



Land Use Code

Landscaping Standards Public Draft

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Article 4.0 Development Standards

4.2. Applicability

Commentary

This section displays Section 4.2.1.C.3.e. which describes when minor expansions and changes of use must comply with the Minimum Landscaping requirements in Section 4.8.4. The remainder of Section 4.2 as it relates to Off-Street Parking and Loading is carried forward and not repeated here.

- a. Section 4.7.4, *Minimum Landscaping Required*
 - i. Minor expansions shall comply with all applicable requirements in §4.7.4, *Minimum Landscaping Required*, unless the Planning Director waives the requirements through an Alternative Landscape Plan or based on a determination that the scale and character of the expansion does not adversely impact the quality, appearance, or
 - ii. Changes of use shall comply with all applicable requirements in §4.7.4, *Minimum Landscaping Required* unless the Planning Director waives the requirements based on a determination that the scale and character of the new use is sufficiently similar to the current use and is not likely to adversely impact the off-street parking and loading needs of the development.

4.7 Landscaping

Commentary

Generally, the content carried forward from the current LUC has been significantly reorganized with new subsections to help improve the user-friendliness of this section. The existing Phase 1 LUC language has been redlined with all revisions, deletions, and additions.

There are new applicability standards throughout this section that encourage context-sensitive design and carry forward the character area concept established in Phase 1. All standards referring to applicability within and outside of GMAs have been updated to reference the relevant character areas and zoning districts. New standards to encourage water-efficient landscaping design and support water conservation have been integrated throughout this section. Certain requirements have been tailored by character area, typically to exempt the more rural areas of the County from meeting standards that may not be feasible or necessary.

References to the Larimer County Landscaping Guide have been deleted and the Larimer County Plant List has been updated and simplified. We recommend the Plant List (included in a Table at the end of this document) be included with the other Landscaping requirements in the Supplemental Materials. For the purpose of this draft, it is included as §4.8.3.

4.7.1 Purpose

The purpose of this section is to protect the aesthetic, economic, recreational, and environmental resources of Larimer County with landscape standards that:

1. Enhance the quality and appearance of new development in public or private areas.
2. Mitigate negative visual impacts between existing and proposed uses.
3. Promote the efficient use of water in landscaping through application of Xeriscape™ water-wise design techniques to establish procedures for landscape design, installation, and maintenance.

4. Improve the environment by providing:
 - a. Shade to reduce the heat island effect generated by large, paved areas or structures;
 - b. Air purification;
 - c. Wildlife habitat;
 - d. Wildfire-safe designs;
 - e. Erosion and stormwater control;
 - f. Controls on noxious weed and invasive/destructive plants;
 - g. For the use of native, adaptive and drought tolerant plants; and
 - h. For the preservation of existing, non-invasive, trees and shrubs.

4.7.2 Applicability

Commentary

The applicability table in §4.2 makes the standards in this Section applicable to all character areas in the County. However, several standards have been tailored based on character area including the new Minimum Landscaped Area requirements. Footnotes indicate other sections that have the potential to be further tailored.

Still to be addressed and requiring further discussion is whether different levels of applicability should be applied to minor expansions and changes of use.

A. General Applicability

Except as otherwise provided in this section, the standards of this section shall apply to all development that meets the compliance thresholds established in §4.2., *Applicability*.

B. Exemptions

Properties containing only single-family detached, cabin dwellings, or duplex dwellings are exempt from all parts of this section except for the following:

1. §4.7.4.C, *Street Landscaping*
2. §4.8.1, *Buffering and Screening*; and
3. §4.8.2, *Fences and Walls*.

C. Landscape Plan Requirements

1. Landscape Plan

All landscape plans shall meet the requirements listed in the LUC Supplemental Materials.

2. Alternative Compliance

a. Landscape Narrative

The Director may determine that a landscape narrative can substitute for a landscape plan. The landscape narrative shall be approved by the County prior to installation of any landscape materials. The landscape narrative shall meet the requirements in the LUC Supplemental Materials.

b. Alternative Landscape Plan¹

The Director may approve alternative landscape plans that do not meet the specific requirements in this §4.7, when the applicant demonstrates and the Director determines that the alternatives meet all of the following criteria:

- i. Are consistent with the purposes of this §4.7;
- ii. Are consistent with the general landscape character and context of the site;
- iii. Do not include noxious, invasive, or prohibited vegetation as identified by Larimer County, the United States, or the State of Colorado;
- iv. Provide equal or superior buffering of adjacent properties from anticipated impacts of the proposed development; and
- v. Provide equal or superior visual appearance of the property when viewed from a public right-of-way.

4.7.3 General Landscaping Standards²

A. Plant Materials

1. Generally

All plant materials shall meet the American Association of Nurserymen specifications for Number 1 grade and comply with the quality standards of the Colorado Nursery Act, 1973 C.R.S. Title 35, Article 26, as amended.

2. Mulch

- a. Organic mulch is required below plants and shall extend a minimum of one foot from the drip line (outer edge of the plant) at time of install.
- b. Inorganic mulch, including rock, stone, and synthetic material, may be used between plant groups.
- c. Mulch depth shall not exceed four inches.
- d. Shrub and flower beds may be lined with a weed barrier mesh (or similar material designed for weed control) to prevent noxious weeds. Non-porous fabrics, such as black plastic, are prohibited.³
- e. Edging shall be placed with sufficient rise to keep mulch out of turf, walks, drives and drainage features. Metal edging shall be of the "rolled edge" type. Concrete, wood, or similar material without sharp edges may also be used.

3. Turf Areas

- a. Turf areas shall be a drought-tolerant and/or adaptive sod or seed mix that is appropriate to the natural conditions found at the site.⁴
- b. Turf areas classified as medium or high water use in the Larimer County Plant List shall be limited to high use or high visibility areas.⁵

¹ New standards to allow Director approval of a landscape plan that allows for the modification of certain landscaping materials based on the established criteria.

² Previously Section 4.7.4.

³ New prohibition of black plastic under mulch to encourage water-efficiency.

⁴ "Descriptive information regarding the composition of a sod or seed mix shall be listed in the plant schedule and shown on the landscape plan" deleted and relocated to the LUC Supplemental Materials.

⁵ New limitation to encourage water conservation based on Windsor requirements.

4. Artificial Plant Materials⁶

Artificial trees, shrubs, plants, and turf are prohibited unless approved by the Director.

5. Soil Amendments⁷

Soil amendments such as compost, peat, or aged manure, that are appropriate for the intended plant materials, design of the site, and soil conditions shall be selected and installed. The minimum soil amendment requirements per 1,000 square feet of landscape area are as follows:

- a. High-water plantings (as indicated in the Larimer County Plant List) : three cubic yards
- b. Shrubs, perennials, and low to medium-water plantings (as indicated in the Larimer County Plant List): 2 cubic yards
- c. Xeric and very low-water plantings (as indicated in the Larimer County Plant List: 1 cubic yard or comparable treatment
- d. Dryland and native grassland re-establishment areas: no required treatment.

B. Location and Arrangement

- 1. Landscape areas shall be arranged to maximize their inter-connectivity with other landscaping on the site, to landscaping on adjacent sites and to natural areas. Plants shall not be spread thinly around the site in small, isolated pockets of landscaping.
- 2. Landscape elements including turf, plants, mulch, boulders, and other materials shall be arranged to provide appropriate spacing to avoid a disproportionate and excessive use of mulch.⁸
- 3. Plants with similar water use shall be grouped together to the maximum extent practicable.⁹
- 4. Low water use plants are preferred in all locations, but are required in areas where permanent irrigation is not feasible.¹⁰
- 5. Plants that exceed six inches in mature height shall not be planted within three feet of fire hydrants.

C. Minimum Plant Specifications

1. Common Areas and Nonresidential Development Landscaping¹¹

- a. Plants used in common areas or in landscaped areas provided for all nonresidential development shall meet the following size standards:

⁶ New standard to encourage water-efficient landscaping design.

⁷ New standard to encourage water conservation based on Windsor and Loveland regulations. Reference new definition.

⁸ New standard to encourage water-efficient landscaping design.

⁹ New standard to encourage water-efficient landscaping design.

¹⁰ New standard to encourage water conservation.

¹¹ Deleted reference to "Open Space" to avoid confusion with publicly owned natural areas/open space. Reference new definition of "common areas."

Table 4-x¹²: Minimum Plant Size for Common Areas and Nonresidential Development

Landscaping Type	Minimum Size
Large or shade trees	2-inch caliper
Small/ornamental trees	1½-inch caliper
Evergreen trees	6 feet
Shrubs	5-gallon container
Vines, ground covers	1-gallon container or trays

- b. Plants used in common areas or in landscaped areas provided for all nonresidential development in the Urban character area shall provide plants exceeding the minimum size requirements in the following amounts:¹³

Table 4-x: Landscaping Exceeding Minimum Requirements Required in Urban Character Area

Landscaping Type	Minimum Size	Percent of Total Landscaping Provided
Large or shade trees	3-inch caliper	10%
Small/ornamental trees	2½-inch caliper	10%
Evergreen trees	8 feet	10%

2. Residential Street Landscaping

Plants required along residential streets or roads shall meet the following size standards:

Table 4-x: Minimum Residential Street Planting Size

Landscaping Type	Minimum Size
Large or shade trees	2-inch caliper
Small/ornamental trees	1 ½ -inch caliper
Evergreen trees	6 feet (height)
Shrubs	5-gallon
Vines, ground covers	1-gallon or trays

¹² Table numbers to be determined when integrated into the Phase 2 LUC Adoption Draft.

¹³ Current requirements for 10% of total landscaping to exceed minimum requirements removed from all areas outside of the Urban character area to better align with municipality standards and support contextual landscaping standards.

D. Plant Selection

1. Species Mix Standards¹⁴

Landscape plans shall follow the below species mix requirements to reduce disease susceptibility and the potential demise of a large portion of trees. The maximum percentage of any single species is based on the number of trees proposed. Related varieties or cultivars may substitute as long as they are not susceptible to the same diseases.

Table 4-x: Maximum Percentage of Any Species

Number of Trees Proposed	Maximum %
1-9	-
10-19	50
20-39	33
40-59	25
60 or more	15

2. Plant Variety

- a. Landscaping plans shall use native, adaptive and drought tolerant plant varieties as identified in the Larimer County Plant List.¹⁵
- b. Plant varieties shall be selected based on the natural conditions at the site and grouped together based on water, sun, and other similar needs for viability. Invasive, destructive, and exotic plants shall not be used.
- c. In the Urban character area and within the GMAs, trees and shrubs classified as high water use shall not exceed 50 percent of the total required landscaping.¹⁶

E. Lighting

Any exterior lighting used in landscape plans shall comply with §4.10, *Exterior Lighting*.

F. Sight Triangles

The County Engineer will determine sight triangle locations and shall be shown on landscape plans provided for County review and approval. No plant materials, structures, or signs higher than 30 inches above the top of the curb shall be located within the designated sight triangles.

G. Utility Easement Landscaping

- 1. Landscaping in utility easements shall be designed to comply with the utility company requirements. Other required landscaping necessary to meet the requirements of this Code shall be located outside of utility easements.

¹⁴ Revised to increase flexibility and better align with standards in the municipalities.

¹⁵ Deleted reference to the USDA hardiness zones.

¹⁶ New limitation on high water use plants to encourage water conservation based on City of Loveland standards.

2. Trees shall not be planted within four feet of any underground natural gas line or electric utility line or within 10 feet of any water or sewer line.¹⁷ Where utility lines are present, trees shall be located outside of the utility easements.¹⁸

H. Water Features

Water features such as fountains, waterfalls and ponds shall comply with the following standards:

1. The water used shall be recycled through the feature;
2. The feature shall be designed to prevent leakage;
3. Permanent provisions for maintenance of the feature shall be explained in a narrative that accompanies the landscape plan;
4. Evidence of the right to use the water for this purpose is required when the water will be obtained from an irrigation ditch or a well.

I. Wildfire Prevention

Wildfire prevention requirements apply to all new development located in designated wildfire hazard areas. Prevention requirements are based on the "Wildfire Hazard Mitigation Requirements for New Construction" found in the International Building Code (as adopted or amended) on file with the Larimer County Building Department. Sites in designated wildfire hazard areas shall include defensible spaces in the design and use plant varieties appropriate for wildfire mitigation. Fire-prone vegetation included in a landscape plan shall be limited to the maximum extent practicable.

4.7.4 Minimum Landscaping Required

A. Site Area Landscaping

1. General

- a. Any part of a site not used for buildings, parking, driveways, walkways, utilities, or approved storage areas shall be retained in a natural state, reclaimed to its natural state, or landscaped pursuant to the standards in this section.
- b. Plants, walls, fences, buffering and screening, etc., located on adjacent properties do not satisfy landscape requirements for proposed development. All required landscaping shall be located on the property it serves.

2. Minimum Landscaped Area in Urban Character Area¹⁹

For all multifamily residential, commercial, or mixed-use development in the Urban character area, a minimum percentage of site area is required to be landscaped as established for the zoning districts listed in **Table 4-x**. All required screening, parking perimeter, building perimeter, and interior parking landscaping shall count toward this minimum landscaped area requirement.

¹⁷ New standard for planting distance from water and sewer lines.

¹⁸ Current prohibition in parking lot landscaping standards broadly applied.

¹⁹ New minimum landscaped area requirements to better align with municipalities. Windsor requires a certain percentage (ranging from 15-20) of landscaping based on size of property and Berthoud requires 15% for high-density residential, commercial, and mixed-use development.

