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Cooperative Extension Service
Department of Range Management
College of Agriculture
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Landscaping Guidelines to Attract Wildlife



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Introduction

Traditional home landscaping involves replacing natural vegetation with a large green lawn and adding a few trees, shrubs, and flower beds for decoration. Typical “yards” with a minimal variety of vegetation offer reduced aesthetic appeal, little protection against harsh weather, and little wildlife habitat value. In most cases, traditional yards require constant attention and expense to maintain their appearance. With a little planning, typical yards can attract wildlife through altered landscape designs that improve wildlife habitat.

For example, instead of a large expanse of green lawn that needs constant watering and mowing, consider planting patches of evergreens, shrubs, and other herbaceous plants that require little care. In one portion of the yard, a “lawn” of unmowed native grasses will provide additional vegetative variety. Leaving small brush piles, dead trees, and unharvested garden plots also provide attractive landscaping for wildlife.

Many wildlife species attracted to a yard with good habitat characteristics are beneficial. For example, kingbirds, swallows, flycatchers, martins, warblers, and bats feed on large quantities of insects. Insect-eating birds and mammals provide an environmentally safe alternative to chemical insecticides. They provide significant insect control in areas where insects are abundant. In urban areas, attractive landscaping designs encourage habitation by songbirds, woodpeckers, hummingbirds, butterflies, cottontail rabbits, and squirrels.

Landscaping for wildlife also provides benefits for homeowners. A properly planted and landscaped yard reduces the amount of time and effort for maintenance. Watering also can be significantly reduced with proper plant selection. Tree and shrub planting can be located to screen out sound and reduce vision from adjacent property for privacy. Strategically planted trees and shrubs will also reduce the effects of wind and temperature extremes in the yard and the home. Selected plants can provide a variety of commodities such as fruit, herbs, and material for floral arrangements. Finally, a diverse, aesthetically pleasing landscaping design increases property value.



A properly landscaped yard provides benefits for both wildlife and the landowner. A variety of plants, bird baths, rock gardens, brush piles, and tree stumps provides habitat diversity and attracts wildlife. Tree and shrub plantings can screen out sound, reduce vision from adjacent property for privacy, reduce wind and temperature extremes, and increase property value.

The purpose of this bulletin is to (1) provide an approach in planning wildlife landscape designs, (2) discuss critical habitat factors required by wildlife, (3) suggest plant species to select for landscaping designs, and (4) offer ideas to provide diversity for attracting wildlife.

Planning the Landscape Design

The first step in planning a landscape design is to identify habitat elements that already exist for attracting wildlife. Determine if any existing plants provide food such as seeds, fruits, and nuts. Assess the amount of dense shrubbery or coniferous (evergreen) trees that provide cover and protection from predators. Try to visualize a yard from a wildlife standpoint. Knotholes or cavities in a dead tree could provide nesting sites for birds, bees, or squirrels. Brush piles may offer areas for rabbits to safely bear and raise young.

Inventory and list the plant species, sizes, and locations of all existing vegetation in the yard. Draw a base map to scale that illustrates where pathways, existing vegetation, ponds, fences, large rocks, power lines, and buildings are located in the proposed development area.

Trees, shrubs, and herbaceous vegetation proposed for planting can be drawn on clear overlay material and laid over the base map of existing vegetation and structures in the yard for an idea of the final landscape design. Before selecting plant species, make a list of plants in the neighborhood that grow well and appear suitable for your yard. Note their growth form and ability to attract wildlife. Determine which plant species provide shelter for the home and wildlife during the winter. Select plants that are aesthetically pleasing during the winter.

It might be helpful to contact resource agencies in the area for ideas and information on choosing plant species, arranging plantings, estimating time for vegetative development, and determining the amount of maintenance required for the design. Agencies such as the Soil Conservation Service, the University of Wyoming Cooperative Extension Service, local conservation district offices, and the Wyoming Game and Fish Department have staff members who can provide information and help with landscape planning. In addition, these agencies often have informative publications available.

