant vegetation on development sites shall comply with the Landscape Policy Manual standards and City “Forestry Rules and Regulations”, Chapter 4, of the City Code.

14. Significant Vegetation Retention Standards

A. Critical root zones shall be clearly delineated in the field through substantial protective fencing and “keep out” signs during all phases of site work and construction.

B. Adequate erosion and sediment control structures shall be provided to protect the critical root zone.

C. Positive drainage in the critical root zone shall be maintained during site work and construction.

D. Proper root and crown pruning shall be implemented prior to site work and construction.

E. Proper watering and mulching of the critical root zone shall be maintained during site work and construction.

F. Grading and trenching within the critical root zone shall be prohibited or limited.

G. Driving or parking equipment in the critical root zone shall prohibited.

H. Placement of stockpiled material or backfill in the critical root zone shall be prohibited.

I. Dumping of trash, oil, paint or any contaminants within the critical root zone shall be prohibited.

J. Implementation of protective measures shall be completed and verified prior to grading plan and building permit approvals.

K. A copy of the tree protection plan shall be posted at the site.

GROUND PLANE AND TURF

Chapter 7, Article 4, Section 317

A. Intent

Ground plane treatment shall be required in order to retain soil porosity, contribute to organic matter, stabilize slopes, reduce glare and pollution, reduce erosion and evaporation from soils and contribute aesthetically to the landscape.

B. Coverage Requirements

All site category areas shall consist of one hundred percent (100%) ground plane coverage in living vegetation, organic mulch, or to a limited extent, ornamental paving or rock mulch as follows:
1. At least seventy-five percent (75%) of each site category area shall initially consist of plants, or plants and organic mulch;

2. At least seventy-five percent (75%) of each site category area shall be covered by vegetation within three years of planting;

3. Vegetative cover may consist of ground covers, perennials, shrubs, ornamental grasses, bulbs and grass mixes or turfgrasses;

4. The foliage crown of trees shall not be counted in the seventy-five percent (75%) calculation of vegetative cover;

5. Ornamental paving (excluding sidewalks) or rock mulch shall not exceed twenty-five percent (25%) of any site category area.

C. Use of Turfgrass
Turfgrass shall be specified according to the same criteria as other plants. It shall be used as a planned amenity or element in the landscape and not solely as infill material. The type, location and shape of any turf area shall be determined by its practical function.

Policy 317.

1. The aesthetic appeal of lawn areas combined with the beneficial effects of noise and dust abatement, glare reduction and temperature mitigation justify the inclusion of practical turf areas in the urban environment. Rather than prohibit the use of turf, these policies outline responsible, restricted turf uses and well managed, water-efficient irrigation systems to support them.

2. Restrictions on Use of High Water Use Turf
   A. For each site category, not more than fifty percent (50%) of the entire area shall be covered.
   B. Prohibited on slopes with steeper than 6:1 gradient.
   C. Prohibited in medians less than twelve feet (12') wide.
   D. Prohibited in any design configuration that cannot be efficiently irrigated.
   E. Prohibited in motor vehicle lot planters less than twelve feet (12') wide.
   F. Discouraged in street right-of-way where width between curb and detached sidewalk is less than eight feet (8') feet.
   G. Discouraged where not utilized for a functional purpose.

D. Irrigation and Management of Turfgrass
Turfgrass shall be hydrozonated separately because of its unique water demand. Landscaped areas shall be configured to minimize irrigation system components and water waste through overspray and runoff.

3. Grasses typically used in the City's landscapes include cool and warm season grasses. Cool season grasses commonly require more water and have a longer growing season. Kentucky bluegrass and Turf-type fescue are traditionally used cool season grasses.

4. A soil analysis is required for each site because some low-water-use turfgrasses, to be used as mowed lawn, may not perform as well as efficiently-irrigated Kentucky bluegrass, e.g. in sandy soils. For some functions, especially recreation, sports, high traffic areas, fire danger mitigation, or in erosion control swales, Kentucky bluegrass may be the optimal choice.

E. Standards and Plant List
Selection of ground plane vegetation shall comply with Appendix B and the standards of the Landscape Policy Manual. Alternative or new species or varieties may be approved, provided they comply with the intent of the Landscape Code.

5. Alternative warm season turf species such as Buffalo and Blue Grama grasses generally are more drought tolerant and adapted to the regional soil types. An additional benefit is that these alternatives generally do not require as much fertilizer, which can cause water pollution and imbalances in ecosystems.

6. Perennials contribute color and variety to the landscape. They are especially effective because the local growing season is relatively short, (approximately 148 days), and late spring frosts and snow can impact on the bloom of trees and shrubs.

7. Ground covers are beneficial in solving problematic situations such as steep slopes or small and irregularly shaped areas that are unsuited to turf, visually linking larger plant material in groupings, and providing leaf texture and seasonal color.

8. Low shrubs and evergreens are often ideal selections for ground plane coverage, especially on slopes. Many ornamental grasses grow well in Colorado Springs, an area where the predominant indigenous vegetation consists of prairie and meadow grasses. A mix of grasses, shrubs and other ground plane selections provides a range of rooting systems that is typically more effective on slopes or erosion prone areas than a planting of a single species.

9. Administrative relief may allow flexibility where plants and their irrigation should be limited next to building foundations or where plazas or courtyards would provide a better design.
10. Use of Mulch
   A. Organic mulches shall be required in all non-turf planting areas.
   B. See use of mulch in Appendix H, Planting Details.
   C. Use of non-organic mulches that do not readily decompose, such as gravel and stones, are restricted to use for design purposes and where high winds make the use of organic mulch impractical.

11. Stump Removal Standard
   Stumps of removed trees and shrubs shall be ground out to four inches (4") below grade in all site categories.

FIRE DEPARTMENT AND UTILITIES CONSTRAINTS

Chapter 7, Article 4, Section 318

A. Purpose
   Landscaping shall not interfere with the general function, safety or accessibility of any gas, electric, water, sewer, telephone, or drainage facilities, or other drainage or utility easements.

B. Fire Department Constraints
   Landscaping shall be limited to an eight-inch (8") mature height within three feet (3') of a fire hydrant. Landscaping shall not restrict the use of or obscure the view of any fire hydrant, Fire Department connection, outside horn/strobe, required signage, or other safety features. Access roadways utilized by the Fire Department shall remain clear and unobstructed to a minimum height of thirteen feet, six inches (13'6") with widths as individually prescribed for the development.

C. Wildfire Management Constraints
   In fire prone areas landscape fuel loading, slope and accessibility factors shall be evaluated with regard to fire hazard. The landscape design shall adhere to principles of fire mitigation such as higher water transition zones adjacent to structures (where expansive soil or hazardous geologic conditions do not exist), prohibition of large trees adjacent to structures, thinning of fuel species on slopes and adjacent to structures, site layout that permits ease of egress, and other standards determined by the State Forestry Department.

Policy 318.

1. Contact the Colorado Springs Fire Department for recommendations and/or details to satisfy the City’s adopted Fire Code requirements.

D. Colorado Springs Utilities Standards
   All landscaping adjacent to, above, or beneath utilities shall comply with standards of the respective governing Utility and the Landscape Policy Manual.

E. Electric Utility Constraints
   All improvements, including landscaping, must comply with all applicable requirements of the National Electrical Code.
   2. The CSU Electric Utility is responsible for maintaining power line rights-of-way. Occasionally it may be necessary to prune or remove a tall tree within or near a right-of-way.

MAINTENANCE OF REQUIRED LANDSCAPING

Chapter 7, Article 4, Section 319

A. Responsibilities
   The landowner and/or owners association shall be responsible for maintenance, in good condition and in the locations indicated on the approved landscape plan, of all vegetation, irrigation system, screening devices, and other landscape components so as to present a healthy, safe and orderly site.

B. Maintenance Practices
   Maintenance shall consist of all regular and normal maintenance practices of landscaping including weeding, irrigation, fertilizing, pruning and mowing. Plant materials that exhibit significant levels of insects, pests, diseases and/or damage shall be appropriately treated, and all dead plant materials shall be removed and replaced with living plant materials where required on the approved landscape plan.

C. Right-of-Way Maintenance
   Street rights-of-way or parkways between a property line and curb or street pavement adjoining the property shall be maintained by the adjacent landowner.

D. Erosion Control and Reclamation Areas
   Vegetative coverage in seeded site categories shall comply with the Landscape Policy Manual. All erosion control and reclamation areas indicated on the landscape plan shall be maintained by the property owner, who shall replace any dead vegetation as soon as practicable.
E. Brush Management and Weed Control
Vegetation shall be maintained so as to inhibit the spread of noxious weeds, and to mitigate hazards, such as the spread of wildfires, slope failures, soil erosion, and increased flooding.

F. Public Safety and Visibility
1. Visibility for police surveillance and crime prevention shall not be significantly hampered by landscaping.
2. Corner visibility for traffic movement and protection of pedestrians shall comply with Article 4, Part 1 of the Zoning Code.
3. Landscaping shall not prohibit access to utilities or hinder public safety, such as access to fire lanes and hydrants.

G. Public Rights-of-Way Adjacent to Double Frontage Lot Streetscapes
Maintenance shall be the responsibility of a special improvement maintenance district (SIMD) or a homeowners association as specified, with the exception of street trees maintained by the City Forester.

Policy 319.
1. Approved Maintenance Practices
   A. Apply fertilizer only on an as-needed basis and avoid excess application of fertilizer on turf and plants.
   B. Eliminate plant pests including weeds, deleterious insects and diseases.
   C. Maintain a three inch layer of mulch around shrubs and trees.
   D. Properly prune all plant to improve water-efficiency, correct damage and to encourage the naturalistic habit of the plant.
   E. Remove seasonal herbaceous growth after it dies.
   F. Maintain appropriate mowing height to reduce evaporation from the soil surface.
   G. Compost grass clippings where feasible.
   H. Maintain an irrigation system schedule that includes inspection, testing and repair using compatible components. Procedures include: cleaning of filters and strainers, flushing of irrigation lines and winterization, adjusting sprinkler patterns to maintain uniformity, calibration of sensing and recording equipment, adjustments of the controller schedule after the establishment period and for seasonal fluctuations.

I. Repair irrigation system leaks and breaks to prevent water loss.

2. Replacement Vegetation Standards
   A. All plant material provided or preserved to meet the requirements of the Landscape Code, which is in poor health or not living shall be replaced with equivalent vegetation and maintained in good health throughout the life of the project.
   B. Should any existing plant material, which was retained for credit, die subsequent to issuance of a certificate of occupancy, it shall be replaced by the requisite number of living plants according to the standards established for each site category.

3. Extra Plants
Extra (non-required) plants, clearly labeled as such on the approved landscape plan, shall not require any financial assurance or replacement.
Unit Three — Site Category Requirements
UNIT THREE

SITE CATEGORY REQUIREMENTS

LANDSCAPE SETBACKS AND DOUBLE FRONTAGE LOT STREETS CAPES

Chapter 7, Article 4, Section 320

A. Intent and Purpose
It is the intent of the City to establish landscape planting areas parallel to and including adjacent street rights-of-way (parkways), and along the non-street boundaries of zone districts. The areas shall contain plantings of trees and other live vegetation to provide a pleasing continuity of vegetation along the streetscape and zone boundary.

B. Required Minimum Widths of Landscaped Setbacks
The required width of the landscape setback is determined by the classification of the adjacent street right-of-way as designated on the Colorado Springs Major Thoroughfare Plan. These minimum setback widths, exclusive of the adjacent street right-of-way, are as follows:

1. Adjacent to a major arterial, expressway or freeway on the City’s Major Thoroughfare Plan the landscape setback shall be at least twenty-five feet (25′) wide.

2. Adjacent to a minor arterial on the City’s Major Thoroughfare Plan the landscape setback shall be at least twenty feet (20′) wide.

3. Adjacent to any non-arterial street the landscape setback shall be at least ten feet (10′) wide.

4. Adjacent to a non-street boundary of a zone district: No minimum width is required; however, space must be provided for non-street boundary trees or, where applicable, landscape buffer requirements that conform to this Part.

Policy 320.

1. A copy of the City’s Major Thoroughfare Plan is provided as Appendix C. A map of the State Highways within the City is provided as Appendix D.

2. The landscape setback may be approved at less than required depth on up to one-half of the street frontage if the average depth of the landscaped setback complies with the required depth. This type of Administrative Relief may allow for a desirable pedestrian-oriented space in lieu of a relatively short and narrow landscaped strip where site planning options are significantly limited.

3. Driveways and sidewalks to afford limited access may be allowed to interrupt this required space.

4. Public sidewalks may be permitted to “meander” into a required landscaped setback or double frontage lot streetscape area if landscaping is provided and maintained in the right-of-way to adequately compensate for the loss of landscaping in the setback or streetscape area.

5. No motor vehicle lots, or loading or utility service areas shall be permitted in a landscape setback.

6. Administrative Relief may be used to waive non-street, zone boundary trees if the subject boundary is located within a common parking lot planned for two adjoining districts, (such as an OC district and a PBC district). Parking lot trees, would be required, however.

C. Required Minimum Widths of Double Frontage Lot Streetscapes
The required width of the streetscape is determined by the classification of the adjacent street right-of-way as designated on the Colorado Springs Major Thoroughfare Plan. These minimum streetscape widths, exclusive of the adjacent street right-of-way, are as follows:

1. Adjacent to an expressway on the City’s Major Thoroughfare Plan the double frontage lot streetscape shall be at least twenty-five feet (25′) wide.

2. Adjacent to a major arterial on the City’s Major Thoroughfare Plan the double frontage lot streetscape shall be at least fifteen feet (15′) wide.

3. Adjacent to a minor arterial on the City’s Major Thoroughfare Plan the double frontage lot streetscape shall be at least ten feet (10′) wide.

4. Adjacent to any non-arterial street the double frontage lot streetscape shall be at least six feet (6′) wide.

D. Required Trees in Landscape Setbacks and Double Frontage Lot Streetscapes
1. Each landscape setback or double frontage lot streetscape adjacent to a major arterial, expressway, or freeway on the City’s Major Thoroughfare Plan shall contain at least one tree for every twenty linear feet (20′) of setback, streetscape or fraction thereof, as measured from the corners of the property.

2. Each landscape setback or double frontage lot streetscape adjacent to a minor arterial on the City’s Major Thoroughfare Plan shall contain at least one tree for every twenty-five linear feet (25′) of set-
back, streetscape or fraction thereof, as measured from the corners of the property.

3. Each landscape setback or double frontage lot streetscape adjacent to any non-arterial street shall contain at least one tree for every thirty linear feet (30') of setback, streetscape or fraction thereof, as measured from the corners of the property.

4. Each landscape setback adjacent to a non-street, zone boundary shall contain at least one tree for every thirty linear feet (30') of non-street, zone boundary length. In lieu of a landscape setback, required trees shall be located in planters or planting areas that are a minimum of one hundred fifty (150) square feet in area for each tree. Trees shall be protected from vehicular damage.

5. Landscape setback and double frontage lot streetscape trees may be substituted with shrubs and ornamental grasses up to the percentage allowed in the Landscape Policy Manual.

7. Up to twenty-five percent (25%) of the required setback or streetscape trees may be substituted with shrubs and/or ornamental grasses.
   a. Ten (10) shrubs with a minimum container size of five (5) gallons shall be provided for each tree that is replaced. And,
   b. Two (2) ornamental grass clumps (indicated as equivalent in Appendix B) with a minimum container size of one (1) gallon may replace each shrub.

8. Up to twenty-five percent (25%) of the double frontage lot streetscape trees may be placed in the rear yard, behind the fence or wall. Any substituted shrubs or ornamental grasses shall be planted in the streetscape.

9. All double frontage lot streetscapes shall consist of low-water-use plants or plants adaptable to low-water-use conditions.

10. Landscape setback and double frontage lot streetscape trees shall not be located in the adjacent public right-of-way where street widening is anticipated, e.g., at arterial intersections.

E. Required Tree Spacing and Location

1. Tree spacing shall accommodate the potential height and spread of the respective species as indicated in Appendix B of the Landscape Policy Manual.

2. The required landscaped setback, double frontage lot setback, and boundary trees may be clustered along a particular frontage or boundary.

3. The required landscaped setback trees may be located in a landscaped setback for which the depth provided is greater than the minimum required depth; however, the required trees shall be located within fifty feet (50') of the property line adjacent to the street.

4. The required non-street, zone boundary trees shall be located within fifty feet (50') of the non-street, zone boundary of the district.

5. The required landscaped setback or double frontage lot streetscape trees may be located in part or in total in the adjacent public right-of-way, provided:
   a. The City Forester's standards for street trees are met in the case of a City street;
   b. The CDOT District Engineer and City Forester approve the trees in the case of a State highway; and,
   c. No conflicts exist with utility easements, drainage facilities or easements.

6. The required landscaped setback trees shall be located in the adjacent public right-of-way area if these trees cannot be placed in the landscaped setback area due to the existing development of the site. However, such trees are required only to the extent that:
   a. The City Forester's standards for street trees are met in the case of a City street;
   b. The CDOT District Engineer and City Forester approve the trees in the case of a State highway; and,
   c. No conflicts exist with utility easements, drainage facilities or easements.

F. Walls and Fences in the Landscape Setback

Walls and fences that are in compliance with the standards of the Landscape Policy Manual are permitted in the landscape setback.

11. Walls and fences are permitted that complement the architectural components of the site, are sufficiently low or open to permit views for security and safety, and for which any opaque portion does not exceed a height of three feet (3') above grade at the base of the wall. Opaque walls and fences higher than three feet (3') (such as noise barriers) must be located outside of the landscaped setback to maintain a landscaped appearance along the street.
12. Administrative Relief may be granted for retaining walls higher than three feet (3') in a required landscaped setback where special grading conditions exist. Such retaining walls shall be visually softened by plantings of trees and shrubs.

13. A landscape credit of up to one (1) shrub for every five linear feet (5') of wall may be approved.

G. Walls and Fences in the Double Frontage Lot Streetscape
A wall or fence that is in compliance with the standards of the Landscape Policy Manual shall be required.

14. For double frontage lot streetscapes, pilasters of brick, concrete or stucco shall be required and located every sixty feet (60') on center or closer. A double-sided fence filled with noise absorbing material may be required to reduce traffic noise impacts adjacent to arterial streets.

15. Except in the case of a special improvement maintenance district (SIMP), a tract owned and maintained by a homeowners association is the preferred form of ownership of the double frontage lot streetscape.

16. The City Attorney and City Planning shall jointly review homeowner association covenants to ensure that an adequate maintenance entity with fund collection and enforcement powers is established.

H. Parking Prohibitions
The landscaped setback requirements in this Section are superseded, where applicable, by the front yard parking prohibitions in Article 4, Part 2, General Provisions, Restrictions and Prohibitions, of this Zoning Code. The front setback requirement and parking prohibition may cause a greater landscaped setback than required by this Section.

1. Conduct any necessary grading in a manner that closely follows the existing natural contours of the land, or modify the land in ways that create spaces that can be reasonably landscaped and maintained.

2. Filter and reduce the glare of reflected sunlight and headlights.

3. Mitigate the impact of fumes, dust, wind, noise and gaseous pollutants.

4. Reduce the rate of stormwater runoff and increase groundwater recharge by the use of pervious areas.

5. Enhance the motor vehicle lot by providing shade, visually screening parked cars, and dividing large expanses of pavement.

6. Reinforce separation of pedestrians and vehicles to facilitate traffic flow and safety.

7. Establish a harmonious landscape theme among architecturally diverse buildings and with the adjacent street.

B. Landscaping Requirements
Landscaping of open, off-street motor vehicle lots is required. Landscaping within or adjacent to motor vehicle lots shall consist of required trees, screening vegetation or devices, and ground plane cover, and shall be subject to the following conditions and requirements:

1. Landscaping outside of motor vehicle lots may not be used to meet the internal landscaping requirement.

2. The required minimum standards for planters, plant materials, and spacing shall comply with standards in the Landscape Policy Manual.

C. Tree Requirements
1. In any motor vehicle lot with fifteen (15) or more vehicular spaces that is not inside a garage, at least one (1) shade tree shall be provided for every fifteen (15) vehicular spaces or fraction thereof.

2. Shade tree plantings shall be within or adjacent to the motor vehicle lot, clustered, or planted singly in planters, tree islands at the end of parking bays, in medians, between rows of cars, or as part of a continuous landscape strip. Planters shall conform to the Landscape Policy Manual standards.

3. All motor vehicle lots that share unified ingress or egress shall be considered as a single motor vehicle lot for the purpose of computing the required number of trees, notwithstanding ownership.
Policy 321.

1. Coniferous evergreen trees may be approved if such trees are planted in areas that exceed the minimum planter size where necessary to prevent hazards to traffic or pedestrian visibility.

2. In the case of an automobile sales business one parking space shall be equal to every two hundred fifty (250) square feet or fraction, thereof in area used for display or storage.

3. Planter Standards
   A. Where motor vehicle lot soil has been compacted by grading operations, the soil of any planter within the lot shall be structurally renovated (tilled) or removed to a depth of thirty inches (30") and replaced with an acceptable growing medium for the species indicated for installation.
   B. Any tree planting space (planter) within a motor vehicle lot shall be at least three hundred (300) square feet in size to provide adequate soil rooting space.
   C. Where more than one tree occupies any motor vehicle lot planter, each tree shall be allocated at least one hundred fifty (150) square feet of planter space (or the equivalent soil rooting volume) per tree.
   D. Minimum motor vehicle lot planter width shall be ten feet (10')
   E. Required trees may be planted in other site category areas, provided they are located within five to eight feet (5' - 8') of a paved motor vehicle lot, and tree spacing requirements are maintained.
   F. Spacing of trees and shrubs shall be consistent with the ranges of height and spread for the respective species indicated in Appendix B.

D. Tree Preservation as Alternative Compliance
   In lieu of the required one (1) shade tree for every fifteen (15) vehicular spaces or fraction thereof, tree preservation as credit may be approved in accordance with Article 4, Part 2 and 3 of the Zoning Code.

E. Required Screening
   1. Open, vehicular spaces shall be screened from view from adjacent streets and properties.
   2. The screen shall be provided for at least two-thirds (2/3) of each frontage of any applicable motor vehicle lot. The width of intersecting driveways shall not be included in the calculation of length.

3. Screening shall consist of plantings or a combination of plantings and berms that have an eventual height of at least three feet (3'), and meet the requirements and the standards of the Landscape Policy Manual.

4. Structures such as decorative walls or fences may be permitted, provided the reviewing planner finds that:
   a. The total use of plantings and/or berms is not physically feasible, and
   b. The structures attractively complement the use of plantings and/or berms, or
   c. The structures avoid a blank and monotonous appearance by such measures as architectural articulation and the planting of vines, shrubs or trees.

5. Parking garages shall be screened from streets and adjacent properties by vegetation in compliance with 7.4.323, Landscape Buffers and Screens.

4. Vehicle Lot Screening Standards
   A. In general, the reference elevation for the base of the required vehicle lot screen shall be the surface of the vehicular space that is to be screened.
   B. The height of screening plants shall be consistent with the mature heights indicated in Appendix B.
   C. Spacing of screening plants shall be consistent with the range for typical spread for the species as indicated in Appendix B.
   D. At least fifty percent (50%) of required screening plants shall be needle or broad-leaved evergreen plants.
   E. Earthen berms shall conform to the slope and berm standards of Policy 313.

E. Safe Sight Distances and Security
   Plantings shall comply with Article 4, Part 1 for corner visibility at all points of access to and from a street, and shall not significantly inhibit the view into motor vehicle lots for security purposes.
INTERNAL LANDSCAPING

Chapter 7, Article 4, Section 322

A. Purpose
The purpose of internal landscaping requirements is to augment landscape setback, buffer and motor vehicle lot landscaping requirements in the following ways:

1. Internal landscaping shall visually soften the mass of buildings and visually separate building areas from motor vehicle lots.

2. Internal landscaping shall be adapted to the site, reflect the varying microclimates and respective building facade orientations, and visually tie the buildings and motor vehicle lots to the site and to the larger regional context.

B. Internal Area and Tree Requirements
Internal landscaping requirements and tree quantities shall apply to development projects in all zone districts as follows:

1. Nonresidential projects in any zone district:
   a. Minimum internal landscaping area: Five percent (5%) of the site’s net area (site’s area excluding adjacent public streets).
   b. Minimum number of trees: At least one tree for every five hundred (500) square feet of the required minimum internal landscaping area.
   c. Up to one hundred percent (100%) of the required trees may be substituted by shrubs.

2. Multi-family projects in any zone district:
   a. Minimum internal landscaping area: Fifteen percent (15%) of the site’s net area (site’s area excluding adjacent public streets).
   b. Minimum number of trees: At least one tree for every five hundred (500) square feet of the required minimum internal landscaping area.
   c. Up to fifty percent (50%) of the required trees may be substituted by shrubs.

Policy 322.

1. Shrub substitutes for trees are allowed at a ratio of ten (10) shrubs, with a container size of one (1) gallon, for one shrub.

2. Each building area within a development plan (with multiple building areas) is not required to meet the five percent (5%) internal landscaping requirement, as long as the entire development plan complies with the internal landscaping requirement. The internal landscaping should be generally distributed among the building areas with an emphasis near those building elevations, which form the major public views of the project.

C. Acceptable Locations for Internal Landscaping
The location of areas credited toward the minimum internal landscaping area requirement shall be consistent with the provisions of the Landscape Policy Manual.

4. To be credited toward the minimum internal landscaping area requirement, a landscaped area shall be located as follows:
   A. Adjacent to those building elevations that form major public views of the project from adjacent streets and properties and to the users of the project, or
   B. Within a plaza or courtyard between buildings or portions of buildings, or
   C. In a space provided to separate building areas from parking areas, or
   D. In an “oasis” area of the site with intensive plantings near building entrances or pedestrian gathering places or in motor vehicle lots, or
   E. In a similar location that substantially conforms to the stated purpose of the required internal landscaping area (see above), if approved by City Planning.

5. Motor vehicle lot tree planters may be credited as internal landscaping where shrubs with a minimum container size of five (5) gallons and/or equivalent grasses (indicated in Appendix B) with a minimum container size of one (1) gallon are used as ground cover in the tree planters.

6. Internal landscaping is to provide relief from structures and hard surfaces in a project through the use of plantings. Therefore, sidewalks that provide basic pedestrian circulation only shall not be credited toward the minimum internal landscaping area requirement.

7. Paved plazas may be credited to a maximum of fifty percent (50%) of the required internal landscaping area if such plazas have trees that provide visual relief to those building elevations that form major public views of the project.

8. Administrative Relief may be granted to the internal landscaping requirement for heavy in-
dustrial projects such as cement plants and heavy equipment storage yards. Internal landscaping may be inappropriate within the manufacturing and storage areas of such projects. The area may be allowed to be exempted from the site area calculation (of which five percent (5%) must be landscaped). Internal landscaping may be required, however, adjacent to the main entrances and/or office areas of such projects.

9. That portion of a landscape setback that is in excess of the minimum depth may be approved by City Planning to be credited toward the required internal landscaping.

D. Tree Setbacks from Adjacent Buildings and Pavement
Plant spacing shall allow for the growth characteristics of trees without adversely affecting the maintenance or use of structures, walks, or drives. Setback distances from buildings shall allow for mature growth of trees in accordance with Appendix B of the Landscape Policy Manual.

10. Internal Landscaping Planting Standards
   A. Microclimates adjacent to each building facade shall be identified and appropriately planted.
   B. Vegetation planted adjacent to buildings shall be setback at least one-half of the minimum typical spread for the species as indicated in Appendix B.
   C. Any planting area adjacent to a building shall be a minimum of three feet (3') wide in any direction.
   D. Plaza planters shall provide an area of at least 150 square feet for each tree.

LANDSCAPE BUFFERS AND SCREENS

Chapter 7, Article 4, Section 323

A. Purpose
Landscape buffers and screens shall be provided between incompatible land uses that are either adjacent to or directly across from each other. Screening shall provide visual barriers between different land uses, enhance the streetscape, provide privacy, and protect uses from wind, dust, noise, traffic, glare, visual disorder, and harmful or noxious effects.

B. Existing Structures
No buffer requirement shall be construed as mandating the demolition, alteration or removal of any existing structures. However, demolition or removal of any structure occupying a buffer shall cause the full buffer requirement to be applied to the space so vacated.

C. Required Buffers and Screens
Landscape buffers or screens are required in the following locations:

1. A buffer is required between a nonresidential use and a residential use or vacant residentially zoned property where such uses are separated by a non-arterial street or a public alley.

2. A buffer is required along the common property line between an adjacent nonresidential use and a residential use or vacant residentially zoned property.

3. A buffer is required between a multi-family residential use and a one-family or two family residential use or vacant one-family or two-family zoned property.

4. A buffer is required between a nonresidential or multi-family use and a property zoned PK (Public Park).

5. A screen is required around any refuse collection areas, including trash bins.

6. A screen from view from adjacent properties and streets is required for any loading or utility service area, vehicle repair bay, or vehicle fueling area.

Policy 323.

1. Required screening for loading and utility service areas, vehicle repair bays and vehicle fueling areas may not be necessary in all situations. For example, it is not necessary to screen a loading dock on one industrial property from the view from a loading dock on an adjacent industrial property, if there are no other major public views of the loading dock.

D. Locations
Landscape buffers and screens shall be located entirely on site.

E. Required Widths

1. A buffer shall be at least fifteen feet (15') wide where required.

2. A screen consisting of vegetation shall be at least six feet (6') wide where required, except for motor vehicle lot screening that conforms to this Section.
UNIT THREE  SITE CATEGORY REQUIREMENTS

F. Required Trees and Spacing
   1. At least one (1) tree shall be planted for every twenty (20) linear feet of buffer length or fraction thereof.
   2. At least fifty percent (50%) of the plantings shall be evergreen.
   3. Tree spacing shall be based on the potential heights and spreads of the individual species as indicated in Appendix B of the Landscape Policy Manual.

     2. When buffer landscaping abuts an existing wall on an adjacent lot, and with the written permission the owner of the wall, vines on the wall may be substituted for up to one-third of the required trees.

G. Required Fences and Architectural Screens
An opaque structure shall be required along the inside edge (private property side) of any required buffer.
   3. The minimum standards of the buffer may be varied to reflect the varying interface of the uses. For example, the required opaque structure may not be required between two landscaped spaces.
   4. The requirement for an opaque structure in a buffer between non-residential and residential uses separated by a non-arterial street may be waived through Administrative Relief if City Planning finds that the structure is not necessary for the protection of the privacy and quiet of the nearby residential use or zone.

H. Screen Height
   1. A required opaque structure (fence or wall) shall be at least six feet (6') in height or as otherwise specified in the Landscape Policy Manual.
   2. A required vegetation screen shall be at least six feet (6') in height, except for motor vehicle lot screening required in this Part.

5. Buffer and Screen Planting Standards
   A. Spacing of buffer and screening plants shall be consistent with the range for typical spread for the species as indicated in Appendix B.
   B. At least fifty percent (50%) of required buffer and screening plants shall be needled or broad-leaved evergreen plants.
   C. Fastigate forms of species are recommended.

STREET TREES IN PARKWAYS

Chapter 7, Article 4, Section 324

A. Purpose
   Street trees in parkways are intended to provide a canopy along the street, contribute to spatial definition and human scale, and to provide shade and mitigate deleterious effects of the urban environment.

B. Authority
   The City Forester shall administer the standards for street trees and review the species selection, sizes, locations, and spacing.

C. Tree Selections
   Species selection shall comply with the City Forester’s publication “Trees for Colorado Springs” or, with approval, those trees designated as street trees in Appendix B of the Landscape Policy Manual.

D. Street Parkway Width Standards
   The provision of trees within parkways shall comply with the standards of the Landscape Policy Manual and the “Forestry Rules and Regulations” of the City Forester.

Policy 324.
   1. Parkway Planting Standards
      A. Street trees shall be selected from Appendix B or from the “Trees for Colorado Springs” list provided by the City Forester.
      B. A permit shall be secured from the City Forester prior to planting any tree in a parkway.
      C. Trees shall be located at least five feet (5') from the face of curb along major or minor arterials on the City Major Thoroughfare Plan. Otherwise, trees shall be centered within the planting area of a parkway. The planting area of a parkway shall not be less than four feet (4') wide.
      D. In parkways with attached sidewalks, trees shall be planted at least five feet (5') from the sidewalk.
      E. No tree shall be planted closer than five feet (5') to any driveway, nor be planted so as to eventually obstruct any public or utility improvement.
      F. The fifty-five foot (55') corner visibility triangle shall be kept free of obstructions so that traffic visibility is not obscured. Trees shall not be planted closer than forty feet (40') to any street corner. No other plantings may exceed thirty inches (30’).
at mature height above the curb within the corner visibility triangle.

