

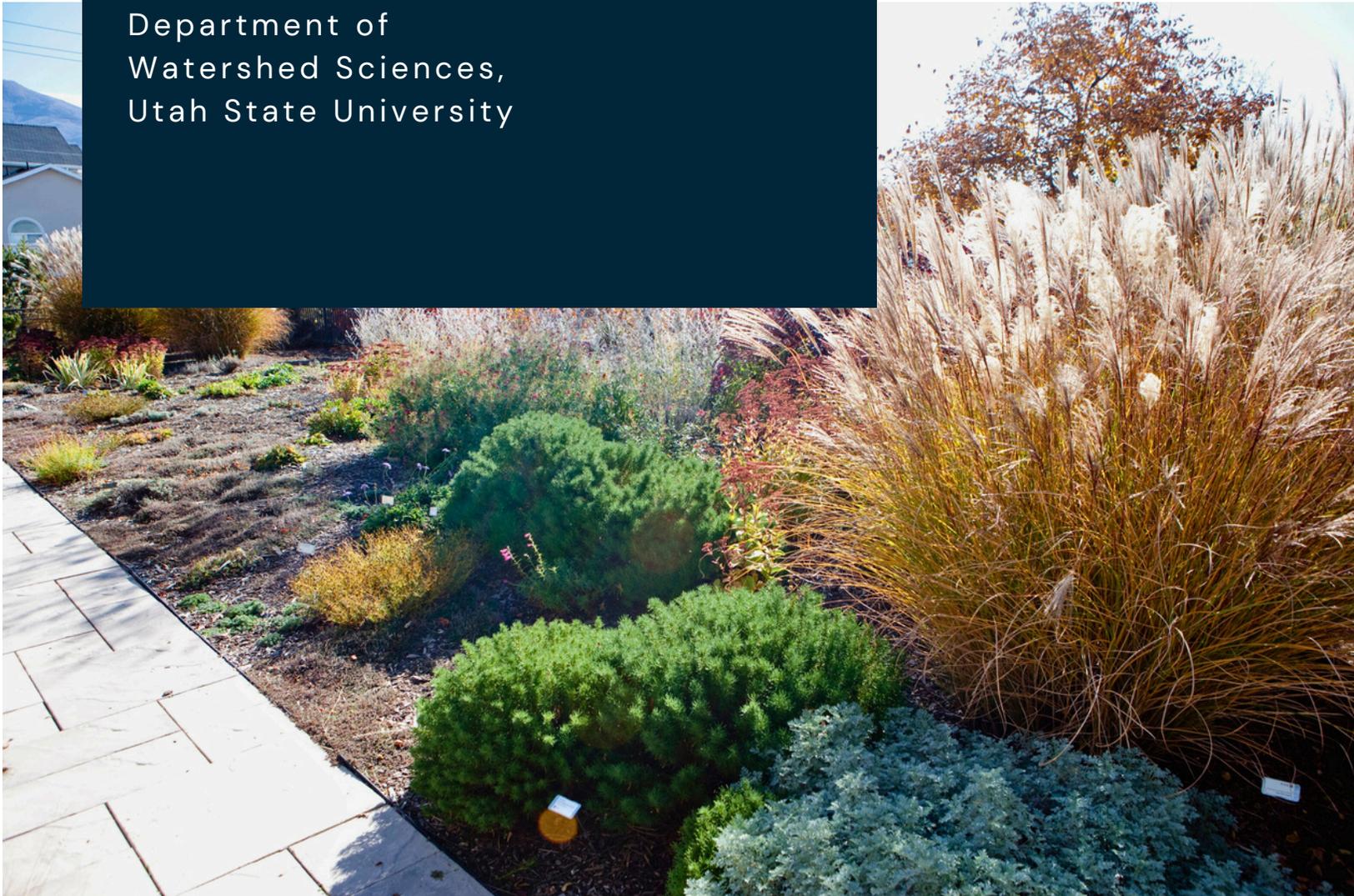
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APPENDIX 5

# Low-Impact Development Planting Guide

**PREPARED FOR :**  
Master's Degree Project

Department of  
Watershed Sciences,  
Utah State University



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## Stormwater & Low-Impact Development in Arid Regions & Utah

Rapid population growth and development is placing pressure on the limited water resources in Western states. Urbanization increases impervious surfaces preventing precipitation from infiltrating into the ground effectively, which results in changes to hydrologic conditions with higher runoff volumes and higher peak flows. Stormwater flows across impervious surfaces transporting urban pollutants and discharging them into receiving waters. As cities grow, the amount of pollution entering waterways increases in turn. A rapid transition from undeveloped to developed environments is occurring across the state of Utah.

In Utah, natural landscapes and agricultural lands are being developed rapidly to accommodate population growth. Undeveloped areas have natural ground cover, including soil and plants to help infiltrate water and decrease the amount of runoff that leaves a site during precipitation events (Figure 1). Plants use a portion of the water, then transpire and evaporate the rest back into the surrounding environment in a process known as evapotranspiration. In arid and semi-arid climates, evapotranspiration accounts for the highest percentage of water leaving an undeveloped, natural system. A much smaller portion of water is stored in soil or infiltrates down to recharge ground aquifers. Only a small percentage of water leaves a site as runoff. In undeveloped watersheds, runoff gradually drains across the landscape to waterways.

In developed areas, much of the natural ground cover is replaced with impervious surfaces such as roads, rooftops, and parking lots. Precipitation cannot easily soak through impervious surfaces causing more water to leave the system as runoff, while the decrease in vegetation results in a loss to total evapotranspiration (Figure 1).

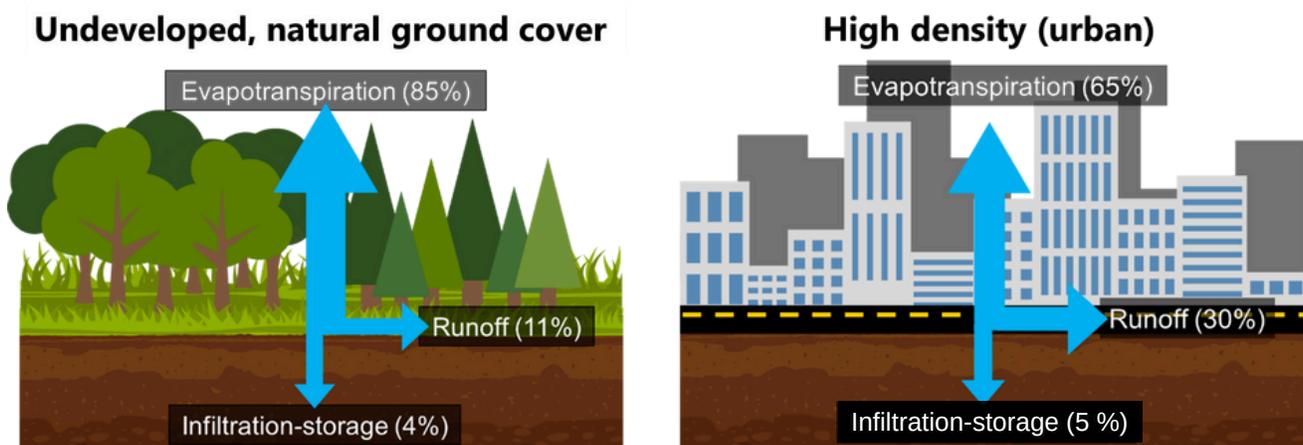


Figure 1. Magnitude of hydrologic pathways in undeveloped and urban land uses in arid regions.

Many urban watersheds use traditional “collect-and convey” pipe drainage systems, which carry large volumes of stormwater directly to surface waters, often without any form of water treatment. Precipitation falls on impervious surfaces, then flows to pipes or drains in designated collection areas. The water is either piped directly to outlets in waterbodies or injected into stormwater collection systems underground. Water that is not captured by these systems, infiltrated into the ground, or evaporated flows across impervious surfaces eventually entering waterways as urban runoff.

The hydrologic impacts of urbanization are well-documented, including higher runoff volumes and more frequent and higher peak flows (D.B. Booth, 1997; Konrad & Booth, 2002). Higher runoff volumes send pulses of energy through a system increasing stream channel erosion and pollutant loading. Stormwater runoff flows quickly over impervious surfaces picking up and discharging urban pollutants—such as oils, chemicals, sediment, microplastics, and organic materials that impair water quality—into surface waters.

## **Benefits of LID**

A low-impact development (LID) approach to stormwater management aims to mimic predevelopment hydrologic conditions and utilizes stormwater as a resource to retain precipitation onsite longer. Low-impact development techniques are used to improve infiltration, evapotranspiration, and the harvesting and/or reuse of runoff. The focus of LID practices is to preserve, restore, and create green spaces using regional and site-specific soils and vegetation to help capture and collect stormwater.

Using LID practices reduces development impacts, while restoring natural hydrologic conditions and providing aesthetic benefits. The use of LID provides many benefits, including lower runoff volumes and peak flows, less impervious surfaces, more vegetation, fewer pipes and underground stormwater infrastructure, better water quality and habitat protection, decreases in the urban heat-island effect, and less erosion of stream channels.