Other planned features such as ground cover, rock, or gardens can be drawn on separate overlays and superimposed on the base map and vegetative overlays. Because these features are drawn as a top view, try to envision what the yard will look like from within, outside, and at various angles at maturity.

Also determine the arc or pathway the sun travels through the day, the direction of the prevailing wind, snow-drifting patterns, and desirable areas for visual or sound screening. Identify areas that are difficult to water, have poor soil, or are heavily shaded by the house, fences, garage, and other structures. These factors play an important role in locating selected plant species around the yard.

Before deciding on which wildlife species to attract, become familiar with the birds and animals native to the area. Study the property and adjacent land and make a list of the species already present. Other desirable species must be native to the region or present during migration periods. Information on wildlife species already present will dictate the landscaping design. Habitat that attracts butterflies, for example, may not necessarily attract birds.

Other considerations include decisions on how much space and money to invest in habitat development. Also check local laws regarding lawn care and weed control. Some localities may not permit unmowed grass or the presence of noxious weeds.

Be creative with the landscape design. The initial design may be rather simple with additional development later. Avoid unorganized or over-extensive landscaping that may convert the yard into an overgrown jungle and defeat the goal of establishing a diversified habitat.

When planning the landscape design, consider plant characteristics such as size at maturity and growth form. Select plant species that will not be crowded when reaching maturity. Also consider a plant's growth form and shape. Determine if the foliage fills the entire plant height or forms a "canopy," whether it is low and spreading for ground cover, and whether it has dense or open foliage.

The length of time for plant growth and development is another factor to consider. Accept the fact that complete development will take years. Develop a realistic landscaping plan and be patient. With unlimited resources, a landscape design can progress quickly. However, because most people must follow a budget, landscaping progresses as time and money allow. Take advantage of clearance sales and use legally obtained native plants and materials to cut costs when possible.

Prioritize landscape plantings based on the length of time needed to reach maturity. Landscaping features that provide the greatest contribution or require the longest time to reach maturity should be planted the first few years. Additional plantings can be added later to finish the design. Ideally, the completed landscape design will include relatively stable plants that require little maintenance.

Once a landscaping plan is designed to create habitat attractive to desired wildlife species, use the information in this bulletin to develop habitat in the yard. To start providing some habitat right away, erect bird feeders, develop brush piles for small animals, or plant red-tubular flowers for hummingbirds.

Essential Wildlife Habitat Components

Four basic elements are required for wildlife survival: food, water, cover, and areas for reproduction and rearing young. To attract the greatest number of wildlife species, provide a wide variety of these essential elements in the landscape design. As wildlife habitat diversity increases, more wildlife species and greater numbers will be attracted.

Food

To satisfy the year-round food requirements of many species, wildlife habitat developments should provide as much food as possible through native vegetation. Shrubs, trees, and other plants that produce acorns and nuts, berries, buds, catkins, fruit, nectar, and seeds should be selected for planting wherever possible. Trees and shrubs provide foraging sites for birds such as warblers and wrens which gather insects from trunks and branches. Rough-barked woody species such as mature cottonwoods, elms, and green ash make excellent foraging sites for brown creepers and nuthatches.

Open areas in a yard such as lawns provide foraging habitat for aerial feeders (swallows, swifts, kingbirds, bluebirds) and certain ground feeders (robins). Cottontails prefer grasses, forbs, and tender woody plants located near cover. Fox squirrels feed on fruits, nuts, and buds.

Natural fruits of shrubs such as cotoneaster, chokecherry, western sandcherry, sumac, hawthorn, Russian olive, currant, and rose are preferred by a variety of songbirds. Trees that provide valuable fruits include crabapple, oak, wild plum, hackberry, and cherry. Coniferous trees (pine, spruce, or fir) provide year-round cover and cone seeds that are eaten by numerous wildlife species. Vines such as Virginia creeper, grape, or peas provide berries or other fruits. They also cover structures such as fences, telephone poles, or brush piles.