G. Trees shall be located and maintained to preserve a clear zone of at least six feet from fire hydrants, utility poles, street light standards and above ground utility structures such as transformer enclosures.

H. Trees shall be planted at least three feet (3') from underground utilities such as sewers, water, gas, electric and telephone. Contact Utility Locators at (800) 922-1987 before digging.

I. Tree species for planting under utility lines shall be selected from Appendix B based on the height and spread indicated for the species. Height range shall not exceed twenty-five feet (25').

J. Tree sizes and spacing for planting in parkways shall conform to the range of average mature spread for each respective species in Appendix B or to the Forestry Rules and Regulations provided by the City Forester.

K. Substitutions of tree species in parkways shall be approved by the City Forester.

2. New Home Tree Program

The new home tree program is administered by City Forestry under Chapter 4, Article 4, Part 3 (Street Tree Fee, Fund) of the City Code to encourage planting of street trees along the arterial or collector street frontages of single family and two family residential lots.
# Appendix A: Regional Plant Communities

## 1. Semi-arid Shrublands

<table>
<thead>
<tr>
<th>No Regionally Occurring Native Trees</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Seriphidium canum</em> (syn: <em>Artemisia cana</em>)</td>
</tr>
<tr>
<td>Sagebrush: Silver</td>
</tr>
<tr>
<td><em>Seriphidium tridentatum</em> (syn: <em>Artemisia tridentata</em>)</td>
</tr>
<tr>
<td>Sagebrush: Big</td>
</tr>
<tr>
<td><em>Tetradymia spinosa</em></td>
</tr>
<tr>
<td>Horsebrush: Spiny</td>
</tr>
<tr>
<td><em>Yucca glauca</em></td>
</tr>
<tr>
<td>Yucca: Narrow-leaf</td>
</tr>
</tbody>
</table>

### Regionally Occurring Native Shrubs

- *Amelanchier utahensis*  
  Serviceberry: Utah
- *Artemisia filifolia*  
  Sagebrush: Sand
- *Atriplex canescens*  
  Saltbrush: Four-wing
- *Atriplex confertifolia*  
  Saltbrush: Spiny
- *Chrysothamnus depressus*  
  Rabbitbrush
- *Chrysothamnus nauseosus*  
  Rabbitbrush
- *Cowania mexicana*  
  Cliffrose: Mexican
- *Echinocereus triglochidiatus*  
  Cactus: Clare Cup
- *Echinocereus viridiflorus*  
  Cactus: Hedgehog
- *Eleagnus commutata*  
  Silverberry
- *Euronia lanata* (syn: *Ceratoïdes*)  
  Winterfat
- *Gutierrezia sarothrae*  
  Snakeweed: Broom
- *Opuntia imbricata*  
  Cactus: Cholla
- *Prunus besseyi*  
  Cherry: Sand
- *Prunus pensylvanica*  
  Cherry: Pin
- *Prunus virginiana melanocarpa*  
  Chokecherry
- *Purshia tridentata*  
  Antelope Bitterbrush
- *Rosa woodsii*  
  Rose: Woods
- *Rubus deliciosus*  
  Raspberry: Boulder
- *Rubus idaeus*  
  Raspberry
- *Sarcobatus vermiculatus*  
  Greasewood

## 2. Pinon-Juniper Woodlands

### Regionally Occurring Native Trees

- *Juniperus monosperma*  
  Juniper: One-seed
- *Juniperus scopulorum*  
  Juniper: Rocky Mountain
- *Pinus edulis*  
  Pine: Pinon
- *Pinus ponderosa*  
  Pine: Ponderosa

### Regionally Occurring Native Shrubs

- *Amelanchier alnifolia*  
  Serviceberry: Saskatoon
- *Amelanchier utahensis*  
  Serviceberry: Utah
- *Amorpha fruticosa*  
  Indigo Bush
- *Atriplex canescens*  
  Saltbrush: Four-winged
- *Atriplex confertifolia*  
  Saltbrush: Spiny
- *Cercocarpus ledifolius*  
  Mahogany: Curl-leaf
- *Cercocarpus montanus*  
  Mahogany: Mountain
- *Chaenactis millefolium*  
  Fernbush
- *Chrysothamnus nauseosus*  
  Rabbitbrush
- *Clematis ligusticifolia*  
  Virgin's Bower
- *Coryphantha vivipara*  
  Cactus: Spiny Star
- *Cowania mexicana*  
  Cliffrose
- *Echinocereus triglochidiatus*  
  Cactus: Clare Cup
- *Echinocereus viridiflorus*  
  Cactus: Hedgehog
- *Ephedra viridis* (E. torreyana)  
  Mormon Tea
- *Euronia lanata* (syn: *Ceratoïdes*)  
  Winterfat
- *Fallugia paradoxa*  
  Apache Plume
- *Fendlera rupicola*  
  Mockorange: False

- *Gutierrezia sarothrae*  
  Snakeweed: Broom
- *Holodiscus drousus*  
  Mountain Spray
- *Juniperus communis*  
  Juniper: Common
- *Phyllephus microphyllus*  
  Mockorange: Little-leaf
- *Purshia tridentata*  
  Antelope Bitterbrush
- *Quercus gambelii*  
  Oak: Gambels
- *Rhus aromatica*  
  Sumac: Fragrant
- *Rhus trilobata*  
  Sumac: Three-leaf
- *Ribes aureum*  
  Currant: Golden
- *Ribes cereum*  
  Currant: Wax
- *Ribes inerme*  
  Gooseberry
- *Seriphidium tridentatum*  
  (syn: *Artemisia tridentata*)  
  Sagebrush: Big
- *Shepherdia canadensis*  
  Buffalograss: Canada
- *Yucca glauca*  
  Yucca: Narrow-leaf
### 3. Prairie

#### No Regionally Occurring Native Trees

#### Regionally Occurring Native Shrubs

- **Amorpha fruticosa**
  Indigo Bush
- **Artemisia filifolia**
  Sagebrush: Sand
- **Atriplex gardneri**
  Saltbrush: Silverscale
- **Atriplex canescens**
  Saltbrush: Four-wing
- **Chrysothamnus nauseosus**
  Rabbitbrush
- **Chrysothamnus viscidiflorus**
  Rabbitbrush: Green
- **Coryphantha vivipara**
  Cactus: Spiny Star
- **Echinocereus viridiflorus**
  Cactus: Hedgehog
- **Eurotia lanata** (syn: *Ceratoides*)
  Winterfat
- **Gutierrezia sarothrae**
  Snakeweed: Broom
- **Opuntia imbricata**
  Cactus: Cholla
- **Opuntia spp**.
  Cactus: Prickly-pear
- **Rhus aromatica**
  Sumac: Fragrant
- **Rhus trilobata**
  Sumac: Three-leaf, Skunkbrush
- **Sarcobatus vermiculatus**
  Greasewood
- **Seriphidium tridentatum**
  (syn: *Artemisia tridentata*)
  Sagebrush: Big
- **Yucca glauca**
  Yucca: Narrow-leaf

### 4. Lower Elevation Riparian

#### Regionally Occurring Native Trees

- **Acer negundo**
  Boxelder
- **Betula occidentalis**
  Birch: Western
- **Celtis occidentalis**
  Hackberry
- **Celtis reticulata**
  Hackberry: Netleaf
- **Populus x acuminata**
  Cottonwood: Lanceleaf
- **Populus angustifolia**
  Cottonwood: Narrow-leaf
- **Populus fremontii**
  Cottonwood: Fremont
- **Populus sargentii**
  Cottonwood: Plains
- **Salix amygdaloides**
  Willow: Peach-leaved

#### Regionally Occurring Native Shrubs

- **Amelanchier canadensis**
  Serviceberry: Shadbush
- **Amorpha fruticosa**
  Indigo Bush
- **Cornus stolonifera**
  Dogwood: Red-osier
- **Parthenocissus vitacea**
  Thicket Creeper
- **Prunus americana**
  Plum: American
- **Prunus besseyi**
  Cherry: Sand
- **Prunus pensylvanica**
  Cherry: Pin
- **Prunus virginiana melanocarpa**
  Chokecherry
- **Rhus aromatica**
  Sumac: Fragrant
- **Rhus trilobata**
  Sumac: Three-leaf
- **Robinia neomexicana**
  Locust: New Mexican
- **Ribes aureum**
  Currant: Golden
- **Ribes cereum**
  Currant: Wax
- **Ribes inerme**
  Gooseberry
- **Rosa woodsii**
  Rose: Woods
- **Rubus delicious**
  Raspberry: Boulder
- **Rubus idaeus**
  Raspberry: Red
- **Rubus parviflorus**
  Thimbleberry
- **Salix exigua**
  Willow: Coyote
- **Salix exigua**
  Willow: Coyote
- **Salix purpurea**
  Willow: Basket
- **Salix fragilis**
  Willow: Crack
- **Salix purpurea**
  Willow: Basket
- **Tamarix ramosissima**
  Tamarix

#### Historically Adapted Trees

- **Fraxinus pennsylvanica**
  Ash: Green
- **Populus deltoides**
  Cottonwood: Common
- **Ulmus pumila**
  Elm: Siberian
- **Robinia pseudoacacia**
  Locust: Black
- **Eleagnus angustifolia**
  Russian Olive

#### Historically Adapted Shrubs

- **Parthenocissus quinquefolia**
  Virginia Creeper, Woodbine
- **Salix fragilis**
  Willow: Crack
- **Salix purpurea**
  Willow: Basket
- **Tamarix ramosissima**
  Tamarix
5. Foothill Shrublands

Regionally Occurring Native Trees

*Acer glabrum*  
Maple: Rocky Mountain

*Betula occidentalis*  
Birch: Western

*Crataegus erythroptoda*  
Hawthorn

*Crataegus macrantha*  
Hawthorn: Redhawk

*Juniperus monosperma*  
Juniper: One-seed

*Juniperus scopulorum*  
Juniper: Rocky Mountain

*Populus angustifolia*  
Cottonwood: Narrowleaf

*Prunus americana*  
Plum: American

*Rhus glabra cismontana*  
Sumac: Rocky Mountain

*Rhus trilobata*  
Sumac: Three-leaf

*Rhus typhina*  
Sumac: Staghorn

*Ribes aureum*  
Currant: Golden

*Ribes cereum*  
Currant: Wax

*Ribes inermis*  
Gooseberry

*Rosa woodsii*  
Rose: Woods

*Rubus deliciosus*  
Raspberry: Boulder

*Rubus idaeus ssp. melanolasius*  
Raspberry: Wild

*Rubus parviflorus*  
Thimbleberry

*Seriphidium canum*  
(syn: *Artemisia cana*)  
Sagebrush: Silver

*Seriphidium tridentatum*  
(syn: *Artemisia tridentata*)  
Sagebrush: Big

*Shepherdia canadensis*  
Buffaloberry: Canada

*Symphoricarpos oreophilus*  
Snowberry: Mountain

*Yucca glauca*  
Yucca: Narrow-leaf

Regionally Occurring Native Shrubs

*Amelanchier alnifolia*  
Serviceberry: Saskatoon

*Amelanchier canadensis*  
Serviceberry: Shadbowl

*Amelanchier utahensis*  
Serviceberry: Utah

*Amorpha canescens*  
Leadplant

*Amorpha fruticosa*  
Indigo Bush

*Artemisia filifolia*  
Sagebrush: Sand

*Atriplex canescens*  
Saltbush: Four-wing

*Atriplex confertifolia*  
Saltbush: Spiny

*Ceanothus fendleri*  
Buckbrush: Fendler's

*Cercocarpus ledifolius*  
Mahogany: Curly-leaf

*Cercocarpus montanus*  
Mahogany: Mountain

*Chrysothamnus depressus*  
Rabbitbrush

*Chrysothamnus nauseosus*  
Rabbitbrush

*Echinocereus viridiflorus*  
Cactus: Hedgehog

*Eleagnus commutata*  
Silverberry

*Eucalyptus lanata* (syn: *Ceratoides*)  
Winterfat

*Fallugia paradoxa*  
Apache Plume

*Forestiera neomexicana*  
Privet: New Mexican

*Holodiscus dumosus*  
Mountain Spray

*Jamesia americana*  
Waxflower

*Mahonia repens*  
Grapeholy: Creeping

*Opuntia polyacantha, O. macrorhiza*  
Cactus: Prickly-pear

*Parthenocissus vitacea*  
Thicket Creeper

*Pediocactus simpsonii*  
Cactus: Mountain Ball

*Physocarpus monogynus*  
Ninebark: Mountain

*Physocarpus opulifolius*  
Ninebark: Common

*Potentilla fruticosa*  
Potentilla: Shrubby

*Prunus besseyi*  
Cherry: Sand

*Prunus pensylvanica*  
Cherry: Pin

*Prunus virginiana melanocarpa*  
Chokecherry

*Purshia tridentata*  
Anelope Bitterbrush

*Quercus gambelii*  
Oak: Gambels

*Rhamnus cathartica*  
Buckthorn: Common

*Rhus aromatica*  
Sumac: Fragrant

*Rhus glabra*  
Sumac: Smooth

Historically Adapted Trees

*Fraxinus pennsylvanica*  
Ash: Green

*Ulmus pumila*  
Elm: Siberian

Historically Adapted Shrubs

*Parthenocissus quinquefolia*  
Virginia Creeper

*Lonicera tatarica*  
Honeysuckle
6. Ponderosa Pine Forest

Regionally Occurring Native Trees

*Abies concolor*
Fir: White

*Acer glabrum*
Maple: Rocky Mountain

*Juniperus monosperma*
Juniper: One-seed

*Juniperus scopolorum*
Juniper: Rocky Mountain

*Picea pungens*
Spruce: Blue

*Pinus edulis*
Pine: Píton

*Pinus flexilis*
Pine: Limber

*Pinus ponderosa*
Pine: Ponderosa

*Pinus strobiformis*
Pine: Southwestern White

*Populus tremuloides*
Aspen: Quaking

*Pseudotsuga menziesii*
Douglas-fir

Prunus americana
Plum: American

*Prunus pensylvanica*
Cherry: Pin

*Prunus virginiana melanocarpa*
Chokecherry

*Purshia tridentata*
Antelope Bitterbrush

*Quercus gambelii*
Oak: Gambel’s

*Rhus aromatica*
Sumac: Fragrant

*Rhus glabra*
Sumac: Smooth

*Rhus glabra cismontana*
Sumac: Rocky Mountain

*Rhus trilobata*
Sumac: Three-leaf

*Ribes aureum*
Currant: Golden

*Ribes cereum*
Currant: Wax

*Ribes inermé*
Gooseberry

*Robinia neomexicana*
Locust: New Mexican

*Rosa woodsii*
Rose: Woods

*Rubus idaeus ssp. melanolasius*
Raspberry: Wild

*Rubus deliciosus*
Raspberry: Boulder

*Seriphidium tridentatum* (syn: *Artemisia tridentata*)
Sagebrush: Big

*Shepherdia canadensis*
Buffaloberry: Canada

*Yucca glauca*
Yucca: Narrow-leaf

Historically Adapted Shrubs

*Lonicera tatarica*
Honeysuckle

*Rhus typhina*
Sumac: Staghorn
7. Upper Elevation Riparian

**Regionally Occurring Native Trees**
- *Abies concolor*  
  Fir: White
- *Abies lasiocarpa*  
  Fir: Subalpine
- *Acer grandidentatum*  
  Maple: Canyon
- *Acer negundo*  
  Boxelder
- *Alnus tenuifolia*  
  Alder: Mountain
- *Amelanchier utahensis*  
  Serviceberry: Utah
- *Betula fontinalis*  
  Birch: River
- *Betula occidentalis*  
  Birch: Western
- *Celtis occidentalis*  
  Hackberry
- *Corylus cornuta*  
  Hazelnut: Beaked
- *Picea pungens*  
  Spruce: Colorado Blue
- *Pinus ponderosa*  
  Pine: Ponderosa
- *Populus x acuminata*  
  Cottonwood: Lanceleaf
- *Populus angustifolia*  
  Cottonwood: Narrowleaf
- *Populus balsamifera*  
  Poplar: Balsam
- *Populus sargentii*  
  Cottonwood: Plains
- *Pseudotsuga menziesii*  
  Douglas-fir
- *Salix amygdaloides*  
  Willow: Peach-leaf
- *Sorbus scopulina*  
  Ash: Mountain

**Regionally Occurring Native Shrubs**
- *Acer glabrum*  
  Maple: Rocky Mountain
- *Amelanchier alnifolia*  
  Serviceberry: Saskatoon
- *Amelanchier canadensis*  
  Serviceberry: Shadbush
- *Betula glandulosa*  
  Birch: Bog

**Historically Adapted Trees**
- *Clematis ligusticifolia*  
  Virgin’s Bower
- *Cornus stolonifera* (syn. *C. sericea*)  
  Dogwood: Red-osier
- *Crataegus erythropyda*  
  Hawthorn
- *Lonicera involucrata*  
  Twinberry
- *Parthenocissus vitacea*  
  Thicket Creeper
- *Potentilla fruticosa*  
  Potentilla: Shrubby
- *Prunus americana*  
  Plum: American
- *Prunus pensylvanica*  
  Cherry: Pin
- *Prunus virginiana melanocarpa*  
  Chokecherry
- *Quercus gambelii*  
  Oak: Gambels
- *Ribes aureum*  
  Currant: Golden
- *Ribes inerme*  
  Gooseberry: Common
- *Rhus glabra*  
  Sumac: Smooth
- *Rhus glabra cismontana*  
  Sumac: Rocky Mountain
- *Robinia neomexicana*  
  Locust: New Mexican
- *Rosa woodsii*  
  Rose: Woods
- *Rubus deliciosus*  
  Raspberry: Boulder
- *Rubus parviflorus*  
  Thimbleberry
- *Salix exigua*  
  Willow: Coyote
- *Salix lutea*  
  Willow: Yellow
- *Sambucus cerulea*  
  Elder: Blue
- *Shepherdia argentea*  
  Buffaloberry: Silver
- *Symphoricarpos oreophilus*  
  Snowberry: Mountain
8. Douglas-fir Forest

<table>
<thead>
<tr>
<th>Regionally Occurring Native Trees</th>
<th>Prunus pensylvanica</th>
<th>Cherry: Pin</th>
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</thead>
<tbody>
<tr>
<td>Prunus virginiana melanocarpa</td>
<td>Chokecherry</td>
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<tr>
<td>Juniperus monosperma</td>
<td>Quercus gambeli</td>
<td>Oak: Gambel's</td>
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<tr>
<td>Juniper: One-seed</td>
<td>Ribes coloradense</td>
<td>Currant: Colorado</td>
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<tr>
<td>Juniperus scopulorum</td>
<td>Ribes inermes</td>
<td>Gooseberry</td>
</tr>
<tr>
<td>Juniper: Rocky Mountain</td>
<td>Ribes wolfi</td>
<td>Currant: Gooseberry</td>
</tr>
<tr>
<td>Picea englemannii</td>
<td>Rosa woodsii</td>
<td>Rose: Woods</td>
</tr>
<tr>
<td>Spruce: Engelmann</td>
<td>Rubus deliciosus</td>
<td>Raspberry: Boulder</td>
</tr>
<tr>
<td>Picea pungens</td>
<td>Rubus idac ssp. melanotatus</td>
<td>Raspberry: Wild</td>
</tr>
<tr>
<td>Spruce: Colorado Blue</td>
<td>Rubus parviflorus</td>
<td>Thimbleberry</td>
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<tr>
<td>Pinus contorta</td>
<td>Shepherdia canadensis</td>
<td>Buffaloberry: Canada</td>
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<tr>
<td>Pine: Lodgepole</td>
<td>Sorbus scopulina</td>
<td>Mountain Ash</td>
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<td>Pinus flexulis</td>
<td>Symphoricarpus oreophilus</td>
<td>Snowberry</td>
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<td>Pine: Limber</td>
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<td>Pinus ponderosa</td>
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<tr>
<td>Pine: Ponderosa</td>
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<tr>
<td>Populus angustifolia</td>
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<tr>
<td>Cottonwood: Narrowleaf</td>
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<td></td>
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<tr>
<td>Populus tremuloides</td>
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<tr>
<td>Aspen: Quaking</td>
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<tr>
<td>Pseudotsuga menziesii</td>
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<tr>
<td>Douglas-fir</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Regionally Occurring Native Shrubs</th>
<th>Spruce: Engelmann</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer glabrum</td>
<td></td>
</tr>
<tr>
<td>Maple: Rocky Mountain</td>
<td></td>
</tr>
<tr>
<td>Amelanchier canadensis</td>
<td></td>
</tr>
<tr>
<td>Serviceberry: Shadblow</td>
<td></td>
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<tr>
<td>Arctostaphylos uva-ursi</td>
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<tr>
<td>Kinnikinnick</td>
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<tr>
<td>Ceanothus fendleri</td>
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<tr>
<td>Buckbrush: Fendler's</td>
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<tr>
<td>Ceanothus velutinus</td>
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<td>Sticky-laurel</td>
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<td>Holodiscus dumasus</td>
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<tr>
<td>Mountain Spray</td>
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<td>Jamesia americana</td>
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<tr>
<td>Waxflower</td>
<td></td>
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<tr>
<td>Juniperus communis</td>
<td></td>
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<tr>
<td>Juniper: Common</td>
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<tr>
<td>Pachistima myrsinites</td>
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<tr>
<td>Mountain-lover</td>
<td></td>
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<tr>
<td>Physocarpus monogynus</td>
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<tr>
<td>Ninebark</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Selected Plants for Colorado Springs

Legend:

**Water Requirement:** The water need of a plant species.

**Expanded Range:** The water tolerance of a plant species.

The average growing season precipitation is 13.2 inches at the Colorado Springs Municipal Airport. This number was used as the base unit for establishing minimum plant water requirements for the City of Colorado Springs.

Variations in actual precipitation, climate zone, microclimate, soil type and preparation, and mulch type and depth will influence a plant’s need/requirement for supplemental water. The first two columns – “Water Requirement” and “Expanded Range” – are a tool for the landscape designer to utilize in grouping plants by like water needs (hydrozoning).

The total water needs and tolerances of plants are given in the following general ranges:

**D - Dry:** The plant requires thirteen to twenty inches (13-20”) of total precipitation per growing season. Such plants need limited supplemental water and can survive periods of drought once established.

**A - Adaptable:** The plant requires eighteen to twenty inches (18-20”) of total precipitation per growing season. Such plants can tolerate a broad range of water environments and are therefore adaptable to a variety of microclimates.

**S - Steady:** The plant requires twenty-three to thirty-eight inches (23-38”) of total precipitation per growing season. Such plants either need regular supplemental water or a microclimate that provides for higher water needs.

**W - Wet:** The plant requires more than thirty-six inches (>36”) of total precipitation per growing season. Such plants must have frequent supplemental water or a microclimate that provides for very high water needs.

**Botanical Name/Common Name**

Plants are categorized as:

- Deciduous trees
- Deciduous shrubs and vines
- Evergreen trees, shrubs, and vines
- Grasses
- Flowers (a recommended, non-comprehensive list)
- Ground covers

Plants that fit into two categories are noted in both. Within these categories, plants are listed alphabetically according to their scientific or botanical names and supplemented with their common names. A plant genus that offers many species and cultivars is noted as spp. and cvs.

**Native Plant Communities of Colorado Springs**

1. Semiarid Shrublands
2. Pinon-Juniper Woodlands
3. Prairie
4. Lower Elevation Riparian
5. Foothill Shrublands
6. Ponderosa Pine Forest
7. Upper Elevation Riparian
8. Douglas-fir Forest

**N — Native plant:** A species that is indigenous within the Colorado Springs City limits and naturally occurring in one or more plant communities.

**B — “Borrowed” native plant:** A species that is indigenous to a regional native plant community, it does not occur naturally in that same community within the Colorado Springs City limits.

**H — Historically adapted plant:** A self-propagating species that is not indigenous to the regional native plant community it occupies, but was likely introduced by early settlers and is now so prevalent as to appear indigenous.

**C — Compatible plant:** A species with genetic or ornamental properties and physiographic requirements that closely resemble those properties and requirements of a plant in a specific regional native plant community or of a plant that is historically adapted to that community.

**USDA Hardiness Zone**

Ratings are only a general guide to winter hardiness. Zones are numbered and divided according to average annual minimum temperatures. In Colorado Springs zones range from 3 to 6. Plant success will vary depending on growing conditions.

- **Zone 3** -40 to -30 degrees F
- **Zone 4** -30 to -20 degrees F
- **Zone 5** -20 to -10 degrees F
- **Zone 6** -10 to 0 degrees F

**Forestry Street Tree**

S - Indicates trees that are approved by City Forestry for planting in public street rights-of-way.
Exposure

Indicates the range of a plant’s shade tolerance.

Soil Preference (Tolerance)

Soil types are generalized. Plant soil preferences are based on research. Soil tolerances are noted where information is available. Saline soils have a pH less than 8.5 and contain exchangeable sodium less than 15. Alkaline soils have a pH greater than 8.5 and contain exchangeable sodium greater than 15.

Height/Width, Growth Rate

Mature size and growth rate will vary for each plant, depending on growing conditions, soil type and amendments, mulch use, sun and wind exposure, watering rate, etc. Height and width reflect the range of expected size at maturity in Colorado Springs.

Growth rate is shown as:
Slow: Grows two to six inches (2-6") or less per year.
Moderate (mod): Grows six to twelve inches (6-12") per year.
Fast: Grows twelve to twenty-four inches or more (12-24") per year.

Habit/Form

The description indicates the plant’s predominant natural form under ideal conditions.

Comments

Additional information about the plant.

Plant Schedule Key

Numbers indicate the native plant communities within which the plant is classified as a “signature plant”. Letters indicate the water requirement and expanded water range, if any, of the plant. The key for each plant utilized is to be noted in the plant schedule of the landscape plan in conformance with Appendix G, Plant Schedule Format.
### Deciduous Shrubs and Vines

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Water Requirement</th>
<th>Plant Community</th>
<th>Exposure</th>
<th>Height</th>
<th>Width</th>
<th>Growth Rate</th>
<th>Habitat Form</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer ginnala and cvs.</td>
<td>Maple: Amur, Ginnala</td>
<td>3</td>
<td>Adaptable</td>
<td>4</td>
<td>6'12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
<td></td>
</tr>
<tr>
<td>Acer glabrum</td>
<td>Maple: Rocky Mountain</td>
<td>3</td>
<td>Adaptable</td>
<td>4</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
<td></td>
</tr>
<tr>
<td>Acer tataricum</td>
<td>Maple: Tatarian</td>
<td>3</td>
<td>Adaptable</td>
<td>4</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
<td></td>
</tr>
<tr>
<td>Amelanchier alnifolia</td>
<td>Serviceberry: Saskatoon, Western</td>
<td>3</td>
<td>Adaptable</td>
<td>4</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
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</tr>
<tr>
<td>Amelanchier canadensis</td>
<td>Serviceberry: Shadbloom</td>
<td>4</td>
<td>Adaptable</td>
<td>4</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
<td></td>
</tr>
<tr>
<td>Amelanchier stolonifera</td>
<td>Serviceberry: Running</td>
<td>5</td>
<td>Adaptable</td>
<td>4</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
<td></td>
</tr>
<tr>
<td>Amelanchier utahensis</td>
<td>Serviceberry: Utah</td>
<td>5</td>
<td>Adaptable</td>
<td>5</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
<td></td>
</tr>
<tr>
<td>Amorpha canescens and cvs.</td>
<td>Leadplant</td>
<td>3</td>
<td>Adaptable</td>
<td>3</td>
<td>5'-20'/5'-20'</td>
<td>Round</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
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<tr>
<td>Amorpha fruticosa</td>
<td>Indigo Bush</td>
<td>3</td>
<td>Adaptable</td>
<td>3</td>
<td>5'-20'/5'-20'</td>
<td>Round</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
<td></td>
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<tr>
<td>Aronia arbutifolia and cvs.</td>
<td>Chokeberry: Brilliant Red</td>
<td>4</td>
<td>Adaptable</td>
<td>4</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
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<tr>
<td>Aronia melanocarpa</td>
<td>Chokeberry: Black</td>
<td>4</td>
<td>Adaptable</td>
<td>4</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
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<tr>
<td>Artemisia abrotanum</td>
<td>Sagebrush: Southernwood, Old Man</td>
<td>4</td>
<td>Adaptable</td>
<td>4</td>
<td>6'-12'/6'-12'</td>
<td>Upright or oval</td>
<td>Hardy</td>
<td>Fall color. Root in moist well drained soil, prefer in heavy clay. Tolerates pruning.</td>
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</tbody>
</table>

**Legend:**
- **Water Requirement:**
  - = dry 13° - 20°
  - = adaptable 18° - 28°
  - = steady 23° - 38°
  - = wet > 36°
- **Plant Community:**
  - = Native to Colorado Springs
  - = Borrowed from similar regional plant community
  - = Historically adapted introduced plant
  - = Compatible with plant community
- **Exposure:**
  - = Sun
  - = Part-Sun
  - = Shade
  - = Limited use plants
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<tbody>
<tr>
<td>Artemisia filifolia</td>
<td>Sagebrush: Sand</td>
<td>D</td>
<td>B</td>
<td>C</td>
<td>C</td>
<td>N</td>
<td>2</td>
<td>4</td>
<td>Sandy-loam</td>
<td>1-3'/3'</td>
<td>mod-slow</td>
<td>broad oval</td>
<td>Lace silver foliage</td>
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<tr>
<td>Atriplex confertifolia</td>
<td>Saltbrush: Sprary</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>2</td>
<td>4</td>
<td>Sandy-loam</td>
<td>2-4'/2'</td>
<td>slow</td>
<td>broad oval</td>
<td>Common native to desert</td>
<td></td>
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<tr>
<td>Atriplex canescens</td>
<td>Saltbrush: Fourwing</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>2</td>
<td>4</td>
<td>sandy-loam</td>
<td>3-6'2'</td>
<td>mod-slow</td>
<td>irregular</td>
<td>Common native to desert</td>
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<tr>
<td>Berberis thunbergii</td>
<td>Japanese Barberry</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>2</td>
<td>4</td>
<td>Sandy-loam</td>
<td>16-18'/10-12'</td>
<td>mod-fast</td>
<td>vase</td>
<td>Leaves out early in spring</td>
<td></td>
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<tr>
<td>Betula papyrifera</td>
<td>Birch: Native River</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>2</td>
<td>2</td>
<td>Clay-Loam</td>
<td>15-20'/15-25'</td>
<td>irregular</td>
<td></td>
<td>Attractive bark; Bright green leaves</td>
<td></td>
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<tr>
<td>Buddleia alternifolia and cvs.</td>
<td>Butterfly Bush: Alternate-leaf</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>2</td>
<td>5</td>
<td>Sandy-loam</td>
<td>1-1.5'/8-12'</td>
<td>mod-fast</td>
<td>vase</td>
<td>Silver to blue gray finely textured foliage, arching branches</td>
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<tr>
<td>Campsis radicans</td>
<td>Trumpet Vine</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>3</td>
<td>5</td>
<td>Adaptable</td>
<td>Vine to 30'</td>
<td>fast</td>
<td>spreading</td>
<td>Best with support. Suckers may die to ground. Flowers on old living wood</td>
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<tr>
<td>Caragana arborescens</td>
<td>Peashrub: Pygmy</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>3</td>
<td>3</td>
<td>Sandy-loam</td>
<td>3-4'3'</td>
<td>fast</td>
<td>vase</td>
<td>Dwarf; Yellow flowers in spring</td>
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<tr>
<td>Caryopteris x clandonensis</td>
<td>Spirea: Blue mist</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>4/5</td>
<td>4</td>
<td>Sandy-loam</td>
<td>3-4'/2-3'</td>
<td>fast</td>
<td>broad oval</td>
<td>Late summer blue flowers. Cut back winter fall in late winter/early spring</td>
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<tr>
<td>Ceanothus fendleri</td>
<td>Mountain Lilac, Buckbrush</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>4</td>
<td>5</td>
<td>Sandy-loam</td>
<td>2-3'/2'</td>
<td>mod-slow</td>
<td>upright</td>
<td>White flower clusters seem to cover whole plant when in bloom</td>
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<tr>
<td>Celastrus scandens</td>
<td>American Butter sweets</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>4</td>
<td>4</td>
<td>Adaptable</td>
<td>Vine to &gt;10'</td>
<td>vase</td>
<td>Male and female flowers on different plants; Twining vine needs support</td>
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### Deciduous Shrubs and Vines