Table 4-x: Minimum Landscaped Area

District	Minimum Landscaped Area (Percent of Total Site Area)
UR-1 Urban Residential	25
UR-2 Urban Residential	
UR-3 Urban Residential	
MR Multifamily Residential	15
MHP Manufactured Housing Park	
MU-N Mixed Use Neighborhood	
MU-C Mixed Use Commercial	
CC Commercial Corridor	
CN Commercial Neighborhood	10
CD Commercial Destination	
IL Industrial Light	
IH Industrial Heavy	10
AP Airport	

B. Parking Lot Landscaping

1. Purpose

The purpose of this section is to reduce the heat island effect produced by large expanses of pavement. Parking lot landscaping provides shade for vehicles and pedestrians and can buffer or screen views of parking lots from adjacent public areas, streets, and development. It also adds an aesthetic element to nonresidential areas and enhances the overall appearance of the site.

2. Where Required²⁰

All uses that require special review, administrative special review, and site plan review, excluding uses in the Conservation and Agriculture and Rural character areas, shall provide parking lot landscaping in compliance with this section.

3. Standards

a. Parking Lot Perimeter

- i. At least 70 percent of the length of all sides of a parking lot containing six or more spaces²¹ shall be buffered or screened according to §4.8.1.C.2.b, *Constructed Landscape Buffer*. The Director may determine that the arrangement of existing structures, uses, or other factors make this amount of landscaping impractical or unnecessary.
- ii. Parking areas on side or rear lot lines shall contain at least one shade or ornamental tree for every 40 lineal feet of parking area along the lot line, within three to 10 feet of sidewalks. Trees shall be at least 25 feet from street

²⁰ New exemption tailored by character area.

²¹ New threshold based on Estes Valley and Fort Collins land use codes.

intersections; at least 10 feet from fire hydrant access points, and at least 40 feet from streetlights.²²

- iii. Trees shall be arranged to allow for the maximum possible shading of parking areas.

b. Parking Lot Interior Design

- i. Parking lots with more than 100 spaces shall be designed to provide areas for pedestrian staging and snow storage.
- ii. Landscape areas in parking lots with a gravel or other permeable surface, may omit the raised bed requirement of Paragraph 4.7.3.B.3.c.iii.4) below with County approval. Landscape areas shall have clearly defined edges and designed in such a way to contain mulch within the landscape bed.
- iii. Landscape areas in parking lots without raised beds shall use wheel-stops to define the end of the parking area.
- iv. Plantings shall not interfere with driver vision or with vehicle and pedestrian circulation.
- v. The maximum impervious area in parking lots shall not exceed 15 percent of the total site area.²³

c. Landscape Islands

i. Number of Parking Lot Landscape Islands Required²⁴

Parking lots with more than 15 parking spaces shall provide a landscape island after every fifteenth contiguous parking space.

ii. Size and Location Requirements

- 1) Landscaped islands shall define parking lot entrances, the ends of all parking aisles and pedestrian staging areas to the maximum extent possible.
- 2) Landscape islands shall be at least nine feet by 19 feet in size. Landscape islands on the perimeter of pedestrian staging areas shall be a minimum of four feet in width per side.
- 3) Landscape islands in areas not visible from public roads, sidewalks or open space may be reduced in size to a minimum of 25 square feet.

iii. Planting Requirements

- 1) Landscape islands shall have a minimum of one shade tree and two shrubs. If the landscape island extends the width of a double parking row, two shade trees are required. Shrubs are not required for landscape islands that are 25 square feet in size.²⁵
- 2) Organic mulch shall be used around plants per §4.7.4.A.2.
- 3) Ground covers, boulders and other decorative features may be used as optional decorative elements.

²² Current prohibition on trees in utility easements in parking lot perimeters moved to general landscaping standards and broadly applied. Reference 4.7.3.G.

²³ New limitation on impervious surface area to support water conservation and quality as recommended by staff.

²⁴ Increased 10-15 to align with municipality standards and deleted Director authority to increase this standard

²⁵ New standard to encourage additional shading in large landscape islands.

- 4) Landscape islands shall be contained within raised beds to minimize vehicle contact with planting areas. Where mulch is used in the islands, the interior level of the island shall be constructed lower than the required curb to retain mulch and water.
- 5) Landscape islands shall include an automated sprinkler system and be contained within raised beds to minimize vehicles from entering planting areas. Where mulch is used in the islands, the interior level of the island shall be constructed lower than the required curb to retain mulch and water.
- 6) Rain gardens, bio-swales, drainage easements, and drainage inlets are permitted within parking lot islands.²⁶
- 7) Where appropriate and approved by the County Engineer, the use of permeable pavement and/or specially designed brick or block should be considered to increase on-site water retention for plant material, replenishment of groundwater supplies and to reduce problems associated with runoff.²⁷

C. Building Perimeter Landscaping

1. Purpose

The purpose of this section is to visually connect structures to the landscape using trees, shrubs, and groundcover. Building perimeter landscaping enhances the overall appearance of the development and integrates the site with adjacent land uses and/or the surrounding neighborhoods.

2. Where Required²⁸

All commercial, industrial, and multifamily residential uses, excluding those in the Conservation and Agriculture and Rural character areas that are not adjacent to a residential use, that require administrative special review, special review, and site plan review shall provide building perimeter landscaping per this section for structures included in the plan.

3. Standards²⁹

a. Planting Requirements

- i. At least 50 percent of the length of any facade visible from public streets, roads, sidewalks, and open space areas shall have perimeter landscaping.
- ii. Plant beds shall be at least five feet wide, with the actual size determined by the quantity and choice of plant materials.
- iii. At least one tree and eight shrubs are required for every 500 square feet of lineal building perimeter.
- iv. Trees shall be placed a minimum of ½ the diameter of the mature canopy from the structure.

²⁶ New allowance to encourage low-impact design practices as recommended by staff.

²⁷ New allowance to encourage low-impact design practices as recommended by staff.

²⁸ New applicability tailored by character area.

²⁹ Deleted standards for landscape islands because they are addressed in the requirements for parking lot interiors.

b. Sidewalks

- c. Sidewalks may be placed between the structure and the parking area landscaping. Cut-through areas are required to accommodate pedestrian movement.

4. Exposed Foundations

Exposed foundations not screened by landscaping shall be finished with a decorative veneer or use some other method to hide the exposed foundation.

D. Street Landscaping

1. Purpose

The purpose of this section is to add an attractive element to a site that complements the overall neighborhood character. Street trees, shrubs, ornamental grasses, ground covers and flowers can enhance the pedestrian experience, provide an element of safety by separating pedestrians and vehicular traffic, reduce the heat island effect of pavement on surrounding structures and help to establish a neighborhood identity.

2. Where Required

The following types of uses shall provide street landscaping for all areas that adjoin public streets, roads, or sidewalks:

- a. All nonresidential development, except those uses subject to the standards in §4.7.4.E, *Outdoor Display and Sales Lots*.
- b. All single- and multifamily residential development in the Urban districts and GMAs.
- c. All facilities that require site plan review, except §4.7.4.E, *Outdoor Display and Sales Lots*.

3. Standards

a. Plant Beds

Landscape areas along public streets or roads shall be at least five feet wide and run the length of the street or road between access points.

b. Shade Trees

i. Conservation and Agriculture, Rural, and Mixed Center Districts

- 1) Shade tree plantings are required where the site includes a sidewalk, trail, or parking area adjacent to the public street or road.
- 2) Shade trees may be planted in a lineal fashion or in groups depending on the context of the site and the existing pattern of development.
- 3) The required number of trees is one tree for every 40 feet of street frontage adjacent to the sidewalk, trail, or parking area.

ii. Urban Districts and GMAs

- 1) One shade tree is required for every 40 feet of street frontage.
- 2) Trees shall be planted at an average spacing of 20 to 40 feet on center and within three to ten feet of sidewalks.
- 3) Trees shall be at least:

- (a) 25 feet from street intersections;
 - (b) 10 feet from fire hydrant access points; and
 - (c) 40 feet from streetlights.
- 4) Where utility lines are present, trees shall be located outside of the utility easements.

c. Sidewalks and Tree Grates

- i. Cutouts for tree plantings in sidewalks shall include tree grates to provide for pedestrian safety and adequate water penetration.
- ii. Grates can vary in shape and size but shall cover at least 25 square feet and may be constructed of decorative iron, structural plastic, or other sustainable materials.
- iii. Tree grates shall be set flush with the sidewalk and maintained at even levels and replaced when damaged or when necessary to accommodate trunk growth.
- iv. Trees shall be set so that the root flare remains exposed below the grate to provide proper air circulation for the health of the tree.

d. Understory Landscaping³⁰

- i. Street landscaping shall include groups of understory plantings, groundcovers, rock features, sculptures, etc., or a combination of these elements. Understory landscape plants shall:
 - 1) Reach a minimum height of three feet at maturity, measured from the ground plain adjacent to the landscaped area.
 - 2) Cover a minimum of 40 percent of the street frontage and may be divided into groups or run in a linear fashion.
- ii. 75 percent of understory landscaping shall be covered with living ground cover. Non-living materials such as rock, gravel, and bark shall be used sparingly.³¹

e. Right-of-Way Landscaping

i. Conservation and Agriculture, Rural, and Mixed Center Districts

Only native or adaptive ornamental grasses and/or wildflowers shall be planted in the right-of-way. Trees, shrubs and irrigation systems and other elements shall be located outside of the right-of-way, unless approved by the County Engineer.

ii. Urban Districts and GMAs

Trees, shrubs, and other plant materials identified in the Larimer County Plant list are permitted in the right-of-way.

E. Outdoor Display and Sales Lots

1. Purpose

Display and sales lot landscaping is intended to enhance the overall appearance of the site and integrate the development with adjacent land uses and the surrounding neighborhood.

³⁰ Deleted special applicability requirements to align with the rest of the standards in this section.

³¹ New standard to encourage water-efficient landscaping.

2. Where Required

All display and sales lot uses including agricultural equipment sales, outdoor display and sales, and vehicle sales and leasing, that require administrative special review or site plan review shall provide parking lot landscaping per this section.

3. Standards

a. Parking Areas

Parking areas for customers and employees shall include landscape islands per §4.7.4.B.3.c.

b. Display Pads

- i. Vehicles and/or merchandise exhibited at the perimeter of the sales lot shall be located on a paved display pad.
- ii. Display pads may be located between required street landscape areas and shall not be larger than 400 square feet in size.
- iii. Manufactured homes cannot be displayed on pads.

c. Landscape Islands

Display and sales lots where agricultural equipment, vehicles or manufactured homes are parked for sales purposes are not required to provide landscape islands unless otherwise determined by the County Commissioners.

d. Maintenance, Service and Trash Areas

Areas used for maintenance, the parking of vehicles before or after service, or waste storage and removal shall meet the standards set forth in §4.8.1, *Buffering and Screening*.

e. Planting Beds

Landscape areas between outdoor display and sales lots and streets shall be at least five feet wide and run the length of the street with provisions made for access points.

f. Security Fencing

Chain link or similar security style fencing may be used to secure the sales lot only on sides adjacent to property not zoned or used for residential purposes, and in areas not adjacent to public roads, sidewalks, or public/private open space areas.

g. Street Landscaping

- i. Landscaping adjacent to public streets or roads shall include one shade tree for every 60 feet of street frontage.
- ii. Trees shall be planted at an average spacing of 40 to 60 feet on center, within three to ten feet of existing and proposed sidewalks/roads.
- iii. Trees shall be at least:
 - 1) 25 feet from intersections;
 - 2) 10 feet from fire hydrant access points; and
 - 3) 40 feet from streetlights.
- iv. Where utility lines are present, trees shall be located outside of the utility easements.

h. Understory Landscaping

- i. Outdoor display and sales lot landscape plans shall include understory plantings for at least 50 percent of the area adjacent to public street or road.
- ii. 80 percent of these plants shall be of varieties that reach a mature height of at least three feet.
- iii. 75 percent of understory landscaping shall be covered with living ground cover. Non-living materials such as rock, gravel, and bark shall be used sparingly.³²

4.7.5 Installation and Maintenance

A. Landscape Installation

1. Generally

- a. Plants shall be professionally installed in compliance with planting details and notes shown on the approved landscape plan.
- b. Plants shall be installed where shown on the approved landscape plan. Plants shall be installed to allow for maximum growth in height and shape without the need for excessive pruning to maintain the health of the plant.

2. Nonresidential Landscaping

Nonresidential landscaping shall be installed before the issuance of any certificate of occupancy. A temporary certificate of occupancy may be issued.

3. Residential Landscaping

Residential landscaping shall be installed no later than three months following the issuance of the certificate of occupancy for each lot in front of which the landscaping is required. If seasonal conditions prohibit plant installation, it shall be done no later than June 15 of the following year.

4. Common Area and Entry Feature Landscaping³³

Installation of common areas and entry feature landscaping shall occur at the start of the warranty period, or, if seasonal conditions prohibit planting, installation shall occur no later than May 31 of the following year.

5. Major Design Changes

Major changes require staff review and approval of a revised landscape plan prior to installation. Major changes include the following:

- a. The removal, relocation, or reduction in size of planted beds;
- b. The replacement of approved plant selections that do not provide the same effect as the original in species and form; or
- c. The removal, relocation, and replacement of hardscape elements.

³² New standard to encourage water-efficient landscaping.

³³ Replaced reference to “open space” to “common areas” to avoid confusion with publicly owned natural areas/open spaces. Reference new definition of “common areas.”

6. Minor Design Changes

Minor changes do not require submittal of a new plan, but a written description of all minor changes shall be provided for staff approval prior to installation. Minor changes include the following:

- a. Small adjustments to the dimensions of planted beds with less than a ten percent reduction in size;
- b. Replacing plant species with selections from the same genus that provides a similar form and effect as the initial selection;
- c. Adjustments to the placement of hardscape elements including sidewalk or trail layouts;
- d. The placement of other elements such as gazebos, play sets, etc.