Urban environments in the southwestern U.S. have a small but disproportionate impact on water quality relative to their size (Gallo et al., 2012; Grimm et al., 2008). Urban runoff is considered one of the leading sources of anthropogenic water quality impairment behind agricultural runoff. The volume of runoff discharged into urban-interfacing waterbodies creates significant water quality issues. Properly managing stormwater in water-limited landscapes is crucial for long-term water quality and habitat protection. Many Utah counties are experiencing, or soon will be, the growing challenge of stormwater management as more landscapes transition from undeveloped to developed. Implementing sustainable stormwater management practices, such as LID in areas expected to see exponential growth in the next 25 years is critical to avoid the expensive and difficult task of restoring impaired waters.

## Benefits of Vegetation in LID Design

Vegetation is an important part of the success of BMPs. Plants can be selected to provide specific benefits such as pollutant uptake, erosion protection, increased percolation, wildlife habitat, aesthetic appeal, and heat reduction.

*Table 1. Adapted from DWQ's LID Manual ("A Guide to LID," 2020, pgs. 39-40)*

| Benefit                           | Purpose  |
|-----------------------------------|--|
| <b>Pollutant Reduction</b>        | <ul style="list-style-type: none"> <li>• Uptake pollutants through their root systems and utilize the contaminants to promote vegetative growth above ground.</li> <li>• Break down otherwise harmful pollutants and either minimize pollutants to acceptable levels or reduce them altogether.</li> </ul>   |
| <b>Protects Soil from Erosion</b> | <ul style="list-style-type: none"> <li>• Providing protective cover.</li> <li>• Slow down runoff and holding soil in place, fewer soil particles carried downstream, and surface water can soak into the soil.</li> <li>• Roots help to bind the soil, reducing wind and water displacement.</li> <li>• Roots help to stabilize embankments and slopes.</li> </ul> |
| <b>Increase Percolation Rates</b> | <ul style="list-style-type: none"> <li>• Voids created in the soil by plants allow water to move more freely for plant uptake or groundwater infiltration.</li> </ul>  |
| <b>Wildlife Habitat</b>           | <ul style="list-style-type: none"> <li>• Plants offer wildlife food, shelter, water, and space needed for survival.</li> <li>• When wildlife occupies the area, they contribute to vegetation distribution and help to control growth.</li> </ul>  |
| <b>Aesthetics/ Mental Health</b>  | <ul style="list-style-type: none"> <li>• Add beauty and aesthetics to the landscape.</li> <li>• Makes BMPs more visually pleasing and increases acceptance of BMP practices within urbanized areas.</li> <li>• In increasingly urbanized and developed areas, they provide respite and a sense of connectivity to nature.</li> </ul>                               |
| <b>Heat Reduction</b>             | <ul style="list-style-type: none"> <li>• Mitigate the effect of heat islands created by development through increased shading and green spaces.</li> <li>• Plants near buildings help provide shade and insulation, which creates a cooling effect and helps to mitigate cooling costs from urban living.</li> </ul>   |

## Vegetation Considerations

There are many factors that can influence the establishment and longevity of plants used with LID practices. Some of the most important factors to consider include site conditions and a plant's adaptability to various conditions, water needs, soil needs, ability to tolerate pollutants, heat, cold, wind, flooding, and drought.



### Site and Growing Conditions

It is important to match the needs of selected plants to site conditions. Urban environments can create microclimates when sunlight and heat absorb into roadways and reflect off pavement, concrete, and glass. Increasing temperatures due to the urban heat island effect can cause increases in evapotranspiration rates. Development disturbs soils causing changes in natural drainage patterns and soil porosity and structure. Plants need to be tolerant of and adaptable to changing site conditions due to urban pollution (e.g., salts, poor air quality, grease, etc.), temperature fluctuations, and nutrient and water availability. Native species are a good choice because they are better adapted to changing site conditions, but plants that are highly tolerant of a variety of soils and frequent water and temperature changes may also be suitable.



### Water Needs

In arid to semi-arid climates, such as Utah, a plant's water needs and ability to withstand periods of drought is particularly important. Fluctuation in soil moisture is common in desert environments. This should be taken into consideration as plants that can adapt to wide fluctuations in soil moisture will be better suited to Utah's climate. Additionally, water restrictions are common during periods of drought. Plants that need less water or that are tolerant of drought will be less stressed as well as conserve water. On the other hand, plants that can withstand saturated soils, flooding, and ponding are well suited to LID practices designed to increase stormwater infiltration rates.



## Soil Needs

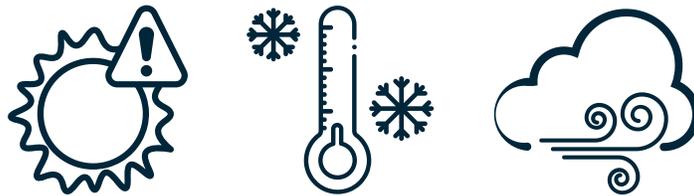
Plants have soil preferences including consistency, drainage, and pH. It is important to consider these factors when selecting plants for a site. Natural and/or engineered soils may need to be enhanced to help plants establish and succeed. Some plants are nitrogen fixers and can work symbiotically with soil microbes to improve soil naturally. Soil porosity and structure will impact drainage and infiltration. Soil structure also impacts plants' root systems and ability to withstand various stormwater volumes and velocities.



## Pollution Tolerance

Tolerance to salts is an important factor in plant selection for urban environments. Some plants prefer slightly saline environments and are good choices for LID practices in sites where salt concentrations are higher in stormwater runoff.

Air pollution tolerance should also be considered. Some plants prefer environments with higher carbon concentrations and would be ideal for urban areas. Plants can also play a role in CO<sub>2</sub> sequestration.



## Heat, Cold, and Wind Tolerance

A plant's ability to survive local climate is key to its survival. Selected plants should be adapted to or tolerant of seasonal temperature changes, including maximum and minimum temperatures, and exposure to direct sun, frost, snow, and wind. The DWQ has developed a [map of plant hardiness zones](#) that labels areas in Utah according to their lowest annual minimum temperature. Plants should only be grown in their identified hardiness zones.

Heat tolerance is also an important factor in plant survival. Consider the average number of days the site location experiences extreme heat when selecting plants. The urban heat island effect, as well as impervious and reflective surfaces, may exacerbate temperatures on site. Drought conditions and increased evapotranspiration will play a larger role in especially hot and dry desert regions.

The Utah DWQ recommends the following steps when selecting vegetation for specific LID BMP types (“A Guide to LID,” 2020, pg. 44):

1. Consider consulting relevant professionals such as engineers, landscape architects, and/or horticulturalists to help select plants and design each BMP.
2. Identify the hardiness zone(s) at the site.
3. Identify which BMPs will be used.
4. Determine if there are any microclimates within the site that need to be considered.
5. Identify plants that will best work for the BMP based on the hardiness zone and site’s microclimates.
6. Develop a landscape plan that considers site conditions, erosion protection, pollutant mitigation, human use of and interaction with the site, creation of wildlife habitat, aesthetics, and site and BMP maintenance.

## LID Planting Guide Development

This guide was designed to supplement the Utah Division of Water Quality’s “Utah Plant Selection Matrix by Climate Zone and BMP” list included in their [LID manual](#) called “A Guide to Low Impact Development within Utah.” The plant selection matrix contains regionally appropriate trees, grasses, shrubs, groundcover, perennials, vines, cacti, and succulents for the LID BMPs covered in the DWQ manual.

The purpose of this planting guide is to add supplemental information about each plant’s benefits and qualities. The goal is to help stormwater professionals select the best plants for the LID-type they are designing while considering the co-benefits the plant offers, such as pollution tolerance, adaptations, water needs, etc. Extensive efforts were made to make as comprehensive a list as possible; however, not all plants in the DWQ LID Manual were covered, so it should not be considered definitive.

See the [Plant List Keys](#) page to interpret the additional benefits and plant characteristics added to the plants lists. Use the [Plant Hardiness Zones map](#) to determine the best regions to grow each plant.

Low-Impact Development  
Best Management  
Practice Types



# BIORETENTION CELLS

Bioretention cells are shallow bioretention areas with a distinct boundary, such as a curb or wall, designed to retain a predetermined volume of runoff. Retaining stormwater allows it to slowly infiltrate into the soil and gives plants an opportunity to naturally treat the water through nutrient and pollutant uptake. The most effective bioretention cells are aesthetically pleasing, while properly retaining their design volume of runoff.

Designs can include drainage systems or use native or engineered layers of soil, sand, and aggregate to achieve the desired infiltration rate. Soil layers may also provide water storage. It is important for the design to support vegetation and landscape features. Carefully selecting plants for their desired benefits will provide the best opportunity for nutrient and pollutant uptake as well as aesthetic appeal.

Bioretention cells are particularly effective at removing pollutants from stormwater.

| Pollutant  | Effectiveness |
|------------|---------------|
| Sediment   | High          |
| Nutrients  | High          |
| Metals     | High          |
| Bacteria   | High          |
| Oil/Grease | High          |

## Primary Functions:



- Bioretention
- Volume Retention
- Biofiltration



## Benefits:

- Reduces and treats runoff from the surrounding area.
- Can be integrated into densely developed urban settings.
- Increases biodiversity & habitat in urban areas.
- Increases green space in developed areas.
- Can be designed to provide traffic calming in residential areas.