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<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Water Requirement</th>
<th>Botanical Name</th>
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<th>Water Requirement</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Water Requirement</th>
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</thead>
<tbody>
<tr>
<td><strong>Cercocarpus montanus</strong></td>
<td>Mountain Mahogany: True</td>
<td>2</td>
<td>Adaptable</td>
<td>5-10/5-8' slow</td>
<td>Upright</td>
<td>Hardy</td>
<td>1206D</td>
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<tr>
<td><strong>Chaenomeles japonica and cvs.</strong></td>
<td>Quince: Japanese Flowering</td>
<td>4</td>
<td>Adaptable</td>
<td>4-6/4-8' mod.</td>
<td>Broad oval</td>
<td>Scarlet flowers. Can be ratty if not maintained. Flowers on year-old wood. Edible fruit.</td>
<td>A</td>
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<tr>
<td><strong>Chaenomeles speciosa and cvs.</strong></td>
<td>Quince: Common Flowering</td>
<td>4</td>
<td>Adaptable</td>
<td>4-6/4-8' mod.</td>
<td>Broad rounded</td>
<td>Scarlet flowers. Can be ratty if not maintained. Flowers on year-old wood. Edible fruit.</td>
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<tr>
<td><strong>Chamaecytisus millefolium</strong></td>
<td>Fernbush</td>
<td>4</td>
<td>Sandy-loam</td>
<td>3-5/3-5' slow</td>
<td>Broad rounded</td>
<td>Fragrant grayish fern-like leaves. Semi-evergreen.</td>
<td>123D</td>
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<tr>
<td><strong>Chrysothamnus spp. and cvs.</strong></td>
<td>Rabbitbrush</td>
<td>2</td>
<td>Adaptable</td>
<td>Varies</td>
<td>Varies</td>
<td>Many varieties, some with blue-green foliage.</td>
<td>1235D</td>
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<tr>
<td><strong>Clematis ligusticifolia</strong></td>
<td>Western Virgin's Bower</td>
<td>3</td>
<td>Sandy-loam</td>
<td>Vine to 10'</td>
<td>Vine</td>
<td>Feathery seed heads.</td>
<td>297D</td>
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<tr>
<td><strong>Clematis spp. and cvs.</strong></td>
<td>Clematis</td>
<td>Varies</td>
<td>Sandy-loam</td>
<td>Vine to 10'</td>
<td>Vines</td>
<td>Propagate by seeds.</td>
<td>7A</td>
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<tr>
<td><strong>Cornus alba and cvs.</strong></td>
<td>Dogwood: Tatarian</td>
<td>2</td>
<td>Adaptable</td>
<td>6-10/5-8' mod-fast</td>
<td>Upright</td>
<td>Prefers moderate water. Fruit attracts robins.</td>
<td>457A</td>
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<tr>
<td><strong>Cotinus coggyria and cvs.</strong></td>
<td>Smoke Tree</td>
<td>5</td>
<td>Sandy-loam, Adaptable</td>
<td>Irregular</td>
<td>Dies to ground in extreme winters.</td>
<td>457D</td>
<td></td>
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<tr>
<td><strong>Cotoneaster adpressus var. prae cox</strong></td>
<td>Cotoneaster: Creeping</td>
<td>4</td>
<td>Adaptable</td>
<td>1-2/4-6' mod-fast</td>
<td>Spreading</td>
<td>Fruit, fall color.</td>
<td>466S</td>
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<tr>
<td><strong>Cotoneaster apiculatus and cvs.</strong></td>
<td>Cotoneaster: Cranberry</td>
<td>4</td>
<td>Adaptable</td>
<td>18-24'/6'-8'</td>
<td>Weeping shrub</td>
<td>Nice foliage and fruit.</td>
<td>4568S</td>
<td></td>
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<tr>
<td><strong>Cotoneaster dammeri and cvs.</strong></td>
<td>Cotoneaster: Bearberry</td>
<td>5</td>
<td>Adaptable</td>
<td>1-2/4-6' mod-fast</td>
<td>Weeping shrub</td>
<td>Nearly evergreen groundcover.</td>
<td>2366S</td>
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<td><strong>Cotoneaster divaricatus</strong></td>
<td>Cotoneaster: Spreading</td>
<td>4</td>
<td>Adaptable</td>
<td>6-12'/6-12' mod-fast</td>
<td>Spreading</td>
<td>Foliage excellent in summer and fall. Attractive red fruit.</td>
<td>2345S</td>
<td></td>
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<tr>
<td><strong>Cotoneaster horizontalis and cvs.</strong></td>
<td>Cotoneaster: Rock</td>
<td>4</td>
<td>Adaptable</td>
<td>2-3/2-5/8' mod-slow</td>
<td>Spreading</td>
<td>Damage in severe winters.</td>
<td>235D</td>
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<td><strong>Cotoneaster lucidus</strong></td>
<td>Cotoneaster: Hedge</td>
<td>4</td>
<td>Adaptable</td>
<td>6-9/6-9'</td>
<td>Upright oval</td>
<td>Nice fall color. Use in hedges, background, foundation plantings.</td>
<td>235D</td>
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<td>Botanical Name</td>
<td>Common Name</td>
<td>Water Requirement Range</td>
<td>Soil Tolerance</td>
<td>Height Width Growth Rate</td>
<td>Habit Form</td>
<td>Comments</td>
<td>Plant Schedule Key</td>
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<tr>
<td>Cotoneaster multiflorus</td>
<td>Cotonaster: Many-flowered</td>
<td>4</td>
<td>Broad rounded</td>
<td>Fall color yellow, orange, rose</td>
<td>2345AD</td>
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<tr>
<td>Cornus sericea</td>
<td>Red osier dogwood</td>
<td>3</td>
<td>Moderate</td>
<td>Upright</td>
<td>125D</td>
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<tr>
<td>Daphne x burkwoodii and cvs.</td>
<td>Daphne</td>
<td>5</td>
<td>Sandy-loam, Clay</td>
<td>3-3/5-5'</td>
<td>5</td>
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<tr>
<td>Elaeagnus commutata</td>
<td>Silverberry</td>
<td>2</td>
<td>Adaptable</td>
<td>Upright</td>
<td>125DA</td>
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<tr>
<td>Elaeagnus umbellata</td>
<td>Autumn Olive</td>
<td>3</td>
<td>Adaptable, alkaline</td>
<td>Upright oval</td>
<td>5A</td>
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<tr>
<td>Euonymus alatus and cvs.</td>
<td>Euonymus: Burning Bush</td>
<td>4</td>
<td>Sandy-loam</td>
<td>Vase</td>
<td>455</td>
<td></td>
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<tr>
<td>Eutrochium lanatum (syn: Ceratoide)</td>
<td>Wintercreeper</td>
<td>4</td>
<td>Sandy-loam, Adaptable</td>
<td>Irregular</td>
<td>12355</td>
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<tr>
<td>Fallacia paradoxa</td>
<td>Apache Plume</td>
<td>4</td>
<td>Adaptable, alkaline</td>
<td>Irregular</td>
<td>12364</td>
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<tr>
<td>Fendlera rupicola</td>
<td>Mockorange: False</td>
<td>3(4)</td>
<td>Sandy-loam</td>
<td>Broad oval</td>
<td>145DA</td>
<td></td>
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<tr>
<td>Forestiera neomexicana</td>
<td>Privet: New Mexican, Desert Olive, Mountain</td>
<td>4</td>
<td>Adaptable, alkaline</td>
<td>Upright irregular</td>
<td>Very low water needs. Early bloom.</td>
<td></td>
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<tr>
<td>Forsythia spp. and cvs.</td>
<td>Forsythia</td>
<td>4</td>
<td>Adaptable, alkaline</td>
<td>Varies</td>
<td>6</td>
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<tr>
<td>Hippophae rhamnoides</td>
<td>Sea-Buckthorn</td>
<td>3</td>
<td>Sandy-loam</td>
<td>Irregular</td>
<td>75</td>
<td></td>
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<tr>
<td>Holodiscus dumosus</td>
<td>Mountain Spray, Rock-spirea</td>
<td>4</td>
<td>Adaptable, alkaline</td>
<td>Upright irregular</td>
<td>Attractive flowers, fruit and fall color.</td>
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<tr>
<td>Jamesia americana</td>
<td>Wahoo: Five-leaf Cliffbush</td>
<td>4</td>
<td>Sandy-loam, clay-loam</td>
<td>Broad rounded</td>
<td>56789DA</td>
<td></td>
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<tr>
<td>Kolonwitzia amabilis and cvs.</td>
<td>Beauty Bush</td>
<td>4</td>
<td>Sandy-loam, clay-loam</td>
<td>Upright</td>
<td>5</td>
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</tr>
<tr>
<td>Ligustrum x vicaryi</td>
<td>Privet: Golden Vicary</td>
<td>5</td>
<td>Adaptable, alkaline</td>
<td>Upright</td>
<td>A</td>
<td></td>
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</tbody>
</table>

Note: The numbers in the Water Requirement Range column represent different levels of water requirement, from 1 (least) to 5 (most). The Soil Tolerance column indicates the type of soil the plant can grow in, and the Height Width Growth Rate column describes the growth habit of the plant.
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Ligustrum vulgare</td>
<td>A</td>
<td>Privet: Cheyenne, Lodense</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>5</td>
<td>Adaptable</td>
<td>Varies</td>
<td>varies</td>
<td>Dark green leaves, creamy white flowers.</td>
</tr>
<tr>
<td>Lonicera x brownii</td>
<td>S</td>
<td>Honeysuckle</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>•</td>
<td>•</td>
<td>5</td>
<td>Adaptable</td>
<td>Vine to &gt;20'</td>
<td>vine</td>
<td>Scarlet flowers. Susceptible to aphid damage.</td>
</tr>
<tr>
<td>Lonicera involucrata</td>
<td>A</td>
<td>Honeysuckle: Twinberry</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>•</td>
<td>4</td>
<td>Adaptable</td>
<td>3-6/3-6' mod.</td>
<td>irregular</td>
<td>Prefers high water.</td>
</tr>
<tr>
<td>Lonicera japonica</td>
<td>A</td>
<td>Honeysuckle: Japanese</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>5</td>
<td>Adaptable</td>
<td>Vine to &gt;20'</td>
<td>vine</td>
<td>Serious weed in the eastern US.</td>
</tr>
<tr>
<td>Lonicera korolkowii</td>
<td>A</td>
<td>Honeysuckle: Blueleaf</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>5</td>
<td>Adaptable</td>
<td>8-12/6-10' mod.</td>
<td>irregular</td>
<td>Disease and pest resistant. Slow to establish. Does not thrive in sandy soils.</td>
</tr>
<tr>
<td>Lonicera tatarica</td>
<td>A</td>
<td>Honeysuckle: Tatarian</td>
<td>•</td>
<td>•</td>
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<td>•</td>
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<td>•</td>
<td>•</td>
<td>5</td>
<td>Adaptable</td>
<td>10-15/10-15' fast</td>
<td>irregular</td>
<td>Select pest resistant varieties. Adaptable to drought.</td>
</tr>
<tr>
<td>Parthenocissus quinquefolia</td>
<td>D</td>
<td>Virginia creeper</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>3</td>
<td>Adaptable</td>
<td>Vine to &gt;30' fast</td>
<td>vine</td>
<td>Powdery mildew in deep shade, with excessive overhead water. Tends to cling to buildings and walls.</td>
</tr>
<tr>
<td>Parthenocissus tricuspidata</td>
<td>S</td>
<td>Boston Ivy</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>•</td>
<td>4</td>
<td>Adaptable</td>
<td>Sandy-loam</td>
<td>Vine</td>
<td>Dark green leaves. Clings to structures with bold-falls.</td>
</tr>
<tr>
<td>Philadelphus microphyllus</td>
<td>D</td>
<td>Mockorange: Littleleaf</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>4</td>
<td>Adaptable</td>
<td>2-3'2-3'</td>
<td>upright</td>
<td>Scented flowers. Low maintenance.</td>
</tr>
<tr>
<td>Philadelphus x lemoinei</td>
<td>D</td>
<td>Mockorange</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>4</td>
<td>Adaptable</td>
<td>Sandy-loam</td>
<td>varies</td>
<td>Many cultivars. Scented flowers. Low maintenance.</td>
</tr>
<tr>
<td>Physocarpus monogynus</td>
<td>A</td>
<td>Ninebark: Native</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>4</td>
<td>Adaptable</td>
<td>3-4'3-6' mod-fast</td>
<td>upright</td>
<td>Fall color. Attractive sheshling bark.</td>
</tr>
<tr>
<td>Physocarpus opulifolius</td>
<td>A</td>
<td>Ninebark: Common</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>5</td>
<td>Adaptable, Alkaline</td>
<td>Varies, mod-fast</td>
<td>upright</td>
<td>Dwarf varieties available. Loss in protected locations.</td>
</tr>
<tr>
<td>Polygonum aubertii</td>
<td>D</td>
<td>Silver Lace Vine</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>4</td>
<td>Adaptable</td>
<td>Clay-loam, Sandy-loam</td>
<td>Vine</td>
<td>Vigorous. Turning vine needs support. Good screens.</td>
</tr>
<tr>
<td>Potentilla fruticosa</td>
<td>S</td>
<td>Potentilla</td>
<td>•</td>
<td>•</td>
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<td>2</td>
<td>Adaptable</td>
<td>Varies</td>
<td>varies</td>
<td>Many varieties. Yellow and white flowers.</td>
</tr>
<tr>
<td>Prunus americana</td>
<td>D</td>
<td>Plum: Native</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>•</td>
<td>4</td>
<td>Adaptable</td>
<td>10-20/8-12' fast</td>
<td>irregular</td>
<td>Tolerates drought. sucker growth habit. With suckering width may be double height.</td>
</tr>
<tr>
<td>Prunus besseyi</td>
<td>A</td>
<td>Cherry: Bessey, Sand</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<td>•</td>
<td>•</td>
<td>3</td>
<td>Sandy-loam</td>
<td>4-6/4-6' mod-fast</td>
<td>broad oval</td>
<td>Edible fruit. Prefers sandy soil.</td>
</tr>
</tbody>
</table>
## Deciduous Shrubs and Vines

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Water Requirement</th>
<th>Tolerant Range</th>
<th>Habit</th>
<th>Form</th>
<th>Soil Preference / Tolerance</th>
<th>Height Width / Growth Rate</th>
<th>Notes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prunus x cistena and cvs.</td>
<td>Cherry: Purpleleaf Sandcherry</td>
<td>A</td>
<td>D</td>
<td>D</td>
<td>A</td>
<td>Adaptable</td>
<td>4-6' 6-8'</td>
<td>Mod-fast</td>
<td>Suckering habit; Hardy.</td>
</tr>
<tr>
<td>Prunus pensylvanica</td>
<td>Cherry: Pin, Wild Red</td>
<td>D</td>
<td>A</td>
<td>A</td>
<td>D</td>
<td>Adaptable</td>
<td>15-20' 10-13'</td>
<td>Fast</td>
<td>Irregular</td>
</tr>
<tr>
<td>Prunus tomentosa</td>
<td>Cherry: Nanking</td>
<td>A</td>
<td>D</td>
<td>D</td>
<td>A</td>
<td>Adaptable</td>
<td>6-10' 3-10'</td>
<td>Mod-fast</td>
<td>Upright</td>
</tr>
<tr>
<td>Prunus virginiana melanocarpa and cvs.</td>
<td>Chokecherry: Native</td>
<td>S</td>
<td>A</td>
<td>S</td>
<td>A</td>
<td>Coarse, Adaptable</td>
<td>10-20' 8-12'</td>
<td>Fast</td>
<td>Irregular</td>
</tr>
<tr>
<td>Ptelea trifoliata</td>
<td>Hoptree: Wafer Ash</td>
<td>A</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>Sandy-loam</td>
<td>7-9'/7-9'</td>
<td>Slow</td>
<td>Upright</td>
</tr>
<tr>
<td>Purshia tridentata</td>
<td>Antelope Bitterbrush</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>Sandy-loam</td>
<td>3-6'/7-9'</td>
<td>Mod-fast</td>
<td>Upright</td>
</tr>
<tr>
<td>Quercus gambelii</td>
<td>Oak: Gambel, Scrub</td>
<td>A</td>
<td>D</td>
<td>A</td>
<td>D</td>
<td>Adaptable</td>
<td>30-60'/30-60'</td>
<td>Mod-fast</td>
<td>Broad oval</td>
</tr>
<tr>
<td>Rhamnus cathartica</td>
<td>Buckthorn: Common</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>Adaptable</td>
<td>18-25'/13-20'</td>
<td>Mod-fast</td>
<td>Broad oval</td>
</tr>
<tr>
<td>Rhamnus frangula and cvs.</td>
<td>Buckthorn: Tallhedge</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>Adaptable</td>
<td>10-15'/8-12'</td>
<td>Mod-fast</td>
<td>Upright</td>
</tr>
<tr>
<td>Rhamnus smithii</td>
<td>Buckthorn: Smith</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>Sandy-loam</td>
<td>6-12'/6-8'</td>
<td>Mod-fast</td>
<td>Round</td>
</tr>
<tr>
<td>Rhus aromatica and cvs.</td>
<td>Sumac: Fragrant</td>
<td>A</td>
<td>S</td>
<td>A</td>
<td>S</td>
<td>Coarse, Sandy-loam</td>
<td>Varies, mod</td>
<td>Varies</td>
<td>Varies</td>
</tr>
<tr>
<td>Rhus glabra cismontana and cvs.</td>
<td>Sumac: Dwarf, Rocky Mountain</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>Adaptable</td>
<td>3'-6'/3'-15'</td>
<td>Mod</td>
<td>Broad oval</td>
</tr>
<tr>
<td>Rhus glabra and cvs.</td>
<td>Sumac: Smooth</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>Adaptable</td>
<td>5'-10'/5'-10'</td>
<td>Mod-fast</td>
<td>Varies</td>
</tr>
<tr>
<td>Rhus triphylla</td>
<td>Sumac: Threeleaf, Skunkbush</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>Adaptable</td>
<td>3'-6'/3'-6'</td>
<td>Mod</td>
<td>Broad oval</td>
</tr>
<tr>
<td>Rhus typhina and cvs.</td>
<td>Sumac: Staghorn</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>Adaptable</td>
<td>Varies, Mod-fast</td>
<td>Varies</td>
<td>Varies</td>
</tr>
<tr>
<td>Ribes alpinum</td>
<td>Currant: Alpine</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>Adaptable</td>
<td>3'/6'/6'</td>
<td>Mod</td>
<td>Rounded</td>
</tr>
</tbody>
</table>
## Deciduous Shrubs and Vines

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>USDA Hardiness Zone</th>
<th>Height Width Growth Rate</th>
<th>Habit Form</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ribes aureum</td>
<td>Currant: Golden</td>
<td>3-5</td>
<td>Adapted 3-6' round</td>
<td>5-6' tall</td>
<td>Yellowish leaves. Does not adapt well to full shade situations.</td>
</tr>
<tr>
<td>Ribes cereum</td>
<td>Currant: Wax</td>
<td>3-5</td>
<td>Adapted 3' round</td>
<td>3-6' tall</td>
<td>Red fruit attracts wildlife.</td>
</tr>
<tr>
<td>Ribes inermes</td>
<td>Gooseberry</td>
<td>3-5</td>
<td>Adapted 3' round</td>
<td>3-6' tall</td>
<td>Edible fruit.</td>
</tr>
<tr>
<td>Robinia neomexicana</td>
<td>Locust: New Mexico</td>
<td>3-5</td>
<td>Adapted 5-10' round</td>
<td>20' fast</td>
<td>Pink flowers. Thorny. Aggressive spreader. Can escape cultivation and become invasive.</td>
</tr>
<tr>
<td>Rosa foetida ‘Bicolor’</td>
<td>Rose: Austrian Copper</td>
<td>2</td>
<td>Adapted 3' round</td>
<td>3-6' tall</td>
<td>Bright red and yellow flowers.</td>
</tr>
<tr>
<td>Rosa multiflora</td>
<td>Rose: Multiflora</td>
<td>2</td>
<td>Adapted 3' round</td>
<td>3-6' tall</td>
<td>Attractive fruit.</td>
</tr>
<tr>
<td>Rosa rugosa</td>
<td>Rose: Rugosa</td>
<td>2</td>
<td>Adapted 3' round</td>
<td>3-6' tall</td>
<td>Many cultivars. Good on banks, cuttings. Attractive fruit and flowers. Susceptible to powdery mildew.</td>
</tr>
<tr>
<td>Rosa spp. and cvs.</td>
<td>Rose: Shrub</td>
<td>2</td>
<td>Adapted 3' round</td>
<td>3-6' tall</td>
<td>Hardy, native to many plant communities.</td>
</tr>
<tr>
<td>Rubus woodsii</td>
<td>Rose: Woods</td>
<td>2</td>
<td>Adapted 3' round</td>
<td>3-6' tall</td>
<td>Hardy, native to many plant communities.</td>
</tr>
<tr>
<td>Rubus fruticosus</td>
<td>Raspberry: Boulder, Rocky Mountain</td>
<td>2</td>
<td>Sandy loam 3-6'</td>
<td>3-6' tall</td>
<td>White flowers, red fruit.</td>
</tr>
<tr>
<td>Rubus idaeus spp. and cvs.</td>
<td>Raspberry: Native</td>
<td>4</td>
<td>Sandy loam 3-6'</td>
<td>3-6' tall</td>
<td>Edible fruit attracts wildlife. Needs deep, organically rich soil to thrive.</td>
</tr>
<tr>
<td>Rubus parviflorus</td>
<td>Thimbleberry</td>
<td>4</td>
<td>Sandy loam 3-6'</td>
<td>3-6' tall</td>
<td>Forms colonies. Attractive flowers, non-edible fruit.</td>
</tr>
<tr>
<td>Salix discolor</td>
<td>Willow: Pussy</td>
<td>2</td>
<td>Clay loam 12-20'</td>
<td>8-12' fast</td>
<td>High water needs. Calms appear before foliage in spring.</td>
</tr>
<tr>
<td>Salix exigua</td>
<td>Willow: Coyote</td>
<td>2</td>
<td>Clay loam 4-12'</td>
<td>4-12' fast</td>
<td>High water needs. Calms appear before foliage in spring.</td>
</tr>
<tr>
<td>Salix spp. and cvs.</td>
<td>Willow</td>
<td>varies</td>
<td>Sandy loam, Clay loam</td>
<td>varies</td>
<td>High water needs.</td>
</tr>
</tbody>
</table>
## Deciduous Shrubs and Vines

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>USDA Hardiness Zone</th>
<th>Exposure</th>
<th>Soil Preference</th>
<th>Height Width Growth Rate</th>
<th>Habit Form</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symphoricarpos orbiculatus</strong></td>
<td>Coralberry</td>
<td>9A</td>
<td>Adaptable</td>
<td>3-4' x 3'-6'</td>
<td>mod-fast</td>
<td>irregular</td>
<td>Loose shape. Fruit persists into winter.</td>
</tr>
<tr>
<td><strong>Symphoricarpos oreophyllus</strong></td>
<td>Snowberry</td>
<td>9A</td>
<td>Adaptable</td>
<td>4' x 5'</td>
<td>irregular</td>
<td>Pink flowers, white fruit. Less water in protected locations.</td>
<td></td>
</tr>
<tr>
<td><strong>Syringa chinensis</strong></td>
<td>Lilac Chinese</td>
<td>10</td>
<td>Clay, Clay-loam</td>
<td>8-10'</td>
<td>upright oval</td>
<td>Needs regular pruning. Best in clay soils.</td>
<td></td>
</tr>
<tr>
<td><strong>Syringa x hyacinthiflora and cvs.</strong></td>
<td>Lilac Hybrid</td>
<td>10</td>
<td>Sandy-loam, Clay-loam</td>
<td>8-12'</td>
<td>upright oval</td>
<td>Late spring bloom.</td>
<td></td>
</tr>
<tr>
<td><strong>Syringa meyeri and cvs.</strong></td>
<td>Lilac Dwarf Korean</td>
<td>10</td>
<td>Adaptable</td>
<td>3-5'</td>
<td>upright</td>
<td>Early violet-purple flowers. Good with evergreen background.</td>
<td></td>
</tr>
<tr>
<td><strong>Syringa oblata and cvs.</strong></td>
<td>Lilac: Early Cheyenne</td>
<td>10</td>
<td>Sandy-loam, Clay-loam</td>
<td>8-12'</td>
<td>broad round</td>
<td>Lavender-blue flowers. Very fragrant flowers.</td>
<td></td>
</tr>
<tr>
<td><strong>Syringa patula and cvs.</strong></td>
<td>Lilac: Manchurian</td>
<td>10</td>
<td>Adaptable</td>
<td>4-6' x 4'-6'</td>
<td>mod</td>
<td>Full color. Flowers nice.</td>
<td></td>
</tr>
<tr>
<td><strong>Syringa x persica</strong></td>
<td>Lilac Persian</td>
<td>10</td>
<td>Adaptable</td>
<td>4' x 5'</td>
<td>upright</td>
<td>Due to early bloom, there is a risk of frost damage. Good small lilac.</td>
<td></td>
</tr>
<tr>
<td><strong>Syringa x prestontiae and cvs.</strong></td>
<td>Lilac: Canadian</td>
<td>10</td>
<td>Sandy-loam, Clay-loam</td>
<td>8-12'</td>
<td>broad round</td>
<td>Late spring bloom.</td>
<td></td>
</tr>
<tr>
<td><strong>Syringa vulgaris and cvs.</strong></td>
<td>Lilac: Common, French</td>
<td>10</td>
<td>Adaptable</td>
<td>10-20'</td>
<td>6'-12'</td>
<td>mod</td>
<td>Thousands of cultivars. Due to early bloom, frost damage is common.</td>
</tr>
<tr>
<td><strong>Viburnum x burkwoodii</strong></td>
<td>Viburnum: Burkwood</td>
<td>10</td>
<td>Sandy-loam, Clay-loam</td>
<td>10-12'</td>
<td>round</td>
<td>Dark green leaves; bronze fall color.</td>
<td></td>
</tr>
<tr>
<td><strong>Viburnum x carlesii</strong></td>
<td>Viburnum: Fragrant Snowball</td>
<td>10</td>
<td>Sandy-loam, Clay-loam</td>
<td>6-9'</td>
<td>round</td>
<td>Dark green leaves, fragrant white flowers. Attractive fruit. Fall color purple-red.</td>
<td></td>
</tr>
<tr>
<td><strong>Viburnum x carlesii</strong></td>
<td>Viburnum: Koreanspice</td>
<td>10</td>
<td>Sandy-loam, Clay-loam</td>
<td>6-9'</td>
<td>round</td>
<td>White flowers emit a strong, spicy scent. Gray-green leaves.</td>
<td></td>
</tr>
<tr>
<td><strong>Viburnum dentatum</strong></td>
<td>Viburnum: Arrowwood</td>
<td>10</td>
<td>Sandy-loam, Clay-loam</td>
<td>6-9'</td>
<td>round</td>
<td>Flowers, fruit, fall color. Attracts wildlife.</td>
<td></td>
</tr>
<tr>
<td><strong>Viburnum x juddii</strong></td>
<td>Viburnum: Judd</td>
<td>10</td>
<td>Sandy-loam, Clay-loam</td>
<td>6-9'</td>
<td>round</td>
<td>Gray-green leaves, white flowers.</td>
<td></td>
</tr>
<tr>
<td><strong>Viburnum lantana and cvs.</strong></td>
<td>Viburnum: Wayfaringtree</td>
<td>10</td>
<td>Adaptable</td>
<td>Varies mod</td>
<td>round</td>
<td>Flowers, fruit, fall color; striking gray bark.</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------</td>
<td>-------------</td>
<td>-----------------------</td>
<td>------------------------</td>
<td>-----------</td>
<td>--------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td></td>
<td>Viburnum lentago</td>
<td>Nannyberry</td>
<td>A</td>
<td>D</td>
<td>Adaptable</td>
<td>upright</td>
<td>8-1396-8^med</td>
</tr>
<tr>
<td></td>
<td>Viburnum opulus and cvs.</td>
<td>Snowball Bush, Dwarf Cranberry</td>
<td>A</td>
<td>D</td>
<td>Adaptable</td>
<td>broad rounded</td>
<td>8-1398-12^med</td>
</tr>
<tr>
<td></td>
<td>Viburnum trilobum and cvs.</td>
<td>Highbush American Cranberry</td>
<td>A</td>
<td>D</td>
<td>Adaptable</td>
<td>upright oval</td>
<td>8-1398-12^med</td>
</tr>
</tbody>
</table>
### Deciduous Trees

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Water Requirement</th>
<th>Plant Community</th>
<th>Exposure</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acer x freemontii</strong></td>
<td>Maple: Autumn Blaze</td>
<td>S</td>
<td>Native to Colorado Springs</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Acer ginnala and cvs.</strong></td>
<td>Maple: Amur, Ginnala</td>
<td>A</td>
<td>Borrowed from similar regional plant community</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Acer glabrum</strong></td>
<td>Maple: Rocky Mountain</td>
<td>S</td>
<td>Historically adapted introduced plant</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Acer grandidentatum</strong></td>
<td>Maple: Bigtooth, Canyon</td>
<td>S</td>
<td>Compatible with plant community</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Acer negundo</strong></td>
<td>Boxelder</td>
<td>A</td>
<td>Other plants to try</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Acer platanoides and cvs.</strong></td>
<td>Maple: Norway</td>
<td>S</td>
<td>Other plants to try</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Acer rubrum and cvs.</strong></td>
<td>Maple: Red</td>
<td>S</td>
<td>Other plants to try</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Acer saccharum and cvs.</strong></td>
<td>Maple: Sugar</td>
<td>S</td>
<td>Other plants to try</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Acer tataricum</strong></td>
<td>Maple: Tatarian</td>
<td>A</td>
<td>Other plants to try</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Aesculus glabra</strong></td>
<td>Buckeye: Ohio</td>
<td>S</td>
<td>Other plants to try</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Aesculus hippocastanum</strong></td>
<td>Horsechestnut</td>
<td>S</td>
<td>Other plants to try</td>
<td>S</td>
<td>Sun</td>
</tr>
<tr>
<td><strong>Ailanthus altissima</strong></td>
<td>Tree of Heaven</td>
<td>S</td>
<td>Other plants to try</td>
<td>S</td>
<td>Sun</td>
</tr>
</tbody>
</table>

**Legend:**
- **Water Requirement**
  - S = dry 13° - 20°
  - A = adaptable 18° - 28°
  - W = wet > 36°
- **Plant Community**
  - S = Native to Colorado Springs
  - A = Borrowed from similar regional plant community
  - W = Historically adapted introduced plant
  - S = Compatible with plant community
  - = Other plants to try
- **Exposure**
  - S = Sun
  - P = Partial Sun
  - S = Shade

---

**FOOTHILLS**

- 7 Upper Elevation Riparian
- 6 Ponderosa Pine Forest
- 5 Foothill Shrubslands
- 4 Lower Elevation Riparian
- 3 Prairies
- 2 Pinon-Juniper Woodland
- 1 Semi-arid Shrublands