Hummingbirds and butterflies are often attracted by flowers that produce abundant nectar. Flower gardens designed for hummingbirds or butterflies should provide blossoms throughout the summer. Hummingbirds prefer red tubular flowers, but other flower

colors will work too. Outstanding plant species for hummingbirds include trumpet vine, four o'clock, salvia, tiger lily, bluebell, scarlet gilia, scarlet runner bean, delphinium, perennial phlox, red columbine, alyssum, and nasturtium. Butterflies will also use flowers from these plants. To reduce the risk of killing butterflies, avoid using chemical insecticides.

Remember to select plants that provide food all year. Plants with persistent "fruits" throughout the winter provide a critical food source during stressful periods. Bird feeding stations can supplement native food sources and recently planted trees, shrubs, and herbaceous vegetation during the winter. Sunflower seeds, niger thistle seed, proso millet, and cracked corn are good choices for bird feeding stations. In summer, offer sugar water in feeders for hummingbirds.

Water

Water is essential to wildlife for drinking and bathing. A small birdbath or an elaborate small pool complete with shallow and deep areas for bathing will provide needed water. An elevated birdbath with predator guards will provide protection from cats and other ground predators.

The sound of splashing water from a dripping garden hose suspended a few feet above a shallow pan or flat rock often attracts many birds. A slow, steady trickle from drip irrigation emitters will attract warblers.

For small animals, place a small, shallow dish near shrubbery or other cover to offer security when watering. For a more elaborate setup, a small pool placed in the ground provides water for drinking and bathing and cover and reproductive habitat for small fish, amphibians, insects, and reptiles. Water can be recirculated with a small pump.

Remember that water sources must be kept clean and accessible year round. Change water frequently to guard against contamination. In summer, locate water sources in shaded and cool areas. In winter, use an immersion heating unit to keep the water from freezing.



A small bird bath is essential to wildlife for drinking and bathing. Place bird baths near shrubbery to offer security and change water frequently to prevent contamination.

Cover

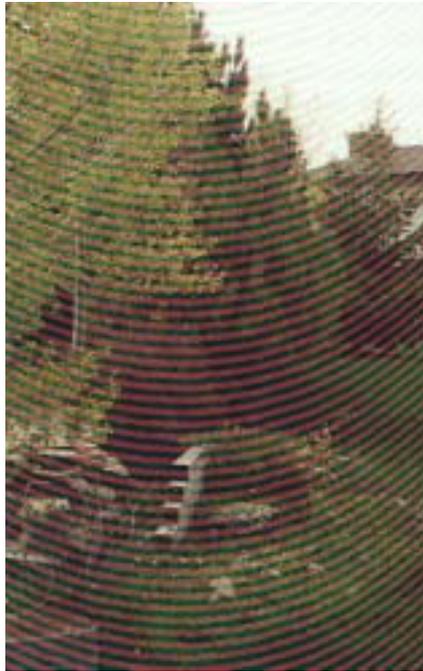
Protective cover for wildlife can be provided as dense shrubs, hollow logs, rock piles, brush piles, stone walls, coniferous trees, and tall grass. Many plants selected as wildlife food sources are also used for cover. For maximum effectiveness, wildlife cover developments should be located away from areas of highest human traffic.

When developing wildlife cover, select plants of a wide range in size and density to supply cover for as many species as possible and to allow animals to select preferred cover types for different activities. “Layers” of large trees, smaller trees, tall shrubs, and short, dense shrubs provide a diverse mixture of cover heights for birds and tree-dwelling and ground-level animals. Brush and rock piles offer additional cover for ground-dwelling species such as rabbits, chipmunks, and some birds. Larger logs spaced several inches apart should form the base of a brush pile to allow plenty of hiding space. Vines can be established to make the brush pile more attractive to humans. Coniferous trees in the landscape design will provide winter cover.