## Maintenance Requirements

Table 2. The following table has been remade from the DWQ's bioretention maintenance activity table in their LID manual ("A Guide to LID," 2020, pg. C-14).

| Inspection  | Frequency                            | Maintenance Activity  | Effort   |
|---|--------------------------------------|---|----------|
| Inspect for adequate vegetative coverage, and impaired or failing vegetation.         | Semiannual (Spring, Fall)            | Reseed/replant barren spots. Notify the engineer if failing vegetation persists.  | Low      |
| Inspect for trash and debris within basin and at inlet and outlet structures.         | Semiannual (Spring, Fall), as needed | Remove and dispose of trash and debris.   | Low      |
| Inspect for large deposits of sediment on bottom indicating soil clogging.            | Semiannual (Spring, Fall), as needed | Remove and dispose of built-up sediment when buildup causes reduction in size of basin or if buildup results in standing water. Notify the engineer in the case of standing water as it may indicate clogging within the basin's soil layers. | Low      |
| Inspect for standing water within bioretention cell or within observation well.       | Semiannual (Spring, Fall)            | Notify the engineer for further inspection.   | Moderate |
| Inspect for failure of additional features such as underdrains or irrigation systems. | Semiannual (Spring, Fall)            | Repair as needed.   | Moderate |

## Plant Selection

Bioretention cells are used to increase infiltration and nutrient uptake. A variety of plants can provide these benefits including trees, shrubs, grasses, and other plants suitable for the local climate. This BMP usually receives more stormwater runoff pollution due to being located near roadways. It also receives water from every storm event. Therefore, the best plants for bioretention cells:

- Can tolerate moist to boggy soils.
- Can tolerate salts and urban pollutants.
- Can uptake nutrients well.
- Can neutralize pollutants well.



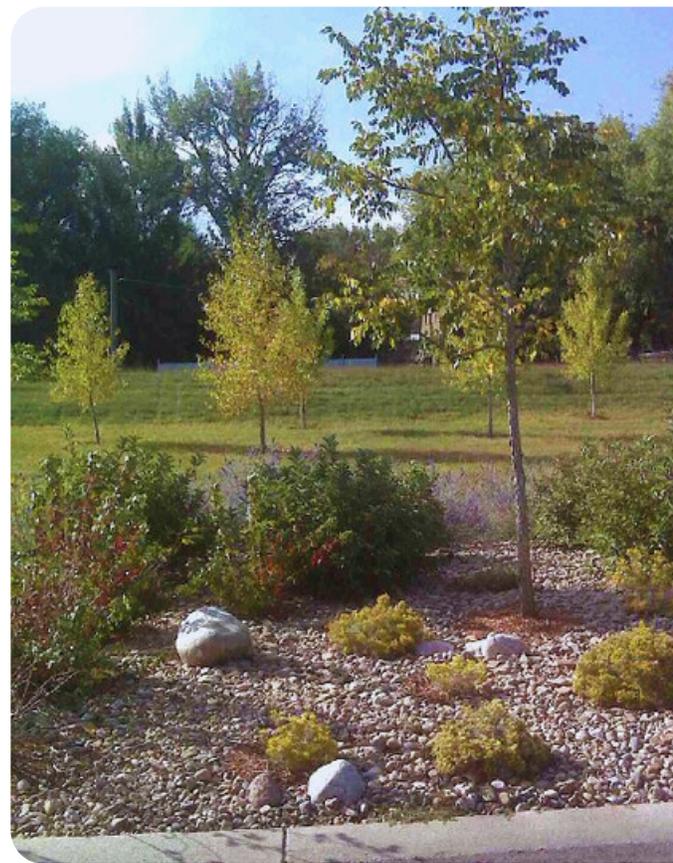
# RAIN GARDENS

Rain gardens are shallow bioretention areas designed to retain a predetermined volume of runoff, allowing it to slowly infiltrate into the soil and giving plants an opportunity to naturally treat the water through nutrient and pollutant uptake. These BMPs differ from bioretention cells because they are not constrained by a definitive boundary. The most effective rain gardens are aesthetically pleasing, while properly retaining their design volume of runoff.

Designs can include drainage systems or use native or engineered layers of soil, sand, and aggregate to achieve the desired infiltration rate. Soil layers may also provide water storage. It is important for the design to support vegetation and landscape features. Carefully selecting plants for their desired benefits will provide the best opportunity for nutrient and pollutant uptake as well as aesthetic appeal.

Rain gardens are particularly effective at removing pollutants from stormwater.

| Pollutant  | Effectiveness |
|------------|---------------|
| Sediment   | High          |
| Nutrients  | High          |
| Metals     | High          |
| Bacteria   | High          |
| Oil/Grease | High          |



## Primary Functions:



- Bioretention
- Volume Retention
- Biofiltration



## Benefits:

- Reduces and treats runoff from the surrounding area.
- Native, drought tolerant plants in rain gardens typically require little to no maintenance once established.
- Provides shade and local cooling effects.
- Creates neighborhood greening and aesthetic benefits.

## Maintenance Requirements

Table 3. The following table has been remade from the DWQ's rain gardens maintenance activity table in their LID manual ("A Guide to LID," 2020, pg. C-7-8).

| Inspection  | Frequency                            | Maintenance Activity  | Effort   |
|---|--------------------------------------|---|----------|
| Inspect for adequate vegetative coverage, and impaired or failing vegetation.         | Semiannual (Spring, Fall)            | Reseed/replant barren spots. Notify the engineer if failing vegetation persists.  | Low      |
| Inspect side slopes for erosion, rilling, and sloughing.                              | Semiannual (Spring, Fall)            | Regrade side slope if sloughing does not impact slope stability. Notify the engineer if side slope stability has been compromised and is affecting the functionality of the basin.  | Low      |
| Inspect for trash and debris within basin and at inlet and outlet structures.         | Semiannual (Spring, Fall), as needed | Remove and dispose of trash and debris.   | Low      |
| Inspect for large deposits of sediment on bottom indicating soil clogging.            | Semiannual (Spring, Fall), as needed | Remove and dispose of built-up sediment when buildup causes reduction in size of basin or if buildup results in standing water. Notify the engineer in the case of standing water as it may indicate clogging within the basin's soil layers. | Low      |
| Inspect for standing water within bioretention cell or within observation well.       | Semiannual (Spring, Fall)            | Notify the engineer for further inspection.   | Moderate |
| Inspect for failure of additional features such as underdrains or irrigation systems. | Semiannual (Spring, Fall)            | Repair as needed.   | Moderate |

## Plant Selection

Rain gardens are used to increase infiltration and nutrient uptake. A variety of plants can provide these benefits including trees, shrubs, grasses, and other plants suitable for the local climate. This BMP usually receives more stormwater runoff pollution due to being located near roadways. It also receives water from every storm event. Therefore, the best plants for rain gardens:

- Can tolerate moist to boggy soils.
- Can tolerate salts and urban pollutants.
- Can uptake nutrients well.
- Can neutralize pollutants well.



# VEGETATED STRIPS

Vegetated strips are designed to receive stormwater sheet flow from adjacent impervious surfaces and transport them to a planned receiving area. The vegetation slows runoff velocity allowing for bioretention and biofiltration. As runoff passes through the vegetation, it infiltrates into the soil, trapping sediment and filtering pollutants before entering the storm sewer system. The more vegetation coverage, the better the vegetated strip will function.

This BMP is best used near roadways, parking lots, and other large areas with impervious surfaces. Vegetated strips can be used as an LID practice or as part of construction activities.

| Pollutant  | Effectiveness* |
|------------|----------------|
| Sediment   | High           |
| Nutrients  | Moderate       |
| Metals     | Moderate       |
| Bacteria   | High           |
| Oil/Grease | High           |

\*Removal effectiveness is increased for all pollutants as retention increases.



## Primary Functions:

- Bioretention
- Some Volume Retention
- Biofiltration



## Benefits:

- Reduces and treats runoff from the surrounding area.
- Can be integrated into densely developed urban settings.
- Increases biodiversity & habitat in urban areas.
- Provides local cooling effects.
- Creates greening and aesthetic benefits in developed areas.

## Maintenance Requirements

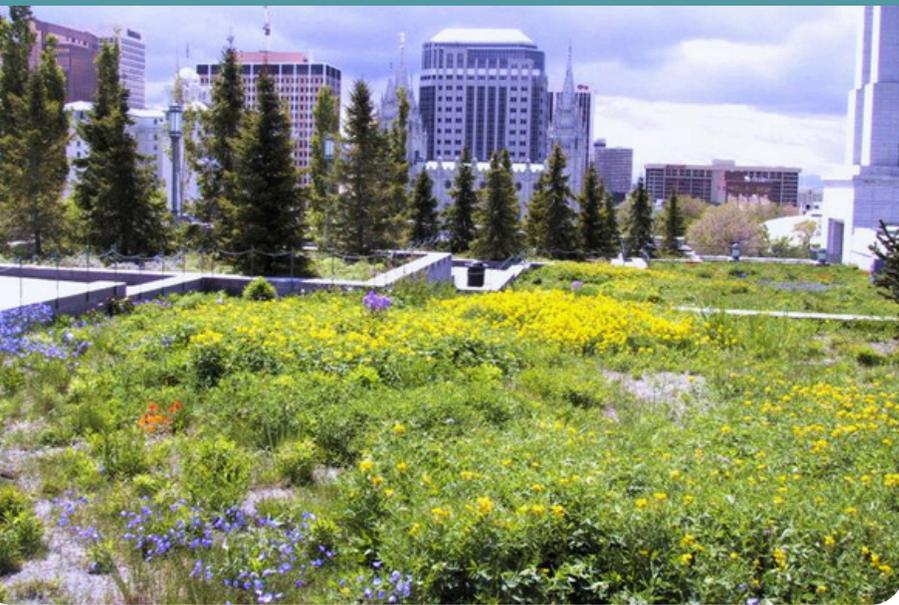
Table 4. The following table has been remade from the DWQ's vegetated strips maintenance activity table in their LID manual ("A Guide to LID," 2020, pg. C-27).