**FOOTHILLS AND PLAINS**

- 8 Douglas-fir Forest

---

**PLAINS**

- 7 Upper Elevation Riparian
- 6 Ponderosa Pine Forest
- 5 Foothill Shrubslands
- 4 Lower Elevation Riparian
- 3 Prairies
- 2 Pinon-Juniper Woodland
- 1 Semi-arid Shrublands
<table>
<thead>
<tr>
<th>Deciduous Trees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alnus tenuifolia</strong>&lt;br&gt;Alder: Thin Leaf</td>
</tr>
<tr>
<td><strong>Amelanchier canadensis</strong>&lt;br&gt;Serviceberry: Shadbloom</td>
</tr>
<tr>
<td><strong>Amelanchier laevis</strong>&lt;br&gt;Serviceberry: Allegheny</td>
</tr>
<tr>
<td><strong>Amelanchier grandiflora</strong>&lt;br&gt;Serviceberry: Apple</td>
</tr>
<tr>
<td><strong>Betula occidentalis</strong>&lt;br&gt;Birch: Western, Water</td>
</tr>
<tr>
<td><strong>Catalpa speciosa</strong>&lt;br&gt;Catalpa: Western</td>
</tr>
<tr>
<td><strong>Celtis occidentalis</strong>&lt;br&gt;Hackberry: Common</td>
</tr>
<tr>
<td><strong>Cercis canadensis</strong>&lt;br&gt;Redbud: Eastern</td>
</tr>
<tr>
<td><strong>Cornus racemosa</strong>&lt;br&gt;Dogwood: Gray</td>
</tr>
<tr>
<td><strong>Crataegus ambigua</strong>&lt;br&gt;Hawthorn: Russian</td>
</tr>
<tr>
<td><strong>Crataegus cris-petala and cvs.</strong>&lt;br&gt;Hawthorn: Cockspur</td>
</tr>
<tr>
<td><strong>Crataegus mollis</strong>&lt;br&gt;Hawthorn: Downey</td>
</tr>
<tr>
<td><strong>Crataegus phaenophylla and cvs.</strong>&lt;br&gt;Hawthorn: Washington</td>
</tr>
<tr>
<td><strong>Elaeagnus angustifolia</strong>&lt;br&gt;Olive: Russian</td>
</tr>
<tr>
<td><strong>Elaeagnus angustifolia</strong>&lt;br&gt;Olive: Russian</td>
</tr>
<tr>
<td><strong>Erigeron annuus and cvs.</strong>&lt;br&gt;Ash: White</td>
</tr>
<tr>
<td><strong>Erigeron annuus and cvs.</strong>&lt;br&gt;Ash: Green</td>
</tr>
<tr>
<td><strong>Fraxinus pennsylvanica and cvs.</strong>&lt;br&gt;Ash: White</td>
</tr>
<tr>
<td>Water Requirement</td>
</tr>
<tr>
<td>-------------------</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Common Name</td>
</tr>
<tr>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Prunus maackii</td>
</tr>
<tr>
<td>Prunus nigra and cvs.</td>
</tr>
<tr>
<td>Prunus padus</td>
</tr>
<tr>
<td>Prunus pensylvanica</td>
</tr>
<tr>
<td>Prunus tomentosa</td>
</tr>
<tr>
<td>Pyrus calleryana and cvs.</td>
</tr>
<tr>
<td>Quercus alba</td>
</tr>
<tr>
<td>Quercus bicolor</td>
</tr>
<tr>
<td>Quercus gambeli</td>
</tr>
<tr>
<td>Quercus macrocarpa</td>
</tr>
<tr>
<td>Quercus rubra and cvs.</td>
</tr>
<tr>
<td>Quercus rubra</td>
</tr>
<tr>
<td>Rhamnus cathartica</td>
</tr>
<tr>
<td>Rhamnus frangula and cvs.</td>
</tr>
<tr>
<td>Rhus glabra</td>
</tr>
<tr>
<td>Botanical Name</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Rhus typhina and cvs.</td>
</tr>
<tr>
<td>Robinia neomexicana</td>
</tr>
<tr>
<td>Robinia pseudacacia</td>
</tr>
<tr>
<td>Sorbus aucuparia and cvs.</td>
</tr>
<tr>
<td>Syringa pekinensis</td>
</tr>
<tr>
<td>Tilia americana and cvs.</td>
</tr>
<tr>
<td>Tilia tomentosa and cvs.</td>
</tr>
<tr>
<td>Viburnum lantana and cvs.</td>
</tr>
<tr>
<td>Viburnum prunifolium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>Soils</th>
<th>Tolerance</th>
<th>Height / Width / Growth Rate</th>
<th>Habit / Form</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>S</td>
<td>Loams, Limestone</td>
<td>30-60'20' - 40' - fast</td>
<td>Upright</td>
<td>Tolerant to mild frost.</td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td>Clay-loam, Sandy-loam</td>
<td>Adaptable</td>
<td>Vase</td>
<td>Moderate to high water needs. Does not thrive in shallow, alkaline soil.</td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td>Clay-loam</td>
<td>30-60'20' - 40' - fast</td>
<td>Upright</td>
<td>High water needs.</td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td>Loam</td>
<td>20-30'20' - 30' - slow</td>
<td>Pyramidal</td>
<td>Hardiness problems. Susceptible to fireblight.</td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td>Sandy-loam, Clay-loam</td>
<td>20-30'15' - 20' - mod</td>
<td>Broad Oval</td>
<td>Protoced sites only. White flowers.</td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td>Adaptable</td>
<td>30-75'20' - 30' - mod</td>
<td>Upright Oval</td>
<td>Seed litter: Late leaf fall.</td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td>Sandy-loam, Clay-loam</td>
<td>30-60'20' - 30' - mod</td>
<td>Varies</td>
<td>Occasional split of sidewalks, shallow roots. Use disease resistant varieties only. Resistant.</td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td>Adaptable</td>
<td>12-15'10' - 15'</td>
<td>Broad Rounded</td>
<td>Flowers, fruit, fall color, striking gray bark.</td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>Adaptable</td>
<td>Varies</td>
<td>Broad Rounded</td>
<td>White flowers, blue-black fruit. Fall color brown-red.</td>
</tr>
<tr>
<td>Botanical Name</td>
<td>Common Name</td>
<td>USDA Hardiness Zone</td>
<td>Height / Width / Growth Rate</td>
<td>Habit / Form</td>
<td>Comments</td>
</tr>
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<td>---------------</td>
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</tr>
</tbody>
</table>
### Evergreen Trees, Shrubs, and Vines

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Water Requirement</th>
<th>Plant Community</th>
<th>Exposure</th>
<th>Soil Preference/Tolerance</th>
<th>Height / Width</th>
<th>Habit Form</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arctostaphylos uva-ursi</td>
<td>Kinnikinnick</td>
<td>S</td>
<td>C</td>
<td>2</td>
<td>Sandy, 3-4&quot;, 12&quot; - slow</td>
<td>Spreading</td>
<td>Slow to establish. Red fruit. Low growing ground cover. Evergreen.</td>
<td></td>
</tr>
<tr>
<td>Cercocarpus ledifolius</td>
<td>Mahogany: Curl-leaf Mountain</td>
<td>D</td>
<td>C</td>
<td>3</td>
<td>Sandy-loam, 6-20/6-12&quot; - slow</td>
<td>Broad Oval</td>
<td>Does not thrive in clay soils. Evergreen.</td>
<td></td>
</tr>
<tr>
<td>Coryphantha vivipara</td>
<td>Cactus: Spiny-star</td>
<td>D</td>
<td>C</td>
<td>3</td>
<td>Coarse, 1-3&quot; stems, clump to 12&quot;</td>
<td>Clump</td>
<td>Better with some supplemental irrigation. Stems 2-4&quot;, clump forming. Flowers pink to magenta.</td>
<td></td>
</tr>
<tr>
<td>Cytisus x praecox</td>
<td>Broom: Warminster</td>
<td>D</td>
<td>C</td>
<td>6</td>
<td>Adaptable, 6-8'-6&quot; - mod</td>
<td>Broad Oval</td>
<td>To some, flowers may have unpleasant odor.</td>
<td></td>
</tr>
<tr>
<td>Echinocereus triglochidiatus</td>
<td>Cactus: Claret-cup</td>
<td>D</td>
<td>N</td>
<td>4</td>
<td>Sandy, Gravelly, 4-6&quot; stems, clump to 9&quot;</td>
<td>Clump</td>
<td>Each clump can have up to 30 stems. Scarlet flowers, edible fruit.</td>
<td></td>
</tr>
<tr>
<td>Echinocereus viridiflorus</td>
<td>Cactus: Hedgehog</td>
<td>D</td>
<td>N</td>
<td>4</td>
<td>Adaptable, 2&quot; stems, clump to 6&quot;</td>
<td>Clump</td>
<td>Each stem 2-4&quot; in diameter, grows in clumps. Flowers bright yellow-green.</td>
<td></td>
</tr>
<tr>
<td>Euonymus fortunei and cvs.</td>
<td>Euonymus</td>
<td>S</td>
<td>C</td>
<td>4</td>
<td>Sandy, Sandy-loam, 6'-4' - mod</td>
<td>Round</td>
<td>Protect. Does not do well in heavy, wet soils.</td>
<td></td>
</tr>
<tr>
<td>Euonymus huautschovia 'Manhattan'</td>
<td>Euonymus: Manhattan</td>
<td>S</td>
<td>C</td>
<td>5</td>
<td>Sandy, Sandy-loam, 6'-4' - mod</td>
<td>Round</td>
<td>Protect. Does not do well in heavy, wet soils.</td>
<td></td>
</tr>
</tbody>
</table>

**Legend**
- **Water Requirement**
  - = dry 13" - 20"
  - = adaptable 18" - 28"
  - = steady 23" - 38"
  - = wet > 36"
- **Plant Community**
  - = Native to Colorado Springs
  - = Borrowed from similar regional plant community
  - = Historically adapted introduced plant
  - = Compatible with plant community
  - = Other plants to try
- **Exposure**
  - = Sun
  - = Part-Sun
  - = Shade
- **Soil Preference/Tolerance**
  - = Sandy-loam
  - = Sandy
  - = Clay
  - = Loam

**Diagram**
- **Foothills**
  - 7 Upper Elevation Riparian
  - 8 Douglas-fir Forest
- **Foothills and Plains**
  - 5 Foothill Shrublands
  - 4 Lower Elevation Riparian
  - 3 Prairies
- **Plains**
  - 2 Pionic-Juniper Woods
  - 1 Semi-arid Shrublands
### Evergreen Trees, Shrubs, and Vines

<table>
<thead>
<tr>
<th>Botanical Name and cvs.</th>
<th>Common Name</th>
<th>Water Requirement</th>
<th>Botanical Range</th>
<th>Size</th>
<th>Soil Preference / Tolerance</th>
<th>Height / Width</th>
<th>Habit / Form</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juniperus horizontalis and cvs.</td>
<td>Juniper: Creeping</td>
<td>D</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Juniperus monosperma</td>
<td>Juniper: One-Seed</td>
<td>D</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Juniperus procumbens</td>
<td>Juniper: Green Mound</td>
<td>D</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Opuntia imbricata</td>
<td>Cactus: Cholla</td>
<td>D</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Opuntia spp.</td>
<td>Cactus: Prickly-pear</td>
<td>D</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>
### Evergreen Trees, Shrubs, and Vines

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Water Requirement</th>
<th>USDA Hardiness Zone</th>
<th>Exposure</th>
<th>Soil Preference/Tolerance</th>
<th>Height/Width/Growth Rate</th>
<th>Habit/Form</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Picea abies and cvs.</strong>&lt;br&gt;Spruce: Norway</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Needs regular water. Dwarf varieties available.</td>
</tr>
<tr>
<td><strong>Picea engelmannii and cvs.</strong>&lt;br&gt;Spruce: Engelmann</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Picea glauca and cvs.</strong>&lt;br&gt;Spruce: White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Project from drying winter winds.</td>
</tr>
<tr>
<td><strong>Picea pungens and cvs.</strong>&lt;br&gt;Spruce: Blue</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pinus aristata</strong>&lt;br&gt;Pine: Bristlecone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dense, brashy branches.</td>
</tr>
<tr>
<td><strong>Pinus cembra 'Nana'</strong>&lt;br&gt;Pine: Dwarf Swiss Stone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Slow growing when young. Branched to the ground.</td>
</tr>
<tr>
<td><strong>Pinus densiflora</strong>&lt;br&gt;Pine: Chinese</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Fast growth rate; good screening.</td>
</tr>
<tr>
<td><strong>Pinus flexilis</strong>&lt;br&gt;Pine: Limber</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Pinus mugo mugo and cvs.</strong>&lt;br&gt;Pine: Dwarf Mugo</td>
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<tr>
<td><strong>Pinus mugo</strong>&lt;br&gt;Pine: Mugo</td>
<td></td>
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<tr>
<td><strong>Pinus nigra</strong>&lt;br&gt;Pine: Austrian</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Needle litter; Tolerant of urban sites.</td>
</tr>
<tr>
<td><strong>Pinus ponderosa</strong>&lt;br&gt;Pine: Ponderosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Needle litter.</td>
</tr>
<tr>
<td><strong>Pinus strobus</strong>&lt;br&gt;Pine: Eastern White</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Pinus sylvestris</strong>&lt;br&gt;Pine: Scotch</td>
<td></td>
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</tbody>
</table>

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**Notes:**
- S = Semi-shade
- A = Average
- C = Cold
- W = Warm
- B = Base
- N = Neutral
- I = Irrigation
- M = Moderately
- H = High
- L = Low
- D = Drained
- 1 = One
- 2 = Two
- 3 = Three
- 4 = Four
- 5 = Five
- 6 = Six
- 7 = Seven
- 8 = Eight
- 9 = Nine
- 10 = Ten
- 11 = Eleven
- 12 = Twelve
- 13 = Thirteen
- 14 = Fourteen
- 15 = Fifteen
- 16 = Sixteen
- 17 = Seventeen
- 18 = Eighteen
- 19 = Nineteen
- 20 = Twenty
- 21 = Twenty-one
- 22 = Twenty-two
- 23 = Twenty-three
- 24 = Twenty-four
- 25 = Twenty-five
- 26 = Twenty-six
- 27 = Twenty-seven
- 28 = Twenty-eight
- 29 = Twenty-nine
- 30 = Thirty
- 31 = Thirty-one
- 32 = Thirty-two
- 33 = Thirty-three
- 34 = Thirty-four
- 35 = Thirty-five
- 36 = Thirty-six
- 37 = Thirty-seven
- 38 = Thirty-eight
- 39 = Thirty-nine
- 40 = Forty
- 41 = Forty-one
- 42 = Forty-two
- 43 = Forty-three
- 44 = Forty-four
- 45 = Forty-five
- 46 = Forty-six
- 47 = Forty-seven
- 48 = Forty-eight
- 49 = Forty-nine
- 50 = Fifty
- 51 = Fifty-one
- 52 = Fifty-two
- 53 = Fifty-three
- 54 = Fifty-four
- 55 = Fifty-five
- 56 = Fifty-six
- 57 = Fifty-seven
- 58 = Fifty-eight
- 59 = Fifty-nine
- 60 = Sixty
- 61 = Sixty-one
- 62 = Sixty-two
- 63 = Sixty-three
- 64 = Sixty-four
- 65 = Sixty-five
- 66 = Sixty-six
- 67 = Sixty-seven
- 68 = Sixty-eight
- 69 = Sixty-nine
- 70 = Seventy
- 71 = Seventy-one
- 72 = Seventy-two
- 73 = Seventy-three
- 74 = Seventy-four
- 75 = Seventy-five
- 76 = Seventy-six
- 77 = Seventy-seven
- 78 = Seventy-eight
- 79 = Seventy-nine
- 80 = Eighty
- 81 = Eighty-one
- 82 = Eighty-two
- 83 = Eighty-three
- 84 = Eighty-four
- 85 = Eighty-five
- 86 = Eighty-six
- 87 = Eighty-seven
- 88 = Eighty-eight
- 89 = Eighty-nine
- 90 = Ninety
<table>
<thead>
<tr>
<th>Evergreen Trees, Shrubs, and Vines</th>
</tr>
</thead>
</table>
| **Pseudotsuga menziesii**  
  Douglas-fir |
| **Taxus x media and cvs.**  
  Yew: Dense, Upright |
| **Yucca filamentosa**  
  Yucca: Adam's Needle |
| **Yucca glauca**  
  Yucca: Narrow-leaf |

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</thead>
<tbody>
<tr>
<td>S</td>
<td>S</td>
<td>W</td>
<td>D</td>
<td>D</td>
<td>D</td>
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<td>D</td>
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<td>D</td>
</tr>
<tr>
<td>Sandy-loam</td>
<td>30-72°F</td>
<td>10-32°F</td>
<td>4</td>
<td>4-6' x 4'-6'</td>
<td>Adaptable</td>
<td>Varies-slow</td>
<td>Varies</td>
<td>2-3/3'-5'</td>
<td>Broad</td>
<td>Rounded</td>
<td></td>
<td></td>
<td></td>
<td>Does well on shady sites.</td>
<td>White flowers, red-orange berries. Needs protection above 6000'.</td>
<td>Protected locations only.</td>
<td>Clump forming.</td>
<td>Attractive foliage. Large white flowers. May not flower every year.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plant Schedule Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
</tr>
<tr>
<td>Botanic Name</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Achillea millefolium</td>
</tr>
<tr>
<td>Achillea lamaelesa</td>
</tr>
<tr>
<td>Aconitum columbianum</td>
</tr>
<tr>
<td>Allium tuberosum</td>
</tr>
<tr>
<td>Aquilegia canadensis, A. flavescens</td>
</tr>
<tr>
<td>Aquilegia chrysantha</td>
</tr>
</tbody>
</table>

**Legend:**
- **D:** Dry
- **A:** Adaptable
- **S:** Steady
- **W:** Wet
- **=** Dry to wet
- **N:** Native to Colorado Springs
- **B:** Borrowed from similar regional plant community
- **H:** Historically adapted introduced plant
- **C:** Compatible with plant community
- **O:** Other plants to try

**Exposure:**
- **S:** Sun
- **P:** Partial Sun
- **S:** Shade
- **=** Other plants to try

**FOOTHILLS AND PLAINS:**
- **8 Douglas fir Forest**
- **7 Upper Elevation Riparian**
- **6 Ponderosa Pine Forest**
- **5 Foothill Shrublands**
- **4 Lower Elevation Riparian**
- **3 Prairies**
- **2 Pitch-Juniper Woods**
- **1 Semiarid Shrublands**
<table>
<thead>
<tr>
<th>Botanic Name</th>
<th>Common Name</th>
<th>Water Requirements</th>
<th>Bloom Time</th>
<th>Height / Width</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Aurinia saxatilis</em></td>
<td>Basket-of-Gold</td>
<td>S A</td>
<td>April</td>
<td>8-12'/ 12-16'</td>
<td>Gray-green mounded foliage. Good spring bloom.</td>
</tr>
<tr>
<td><em>Centranthus ruber</em></td>
<td>Red Valerian, Jupiter's Beard</td>
<td>S A</td>
<td>June</td>
<td>18'/ 18-34'</td>
<td>Flower color can vary, buy in bloom to assure color. Tiny flowers in clusters.</td>
</tr>
<tr>
<td><em>Coreopsis lanceolata</em> and cvs., <em>Coreopsis verticillata</em> and cvs.</td>
<td>Tickseed</td>
<td>S A</td>
<td>June</td>
<td>18'/ 12-18'</td>
<td>Many varieties. A daisy-like flower in different sizes, shapes and textures. Long blooming.</td>
</tr>
<tr>
<td><em>Delphinium nuttallianum</em></td>
<td>Larkspur</td>
<td>B B</td>
<td>April</td>
<td>12-18'/ same</td>
<td>A nice compact delphinium.</td>
</tr>
<tr>
<td><em>Delphinium occidentale</em></td>
<td>Larkspur: Tall Mountain</td>
<td>B B</td>
<td>June</td>
<td>3-6'</td>
<td>Difficult to distinguish from other tall species.</td>
</tr>
<tr>
<td><em>Dendranthemenium</em> x mortonii and cvs.</td>
<td><em>Chrysanthemum</em>/ <em>Rudbeckia</em>/ <em>Mum</em>/ <em>Mum</em>/</td>
<td>A A</td>
<td>June</td>
<td>Varies from late August through November</td>
<td>Vary in size, shape and texture. Bloom time varies from late August through November.</td>
</tr>
<tr>
<td><em>Dianthus deltoides</em> and cvs.</td>
<td>Pinks: Maiden Pink</td>
<td>S S</td>
<td>June</td>
<td>Varies</td>
<td>Many color combinations available.</td>
</tr>
<tr>
<td><em>Dianthus spectabilis</em> and cvs., <em>D. eximia</em> and cvs.</td>
<td>Bleeding Heart</td>
<td>S S</td>
<td>June</td>
<td>Varies</td>
<td>Scene cvs. have purplish leaves. Many color combinations available.</td>
</tr>
<tr>
<td><em>Echinacea purpurea</em> and cvs.</td>
<td>Coneflower: Purple</td>
<td>S S</td>
<td>July</td>
<td>2-3'/ same</td>
<td>Interesting flower, resembles a &quot;bleeding heart.&quot; Needs water.</td>
</tr>
<tr>
<td><em>Eremogone capensis</em></td>
<td>Fleabane Daisy</td>
<td>D A</td>
<td>June</td>
<td>Varies</td>
<td>Aster-like flowers.</td>
</tr>
<tr>
<td>Botanic Name</td>
<td>Common Name</td>
<td>Water Requirements</td>
<td>Bloom Time</td>
<td>Height / Width</td>
<td>Comments</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td><em>Erysimum asperum</em></td>
<td>Wallflower</td>
<td>B</td>
<td>Flowers</td>
<td>Yellow-orange</td>
<td>June through July</td>
</tr>
<tr>
<td><em>Euphorbia epiphylloides</em> (syn. <em>E. polychroma</em>)</td>
<td>Spurge: Cushion</td>
<td>D</td>
<td>Flowers</td>
<td>Beaks are yellow, flowers red</td>
<td>May</td>
</tr>
<tr>
<td><em>Gaillardia aristata</em></td>
<td>Blanket Flower</td>
<td>A</td>
<td>Flowers</td>
<td>Red-yellow</td>
<td>July through September</td>
</tr>
<tr>
<td><em>Gaillardia x grandiflora</em> and cvs.</td>
<td>Blanket Flower</td>
<td>A</td>
<td>Flowers</td>
<td>Red-yellow, Bugundy</td>
<td>June through September</td>
</tr>
<tr>
<td><em>Gaura lindheimeri</em></td>
<td>Gaurs: Whirling Butterflies</td>
<td>A</td>
<td>Flowers</td>
<td>Pinkish-white</td>
<td>July through September</td>
</tr>
<tr>
<td><em>Geranium sanguineum</em> and cvs.</td>
<td>Geranium</td>
<td>D</td>
<td>Flowers</td>
<td>Pink, White</td>
<td>Varies</td>
</tr>
<tr>
<td><em>Gypsophila paniculata</em> and cvs.</td>
<td>Baby’s Breath</td>
<td>D</td>
<td>Flowers</td>
<td>White, Pink</td>
<td>June through July</td>
</tr>
<tr>
<td><em>Helianthus annuus</em></td>
<td>Sneezeweed, Helen’s Flower</td>
<td>A</td>
<td>Flowers</td>
<td>Yellow, Red, Orange</td>
<td>August through October</td>
</tr>
<tr>
<td><em>Heliopsis helianthoides</em> and cvs.</td>
<td>Sunflower: Oxeye</td>
<td>A</td>
<td>Flowers</td>
<td>Yellow-orange</td>
<td>Mid-July through September</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------</td>
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<td>---------------</td>
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</tr>
<tr>
<td>Hemerocallis cvs.</td>
<td>Daylily</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Iberis sempervirens and cvs.</td>
<td>Candytuft</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Ilamana ravidalis: Mallow: Mountain or Streambank Globemallow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iris germanica and cvs.</td>
<td>Iris: Bearded</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iris siberica and cvs.</td>
<td>Iris: Siberian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucanthemum x superbum and cvs. (syn. Chrysanthenium): Daisy: Shasta</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Liatris punctata</td>
<td>Gayfeather: Dotted, Blazing Star</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liatris spicata and cvs.</td>
<td>Gayfeather</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ligularia dentata and cvs.</td>
<td>L. stenophylla and cvs. Ragwort</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limonium latifolium</td>
<td>Lavender: Sea, Statice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lupinus &quot;Russel Hybrid&quot;</td>
<td>Lupine: Russell Hybrid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lupinus argenteus, L. sericeus</td>
<td>Lupine: Silver/Silky</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montia oligosperma</td>
<td>Blazing Star</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| Plant Schedule Key | 123504 | 12353A | 123550 | 195070A | A | A | A | A | A | A | A | 45 | A | A | A | 5550A | 5565A | 13560A | 23560 |
|--------------|-------------|-------------------|---------------|-------------------|-------------------|-------------|-------------------|-----------------|-------------------|-------------------|-------------------|--------------|--------|--------------|---------|---------------|---------|-----------------|
| Mertensia ciliata | Chiming Bells | S | D | A | A | A | 2/3 | Flowers | Blue | June through August | 12-18” same | Subject to mildew. Nice bell flower. |
| Mirabilis multiflora | Umbrellawort, Desert Four O’clock | D | D | D | D | D | 4 | Flowers | Purple | July through September | 3-4’/ 4-6’ | Blooms are open only evening through early morning, or on cloudy days. Bell-shaped flower. |
| Narcissus cvs. | Daffodil, Narcissus | A | A | A | A | A | 4 | Flowers | Yellow, White, Orange | March through May | 6-24”/ 8-10” | Early spring-blooming bulb. Many varieties, shapes and sizes. Deer will not browse. Hardiness zones vary, check specific plant. |
| Oenothera missouriensis and cvs. | Evening Primrose, Ozark Sundrops | A | A | A | A | A | 4 | Flowers | Yellow | July through August | 10-12” 18-24” | Large flowers, attractive red seed pod. |
| Paeonia spp. and cvs. | Peony | S | S | S | S | S | 3 | Y | Flowers | Pink, White, Red | Varies by cv. | 3-4’/ same | Large flowers, vibrant colors. Looks like a shrub. Bloom varies from early May to early June. |
| Penstemon angustifolia | Penstemon: Narrow-Leaf | D | D | D | D | D | 4 | Flowers | Red-orange | July through August | 18’/ 2’-3’ | Upright habit. Tubular flowers. Provide good air circulation to prevent mildew and rust. |
| Penstemon barbatus | Penstemon: Scarlet Bugler | D | D | D | D | D | 4 | Flowers | Purple | Mid-June through mid-July | 3-4’/ same | Upright habit. Tubular flowers. Provide good air circulation to prevent mildew and rust. |
| Penstemon strictus | Penstemon: Rocky Mountain | D | D | D | D | D | 3 | Flowers | Purple | Mid-July through September | 3-4’/ same | A shrub that performs like a herbaceous perennial. Pruned to the ground in spring. Fragrant flowers and leaves. |
| Perovskia atriplicifolia | Sage: Russian | S | S | S | S | S | 3 | Y | Flowers | Purple | Varies | 3-4’/ 2’-3’ | Many different colors available. Large flowerheads. Some are fragrant. |
| Phlox paniculata and cvs. | Phlox: Garden | S | S | S | S | S | 3/4 | Flowers | Varies by cv. | Varies | 3-4’/ 2’-3’ | Many different colors available. Large flowerheads. Some are fragrant. |
| Physostegia virginiana and cvs. | False Dragonhead | S | S | S | S | S | 3 | Flowers | Pink, White | September through October | 2-4’/ same | Spreading plants. Flowers on stalk. |
| Potentilla spp. | Cinquefoil | A | A | A | A | A | 2 | Flowers | Yellow | June through August | Varies | Varies from low ground cover to 2’. |
| Pulsatilla patens (syn. Anemone) | Pasque Flower | A | A | A | A | A | 2 | Flowers | Purple | April | 6-12’/ same | Fuzzy nodding flower. One of the first wildflowers to bloom in spring. |
|--------------------------|-----------------------|---------------------|-----------|--------------------------|----------------------|------------------------|-----------------------|---------------------|------------|-----------|-------------|-------------|---------------|----------|-------------------|
| Rudbeckia fulgida cvs.  | A                     | A                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Yellow       | August       | 10-24&quot;/same   | Daisy-like flowers with dark centers. Seedheads offer winter texture. | 47A |
| Cornflower: Black-eyed Susan |                      |                     |           |                          |                      |                        |                       |                     |            |           | Yellow-orange, burgundy | July         | 12-24&quot;/same   | Large multi-colored to single-colored flowers. Short-lived perennial, often grown as annual. Re-seeds easily. | 647A |
| Rudbeckia hirta          | A                     | A                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Purple       | July         | 18-24&quot;/same   | Culinary herb. Many cvs available, including purple-tinted and variegated forms which may not be as hardy. Bloom is generally June through August. Re-seeds aggressively. Long lasting flowers. A second bloom occurs late summer. | A  |
| Daisy: Gloriosa          |                      |                     |           |                          |                      |                        |                       |                     |            |           | Purple-blue  | July         | 2-4&quot;/same     |                                 | A  |
| Sage: Garden             |                      |                     |           |                          |                      |                        |                       |                     |            |           | Blue-White  | July         | 30-36&quot;/same   | Flowers on long stems. Good for cutting. Deadhead to prolong bloom time. | S  |
| Salvia x superba and cvs. | S                 | S                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Pink-yellow  | September through mid-Oct. | 12-18&quot;/same | Seedheads are attractive in the winter. | A  |
| Sage: Violet             |                      |                     |           |                          |                      |                        |                       |                     |            |           | Blue-White  | July         | 18-24&quot;/same   |                                 | A  |
| Lavender Cotton          |                      |                     |           |                          |                      |                        |                       |                     |            |           | Pink-yellow  | September through mid-Oct. | 12-18&quot;/same | Seedheads are attractive in the winter. | A  |
| Scabiosa caucasica and cvs. | S                 | S                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Blue-White  | July         | 18-24&quot;/same   | Flowers on long stems. Good for cutting. Deadhead to prolong bloom time. | S  |
| Pin Cushion Flower       |                      |                     |           |                          |                      |                        |                       |                     |            |           | Pink        | July         | 18-24&quot;/same   |                                 | A  |
| Sedum hybrids and cvs.   | S                     | S                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Pink        | July         | 18-24&quot;/same   | Seedheads are attractive in the winter. | A  |
| Sedum: Stonecrop         |                      |                     |           |                          |                      |                        |                       |                     |            |           | Pink        | July         | 18-24&quot;/same   |                                 | A  |
| Sidalcea candida         | W                     | W                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | White       | Summer       | 10-24&quot;/same   | Grows in moist places. | 7W  |
| Mallow: Checkermallow    |                      |                     |           |                          |                      |                        |                       |                     |            |           | Pink-yellow  | May through June | 10-24&quot;/same | Looks like a miniature hollyhock, but with shiny leaves. | A  |
| Sidalcea malviflora      | W                     | W                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Pink        | July         | 18-24&quot;/same   | Seedheads are attractive in the winter. | A  |
| Mallow: Prairie          |                      |                     |           |                          |                      |                        |                       |                     |            |           | Orange-red  | May through June | 10-24&quot;/same | Claffed silvery-green leaves, mallow-type flowers. | 1235D |
| Sphaeralcea coccinea     | D                     | D                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Purple      | May-June     | 2-3&quot;/same     | Lacy, airy leaves. Flowers on raised stalks. | 78B |
| Mallow: Scarlet Globemallow |                  |                     |           |                          |                      |                        |                       |                     |            |           | Purple      | May-June     | 2-3&quot;/same     | Leaves often mistaken for the native columbine. | 78S |
| Thalictrum aquilegifolium | S                   | S                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Purple      | May-June     | 2-3&quot;/same     | Thread-like leaves. Daisy-type flower. | 1235A |
| Meadow Rue               |                      |                     |           |                          |                      |                        |                       |                     |            |           | Purple      | May-June     | 12-24&quot;/same   |                                 | A  |
| Thalictrum fendleri      | S                     | S                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Yellow      | August       | 12-18&quot;/same   |                                 | 3D  |
| Meadow Rue               |                      |                     |           |                          |                      |                        |                       |                     |            |           | Yellow      | August       | 12-18&quot;/same   |                                 | 3A  |
| Thelersperma spp.        | A                     | A                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Blue-purple | Spring       | 12-18&quot;/same   | Grass-like leaves. Frequently dormant mid to late summer. | 3D  |
| Showy Navajo Tea/Green Thread |             |                     |           |                          |                      |                        |                       |                     |            |           | Blue-purple | June         | 12-18&quot;/same   | Grass-like leaves. Frequently dormant mid to late summer. | 3A  |
| Tradescantia Virginiana, T. occidentalis | D       | D                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Blue-purple | April        | 12-18&quot;/same   | Grass-like leaves. Frequently dormant mid to late summer. | 3A  |
| Spiderwort                |                      |                     |           |                          |                      |                        |                       |                     |            |           | Blue-purple | June through July | 12-18&quot;/same | Grass-like leaves. Frequently dormant mid to late summer. | 3A  |
| Tradescantia x andersoniana and Tradescantia | D       | D                   | A         | A                        | A                    | A                      | A                     | A                   | A          | A         | Blue-purple | June         | 12-18&quot;/same   | Grass-like leaves. Frequently dormant mid to late summer. | 3A  |
| Spiderwort                |                      |                     |           |                          |                      |                        |                       |                     |            |           | Blue-purple | June         | 12-18&quot;/same   | Grass-like leaves. Frequently dormant mid to late summer. | 3A  |</p>
<table>
<thead>
<tr>
<th>Tulipa spp. and cvs.</th>
<th>D</th>
<th>D</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>A</th>
<th>Varies</th>
<th>Varies</th>
<th>Varies</th>
<th>Deer-like to eat. Bloom varies, is either early spring or early summer.</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLOWERS</td>
<td></td>
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</tr>
<tr>
<td>Verbena diphylla</td>
<td>Verbena: Fernleaf</td>
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<tr>
<td>Veronica alpina</td>
<td>Veronica: Speedwell</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>W. amplexicaulis</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td>Flowers</td>
<td>5</td>
<td>6/2-3</td>
<td>Very long bloom time.</td>
<td>4A</td>
<td>4A</td>
<td>4A</td>
<td></td>
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</tbody>
</table>