To attract more wildlife, intersperse open grassy areas with a variety of different woody plantings to create “edge.” Edge is the area where two or more different vegetative types adjoin one another. This increases habitat diversity, allowing a piece of property to support many more species of wildlife than the individual vegetative

types alone. Making the boundaries between vegetative types irregular can further increase the amount of edge.

Establish at least one area of heavy cover with two or three different heights of vegetation in the habitat development project. Several areas of heavy cover scattered across the yard would be better. Clusters of trees and shrubs or a combination of the two planted throughout the yard provide optimum landscape diversity. Some shrub clusters should be 4 to 5 feet high with dense branching. Locate these dense cover patches in corners or scatter them along two sides of the yard.



When selecting plants for landscaping, choose species with a wide variety of sizes to offer cover for a variety of wildlife. "Layers" of large trees, small trees, tall shrubs, short shrubs, and herbaceous flowers and grasses offer a variety of cover heights that add habitat diversity to a yard.

Reproductive areas

Reproductive areas provide specific cover types that offer protection from harsh weather and predators during vulnerable periods. For example, mature trees offer reproductive cover for squirrels and nesting birds. Dense shrubbery provides cover for a variety of other wildlife species.

Other examples of reproductive cover are birdhouses and nesting shelves attached to homes, trees, or poles in the yard. Water-dwelling animals use small pools or ponds for reproductive cover. Rock piles or hollow trees provide safe reproductive areas for several species of wildlife.



Natural reproductive cover will eventually occur as tree and shrub plantings mature. In the meantime, birdhouses can be attached to trees in strategic locations to attract breeding birds.

Natural reproductive cover will become available as habitat plantings mature. However, artificial structures can be constructed and placed in strategic locations to accelerate the process of attracting breeding birds and mammals (squirrels, bats, rabbits) or to supplement natural nesting sites in a mature habitat.

Selecting Plant Species

Consider selecting plant species with low-maintenance requirements. For example, mowing can be reduced by selecting grasses of slow growth or low growth and using design elements such as rock gardens. Permitting shrubs to branch and spread saves pruning maintenance time. Diversity can be added by allowing a lawn to grow without mowing and permitting native forbs to grow normally. To many people this practice may sound irresponsible. However, a yard does not have to be kept meticulously clean.

Select trees and shrubs to occupy areas that take extra time to maintain such as odd corners, strips of lawn between walks, and areas requiring post-mowing clipping. Choose plants native to the area or introduced plants with low water requirements to keep water bills low and to conserve water. A list of plants suitable for planting in Wyoming is found in Table 1.

Group plants with similar moisture requirements together for proper watering without waste. In areas where soil moisture levels are difficult to maintain due to poor soil conditions or excessive wind-caused evaporation, select drought-tolerant grasses to start a new lawn or inter-seed them into an existing lawn. With reduced watering, drought-tolerant grasses will eventually dominate.

When slow-maturing woody plants are selected, consider installing a drip irrigation system to enhance establishment. The initial cost of drip irrigation will be recovered in savings of water and time over the years. Use this system to start plants in one area and then move to newly planted sites as necessary. Soaker hoses are not as efficient as drip irrigation but serve the same purpose. Regardless of the system selected, water new plantings at night to obtain maximum efficiency.

Carefully consider the amount of lawn area that will be used before planting a grass species such as Kentucky bluegrass that requires continual watering. Select drought-resistant grasses that require less water such as ryegrass, fairway wheatgrass, western wheatgrass, smooth brome, fescue, or buffalograss. These species can be planted adjacent to a bluegrass area and separated by a border or edge. High water-demanding fruit trees, shade trees, flowers, or vegetables can be planted adjacent to or within the bluegrass area for more efficient and proper watering. The moisture requirements of drought-resistant grass species will be reduced with increased cover at maturation. Ground with extra cover loses less moisture. Less watering will reduce the rate of grass growth in the yard.