| Inspection  | Frequency                            | Maintenance Activity   | Effort |
|---|--------------------------------------|--|--------|
| Inspect upstream end of vegetated strip for sediment buildup that may be impeding sheet flow. | Semiannual (Spring, Fall), as needed | Remove and dispose of sediment buildup.  | Low    |
| Inspect grass length.   | As needed                            | Mow strip as needed.   | Low    |
| Inspect for erosion, rilling, and sloughing.  | Semiannual (Spring, Fall)            | Regrade side slope if slope stability is not affected by sloughing. Notify engineer if stability is affecting basin functionality. | Low    |
| Inspect for adequate vegetative coverage, and impaired or failing vegetation.                 | Semiannual (Spring, Fall), as needed | Reseed/replant barren spots. Notify the engineer if failing vegetation persists.   | Low    |

## Plant Selection

Vegetated strips are used to capture and treat sheet flow from nearby impervious surfaces, such as parking lots and roads. A variety of plants can be used including grasses, forbs, and ground cover. However, in arid regions, it is common to use fewer plants and more gravel. It should be noted that fewer plants significantly reduces the amount of biofiltration possible. This BMP usually has limited planting space, so consider the size of the location when selecting plants. The best plants for vegetated strips:

- Will not require additional fertilization.
- Can tolerate salts and urban pollutants.
- Can tolerate heat and reflectivity from pavement and buildings.
- Can tolerate trampling.



# GREEN ROOFS

Green roofs are designed to retain, treat, filter, and transport rooftop runoff. The volume of water that will be retained determines the design. Additionally, the design must consider the load-bearing capacity of the roof structure on which the plants will be installed. The roof must be able to support the weight of the plants, soil, and captured water. Plants chosen will impact the weight load on the building (e.g., trees have more weight than grasses). Green roofs must be designed, installed, and maintained by qualified personnel.

The species of plants chosen, as well as plant establishment and health, will determine the depth of soil and capacity for retention and filtration.

| Pollutant  | Effectiveness* |
|------------|----------------|
| Sediment   | High           |
| Nutrients  | Moderate       |
| Metals     | High           |
| Bacteria   | High           |
| Oil/Grease | N/A            |

\*Removal effectiveness is increased for thicker soil layers.



## Primary Functions:

- Bioretention
- Volume Retention
- Biofiltration



## Benefits:

- Reduces and treats building runoff.
- Provides habitat for wildlife such as pollinators and birds.
- Creates neighborhood greening, recreational, and aesthetic benefits.
- Reduces the urban heat island effect.
- Protects roof from solar exposure.
- Insulates and lowers building energy costs.

## Maintenance Requirements

Table 5. The following table has been remade from the DWQ's green roofs maintenance activity table in their LID manual ("A Guide to LID," 2020, pg. C-34).

| Inspection               | Frequency                            | Maintenance Activity  | Effort   |
|--------------------------|--------------------------------------|---|----------|
| Inspect weed growth.     | 2-4 weeks during growing season      | Remove weeds before they flower.  | High     |
| Inspect fertilization.   | Annually                             | Apply fertilizer in accordance with manufacturer recommendations. Avoid hottest/driest parts of the year. | Moderate |
| Inspect water retention. | Semiannual (Spring, Fall), as needed | If natural precipitation is not adequate for vegetation, water plants.                                    | High     |

## Plant Selection

Green roof plant selection should be determined by the structure of the building, the type of installment desired, and the maintenance capacity. The weight of the plants should also be considered. A variety of plants can be used including succulents, cacti, grasses, shrubs, and (less commonly) trees. Groundcovers, grasses, and perennials generally require more watering and maintenance. Native plants may not succeed in rooftop environments. A plants hardiness should be considered. Therefore, the best plants for green roofs:

- Can grow in human-made environments.
- Can grow in shallow soils.
- Are drought tolerant or require low watering once established.
- Can tolerate wind, heat, frost, reflectivity, and fire.
- Can adapt to or tolerate salts.
- Require lower maintenance.
- Can reduce erosion.



# TREE BOX FILTERS

Tree box filters are bioretention systems used when there is limited space. The design depends on whether the primary function will be water quality volume (retention) or flow (treatment). Both designs will also depend on the surrounding drainage area and imperviousness. The filters are generally designed to allow stormwater to flow through and receive treatment by the mulch, soil matrix, and plant roots. However, if the filter box is bottomless, the water can be retained and infiltrated into the native soils below.

Proper maintenance is important for the effective use of tree box filters. The flow filters must be clear of debris and trash to allow water to effectively flow through the system. Maintaining the soil and vegetation is important for the proper chemical and biological treatment to occur.

| Pollutant  | Effectiveness |
|------------|---------------|
| Sediment   | High          |
| Nutrients  | Moderate      |
| Metals     | Moderate      |
| Bacteria   | High          |
| Oil/Grease | High          |

## Primary Functions:



- Bioretention
- Volume Retention Varies
- Biofiltration



## Benefits:

- Reduces and treats runoff from the surrounding area.
- Increases infiltration into soil and groundwater.
- Provides shade and local cooling effects.
- Creates neighborhood greening and aesthetic benefits.
- Can be installed almost anywhere, highly adaptable.

## Maintenance Requirements

Table 6. The following table has been remade from the DWQ's tree box filters maintenance activity table in their LID manual ("A Guide to LID," 2020, pg. C-30).

| Inspection   | Frequency                            | Maintenance Activity                         | Effort   |
|--|--------------------------------------|--|----------|
| Inspect for trash and debris within tree box filters and at inlet and outlet structures. | Semiannual (Spring, Fall), as needed | Remove and dispose of trash and debris.      | Low      |
| Inspect performance.   | Semiannual (Spring, Fall)            | Replenish media filter layer with new mulch. | Moderate |
| Inspect for invasive species.  | Semiannual (Spring, Fall)            | Prune and weed filter box.                   | Moderate |

## Plant Selection

Tree box filters are primarily used for stormwater treatment and bioretention. This BMP usually receives more stormwater runoff pollution due to being located near roadways. It also receives water from every storm event. Therefore, the best plants for tree boxes:

- Can tolerate moist to boggy soils.
- Can tolerate salts and urban pollutants.
- Can uptake nutrients well.
- Can neutralize pollutants well.



## Plant List Keys

Use these keys to interpret the following plant lists for each LID type.

For the Zone, refer to the [Plant Hardiness Zone map](#).

Each plant's soil needs are classified by type followed by a comma and the specialties.

### Soil types:

Variety  
Sandy  
Clay  
Loam  
Gravel  
Rocky

### Soil specialties:

Rich  
Dry  
Wet  
Humusy  
Peaty  
Acidic  
Alkaline

Each plant's water needs are classified by the amount followed by a comma and the drainage type.

### Water Amount:

Low  
Moderate  
High

### Drainage Type:

Well-drained  
Consistently moist

For the Drought Tolerant, Erosion Control, and Flooding Tolerant columns:

Y = Yes

N = No

### Plant Type:

T = tree  
SH = shrub  
G = grass  
P = perennial  
GC = groundcover  
V = vine  
C = cactus  
SU = succulent