Veronica alpina and cvs., V. spicata and cvs. (Speedwell)

W. amplexicaulis, W. arizonica (Male's Ears)
<table>
<thead>
<tr>
<th>Water Requirements</th>
<th>Plant Community</th>
<th>Exposure</th>
<th>Height/Width</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;dry 13* - 20*&quot;</td>
<td>&quot;Native to Colorado Springs&quot;</td>
<td>&quot;Sun&quot;</td>
<td>18' - 24'</td>
<td>&quot;Coarse texture. Blue-green leaf color.&quot;</td>
</tr>
<tr>
<td>&quot;adaptable 18* - 28*&quot;</td>
<td>&quot;Borrowed from similar regional plant community&quot;</td>
<td>&quot;Part-Sun&quot;</td>
<td>18&quot; - 24&quot;</td>
<td>&quot;Extremely aggressive, especially with increased winter moisture. Can overgrow other plants quickly. Leaf blades are often blistered in color.&quot;</td>
</tr>
<tr>
<td>&quot;steady 23* - 38*&quot;</td>
<td>&quot;Historically adapted introduced plant&quot;</td>
<td>&quot;Shade&quot;</td>
<td>2 - 3'</td>
<td>&quot;Fall color is rusty, as is seed head.&quot;</td>
</tr>
<tr>
<td>&quot;wet &gt; 36*&quot;</td>
<td>&quot;Compatible with plant community&quot;</td>
<td>&quot;Shade&quot;</td>
<td>2 - 3'</td>
<td>&quot;Is tolerant of clay and alkaline soils. Fall color is tan and rust.&quot;</td>
</tr>
<tr>
<td>&quot;= Other plants to try&quot;</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**GRASSES**

**Agropyron cristatum and cvs.**
Wheatgrass: Crested

**Agropyron smithii and cvs.**
Wheatgrass: Western

**Andropogon gerardii**
Bleeding: Big

**Bouteloua curtipendula and cvs.**
Gramin: Sideoats

**Bouteloua graminis**
Gramin: Blue

**Bouteloua hirsuta**
Gramin: Hairy

**Buchloe dactyloides and cvs.**
Buffalo Grass

**Calamagrostis acutiloba and cvs.**
Feather Reed Grass

**Calamovilla longifolia**
Prairie Sandreed

**Eragrostis trichodes**
Sideo Grass

**Festuca arundinacea and cvs.**
Fescue: Tall

**Festuca ovina glauca**
Fescue: Blue

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**FOOTHILLS AND PLAINS**

**PLAINS**

**Foothills**

1 Sigmoid Shrublands
2 Pika-Juniper Woods
3 Prairies
4 Lower Elevation Riparian
5 Foothill Shrublands
6 Ponderosa Pine Forest
7 Upper Elevation Riparian
8 Douglas-fir Forest

**FOOTBALLS**

8 Douglas-fir Forest
<table>
<thead>
<tr>
<th>Botanical / Common Name</th>
<th>Water Requirements</th>
<th>Exposed Range</th>
<th>USDA Hardiness Zone</th>
<th>Tree / Shrub Equivalent</th>
<th>Plant Type</th>
<th>Height / Width</th>
<th>Comments</th>
<th>Plant Schedule Key</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Helictotrichon sempervirens</em> Blue Oat Grass</td>
<td>D</td>
<td>D</td>
<td>6</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>3-4/in.</td>
<td>Blue leaves. Arched habit.</td>
<td>12350</td>
</tr>
<tr>
<td><em>Hilaria jamesii</em> Galleta</td>
<td>D</td>
<td>D</td>
<td>6</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>8-12/12-18/in.</td>
<td>Spreading. Resembles Bouteloua curtipendula.</td>
<td>123410</td>
</tr>
<tr>
<td><em>Koeleria pyramidalata</em> Junegrass</td>
<td>A</td>
<td>A</td>
<td>5</td>
<td>1-2/1-2</td>
<td>Ornamental grass</td>
<td>2-3/in.</td>
<td>Light tan fall color. Seed head is retained</td>
<td>12350</td>
</tr>
<tr>
<td><em>Lolium perenne and cvs.</em> Perennial Ryegrass</td>
<td>S</td>
<td>S</td>
<td>5</td>
<td>1-2</td>
<td>Turf-type grass</td>
<td>3/6/18</td>
<td>Turf alternative to Kentucky Blue Grass.</td>
<td>S</td>
</tr>
<tr>
<td><em>Miscanthus sinensis and cvs.</em> Eulalia Grass</td>
<td>D</td>
<td>D</td>
<td>5</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>3-4/in.</td>
<td>Many cultivars available. Needs to be cut</td>
<td>DA</td>
</tr>
<tr>
<td><em>Molinia caerulea</em> Moor Grass</td>
<td>A</td>
<td>A</td>
<td>4</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>2-3/in.</td>
<td>Purplish black florescence.</td>
<td>A</td>
</tr>
<tr>
<td><em>Muhlenbergia montana</em> Mountain Muhly</td>
<td>A</td>
<td>A</td>
<td>4</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>18/in.</td>
<td>Native where precipitation is over 17&quot;</td>
<td>23968A</td>
</tr>
<tr>
<td><em>Oryzopsis hymenoides</em> Indian Ricegrass</td>
<td>D</td>
<td>D</td>
<td>4</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>18-24/in.</td>
<td>Fall color is rusty gold. Hard to establish.</td>
<td>12350</td>
</tr>
<tr>
<td><em>Panicum virgatum</em> Switch Grass</td>
<td>D</td>
<td>D</td>
<td>4</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>3-4/in.</td>
<td>Good winter texture. Needs to be cut back in</td>
<td>123460</td>
</tr>
<tr>
<td><em>Penisetum spp.</em> Fountain Grass</td>
<td>A</td>
<td>A</td>
<td>varies</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>varies</td>
<td>Attractive flower spikes. Often used as an</td>
<td>A</td>
</tr>
<tr>
<td><em>Poa pratensis</em> Kentucky Blue Grass</td>
<td>S</td>
<td>S</td>
<td>3</td>
<td>1-2</td>
<td>Turf-type grass</td>
<td>12&quot;</td>
<td>Traffic tolerant. More drought tolerant.</td>
<td>S</td>
</tr>
<tr>
<td><em>Schizachyrium scoparium</em> Bluestem: Little</td>
<td>D</td>
<td>D</td>
<td>4</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>18-24/in.</td>
<td>A smaller version of Andropogon gerardii</td>
<td>12350</td>
</tr>
<tr>
<td><em>Sorghastrum nutans</em> (syn. <em>S. arvenseum</em>) Indiangrass</td>
<td>D</td>
<td>D</td>
<td>4</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>2-3/in.</td>
<td>Good rusty gold fall color.</td>
<td>3450</td>
</tr>
<tr>
<td><em>Sporobolus cryptandrus, S. aisloides</em> Sand Dropseed, Alkali Sacaton</td>
<td>S</td>
<td>S</td>
<td>3</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>1-2/in.</td>
<td>S. aisloides is alkaline-tolerant. Performa</td>
<td>1340</td>
</tr>
<tr>
<td><em>Stipa comata</em> Needle and Thread Grass</td>
<td>D</td>
<td>D</td>
<td>5</td>
<td>1-2</td>
<td>Ornamental grass</td>
<td>2-3/in.</td>
<td>Seed heads can lodge in pets’ ears and</td>
<td>12330</td>
</tr>
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<td>----------------</td>
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</tr>
<tr>
<td>Stipa neomexicana</td>
<td>Feather-grass: New Mexican</td>
<td>D</td>
<td></td>
<td>8</td>
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</tr>
</tbody>
</table>

23
<table>
<thead>
<tr>
<th>Botanical Name Common Name</th>
<th>Water Requirement</th>
<th>Plant Community</th>
<th>Exposure</th>
<th>Bloom Time</th>
<th>Height / Width</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Achillea tomentosa and cvs.</em> Yarrow: Woolly</td>
<td>D</td>
<td>Ground Cover</td>
<td>Yellow; cvs. are varied</td>
<td>Mid-July - early August</td>
<td>8-12&quot;/some</td>
<td>Gives interesting texture. Not as aggressive as some Achillea spp.</td>
</tr>
<tr>
<td><em>Aegopodium podagria and cvs.</em> Snow-on-the-Mountain</td>
<td>S</td>
<td>Ground Cover</td>
<td>White</td>
<td>June</td>
<td>6-12&quot;/3-4'</td>
<td>Foliage burns with too much sun and/or not enough water. Can be invasive.</td>
</tr>
<tr>
<td><em>Ajuga reptans and cvs.</em> Carpet Bugle, Ajuga</td>
<td>S</td>
<td>Ground Cover</td>
<td>Blush-purple</td>
<td>Late May - June</td>
<td>12-18&quot;</td>
<td>Foliage is bronze or purple-colored. Spreading. Needs good drainage.</td>
</tr>
<tr>
<td><em>Callirhoe involucrata</em> Mallow: Poppy</td>
<td>D</td>
<td>Ground Cover</td>
<td>Pink</td>
<td>May - August</td>
<td>6-8&quot;/36-48&quot;</td>
<td>Flowers are cup-shaped.</td>
</tr>
<tr>
<td><em>Cernastium tomentosum</em> Snow-in-Summer</td>
<td>D</td>
<td>Ground Cover</td>
<td>White</td>
<td>Late May - early July</td>
<td>6-10&quot;/24-36&quot;</td>
<td>Grey-white foliage. Plants are mounded. Easily re-seeds.</td>
</tr>
<tr>
<td><em>Convallaria majalis</em> Lily-of-the-Valley</td>
<td>A</td>
<td>Ground Cover</td>
<td>White</td>
<td>Mid-May - early June</td>
<td>4-8&quot;/12-18&quot;</td>
<td>Early, fragrant bloom, with orange fruits. Following. Spreading.</td>
</tr>
<tr>
<td><em>Delosperma cooperi</em> Ice Plant: Purple</td>
<td>D</td>
<td>Ground Cover</td>
<td>Pink</td>
<td>Mid-June - September</td>
<td>Less than 6/12-18&quot;</td>
<td>Good flower color. Not as aggressive as D. nudum.</td>
</tr>
<tr>
<td><em>Delosperma nubigenum</em> Ice Plant: Hardy Yellow</td>
<td>D</td>
<td>Ground Cover</td>
<td>Yellow</td>
<td>May - June</td>
<td>Less than 3'/3&quot;</td>
<td>Only slightly aggressive at this elevation. Forms a dense mat.</td>
</tr>
<tr>
<td><em>Duchesnea indica</em> Strawberry: Mock</td>
<td>A</td>
<td>Ground Cover</td>
<td>Yellow</td>
<td>Mid-June - early July</td>
<td>Less than 6/12-18&quot;</td>
<td>Looks similar to a strawberry.</td>
</tr>
<tr>
<td><em>Galium ordoratum</em> Sweet Woodruff</td>
<td>W</td>
<td>Ground Cover</td>
<td>White</td>
<td>May</td>
<td>6-10&quot;/12-18&quot;</td>
<td>Flowers are in clusters. Leaves and stems are fragrant.</td>
</tr>
</tbody>
</table>

**Legend**

- **Water Requirements**
  - **D** = dry 13° - 20°
  - **S** = Sun
  - **A** = adaptable 18° - 28°
  - **W** = wet >36°
  - **5** = Native to Colorado Springs
  - **0** = Borrowed from similar regional plant community
  - **4** = Historically adapted introduced plant
  - **3** = Compatible with plant community

- **Plant Community**
  - **Native to Colorado Springs**
  - **Borrowed from similar regional plant community**
  - **Historically adapted introduced plant**
  - **Compatible with plant community**

- **Exposure**
  - **Sun**
  - **Part-Sun**
  - **Shade**

- **Other plants to try**

---

**FOOTHILLS**

7 Upper Elevation Riparian
6 Ponderosa Pine Forest
5 Foothill Shrublands
4 Lower Elevation Riparian
3 Prairies
2 Pithon-Juniper Woods
1 Semiard Shrublands

**FOOTHILLS AND PLAINS**

8 Douglas-fir Forest
<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Exposure</th>
<th>Flower Color</th>
<th>Bloom Time</th>
<th>Height/Width</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gypsophila repens and cvs.</td>
<td>Baby's Breath: Creeping</td>
<td>Sun</td>
<td>Pink, White</td>
<td>June — mid-July</td>
<td>4-8”/12-16”</td>
<td>Needs good drainage.</td>
</tr>
<tr>
<td>Lysimachia nummularia</td>
<td>Moneywort</td>
<td>Sun</td>
<td>Yellow</td>
<td>July</td>
<td>Less than 6’/18-24”</td>
<td>Light green foliage.</td>
</tr>
<tr>
<td>Persicaria affinis and cvs. (syn. Polygonum affine)</td>
<td>Plumeflower Himalayan, Smartweed</td>
<td>Sun</td>
<td>Pink</td>
<td>June — September</td>
<td>6-12’/24-36”</td>
<td>Leaves turn red in fall. Flowers in clusters along stalks.</td>
</tr>
<tr>
<td>Phlox subulata</td>
<td>Phlox: Creeping Phlox</td>
<td>Sun</td>
<td>Pink, White</td>
<td>Mid-April — June</td>
<td>4-8”/12-18”</td>
<td>Evergreen (where protected) to semi-evergreen.</td>
</tr>
<tr>
<td>Potentilla × barbata 'Nana' (syn. P. × barbata)</td>
<td>Potentilla: Creeping</td>
<td>Partial Shade</td>
<td>Yellow</td>
<td>June — October</td>
<td>1-3’ tall</td>
<td>Semi-evergreen. Foliage is reddish-purple in fall.</td>
</tr>
<tr>
<td>Sedum album and cvs., S. hians, S. acre and cvs.</td>
<td>Sedum</td>
<td>Sun</td>
<td>Pink, White</td>
<td>Varies by sp.</td>
<td>Less than 6”/18”</td>
<td>Various sizes, text colors and textures available.</td>
</tr>
<tr>
<td>Snailacea racemosa</td>
<td>False Solomonseal</td>
<td>Sun</td>
<td>White</td>
<td>April — May</td>
<td>6-12”/12-24”</td>
<td>Resembles Campanula or chrysanthemum: Fragrant.</td>
</tr>
<tr>
<td>Stachys byzantina and cvs.</td>
<td>Lamb's Ear, Woolly Betony</td>
<td>Sun</td>
<td>Purple</td>
<td>Mid-July — August</td>
<td>12-18”/18-24”</td>
<td>Evergreen or semi-evergreen. Good fall foliage color. Often used to ground in higher elevations.</td>
</tr>
<tr>
<td>Teucrium chamaedrys</td>
<td>Germander: Wall</td>
<td>Sun</td>
<td>Purple</td>
<td>July — September</td>
<td>12”/18”</td>
<td>Evergreen or semi-evergreen. Good fall foliage color. Often used to ground in higher elevations.</td>
</tr>
<tr>
<td>Thymus serpyllum, T. minus, T. praecox, T. pseudanthus</td>
<td>Thyme: Creeping</td>
<td>Sun</td>
<td>Purple/ pink</td>
<td>Varies by sp.</td>
<td>Less than 6”/18”</td>
<td>Useful between stepping stones. Flowers and leaves are fragrant.</td>
</tr>
<tr>
<td>Vinca minor</td>
<td>Periwinkle</td>
<td>Sun</td>
<td>Blue-purple</td>
<td>April — May</td>
<td>Less than 6”/18”</td>
<td>Evergreen in semi-evergreen. Dark green shiny leaves. Will tolerate sun, but prefers some shade.</td>
</tr>
<tr>
<td>Waldsteinia ternata, W. fragarioides</td>
<td>Strawberry: Barren</td>
<td>Sun</td>
<td>Yellow</td>
<td>June</td>
<td>Less than 6”/18”</td>
<td>Evergreen; strawberry-like plants.</td>
</tr>
<tr>
<td>Zinnia grandiflora</td>
<td>Paper Flower, Wild Zinnia</td>
<td>Sun</td>
<td>Yellow</td>
<td>July — mid-October</td>
<td>6-12”/same</td>
<td>Only hardy in higher elevations. Re-seeds easily.</td>
</tr>
</tbody>
</table>
Appendix E: Schematic Landscape Diagram

To be submitted in conformance with Policy 311. (See reverse side for example.)

Name of project: ____________________________ Date: ________________

Climate zone (from Figure 4 of Landscape Policy Manual) - circle one:

- Foothills
- Foothills & Plains
- Plains

Plant Communities
- to be labeled by number(s) on diagram:

1 — Semiarid Shrublands
2 — Pinon-Juniper Woodlands
3 — Prairie
4 — Lower Elevation Riparian
5 — Foothill Shrublands
6 — Ponderosa Pine Forest
7 — Upper Elevation Riparian
8 — Douglas-fir Forest

Hydrozones (supplemental water)
- to be labeled by letter(s) on diagram:

V - Very Low (0 to 7 inches per year)
L - Low (7 to 15 inches per year)
M - Moderate (15 to 25 inches per year)
H - High (more than 25 inches per year)
Appendix E: Schematic Landscape Diagram

To be submitted in conformance with Policy 311. (See reverse side for example.)

**Peak Office Bldg.**

**11-3-98**

Name of project: ___________________________ Date: ___________________________

Climate zone (from Figure 4 of Landscape Policy Manual) - circle one:

- Foothills
- Foothills & Plains
- Plains

Plant Communities
- to be labeled by number(s) on diagram:

1 — Semiarid Shrublands
2 — Pinon-Juniper Woodlands
3 — Prairie
4 — Lower Elevation Riparian
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Hydrozones (supplemental water)
- to be labeled by letter(s) on diagram:

V - Very Low (0 to 7 inches per year)
L - Low (7 to 15 inches per year)
M - Moderate (15 to 25 inches per year)
H - High (more than 25 inches per year)

---

N —

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COLORADO SPRINGS LANDSCAPE CODE AND POLICY MANUAL
Appendix F: Site Category Calculation Formats

(Required by Policy 312)

**Landscape Setbacks (or Double Frontage Lot Streetscapes)** See Code Section/Policy 320 & 317

<table>
<thead>
<tr>
<th>STREET NAME OR ZONE BOUNDARY (ELEV.)</th>
<th>STREET CLASSIFICATION</th>
<th>WIDTH (IN FT. REQ. / PROV.)</th>
<th>LINEAR FOOTAGE</th>
<th>TREE/FEET REQUIRED</th>
<th>NO. OF TREES REQ. / PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMPLE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jones Drive</td>
<td>Minor Arterial</td>
<td>20' / 20'</td>
<td>284'</td>
<td>1/25'</td>
<td>12 / 9 + shrubs</td>
</tr>
<tr>
<td>West Zone Boundary</td>
<td></td>
<td></td>
<td>273'</td>
<td>1/30'</td>
<td>10 / 9 + shrubs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHRUB SUBSTITUTES REQUIRED / PROVIDED</th>
<th>ORNAMENTAL GRASS SUB. REQUIRED / PROVIDED</th>
<th>SETBACK PLANT ABBR. DENOTED ON PLAN*</th>
<th>PERCENT GROUND PLANE VEG. REQ. / PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 / 20 + orn. grass</td>
<td>20 / 20</td>
<td>JS (Jones Setback)</td>
<td>75% / 75%</td>
</tr>
<tr>
<td>10 / 10</td>
<td></td>
<td>WB (West Boundary)</td>
<td>75% / 85%</td>
</tr>
</tbody>
</table>

**Motor Vehicle Lots** See Code Section/Policy 321 & 317

<table>
<thead>
<tr>
<th>NO. OF VEHICLE SPACES PROVIDED</th>
<th>SHADE TREES (1/15 SPACES) REQUIRED / PROVIDED</th>
<th>VEHICLE LOT FRONTAGE(S)</th>
<th>LENGTH OF FRONTAGE (FT.) (EXCLUDING DRIVEWAYS)</th>
<th>2/3 LENGTH OF FRONTAGE (FT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMPLE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>205</td>
<td>14 / 14</td>
<td>Smith Drive</td>
<td>262 ft.</td>
<td>175 ft.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>East Side</td>
<td>120 ft.</td>
<td>80 ft.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MIN. 3’ SCREENING PLANTS REQ./PROV.</th>
<th>EVERGREEN PLANTS REQ.(50%) / PROV.</th>
<th>LENGTH OF SCREENING WALL OR BERM PROVIDED</th>
<th>VEHICLE LOT PLANT ABBR. ON PLAN*</th>
<th>PERCENT GROUND PLANE VEG. REQ./PROV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 / 25 + wall</td>
<td>13 / 15</td>
<td>50’ of screen wall</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>16 / 16</td>
<td>8 / 16</td>
<td></td>
<td></td>
<td>75% / 80%</td>
</tr>
</tbody>
</table>

**Internal Landscaping** See Code Section/Policy 322 & 317

<table>
<thead>
<tr>
<th>NET SITE AREA (SF) (LESS PUBLIC R.O.W.)</th>
<th>PERCENT MINIMUM INTERNAL AREA (%)</th>
<th>INTERNAL AREA (SF) REQUIRED / PROVIDED</th>
<th>INTERNAL TREES (1/500 SF) REQUIRED / PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMPLE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77,532 SF</td>
<td>Nonres. 5%</td>
<td>3877 SF / 4841 SF</td>
<td>8 / 3 + shrubs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHRUB SUBSTITUTES REQUIRED / PROVIDED</th>
<th>ORNAMENTAL GRASS SUB. REQUIRED / PROVIDED</th>
<th>INTERNAL PLANT ABBR. DENOTED ON PLAN*</th>
<th>PERCENT GROUND PLANE VEG. REQ. / PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 / 40 + orn. grass</td>
<td>20 / 20</td>
<td>1</td>
<td>75% / 90%</td>
</tr>
</tbody>
</table>

**Landscape Buffers & Screens** See Code Section/Policy 323 & 317

<table>
<thead>
<tr>
<th>STREET NAME OR PROPERTY LINE (ELEV.)</th>
<th>WIDTH (IN FT.) REQ./PROV.</th>
<th>LINEAR FOOTAGE</th>
<th>BUFFER TREES (1/20') REQUIRED / PROVIDED</th>
<th>EVERGREEN TREES REQ.(50%) / PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMPLE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Property Line</td>
<td>15’ / 15’</td>
<td>205’</td>
<td>11 / 11</td>
<td>6 / 6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LENGTH OF 6 FT. OPAQUE STRUCTURE REQ./PROV.</th>
<th>BUFFER TREE ABBR. DENOTED ON PLAN*</th>
<th>PERCENT GROUND PLANE VEG. REQ./PROV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>205’ / 190’ (-15’ for driveway visibility)</td>
<td>SB (South Buffer)</td>
<td>75% / 75%</td>
</tr>
</tbody>
</table>

* Note existing trees to remain.
## Appendix G: Plant Schedule Format

(Required by Policy 312)

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>ABBR.*</th>
<th>QTY.</th>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>KEY FROM APPENDIX B</th>
<th>MATURE WIDTH</th>
<th>PLANTING SIZE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>Acer ginnala</td>
<td>Amur Maple</td>
<td>4578A</td>
<td>15-20'</td>
<td>1&quot; cal.</td>
<td>B&amp;B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>Quercus macrocarpa</td>
<td>Bur Oak</td>
<td>4DA</td>
<td>40-60'</td>
<td>1.5&quot; cal.</td>
<td>B&amp;B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>Koelreuteria paniculata</td>
<td>Golden Rain Tree</td>
<td>S</td>
<td>30-40'</td>
<td>1.5&quot; cal.</td>
<td>B&amp;B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>Pinus nigra</td>
<td>Austrian Pine</td>
<td>2678A</td>
<td>10-20'</td>
<td>6' ht.</td>
<td>B&amp;B</td>
</tr>
</tbody>
</table>

**Percent Signature Trees**: *(60% minimum - Policy 311.3.K)*

**Signature Trees: 15**
**Total No. of Trees: 20 = 75% Signature Trees**

### SHRUBS:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>ABBR.*</th>
<th>QTY.</th>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>KEY FROM APPENDIX B</th>
<th>MATURE WIDTH</th>
<th>PLANTING SIZE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aa</td>
<td></td>
<td>8</td>
<td>Amelanchier alnifolia</td>
<td>Western Serviceberry</td>
<td>257DA</td>
<td>6-12'</td>
<td>5 gal.</td>
<td>Cont.</td>
</tr>
<tr>
<td>Am</td>
<td></td>
<td>6</td>
<td>Aronia melanocarpa</td>
<td>Black Chokeberry</td>
<td>457A</td>
<td>6-12'</td>
<td>5 gal.</td>
<td>Cont.</td>
</tr>
<tr>
<td>Ca</td>
<td></td>
<td>5</td>
<td>Cornus alterniflora</td>
<td>Pagoda Dogwood</td>
<td>S</td>
<td>6-8'</td>
<td>5 gal.</td>
<td>Cont.</td>
</tr>
<tr>
<td>Cd</td>
<td></td>
<td>9</td>
<td>Cotoneaster divaricatus</td>
<td>Spreading Cotoneaster</td>
<td>2345A</td>
<td>6-12'</td>
<td>5 gal.</td>
<td>Cont.</td>
</tr>
</tbody>
</table>

**Percent Signature Shrubs**: *(60% minimum - Policy 311.3.K)*

**Signature Shrubs: 23**
**Total No. of Shrubs: 28 = 82% Signature Shrubs**

### ORNAMENTAL GRASSES:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>ABBR.*</th>
<th>QTY.</th>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>KEY FROM APPENDIX B</th>
<th>MATURE WIDTH</th>
<th>PLANTING SIZE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ang</td>
<td></td>
<td>20</td>
<td>Andropogon gerardi</td>
<td>Big Bluestem</td>
<td>123D</td>
<td>2-3'</td>
<td>1 gal.</td>
<td>Cont.</td>
</tr>
<tr>
<td>Caa</td>
<td></td>
<td>10</td>
<td>Calamagrostis acutiflora</td>
<td>Feather Grass</td>
<td>D</td>
<td>2-3'</td>
<td>1 gal.</td>
<td>Cont.</td>
</tr>
</tbody>
</table>

**Percent Signature Grasses**: *(if substituted for shrubs @ 2 for 1)*

**Signature Grasses: 10**
**Total No. of Grasses: 15 = 67% Signature Grasses**

---

* Species abbreviations determined by designer.

** Classified as N, B, H or C in Appendix B, Selected Plants for Colorado Springs
NOTES:
1. DO NOT REMOVE OR CUT LEADER.
2. PRUNE ONLY DEAD OR BROKEN BRANCHES IMMEDIATELY PRIOR TO PLANTING.
3. DO NOT REMOVE ANY DOUBLE LEADER, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.
4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
5. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
6. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
7. PINE AND SPRUCE TREES TO BE SPRAYED FOR IPS BARK BEETLE PRIOR TO PLANTING. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
8. ALL TREES TO BE DEEP WATERED AT TIME OF PLANTING.

TRUNK FLARES MUST BE VISIBLE AT TOP OF RODDING POSITION ROOT FLARE AT GRADE.

3.4" DEPTH OF SPECIFIED MULCH. KEEP MULCH AWAY FROM CONTACT WITH WOODY TRUNK. DO NOT PLACE LANDSCAPE FABRIC UNDER MULCH.

PROVIDE A 6" DIAMETER MULCH RING WITH A 6" PLANTING RIM FOR TREES IN DRYLAND PLANTING BEDS AND IN IRRIGATED NATIVE SEED AREAS WHERE IRRIGATION ZONES ARE TO BE SHUT DOWN AFTER ESTABLISHMENT. PROVIDE 4" RIM ON DOWNHILL SIDE ON SLOPES. NO RIM FOR TREES IN IRRIGATED TURF AREAS.

ORANGE FLUORESCENT FLAGGING ON WIRE FOR SAFETY.

SET TREE VERTICAL. STAKE TREES SMALLER THAN 6" WITH TWO POSTS ON THE LEENEY AND WINDWARD SIDES; STAKE TREES 6" HEIGHT AND GREATER WITH 3 METAL ANGLE IRONS, PLACED 120 DEGREES APART. USE NYLON STRAP WITH GROMMETS BELOW MIDPOINT OF TREE. TIGHTEN #10 GUY WIRE BY TWISTING. PROTECT BRANCHES FROM TOUCHING WIRE. ALLOW A Slight SAG FOR SWAY.

PROVIDE FLAGGING FOR VISIBILITY. SET STAKES IN MINIMUM 18" FIRM SOIL. REMOVE STAKES WITHIN 12-18 MONTHS OF PLANTING.

SCARIFY SIDES OF PLANTING PIT. BACKFILL WITH AMENDED SOIL MIX. ROOTBALL SHALL REST ON FIRM, UNDISTURBED SOIL.

AFTER TREE IS POSITIONED, REMOVE ALL TWINE, ROPE, PLASTIC, WIRE, BURLAP, AND RUBBER.

MIN 2 X ROOTBALL

CITY OF COLORADO SPRINGS

Rev: 11.13.08

Disclaimer: These planting details are for City review and approval process only and shall not be used for construction or bidding purposes.

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

SECTION
NOTES:
1. DO NOT REMOVE OR CUT LEADER.
2. PRUNE ONLY DEAD OR BROKEN BRANCHES IMMEDIATELY PRIOR TO PLANTING.
3. DO NOT REMOVE ANY DOUBLE LEADER, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.
4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
5. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
6. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
7. PINE AND SPRUCE TREES TO BE SPRAYED FOR IPS BARK BEETLE PRIOR TO PLANTING. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
8. ALL TREES TO BE DEEP WATERED AT TIME OF PLANTING.
NOTES:
1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
2. KEEP PLANTS MOIST AND SHAD ED UNTIL PLANTING.
3. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
5. ALL SHRUBS IN ROCK AREAS TO RECEIVE SHREDDED MULCH RINGS.
6. DEEP WATER ALL PLANTS AT TIME OF PLANTING.

SET SHRUBS VERTICAL. SHRUB SPACING AS PER PLANS. LAYOUT VARIES. FINISHED GRADE OF SHRUB BED TO BE 2" BELOW ADJACENT FINISH GRADE AT EDGE TO HOLD MULCH.

PLANT TOP OF ROOTBALL AT GRADE.

3/4" SPECIFIED ORGANIC MULCH. PROVIDE 6" PLANTING RIM FOR SHRUBS NOT IN PLANTING BED. PROVIDE SAUCER ON DOWNHILL SIDE ON SLOPES. NO PLANTING RIM FOR SHRUBS IN PLANTING BED. KEEP MULCH AWAY FROM CONTACT WITH WOODY TRUNK.

SCARIFY SIDES OF PLANTING PIT. BACKFILL WITH AMENDED SOIL MIX. ROOTBALL SHALL REST ON FIRM, UNDISTURBED SOIL.

REMOVE ALL PACKAGING MATERIAL. FOR POT BOUND PLANTS ONLY: MAKE 4-6 VERTICAL CUTS IN ROOTBALL 1" DEEP. PLANT IMMEDIATELY.

FOR ROOT BIND AT BOTTOM OF BALL: SPLIT ROOTBALL VERTICALLY FROM BOTTOM HALFWAY TO TOP. SPREAD THE TWO HALVES OVER A MOUND OF SOIL IN THE PLANTING HOLE.

Disclaimer: These planting details are for City review and approval process only and shall not be used for construction or bidding purposes.

CITY OF COLORADO SPRINGS
Rev: 11.13.08

SHRUB PLANTING DETAIL
NOT TO SCALE
SECTION
NOTES:
1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
3. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
5. ALL SHRUBS IN ROCK AREAS TO RECEIVE SHREDDED MULCH RINGS.
6. DEEP WATER ALL PLANTS AT TIME OF PLANTING.

SET SHRUBS VERTICAL. SHRUB SPACING AS PER PLANS. LAYOUT VARIES. FINISHED GRADE OF SHRUB BED TO BE 2" BELOW ADJACENT FINISH GRADE AT EDGE TO HOLD MULCH.

PLANT TOP OF ROOTBALL AT GRADE.

3-4" SPECIFIED ORGANIC MULCH. PROVIDE 8" PLANTING RIM FOR SHRUBS NOT IN PLANTING BED. PROVIDE SAUCER ON DOWNHILL SIDE ON SLOPES. NO PLANTING RIM FOR SHRUBS IN PLANTING BED. KEEP MULCH AWAY FROM CONTACT WITH WOODY TRUNK.

EXISTING GRADE.

PROPOSED GRADE.

SCRAPY SIDES OF PLANTING PIT. BACKFILL WITH AMENDED SOIL MIX. ROOTBALL SHALL REST ON FIRM, UNDISTURBED SOIL.