7. Collateral

Developer shall provide funding in the amount of 125 percent of the purchase and installation cost of landscaping, to include all elements needed for its installation and care, as shown on the approved landscape plan and described in an opinion of costs. For residential development, the homeowner's association shall retain control of the remaining funds following the two-year warranty.

B. Landscape Irrigation³⁴

- 1. Automated irrigation systems are required for all areas where public water is available and shall meet the following standards:
 - a. A certified irrigation designer (CID) shall design the system.
 - b. Irrigation methods shall use a combination of pop-up, drip, spray, or bubbler delivery as appropriate. Drip irrigation or bubblers shall be used for non turf areas and pop-up and spray methods shall be used for turf.
 - c. Turf areas shall have low-volume and low angle emitters.
 - d. Timing mechanisms shall be set to prevent activation between the hours of 9:00 a.m. and 7:00 p.m. and include a rain detection/shut-off device.
 - e. System flow rates for individual zones shall be set to provide the appropriate amount of irrigation for the specific plant varieties used in each zone.
- 2. Where a permanent, suitable supply of public water is unavailable, the use of non-treated water for irrigation is encouraged.

C. Maintenance

1. Generally

- a. All elements that are unique to and part of the approved landscape plan shall be properly and continuously maintained, for as long as the use is in effect that required the landscaping.
- b. All plant materials shall be kept in a healthy condition.

2. Plant Removal and Replacement

- a. Dead plants shall be replaced as necessary.

³⁴ New standards added to encourage water conservation.

- b. Diseased or insect/parasite-infested plants that cannot be effectively treated shall be replaced during the current growing season or at the start of the next growing season. The Director may grant an extension and/or require adequate financial assurance from the applicant to ensure replacement.
- c. Dead or dying landscape plants shall be replaced within the next planting season, not to exceed one calendar year. Trees that are diseased, damaged, or considered invasive/nuisance species shall be replaced with a new tree recommended in the Larimer County Plant List by the end of the following planting season.³⁵

3. Fences and Walls

All fences shall be constructed in a professional manner and properly maintained.

4. Restoration Standards³⁶

Commentary

This section includes new standards as drafted by the Larimer County Natural Resources Department. Further discussion regarding the restoration plan review process, application fees, inspections, and project management for these standards is necessary.

a. Applicability

- i. This section shall apply to any development that will disturb one or more acres of ground.
- ii. An applicant for a development with less than one acre of ground disturbance shall submit an equipment decontamination plan/weed prevention plan and is responsible for the management of any List A or B noxious weeds.

b. Desirable Condition

- i. Desirable post-disturbance conditions are determined by considering pre-disturbance conditions or appropriate reference site conditions, habitat connectivity, a cost/benefit analysis, and conservation outcomes that align with the landowner's desires.
- ii. At a minimum, the site will be restored to function at the same level as the pre-disturbance site or appropriate reference site.

c. Planning

- i. Construction projects shall be planned and designed to include site protection and restoration specifications and ensure that these costs are included in the project scope and budget.
- ii. The applicant shall submit a restoration plan that includes restoration goals, measurable objectives, restoration prescription and a cost estimate to be included in the land use application.

³⁵ New requirement to replace diseased, damaged, or invasive tree species to better align with the practice of the municipalities.

³⁶ New content from Natural Resources Department. Further discussion regarding the review process for applications, fees, and project management for these standards is necessary.

d. Acceptable Materials

- i.** Noxious weed-free plant materials shall be used exclusively at all sites. To the maximum extent practicable, plant grasses, forbs and shrubs that are native to the site or Larimer County.
- ii.** Seed tags and plant lists shall be approved by Larimer County staff and the landowner(s) prior to plant materials being sown or planted. Seed and plant substitutions shall receive written approval by Larimer County staff and the landowner(s).
- iii.** To the maximum extent practicable, erosion control materials shall be fully biodegradable (not photodegradable) and made of the highest quality materials.
- iv.** Straw used for erosion control shall be certified weed free.
- v.** In the foothills and higher elevations, use of wood-based or Excelsior erosion control products to mitigate for weed seeds is recommended.
- vi.** Hydromulch shall be biodegradable, rated for the grades they are applied to, and have a functional longevity of at least 6 months. Hydroseeding is not recommended.
- vii.** Straw crimping shall only be applied on flat surfaces and not slopes.

e. Soils

- i.** Topsoil shall be salvaged and stockpiled appropriately.
- ii.** Project plans will designate the depth of soil that shall be salvaged and the stockpile location, preferably protected by prevailing wind conditions.
- iii.** Soil testing is recommended prior to seeding to determine if any amendments are necessary.
- iv.** Soil compaction shall be ripped to a minimum depth of 12 inches and seed bed prepared to specification.
- v.** Importing topsoil shall be limited to sites where there is no other alternative appropriate and shall not be imported without the written approval of landowner(s). Where importing topsoil is the only appropriate alternative, measures to monitor and manage invasive/noxious weeds shall be required to be stipulated in the applicants' restoration plan or submitted as an addendum.

f. Planting

- i.** Seed mix shall be applied at the specified rate either with a native seed drill or broadcasted. If broadcasted, seed shall be manually incorporated into the top 0.25 inches to 0.5 inches of soil.
- ii.** All plant material shall be inspected and approved by Larimer County Department of Natural Resources staff and the landowner(s) prior to installation.
- iii.** Trees in balls and burlap shall be two inches in caliper. Balled and burlap trees shall be planted, maintained, watered, and protected in a manner consistent with the International Society of Arborist standards.
- iv.** Where feasible, plantings shall be hand watered rather than the installation of irrigation systems. If an irrigation system is necessary, the system shall be inspected monthly to check for leaks and ensure the correct amount of water is dispensed.

Article 4.0: Development Standards

4.7 Landscaping | 4.7.5 Installation and Maintenance

- v. If rare or endangered plant species or communities are found at the site, a setback buffer will be required. The distance of the setback shall be based on regulations, Larimer County staff direction and best available science.
- g. Erosion and sediment control measures shall be installed in accordance with the project's State Construction Stormwater permit, MS4 Permit and any other applicable permits and mitigation plans.
- h. Inspections shall occur by Larimer County staff throughout restoration implementation for quality assurance purposes. Inspections examine the following elements:
 - i. Equipment has been properly decontaminated and cleaned of mud and plant materials before entering the site. This includes but is not limited to tracks, tires, undercarriage, seed drills and hydro mulchers.
 - ii. Seed tags stating rates, variety, and scientific names. Tags shall remain on the seed bags until approved by an inspector.
 - iii. Proper mulch and straw materials.
 - iv. Proper pollution prevention and erosion and sediment control installations and materials.
 - v. Proper plant installation and materials.
 - vi. Proper seed bed preparation where the surface is firm, but not compacted.
 - vii. Compliance with wildlife and resource protection standards required by Larimer County in application approval.
 - viii. Compliance with MS4, State Construction Stormwater and any other applicable permits.
- i. Monitoring shall occur at specified intervals to determine if the project has met the objectives as defined in the construction plan set.
- j. Adaptive management shall be based on monitoring data until all restoration objectives have been met. If an objective is unobtainable due to unforeseen circumstances, it can be modified based on the professional judgement of Larimer County staff.
- k. Topsoil shall be salvaged and reapplied following construction prior to revegetation activities according to the following standards:
 - i. For areas with native vegetation, strip topsoil in all areas of excavation to a minimum of four inches and stockpile separately.
 - ii. Wetland and upland soils shall be stockpiled separately from each other.
 - iii. Stockpile height shall not exceed two feet unless the topsoil pile is intended to be inoculated before reapplying on site.
- l. Damage Penalties**
 - i. Staff shall document resource protection measures as well as resource condition prior to construction.
 - ii. If staff finds that the resource protection measures were not taken or adhered to, and resources were damaged during construction, a penalty may be assessed commensurate with restoration or mitigation costs. A damages provision within the contract shall be written for this purpose.

4.7.6 Tree Preservation and Protection

A. Generally

1. No cut or fill over four inches is allowed below the perimeter drip line of any protected tree, without evaluation by a qualified arborist or forester, and subsequent approval by the County in writing prior to digging.
2. No damaging attachments, wires, signs, or permits may be fastened to any protected tree at any time.

B. Tree Protection During Construction³⁷

1. Contractors shall not stockpile any construction materials or debris below the perimeter drip line of trees. This area shall be clearly designated on-site with temporary fencing or other similar material at least four feet in height. Large areas containing protected trees may be “ribboned off”, rather than surrounding each tree with protective fencing.
2. Contractors shall not clean equipment below the perimeter drip line of any trees or store or dispose of any harmful cleaning materials such as paints, oils, solvents, asphalt, or concrete, in these areas.
3. Desirable trees and snags to be left on site after construction shall be protected from heavy equipment.
4. Trees shall be wrapped with construction blankets and flagged if root zone is within the limits of disturbance.
5. Any additional required tree protections including signage and fencing will be specified by the Larimer County Department of Natural Resources staff.

C. Utility Line, Irrigation Line, and Underground Fixture Installation

The installation of utilities, irrigation lines or underground fixtures requiring excavation deeper than six inches shall be accomplished by boring under the root system of protected trees at a minimum depth of 24 inches. The auger distance is scaled from the tree's diameter, measured at six inches above ground level and based on the following schedule:

Table 4-x: Required Auger Distance	
Tree Diameter (inches)	Auger Distance (feet)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
Over 19	15

D. Tree Removal³⁸

1. To the maximum extent practicable, large, healthy trees shall be retained.

³⁷ Paragraph 3 is new content from the Natural Resources Department.

³⁸ New content from Natural Resources Department.

2. Prior to removing any trees, the tree shall be monitored for nesting birds and mitigated as necessary.
3. All trees shall be cut as low to the ground as possible unless specified otherwise.
4. An appropriate herbicide shall be applied to the living plant tissue on the stump surface within five minutes of the final cut to all deciduous tree removals to prevent resprout.

4.7.7 Irrigation Facilities

Irrigation facilities shall meet the standards set forth in the LUC Supplemental Materials.

4.8 Adjacency and Buffering Standards

4.8.1 Buffering and Screening

A. Purpose³⁹

The purpose of this section is to enhance the visual relationships between uses and structures and mitigate undesirable impacts including, but not limited to noise, dust, odor, spraying, or glare from proposed development on existing or allowed uses.

B. Credits Toward Required Landscaping

Any landscaping provided to meet buffering and screening standards shall be credited towards the overall landscaping requirements set forth in §4.7, *Landscaping*.

Commentary

This subsection has been updated to apply the three buffer types established in Phase 1 for the residential/agriculture buffer to a wider range of development scenarios. Specific requirements within the buffer types have been modified or expanded, but the original intent of the residential/agricultural buffer is carried forward. In each situation, the applicant for a development proposal is responsible for providing the buffer.

1. Applicability⁴⁰

- a. A buffer shall be provided in the following situations:
 - i. Between all new residential structures and lots that do not qualify as agricultural housing and that are located within or adjacent to an agricultural or conservation zoning district or use.
 - ii. Between all new nonresidential structures adjacent to an existing residential use or a lot with residential zoning.
 - iii. When proposed mineral extraction operations will be visible from public roads, or other uses of a less intense zoning classification. All landscaping shall be installed during the initial extraction phase, unless the County Commissioners approves an alternate proposal. Stockpiles may be used as a buffer and shall be seeded with drought tolerant grasses to prevent erosion and provide for dust control.
 - iv. When a new residential development will have double frontage lots with one side against an arterial road.

³⁹ Purpose statement broadened to apply to all buffer types and the current text specific to “other impacts associated with farming and ranching” and the protection of “the agricultural operator from nuisance complaints” has been deleted.

⁴⁰ New and simplified scenarios that require buffers. Further discussion is necessary to determine if there are certain situations in this list where only the constructed landscape buffer is appropriate.

- v. Between any drive-through facility and adjacent residential property.⁴¹
 - vi. When the Director determines the proposed arrangement of uses, the design of buildings or other characteristics of development do not adequately mitigate visual compatibility issues, or negative impacts, that are reasonably anticipated to arise.
- b. Where required, the buffer shall be placed and maintained on the lot proposed for development.
 - c. Only one buffer type is required unless a combination is used to meet the standards in §4.8.1.3.c, *Setback Buffer*.

2. Alternative Buffers⁴²

The Director may approve alternative buffer widths or setback distances through the Alternative Landscape Plan process as set forth in §4.7.2.C.2.b.

3. Buffer Types⁴³

a. Adequate Existing Buffer⁴⁴

Existing physical features, such as topography, water bodies, trees, hedgerows, plants, rock features, landforms, or similar vegetation, may be utilized to serve as the buffer. Such buffer shall be at least:

- i. 50 feet wide between new residential structures (excluding agricultural housing) and a Conservation and Agriculture zoning district or agricultural use.
- ii. 25 feet wide between new industrial uses and an existing residential use.
- iii. 15 feet wide for all other applicable situations.

b. Constructed Landscape Buffer

- i. A new physical barrier may be constructed to serve as the buffer. Constructed buffers shall:
 - 1) Provide a year-round, semi-opaque or opaque separation between uses for the length of the buffer area;⁴⁵
 - 2) Be at least:
 - (a) 50 feet wide between new residential and a Conservation and Agriculture zoning district or use.
 - (b) 25 feet wide between new industrial uses and an existing residential use.
 - (c) 15 feet wide for all other applicable situations.
 - 3) Incorporate a vegetative screening component (trees, shrubs, or berms) and may incorporate a solid, architectural, landscaped wall or fence; and

⁴¹ New requirement to mitigate impacts of sound, headlight glare, exhaust fumes, etc.

⁴² New requirement to allow for variation from the standards if applicant can demonstrate they are providing an adequate buffer.