Strategically locating trees and shrubs

In addition to providing wildlife habitat, strategically located trees, shrubs, and vines can significantly reduce the effects of wind and temperature extremes and regulate the amount of sun or shade in a yard. Trees and shrubs can be more than five times more effective than shades or drapes in reducing summer heat in a home. Strategically placed trees, shrubs, and vines can provide energy efficiency benefits, saving 20 to 40 percent on heating and cooling costs.

Factors such as yard size and shape, prevailing winds, orientation of the sun, type of house, construction design, location in yard, and presence of other structures will affect the design, location, and selection of plants used in landscaping. Both the house and yard characteristics must be considered in selecting locations for trees and shrubs.

Following are a few ideas:

- Coniferous trees on the north and west sides of a house provide protection from winter wind and cold.
- Deciduous trees, shrubs, and vines on the south and east sides of a house will shade the house in summer yet allow the penetration of warming sun in winter.



Strategically located trees can be more than five times as effective in reducing summer heat in a home compared to shades or drapes. Many people realize a 20- to 40-percent savings on heating and cooling costs when planting trees to reduce wind and temperature changes.

- Vines such as silver lace and Virginia creeper can shade porches, decks, and windows in the summer when grown on trellises. These vines have persistent stems, so their placement should be carefully considered. Non-persistent vines such as clematis can be used in other landscaping applications. Clematis has flowers to attract hummingbirds, butterflies, and other wildlife.
- Shade trees should possess dense foliage, a mature height of 50 feet, and a sparse branch pattern to allow sunlight penetration in the winter. Deciduous trees that leaf out late and drop leaves early will provide a longer winter period of sun-induced home heating. A mature deciduous tree allows the winter sun to reach windows as opposed to a mature coniferous tree.

- Consider the angle of the sun and the location of decks, porches, windows, stone patios, and other structures that serve as heat traps when strategically locating trees and shrubs for summer and winter conditions.
- Properly located shade trees can reduce glare from reflective surfaces such as windows and shade asphalt driveways that absorb heat. Shrubs and other low-growing plants can reduce the amount of reflected sunlight entering a house when placed below windows.
- Shading the outside central air-conditioning unit with tall shrubs or trees will improve the operating efficiency and reduce the operating load.
- Plant living windbreaks of trees and shrubs in strategic locations to increase soil moisture from accumulated snow drifting and to reduce undesired wind velocity. Consider the impact of snow drifting before locating windbreaks.
- Low-growing coniferous plants such as junipers or raised plant beds placed along a house foundation on the windward or north-facing side provide additional insulating properties.

Strategic locations of trees and shrubs can also create protective screening against unwanted noise and undesirable views of adjacent land. Vegetative barriers help create a quiet, secluded refuge from urban surroundings.

To create vegetative screens, select trees and shrubs which produce dense foliage at maturity and strategically plant these species in rows where visual and sound barriers are desired. These vegetative barriers may not eliminate the problem but will provide additional privacy and some insulation from noise.

Visual screening is important in the summer to provide privacy in the backyard. Screening is also used to eliminate views of back alleys, non-aesthetic structures, or high-traffic roadways. Many people prefer to screen their homes from neighbors, sidewalks, and streets.



Coniferous trees provide protection from winter wind and cold when planted on the north and west sides of a house. Likewise, deciduous trees shade a house in the summer yet allow penetration of the warming sun in winter when planted on the south and east sides of a house.

Multi-layered screens are more effective than a single-species row for reducing noise and vision. They provide the added benefits of aesthetically pleasing appearance and enhanced wildlife habitat. Tall, deciduous woody species are effective in the summer. However, coniferous vegetation offers yearlong protection. Hedges are often used as fences to prevent short cutting across yards.