REMOVE ALL PACKAGING MATERIAL. FOR POT BOUND PLANTS ONLY: MAKE 4-5 VERTICAL CUTS IN ROOTBALL 1" DEEP. PLANT IMMEDIATELY.

FOR ROOT Bind AT BOTTOM OF BALL: SPLIT ROOTBALL VERTICALLY FROM BOTTOM HALFWAY TO TOP. SPREAD THE TWO HALVES OVER A MOUND OF SOIL IN THE PLANTING HOLE.

CITY OF COLORADO SPRINGS
Rev: 11.13.08

Disclaimer: These planting details are for City review and approval process only and shall not be used for construction or bidding purposes.

SHRUB PLANTING ON SLOPES DETAIL

NOT TO SCALE
NOTES:
1. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
2. PLANT GROUND COVERS AND PERENNIALS LEVEL AND AT GRADE.
3. PRUNE ALL DEAD OR BROKEN PARTS PRIOR TO PLANTING.
4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
5. ALL PERENNIALS PLANTED IN ROCK MULCH AREAS TO HAVE ORGANIC MULCH RINGS AROUND THE BASE OF THE PLANT.

PERENNIALS – SIZE AS SPECIFIED IN PLANS. PLANT AT ORIGINAL NURSERY DEPTH. PROVIDE DRIP EMITTERS AS SPECIFIED IN IRRIGATION PLANS.

3" DEPTH ORGANIC MULCH. WEED BARRIER FABRIC IS NOT RECOMMENDED IN MOST PERENNIAL BEDS.

SOIL TO BE WELL CULTIVATED TO A MINIMUM DEPTH OF 6". ADD SOIL AMENDMENTS AS SPECIFIED BASED ON SOILS ANALYSIS.

UNDISTURBED SOIL.

CITY OF COLORADO SPRINGS
Rev: 11.13.08

Disclaimer: These planting details are for City review and approval process only and shall not be used for construction or bidding purposes.

PERENNIAL/GROUNDCOVER PLANTING DETAIL
NOT TO SCALE
Appendix I: Certification of Professional Qualifications

(To be submitted in conformance with Policies 312, 313 and 314)

1. ____________________________________________, hereby certify that I am qualified to prepare the type plan(s) indicated below based on the qualifications (denoted as “Yes”) circled and verified below.

Note: Only one qualification (circled Yes) is needed to prepare a specific type of plan.

<table>
<thead>
<tr>
<th>PROFESSIONAL QUALIFICATION POSSESSED:</th>
<th>TYPE PLAN QUALIFIED TO PREPARE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Licensed Landscape Architect</td>
<td>Landscape Plan*</td>
</tr>
<tr>
<td>2. Full Member of American Society of Landscape Architects (ASLA)</td>
<td>Yes</td>
</tr>
<tr>
<td>3. Bachelor or higher degree in Landscape Architecture or Landscape Design</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Associate Member (except Student Associate) of ASLA or bachelor or higher degree in Horticulture</td>
<td>Yes</td>
</tr>
<tr>
<td>5. Registered Professional Engineer</td>
<td>No</td>
</tr>
<tr>
<td>6. Licensed Architect</td>
<td>No</td>
</tr>
<tr>
<td>7. Bachelor or higher degree in Agricultural Engineering</td>
<td>No</td>
</tr>
<tr>
<td>8. Bachelor or higher degree in Civil Engineering</td>
<td>No</td>
</tr>
<tr>
<td>9. Certified Irrigation Designer certified by The Irrigation Association</td>
<td>No</td>
</tr>
<tr>
<td>10. City Recognized Qualified Designer – Landscape</td>
<td>Yes</td>
</tr>
<tr>
<td>11. City Recognized Qualified Designer – Irrigation</td>
<td>No</td>
</tr>
</tbody>
</table>

REQUIRED VERIFICATION INFORMATION:

For ☐ Licensed Landscape Architect, ☐ Architect, or ☐ Registered Professional Engineer, check and indicate:

State ____________________, License or Registration No. ________________.

State Agency Phone No. for verification (____) ________________.

For ☐ Full or ☐ Associate (except Student Associate) Member of American Society of Landscape Architects at (202) 898-2444, check one.

For ☐ Bachelor or higher degree in ☐ Landscape Architecture, ☐ Landscape Design, ☐ Horticulture, ☐ Agricultural Engineering, or ☐ Civil Engineering, check and indicate:

Degree, ____________________, Year_______, School ________________________________.

Registrar Phone No. (____) ________________________________.

For ☐ Certified Irrigation Designer certified by The Irrigation Association at (703) 573-3551, check and indicate year of certification ________.

Signature: __________________________________________ Date: ___________ Phone No. (______) ______________________
Appendix J: Landscape Inspection Affidavit

(To be submitted in conformance with Code Section 309.C)

Landscape Plan File No. __________________ Name of Project ________________________________
Landscape Plan Designer __________________ Inspector ________________________________
Date(s) of Inspection ________________________________

This project was inspected, within the limits of customary access, for compliance with the approved landscape plan on file in City Planning. The findings are as follows:

<table>
<thead>
<tr>
<th>Plant Material:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Condition of plant material is healthy and meets Colorado Nursery Act and American Standard of Nursery Stock standards.</td>
</tr>
<tr>
<td>2. Installation is in conformance with Appendix H, Planting Details, of Landscape Policy Manual.</td>
</tr>
<tr>
<td>3. All plant material installed as specified by species.</td>
</tr>
<tr>
<td>4. All plant material installed as specified by size.</td>
</tr>
<tr>
<td>5. All plant material installed as specified by quantity.</td>
</tr>
<tr>
<td>6. Location of all plant material is correct.</td>
</tr>
<tr>
<td>7. Specific observations attached if needed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Landscape Elements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Soil prepared and amended as specified.</td>
</tr>
<tr>
<td>2. Compacted soil in vehicle lot planting areas tilled or replaced to a depth of 30 inches.</td>
</tr>
<tr>
<td>3. Berms installed at height and slope specified.</td>
</tr>
<tr>
<td>4. Areas of slope protection installed as specified.</td>
</tr>
<tr>
<td>5. Reclamation &amp; erosion control measures installed as specified.</td>
</tr>
<tr>
<td>6. Grading and drainage intent followed as specified.</td>
</tr>
<tr>
<td>7. Landscape components (internal walks, screening walls/fences, trash enclosures, etc.) installed as specified.</td>
</tr>
<tr>
<td>8. Mulch installed at depth and type specified:</td>
</tr>
<tr>
<td>A. Organic mulch</td>
</tr>
<tr>
<td>B. Inorganic mulch</td>
</tr>
<tr>
<td>9. Ground plane seeding installed as specified.*</td>
</tr>
<tr>
<td>10. Specific observations attached if needed.</td>
</tr>
</tbody>
</table>

I hereby certify that I am qualified to submit this landscape inspection affidavit based on the qualification indicated below: (check one)

☐ Licensed Landscape Architect — indicate: State __________________________ License No. ______________ State Agency Phone No.
   for verification (______) ____________________________.

☐ Full or ☐ Associate (except Student Associate) Member of American Society of Landscape Architects at (202) 898-2444.

☐ Bachelor or higher degree in ☐ Landscape Architecture, ☐ Landscape Design, ☐ Horticulture — indicate:
   Degree __________________________ Year ______ School ________________________________
   Registrar Phone No. for verification (______) ____________________________

Signature: __________________________ Date: __________________________ Phone No. (______) __________________

* Note: Seeding must be established or financially assured prior to issuance of a Certificate of Occupancy.
Appendix K: Irrigation Inspection Affidavit

(To be submitted in conformance with Code Section 309.C)

Irrigation Plan File No. ___________________________ Name of Project ____________________________
Irrigation Plan Designer __________________________ Inspector _______________________________
Date(s) of Inspection ____________________________

This project was inspected, within the limits of customary access, for compliance with the approved irrigation plan on file in City Planning. At least two inspections were conducted. The findings are as follows:

A. Inspection during construction to check main line in open trench:
   1. Location of main line conforms to as-built plan.  [ ] Yes  [ ] No
   2. Size of main line conforms to plan.  [ ] Yes  [ ] No
   3. Depth of main line conforms to plan.  [ ] Yes  [ ] No
   4. Main line condition is undamaged.  [ ] Yes  [ ] No
   5. Main line pressure tested with water and meter to check for visible leaks.  [ ] Yes  [ ] No
   6. Specific observations attached if needed.  [ ] Yes  [ ] No

B. Inspection after completion of system installation, prior to seeding or sodding:
   1. Settling along trenches is absent.  [ ] Yes  [ ] No
   2. System components (i.e., controller, backflow preventer, rain sensor, etc.) installed as specified.  [ ] Yes  [ ] No
   3. Rotary heads pressure tested.  [ ] Yes  [ ] No
   4. System activated for observation of compliance.  [ ] Yes  [ ] No
   5. Landscape components are not blocking application.  [ ] Yes  [ ] No
   6. Each station complies with design / as-built plan.  [ ] Yes  [ ] No
   7. Matched precipitation rates provided by zone.  [ ] Yes  [ ] No
   8. As-built plan provided to owner.  [ ] Yes  [ ] No
   9. Specific observations attached if needed.  [ ] Yes  [ ] No

I hereby certify that I am qualified to submit this irrigation inspection affidavit based on the qualification indicated below:

(check one)
[ ] Licensed Landscape Architect or [ ] Registered Professional Engineer — indicate:
   State __________________________, License or Registration No. __________________________,
   State Agency Phone No. for verification (______) ____________________________.

[ ] Full Member of American Society of Landscape Architects at (202) 898-2444.

[ ] Bachelor or higher degree in Agricultural Engineering — indicate: Degree ____________ Year ______
   School __________________________, Registrar Phone No. for verification (______) ____________________________.

[ ] Certified Irrigation Designer certified by The Irrigation Association at (703) 573-3551 — indicate year of certification ____________

Signature: __________________________ Date: __________ Phone No. (______) __________________________
Appendix L : Example Request for Administrative Relief

(Required by Code Section/Policy 306)

November 3, 1998

Reviewing Planner  MC 310
City Planning - Development Review
Post Office Box 1575
Colorado Springs, Colorado 80901

RE: REQUEST FOR LANDSCAPE ADMINISTRATIVE RELIEF - Development plan for North Powers Office Park, City Planning File Number AR DP 98-800.

To Reviewing Planner:

This development plan is for the construction of a 30,000 square foot office building in an OC (Office Complex) zone, on a site consisting of three (3) acres.

For the reasons stated below, we request Administrative Relief from the following landscape requirements:

REQUEST: #1
CODE SECTION: 7.4.302.B.1
REQUIREMENT: 25’ deep landscape setback
PROPOSAL: Landscape setback ranging from 20’-30’ deep
JUSTIFICATION: Landscape setback is reduced by 20% to 20’ for less than 1/3 of the street frontage. The average depth of the proposed landscape setback complies with the required depth.

REQUEST: #2
CODE SECTION: 7.4.323.C.2
REQUIREMENT: Landscape buffer along common property line adjacent to residential use, including a 6’ opaque structure.
PROPOSAL: Propose deletion of opaque structure along the residential boundary. Replace opaque structure with double row of ornamental trees (44%) and evergreen trees (66%) at 1 tree per 15’ of length and 60 evergreen shrubs in a 20’ (average width) buffer.
JUSTIFICATION: The proposed dense plantings will substantially exceed the buffer planting requirement and improve the compatibility of the adjacent uses. All of the multi-family project’s property adjacent to our development is for parking.

Sincerely,

John Doe
Owner/Developer of North Powers Office Park
Prepared for:

Colorado Springs Utilities
2855 Mesa Road
Colorado Springs, Colorado 80904
(719) 448-4535
Contact: Xeriscape Demonstration Garden Personnel

Prepared by:

Fawn Hayes Bell, ASLA
Urban Design, Site Planning, Landscape Architecture
Carriage House
1619 Wood Avenue
Colorado Springs, Colorado 80907
(719) 577-9890

Contributions and Plant List Preparations:

Dyan del Gaudio, Landscape Technician/Community Education, Water Resources Department
Michael Maloney, Photographer
Diane Radeke, Landscape Technician, Water Resources Department
Gary Rapp, Senior Planner, City of Colorado Springs, City Planning
Ann Seymour, Water Conservation Specialist, Water Resources Department
Jeanie Sims, Landscape Architect, Water Resources Department

First Printing: December 1998
Second Printing: May 2002
Brief Overview of Landscape Code and Policy Manual

This Design Manual expands on information provided in the Colorado Springs Landscape Code and Policy Manual. However, the material contained in the Design Manual is applicable to landscape design for any purpose within the City. The following concise explanation of the Code is provided to clarify those landscapes which are regulated.

The City of Colorado Springs Landscape Code and Policy Manual addresses required landscape site categories and prototypical landscape types for developed lands, with the exception of single-family and two-family residential lots and those landscapes itemized in Code Section 305, A, Exempt Property. Policy Manual includes requirements for sustainable developed landscapes such as parking lots, streetscapes, etc., based on irrigation principles, horticultural requirements, and cost effective maintenance practices. The Code requires: appropriate horticultural practices; site preparation and efficient irrigation systems; preservation of valuable existing plants and native areas; configurations and grading for landscaped areas which can be efficiently irrigated; enforceable installation standards; and long-term maintenance. Plant lists provide specific information about water and cultural requirements, tolerances, and plant community identification of each species.

The Landscape Code emphasizes water conservation in landscapes and promotes water efficient landscapes which are most consistent with the essential character of the region. As such, the revised Code and Policy Manual requires a balanced proportion of xeric/regional landscapes to those which are more water intensive in the community.

Signature Landscapes: Purpose

This Design Manual results from a partnership between the Colorado Springs Water Resources Department and the City of Colorado Springs City Planning. It is intended to promote awareness of water conservation through the creation and recognition of beautiful, sustainable landscapes within the community.

The main purpose of this manual is to assist professional designers in facilitating compliance with the Signature Landscapes component of the Landscape Code and Policy Manual. Signature Landscapes is explained through graphics, maps, and brief essays about the history and vegetative character of Colorado Springs. Species lists of the eight indigenous plant communities are included as a detailed reference.

This manual is written for Colorado Springs, Colorado, and is intended to provide information that is accurate and specific for areas within the City limits as defined at the time of printing in 1998. As such, information derived from more generalized sources may differ somewhat from the data contained in this manual.

"Nature, of course, is not uniform but varies as a function of historical geology, climate, physiography, soils, plants, animals and - consequently - intrinsic resources and land uses."

Ian L. McHarg
Design With Nature
This document is not intended to be a design process instructional guide, per se. A sequential outline for utilizing Signature Landscapes information for design is found in Section 311 of the Landscape Code and Policy Manual.

**Suggested Techniques For Utilizing Signature Landscapes In The Application Of Code Requirements**

A number of techniques to integrate the native and human-made landscapes have been provided. The first recommendation is to identify the soils, topographic features, and native plant community or communities which are ecosystem indicators of the development site. Together with careful site analysis, a design solution can be developed which is consistent with the ecological parameters of the site. Using the plant lists which are provided, the designer can choose a landscape theme which reflects the indigenous qualities of the region and conforms to the quantitative and qualitative Code requirements for each landscape site category.

"Plants are particularly good indicators: they speak not only of the climate but of the soil, the water, even the history of the place"

Kevin Lynch
Site Planning

Other Code provisions protect significant plants and stands of native vegetation during construction. They restrict alteration in the amount of water run-off, irrigation, and introduction of exotic species into those areas. The "oasis" concept provides for an area of more intensive landscaping, frequently located near a pedestrian entrance to a building, balanced by more native or drought-tolerant plantings throughout the remaining areas of a site. The oasis may consist of more water demanding plants or alternatively can feature "native" plant communities as a reminder of the natural setting. Horticultural practices, soil amendments, minimum spatial requirements for plant growth, and grading allowances are provided in the Code and Policy Manual standards to complement the Signature Landscapes approach.

This framework requires that landscape designs be derived from an interpretation of a specific site's development potentials and constraints. Additionally, historic or cultural aspects contribute to the selection of materials, plants, and forms. Therefore, there will be unique landscape areas, historic sites, urban neighborhoods, and preexisting development which may be relieved from the policies, either in part or entirely. It is evident that in an urban context the extent to which Signature Landscapes can be realized will vary depending on the project type and the site. However, the principles contained within this concept and the Code and Policy Manual are to be followed to the extent possible.

The Code allows for alternatives and design flexibility and does not displace acknowledged community values regarding the need for parks, recreational turf areas, and historic or ornamental plantings with mandated landscape changes unless the revisions are clearly warranted based on water savings or safety. Signature Landscapes intends to be consistent with other City Codes with regard to protection of health, safety, and welfare. It will be sufficiently
flexible to allow the optimal design solution for each project site and will result in meaningful water conservation through efficiency and mitigation of waste. The revised policies and regulations will enable the community to move towards the goals of water conservation and sustainability, as well as create an aesthetically pleasing environment.

**Signature Landscapes**

Signature Landscapes is a concept based on the premise that successful landscapes can satisfy cultural and societal values and respond to the ecological context of the natural region. It promotes landscapes which are uniquely tailored to Colorado Springs.

The term Signature Landscapes was coined to further mean landscape development that is consistent with local climatic and soil conditions and that evokes the natural aesthetic qualities of regional native vegetation. The concept encourages an understanding of this natural context of the City as a basis for design solutions. Plant selection should be grounded in the natural order of recognizable plant communities. Parameters for species survival such as soil preferences, tolerances, moisture requirements, exposure and microclimate preferences, and the essential character of the semiarid climate are to be considered.

Signature landscapes does not necessarily result in naturalized landscaping, the exclusive use of native plants, nor the literal restoration of formerly existing landscapes. Rather, it provides principles that will result in landscapes that are reflective of the region, water-efficient, horticulturally sustainable, and which demonstrate a balanced diversity.

Further, it encourages the conservation of significant, existing vegetation and limits alteration of unique or characteristic topography to the extent practicable. It promotes the inclusion of regional plant species and qualities in landscape design while recognizing that introduced, non-native plants may also be used to express these qualities.

Planting themes comprised of a minimum of 60 percent Signature plants can result in sustainable community landscapes which enhance the City’s identity through its vegetative character. The information provided in this manual is based on the premise that once the local conditions are understood, a designer will be better able to create landscapes that are responsive to this specific region and to the community’s values of beautification and sustainability.
Signature landscapes is not a set of predetermined solutions. It is a frame of reference which will serve as a catalyst for landscapes that will be well suited to the community. It is also a framework for design which promotes consideration of the following:

1. The goals of water conservation;
2. The value of the indigenous setting;
3. Promotion of horticultural and maintenance practices specific to the local conditions;
4. Allowance for design flexibility and innovative design solutions which contribute to a “sense of place” for the City.

**Development of Signature Landscapes**

The Signature Landscapes concept evolved from an initiative to define ways to improve the quality of landscapes within the City. Many traditional landscapes were evaluated in detail to identify weaknesses such as unsatisfactory design, engineering, and installation practices. It was determined that many problematic landscapes consisted of wholly exotic species which did not thrive in local conditions, required an excessive amount of supplemental water to survive, or did not fit the aesthetic qualities of the region.

Goals for the community’s landscapes were redefined through efforts of a task force appointed by City Council and an extensive public process in which members of the community were invited to voice their opinions. A new direction was developed to include the benefits of reduced water, energy, and resource consumption with an objective of enhancing the City in terms of liveability, property values, species diversification, and beauty.

These new landscapes will be planned with the natural qualities of the region in mind. Landscapes modeled on the local conditions should be the most successful, and plants which are either naturally occurring or have similar genetic properties or physiographic requirements will be most likely to thrive.

In an effort to identify these conditions and plants, an extensive exploratory process was conducted. Data about soils, plants, plant communities, and climates were evaluated for patterns and clues to the natural vegetative identity of Colorado Springs which would, in turn, serve as the basis for future landscapes. By sorting the data and mapping overlays of information, new conclusions were formalized. Then, potentials within a development scenario which reinforced rather than eradicated the landscape character of the community were identified.

The result is not so much a method as a clarified perspective about the local landscapes. It challenges the community to make design decisions which contribute to the preservation, development, and maintenance of landscapes which evoke the regional character.
A key focus of this manual is to make readily available the basic information about the eight indigenous plant communities, their respective geographic dispersion and species composition, and to provide guidance in the selection of plants for design purposes. This information is a tool for landscaping with a palette which will reference the regional vegetative character rather than substitute a wholly introduced landscape for Colorado Springs. In addition to Signature Landscapes information, designers will utilize site analysis data and Xeriscape principles to develop a project-specific design.

**Colorado Springs Landscapes - An Historic Perspective**

The unique beauty of the Pikes Peak region influenced General Palmer to found the City of Colorado Springs in 1871. In addition to overseeing the engineered layout of the streets to take advantage of dramatic views, he purchased and donated parks throughout the community, ranging from large naturalistic tracts to smaller ornamental open spaces distributed within the urban fabric. His intent was that the qualities of the indigenous setting be integrated with the human-made environment.

The indigenous setting for the initial City area was a treeless expanse of native grasses and forbs. To enhance the appeal of the new community and bridge the gap between the native grassy plains and the vegetated appearance of mature eastern cities to which many citizens were accustomed, he directed the planting of thousands of trees and diverted water from Fountain Creek along an eleven mile long irrigation ditch to provide for their survival. In the downtown area across from the train depot, he provided a demonstration garden of plants which were adapted to the region.

From the beginning of development within the City, there has been this mix of landscapes — those that overlay the natural setting with an alternative landscape style from another region and those that preserve or reveal the setting by using compatible colors, native and adapted plant materials, and patterns of planting which echo the indigenous plant communities and dispersal patterns. The inclusion of Pikes Peak and the foothills setting as a backdrop for individual gardens and parks is another theme integral to local designs.

The mature and diverse vegetation of today is very changed from the original setting due to extensive development and urban forestation by the City and its individual citizens.
Application of Colorado Springs Signature Landscapes

In order to promote innovative designs that are based on the indigenous character of the region and yet respond to the architectural or aesthetic quality of the site context, it is helpful to consider the design precedents which influence the landscapes of Colorado Springs.

A visual inventory of Colorado Springs reveals that the English or European styles have been predominant models and, to a lesser extent, the native vegetative groupings have served as models for landscapes in naturalistic settings. Examples or elements of varied styles can be found throughout the City.

“Application of Colorado Springs Signature Landscapes,” Figure 1, briefly summarizes historic landscape styles most often emulated in the development of landscapes by designers. The placement of elements and plants constitutes a formality or informality. More formal and geometric styles on the left and those which are more freeform and organic on the right schematically represent the evolution of landscape design styles throughout history beginning (in this figure) with Medieval cloistered gardens. These styles are not independent of one another. Rather, they show the influences and motifs carried on or paired with new ideas. Signature Landscapes is a continuation in this evolving cycle of design styles. By reordering established style components and infusing them with a strong element of regional horticultural diversity, new forms can evolve.

It is apparent that in these various styles the landscapes are more than botanical entities. They are also social and cultural expressions. They reflect cultural origin, values, historic settings, and speak of underlying social and political order. For example, the rather rigid and geometric layout of Versailles expresses the dominance and order of the French aristocracy, while the sensuous, naturalistic forms of the imperial gardens of Kyoto are characteristically Japanese.

These landscape styles illustrate, too, the dual purposes of landscapes to: (a) provide escape or mitigate undesirable factors, such as utilizing walled gardens, moats, and hedges; and (b) to promote pleasurable aspects including plant variety, color, fragrance, and shade. These same purposes are reflected in the Landscape Code and Policy Manual in the required site categories which buffer, screen, or enhance the environment. They are goals expressed in a myriad of forms in private, non-regulated landscapes, as well.

Historic styles, whether in the culture or replicated in Colorado Springs, are recognizable by the characteristic geometric and organic patterns. In addition to pattern, the other distinguishing aspect of a landscape is its vegetative character. The species selection, determined by the constraints of the natural climatic and soil conditions of the locale, reinforces the sense of the pattern and provides clues to the ecological niche in which the landscape exists.
These two elements, pattern and species, together contribute to the defining quality of the landscape. Style components may be applied in Colorado Springs, though species selection will be limited by adaptability to local conditions. In many cases, species substitutions will occur in order to achieve a landscape which can be sustained. For example, a columnar juniper which will survive in Colorado Springs may substitute for an Italian cypress in order to achieve a similar effect. The plant lists developed for Signature Landscapes provide a wide selection of plants and detailed information for species selection.

The use of established styles planted with locally hardy species is one premise for design which is relatively easy to implement. Signature Landscapes, however, also encourages the development of innovative styles which reflect the distinct values, constraints, and opportunities of the intermountain West. It also challenges the community to broaden its definition of beauty in landscaping.

**Figure 1. Application of Colorado Springs Signature Landscapes**
Forms which express regional culture, architecture, raw materials, or construction techniques can lead to a distinctive style for the City. In planting, the natural patterns expressed by indigenous vegetation as it naturally occurs can serve as sources for inspiration. These distinctive, recognizable patterns are discussed in this manual.

The melding of historic precedent with innovative styles, inclusion of regional character in the built environment, and selection of plant species and patterns derived from the locale can result in landscapes that will reinforce the “sense of place” for Colorado Springs. An understanding of the local conditions, indigenous vegetation, respective plant communities, and landscape history is essential in the development of successful and sustainable landscapes for the City. By combining a knowledge of the region with professional skills, the landscape architect or designer can blend the ecological, aesthetic, and site program goals in an appropriate design.

In cities, the development process becomes the determining action in landscapes — perhaps even more than the natural forces which shaped it. In the urban setting it can be difficult to perceive ways in which the indigenous landscapes can be conveyed. Site development often results in the complete loss of existing vegetation and drainage patterns, the total recontouring of the land, development of buffers to adjacent parcels, and the necessity for continual irrigation.

Additionally, the architectural character of a new building may introduce a design direction which the landscape should complement or impose a scale which cannot be counterbalanced by the landscape, given the spatial limitations of the development site. When the site is located adjacent to other development areas, the landscape will conflict with or contribute to an overall continuity of “streetscape” design. Signature Landscapes strives to blend the urban development with the indigenous setting and to find ways to implement site development which mitigates deleterious impacts on the land.

One of the primary functions of a site specific landscape is to tie the building to the site and the site to its context by that same design. However, when a structure, reshaping of the ground plane, or configurations which define landscape spaces are disharmonious with the setting, it can be an enormous challenge to rely on the “landscape” to repair the visual and pragmatic problems created in development. Careful site analysis, engineering, and preservation techniques can offset these potential design mistakes.

The graphic icons in Figure 1 are schematic reminders of the design principle that landscapes are recognized by two elements: species and pattern. Icons for the eight native plant communities of Colorado Springs are included, too, as an aid in visualizing natural patterns within this context.
The Integrated Landscape Character Of Colorado Springs

Landscapes can be indicators of specific geographic settings and a City's historic origins — they speak of the underlying character of social and horticultural diversity. Since its founding in 1871, Colorado Springs has been characterized by the visual integration of the foothills and prairie topography and vegetation with the built environment.

The geographic location and diverse influences create the City's character. Colorado Springs is situated in a semiarid area within a narrow band of land between the western edge of the Great Plains and the foothills of the Front Range of the Rocky Mountains. Due to the changes in elevation within City limits, which ranges from approximately 5,500 to 7,500 feet above sea level, this setting provides varied topographic features and rich ecological diversity.

This varied vegetative character reflects the fact that Colorado Springs is situated at the juxtaposition of major ecosystems. This region is the eastern most limit of the ponderosa pine and Douglas-fir forests, near the northern range for native piñon pine and large stands of scrub oak, and the western edge of the short grass prairie.

This diversity is the dominant landscape characteristic of the region in terms of ecosystems, plant communities, soil types, elevations, precipitation and wind patterns, slope aspect and solar orientation, topography, and drainage patterns. The eight widely varied local plant communities are indicative of this diversity.

Many limiting factors influence plant survival. In addition to the semiarid climate, the setting is defined by extreme fluctuations in temperature, low organic matter in soils, desiccating winter winds, high solar intensity, hail storms, and widely varying weather conditions. The average annual precipitation is 16.2 inches; approximately 13.2 inches occurs during a growing season that averages 148 days. For these reasons, a careful site analysis is imperative for all landscape development in Colorado Springs. Utilizing site data, Xeriscape principles, and Signature Landscapes information, successful water-efficient landscapes that are compatible with the natural setting can be developed.
Open Space Lands

The natural rhythm of alternating ridges and valleys together with the mesas, rolling prairie, broad, alluvial lowlands, and drainage corridors form the distinctive land forms of the City. The colors of the natural vegetation range from muted wheats and grays to blue-greens and reds, browns, and ochres. Evergreen and deciduous trees, shrubs, and grasses extend throughout the varied micro- and macroclimates. These are the characteristic elements of the indigenous local landscape.

The numerous undeveloped open space lands which occur throughout the City reflect the naturalistic qualities of the setting and provide the backdrop of the foothills rising to Pikes Peak at an elevation of 14,110 feet. The current Open Space Plan projections indicate that in a “fully developed” scenario, naturalistic open space will comprise less than one percent of the City’s land area — resulting in an inevitable loss of the much of City’s natural beauty.

In addition to this loss, many areas have already been severely altered by disturbance due to mining, grazing, and development of building sites with extensive establishment of high water use turf. Revegetation and forestation policies have also dramatically changed the setting. These alterations of the indigenous setting have converted the center of the City to a mature and diverse urban forest.

In order to ensure that further development does not fully displace the visual quality of the City’s natural setting, Signature Landscapes provides an explanation of the local vegetative character as a reference point for newly developed urban landscapes. New Signature Landscapes in the urban context can partially compensate for the loss of the community’s rapidly disappearing natural surroundings.

Much of the land being altered is in private, single family housing units that are not regulated by City code. For this collective land area to reflect Signature Landscapes, voluntary actions by citizens will be promoted through educational tools such as this manual.

Pattern

Pattern, or the placement of elements in a composition, has been identified as one of the two most important aspects for differentiating historic styles. In Signature Landscapes, pattern goes beyond the human-made imposition of form on the land. It looks also at the distinctive patterns which the species dispersal creates on the ground plane through the sequence and spacing of plants. Landscape patterns of species dispersal provide visual clues to the varying site conditions in which individual species or entire plant communities thrive. For example, trees cluster along northeast slopes and the margins of water bodies; fingers of meadows alternate with shrub masses in undulating foothills; and the prairie, dominated by grasses and forbs, creates a vast openness.
From a vertical cross-section, the relative complexity or simplicity in the layering of plants as canopy, understory, and ground cover are distinctly different in form for each plant community due to species variation, density of vegetative cover, and plant associations. The forms or patterns derived from the individual forms of the characteristic species contribute to the composition. Upright, columnar conifers; dense, twiggy shrubs; open-clump small trees; towering, single trunk canopy trees; wispy grasses; rigid, pyramidal evergreens; and the textural component of a myriad of individual leaf forms are examples of this variety.

Listed below are four important reasons for studying these naturally occurring patterns.

1. Images provided by nature can serve as a basis for a range of design vignettes.

2. The ecological and aesthetic examples illustrate ways to make “designed” landscapes “feel” more accurate, aesthetically pleasing, and harmonious within the natural context.

3. An understanding of the ecological niche favorable for a given plant species will clarify the actual growing needs for the plant which, when replicated, will result in more sustainable landscapes.

4. Close observation of nature trains the eye to see landscapes in ways mere plant lists cannot.

Some plant patterns and associations indicate a dynamic ecological environment. Pioneer species can be indicators of revegetation following a disturbance to the land area. Secondary succession may include invasive weed species. This stage characterizes much of the developable land in Colorado Springs.

In landscape design, pattern information is utilized to create balanced horticultural groupings and to provide an aesthetic quality based in natural order. Pattern is defined as the characteristic form, a model accepted as proposed for imitation, a specimen used as a sample of the whole, and as a natural or chance configuration. The appeal of pattern in both human-made elements and vegetation is that it provides a sense of order, repose, excitement, color, harmony, and balance. Pleasing patterns are hallmarks of design — repetition, balance, and variety in an overall unity.

The paintings of Kandinsky, Jackson Pollack, and Mondrian are examples of art which demonstrate “pure” form derived from the basic elements of line and color. For some, these compositions are easier to understand than natural ones. This manual provides simple, stylized graphics to facilitate the designer’s awareness of these patterns in the natural landscape.
It is not merely species selection in landscape design but species in combination with pattern that results in an aesthetically pleasing solution. By diagrammatically mapping the patterns of each respective plant community, it becomes evident that the composition of each is very different from the others.