⁴³ The dimensional requirements in the three buffer types were drafted specifically for residential uses adjacent to agriculture uses. They would be prohibitively large in most of the other development scenarios therefore an expanded list is provided and requires further discussion.

⁴⁴ Added plants, rock features, and landforms to examples of physical features from Phase 1 Section 4.8.1.C.2.a.

⁴⁵ New. Carries forward Phase 1 Section 4.8.1.C.2.b.

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4.8 Adjacency and Buffering Standards | 4.8.1 Buffering and Screening

- 4) Be described on a landscape plan prepared by a professional landscape architect or landscape designer.
 - ii. Any fences or walls used to achieve an opaque separation shall meet the requirements in §§4.8.2.C.4. and 4.8.2.D.⁴⁶
 - iii. At least 60 percent of the plants provided for buffering or screening along fences or walls shall be on the side facing the public right-of-way, open space, residential area, or other uses being buffered or screened.⁴⁷
- c. Setback Buffer⁴⁸**
- i. An enhanced setback buffer shall provide the following minimum separation between the proposed structure and adjacent use’s property line(s).

Table 4-x: Enhanced Setback Buffer Minimum Separation Requirements			
Proposed Structure	Adjacent Use	Minimum Setback (ft.)	Minimum Reduced Setback (ft.)
Residential	Agricultural	200	50
Industrial	Residential	100	25
Commercial	Residential	80	20
Any other combination of uses		60	15

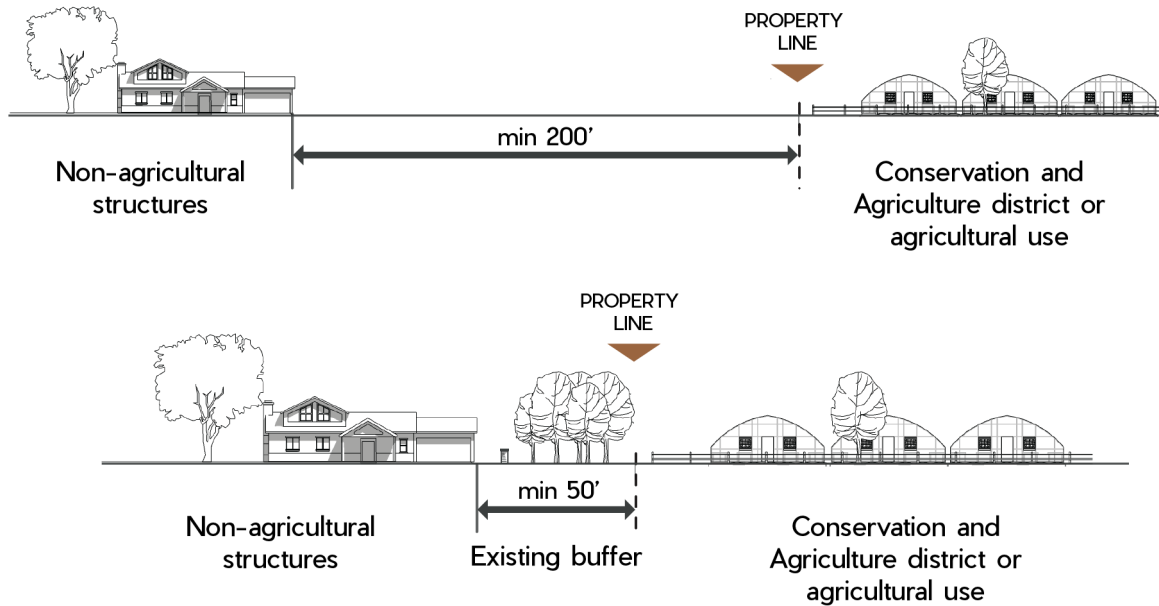
- ii. The setback buffer may be reduced to the distance from the property line listed in Table 4-x, above, by considering the following:
 - 1) The nature of the proposed use and the potential for conflict between the proposed use and the existing adjacent use due to potential impacts such as noise, dust, odor, chemical drift, and fire/smoke; and
 - 2) Whether an adequate existing buffer or a constructed buffer, as described above, or a combination of the two, will be provided that will achieve the buffer benefits described above.

⁴⁶ New reference to wildlife fencing requirements to ensure buffers do not effectively prohibit wildlife movement.

⁴⁷ Relocated from Phase 1 Section 4.8.2.C.1.d.

⁴⁸ New enhanced setback allowances for additional buffer scenarios. Further discussion regarding the minimum separation requirements and particular scenarios (proposed and adjacent uses) is required.

Figure 4-1: Enhanced Setback Buffer for Residential/Agriculture Development



C. Screening

In addition to the standards in this section, fences and walls used for screening shall meet the requirements in §4.13.2, Fences and Walls.

1. Refuse Areas

All refuse and refuse containers shall be screened from all public rights-of-way.

a. Enclosures Required

Refuse containers shall be located within an enclosure.

b. Location

Refuse container enclosures shall be located at the rear of the property to the extent practicable and shall be sited to allow for easy vehicular access such that access does not require backing movements onto public rights-of-way, with the exception of alleys.

c. Design and Materials

Refuse container enclosures shall be of sufficient height to screen containers but shall not exceed eight feet in height unless screening a refuse container taller than eight feet. Such enclosures shall be visually compatible with materials used on the primary building. In no case shall enclosures consist of chain link or corrugated metal.

d. Landscaping

Landscaping shall be used to soften the appearance of the enclosure where such enclosure is located within a side yard or can be viewed from public rights-of-way.

2. Mechanical and Utility Equipment

All mechanical and utility equipment including but not limited to air-conditioning, heating, water, propane, and fuel tanks, televisions antennas, satellite dishes, security apparatus, transformers, ground-mounted solar equipment, and electric and gas meters shall be integrated into the building design, screened from public view, or enclosed in a suitable accessory structure, pursuant to the following standards:

a. Location

- i. Ground-mounted mechanical and utility equipment shall be located outside of sight triangles in order to avoid obscuring vision at intersections.
- ii. Ground-mounted mechanical and utility equipment shall be located out of view of public rights-of-way, customer entrances, and other public areas.

b. Design

- i. Ground-mounted mechanical equipment located within view of customer entrances or public rights-of-way shall be integrated into the overall site design, the architectural design of the building, and screened from public view using one or a combination of the following:
 - 1) Decorative wall, fence or enclosure that is constructed of materials that are compatible with the overall architectural design of the development and of a height that is not less than the height of the equipment to be screened; or
 - 2) Landscaping that is of sufficient height at maturity and of opacity to effectively soften and screen the equipment, and that is integrated into the overall landscape plan.
- ii. Roof-mounted mechanical and utility equipment shall be an integral part of the building's overall architectural design and shall be screened from view to the extent practicable from public rights-of-way, residential land uses, public parking areas, and/or adjacent properties using parapet walls or other means of screening. When reviewing the type and amount of screening, the Director shall consider the following:
 - 1) The proximity of the development to surrounding residential land uses and the visual impact that roof-mounted equipment may have upon those surrounding residential land uses.
 - 2) The number and size of roof-mounted equipment. The greater the number and/or size, the more screening may be warranted.
- iii. Roof-mounted equipment shall maintain a color and finish that are compatible with the primary building façade.

4.8.2 Fences and Walls

A. Purpose

This section is intended to provide uniform, minimum technical standards for fences and walls including those used as elements in a landscape plan for buffering and screening purposes.

B. Exemptions⁴⁹

Agricultural fencing, as defined in §20.3, *Other Terms Defined*, is not required to meet the standards in paragraphs C.1, C.2, and C.3, below.⁵⁰

C. Standards for All Fences and Walls

1. Height

- a. The height of all fences will be measured from finished grade at the base of the fence except that depth-of-drainage channels under a fence shall not be included in the height measurement.
- b. The height of all fences built on berms or retaining walls shall include the height of the berm or wall.

2. Fences for Nonresidential Uses

Fences for individual nonresidential uses shall meet the following criteria:

- a. Fences up to six feet high may be placed anywhere on the lot but are subject to sight triangle standards included in the Larimer County Road Standards.
- b. Security fencing may include three strands of wire on top of the fence that will not be included in the height measurement. The wire strands shall not extend beyond the property line.
- c. Fences within a fire district shall provide adequate access for fire authority staff to service the property.

3. Development Perimeter Fencing

Fences installed on the perimeter or any development shall meet the following criteria:

- a. If fencing is proposed around the perimeter of a development, any fencing adjacent to a county road or state or federal highway shall be compatible with existing land uses, topography, and landscaping in the immediate vicinity.
- b. Fences longer than 40 feet shall include one evergreen tree or three shrubs for each 40-foot section or portion thereof planted on the outer or public side of the fence.
- c. Fences longer than 100 feet shall provide variation by using changes in height, different material combinations, offset angles, articulation and/or plant materials.

4. Wildlife Protection

Wildlife should be considered before the construction of any fence. All fences shall meet the wildlife fencing standards in §4.4.4.C.4.d. If a development is subject to a wildlife conservation plan, there may be additional fence regulations based on the plan.

D. Additional Standards for Fences and Walls Included in Landscaping Plan

1. Height

- a. Fences used for screening shall be at least six feet high and not taller than eight feet from the finished grade. Fences above six feet require a building permit.
- b. All walls used for screening require a building permit and shall be no more than 10 feet in height from the finished grade. Wall heights above 10 feet require written approval by the Director.

⁴⁹ New section to exempt agricultural fencing from standards. Reference new definition for agricultural fencing.

- c. Fences or walls may be combined with landscape berms to achieve the desired height if berms are sized appropriately to provide adequate support for the fence or wall. If the use or element to be screened remains visible at six feet off-site, additional screening may be required.

2. Materials and Design

a. Articulation

- i. Fencing or walls used as a screen shall not have breaks in the run of fences or walls, unless breaks are needed to prevent wind damage. Where breaks are necessary, the placement of trees or shrubs shall conceal the view through the gaps.
- ii. Where fences are designed with vertical picket boards on the alternate sides of the horizontal rail, the design shall use plant materials or board widths sufficient to screen the view into the site between the pickets.
- iii. If the fence or wall exceeds 40 feet in length, the design shall include at least one tree and six shrubs for each 40-foot section. Four of the required shrubs shall be of a variety that reaches a mature height of three feet, and two of the required shrubs shall be of a variety that reaches a mature height of six feet.
- iv. Alternating 40-foot sections of fence and wall can be constructed within three feet of the property line, so long as they do not interfere with site triangle requirements or create safety concerns.

b. Design

Required fences and walls shall have a unifying theme and provide variation by using clearly visible changes in height or depth, different material combinations, offset angles or structural articulation and/or plant materials.

c. Prohibited Finish Materials

Chain link fencing, with or without slats, shall not be used for screening or buffering, except as allowed by §4.7.4.E.3.f., *Security Fencing*.

Article 20.0 Rules of Interpretation and Definitions

Commentary

This Section includes only those terms related to Sections 4.7. and 4.8. Redlines indicate if the term has been carried forward, revised, or deleted entirely.

20.3. Other Terms Defined

Agricultural Equipment

For the purpose of exterior lighting regulations, any farm tractor, self-propelled or towed unit of agricultural equipment, or implement of husbandry.

Agricultural Fencing

For the purpose of adjacency and buffering regulations, any fence in the Conservation and Agriculture, Rural, and Mixed Center character areas used to control, confine, or corral livestock, deter wildlife from crops, or indicate the borders of a lot that maintains any agriculture use as listed in Tables 3-1 and 3-3.

Agricultural Housing

Housing associated with an agricultural use and provided for use by individuals who are primarily engaged in an agricultural use; includes agricultural labor housing and associated dwellings.

Agricultural Structure

A structure designed and constructed to house agricultural implements, hay, grain, poultry, livestock, or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated, or packaged, nor shall it be a place used by the public.

Buffer

A combination of physical space and/or vertical elements such as plants, berms, fences, or walls, the purpose of which is to separate and/or screen incompatible land uses from each other.

Caliper

The diameter of a tree measured six inches above the ground if up to a four-inch caliper. For a larger tree, the measurement is made 12 inches above the ground.

Common Area

For the purpose of landscaping regulations, any exterior portion of a development that is designed and intended for the common usage, benefit or enjoyment of the residents or visitors of the development.

Coniferous

Trees and shrubs that generally have needles rather than leaves, bear cones, and typically remain green throughout the year.

Drip Line

An area around the tree trunk that generally includes the spread of the tree branches. Also that area around a structure that is beneath the roof overhang.

Fire-Prone Vegetation

Plants and vegetation that is highly flammable including but not limited to ornamental juniper, Leyland cypress, Italian cypress, rosemary, arborvitae, and eucalyptus.

Ground Cover

Low growing plant materials intended to spread over the ground. Also includes mulches used to fill in around plantings and grass.

Hardscape Elements

Any non-living elements that are incorporated into a landscaping plan such as sidewalks, paths, driveways, required light fixtures, seating areas, or structures like gazebos that do not serve as a principal use.

Mature Crown

The width of the area occupied by the branches of a healthy, full-grown tree that has not been pruned and has been grown in a constructed landscape below 6,000 feet elevation.

Mulch

Non-living material used for covering bare ground between plant materials in a landscaped area to retain water, prevent erosion, lessen weeds, and generally make a healthier, aesthetic environment for the plant materials. Mulch is composed of loose, non-living materials including wood chips, shredded wood, pine needles or other materials that do not reflect heat onto adjacent plants or structures.

On Center

A landscaping term that refers to the spacing of plant materials by locating the trunk or center of the plant a specified distance from the center of the next plant.

Opaque

Unable to be seen through.

Ornamental Tree

A small deciduous tree that will be no more than 30 feet tall at maturity with no more than a 30-foot wide mature crown

Perennial

A plant that, under typical condition, will live a minimum of three years.