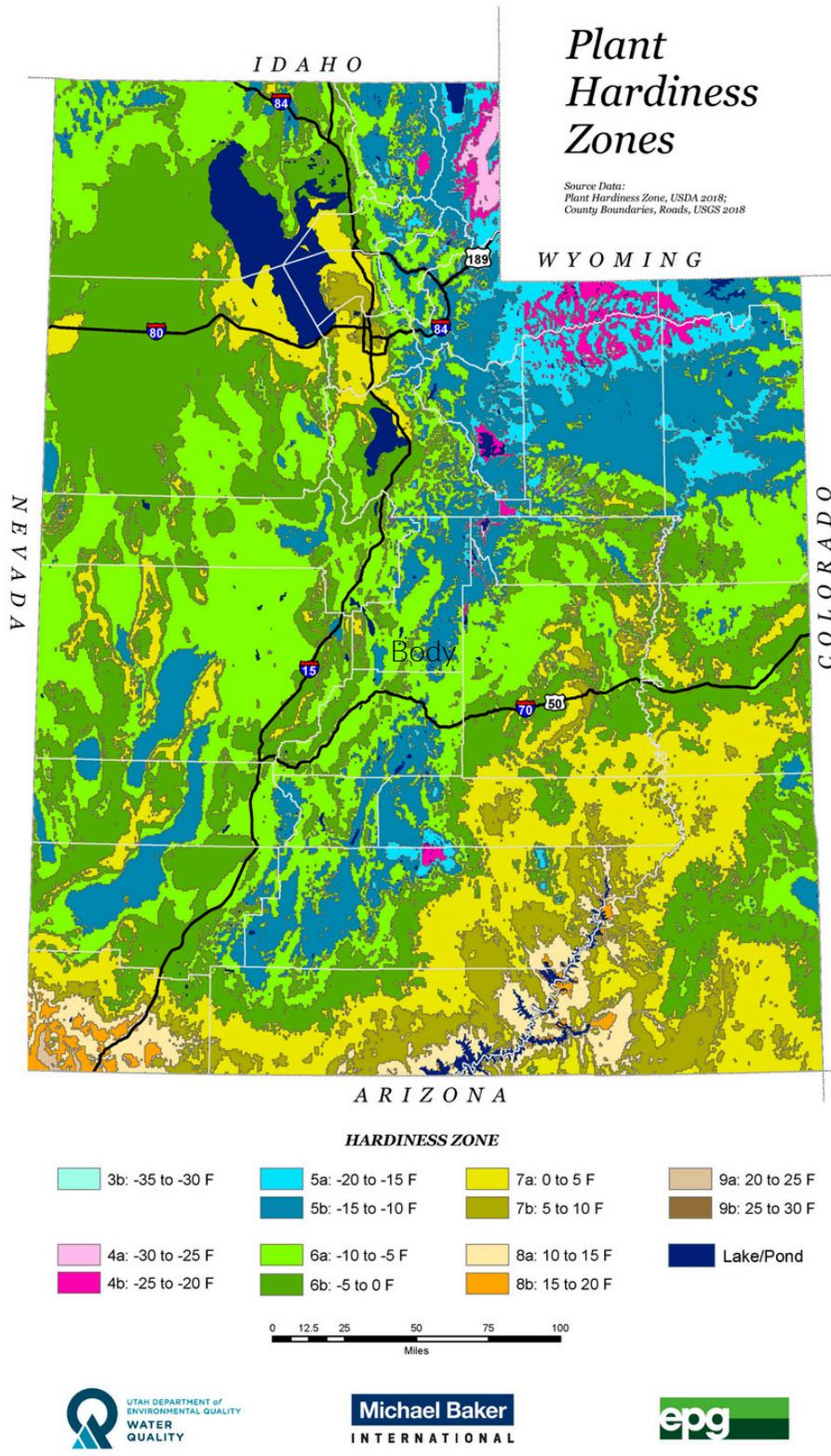
### Growth Rate:

S = slow  
M = moderate  
F = fast

### Light Needs:

○ = full sun  
◐ = full sun to part shade  
● = full shade

# Plant Hardiness Zone Map



Source: Utah Division of Water Quality's "Plant Hardiness Zones" map included in their [LID manual](#) called "A Guide to Low Impact Development within Utah."

# Plant Lists by LID BMP Type

| Bioretention Cells & Rain Gardens Plants List                               |            |       |                   |                    |                 |             |                          |             |                 |                              |                                  |   |
|---|------------|-------|-------------------|--------------------|-----------------|-------------|--------------------------|-------------|-----------------|------------------------------|----------------------------------|---|
| Scientific Name -<br>Common Name  | Plant Type | Zone  | Drought Tolerance | Flooding Tolerance | Erosion Control | Growth Rate | Mature Size (HxW)        | Light Needs | Soil Needs      | Water Needs                  | Native                           | Benefits  |
| Acer ginnala -<br>Amur Maple  | T          | 3b-8a | Y                 |                    |                 |             | H = 15-20'<br>W = 15-20' | ○           | Clay, rich      | Consistently moist           | NE Asia, NW United States        |   |
| Acer glabrum -<br>Rocky Mountain Maple                                      | T          | 5a-9b | Y                 |                    |                 |             | H = 10-30'<br>W = 10-30' | ○           |                 | Low                          | Utah                             | Adaptable to salt   |
| Acer macrophyllum -<br>Big Leaf Maple                                       | T          | 6a-7b |                   |                    |                 |             | H = 40-75'<br>W = 40-75' | ○           | Variety, acidic | Moderate, well drained       | British Columbia, S Alaska to CA |   |
| Acer rubrum -<br>Red Maple  | T          | 3b-9b | Y                 | Y                  |                 | M           | H = 40-70'<br>W = 30-50' | ○           | Variety, acidic | Moderate, well drained       | E and central North America      | Cold tolerant<br>Air pollution tolerant<br>Attracts birds   |
| Acer saccharinum -<br>Silver Maple  | T          | 4a-9b | Y                 | Y                  |                 | F           | H = 50-80'<br>W = 35-70' | ○           | Sandy, variety  | Moderate                     | E North America                  | Adaptable to salt<br>Urban, air pollution tolerant  |
| Acer tataricum -<br>Tatarian Maple  | T          | 3b-8b | Y                 |                    |                 | M           | H = 25-30'<br>W = 25'    | ○           | Variety         | Moderate, well drained       | SE Europe, W Asia                | Adaptable growing conditions<br>Adaptable to salt<br>Urban pollution tolerant   |
| Acer tataricum 'GarAnn' PP 15,023 -<br>HOT WINGS® Tatarian maple            | T          | 4a-9b | Y                 |                    |                 | M           | H = 15-25'<br>W = 15-20' | ○           | Variety         | Moderate                     | SE Europe, W Asia                | Adaptable growing conditions<br>Adaptable to salt<br>Urban pollution tolerant<br>Attracts pollinators<br>Wildlife resistant |
| Acer x freemanii 'Jeffersred' -<br>Autumn Blaze Maple                       | T          | 3b-8b | Y                 | Y                  |                 | F           | H = 40-55'<br>W = 30-40' | ⊙           | Acidic          | High, well-drained           | Cultivated                       | Urban pollution tolerant<br>Deer resistant  |
| Aesculus hippocastanum -<br>Horsechestnut                                   | T          | 3b-8b |                   |                    |                 | M           | H = 50-75'<br>W = 40-65' | ○           | Rich            | Moderate, well drained       | SE Europe, Asia                  | Rabbit resistant<br>Attracts pollinators  |
| Aesculus x arnoldiana 'Autumn Splendor' -<br>Autumn Splendor Horse Chestnut | T          | 4a-7b | N                 |                    |                 | M           | H = 35' x 30'            | ○           | Variety         | Moderate, consistently moist |                                  | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife                                  |
| Alnus sinuata -<br>Sitka Alder  | T          | 4a-5b |                   |                    | Y               | F           | H = 3-20'<br>W = 6-10'   | ○           | Clay, variety   | High, consistently moist     | W North America                  | Nitrogen fixer  |

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| Betula nigra -<br>River Birch                                    | T | 4a-9b | Y | Y | Y | F | H = 40-70'<br>W = 40-60'  | ○ | Variety, rich,<br>acidic        | High,<br>consistently<br>moist     | E United States                           | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Deer resistant<br>Attracts birds, pollinators                         |
| Betula occidentalis -<br>Water Birch                             | T | 3a-5b | Y | Y |   | F | H = 10-40'<br>W = 10-30'  | ○ | Variety                         | Moderate,<br>consistently<br>moist | Utah, W North<br>America, S<br>Canada     | Adaptable to salt<br>Wind tolerant<br>Ornamental   |
| Betula papyrifera -<br>Paper Birch                               | T | 3b-6b |   |   | Y | F | H = 50-70'<br>W = 25-50'  | ○ | Variety                         | Moderate, well<br>drained          | North America                             | Adaptable to salt<br>Pioneer species<br>Deer resistant   |
| Betula pendula -<br>Silver Birch                                 | T | 3b-6b |   |   |   | F | H = 30-40'<br>W = 15-30'  | ○ | Variety, rich                   | Moderate, well<br>drained          | Europe, Asia, W<br>Siberia                | Wind tolerant<br>Ornamental<br>Pioneer species<br>Deer resistant   |
| Betula pubescens -<br>White Birch                                | T | 3b-3b |   | Y |   | F | H = 30-65'<br>W = 32'     | ○ | Variety,<br>acidic              | High,<br>consistently<br>moist     | N & central<br>Europe, Russia,<br>Siberia | Wind tolerant<br>Wetland plant<br>Nitrogen fixer<br>Pioneer species<br>Attracts wildlife   |
| Carpinus betulus 'Fastigiata' -<br>Pyramidal European Hornbeam   | T | 4a-8b | Y |   |   | M | H = 30-45'<br>W = 20-35'  | ○ | Variety                         | Low, well-<br>drained              | E, S, & central<br>Europe; W Asia         | Urban pollution tolerant   |
| Carya illinoensis -<br>Pecan                                     | T | 5a-9b |   |   |   | M | H = 40-100'<br>W = 30-50' | ⊙ | Variety,<br>humusy, rich        | Moderate, well<br>drained          | S North<br>America                        | Heat, cold tolerant<br>Urban pollution tolerant<br>Ornamental<br>Pest resistant  |
| Celtis occidentalis -<br>Common Hackberry                        | T | 4a-9b | Y | Y |   | F | H = 40-60'<br>W = 40-60'  | ○ | Variety, rich                   | Low, well-<br>drained              | E & central<br>North America              | Adaptable growing conditions<br>Adaptable to salt<br>Heat, cold, wind tolerant<br>Urban pollution tolerant<br>Attracts pollinators, wildlife |
| Celtis occidentalis 'Prairie Pride' -<br>Prairie Pride Hackberry | T | 3b-9b | Y | Y |   | M | H = 50-60'<br>W = 40-50'  | ○ | Variety                         | Low, well-<br>drained              | E & central<br>North America              | Adaptable growing conditions<br>Heat, cold, wind tolerant<br>Urban pollution tolerant<br>Attracts birds                                      |
| Cercis canadensis -<br>Eastern Redbud                            | T | 5a-9b | Y |   |   | M | H = 20-30'<br>W = 25-35'  | ○ | Variety,<br>acidic,<br>alkaline | Moderate, well<br>drained          | E & central<br>North America              | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife   |