Summary of Landscaping Recommendations

The following summary guidelines offer suggestions for achieving habitat diversity in landscaping projects to attract wildlife:

- Select plants for what they offer in terms of food and shelter rather than for their appearance. Shrubbery with branchy growth is ideal for nesting sites or escape cover. Include plants that bear fruit, seeds, nuts, or other foods.



Groups of trees, shrubs, grasses, and flowerbeds provide “edge” where they adjoin one another. These areas are preferred activity centers for wildlife and should be developed abundantly in a yard.

- Maximize habitat edges where different types of plantings meet. Areas where flowerbeds, hedgerows, and trees adjoin one another are preferred activity centers for birds and other wildlife.
- Create a “layered” effect in the landscape by planting large trees, small trees, shrubs, and herbaceous plants. An open area surrounded by plantings is the optimum strategy in designing a landscape.
- Maximize habitat edges by planting a variety of different vegetative types in clusters throughout the yard. Groups of trees, shrubs, grasses, and flower beds that adjoin one another are preferred activity centers for birds and other wildlife.

- Include coniferous shrubs and trees in the landscaping project. These species offer year-round privacy for the yard while providing critical shelter for wildlife during inclement weather.
- Do not remove all the dead tree stumps, dead branches, leaf litter, or harvested garden plants from the yard. Dead trees or snags provide food for insect-eating wildlife and homes for cavity dwellers. Dead branches provide perch sites. Leaf litter and garden leftovers provide food sources. Leave portions of the lawn unmowed and some shrubbery branches unpruned to improve bird habitat by increasing diversity in vegetative layers.
- Include some special habitat features such as brush piles, rock piles, and watering sites. A sizeable brush pile of cut branches is a favorite area for sparrows, rabbits, and other wildlife. Place brush piles near feeders located in open areas to increase visitation.



Special habitat features such as brush piles are favorite areas for sparrows, rabbits, and other wildlife. To attract wildlife, develop brush piles in open areas near feeders.

- Design backyard habitat so birds and animals can be seen using trees, shrubs, and herbaceous plantings from a window, patio, or terrace.
- If the backyard habitat area contains a pond, establish conifers, clumps of shrubs, and hedges around the pond for resting, nesting, and feeding sites for wildlife.
- Consider planting “food plots” in small, short rows to add habitat diversity and attract more wildlife. Goldfinches, juncos, and sparrows are attracted to food plots of millet, grain sorghum, corn, or sunflowers. Wild ragweed also attracts many bird species.
- Always remember to include the four basic elements of wildlife habitat in the landscaping project: food, water, cover, and areas for reproduction and rearing young.

Acknowledgements

Information presented in this bulletin was extracted primarily from the following references:

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Table 1 – A list of selected plants that can be used in landscape designs to provide cover, nest sites, and food for backyard wildlife in Wyoming.¹

SCIENTIFIC NAME	COMMON NAME
Deciduous Trees	
<i>Ailanthus altissima</i>	Tree-of-heaven
<i>Celtis occidentalis</i>	Common hackberry
<i>Crataegus</i> spp.	Hawthorn*
<i>Fraxinus pennsylvanica</i>	Green ash
<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless common honeylocust
<i>Malus</i> spp.	Crabapple*
<i>Quercus gambelii</i>	Gambel oak
<i>Robinia neomexicana</i>	New Mexico locust
<i>Ulmus pumila</i>	Siberian elm*
Evergreen Trees and Shrubs	
<i>Juniperus scopulorum</i>	Rocky Mountain juniper*
<i>Juniperus monosperma</i>	One-seeded juniper*
<i>Pinus contorta</i>	Lodgepole pine
<i>Pinus edulis</i>	Pinyon pine
<i>Pinus mugho</i>	Mugho pine
<i>Pinus ponderosa</i>	Ponderosa pine
<i>Pinus sylvestris</i>	Scotch pine
<i>Pinus aristata</i>	Bristlecone pine
<i>Pinus flexilis</i>	Limber pine
<i>Pinus nigra</i>	Austrian pine
Shrubs	
<i>Amelanchier arborea</i>	Serviceberry*
<i>Amorpha canescens</i>	Leadplant
<i>Artemisia</i> spp.	Sagebrush
<i>Atriplex canescens</i>	Four-winged saltbush***
<i>Berberis</i> spp.	Barberry
<i>Caragana arborescens</i>	Siberian peashrub*
<i>Caragana microphylla</i>	Littleleaf peashrub*
<i>Caragana pygmaea</i>	Pygmy caragana*
<i>Caryopteris clandonensis</i>	Blue mist spirea