Semi-Opaque

Severely limiting vision by planting trees and shrubs in multiple rows or with reduced spacing between plants.

Shade Tree

A large tree that will be at least 30 feet tall when mature with at least a 30-foot wide mature crown.

Soil Amendment

Organic material added to soil to improve its physical properties, such as water retention, permeability, water infiltration, drainage, aeration, and structure.

Understory Landscaping

A grouping of native, noninvasive low-level shrubs, herbaceous plants, or other ground covers.

Xeriscape

The term Xeriscape is a registered trademark by Denver Water and used here by permission. Xeric design includes seven concepts that describe an established landscape with minimal, supplemental water needs. Site-specific conditions determine which plants are appropriate for use within the parameters established by the seven concepts. Xeric design and xeric plants are not synonymous, and the use of the xeric design techniques does not necessarily require the use of xeric plants.

Xeric Plants

A distinct group of plants that generally require less to remain healthy. The word Xeric is derived from the Greek word Xerox, meaning dry.

LUC Supplemental Materials⁵¹

Commentary

This is a new section intended to be relocated into the LUC Supplemental Materials. The current “Larimer County Plant List” document, municipality standards, and general best practices were used to inform the plant selections. Rather than including the “Where it Grows, What it Looks Like and Special Notes” information in the existing Larimer County Plant List (largely intended to help individual gardeners), the following tables include more relevant information including the water need of each plant or tree species to better align with plant lists from the municipalities.

21.2 Technical Specifications and Supplementary Regulations

Larimer County Plant List

A. Purpose

The purpose of this section is to meet the provisions of §4.7, *Landscaping*, regarding landscape plans that are submitted as part of the development review process.

B. Applicability

The LUC requires plant material included on landscape plans to be selected from the Larimer County Plant List. Additional plants may be added to the list upon a determination that the plants are appropriate for inclusion.

C. Hydrozones

If a landscape plan includes hydrozones to demonstrate irrigation or other plant grouping requirements, they must be defined by a grouping of plants requiring a similar amount of water to sustain health. The four hydrozones based on supplemental irrigation needed are as follows:

1. High Hydrozone (H): 18 gallons/s.f./season
2. Moderate Hydrozone (M): 10 gallons/s.f./season
3. Low Hydrozone (L): 3 gallons/s.f./season
4. Very Low Hydrozone (VL): 0 gallons/s.f./season

D. Prohibited Species

The following list of plants contains species that are known to be invasive or destructive to natural habitats in Larimer County. Their use is prohibited in all applications for development review and it is recommended they not be used in a private, residential, planting plan. In addition to the list, below, all plants classified as noxious weeds in Larimer County by the County Weed Board, or plants listed in applicable state and federal regulations are also prohibited in Larimer County.

Table 1-1: Prohibited Species

Botanical Name	Common Name
Trees and Shrubs⁵²	

⁵¹ New. Replaces current Larimer County Plant List dated November 2000.

⁵² Additional species from City of Fort Collins and Loveland plant lists.

Table 1-1: Prohibited Species

Botanical Name	Common Name
<i>Fraxinus pennsylvanica</i>	Ash
<i>Salix alba</i> X <i>Matsudana</i>	Austree
<i>Malus species</i> Hopa	Hopa Crabapple
<i>Eleagnus angustifolia</i>	Russian-olive
<i>Ulmus pumila</i>	Siberian Elm
<i>Acer saccharinum</i>	Silver Maple
<i>Ailanthus altissima</i>	Tree of Heaven
Forbs and Flowers⁵³	
<i>Linum perenne</i>	Blue Flax
<i>Reynutria japonica</i> (<i>Polygonum cuspidatum</i>)	Buckwheat (Japanese Knotweed)
<i>Cichorium intybus</i>	Chicory
<i>Campanula rapunculoides</i>	Creeping or Denver Bellflower
<i>Tithymalus cyparissas</i> (<i>Euphorbia cyparissias</i>)	Cyprus Spurge
<i>Linaria genistifolia</i> ssp. <i>Dalmatica</i> (<i>Linaria dalmatica</i>)	Dalmatian Toadflax
<i>Hesperis matronalis</i>	Dame's Rocket or Sweet Rocket
<i>Euphorbia esula</i>	Leafy Spurge
<i>Salvia aethiopsis</i>	Mediterranean Sage
<i>Euphorbia myrsinites</i>	Myrtle Spurge
<i>Viticella orientalis</i> (<i>Clematis orientalis</i>)	Oriental Virgins Bower, Chinese clematis
<i>Leucanthemum vulgare</i> (<i>chrysanthemum</i>)	Ox-eye Daisy
<i>Lathyrus latifolius</i>	Perennial Sweetpea
<i>Lythrum salicaria</i>	Purple Loosestrife
<i>Hypericum perforatum</i>	St. John's Wort (Klamath Weed)
<i>Matricaria perforata</i>	Scentless Chamomile
<i>Saponaria officinalis</i>	Soapwort (Bouncing Bet)
<i>Potentilla recta</i>	Sulphur Cinquefoil
<i>Melilotus alba</i> <i>Melilotus officinalis</i>	Sweet-clover (white & yellow)
<i>Tamarix ramosissima</i> (<i>chinensis</i>) <i>Tamarix parviflora</i>	Tamarisk
<i>Linaria vulgaris</i>	Toadflax (Butter and Eggs)
<i>Daucus carota</i>	Wild Carrot (Queen Ann's Lace)
Grasses⁵⁴	

⁵³ Carried forward "problem plants" from the Larimer County Plant List.

⁵⁴ Carried forward "problem plants" from the Larimer County Plant List.

Table 1-1: Prohibited Species	
Botanical Name	Common Name
Bromus inermis	Brome, Smooth
Bromus tectorum	Cheat Grass
Dactylis glomerata	Orchard Grass
Secale cereale	Annual Ryegrass
Stipa tenuifolia	Thread Grass
Phleum pratense	Timothy Grass

E. Recommended Plant Lists

1. Deciduous Trees

Table 1-2: Recommended Deciduous Trees		Water Need (Hydrozone)			
Botanical Name	Common Name	Very Low	Low	Medium	High
Acer spp.	Maple Varieties		L	M	
Aesculus glabra	Birch Varieties			M	
Aesculus hippocastanum	Horsechestnut			M	
Alnus spp.	Alder, Rocky Mountain			M	H
Betula occidentalis	Apricot			M	H
Betula spp.	Birch, Rocky Mountain N			M	H
Carpinus spp.	Hornbeam			M	
Catalpa ovata	Catalpa, Chinese		L	M	
Catalpa speciosa	Catalpa, Northern		L	M	
Catalpa speciosa	Catalpa, Western		L	M	
Celtis occidentalis	Hackberry			M	
Cercis canadensis	Redbud, Eastern			M	H
Cladrastis lutea	Yellow Wood, American			M	
Corylus columna	Filbert, Turkish		L	M	
Crataegus spp.	Hawthorne		L	M	
Gleditsia spp. inermis cv.	Honeylocust, Thornless Varieties		L	M	
Gymnocladus dioica	Kentucky Coffeetree		L	M	
Koelreuteria paniculata	Goldenrain Tree / Japanese Lantern Tree		L		
Malus spp.	Thin Leaf		L	M	
Malus spp.	Crabapple, Flowering		L	M	
Morus alba 'Chaparral'	Mulberry, Weeping			M	
Phellodendron amurense	Corktree, Amur			M	

Table 1-2: Recommended Deciduous Trees		Water Need (Hydrozone)			
Botanical Name	Common Name	Very Low	Low	Medium	High
Prunus americana	Plum, American			M	
Prunus armeniaca	Apple Varieties			M	
Prunus maackii	Cherry Varieties			M	
Prunus padus	Mayday Tree / European Bird Cherry			M	
Prunus pennsylvanica	Buckeye			M	
Prunus spp.	Cherry, Pin or Bird			M	
Prunus virginiana "Shubert"	Chokecherry, Amur		L	M	
Pyrus spp.	Pear Varieties		L	M	
Quercus gambelii	Oak, Scrub / Gambel		L		
Quercus spp.	Oak Varieties		L	M	
Salix amygdaloides	Willow, Peachleaf		L	M	
Sophora japonica	Japanese Pagoda Tree / Chinese or Japanese Scholar Tree			M	
Syringa reticulata	Lilac, Japanese Tree		L	M	
Tilia spp.	Linden Varieties			M	
Ulmus americana	Elm, American		L	M	
Ulmus thomasi	Elm, Cork or Rock		L	M	

2. Deciduous Shrubs

Table 1-3: Deciduous Shrubs		Water Need (Hydrozone)			
Botanical Name	Common Name	Very Low	Low	Medium	High
Acanthopanax sieboldianus	Fiveleaf Aralia		L		
Acer ginnala	Amur Maple		L	M	
Acer glabrum	Rocky Mountain Maple			M	H
Acer grandidentatum	Wasatch Maple			M	
Alnus tenuifolia	Rocky Mountain Alder				H
Amelanchier alnifolia	Saskatoon Serviceberry		L	M	
Amelanchier canadensis	Shadblow Serviceberry		L		
Amelanchier utahensis	Utah Serviceberry	VL	L	M	
Amorpha canescens	Leadplant		L	M	
Amorpha fruticosa	False Indigo			M	
Amorpha nana	Dwarf Leadplant		L	M	

Table 1-3: Deciduous Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Aronia arbutifolia</i>	Red Chokeberry			M	
<i>Aronia melanocarpa</i>	Black Chokeberry			M	
<i>Aronia x prunifolia</i>	Purple Chokeberry			M	
<i>Artemisia tridentata</i>	Tall Western Sage		L		
<i>Artemisia cana</i>	Silver Sage	VL	L	M	
<i>Artemisia filifolia</i>	Sand Sagebrush	VL			
<i>Artemisia frigida</i>	Fringed Sage	VL	L		
<i>Artemisia nova</i>	Black Sage		L		
<i>Artemisia versicolor</i>	Sea Spray Sage		L		
<i>Atriplex canescens</i>	Four-wing Saltbush	VL	L		
<i>Atriplex confertifolia</i>	Spiny Saltbush	VL	L		
<i>Berberis thunbergii</i>	Barberry			M	H
<i>Berberis x 'Emerald Carousel'</i>	Emerald Carousel Barberry		L		
<i>Betula fontinalis</i>	Native River Birch				H
<i>Betula glandulosa</i>	Bog Birch				H
<i>Buddleja alternifolia</i>	Alternate Butterfly Bush			M	
<i>Buddleja alternifolia 'Argentea'</i>	Silver Fountain Butterfly Bush			M	
<i>Buddleja davidii</i>	Butterfly Bush			M	
<i>Caragana arborescens</i>	Siberian Peashrub		L	M	
<i>Caragana frutex</i>	Globe Peashrub		L	M	
<i>Caragana microphylla</i>	Littleleaf Peashrub		L	M	
<i>Caragana pygmaea</i>	Pygmy Peashrub		L	M	
<i>Caragana rosea</i>	Rose Peashrub		L		
<i>Caryopteris incana</i>	Blue Mist Spirea		L	M	
<i>Caryopteris x clandonensis</i>	Dark Knight Spirea		L	M	
<i>Ceratoides lanata</i>	Winterfat		L		
<i>Cercocarpus breviflorus</i>	Hairy Mountain Mahogany	VL			
<i>Cercocarpus ledifolius</i>	Curl Leaf Mountain Mahogany	VL	L		
<i>Cercocarpus ledifolius intricatus</i>	Little Leaf Mountain Mahogany	VL	L		
<i>Cercocarpus montanus</i>	True Mountain Mahogany		L	M	
<i>Chaenomeles speciosa</i>	Quince		L		
<i>Chamaebatiaria millefolium</i>	Fernbush	VL	L		

Table 1-3: Deciduous Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Chrysothamnus nauseosus	Rabbitbrush	VL	L		
Cornus alba	Variegated Dogwood				H
Cornus mas	Cornelian Cherry			M	H
Cornus seicea 'baileyi'	Bailey Redtwig Dogwood			M	
Cornus seicea 'Cardinal'	Cardinal Dogwood			M	
Cornus seicea 'Flaviramea'	Yellowtwig Dogwood			M	
Cornus seicea 'Isanti'	Isanti Dogwood			M	
Cornus stolonifera	Redtwig Dogwood			M	H
Corylus americana	American Filbert			M	
Corylus avellana	European Hazel			M	H
Cotinus coggygria	Smokebush			M	
Cotoneaster apiculatus	Cranberry Cotoneaster			M	
Cotoneaster dammeri	Bearberry Cotoneaster			M	
Cotoneaster divaricatus	Spreading Cotoneaster		L	M	
Cotoneaster horizontalis	Rock Cotoneaster			M	
Cotoneaster ignavus	Szechuan Fire Cotoneaster			M	
Cotoneaster lucidus	Peking Cotoneaster		L		
Cowania mexicana	Cliff Rose		L		
Cytisus purgans	Spanish Gold Broom		L	M	
Cytisus scoparius	Scotch Broom		L	M	
Cytisus x praecox	Warminster Broom		L	M	
Daphne x burkwoodii 'Carol Mackie'	Carol Mackie Daphne			M	
Diervilla lonicera	Dwarf Bush Honeysuckle				H
Elaeagnus commutata	Silverberry		L		
Ephedra equisetina	Bluestem Joint Fir	VL	L		
Ephedra viridis	Mormon Tea	VL	L		
Euonymus alatus	Burning Bush			M	
Euonymus alatus 'Compactus'	Dwarf Burning Bush			M	
Fallugia paradoxa	Apache Plume	VL	L		
Fendlera rupicola	Cliff Fendler Bush		L	M	
Forestiera neomexicana	New Mexico Privet		L	M	