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| Cercis canadensis 'Forest Pansy' - Forest Pansy Redbud   | T | 5a-9b |   |   |  | M | H = 20-30'<br>W = 25-35'  | ○ | Variety                         | Moderate, well drained       | E & central North America | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife   |
| Cercis canadensis 'Ruby Falls' - Ruby Falls Redbud       | T | 6a-9b |   |   |  | M | H = 6-8'<br>W = 4-6'      | ○ | Variety, alkaline               | Moderate, well drained       | E & central North America | Ornamental<br>Deer resistant<br>Attracts pollinators   |
| Cercis canadensis 'The Rising Sun' - Rising Sun Redbud   | T | 6a-9b | Y |   |  | M | H = 8-12'<br>W = 8-15'    | ○ | Variety                         | Moderate                     |                           | Adaptable growing conditions<br>Heat, cold tolerant<br>Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators                                  |
| Cotinus coggygia 'Grace' - American Smoke Tree, Grace    | T | 5a-8b | Y |   |  | M | H = 12-15'<br>W = 12-20'  | ○ | Variety                         | Low, well-drained            | Europe to central China   | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators   |
| Cotinus coggygia 'Royal Purple' - Royal Purple Smoketree | T | 5a-8b | Y |   |  | M | H = 10-15'<br>W = 10-20'  | ⊙ | Variety                         | Low, well-drained            | Europe to central China   | Urban pollution tolerant<br>Ornamental<br>Disease resistant<br>Deer, pest resistant<br>Attracts pollinators  |
| Crataegus douglasii - Black/ Douglas Hawthorn            | T | 4a-6b | Y | Y |  |   | H = 10-25'<br>W = 10-25'  | ○ | Variety                         | Moderate, well drained       | United States             | Wind tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Wetland plant<br>Attracts birds, pollinators   |
| Fraxinus pennsylvanica - Green Ash                       | T | 3b-9b | Y |   |  | F | H = 50-70'<br>W = 35-50'  | ⊙ | Variety, humusy                 | Moderate, consistently moist | United States, S Canada   | Adaptable growing conditions<br>Adaptable to salt<br>Heat, cold, wind tolerant<br>Urban, air pollution tolerant<br>Deer, rabbit resistant<br>Attracts birds, pollinators |
| Ginkgo biloba - Maidenhair Tree                          | T | 3b-8b | Y |   |  | S | H = 50-100'<br>W = 30-60' | ⊙ | Variety, rich, acidic, alkaline | Moderate, well drained       | S China                   | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Disease resistant<br>Deer, pest resistant   |

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| Ginkgo biloba 'Fairmount' -<br>Fairmount Ginkgo                  | T | 5a-8b | Y |  | M | H = 30-50'<br>W = 8-30'    | ○ | Variety                         | Low                                |  | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Deer resistant                               |
| Ginkgo biloba 'PNI 2720' -<br>Princeton Sentry Ginkgo            | T | 3b-8b | Y |  | S | H = 40-50'<br>W = 20-30'   | ⊙ | Variety,<br>acidic,<br>alkaline | Low                                |  | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Deer, rabbit resistant                       |
| Gleditsia triacanthos 'Impcole' -<br>Imperial Honeylocust        | T | 4a-8b | Y |  | F | H = 30-40'<br>W = 25-35'   | ○ | Variety, rich                   | Low, well-<br>drained              | US cultivar                                    | Adaptable growing conditions<br>Adaptable to salt<br>Heat, cold, wind tolerant<br>Urban, air pollution tolerant<br>Deer resistant |
| Gleditsia triacanthos 'Shademaster' -<br>Shademaster Honeylocust | T | 5a-8b | Y |  | F | H = 45-70'<br>W = 30-50'   | ○ | Variety                         | Low, well-<br>drained              |  | Adaptable growing conditions<br>Heat, cold, wind tolerant<br>Air pollution tolerant<br>Deer resistant                             |
| Gleditsia triacanthos 'Skyline' -<br>Skyline Honeylocust         | T | 3b-8b | Y |  |   | H = 35-75'<br>W = 25-50'   | ○ | Variety, rich                   | Low                                | United States                                  | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant   |
| Gymnocladus dioica -<br>Kentucky Coffeetree                      | T | 5a-9b | Y |  |   | H = 60-80'<br>W = 40-55'   | ⊙ | Rich                            | Low                                | Central United<br>States                       | Adaptable to salt<br>Air pollution tolerant   |
| Juglans nigra -<br>Black Walnut                                  | T | 5a-9b | Y |  |   | H = 60-100'<br>W = 50-100' | ⊙ | Rich                            | Moderate                           | United States,<br>Canada                       | Adaptable to salt<br>Deer, rabbit resistant   |
| Koelreuteria paniculate -<br>Golden Raintree                     | T | 5a-9b | Y |  |   | H = 30-40'<br>W = 30-40'   | ⊙ | Variety                         | Low to<br>moderate                 | E Asia to N<br>China                           | Wind tolerant<br>Air pollution tolerant   |
| Liquidambar styraciflua -<br>Sweet Gum                           | T | 5a-9b |   |  |   | H = 60-80'<br>W = 40-60'   | ⊙ | Variety, rich                   | Moderate,<br>consistently<br>moist | E United States,<br>Mexico, Central<br>America | Wildlife resistant  |
| Magnolia grandiflora -<br>Southern Magnolia                      | T | 7a-9b |   |  |   | H = 60-80'<br>W = 30-50'   | ○ | Rich                            | Medium,<br>consistently<br>moist   | SE United<br>States                            | Wind tolerant<br>Air pollution tolerant<br>Attracts birds   |
| Magnolia virginiana -<br>Sweet Bay Magnolia                      | T | 5a-9b | Y |  | M | H = 10-35'<br>W = 10-35'   | ○ | Wet, acidic                     | High                               | SE United<br>States                            | Air pollution tolerant<br>Deer, rabbit resistant  |
| Nyssa sylvatica -<br>Black Gum                                   | T | 3b-9b | Y |  |   | H = 30-50'<br>W = 20-30'   | ○ | Wet, acidic                     | High                               | E North<br>America                             | Attracts birds  |

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| Platanus occidentalis -<br>Sycamore                              | T | 4a-9b |   | Y |   |   | H = 75-100'<br>W = 75-100' | ☉ | Humusy,<br>rich             | High,<br>consistently<br>moist                       | E North<br>America                           | Air pollution tolerant<br>Deer resistant     |
| Platanus x acerifolia -<br>London Plane Tree (American Sycamore) | T | 4a-8b |   | Y |   |   | H = 75-100'<br>W = 60-75'  | ☉ | Humusy,<br>rich             | High,<br>consistently<br>moist                       | Europe, North<br>America                     | Air pollution tolerant<br>Deer resistant     |
| Platanus x hispanica -<br>London Plane Tree                      | T | 4a-8b |   |   |   |   | H = 75-100'<br>W = 60-75'  | ☉ | Humusy,<br>rich             | Moderate, well<br>drained                            |  | Deer resistant<br>Attracts pollinators       |
| Populus angustifolia -<br>Narrowleaf Cottonwood                  | T | 3b-8b |   |   | Y |   | H = 45-65'<br>W = 45-65'   | ☉ | Rich                        | High, well-<br>drained                               | Utah, W North<br>America,<br>Alberta, Mexico |  |
| Populus fremontii -<br>Fremont Cottonwood                        | T | 4a-6b |   |   |   | F | H = 40-80'<br>W = 30-50'   | ☉ | Rich                        | Moderate,<br>consistently<br>moist, well-<br>drained | SW United<br>States                          | Attracts pollinators                         |
| Populus tremuloides -<br>Quaking Aspen                           | T | 3b-6b | Y | Y |   | F | H = 20-50'<br>W = 10-30'   | ☉ | Variety,<br>humusy,<br>rich | Moderate,<br>consistently<br>moist, well-<br>drained | Canada to<br>Mexico                          | Wetland plant<br>Attracts birds, pollinators |
| Populus trichocarpa -<br>Black Cottonwood                        | T | 4a-6b | Y |   |   | F | H = 30-100'<br>W = 25-30'  | ☉ | Gravel                      | Moderate,<br>consistently<br>moist, well-<br>drained | North America                                | Attracts pollinators                         |
| Prunus virginiana -<br>Chokecherry                               | T | 3b-7b | Y |   |   |   | H = 20-30'<br>W = 15-20'   | ○ | Loam                        | Low, well-<br>drained                                | Utah, Canada,<br>United States               | Deer resistant<br>Attracts pollinators       |
| Prunus virginiana 'Scubert' -<br>Canada Red Chokecherry          | T | 3b-7b |   | Y |   | M | H = 20-30'<br>W = 15-20'   | ○ | Loam                        | Low, well-<br>drained                                | Canada, United<br>States                     | Deer resistant<br>Attracts pollinators       |
| Quercus bicolor -<br>Swamp White Oak                             | T | 3b-8b |   |   |   |   | H = 50-60'<br>W = 50-60'   | ☉ | Variety,<br>acidic          | High   | United States                                | Adaptable to salt<br>Attracts birds          |
| Quercus macrocarpa -<br>Bur Oak                                  | T | 3b-8b | Y |   |   |   | H = 60-90'<br>W = 60-80'   | ☉ | Loam,<br>variety            | Low, well-<br>drained                                | North America                                | Adaptable growing conditions                 |
| Robinia 'Purple Robe' -<br>Purple Robe Locust                    | T | 3b-8b | Y |   |   |   | H = 30-40'<br>W = 20-30'   | ☉ | Loam, sandy,<br>rich        | Moderate   | North America                                | Deer resistant                               |
| Salix alba -<br>White Willow                                     | T | 4a-5b |   |   | Y |   | H = 50-80'<br>W = 40-70'   | ○ | Loam                        | Moderate, well<br>drained                            | Europe, N<br>Africa to<br>central Asia       | Deer resistant                               |
| Salix amygdaloides -<br>Peachleaf Willow                         | T | 4a-5b | Y |   |   | F | H = 13-65'                 | ○ | Loam, sandy                 | High   | North America                                | Attracts pollinators                         |