<i>Cercocarpus montanus</i>	Mountain mahogany
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush
<i>Colutea arborescens</i>	Bladdersenna
<i>Cornus stolonifera</i>	Red-osier dogwood
<i>Cotoneaster</i> spp.	Cotoneaster
<i>Cowania</i> spp.	Cliff rose*
<i>Elaeagnus angustifolia</i>	Russian olive*
<i>Elaeagnus commutata</i>	Silverberry
<i>Eurotica</i> spp.	Winterfat
<i>Fallugia paradoxa</i>	Apache plume
<i>Forestiera neomexicana</i>	New Mexican privet
<i>Hippophae rhamnoides</i>	Sea buckthorn* **
<i>Jamesia americana</i>	Cliff jamesia
<i>Juniperus chinensis</i>	Pfitzer juniper
<i>Litustrum</i> spp.	Cheyenne privet
<i>Lonicera tatarica</i>	Tatarian honeysuckle
<i>Potentilla fruticosa</i>	Cinquefoil or potentilla
<i>Prunus americana</i>	Wild plum
<i>Prunus besseyi</i>	Western sandcherry
<i>Prunus serotina</i>	Chokecherry
<i>Purshia</i> spp.	Bitterbrush
<i>Rhamnus cathartica</i>	Common buckthorn
<i>Rhus trilobata</i>	Skunkbush sumac*
<i>Rhus cismontana</i>	Mountain sumac
<i>Ribes</i> spp.	Currant/Gooseberry*
<i>Robina neomexicana</i>	New Mexican locust
<i>Rosa foetida bicolor</i>	Austrian copper rose*
<i>Shepherdia argentea</i>	Silver buffaloberry
<i>Symphoricarpos alba</i>	Snowberry
<i>Tamarix parviflora</i>	Tamarix* **
<i>Viburnum lantana</i>	Wayfaring tree
<i>Yucca filamentosa</i>	Yucca

Vines

<i>Parthenocissus</i> spp.	Virginia creeper
<i>Vitis</i> spp.	Grape silver lace
<i>Clematis</i> spp.	Virgin's bower
<i>Clytostoma</i> spp.	Trumpet vine

Ground Covers

<i>Achillea tomentosa</i>	Wooly yarrow*
<i>Allysum saxatile</i>	Golden tuft
<i>Arabis alpina</i>	Rockcress
<i>Artemisia</i> spp.	Wormwood*
<i>Cerastium tomentosum</i>	Snow-in-summer
<i>Euphorbia</i> spp.	Spurge
<i>Saponaria ocymoides</i>	Soapwart
<i>Sedum</i> spp.	Stonecrop*
<i>Sempervivum</i> spp.	Houseleek*
<i>Thymus</i> spp.	Wooley thyme*

Dryland Grasses (Native to Rocky Mountain West)

<i>Agropyron smithii</i>	Western wheatgrass
<i>Buchloe dactyloides</i>	Buffalograss
<i>Bouteloua gracilis</i>	Blue gramma
<i>Bouteloua curtipendula</i>	Side oats gramma

Other Adapted Grasses

<i>Agropyron cristatum</i>	Fairway wheatgrass
<i>Bromus inermis</i>	Smooth brome
<i>Festuca arundinaceae</i>	Tall fescue

* Very tolerant of alkali soils

** Tolerant of poorly drained, high-salt soils

¹ Data from Rothwell (1988).

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