Table 1-3: Deciduous Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Forsythia viridissima koreana	Kumson Forsythia			M	
Forsythia x 'Arnold Dwarf'	Arnold Dwarf Forsythia			M	
Forsythia x 'Northern Gold'	Northern Gold Forsythia			M	
Genista lydia	Lydia Broom		L	M	
Genista tinctoria	Woadwaxen		L	M	
Hesperaloe parviflora	Red False Yucca	VL	L		
Hibiscus syriacus	Althea			M	
Hippophaë rhamnoides	Sea Buckthorn		L	M	
Holodiscus discolor	Creambush		L	M	
Holodiscus dumosus	Rock Spirea		L	M	
Hydrangea arborescens 'Annabelle'	Annabelle Hydrangea			M	H
Hydrangea macrophylla	Mophead Hydrangea			M	
Hydrangea paniculata	PeeGee Hydrangea			M	H
Jamesia americana	Waxflower		L	M	
Kolkwitzia amabilis	Beauty Bush		L	M	
Ligustrum vulgare	Common Privet		L	M	
Ligustrum x vicaryi	Golden Vicary Privet		L	M	
Lonicera involucrata	Twinberry Honeysuckle			M	H
Lonicera korolkowii	Blue Velvet Honeysuckle			M	
Lonicera syringantha wolfii	Tiny Trumpets Honeysuckle			M	H
Lonicera tatarica 'Arnold Red'	Arnold Red Honeysuckle		L	M	
Lonicera x 'Honeyrose'	Honeyrose Honeysuckle			M	
Lonicera xylosteum	Dwarf Honeysuckle		L	M	
Peraphyllum ramosissimum	Squaw Apple		L	M	
Philadelphus lewisii	Lewis Mockorange		L	M	
Philadelphus microphyllus	Littleleaf Mockorange		L	M	
Philadelphus x virginalis	Snowflake Mockorange			M	
Physocarpus monogynus	Mountain Ninebark		L	M	

Table 1-3: Deciduous Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Physocarpus opulifolius	Dwarf Ninebark		L	M	
Potentilla fruticosa	Shrub Potentilla		L	M	
Prunus americana	American Plum		L	M	
Prunus besseyi	Western Sand Cherry		L	M	
Prunus besseyi 'Pawnee Buttes'	Pawnee Buttes Sand Cherry		L	M	
Prunus fruticosa	European Dwarf Cherry		L	M	
Prunus glandulosa 'Rosea Plena'	Pink Flowering Almond			M	
Prunus tenella	Dwarf Russian Almond		L	M	
Prunus tomentosa	Nanking Cherry		L	M	
Prunus trioba	Double Flowering Plum		L	M	
Prunus virginiana	Chokecherry		L	M	
Prunus x cistena	Purple Leaf Plum			M	
Purshia tridentata	Bitterbrush	VL	L		
Rhamnus frangula	Glossy Buckthorn		L	M	
Rhamnus smithii	Smith's Buckthorn		L	M	
Rhododendron spp.	Rhododendron				H
Rhus aromatica 'Gro-Low'	Gro-Low Sumac				
Rhus glabra	Smooth Sumac		L	M	
Rhus glabra cismontana	Rocky Mountain Sumac		L	M	
Rhus glabra 'Laciniata'	Cutleaf Smooth Sumac		L	M	
Rhus trilobata	Three-leaf Sumac	VL	L		
Rhus typhina	Staghorn Sumac		L	M	
Ribes alpinum	Alpine Currant		L	M	
Ribes aureum	Golden Currant			M	
Ribes cereum	Squaw Currant		L	M	
Ribes odoratum	Crandall Clove Currant		L	M	
Rosa glauca	Redleaf Rose			M	
Rosa rugosa	Rugosa Rose			M	
Rosa woodsii	Wood's Rose			M	
Rosa x var.	Shrub & Climbing Roses		L	M	
Rubus deliciosus	Boulder Raspberry	VL	L		
Rubus idaeus	Wild Raspberry			M	H
Salix arenaria	Blue Creek Willow			M	

Table 1-3: Deciduous Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Salix bebbiana	Bebb's Willow			M	
Salix discolor	Pussy Willow				H
Salix drummondiana	Drummond Willow			M	
Salix exigua	Coyote Willow			M	H
Salix irrorata	Blue Stem Willow			M	H
Salix monticola	Yellow Mountain Willow			M	H
Salix purpurea nana	Dwarf Arctic Willow			M	
Salix purpurea pendula	Blue Fountain Willow			M	
Sambucus canadensis	Elderberry			M	H
Sambucus pubens	Red Fruited Elderberry			M	
Sambucus racemosa	Red Elderberry			M	H
Shepherdia argentea	Silver Buffaloberry	VL	L	M	
Sibiraea laevigata	Siberian Spirea		L	M	
Sorbaria sorbifolia	Ash Leaf Spirea			M	
Sorbus scopulina	Native Mountain Ash			M	
Spiraea cineria	Grefsheim			M	
Spiraea japonica	Japanese Spirea			M	
Spiraea nipponica	Snowmound Spirea			M	
Spiraea thunbergii	Mellow Yellow Spirea		L		
Spiraea trilobata	Three Lobe Spirea			M	
Spiraea x vanhouttei	Vanhoutte Spirea			M	
Symphoricarpos albus	Snowberry		L		
Symphoricarpos orbiculatus	Red Coralberry		L	M	
Symphoricarpos oreophilus	Mountain Snowberry		L		
Symphoricarpos x chenaultii	Hancock Coralberry		L	M	
Syringa joskiae	Purple Single Lilac		L	M	
Syringa meyeri	Dwarf Korean Lilac		L	M	
Syringa microphylla	Littleleaf Lilac			M	
Syringa oblata	Cheyenne Lilac		L	M	
Syringa patula 'Miss Kim'	Miss Kim Lilac		L	M	
Syringa vulgaris	Common Lilac		L	M	
Syringa x chinensis	Chinese Lilac		L	M	
Syringa x hyacinthiflora	Single Blooming Lilac		L		

Table 1-3: Deciduous Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Syringa x prestoniae</i>	Canadian Single Blooming		L	M	
<i>Viburnum burejaeticum</i>	Manchurian Viburnum			M	H
<i>Viburnum carlesii</i>	Korean Spice Viburnum			M	H
<i>Viburnum dentatum</i>	Arrowwood Viburnum			M	H
<i>Viburnum lantana</i>	Wayfaring Viburnum		L	M	
<i>Viburnum lentago</i>	Nannyberry		L	M	
<i>Viburnum opulus</i>	Compact Cranberry Bush			M	H
<i>Viburnum plicatum tomentosum</i>	Doublefile Viburnum			M	H
<i>Viburnum prunifolium</i>	Blackhaw Viburnum			M	H
<i>Viburnum trilobum</i>	American Cranberry Viburnum			M	H
<i>Viburnum x bodnantense</i>	Pink Dawn Viburnum			M	H
<i>Viburnum x burkwookii</i>	Burkwood Viburnum			M	
<i>Viburnum x juddii</i>	Judd Viburnum			M	
<i>Viburnum x rhytidophylloides</i>	Alleghany Viburnum		L	M	
<i>Weigela florida</i>	Weigela			M	H
<i>Xanthocerus sorbifolium</i>	Yellowhorn		L	M	

3. Coniferous Trees

Table 1-4: Recommended Coniferous Trees					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Abies concolor</i>	Fir, White			M	H
<i>Abies concolor</i>	Fir, White, Compact			M	
<i>Abies lasiocarpa</i>	Subalpine or RockyMountain Fir				H
<i>Juniperus chinensis</i>	Juniper, Chinese		L	M	
<i>Juniperus horizontalis</i>	Juniper, Creeping		L	M	
<i>Juniperus monosperma</i>	Juniper, One-Seeded		L		
<i>Juniperus osteosperma</i>	Juniper, Utah		L		

Table 1-4: Recommended Coniferous Trees					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Juniperus scopulorum	Juniper, Rocky Mountain		L		
Juniperus virginiana	Cedar, Eastern Red		L	M	
Larix decidua	European Larch			M	H
Picea abies	Norway Spruce' Cupressina'			M	H
Picea glauca	Black Hills Spruce' Densata'			M	H
Picea pungens	Spruce, Colorado Blue			M	H
Picea pungens	Spruce, Colorado Dwarf Forms N			M	H
Pinus aristata	Pine, Bristlecone		L	M	
Pinus contorta	Pine, Lodgepole		L	M	
Pinus densiflora 'Umbraculifera'	Pine, Tanyosho / Japanese Red			M	H
Pinus edulis	Pine, Pinon		L	M	
Pinus flexilis	Pine, Limber N		L	M	
Pinus mugo	Pine, Mugo		L	M	
Pinus nigra	Pine, Austrian			M	
Pinus nigra 'Hornibrookiana'	Pine, Austrian Dwarf			M	
Pinus ponderosa	Pine, Ponderosa		L	M	
Pinus strobus	Pine, Eastern White			M	
Pinus sylvestris	Pine, Scotch			M	
Pseudotsuga menziesii	Fir, Douglas			M	H
Taxus spp.	Yew				H
Thuja occidentalis	Arborvitae				H

4. Coniferous and Broad-leaved Evergreen Shrubs

Table 1- 5: Coniferous Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Juniperus chinensis	Chinese Juniper		L	M	
Juniperus communis	Common Juniper		L	M	
Juniperus horizontalis	Creeping Juniper		L	M	
Juniperus monosperma	Oneseed Juniper	VL	L		
Juniperus osteosperma	Utah Juniper	VL	L		

Table 1- 5: Coniferous Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Juniperus procumbens</i>	Green Mound Juniper		L		
<i>Juniperus sabina</i>	Savin Juniper		L		
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	VL	L		
<i>Juniperus squamata</i>	Blue Star Juniper		L		
<i>Juniperus virginiana</i>	Hillspire Juniper		L		
<i>Picea abies</i>	Dwarf Spruce			M	
<i>Picea pungens</i>	Globe Spruce			M	
<i>Pinus densiflora umbraculifera</i>	Tanyosho Pine		L		
<i>Pinus mugo</i>	Mugo Pine		L		
<i>Pinus sylvestris</i> 'Glauca Nana'	Dwarf Globe Scotch Pine		L		
<i>Taxus x media</i>	Dark Green Spreading Yew				H
<i>Thuja occidentalis</i>	Western Arborvitae				H

Table 1- 6: Broad-leafed Evergreen Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Agave neomexicana</i>	New Mexico Agave	VL	L		
<i>Arctostaphylos uva-ursi</i>	Kinnikinnick		L		
<i>Arctostaphylos x Coloradoensis</i>	Manzanitas		L	M	
<i>Buxus microphylla</i>	Korean Boxwood			M	H
<i>Buxus sempervirens</i>	Common Boxwood			M	H
<i>Euonymus fortunei</i>	Euonymus			M	H
<i>Euonymus kiautschovicus</i>	Manhattan Euonymus			M	H
<i>Euonymus nana turkestanicus</i>	Turkestan Burning Bush			M	H
<i>Ilex glabra</i>	Compact Inkberry Holly			M	
<i>Ilex x meserveae</i>	Blue Girl & Blue Boy Holly			M	H
<i>Mahonia aquifolium</i>	Oregon Grape Holly		L	M	
<i>Mahonia fremontii</i>	Fremont's Desert Holly	VL	L		
<i>Mahonia haematocarpa</i>	Desert Holly	VL	L		

Table 1- 6: Broad-leaved Evergreen Shrubs					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Mahonia repens	CreepingGrape Holly		L	M	H
Nandina domestica	Heavenly Bamboo			M	H
Pyracantha angustifolia	Firethorn		L		
Pyracantha coccinea	Pyracantha		L	M	
Quercus turbinella	Shrub Liveoak Oak	VL	L		
Yucca baccata	Banana Yucca	VL	L		
Yucca elata	Elata Yucca	VL	L		
Yucca filamentosa	Adam's Needle Yucca	VL	L		
Yucca glauca	Soapweed Yucca	VL	L		

F. Perennials

Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Achillea ageratifolia	Greek Yarrow		L	M	
Achillea 'Coronation Gold'	Coronation Gold Yarrow	VL	L		
Achillea filipendulina 'Parker's'	Tall Yellow Yarrow		L		
Achillea lanulosa	Wooly White Yarrow		L		
Achillea millefolium	Common Yarrow		L		
Achillea 'Moonshine'	Moonshine Yarrow	VL	L	M	
Achillea ptarmica	The Pearl Yarrow		L		
Achillea serbica	Serbian Yarrow		L	M	
Achillea 'Summer Pastels'	Mixed Pastels Yarrow		L		
Aconitum napellus	Monkshood				H
Aegopodium podagraria	Bishop's Weed			M	
Aesclepias tuberosa	Butterfly Weed			M	H
Agastache aurantiaca	Coronado Hyssop		L	M	
Agastache 'Blue Fortune'	Blue Fortune Hyssop		L		
Agastache cana	Double Bubblemint		L	M	
Agastache cana Sonoran Sunset	Sonoran Sunset Hyssop		L	M	
Agastache Coronado Red	Coronado Red Hyssop		L	M	
Agastache pallida	Giant Hummingbird's Mint		L		