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| Salix lasiandra - Pacific Willow                                   | T | 3b-4b |   | Y |   | F | H = 6-37'<br>W = 3-30'   | ○ | Variety, gravel     | High, consistently moist | North America                              | Wetland plant<br>Attracts birds, pollinators  |
| Salix nigra - Black Willow   | T | 3b-5b |   | Y | Y |   | H = 30-60'<br>W = 30-60' | ○ | Wet                 | High, consistently moist | North America                              |   |
| Salix sitchensis - Sitka Willow                                    | T | 4a-5a |   | Y |   | F | H = 10-23'<br>W = 24'    | ○ | Variety             | Moderate                 | W North America                            | Wetland plant<br>Attracts pollinators   |
| Salix prolixa - Mackenzie Willow                                   | T | 4a-5b |   |   |   | M | H = 16-68'               | ○ | Sandy               | Moderate                 | Canada, W United States                    | Attracts pollinators  |
| Taxodium distichum 'Shawnee Brave' - Shawnee Brave Bald Cypress    | T | 4a-9b |   |   | Y |   | H = 15-75'<br>W = 15-20' | ⊙ | Variety, acidic     | Moderate                 | United States                              | Air pollution tolerant<br>Deer resistant  |
| Thuja occidentalis - American Arborvitae                           | T | 3b-7b |   |   |   |   | H = 20-40'<br>W = 10-15' | ○ | Variety             | Moderate, well drained   | E United States, E to central Canada       | Air pollution tolerant<br>Attracts birds  |
| Tilia tomentosa - Silver Linden                                    | T | 4a-8b | Y |   |   |   | H = 50-70'<br>W = 30-50' | ○ | Variety, loam, rich | Moderate, well drained   | SE Europe to Asia Minor                    | Attracts pollinators  |
| Tilia tomentosa 'Sterling' - Sterling Silver Linden                | T | 4a-8a | Y |   |   |   | H = 50'<br>W = 25'       | ○ | Variety             | Low                      |  | Attracts pollinators  |
| Ulmus pumila - Siberian Elm  | T | 4a-9b | Y |   | Y |   | H = 50-70'<br>W = 40-70' | ⊙ | Loam, rich          | Low to moderate          | Eastern Siberia, northern China, Turkestan | Adaptable growing conditions<br>Air pollution tolerant                                    |
| Ulmus 'Homestead' - Homestead Elm                                  | T | 3b-9b | Y | Y |   | F | H = 40-60'<br>W = 30-40' | ⊙ | Variety, peaty      |                          |  | Urban pollution<br>Deer, rabbit resistant   |
| Juniperus scopulorum 'Blue Arrow' - Blue Arrow Juniper             | T | 4a-9b |   |   | Y | M | H = 12-15'<br>W = 2'     | ⊙ | Variety             | Low                      |  | Adaptable to salt<br>Urban pollution tolerant<br>Deer, rabbit resistant                   |
| Juniperus scopulorum 'Skyrocket' - Skyrocket Juniper               | T | 3b-8b | Y |   | Y | F | H = 15-20'<br>W = 2-5'   | ⊙ | Variety             | Low                      |  | Adaptable to salt<br>Urban pollution tolerant<br>Deer, rabbit resistant<br>Attracts birds |
| Juniperus scopulorum 'Woodward' - Woodward columnar juniper        | T | 3b-9b | Y |   |   | M | H = 20'<br>W = 4'        | ○ | Variety             | Low                      | Rocky Mountains, North America             | Deer resistant<br>Attracts birds  |
| Pinus mugo - Mugo Pine   | T | 3b-7b |   |   |   |   | H = 8-20'<br>W = 10-30'  | ○ | Loam, sandy         | Low, well-drained        | Central Europe to Bulgaria                 | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant                             |
| Pinus mugo 'Carsten's Wintergold' - Carsten's Wintergold Mugo Pine | T | 3b-7b |   |   |   | S | H = 12-24"<br>W = 12-24" | ⊙ | Loam, rich          | Low, well-drained        |  | Deer, rabbit resistant<br>Attracts birds  |

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| Pinus mugo 'Jakobsen' -<br>Pinus mugo 'Jakobsen'                   | T  | 3b-7b | Y |   |   | M | H = 12-18"<br>W = 24"   | ☉                        | Variety | Low, well-drained      |                                 | Rabbit resistant   |  |
| Amelanchier alnifolia -<br>Saskatoon Serviceberry                  | SH | 3b-9b |   | Y | Y | M | H = 10-30'<br>W = 5-10' | ○                        | Variety | Low, well-drained      | Utah, central & W United States | Adaptable growing conditions<br>Adaptable to salt<br>Heat, cold tolerant<br>Ornamental<br>Attracts pollinators |  |
| Amelanchier alnifolia 'Obelisk' -<br>Standing Ovation Serviceberry | SH | 3b-8b |   |   |   | M | H = 12-15'<br>W = 3-6'  | ☉                        | Variety | Moderate, well-drained |                                 | Adaptable growing conditions<br>Heat, cold tolerant<br>Ornamental<br>Attracts pollinators                      |  |
| Aronia arbutifolia 'Brilliantissima' -<br>Brilliant Red Chokeberry | SH | 4a-9b |   | Y | Y | Y | S                       | H = 5-8'<br>W = 3-5'     | ○       | Variety, peaty         | Moderate, well-drained          | E North America  | Adaptable to salt<br>Urban, air pollution tolerant<br>Ornamental<br>Wetland plant<br>Deer resistant<br>Attracts birds, pollinators |
| Aronia melanocarpa var. elata -<br>Black Chokeberry                | SH | 4a-9b |   | Y | Y | Y | M                       | H = 5-8'<br>W = 5-10'    | ○       | Variety, peaty         | Low, well-drained               | E North America  | Ornamental<br>Wetland plant<br>Deer resistant<br>Attracts birds, pollinators   |
| Artemisia filifolia -<br>Sand Sagebrush                            | SH | 4a-8b |   | Y |   | Y |                         | H = 3-6'<br>W = 3-5'     | ☉       | Sandy, loam            | Low, well-drained               | Utah, W United States  | Adaptable growing conditions<br>Adaptable to salt<br>Heat, cold tolerant<br>Deer resistant<br>Attracts birds                       |
| Artemisia nova -<br>Black Sagebrush                                | SH | 3b-6b |   | Y |   |   |                         | H = 10-24"<br>W = 12-24" | ☉       | Variety, alkaline      | Low, well-drained               | Utah, W United States  | Deer resistant<br>Attracts pollinators   |
| Atriplex canescens -<br>Four-Wing Saltbrush                        | SH | 6a-9b |   | Y |   |   |                         | H = 1-7'<br>W = 3-7"     | ☉       | Variety, alkaline      | Low, well-drained               | Utah, W United States  | Adaptable to salt<br>Ornamental<br>Bioremediation<br>Attracts pollinators  |
| Berberis aquifolium -<br>Barberry                                  | SH | 5a-8b |   | Y |   |   | S                       | H = 3-6'<br>W = 2-5'     | ●       | Variety, rich, acidic  | Well-drained                    | N North America  | Ornamental<br>Deer resistant<br>Attracts birds, pollinators  |
| Berberis aquifolium repens -<br>Creeping Oregon Grape              | SH | 5a-8b |   | Y |   | Y | M                       | H = 12-18"<br>W = 12-18" | ☉●      | Variety, rich, acidic  | Well-drained                    |  | Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife   |
| Caragana arborescens -<br>Siberian Peashrub                        | SH | 3b-8b |   | Y |   |   |                         | H = 15-20'<br>W = 12-15' | ☉       | Loam                   | Low, well-drained               | E Russia, N China  | Attracts pollinators   |