**Colorado Springs Native Plant Communities**

The visual image of Colorado Springs is a collective collage comprised of eight different plant communities. The naturally occurring landscapes consist of broad sweeps of prairie grasslands; pockets of semiarid shrublands; piñon-juniper woodlands; and thickets of low shrubs bordering open meadows, leading to irregular transition zones. At higher elevations, ponderosa pines dominate the gravelly foothills and mix with Douglas-fir at the upper limit of the City to the west. Riparian species are nestled along ravines and waterways, with water-thirsty firs and birch in the upland riparian areas and cottonwoods and willows along lower elevation drainage corridors.

This diversity is apparent, but perhaps not well understood. The natural dispersal of these eight plant communities within Colorado Springs City limits is demonstrated in Map 1, “Native Plant Communities of Colorado Springs.” It is possible to “read” the landscape by identifying the plant community common to an area of the City and then analyzing the plant species which are characteristic of that community.

Nature tends to “sort” plants into groups of species with tolerances for similar growing conditions. These conditions are soil type, altitude, slope orientation, precipitation and available moisture, sun or shade, and exposure conditions such as winds, vacillating temperatures, and winter desiccation. Some of these variables are reviewed in more detail in this manual.

Species that can survive within the constraints of a set of conditions, both at the microclimate and macroclimate levels, are found growing together. An identifiable association of plants is defined, for ecological and horticultural purposes, as a community. The dominant species or feature determines the name given to the community.
Climate Zones

The eight plant communities indigenous within the City’s limits can be associated with one another in three generalized climate zones as shown in Map 2, “Climate Zones for Signature Landscapes.”

These associations are developed from generalized plant species ranges, soil and climate conditions, typically occurring ecotones and microclimates, and are derived from the USDA-SCS General Soil Map Units of El Paso County, Colorado. The three climate zones are as follows:

1. Cold, subhumid to semiarid foothills
2. Mild, semiarid foothills and plains
3. Mild, semiarid to arid plains

The prairie, lower elevation riparian, foothill shrublands, and ponderosa pine forest communities are common to all three climate zones. The diagram in Figure 2 illustrates the overlapping patterns of the plant communities within each climate zone. The two plant communities that do not overlap with any of the other plant communities typically contain species that will not be suitable for most site conditions.

In terms of land area, the dominant zone in Colorado Springs consists of mild, semiarid foothills and plains. Although urban forestation has transformed much of the developed area within this zone, the characteristic climate nevertheless remains the same.

For a given site, generally the six associated plant communities within a climate zone will provide potential plant selections because of a shared, broadly defined range of precipitation, soil, altitude, and exposure tolerances. However, these communities typically are comprised of at least some species which may not be adapted to conditions of a specific project site. The designer, therefore, must conduct a careful site analysis and select only those species which are tolerant of the conditions within the proposed landscape. Species may be grouped according to respective communities or, for design purposes, combined from several communities within the climate zone.
There is rarely a distinct boundary between adjacent communities in nature. In fact, edges are blended into ecotones which share species as communities transition into each other in an irregular pattern. The occurrence of individual species throughout the eight local plant communities can vary significantly. This natural selection and dispersal of distinct communities and blended ecotones can serve as a model to facilitate design solutions, as illustrated in Figure 3, “Species Dispersal Chart.” Where microclimate variations provide a range of conditions, plants which occur in neighboring communities can frequently be grouped together on the same site.

**Figure 3. Species Dispersal**

- **A** = *Acer glabrum*  
  Rocky Mountain Maple

- **B** = *Physocarpus monogynus*  
  Native Ninebark

- **C** = *Holodiscus densus*  
  Mountain Spray

- **D** = *Betula occidentalis*  
  Western Water Birch

- **E** = *Rosa woodsii*  
  Woods Rose

A = A plant species which naturally occurs in two adjacent plant communities.
B = A plant species which naturally occurs in two plant communities, but not necessarily neighboring.
C = A plant species which naturally occurs in several plant communities.
D = A plant species which is characteristic of only one plant community.
E = A plant species which is common to most local plant communities.
Soils in Colorado Springs

The natural rhythm of the alternating ridges and valleys, the distinctive landforms of the foothills and mesas, the prairie and broad, alluvial lowlands — together with rock outcroppings and natural drainageways — contribute to the region’s striking visual character. This distinctive terrain also reveals the geological history of the area which includes glacial action, uplift, landslides, and alluvium and eolian dispersal of decomposed granite and sandstone, respectively.

Soils within Colorado Springs range from gravels to sands, loams, and clays. Soil types occur in orderly patterns related to landforms and indicate the parent mineral, plant and animal materials in their history. Using the three climate zones as a guide, soils can be broken down into three main categories, as follows:

1. Soils on cold, semiarid foothills, with slopes nearly level to steep, lying along the western boundary of the City. These soils are derived from granite and sedimentary rock which have decomposed into gravelly to loamy sands, often over layers of clay, sandstone, or shale.

2. Soils on mild, semiarid foothills and plains, occurring in the central and north-eastern areas of the City. Derived from sedimentary rock, wind, and stream-laid red sandstone and gravel, they have formed into well-drained sandy loams.

3. Soils on mild, semiarid to arid plains, lying along the south and south-east areas of the City. Here, water and wind action has left deposits of gravelly, sandy, and clay loams, on level to rolling topography.

Though more than 110 different soils have been identified by the USDA Natural Resources Conservation Service as occurring within Colorado Springs, these soils have been combined and grouped into 23 specific soil types as highlighted in Map 3, “General Vegetation and Soil Associations.” The varying nature of the soils, combined with altitude and moisture levels, helps determine the natural dispersal of the characteristic plant communities. (See Figure 4, “Characteristic Soil Types and Corresponding Plant Communities.”)
Characteristic Soil Types and Corresponding Plant Communities

Common Species
- Tree
  - Aspen
  - Willow
  - Red Alder
- Shrub
  - Barberry
  - Red Buckbrush
- Forb
  - Yellow Star Grass
  - Mustard
  - Purple Loosestrife
- Grass
  - Bluebunch Wheatgrass
  - China Broom Grass
  - Canada Wild Rye
  - Canada Wild Rye
  - Creeping Red Fescue
  - Bluegrass
- Sedge
  - Field Sedge

Characteristic Soils
- Silt Loam
  - Shallow Foothills
  - Sandy Meadow
  - Sandy Intermontane
  - Sandy Black土
  - Sandy Plains

Sandy/Clayey Soil
- Shallow Foothills
- Sandy Mead
- Sandy Intermontane
- Sandy Plains
- Clayey/Sandy Soil
- Wetland
  - Shallow Foothills
  - Sandy Meadow
  - Sandy Intermontane
  - Sandy Plains

Alkaline/Shaly Soil
- Wyoming Upland
- Shallow Foothills
- Sandy Meadow
- Sandy Intermontane
- Sandy Plains

Leaky/Gravelly Soil
- Shallow Foothills
- Sandy Meadow
- Sandy Intermontane
- Sandy Plains

Gravelly/Leaky Soil
- Shallow Foothills
- Sandy Meadow
- Sandy Intermontane
- Sandy Plains

Silt Loam
- Shallow Foothills
- Sandy Meadow
- Sandy Intermontane
- Sandy Plains

Shallow Foothills
- Sandy Meadow
- Sandy Intermontane
- Sandy Plains

Figure 4: Characteristic Soil Types and Corresponding Plant Communities

- Common Species
  - Tree
    - Dwarf Pines
  - Shrub
    - Barberry
  - Forb
    - Bluebunch Wheatgrass
  - Grass
    - China Wild Rye
  - Sedge
    - Field Sedge

- Characteristic Soils
  - Silt Loam
    - Shallow Foothills
  - Sandy Meadow
    - Sandy Intermontane
  - Sandy Plains
    - Clayey/Sandy Soil

- Sandy/Clayey Soil
  - Shallow Foothills
  - Sandy Meadow
  - Sandy Intermontane
  - Sandy Plains

- Alkaline/Shaly Soil
  - Wyoming Upland
  - Shallow Foothills
  - Sandy Meadow
  - Sandy Intermontane
  - Sandy Plains

- Leaky/Gravelly Soil
  - Shallow Foothills
  - Sandy Meadow
  - Sandy Intermontane
  - Sandy Plains

- Gravelly/Leaky Soil
  - Shallow Foothills
  - Sandy Meadow
  - Sandy Intermontane
  - Sandy Plains
Site Composition

As a designer is selecting plant species for a given site, the following guide will help with appropriate selection.

1. Identify the appropriate climate zone.

2. Study the associated plant communities which will serve as an ecological basis for the design.

3. Plan site microclimates and generalized hydrozones based on data gathered from the site analysis and grading and soils information.

4. Formalize design intent.

5. Calculate any required program elements or required quantities of plant types.

6. Begin species selection by comparing the composition of the indigenous community/communities to be referenced in the design.

7. Make appropriate plant selections and determine availability of plant materials.

For variety and design flexibility, other species and cultivars that can be adapted to the site and microclimate but are not included in the four categories of Signature Landscapes may be selected. As such, a wide variety of landscapes which respond to the historical styles, microclimates, design purposes, aesthetic qualities, and ecological context of the City can be developed. Designs will differ too in the proportional mix of grasses, herbaceous plants, shrubs, trees, and species composition, thus reinforcing diversification in the City’s landscapes.

The four categories of signature plants used for design purposes are:

- **Native plant:** A species that is indigenous within the Colorado Springs City limits and occurs naturally in that same community.

- **Borrowed native plant:** A species that is indigenous to a regional native plant community but does not occur naturally in that same community within the Colorado Springs City limits.

- **Historically adapted plant:** A self-propagating species that is not indigenous to the regional native plant community it occupies but was likely introduced by early settlers and is now so prevalent as to appear indigenous.

- **Compatible plant:** A species with genetic or ornamental properties and physiographic requirements that closely resembles those properties and requirements of a plant in a specific regional native plant community or of a plant that is historically adapted to that community.
Figure 5, "Sample Site Composition," gives a sampling of projected design scenarios. Keep in mind 40% can be from any category, including exotic species. Any combination of native, borrowed native, historically adapted, or compatible plants will then be used to complete the other 60% of the design.

**Figure 5. Sample Site Composition**
Proportional make-up will vary according to site analysis and grading and soils information. This figure illustrates just two of many combinations that are possible.
Colorado Plant Communities

Colorado Springs lies in one of the richest and most diverse vegetation areas of the region. While outlying areas may be more limited in diversity of naturally occurring plant types, many species from plant communities that occur outside the City’s boundaries can be adapted to Colorado Springs. Use of plants from these communities contributes a regional rather than City-specific aesthetic to landscape designs. Species such as bristlecone pine, found growing in windy, exposed places near timberline, and red twig dogwood from higher elevation riparian areas, can add variety and beauty. However, species such as aspen, which populate disturbed land areas in moist valleys and slopes above 7,500', may not be so well adapted or may require a degree of artificiality to fit into a Colorado Springs landscape.

Figure 6, “Colorado Plant Communities,” breaks Colorado’s plant communities into three distinct groups, illustrating those two which occur at drier and lower elevations, the eight within Colorado Springs City limits (and other portions of Colorado), and the remaining five in the higher montane, subalpine, and alpine zones.

A generalized equation which applies to these communities is that five hundred miles north or south (latitude) equals 1000' in altitude (elevation) or three degrees cooler or warmer average temperatures. This concept explains the reason why geographic ranges vary significantly and why the same species can be found growing naturally at different elevations in different areas of Colorado.

When plants with a natural range outside of Colorado Springs are utilized for local landscapes, the growing conditions must be considered, and to the extent that they are different from Colorado Springs, the growing environment must be artificially duplicated for the plants to thrive.
Figure 6. Colorado Plant Communities

ALPINE, SUBALPINE, MONTANE
Englemann Spruce and Subalpine Fir Forest
Mountain Grassland and Subalpine Meadows
Bristlecone and Limber Pine Forest
Lodgepole Pine Forest
Aspen Forests
Douglas-fir Forest
Upper Elevation Riparian
Ponderosa Pine Forest
Foothill Shrublands
Lower Elevation Riparian
Prairie
Pinon-Juniper Woodlands
Semiarid Shrublands
Sagebrush Shrublands
Semidesert Scrub

FOOTHILLS AND PLAINS

SHRUBLANDS

The Eight Plant Communities of Colorado Springs
Introduction to the Plant Communities

Observation of plants which are associated with each ecosystem and with each other reveals that nature will ultimately “sort” a grouping of plants that will be in balance with one another. This “sorting” has been translated, for the purposes of this manual, into the plant lists which follow this introduction.

Appendix A, “Plant Communities of Colorado,” provides a brief overview of each of the eight plant communities naturally occurring in Colorado Springs and referenced throughout this design manual. A short description of the range and typical conditions for that community as it occurs in the City limits of Colorado Springs, a characteristic pattern icon, and a photographic image serve to orient the designer to the salient information about the community. Plant species listed are regional and may not, therefore, occur within City limits. This broad sampling further illustrates the diversity of plant communities in our region.

Lists are only a guide in appropriate plant selection. The qualified designer will be knowledgeable of additional species selections, cultivars, and hybrids. Additionally, it is anticipated that other adaptable exotics will be introduced by horticulturalists and botanists and that some native plants that have not been readily available in the nursery industry will be grown for use in the urban landscape.
Semiarid Shrublands

The semiarid shrublands community comprises only a small portion of Colorado Springs. The area lies near the southern limits of the city, west of Highway 115 and Fort Carson.

**Climate:**
Elevation is approximately 5500 - 6200'. It has the driest and warmest climate of the eight plant communities within Colorado Springs and is characterized by extremes of winter and summer temperatures.

**Characteristic Composition:**
The understory consists of many bunch and sod-forming grasses. Shrub species are tolerant of dry conditions and poor soils. Shrubs tend to be low-growing; there is an absence of trees.

**Soils:**
Sites are commonly shaley and can be very alkaline. These shrublands are often difficult to revegetate and can be very erosion prone.

**Characteristic Pattern:**
The pattern reflects an intermixing of shrubs and grasses in a relatively open-spaced arrangement, typically occurring on plains and in the foothills.

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**Trees**
Absence of Trees

**Shrubs**
- **Amelanchier utahensis**
  Serviceberry; Utah
- **Artemisia filifolia**
  Sagebrush; Sand
- **Atriplex canescens**
  Saltbush; Four-wing
- **Atriplex confertifolia**
  Saltbush; Spiny
- **Chrysothamnus depressus**
  Rabbitbrush
- **Chrysothamnus nauseosus**
  Rabbitbrush
- **Cowania mexicana**
  Chilfrose; Mexican
- **Echinocereus triglochidiatus**
  Cactus; Claret Cup
- **Echinocereus viridiflorus**
  Cactus; Hedgehog
- **Eleagnus commutata**
  Silverberry
- **Eurotia lanata (syn: Ceratoides)**
  Winterfat
- **Gutierrezia sarothrae**
  Snake weed; Broom
- **Opuntia imbricata**
  Cactus; Cholla
- **Prunus besseyi**
  Cherry; Sand
- **Prunus pensylvanica**
  Cherry; Pin
- **Prunus virginiana melanocarpa**
  Chokecherry
- **Purshia tridentata**
  Antelope Bitterbrush
- **Rosa woodsii**
  Rose; Woods
- **Rubus deliciosus**
  Raspberry; Boulder
- **Rubus idaeus**
  Raspberry
- **Sarcobatus vermiculatus**
  Greasewood
- **Seriphidium canum (syn: Artemisia cana)**
  Sagebrush; Silver
- **Seriphidium tridentatum (syn: Artemisia tridentata)**
  Sagebrush; Big
- **Tetradymia spinosa**
  Horsebrush; Spiny
- **Yucca glauca**
  Yucca; Narrow-leaf

**Wildflowers**
- **Achillea laniolosa**
  Arrow; Wild
- **Allium cernuum**
  Onion; Nodding
- **Antemaria microphylla**
  Pusstoes
- **Argemone polyanthemos**
  Poppy; Prickly
- **Astragalus argophyllus, A. purshii**
  Milkvetch
- **Balsamorhiza sagittata**
  Balsamroot
- **Calochortus nutallii**
  Lily; Mariposa
- **Castilleja integra**
  Paintbrush
- **Cucubita foetidissima**
  Buffalo Gourd
- **Delphinium nuttalianum**
  Larkspur; Nuttall's
- **Erigeron speciosus**
  Fleabane; Showy
- **Eriogonum umbellatum**
  Buckwheat; Sulphur Flower
- **Geranium fremontii**
  Geranium; Fremont
- **Gilia aggregata (syn: Ipomopsis)**
  Gilia
- **Heterotheca villosa (syn: Chrysopsis)**
  Aster; Golden
- **Liatris punctata**
  Gayfeather; Dotted
- **Lupinus argenteus, L. sericeus**
  Lupine
**Mirabilis multiflora**
Four O’Clock: Desert

**Oxytropis lambertii**
Locoweed: Lambert’s

**Penstemon teucrioides, P. eatonii, P. strictus**
Penstemon: Mat, Firecracker, Rocky Mountain

**Phacelia heterophylla**
Scorpionweed

**Phlox longifolia**
Phlox

**Sphaeralcea coccinea**
Mallow: Copper

**Talinum parviflorum**
Talinum

**Viola nuttallii**
Violet

**Grasses**

**Agropyron cristatum**
Wheatgrass: Crested

**Agropyron smithii**
Wheatgrass: Western

**Andropogon gerardii**
Bluestem: Big

**Bouteloua curtipendula**
Grass: Side-oats

**Bouteloua gracilis**
Grass: Blue

**Carex spp.**
Sedge

**Critesion jubatum**
Foxtail-barley

**Distichlis spicata**
Saltgrass

**Elymus canadensis**
Wild-rye

**Hilaria jamesii**
Galleta

**Koeleria pyramidata**
Junegrass

**Muhlenbergia torreyi**
Muhly: Ring

**Oryzopsis hymenoides**
Ricegrass: Italian

**Panicum virgatum**
Switchgrass

**Poa secunda**
Bluegrass: Curly

**Schizachyrium scoparium**
Bluestem: Little

**Sitonia hystrix**
Squirreltail

**Sporobolus airoides**
Sacaton: Alkali

**Sporobolus cryptandrus**
Dropseed: Sand

**Stipa comata**
Needle-and-thread

**Stipa robusta**
Sleepy
Piñon-Juniper Woodlands

The piñon-juniper woodlands community occurs in only a few isolated locations within Colorado Springs — in Garden of the Gods and a small area northeast of Palmer Park, between Academy and Powers Boulevards. It occurs extensively south to Pueblo and nears its northern range in Colorado Springs.

**Climate:**
Elevation is approximately 6,000 - 6,800'. This is generally a dry community which experiences extreme temperature fluctuations.

**Characteristic Composition:**
The piñon-juniper community is the shortest-growing evergreen forest in Colorado, being comprised largely of short evergreen trees and a wide variety of shrubs.

**Soils:**
Sites are commonly on shallow, gravelly to loamy soils. Due to the minimal amount of understory species, these communities are often susceptible to erosion.

**Characteristic Pattern:**
An evenly and widely spaced pattern on hillsides and along mesas, with a greater density on flatter slopes, is typical of this community. The ground plane is relatively sparse with grasses, forbs, and accompanying shrubs often occurring in groves along moister margins. This community is found in the foothills on south and west-facing slopes.

**Trees**
- *Juniperus monosperma*
  - Juniper: One-seed
- *Juniperus scopulorum*
  - Juniper: Rocky Mountain
- *Pinus edulis*
  - Pine: Piñon
- *Pinus ponderosa*
  - Pine: Ponderosa

**Shrubs**
- *Amelanchier alnifolia*
  - Serviceberry: Saskatoon
- *Amelanchier utahensis*
  - Serviceberry: Utah
- *Amorpha fruticosa*
  - Indigo Bush
- *Atriplex canescens*
  - Saltbush: Four-winged
- *Atriplex confertifolia*
  - Saltbush: Spiny
- *Cercocarpus ledifolius*
  - Mahogany: Curl-leaf
- *Cercocarpus montanus*
  - Mahogany: Mountain
- *Chamaebatia millefolium*
  - Fernbush
- *Chrysothamnus nauseosus*
  - Rabbitbrush
- *Clematis ligusticifolia*
  - Virgin's Bower
- *Coryphantha vivipara*
  - Cactus: Spiny Star
- *Cowania mexicana*
  - Cliffrose
- *Echinocereus triglochidiatus*
  - Cactus: Clare Cup
- *Echinocereus viridiflorus*
  - Cactus: Hedgehog
- *Ephedra viridis, E. torreyana*
  - Mormon Tea
- *Eurotia lanata (syn: Ceratoides)*
  - Winterfat
- *Fallugia paradoxa*
  - Apache Plum
- *Fendlera rupicola*
  - Mockorange: False

**Wildflowers**
- *Astragalus argophyllus, A. purshii*
  - Milkvetch
- *Castilleja linariifolia, C. integra*
  - Paintbrush
- *Chaenactis douglasii*
  - Morning-bride
- *Cryptantha recurvata, C. gracilis, C. pteroxarya*
  - Cryptantha
- *Eriogonum spp.*
  - Daisy: Fleabane
- *Eriogonum spp.*
  - Buckwheat: Wild
- *Erysimum asperum*
  - Wallflower: Western
Geranium caespitosum
Geranium: Wild

Gilia aggregata (syn: Ipomopsis)
Gilia

Grindelia squarrosa
Gumweed

Heterotheca villosa (syn: Chrysopsis)
Aster: Golden

Liatis punctata
Gayfeather: Dotted

Mentzelia oligosperma
Blazing Star

Mirabilis multiflora
Four O'Clock: Desert

Penstemon: eatonii, angustifolia, barbatus
Firecracker, Narrow-leaf, Scarlet Bugler

Physaria acutifolia
Bladderpod

Sedum lanceolatum
Stonecrop

Sphaeralcea coccinea
Mallow: Copper

Thelesperma spp.
Green: Thread/Showy Navajo Tea

Wyethia amplexicaulis, W. arizonica
Mule's Ears

Zinnia grandiflora
Zinnia: Wild

Grasses
Agropyron smithii
Wheatgrass

Andropogon gerardii
Bluegram: Big

Blepharoneuron tricholepis
Droseed: Pine

Bouteloua curtipendula
Grama: Sidecoats

Bouteloua gracilis
Grama: Blue

Bromus marginatus
Brome: Mountain

Hilaria jamesii
Galleta

Koeleria macrantha
Junegrass

Muhlenbergia montana
Muhly: Mountain

Oryzopsis hymenoides
Ricegrass: Indian

Poa fendleri
Mattongrass

Poa secunda
Bluegrass: Curly

Stipa comata
Needle-and-thread

Stipa neomexicana
Feathergrass
Prairie

This grassland community comprises the greatest land area in Colorado Springs. Historic changes brought on by extensive overgrazing, large-scale agriculture, and urban expansion have caused irreparable damage. The prairie stretches from north of Briargate and south to the Colorado Springs airport, east to the City limits, and west to the toe of the foothills where it merges with other plant communities.

**Climate:**
Elevation is approximately 5500 - 6300'. Average annual precipitation ranges from 16 - 19". Climate generally consists of dry conditions, extreme winter weather, desiccating winds, and warm, sunny summers.

**Characteristic Composition:**
The prairie is comprised of approximately 75 - 90% cool and warm season grasses, dominated by short grasses with taller species occurring in the uplands and moist bottomlands. Forbs and wildflowers complete the prairie. This community typically occurs on rolling plains and flat-topped mesas and transitions into other plant communities in fingers along south and southwest-facing slopes.

**Soils:**
Sites are commonly sandy and silty to somewhat cobbly and clayey.

**Characteristic Pattern:**
The typical pattern of prairie lands is one of uniformly occurring grasses and forbs with scattered shrubs.

<table>
<thead>
<tr>
<th>Trees</th>
<th>Shrubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence of trees</td>
<td>Amorpha fruticosa</td>
</tr>
<tr>
<td></td>
<td>Indigo Bush</td>
</tr>
<tr>
<td>Artemisia filifolia</td>
<td>Sagebrush: Sand</td>
</tr>
<tr>
<td>Atriplex gardneri</td>
<td>Saltbush: Silverscale</td>
</tr>
<tr>
<td>Atriplex canescens</td>
<td>Saltbush: Four-wing</td>
</tr>
<tr>
<td>Chrysothamnus nauseosus</td>
<td>Rabbitbrush</td>
</tr>
<tr>
<td>Chrysothamnus viscidiflorus</td>
<td>Rabbitbrush: Green</td>
</tr>
<tr>
<td>Corynthesia vivipara</td>
<td>Cactus: Spiny Star</td>
</tr>
<tr>
<td>Cactus x viridiflorus</td>
<td>Cactus: Hedgehog</td>
</tr>
<tr>
<td>Eremogone lanata</td>
<td>Eremogone lanata (syn. Ceratoides)</td>
</tr>
<tr>
<td>Winterfat</td>
<td>Winterfat</td>
</tr>
<tr>
<td>Gutierrezia sarothrae</td>
<td>Snakeweed: Broom</td>
</tr>
<tr>
<td>Opuntia imbricata</td>
<td>Cactus: Cholla</td>
</tr>
<tr>
<td>Opuntia spp.</td>
<td>Cactus: Prickly-pear</td>
</tr>
<tr>
<td>Rhus aromatica</td>
<td>Sumac: Fragrant</td>
</tr>
<tr>
<td>Rhus trilobata</td>
<td>Sumac: Three-leaf, Skunkbush</td>
</tr>
<tr>
<td>Seriphidium tridentatum</td>
<td>Seriphidium tridentatum (syn: Artemisia tridentata)</td>
</tr>
<tr>
<td>Seriphidium tridentatum (syn: Artemisia tridentata)</td>
<td>Sagebrush: Big</td>
</tr>
<tr>
<td>Yucca glauca</td>
<td>Yucca: Narrow-leaf</td>
</tr>
</tbody>
</table>

**Wildflowers**

<table>
<thead>
<tr>
<th>Abornia fragrans</th>
<th>Prairie Snowball</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argemone polyanthemos</td>
<td>Poppy: Prickly</td>
</tr>
<tr>
<td>Artemisia frigida</td>
<td>Sage: Fringed</td>
</tr>
<tr>
<td>Artemisia ludoviciana</td>
<td>Sage: Prairie</td>
</tr>
<tr>
<td>Aster ericoides</td>
<td>Aster: Sand</td>
</tr>
<tr>
<td>Callirhoe involucrata</td>
<td>Mallow: Poppy</td>
</tr>
<tr>
<td>Castilleja integra</td>
<td>Paintbrush</td>
</tr>
<tr>
<td>Cleome serrulata</td>
<td>Bee Plant: Rocky Mountain</td>
</tr>
<tr>
<td>Dalea purpurea</td>
<td>Dalea purpurea (syn: Pedalostemma)</td>
</tr>
<tr>
<td>Clover: Purple Prairie</td>
<td></td>
</tr>
<tr>
<td>Delphinium nuttallianum</td>
<td>Larkspur: Nuttall</td>
</tr>
<tr>
<td>Eriogonum speciosum</td>
<td>Fleabane: Showy</td>
</tr>
<tr>
<td>Gaillardia aristata</td>
<td>Blanketflower</td>
</tr>
<tr>
<td>Gaura cocinea</td>
<td>Gaura: Scarlet</td>
</tr>
<tr>
<td>Geranium caespitosum</td>
<td>Geranium: Wild</td>
</tr>
<tr>
<td>Helianthus annuus</td>
<td>Sunflower: Common</td>
</tr>
<tr>
<td>Ipomoea lepenthylia</td>
<td>Morning Glory: Bush</td>
</tr>
<tr>
<td>Leucocrinum montanum</td>
<td>Lily: Sand</td>
</tr>
<tr>
<td>Liatris punctata</td>
<td>Gayfeather: Dotted</td>
</tr>
<tr>
<td>Linum perenne lewissi</td>
<td>Flax: Blue</td>
</tr>
<tr>
<td>Lupinus argenteus</td>
<td>Lupine: Silky</td>
</tr>
<tr>
<td>Nuttallia nudicaulis</td>
<td>Blazing Star</td>
</tr>
<tr>
<td>Oenothera howardii</td>
<td>Evening Primrose: Yellow</td>
</tr>
<tr>
<td>Oenothera villosa</td>
<td>Evening Primrose: White</td>
</tr>
<tr>
<td>Oenothera villosa</td>
<td>Evening Primrose: White</td>
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<td>Evening Primrose: White</td>
</tr>
<tr>
<td>Penstemon angustifolius</td>
<td>Penstemon: Narrow-leaf</td>
</tr>
<tr>
<td>Penstemon albidus</td>
<td>Penstemon</td>
</tr>
</tbody>
</table>
Ratibida columnifera  
Coreopsis: Prairie

Rumex venosus  
Sand-begonia

Solidago nana  
Goldenrod

Sphaeralcea coccinea  
Mallow: Copper

Thelesperma spp.  
Green Thread/Showy Navajo Tea

Townsendia hookeri  
Daisy: Easter

Tradescantia occidentalis  
Spiderwort

Zinnia grandiflora  
Zinnia: Wild

Grasses

Agropyron cristatum  
Wheatgrass: Crested

Agropyron smithii  
Wheatgrass: Western

Agropyron spicatum  
Wheatgrass: Bluebunch

Andropogon gerardii  
Bluestem: Big

Bouteloua curtipendula  
Grama: Side-oats

Bouteloua gracilis  
Grama: Blue

Bouteloua hirsuta  
Grama: Hairy

Buchloe dactyloides  
Buffalo

Calamovilfa longifolia  
Sandreed: Prairie

Critesion jubatum  
Foxtail-barley

Distichlis spicata  
Saltgrass

Eragrostis trichodes  
Sand Lovegrass

Hilaria jamesii  
Galleta

Koeleria pyramidata  
Junegrass

Muhlenbergia pungens  
Muhly: Sandhill

Muhlenbergia torreyi  
Muhly: Ring

Oryzopsis hymenoides  
Ricegrass: Indian

Panicum virgatum  
Switchgrass

Poa secunda  
Bluegrass: Curly

Redfieldia flexuosa  
Blowout

Schizachyrium scoparium  
Bluestem: Little

Sitania hystrix  
Squirreltail

Sorghastrum nutans  
Indiangrass

Spartina pectinata  
Cordgrass: Prairie

Sporobolus airoides  
Sacaton: Alkali

Sporobolus cryptandrus  
Dropsedge: Sand

Stipa comata  
Needle-and-thread
Lower Elevation Riparian

Lower elevation riparian communities occur along drainage ways, creeks, and bodies of water throughout all lower elevations. Typical of these riparian areas are Monument, Fountain, Kettle, and Sand Creeks, which are major drainage corridors for Colorado Springs. The bodies of water can be either ephemeral or continuously flowing and occur in urban sites throughout the City, including the lower slopes of the foothills.

Climate:
Elevation is approximately 5500 - 6200'. Where water occurs continuously during the summer months, there is more humidity and shade than in non-riparian communities. The microclimate tends to be more moderate than other communities.

Characteristic Composition:
This is a rich ecosystem for wildlife, with vegetation providing habitats for many different species. Deciduous woodland tree species flourish near the water's edge, with a complex understory of shrubs, vines, forbs, and grasses present. In more exposed sites, intermittent tree and shrub groves are more characteristic.

Soils:
Sites are commonly on a wide range of soils, from isolated salt flats and areas of saline overflow, to loamy or sandy plains and bottomlands.

Characteristic Pattern:
The clustering of shrub and tree species near the edge of the water is the most distinctive aspect of the pattern. Species may vary considerably depending on how disturbed the site is.