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Agastache rupestris</i>	Sunset Hyssop		L	M	
<i>Ajuga Chocolate Chip</i>	Dwarf Carpet Bugle			M	
<i>Ajuga reptans</i>	Carpet Bugle			M	
<i>Alcea rosea</i>	Hollyhock		L		
<i>Alchemilla vulgaris</i>	Lady's Mantle			M	H
<i>Allium senescens</i>	Corkscrew Ornamental Onion		L		
<i>Alyssum montanum</i>	Mountain Basket of Gold		L		
<i>Anacyclus pyrethrum</i> var. <i>depressus</i>	Mountain Atlas Daisy		L		
<i>Anemone multifida</i>	Windflower			M	
<i>Anemone sylvestris</i>	Snowdrop Windflower			M	
<i>Anemone tomentosa</i> 'Robustissima'	Grape-leaved Anemone			M	
<i>Anemone x hybrida</i> 'Honorine Jobert'	Honorine Jobert Anemone			M	
<i>Antennaria dioica</i> 'Rubra'	Pink Pussytoes		L		
<i>Antennaria parvifolia</i>	Dwarf Pussytoes	VL	L		
<i>Antennaria rosea</i>	Rose Pussytoes			M	
<i>Aquilegia alpina</i>	Alpine Columbine			M	
<i>Aquilegia barnebyi</i>	Barneby's Columbine			M	
<i>Aquilegia caerulea</i>	Rocky Mountain Columbine			M	
<i>Aquilegia canadensis</i> 'Little Lanterns'	Dwarf Red Columbine			M	
<i>Aquilegia chrysantha</i>	Yellow Columbine		L	M	
<i>Aquilegia</i> 'Crimson Star'	Crimson Star Columbine			M	
<i>Aquilegia</i> 'Dove'	Dove Columbine			M	
<i>Aquilegia</i> L. 'Swan Violet & White'	Remembrance Columbine			M	
<i>Aquilegia</i> McKana Hybrids	McKana's Columbine			M	
<i>Aquilegia vulgaris</i>	Garden Columbine			M	
<i>Aquilegia</i> 'White Star'	White Star Columbine			M	
<i>Arabis caucasica</i> 'Snowcap'	White Alpine Rockcress		L		
<i>Arctostaphylos uva-</i> <i>ursi</i>	Kinnikinnick		L		
<i>Armeria maritima</i> 'Splendens'	Sea Pinks			M	

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Armeria 'Victor Reiter'	Victor Reiter Sea Pinks			M	
Artemisia frigida	Fringed Sage	VL			
Artemisia ludoviciana 'Valerie Finnis'	Valerie Finnis Sage	VL			
Artemisia 'Powis Castle'	Powis Castle Sage		L		
Artemisia schmidtiana	Silver Mound Sage		L		
Artemisia stelleriana 'Silver Brocade'	Silver Brocade Sage		L		
Artemisia versicolor 'Sea Foam'	Sea Foam Artemisia		L	M	
Aruncus dioicus	Goat's Beard			M	
Aster alpinus 'Goliath'	Alpine Aster		L		
Aster lateriflorus 'Lady in Black'	Calico Aster			M	
Aster novae-angliae	New England Aster			M	H
Aster novi-belgii	Dwarf Aster			M	
Aster tongolensis 'Wartburg Star'	Purple Aster			M	
Aster x frikartii	Frikart's Aster			M	H
Astilbe x arendsii	False Spirea				H
Astilbe x japonica	False Spirea				H
Aubrieta deltoidea 'Purple Gem'	Purple Rockcress		L		
Aurinia saxatilis	Basket-of-Gold		L	M	
Baptisia australis	False Indigo		L	M	
Bergenia cordifolia 'Winterglut'	Redleaf Bergenia			M	
Berlandiera lyrata	Chocolate Flower	VL	L		
Boltonia asteroides	Boltonia			M	
Brunnera macrophylla	False Forget-Me-Not			M	
Callirhoe involucrata	Winecups		L	M	
Calylophus hartwegii fendleri	Fendler's Sundrops		L		
Campanula carpatica	Carpathian Harebell			M	
Campanula cochleariifolia	Little Bluebells			M	
Campanula glomerata 'Superba'	Clustered Bellflower			M	
Campanula persicifolia	Bellflower			M	
Campanula poscharskyana	Poscharsky Bellflower			M	

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Campanula punctata 'Cherry Bells'	Cherry Bells Bellflower			M	
Campanula rotundifolia	Harebell		L		
Campsis radicans	Trumpet Vine		L	M	
Campsis x tagliabuana	Madame Galen Trumpet Vine		L		
Castilleja integra	Orange Indian Paintbrush			M	H
Catananche caerulea	Cupid's Dart		L		
Centaurea dealbata	Bachelor Button, Pink		L		
Centaurea montana	Bachelor Button, Perennial		L		
Centranthus ruber	Red Valerian		L	M	H
Centranthus ruber 'Albus'	White Valerian		L	M	H
Cerastium arvense	Mouse-ear Chickweed		L	M	
Cerastium tomentosum	Snow-In-Summer		L	M	
Ceratostigma plumbaginoides	Plumbago		L	M	
Chamerion angustifolium	Fireweed		L		
Chrysanthemum x superbum	Shasta Daisy			M	H
Cimicifuga racemosa 'Brunette'	Black Snakeroot			M	
Clematis 'Comtesse de Bouchard'	Pink Clematis			M	
Clematis 'Ernest Markham'	Red Clematis			M	
Clematis 'Henryi'	White Clematis			M	
Clematis integrifolia Mongolian Bells	Mongolian Bells Clematis			M	
Clematis ligusticifolia	Western Virgin's Bower Clematis		L	M	
Clematis montana rubens	Pink Anemone Clematis			M	
Clematis 'Nelly Moser'	Two-tone Pink Clematis			M	
Clematis 'Ramona'	Blue Clematis			M	
Clematis terniflora	Sweet Autumn Clematis		L	M	
Clematis Wisley	Purple Clematis			M	

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Clematis x jackmanii	Purple Clematis			M	
Cleome serrulata	Rocky Mountain Bee Plant	VL	L		
Convallaria majalis	Lily-of-the-valley			M	H
Coreopsis auriculata 'Nana'	Dwarf Coreopsis		L		
Coreopsis auriculata 'Zampfir'	Fluted Coreopsis		L		
Coreopsis grandiflora 'Sunray'	Dwarf Double Coreopsis		L		
Coreopsis lanceolata	Lance-leaf Coreopsis		L		
Coreopsis 'Limerock Ruby'	Limerock Ruby Coreopsis			M	
Coreopsis rosea	Pink Coreopsis			M	
Coreopsis verticillata	Coreopsis		L		
Crocosmia 'Lucifer'	Lucifer Montbretia			M	
Dalea purpurea	Purple Prairie Clover		L		
Delosperma 'John Proffitt'	Table Mountain Iceplant		L		
Delosperma 'Kelaidis'	Mesa Verde Iceplant		L	M	
Delosperma cooperi	Purple Iceplant		L	M	
Delosperma dyeri	Red Mountain Iceplant		L	M	
Delosperma floribundum	Starburst Iceplant		L	M	
Delosperma 'Lavender Ice'	Lavender Ice Iceplant		L	M	
Delosperma nubigenum	Yellow Hardy Iceplant		L	M	
Delosperma sphalmanthoides	Pink Cushion Iceplant		L		
Delphinium 'Connecticut Yankee'	Connecticut Yankee Larkspur			M	
Delphinium elatum 'Blushing Brides'	Orchid Larkspur			M	
Delphinium grandiflorum	Dwarf Blue Larkspur			M	
Delphinium species 'Blue Springs'	Blue Springs Larkspur			M	
Delphinium x Pacific Giant	Larkspur			M	
Dendranthema x rubellum 'Clara Curtis'	Rose Pink Daisy			M	
Dianthus barbatus 'Double Midget Mix'	Dwarf Sweet William			M	

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Dianthus deltoides	Pinks			M	
Dianthus 'First Love'	First Love Pinks			M	
Dianthus graniticus	Granite Pinks,			M	
Dianthus gratianopolitanus	Pinks			M	
Dianthus lumnitzeri	Cottage Pinks			M	
Diascia integerrima	Coral Canyon Twinspur			M	
Dicentra formosa 'Luxuriant'	Fringed Bleeding Heart			M	
Dicentra spectabilis	Bleeding Heart			M	
Digitalis grandiflora	Perennial Yellow Foxglove			M	
Digitalis obscura	Sunset Foxglove		L	M	
Digitalis purpurea	Common Foxglove				H
Digitalis thapsi	Spanish Peaks Foxglove			M	
Digitalis x mertoniensis	Perennial Pink Foxglove			M	
Duchesnea indica	Mock Strawberry		L	M	
Echinacea paradoxa	Yellow Coneflower		L		
Echinacea purpurea	Purple Coneflower			M	
Echinacea 'Sunset'	Orange Coneflower			M	
Echium amoenum	Red Feathers Bugloss		L		
Epilobium canum garrettii	Orange Carpet Hummingbird Trumpet		L	M	
Erigeron compositus	Cut-Leaf Daisy		L		
Erigeron divergens	Spreading Daisy		L		
Erigeron speciosus	Showy Fleabane		L		
Erigeron vetensis	La Veta Daisy		L		
Eriogonum jamesii	Creamy Sulphur Flower		L		
Eriogonum umbellatum	Sulphur Flower	VL	L		
Erodium reichardii	Heron's Bill		L		
Eryngium spp.	Sea Holly		L	M	
Eschscholzia californica	California Poppy		L		
Euonymus fortunei 'Coloratus'	Purpleleaf Wintercreeper		L	M	
Eupatorium maculatum 'Gateway'	Joe Pye Weed			M	

Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Euphorbia polychroma	Cushion Spurge		L		
Fallopia japonica compacta	Dwarf Fleeceflower		L		
Fern, Athyrium filix-femina	Lady Fern				H
Fern, Athyrium niponicum 'Pictum'	Japanese Painted Fern				H
Fern, Dryopteris filix-mas 'Robusta'	Robust Male Fern			M	
Fern, Matteuccia struthiopteris	Ostrich Fern				H
Filipendula rubra 'Venusta'	Venusta Meadow Sweet			M	
Fragaria americana	Wild Strawberry		L		
Fragaria Lipstick	Pink Flowering Strawberry			M	
Fragaria vesca	Runnerless Strawberry			M	
Gaillardia aristata	Native Blanket Flower		L	M	
Gaillardia 'Arizona Sun'	Dwarf Blanket Flower		L		
Gaillardia 'Fanfare'	Fanfare Dwarf Blanket Flower		L		
Gaillardia x grandiflora 'Burgundy'	Burgundy Blanket Flower		L		
Gaillardia x grandiflora 'Goblin'	Dwarf Blanket Flower		L		
Galium odoratum	Sweet Woodruff			M	H
Gaura lindheimeri	Whirling Butterflies		L		
Gazania krebsiana	Orange Hardy Gazania		L	M	
Gazania linearis	Colorado Gold Gazania		L	M	
Geranium cinereum 'Ballerina'	Ballerina Cranesbill			M	
Geranium dalmaticum	Compact Rose Cranesbill			M	
Geranium endressii 'Wargrave Pink'	Pink Cranesbill			M	
Geranium himalayense 'Plenum'	Birch Double Cranesbill			M	
Geranium 'Johnson's Blue'	Blue Cranesbill			M	
Geranium macrorrhizum	Adriatic Cranesbill		L	M	

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Geranium platypetalum	Purple Cranesbill			M	
Geranium Rozanne	Blue Cranesbill			M	
Geranium sanguineum	Bloody Cranesbill			M	
Geranium viscosissimum	Geranium, Sticky		L		
Geranium x cantabrigiense	Cambridge Cranesbill			M	
Geum chiloense	Avens			M	
Geum triflorum	Native Avens		L		
Glechoma hederacea	Ground Ivy			M	
Gypsophila paniculata	Baby's Breath		L		
Gypsophila repens	Creeping Baby's Breath			M	
Hedera helix	English Ivy			M	
Hedera helix 'Thorndale'	Thorndale English Ivy			M	
Helenium autumnale	Sneezeweed			M	
Helianthemum spp.	Sunroses			M	
Helianthus maximiliani	Maximilian Sunflower		L		
Heliopsis helianthoides 'Summer Sun'	False Sunflower			M	
Helleborus spp.	Hellebores			M	H
Hemerocallis spp.	Daylily				M
Heracleum maximum	Cowparsnip				
Heterotheca villosa	Hairy Golden Aster		L		
Heuchera 'Chocolate Ruffles'	Chocolate Ruffles Coral Bells			M	
Heuchera micrantha 'Palace Purple'	Palace Purple Coral Bells			M	
Heuchera 'Midnight Rose'	Midnight Rose Coral Bells			M	
Heuchera sanguinea	Coral Bells			M	
Hibiscus moscheutos	Mix Mallow,			M	
Hosta spp.	Hostas			M	H
Humulus lupulus neomexicanus	Native Hop Vine		L		
Iberis sempervirens	Evergreen Candytuft			M	
Ipomopsis aggregata	Scarlet Gilia		L		

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Iris ensata</i>	Japanese Iris			M	
<i>Iris missouriensis</i>	Western Blue Flag Iris			M	
<i>Iris pallida</i> 'Variegata'	Variegated Iris		L		
<i>Iris pseudacorus</i>	Yellow Flag Iris			M	
<i>Iris setosa arctica</i>	Dwarf Blue Flag Iris		L		
<i>Iris siberica</i>	Siberian Iris			M	
<i>Iris x germanica</i>	Bearded Iris		L	M	
<i>Iris x pumila</i>	Dwarf Iris		L		
<i>Jasminum nudiflorum</i>	Winter Jasmine			M	
<i>Knautia macedonica</i>	Knautia		L		
<i>Kniphofia caulescens</i>	Torch Lily		L		
<i>Lamiastrum galeobdolon</i> 'Herman's Pride'	Herman's Pride Archangel			M	
<i>Lamium maculatum</i>	Spotted Deadnettle			M	
<i>Lathyrus latifolius</i>	Perennial Sweet Pea		L	M	
<i>Lavandula angustifolia</i>	Lavender		L		
<i>Lavandula spp.</i>	Lavenders	VL	L	M	
<i>Lavatera thuringiaca</i>	Shrub Mallow		L		
<i>Leontopodium alpinum</i>	Edelweiss		L		
<i>Leucanthemum x superbum</i>	Shasta Daisy			M	
<i>Lewisia cotyledon</i> 'Special Mix'	Mixed Colors Bitterroot		L		
<i>Liatris punctata</i>	Dotted Gayfeather	VL	L		
<i>Liatris spicata</i> 'Kobold'	Kobold Gayfeather		L		
<i>Ligularia dentata</i> 'Othello'	Golden Groundsel				H
<i>Ligularia stenocephala</i> 'The Rocket'	The Rocket Ragwort				H
<i>Lilium species</i>	Hardy Lily			M	
<i>Limonium latifolium</i>	Sea Lavender		L	M	
<i>Linum flavum</i> 'Compactum'	Yellow Flax		L		
<i>Linum perenne</i>	Blue Flax		L	M	
<i>Lobelia fulgens</i> 'Queen Victoria'	Lobelia, Scarlet			M	
<i>Lonicera japonica</i> 'Halliana'	Hall's Honeysuckle		L	M	

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Lonicera prolifera	Kintzley's Ghost Honeysuckle			M	
Lonicera sempervirens	Scarlet Trumpet Honeysuckle			M	
Lonicera x heckrottii 'Goldflame'	Goldflame Honeysuckle			M	
Lupinus argenteus	Silvery Lupine		L		
Lupinus, ssp.	Lupines		L		
Lychnis chalcedonica	Maltese Cross			M	
Lychnis coronaria	Rose Campion		L	M	
Lysimachia nummularia	Moneywort			M	
Machaeranthera bigelovii	Santa Fe Aster		L		
Machaeranthera pattersoni	Patterson Aster		L		
Mahonia repens	Creeping Colorado Holly		L	M	
Malva alcea	Hollyhocks			M	
Marrubium rotundifolium	Silvery Horehound	VL	L		
Mimulus guttatus	Yellow Monkey Flower				H
Mirabilis multiflora	Wild Four-O'-Clock	VL	L	M	
Monarda fistulosa menthaefolia	Native Lavender Bee-Balm		L		
Monarda spp.	Bee-Balms			M	H
Nepeta x faassenii	Faassen's Catmint		L	M	
Nepeta x Little Trudy	Dwarf Blue Catmint		L		
Oenothera caespitosa marginata	White Evening Primrose	VL			
Oenothera macrocarpa	Missouri Evening Primrose		L		
Oenothera speciosa 'Rosea'	New Mexico Evening Primrose		L		
Opuntia basilaris	Beavertail Cactus	VL			
Origanum laevigatum 'Herrenhausen'	Purple Oregano		L		
Origanum libanoticum	Hopflower Oregano			M	
Osteospermum barberiae compactum	Purple Mountain Sun Daisy		L	M	
Osteospermum Lavender Mist	Lavender Mist Sun Daisy		L	M	
Paeonia spp.	Peonies			M	

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Papaver nudicaule	Iceland Poppy			M	
Papaver orientale	Oriental Poppy		L	M	
Penstemon angustifolus	Narrowleaf Penstemon		L		
Penstemon barbatus	Scarlet Bugler Penstemon		L		
Penstemon caespitosus	Mat Penstemon		L		
Penstemon cyananthus	Wasatch Penstemon		L		
Penstemon digitalis 'Husker Red'	Husker Red Penstemon		L		
Penstemon eatonii	Firecracker Penstemon		L		
Penstemon 'Elfin Pink'	Pink Penstemon		L		
Penstemon glaber var. alpinus	Smooth Penstemon		L		
Penstemon grandiflorus	Shell Leaf Pink Penstemon		L	M	
Penstemon hirsutus 'Pygmaeus'	Pygmy Purple Penstemon		L		
Penstemon linarioides var. coloradoensis	Silverton Blue Mat Penstemon	VL	L		
Penstemon neomexicanus	New Mexican Blue Penstemon		L		
Penstemon palmeri	Palmer Penstemon		L		
Penstemon pinifolius	Pineleaf Penstemon		L	M	
Penstemon rostriflorus	Bridge's Penstemon	VL	L	M	
Penstemon strictus	Rocky Mountain Penstemon		L	M	
Penstemon virens	Blue Mist Penstemon				
Penstemon virgatus 'Blue Buckle'	Blue Buckle Penstemon	VL			
Penstemon x mexicali Pikes Peak	Pikes Peak Purple Penstemon		L	M	
Penstemon x mexicali Red Rocks	Red Rocks Penstemon		L	M	
Penstemon x mexicali Shadow Mountain	Shadow Mountain Penstemon		L	M	
Pericaria affinis	Himalayan Border Jewel		L		
Phlomis cashmeriana	Himalayan Sage			M	
Phlox douglasii	Rose Cushion Phlox		L		

Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Phlox paniculata	Garden Phlox			M	H
Phlox subulata	Creeping Phlox			M	
Platycodon grandiflorus	Blue Balloon Flower			M	H
Polemonium caeruleum	Jacob's Ladder			M	
Polygonum affine	Himalayan Border Jewel			M	H
Potentilla atrosanguinea	Red Cinquefoil		L		
Potentilla hippiana	Wooly Cinquefoil		L		
Potentilla nepalensis	Miss Wilmott Cinquefoil			M	
Potentilla neumanniana	Creeping Cinquefoil		L		
Potentilla verna nana	Creeping Potentilla		L	M	
Primula parryi	Rocky Mountain Primrose				H
Prunella laciniata	Lacy Self-Heal		L		
Pulmonaria 'Roy Davidson'	Roy Davidson Pulmonaria			M	
Pulsatilla vulgaris	Pasqueflower		L		
Ratibida columnifera	Prairie Coneflower	VL			
Rosmarinus officinalis	Lemon Rosemary		L		
Rudbeckia fulgida	Goldstrum Daisy		L		
Rudbeckia hirta	Black-Eyed Susan		L		
Sagina subulata	Pearlwort			M	
Salvia azurea grandiflora	Pitcher Salvia		L	M	
Salvia daghestanica Platinum	Platinum Sage		L		
Salvia darcyi	Vermillion Bluffs Sage			M	
Salvia greggii 'Furman's Red'	Furman's Red Sage		L	M	
Salvia greggii Wild Thing	Wild Thing Sage		L	M	
Salvia nemorosa	Salvia		L		
Salvia officinalis	Garden Sage		L	M	
Salvia pachyphylla	Mojave Sage		L	M	
Salvia verticillata 'Purple Rain'	Purple Rain Salvia			M	
Santolina chamaecyparissus	Lavender Cotton		L	M	

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Santolina rosmarinifolia	Green Lavender Cotton		L		
Saponaria ocymoides	Rock Soapwort		L	M	
Scabiosa columbaria	Pincushion Flower		L		
Scabiosa lucida	Dwarf Pincushion Flower		L		
Scutellaria alpina 'Arcobaleno'	Rainbow Skullcap			M	
Scutellaria suffrutescens	Cherry Skullcap		L	M	
Sedum acre evergreen	Goldmoss-Utah Stonecrop		L		
Sedum 'Autumn Joy'	Autumn Joy Stonecrop		L		
Sedum 'Blue Spruce'	Blue Creeping Stonecrop		L		
Sedum hybridum	Oak-leaf Stonecrop		L		
Sedum 'Robustum'	Red-leaf Showy Stonecrop		L		
Sedum spectabile 'Indian Chief'	Russet Showy Stonecrop		L		
Sedum spurium 'Dragon's Blood'	Dragon's Blood Stonecrop		L		
Sedum spurium 'Red Carpet'	Red Carpet Stonecrop		L		
Sempervivum species	Hen and Chicks	VL	L		
Seseli gummiferum	Moon Carrot		L	M	
Sidalcea 'Partygirl'	Prairie Mallow			M	
Sisyrinchium macrocephalum	Yellow-Eyed Grass			M	
Sisyrinchium montanum	Blue-Eyed Grass			M	
Solidago 'Golden Baby'	Golden Baby Goldenrod		L		
Solidago rugosa 'Fireworks'	Fireworks Goldenrod			M	
Sphaeralcea munroana	Orange Globe Mallow	VL	L		
Stachys byzantina	Lamb's Ears		L		
Stachys monnieri 'Hummelo'	Hummelo Betony			M	
Stokesia laevis	Stokes Aster			M	
Tanacetum densum amani	Partridge Feather	VL			

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Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Tanacetum niveum	Snow Daisy Tansy		L	M	
Tanacetum x coccineum	Painted Daisy		L		
Teucrium chamaedrys	Wall Germander		L	M	
Thalictrum aquilegifolium	Columbine Meadowrue			M	
Thalictrum flavum glaucum	Yellow Meadowrue			M	
Thalictrum rochebrunianum	Lavender Meadowrue			M	
Thermopsis divaricarpa	Golden Banner			M	
Thymus praecox	Creeping Thyme		L		
Thymus spp.	Thyme species		L	M	
Thymus x citriodorus	Lemon Thyme		L	M	
Tiarella wherryi	Foamflower			M	
Townsendia grandiflora	Large-flower Easter Daisy		L		
Tradescantia andersoniana 'Red Cloud'	Red Cloud Spiderwort		L		
Tradescantia occidentalis	Blue Spiderwort			M	
Trollius chinensis 'Golden Queen'	Golden Queen Globeflower			M	
Verbena bipinnatifida	Native Verbena		L		
Veronica allionii	Allioni Speedwell		L		
Veronica austriaca 'Crater Lake Blue'	CraterLakeBlue Speedwell		L		
Veronica Crystal River	Crystal River Speedwell		L		
Veronica filiformis	Birdseye Speedwell		L		
Veronica liwanensis	Turkish Veronica		L	M	
Veronica pectinata	Woolly Speedwell		L		
Veronica prostrata	Prostrate Speedwell		L		
Veronica repens	Creeping Speedwell		L		
Veronica spicata	Speedwell		L		
Veronica 'Sunny Border Blue'	Sunny Border Blue Speedwell		L		
Vinca major	Big-leaf Periwinkle			M	
Vinca minor	Periwinkle		L		
Viola cornuta	Tufted Pansy			M	
Viola corsica	Corsican Violet			M	

Table 1-7: Perennials					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Viola odorata</i>	English Violet			M	
<i>Waldsteinia ternata</i>	Barren Strawberry		L		
<i>Wisteria sinensis</i>	Lavender Wisteria			M	
<i>Zauschneria californica latifolia</i>	Hummingbird Flower		L		
<i>Zauschneria garrettii</i>	Orange Carpet California Fuchsia		L		
<i>Zinnia grandiflora</i>	Prairie Zinnia	VL	L		

G. Ornamental Grasses

Table 1-					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
<i>Agropyron smithii</i> or <i>Pascopyrum smithii</i>	Western Wheatgrass		L		
<i>Andropogon gerardii</i>	Big Bluestem		L	M	
<i>Arrhenatherum elatius</i>	Bulbous Oatgrass			M	
<i>Bouteloua curtipendula</i>	Sideoats Grama		L		
<i>Bouteloua gracilis</i>	Blue Grama		L		
<i>Briza media</i>	Rattlesnake or Quaking Grass				
<i>Calamagrostis acutiflora</i>	Feather Reed Grass			M	
<i>Chasmanthium latifolium</i>	Northern Sea Oats			M	
<i>Deschampsia caespitosa</i>	Tufted Hair Grass			M	
<i>Elymus arenarius</i>	Blue Lyme Grass				
<i>Eragrotis trichodes</i>	Sand Love Grass		L		
<i>Festuca cinerea</i> , F. <i>ovina</i> or F. <i>glauca</i>	Blue Fescue		L	M	
<i>Glyceria maxima variegata</i>	Variegated Mannagrass				
<i>Helictotrichon sempervirens</i>	Blue Oatgrass		L		
<i>Holcus lanatus</i>	Velvet Grass			M	
<i>Koeleria cristata</i> , K. <i>gracilis</i> or K. <i>macrantha</i>	Prairie Junegrass		L	M	

Table 1-					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Leymus spp. or Luzula spp.	Woodrush			M	
Melica ciliata	Hairy Melic Grass				
Miscanthus floridulus or M. giganteus	Giant Chinese Silvergrass			M	
Miscanthus oligostachys	Japanese Silvergrass			M	
Miscanthus sacchariflorus	Silver Banner Grass			M	
Molina caerulea	Moor Grass			M	
Muhlenbergia spp.	Muhly Grass		L		
Oryzopsis hymenoides	Indian Ricegrass		L		
Panicum virgatum	Switchgrass		L		
Pennisetum alopecuroides	Feathergrass			M	
Pennisetum setaceum	Tender Fountain Grass			M	
Pennisetum villosum	Feather Top			M	
Rychelytrum neriglume	Ruby Grass				
Schizachyrium scoparium or Andropogon scoparius	Little Bluestem		L		
Sesleria autumnalis	Autumn Moorgrass				
Sorghastrum avenaceum or S. avenaceum	Indian Grass		L		
Spartina spp.	Cordgrass			M	
Spartina pectinata	Prairie Cordgrass			M	
Spodiopogon spp.	Frost or Graybeard Grass				
Sporobolus heterolepis	Prairie Dropseed			M	
Sporobolus wrightii	Giant Sacaton	VL	L	M	

H. Turf Grasses

Table 1-					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Bouteloua gracilis	Blue Grama		L		
Buchloë dactyloides	Buffalograss		L		
Festuca elatior cvs.	Turf-type Tall Fescue			M	

Table 1-					
Botanical Name	Common Name	Water Need (Hydrozone)			
		Very Low	Low	Medium	High
Festuca spp.	Fine Fescues, chewings & hard				
Lolium perenne	Perennial Ryegrass				
Poa pratensis	Kentucky Blue Grass				H

I. Additional Resources

1. The *Front Range Tree Recommendation List* published by CSU Extension.