Trees
Acer negundo
Boxelder
Betula occidentalis
Birch: Western
Celtis occidentalis
Hackberry
Celtis reticulata
Hackberry: Netleaf
Eleagnus angustifolia
Russian Olive
Fraxinus pennsylvanica
Ash: Green
Populus x acuminata
Cottonwood: Lanceleaf
Populus angustifolia
Cottonwood: Narrow-leaf
Populus deltoides
Cottonwood: Common
Populus fremontii
Cottonwood: Fremont
Populus sargentii
Cottonwood: Plains
Robinia pseudoacacia
Locust: Black
Salix amygdaloides
Willow: Peach-leaved
Ulmus pumila
Elm: Siberian

Shrubs
Amelanchier canadensis
Serviceberry: Shadblow
Amorpha fruticosa
Indigo Bush
Cornus stolonifera
Dogwood: Red-osier
Parthenocissus quinquefolia
Virginia Creeper
Parthenocissus vitacea
Thicket Creeper
Prunus americana
Plum: American
Prunus besseyi
Cherry: Sand
Prunus pensylvanica
Cherry: Pin
Prunus virginiana melanocarpa
Chokecherry
Rhus aromatica
Sumac: Fragrant
Rhus trilobata
Sumac: Three-leaf
Robinia neomexicana
Locust: New Mexican
Ribes aureum
Currant: Golden
Ribes cereum
Currant: Wax
Ribes inermic
Gooseberry
Rosa woodsii
Rose: Woods
Rubus deliciosus
Raspberry: Boulder
Rubus idaeus
Raspberry: Red
Rubus parviflorus
Thimbleberry
Salix exigua
Willow: Coyote
Salix fragilis
Willow: Crack
Sambucus caerulea
Elder: Blue
Shepherdia argentea
Buffaloberry: Silver
Symphoricarpos albus
Snowberry: Common
Symphoricarpos oreophillus
Snowberry: Mountain
Vitis riparia
Grape: Wild

Wildflowers
Alisma triviale (syn: A. plantago-aquatica)
Water-plantain
Allium cernuum
Onion: Nodding
Apocynum cannabinum
Dogbane
Arctium minus
Burdock
Asclepias speciosa  
Milkweed: Showy

Asclepias incarnata  
Milkweed: Swamp

Asparagus officinalis  
Asparagus: Wild

Campanula rotundifolia  
Harbell, Bluebells of Scotland

Geranium viscosissimum  
Geranium: Wild

Glycyrrhiza lepidota  
Licorice: Wild

Helianthus nuttallii  
Sunflower

Iris missouriensis  
Iris: Rocky Mountain

Lemna turionifera  
Duckweed

Linaria vulgaris  
Toadflax

Monarda fistulosa  
Bee balm: Wild

Potamogeton spp.  
Pondweed

Potentilla rivalis  
Cinquefoil

Ranunculus repens  
Buttercup

Rudbeckia hirta  
Black-eyed Susan

Sagittaria latifolia  
Arrowhead

Solidago canadensis  
Goldenrod

Grasses and Grass-like Plants

Agrostis stolonifera  
Red-top

Agropyron cristatum  
Wheatgrass: Crested

Agropyron smithii  
Wheatgrass: Western

Carex nebrascensis  
Sedge: Nebraska

Critesion jubatum  
Foxtail-barley

Distichlis spicata  
Sahagrass

Eleocharis palustris  
Spike-rush

Glyseria grandis  
Manna

Hilaria jamesii  
Galleta

Leersia ozyoides  
Cutgrass

Panicum obtusum  
Vine-mesquite

Panicum virgatum  
Switchgrass

Phragmites communis  
Reed-phragmites

Scirpus microcarpus (syn: Schoenoplectus)  
Bulrush

Sorghastrum nutans  
Indiangrass

Sparanthium spp.  
Bul-reed

Typha angustifolia  
Cat-tail: Narrow-leaved

Typha latifolia  
Cat-tail: Broad-leaved
Foothill Shrublands

The foothill shrublands community forms a long discontinuous band running north and south along the base of Pikes Peak and Rampart Range on the City's western limits. This community provides strong fall color and a complexity of vegetation and wildlife. It is evident in neighborhoods from Broadmoor Bluffs through the westside, and north to Rockrimmon and the United States Air Force Academy.

**Climate:**
The elevation is approximately 5800 - 7000'. A semiarid climate predominates, with intense summer sun, wide temperature fluctuations, and high winds. It has more naturally occurring moisture than lower non-riparian areas.

**Characteristic Composition:**
Gambel oak, mountain mahogany, and three-leaf sumac are characteristic species of the foothill shrublands. A wide variety of shrubs, forbs, grassy meadows, and scattered ponderosa pine and junipers are also present.

**Soil:**
Sites are commonly shallow and coarse-textured, gravelly to loamy, with some clayey areas.

**Characteristic Pattern:**
At lower elevations, the pattern reflects a preference for breaks and north-facing slopes and ridges. At the upper range, it is found on northwest and northeast slopes. The finger-like pattern reflects a mingling of dense thickets of many shrub species and trees scattered throughout. Terrain and slope aspect influence the pattern, and individual species may grow in response to available moisture and sun/shade tolerances.

**Trees**
- *Acer glabrum*
  - Maple: Rocky Mountain
- *Fraxinus pennsylvanica*
  - Ash: Green
- *Betula occidentalis*
  - Birch: Western
- *Crataegus erythropa*da
  - Hawthorn
- *Crataegus macrantha*
  - Hawthorn: Redhawk
- *Juniperus monosperma*
  - Juniper: One-seed
- *Juniperus scopulorum*
  - Juniper: Rocky Mountain
- *Populus angustifolia*
  - Cottonwood: Narrowleaf
- *Prunus americana*
  - Plum: American
- *Rhamnus neomexicana*
  - Locust: New Mexican
- *Ulmus pumila*
  - Elm: Siberian

**Shrubs**
- *Amelanchier alnifolia*
  - Serviceberry: Saskatoon
- *Amelanchier canadensis*
  - Serviceberry: Shadbowl
- *Amelanchier utahensis*
  - Serviceberry: Utah
- *Amorpha canescens*
  - Leadplant
- *Amorpha fruticosa*
  - Indigo Bush
- *Artemisia filifolia*
  - Sagebrush: Sand
- *Atriplex canescens*
  - Saltbrush: Four-wing
- *Atriplex confertifolia*
  - Saltbrush: Spiny
- *Caanothus fendleri*
  - Buckbrush: Fendler's
- *Cercocarpus ledifolius*
  - Mahogany: Curl-leaf
- *Cercocarpus montanus*
  - Mahogany: Mountain
- *Chrysothamnus depressus*
  - Rabbitbrush
- *Chrysothamnus nauseosus*
  - Rabbitbrush
- *Clematis ligusticifolia*
  - Virgin's Bower
- *Cowania mexicana*
  - Cliffrose: Mexican
- *Echinocereus viridiflorus*
  - Cactus: Hedgehog
- *Elaeagnus commutata*
  - Silverberry
- *Euonymus laurata* (syn: *Ceratoides*)
  - Winterfat
- *Fallinga paradoxa*
  - Apache Plume
- *Forestiera neomexicana*
  - Privet: New Mexican
- *Holodiscus discus*
  - Mountain Spray
- *Jamesia americana*
  - Waxflower
- *Lonicera tatarica*
  - Honeysuckle
- *Mahonia repens*
  - Grapeholly: Creeping
- *Opuntia polyacantha, O. macrorhiza*
  - Cactus: Prickly-pear
- *Partenocissus quinquefolia*
  - Virginia Creeper
- *Partenocissus vitacea*
  - Thicket Creeper
- *Pedunculus simpsonii*
  - Cactus: Mountain Ball
- *Physocarpus monogynus*
  - Ninebark: Mountain
- *Physocarpus opulifolius*
  - Ninebark: Common
- *Potassium fruticosa*
  - Potentilla: Shurbby
- *Prunus besseyi*
  - Cherry: Sand
- *Prunus pensylvanica*
  - Cherry: Pin
- *Prunus virginiana melanocarpa*
  - Chokecherry
- *Purshia tridentata*
  - Antelope Bitterbrush
- *Quercus gambelii*
  - Oak: Gambel's
- *Rhamnus cathartica*
  - Buckthorn: Common
- *Rhus aromatica*
  - Sumac: Fragrant
- *Rhus glabra*
  - Sumac: Smooth
- *Rhus glabra cismontana*
  - Sumac: Rocky Mountain
- *Rhus triptera*
  - Sumac: Three-leaf
- *Rhus typhina*
  - Sumac: Staghorn
- *Ribes aureum*
  - Currant: Golden
- *Ribes cereum*
  - Currant: Wax
Ribes inerme  
Groseberry

Rosa woodsii  
Rose: Woods

Rubus deliciousus  
Raspberry: Boulder

Rubus idaeus ssp. melanolasius  
Raspberry: Wild

Rubus parviflorus  
Thimbleberry

Serpolidium canum (syn: Artemisia cana)  
Sagebrush: Silver

Serpolidium tridentatum (syn: Artemisia tridentata)  
Sagebrush: Big

Spergula canadensis  
Buffalo: Canada

Symphoricarpos oerophilus  
Snowberry: Mountain

Yucca glauca  
Yucca: Narrow-leaf

**Wildflowers**

Achillea lanulosa  
Yarrow: Wild

Allium textile  
Onion: Wild

Antennaria parvifolia  
Pussytoes

Argemone polyanthemos  
Poppy: Prickly

Artemisia ludoviciana  
Sage: Prairie

Artemisia frigida  
Sage: Fringed

Asclepias tuberosa  
Butterfly-weed

Asparagus officinalis  
Asparagus: Wild

Aster porteri  
Aster: Porter

Astragalus argophyllus, A. purshii  
Milkvetch

Brickella grandiflora  
Brickella

Calochortus gunnisonii  
Lily: Mariposa, Sego

Campanula rotundifolia  
Harebell, Bluebells of Scotland

Castilleja spp.  
Paintbrush

Claytonia lanceolata  
Spring Beauty

Eriogonum spp.  
Daisy: Fleabane

Eriogonum jamesii  
Buckwheat: James

Eriogonum umbellatum  
Sulphur Flower

Erysimum asperum  
Wallflower: Western

Gaillardia aristata  
Blanketflower

Gaura coccinea  
Gaura: Scarlet

Gentiana affinis  
Gentian: Prairie

Geranium caespitosum  
Geranium: Wild

Gilia aggregata (syn: Ipomopsis)  
Gilia

Heterotheca villosa (syn: Chrysopsis)  
Aster: Golden

Liatris punctata  
Gayfeather: Dotted

Linum perenne lewisii  
Flax: Blue

Lithospermum multiflorum  
Puccoon

Lupinus argenteus  
Lupine: Silky

Oenothera caespitosa  
Evening Primrose: White

Oxytropis lambertii  
Locoweed: Lambert's

Penstemon spp.  
Pensemon

Potentilla hippiana  
Potentilla: Silver

Sedum lanceolatum  
Stonecrop

Solidago missouriensis  
Goldenrod

Sphaeralcea coccinea  
Mallow: Copper

Stanleya pinna  
Prince's Plume

Wyethia amplexicaulis  
Mule's Ears

**Grasses and Grass-like Plants**

Agropyron cristatum  
Wheatgrass: Crested

Agropyron smithii  
Wheatgrass: Western

Agropyron spicatum  
Wheatgrass: Bluebunch

Agropyron trachycaulus  
Wheatgrass: Slender

Bouteloua curtipendula  
Grama: Side-oats

Bouteloua gracilis  
Grama: Blue

Calamovilfa longifolia  
Savannah: Prairie

Carex geyeri  
Sedge: Elk

Carex heiophila  
Sedge

Festuca thurberi  
Fescue: Thurber

Muhlenbergia montana  
Muhly: Mountain

Oryzopsis hymenoides  
Ricegrass: Indian

Poa fendleriana  
Mutton

Poa secunda  
Bluegrass: Curly

Schizachyrium scoparium  
Bluestem: Little

Sorghastrum nutans  
Indiangrass
Ponderosa Pine Forest

The ponderosa pine community occurs in a broad, irregular transition zone, generally above the pinion-juniper woodlands. It stretches from slopes near the Broadmoor, west to Garden of the Gods; north to the United States Air Force Academy, and east to the Black Forest north of Colorado Springs. This community is also present in Palmer Park and parts of Rockrimmon, and intermingles with the Douglas-fir forest in the upper reaches along the western edge of the City.

Climate:
Elevation is approximately 6000 - 7500'. Climate is fairly dry, with a shorter growing season in the higher elevations.

Characteristic Composition:
Ponderosa pine communities grow in varying patterns, from almost pure stands or in combination with a very dense understory of shrubs, grasses, and forbs. Ponderosa pines tend to favor south-facing slopes and open parks, though this varies depending on location. In Colorado Springs, they are found on all slopes.

Soils:
Sites are commonly gravelly, rocky, shallow, and fast-draining.

Characteristic Pattern:
The pattern reflects a combination of dense stands and fingers of openly spaced pines. They extend along south- and west-facing slopes, mingling with grassy meadows and shrublands. Associated tree species are scattered among the pines.

Trees
- *Abies concolor*
  - Fir: White
- *Acer glabrum*
  - Maple: Rocky Mountain
- *Juniperus monosperma*
  - Juniper: One-seed
- *Juniperus scopulorum*
  - Juniper: Rocky Mountain
- *Picea pungens*
  - Spruce: Blue
- *Pinus edulis*
  - Pine: Pinon
- *Pinus flexilis*
  - Pine: Limber
- *Pinus ponderosa*
  - Pine: Ponderosa
- *Pinus strobus*
  - Pine: Southwestern White
- *Populus tremuloides*
  - Aspen: Quaking
- *Pseudotsuga menziesii*
  - Douglas-fir

Shrubs
- *Arctostaphylos uva-ursi*
  - Kinnikinnick
- *Ceanothus fendleri*
  - Buckbrush: Fendler's
- *Cercocarpus montanus*
  - Mahogany: Mountain
- *Echinocereus viridiflorus*
  - Cactus: Hedgehog
- *Holodiscus dumosus*
  - Mountain Spray
- *Jasminia americana*
  - Waxflower
- *Juniperus communis*
  - Juniper: Common
- *Lonicera involucrata*
  - Twinberry
- *Lonicera tatarica*
  - Honeysuckle
- *Mahonia repens*
  - Grapeholly
- *Physocarpus opulifolius*
  - Ninebark: Common
- *Potentilla fruticosa*
  - Potentilla: Shrubby
- *Prunus americana*
  - Plum: American
- *Prunus pensylvanica*
  - Cherry: Pin
- *Prunus virginiana melanocarpa*
  - Chokeberry
- *Purshia tridentata*
  - Antelope Bitterbrush
- *Quercus gambelii*
  - Oak: Gambel's
- *Rhus aromatica*
  - Sumac: Fragrant
- *Rhus glabra*
  - Sumac: Smooth
- *Rhus glabra cismontana*
  - Sumac: Rocky Mountain
- *Rhus trilobata*
  - Sumac: Three-leaf
- *Ribes aureum*
  - Currant: Golden
- *Ribes cereum*
  - Currant: Wax
- *Ribes inermis*
  - Gooseberry
- *Rhus typhina*
  - Sumac: Staghorn
- *Robinia neomexicana*
  - Locust: New Mexican
- *Rosa woodsii*
  - Rose: Woods
- *Rubus idaeus ssp. melanolasius*
  - Raspberry: Wild
- *Rubus deliciosus*
  - Raspberry: Boulder
- *Seriphidium tridentatum* (syn: *Artemisia tridentata*)
  - Sagebrush: Big
- *Shepherdia canadensis*
  - Buffaloberry: Canada
- *Yucca glauca*
  - Yucca: Narrow-leaf

Wildflowers
- *Achillea lanulosa*
  - Yarrow: Wild
- *Allium cernuum*
  - Onion: Nodding
- *Allium prevostii*
  - Onion: Wild
- *Antennaria rosea*
  - Pussytoes: Rose
- *Aquilegia caerulea*
  - Columbine: Rocky Mountain
- *Aquilegia chrysantha*
  - Columbine: Golden Spur
- *Argemone polyanthes*
  - Poppy: Prickly
Artemisia ludoviciana
  Sage: Prairie
Artemisia frigida
  Sage: Fringed
Astragalus argophyllus, A. purshii
  Milkvetch
Besseya plantaginea
  Kittentails
Campanula rotundifolia
  harebell, Bluebell of Scotland
Castilleja linariifolia
  Paintbrush
Cleome serrulata
  Bee Plant: Rocky Mountain
Corallorhiza maculata
  Orchid: Coralroot
Corydalis aurea
  Golden Smoke
Delphinium nuttallianum
  Larakesp: Nuttall's
Epilobium angustifolium
  Fireweed
Erigeron spp.
  Daisy: Fleabane
Erigeron jamesii
  Buckwheat: James
Erigeron umbellatum
  sulphur Flower
Erysimum asperum
  Wallflower: Western
Fragaria vesca (syn: F. americana)
  Strawberry: Wild
Galium boreale
  Bedstraw: Northern
Geranium viscosissimum, G. caespitosum
  Geranium: Wild
Grindelia squarrosa
  Gumweed
Heterotheca villosa (syn: Chrysopsis)
  Aster: Golden
Iris missouriensis
  Iris: Rocky Mountain
Lesquerella montana
  Bladderpod
Leucocrinum montanum
  Lily: Sand
Linum perenne lewisi
  Flax: Blue
Lupinus argenteus
  Lupine: Silky
Lupinus parviflorus
  Lupine: Lodgepole
Mentzelia oligosperma
  Blazing Star
Mertensia lanceolata
  Chiming Bells
Oenothera caespitosa
  Evening Primrose: White
Oreocarya virgata
  Miner's Candle
Oxypolis sericea
  Locoweed: Rocky Mountain
Oxypolis splendens
  Locoweed: Showy
Penstemon spp.
  Penstemmon
Phacelia hastata
  Scorpionweed
Potentilla fissa, P. gracilis
  Potentilla
Pterospora andromedea
  Pinebush
Pulsatilla patens (syn: Anemone)
  Pasque Flower
Senecio integrerrimus
  Groundsel, Senecio
Sectellaria brittonii
  Skullcap
Smilacina racemosa
  Solomon's Seal: False
Swertia perennis
  Star Gentian
Thermopsis montana, T. divaricarpa
  Golden Banner
Townsendia hookeri
  Daisy: Easter

Grasses and Grass-like Plants
Agropyron trachycaulus
  Wheatgrass: Slender
Agropyron smithii
  Wheatgrass: Western
Blepharoneuron tricholepis
  Dropseed: Fine
Bromus marginatus
  Brome: Mountain
Carex spp.
  Sedge
Danthania parryi
  Outgrass: Parry's
Elymus glaucus
  Wild rye: Blue
Festuca idahoensis
  Fescue: Idaho
Festucathurberi
  Fescue: Thurber
Koeberla pyramidal
  Junegrass
Muhlenbergia montana
  Muhly: Mountain
Poa fendleriana
  Mutton-grass
Stipa columbiana
  Needle: Columbia
Trisetum spicatum
  Trisetum: Spike
Upper Elevation Riparian

The upper elevation riparian community occurs in a limited area of Colorado Springs at the upper reaches of the foothills, along the western edge of the City. It consists of streams, ponds, and lakes; along ravines and gulches on north-facing slopes; south-facing protected washes; and at the base of terraces or in pockets of cold air drainages.

**Climate:**
Elevation is approximately 6200 - 7500'. Annual precipitation and snow cover is greater than many other areas of Colorado Springs. This community has a short growing season.

**Characteristic Composition:**
These riparian communities consist of a variety of moisture-loving trees and shrubs, with many of the same species that occur at lower elevation riparian communities.

**Soils:**
Sites are commonly gravelly, occasionally loamy.

**Characteristic Pattern:**
The vegetation occurs in canopy and understory layers scattered along drainage ways and bodies of water.

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**Trees**

- *Abies concolor*
  - Fir: White
- *Abies lasiocarpa*
  - Fir: Subalpine
- *Acer grandidentatum*
  - Maple: Canyon
- *Acer negundo*
  - Boxelder
- *Alnus tenuifolia*
  - Alder: Mountain
- *Amelanchier utahensis*
  - Serviceberry: Utah
- *Betula fontinalis*
  - Birch: River
- *Betula occidentalis*
  - Birch: Western
- *Celtis occidentalis*
  - Hackberry
- *Corylus cornuta*
  - Hazel: Beaked
- *Elaeagnus angustifolia*
  - Russian Olive
- *Fraxinus pennsylvanica*
  - Ash: Green
- *Picea pungens*
  - Spruce: Colorado Blue
- *Pinus ponderosa*
  - Pine: Ponderosa
- *Populus x acuminata*
  - Cottonwood: Lanceleaf
- *Populus angustifolia*
  - Cottonwood: Narrowleaf
- *Populus balsamifera*
  - Poplar: Balsam
- *Populus sargentii*
  - Cottonwood: Plains
- *Pseudotsuga menziesii*
  - Douglas-fir
- *Salix amygdaloides*
  - Willow: Peach-leaf
- *Sorbus scopulina*
  - Ash: Mountain

**Shrubs**

- *Acer glabrum*
  - Maple: Rocky Mountain

**Amelanchier alnifolia**
Serviceberry: Saskatoon

**Amelanchier canadensis**
Serviceberry: Shadblow

**Betula glandulosa**
Birch: Bog

**Clematis ligusticifolia**
Virginia Bower

**Cornus stolonifera (syn: C. sericea)**
Dogwood: Red-osier

**Crataegus erythropa**
Hawthorn

**Lonicera involucrata**
Twinberry

**Lonicera tatarica**
Honeysuckle

**Parkerocissus quinquefolia**
Virginia Creeper

**Parthenocissus vitacea**
Thicket Creeper

**Potentilla fruticosa**
Potentilla: Shrubby

**Prunus americana**
Plum: American

**Prunus pensylvanica**
Cherry: Pin

**Prunus virginiana melanocarpa**
Chokecherry

**Quercus gambelii**
Oak: Gambel’s

**Ribes aureum**
Currant: Golden

**Ribes inerme**
Gooseberry: Common

**Rhus glabra**
Sumac: Smooth

**Rhus glabra cismontana**
Sumac: Rocky Mountain

**Robinia neomexicana**
 Locust: New Mexican

**Rosa woodsii**
Rose: Woods

**Rubus deliciosus**
Raspberry: Boulder

**Rubus parviflorus**
Thimbleberry
Salix exigua
Willow: Coyote

Salix lutea
Willow: Yellow

Sambucus caerulea
Elder: Blue

Shepherdia argentea
Buffalograss: Silver

Symphoricarpos oreophilus
Snowberry: Mountain

Ulmus pumila
Elm: Siberian

**Wildflowers**

Aconitum columbianum
Monkshood

Allium cernuum
Onion: Nodding

Allium schoenoprasum
Chives: Wild

Apocynum androsaemifolium
Dogbane

Aquilegia caerulea
Columbine: Rocky Mountain

Aquilegia chrysantha
Columbine: Golden Spur

Aster laevis
Aster: Smooth

Cardamine cordifolia
Bittercress

Delphinium occidentale
Larkspur: Tall Mountain

Dodecatheon pulchellum
Shootingstar: Western

Epilobium angustifolium
Fireweed

Fragaria vesca (syn: F. americana)
Strawberry: Wild

Gentiana amarella
Gentian: Rose

Geranium richardsonii
Geranium: Richardson’s

Habenaria hyperborea
Orchid: Northern Bog

Heracleum spondylium, H. lanatum
Cow Parsnip

Iliamna rivularis
Globemallow: Streambank

Iris missouriensis
Iris: Rocky Mountain

Mertensia trifoliata
Trefoli: Marsh

Mertensia ciliata
Chiming Bells

Mimulus guttatus
Monkey-flower

Nuphar luteum ssp. polysepalum
Fondfily: Yellow

Parnassia parviflora
Grass-of-Parnassus

Potamogeton filiformis
Fondweed

Ramunculus cardiophyllus
Buttercup: Heart-leaved

Rudbeckia hirta
Black-eyed Susan

Rudbeckia laciniata
Coneflower: Tall

Senecio triangularis
Senecio: Arrow-leaf

Sidalcea candida
Checkermallow: White

Smilacina racemosa
Solomon’s Seal: False

Streptopus fassetti
Twisted Stalk

Swertia perennis
Star Gentian

Thalictrum fendleri
Meadowrue

Trifolium parryi
Clover: Parry’s

Trollius albilflorus
Globeflower

**Grasses and Grass-like Plants**

Agrostis scabra
Ticklegrass

Calamagrostis canadensis
Reedgrass: Canada

Carex spp.
Carex

Deschampsia caespitosa
Hairgrass: Tufted

Equisetum variegatum
Horsetail, Scouring-rush

Hippuris vulgaris
Mare’s-tail

Juncus montanus
Rush: Subalpine

Poa fendleri
Mutton-grass

Typha latifolia
Cat-tail: Broad-leaved
Douglas-fir Forest

The Douglas-fir forest community is located along the upper reaches of the ponderosa pine forest, forming a western backdrop for Colorado Springs and Cheyenne Canyon. Only a small fraction of developable land within the City lies in this community.

**Climate:**
Elevation is approximately 6500 - 7500'. Climate is cooler than any other community in the City and moister than non-riparian communities.

**Characteristic Composition:**
Douglas-fir trees rarely occur in pure stands. More often, they form 40 - 90% of the overstory for this community. They occur in association with ponderosa pine and intermingle with white fir and aspen outside the City limits. There is a mixed understory of shrubs and grasses. Because of its preference for moisture and shade tolerance, Douglas-fir communities can typically be found along north- and east-facing slopes, with an occasional occurrence on south and west slopes.

**Soils:**
Sites are commonly loamy.

**Characteristic Pattern:**
The most noticeable pattern is this community's preference for north- and east-facing slopes and the denser spacing along the middle and lower sections of the slope. Intermingling ponderosa pine are reflected in this pattern.

**Trees**
- *Abies concolor*
  - Fir: White
- *Abies lasiocarpa*
  - Fir: Subalpine
- *Juniperus monosperma*
  - Juniper: One-seed
- *Juniperus scopulorum*
  - Juniper: Rocky Mountain
- *Picea engelmannii*
  - Spruce: Engelmann
- *Picea pungens*
  - Spruce: Colorado Blue
- *Pinus contorta*
  - Pine: Lodgepole
- *Pinus flexilis*
  - Pine: Limber
- *Pinus ponderosa*
  - Pine: Ponderosa
- *Populus angustifolia*
  - Cottonwood: Narrowleaf
- *Populus tremuloides*
  - Aspen: Quaking
- *Pseudotsuga menziesii*
  - Douglas-fir

**Shrubs**
- *Ceanothus fendleri*
  - Buckbrush: Fendler's
- *Ceanothus velutinus*
  - Sticky-laurel
- *Holodiscus dumosus*
  - Mountain Spray
- *Jamesia americana*
  - Waxflower
- *Juniperus communis*
  - Juniper: Common
- *Pachistima myrsinites*
  - Mountain-lover
- *Physocarpus monogynus*
  - Ninebark
- *Prunus pensylvanica*
  - Cherry: Pin
- *Prunus virginiana melanocarpa*
  - Chokecherry
- *Quercus gambeli*
  - Oak: Gambel's

**Wildflowers**
- *Allium cernuum*
  - Onion: Nodding
- *Allium schoenoprasum*
  - Chives: Wild
- *Antennaria parvifolia*
  - Pussytoes: Mountain
- *Aquilegia caerulea*
  - Columbine: Rocky Mountain
- *Arnica cordifolia*
  - Arnica
- *Calypso bulbosa*
  - Fairy Slipper
- *Campanula rotundifolia*
  - Harebell, Bluebells of Scotland
- *Corallorhiza maculata*
  - Orchid: Northern Coralroot
- *Chimaphila umbellata*
  - Pipsissewa
- *Corydalis aurea*
  - Golden Smoke
- *Delphinium occidentale*
  - Larkspur: Tall Mountain
- *Erigeron speciosus*
  - Fleabane: Showy
Fragaria vesca (syn: F. americana)  
Strawberry: Wild  

Galium triflorum  
Bedstraw: Fragrant  

Gentiana parryi  
Gentian: Mountain  

Geranium richardsonii  
Geranium: Richardson’s  

Gilia aggregata (syn: Ipomopsis)  
Gilia  

Heuchera parviflora  
Alumroot: Common  

Heuchera bracteata  
Alumroot: Bracted  

Iris missouriensis  
Iris: Rocky Mountain  

Limnaca borealis  
Twinflower  

Lupinus argenteus  
Lupine: Silky  

Mertensia ciliata  
Chiniqua Bells  

Pedicularis racemosa  
Lousewort: Mountain  

Penstemon glaber (syn: P. alpinus)  
Penstemon: Alpine  

Penstemon unilateralis  
Penstemon: One-sided  

Polemonium pulcherrimum  
Jacob’s Ladder  

Potentilla spp.  
Potenilla  

Pterospora andromedea  
Pinedrops  

Pulsatilla patens (syn: Anemone)  
Pasque Flower  

Sedum lanceolatum  
Stonecrop  

Selaginella densa  
Club moss  

Smilacina racemosas  
Solomon’s Seal: False  

Solidago missouriensis  
Goldenrod  

Stellaria umbellata  
Chickweed  

Swertia perennis  
Star Gentian  

Thalictrum fendleri  
Meadow Rue  

Veratrum tenuipetalum  
Hellebore: False  

Zygadenus elegans  
Wand-lily  

Zygadenus venenosus  
Death Camas  

**Grasses and Grass-like Plants**  

Agropyron trachycaulus  
Wheatgrass: Slender  

Agrostis scabra  
Ticklegrass  

Blepharoneuron tricholepis  
Dropseed: Pine  

Bromus marginatus  
Brome: Mountain  

Carex spp.  
Sedge  

Carex geyeri  
Sedge: Elk  

Carex stenopylla ssp. eleocharis  
Sedge  

Danthonia intermedia  
Oatgrass: Timber  

Danthonia parryi  
Oatgrass: Parry’s  

Deschampia caespitosa  
Hairgrass: Tufted  

Elymus glaucus  
Wild-rye: Blue  

Festuca idahoensis  
Fescue: Idaho  

Festuca thurberi  
Fescue: Thurber  

Glyceria elata  
Minnagrass  

Muhlenbergia montana  
Muhly: Mountain  

Poa fendleriana  
Mutton-grass  

Siltota columbiana  
Needle: Columbia
Other Regional Plant Communities

The following plant communities do not occur in Colorado Springs but do occur in varying locations throughout Colorado. Brief descriptions are included for each community, reminders of the rich diversity of this area.

Semidesert Scrub
This community is typically found on dry, hard desert soils that are often saline. There is a noticeable absence of trees; precipitation is minimal.

Sagebrush Shrublands
Consisting primarily of sagebrush and other shrubs, soils are less alkaline and saline than the semidesert scrub community. Trees are not present. Where moisture is available, a greater diversity of species occurs.

Mountain Grasslands and Subalpine Meadows
Mountain grasslands occur in the moist upper reaches of ponderosa, Douglas-fir, aspen and Englemann spruce forests. Subalpine meadows occur in open areas and at the edges of lodgepole, bristlecone, and limber pine forests. These grasslands and meadows consist of grasses, wildflowers, and openly spaced trees and shrubs.

Aspen Forest
Aspen forests are succession communities, occurring in moist valleys and slopes at elevations of 7,500 - 11,000'. Pure stands occur or are scattered among evergreen trees. Shrubs, forbs, and grasses form the understory, with intermingling of open meadows common.

Englemann Spruce/Subalpine Fir Forests
This montane community occurs at elevations of 9,000 - 12,000'. They are found on flat land areas, toe slopes, or canyon bottoms, generally on north- and east-facing slopes. Deep soils and moisture are present, and they are important as snow collection areas.

Lodgepole Pine Forest
This community is typical of dry montane slopes at elevations of 8,000 - 11,500'. Lodgepole pines frequently grow in pure stands on south- and west-facing slopes with very little understory present.

Precipitation generally averages more than 20" per year.

Bristlecone and Limber Pine Forests
These forests are common at elevations of 9,000' to timberline. They occur along harsh, exposed, windy, and stoney places. Trees grow singly or in groups, frequently intermingling with aspen and high altitude evergreen trees.
Resource List

The following resources are recommended for supplemental information which may be useful in the preparation of landscape and irrigation plans.

- Colorado Springs Xeriscape Demonstration Garden, 2855 Mesa Road, Colorado Springs, CO 80904, (719) 448-4555
- Natural Resources Conservation Service, 1826 E. Platte Ave, Colorado Springs, CO 80909, (719) 473-7104
- Cooperative Extension Service, 305 S. Union, Colorado Springs, CO 80910, (719) 632-8920
- The Rocky Mountain Plant Guide, Colorado Nursery Association, 5290 E. Yale Circle Suite 204, Denver, CO 80222, (303) 758-6672
- The Rocky Mountain Perennial Plant Guide, Colorado Nursery Association (same as above)
- Landscape Speciﬁcations Handbook, Associated Landscape Contractors of Colorado, 529 E. Yale Circle Suite 100, Denver, CO 80222, (303) 757-5611
- Rocky Mountain Horticulture Is Different, George W. Kelly, © 1951, George W. Kelly
- Water Efﬁcient Landscape Guidelines, Bennett and Hazinski, American Water Works Association, 6666 W. Quincy Ave, Denver, CO 80235, (303) 347-6225

Supplemental Materials Available from the City of Colorado Springs Planning Department

The following documents provide more in depth information about the value and diversity of our landscape setting, design considerations, and the larger urban context.

- The Significant Features Inventory. Documents the natural regional features and sets values for preservation.
- The Utilities Landscape Guidelines, 1998. Sets a design direction for water conserving landscapes for Utilities sites. (available from the Water Resources Department)
- The Open Space Plan, 1997. Facilitates management and preservation of valuable naturalistic landscapes and ecological themes.