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| Caragana arborescens 'Pendula' - Weeping Pea Shrub                      | SH | 3b-5b | Y |   |   |  | H = 6-8'<br>W = 4-8'     | ○ | Variety       | Low                      |  | Adaptable to salt<br>Deer resistant<br>Attracts pollinators                     |
| Celtis occidentalis - Common Hackberry                                  | SH | 4a-9b | Y |   |   |  | H = 40-60'<br>W = 40-60' | ○ | Rich          | Low, well-drained        | NE & central North America                                 | Air pollution tolerant<br>Attracts birds, pollinators                           |
| Cotinus coggygria 'Ancot' GOLDEN SPIRIT - Smoke Tree, 'Golden spirit'   | SH | 4b-7b | Y |   |   |  | H = 8-15'<br>W = 8-15'   | ○ | Variety, loam | Low, well-drained        | Europe to central China                                    | Deer resistant  |
| Cotoneaster adpressus 'Little Gem' - Little Gem Cotoneaster             | SH | 5a-8b | Y |   |   |  |                          | ○ |               | Low                      |  |   |
| Cotoneaster divaricatus - Spreading Cotoneaster                         | SH | 4a-7b |   |   |   |  | H = 5-6'<br>W = 6-8'     | ○ |               | Moderate                 |  | Attracts pollinators  |
| Cotoneaster integerrimus - European Cotoneaster                         | SH | 3b-5b | Y |   |   |  | H = 8-12'<br>W = 12-15'  | ○ | Loam          | Moderate                 |  | Adaptable growing conditions  |
| Cotoneaster racemiflorus var. soongoricus - Sungari redbead cotoneaster | SH | 3b-8b | Y |   |   |  | H = 6-8'<br>W = 6-8'     | ○ | Variety       | Low                      |  | Disease resistant<br>Deer, pest resistant<br>Attracts pollinators               |
| Acorus calamus - Sweet Flag   | G  | 4a-9b |   | Y |   |  | H = 2-2.5'<br>W = 1.5-2' | ○ | Variety       | High, consistently moist | Europe, Asia, North America                                | Wetland plant   |
| Acorus gramineus - Grassy-Leaved Sweet Flag                             | G  | 6a-9b |   | Y | Y |  | H = 6-12"<br>W = 6-12"   | ○ | Variety       | High, consistently moist | China, Japan, Korea, India, Thailand, Myanmar, Philippines | Wetland plant   |
| Agrostis sp. - Redtop Bentgrass   | G  | 3b-6b |   | Y | Y |  | H = 3-4'                 | ○ | Variety       |                          | Eurasia  | Adaptable to salt<br>Wetland plant  |
| Andropogon gerardii - Big Blue Stem                                     | G  | 4a-9b | Y |   | Y |  | H = 4-6'<br>W = 2-3'     | ⊙ | Variety       | Low                      | E North America  | Air pollution tolerant<br>Deer resistant  |
| Andropogon gerardii 'PWIN01S' - WINDWALKER® big bluestem                | G  | 5a-8b |   |   |   |  | H = 60-72"<br>W = 18-24" | ⊙ | Variety       | Moderate                 |  | Ornamental<br>Deer resistant  |
| Bouteloua gracilis - Blue Grama   | G  | 3b-9b | Y |   |   |  | H = 9-24"<br>W = 18-24"  | ⊙ | Variety       | Low                      | W United States  | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant<br>Attracts birds |
| Bouteloua gracilis 'Blonde Ambition' - Blonde Ambition grama grass      | G  | 4a-9b | Y |   |   |  | H = 30-36"<br>W = 30-36" | ○ | Variety       | Low                      | North America  | Deer resistant  |
| Buchloë dactyloides - Buffalo Grass                                     | G  | 3b-9b | Y |   | Y |  | H = 2-5"<br>W = 72"      | ⊙ | Variety       | Low                      | North America, Great Plains                                | Heat tolerant   |

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| Buchloë dactyloides 'Cody' -<br>Cody Buffalo Grass                               | G | 3b-9b | Y |   | Y |   | H = 4-6"<br>W = 72"      | ☉ | Variety            | Low                                | North America,<br>Great Plains            | Heat tolerant  |
| Buchloë dactyloides 'Legacy' -<br>Legacy Buffalo Grass                           | G | 3b-9b | Y |   |   | F | H = 4-6"<br>W = 72"      | ☉ | Clay, alkaline     | Low                                |   | Attracts birds   |
| Calamagrostis x acutiflora 'Eldorado' -<br>Eldorado Feather Reed Grass           | G | 4a-9b | Y |   |   | M | H = 4-6"<br>W = 2-2.5'   | ☉ | Variety            | Low                                |   | Attracts birds   |
| Calamagrostis x acutiflora 'Karl Foerster' -<br>Karl Foerster Feather Reed Grass | G | 4a-9b | Y |   | Y | M | H = 3-5"<br>W = 1.5-2.5' | ☉ | Variety, rich      | Low                                | Europe, Asia                              | Air pollution tolerant<br>Deer resistant                   |
| Calamagrostis x acutiflora 'Overdam' -<br>Overdam Feather Reed Grass             | G | 5a-9b | Y |   | Y | M | H = 3-5"<br>W = 2'       | ☉ | Variety, rich      | Low                                | Europe, Asia                              | Air pollution tolerant<br>Deer resistant                   |
| Calamagrostis brachytricha -<br>Korean feather reed grass                        | G | 4a-9b | Y |   |   |   | H = 24-40"<br>W = 20-24" | ○ | Variety            | Low                                |   | Deer resistant   |
| Carex 'Silver Sceptre' -<br>Silver Scepter Sedge                                 | G | 5a-9b |   |   |   |   | H = 9-12"<br>W = 9-18"   | ● | Variety            | High                               | Japan                                     | Deer resistant   |
| Carex buchananii -<br>Fox Red Curly Sedge  | G | 4b-9b | Y |   |   | S | H = 2-3'<br>W = 2-3'     | ○ | Variety, rich      | Consistently<br>moist              | New Zealand                               | Deer, rabbit resistant                                     |
| Carex lacustris -<br>Common Lake Sedge   | G | 5a-7b |   | Y |   | M | H = 20-50"               | ○ | Clay               | High,<br>consistently<br>moist     | North America                             | Wetland plant<br>Attracts birds, pollinators               |
| Cephalanthus occidentalis -<br>Buttonbush  | G | 5a-9b |   | Y | Y |   | H = 5-12'                | ○ | Humusy             | High                               | North America                             | Attracts pollinators                                       |
| Cynodon dactylon -<br>Bermuda Grass  | G | 7a-9b | Y |   | Y | F | H = 24"<br>W = 20"       | ☉ | Variety            | Low to<br>moderate                 | Europe, Africa,<br>Australia, Asia        | Heat tolerant  |
| Decodon verticillatus -<br>Swamp Loosestrife                                     | G | 3b-9b |   | Y |   |   | H = 6-8'<br>W = 6-8'     | ○ | Clay               | High,<br>consistently<br>moist     | E & central<br>North America              | Wetland plant  |
| Deschampsia cespitosa 'Northern Lights' -<br>Northern Lights Tufted Hair Grass   | G | 4a-9b |   |   | Y | M | H = 1-3'<br>W = 1-3'     | ○ | Variety,<br>acidic | Moderate,<br>consistently<br>moist |   | Air pollution tolerant<br>Deer resistant<br>Attracts birds |
| Deschampsia cespitosa var. vivipara -<br>Tufted Hair Grass                       | G | 4a-9b |   |   |   |   | H = 2-3'<br>W = 1-2'     | ○ | Variety, rich      | High,<br>consistently<br>moist     |   | Air pollution tolerant<br>Attracts birds                   |
| Elocharis palustris -<br>Creeping Spike Rush                                     | G | 3b-8b |   | Y |   |   | H = 2-4'<br>W = 1-2'     | ○ | Wet                | High,<br>consistently<br>moist     | United States,<br>Canada,<br>Europe, Asia | Wetland plant  |
| Elodea canadensis -<br>Canadian Waterweed  | G | 4a-9b |   | Y |   |   | H = 3"<br>W = 12-36"     | ☉ | Wet                | High,<br>consistently<br>moist     | North America,<br>S Canada                | Wetland plant  |

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| Eriogonum caespitosum -<br>Mat Buckwheat                       | G | 4a-9b |   |   |   |   | H = 4"<br>W = 3'         | ○ | Rocky              |                                 | W United States                            | Cold tolerant<br>Attracts pollinators   |
| Festuca spp. -<br>BioMeadow Fine Fescue Mix                    | G | 4a-9b |   |   |   |   | H = 8-12"<br>W = 6-8"    | ○ |                    | Moderate                        |  | Adaptable to salt   |
| Festuca arundinacea -<br>Dwarf Tall Fescue                     | G | 5a-8b |   |   |   |   | H = 24-36"<br>W = 12-18" | ○ | Clay               | Moderate                        |  | Adaptable to salt   |
| Festuca arundinacea 'Bolero' -<br>BioTurf Dwarf Fescue Mix     | G | 5a-8b | Y |   |   | S | H = 2-3'<br>W = 12-18"   | ○ | Clay               | Moderate                        |  | Heat tolerant<br>Deer resistant   |
| Festuca arundinacea 'Bonsai' -<br>Bonsai Dwarf Tall Fescue     | G | 5a-8b |   |   |   |   | H = 24-36"<br>W = 12-18" | ○ | Clay               | Moderate                        |  | Deer resistant  |
| Festuca glauca -<br>Blue Fescue                                | G | 4a-9b | Y |   |   |   | H = 9-12"<br>W = 12-18"  | ⊙ | Variety            | Low, moderate                   |  | Air pollution tolerant<br>Ornamental  |
| Festuca glauca 'Boulder Blue' -<br>Border Blue Fescue          | G | 4a-9b | Y |   |   |   | H = 6-15"<br>W = 6-12"   | ⊙ | Variety            | Low                             |  | Air pollution tolerant<br>Ornamental<br>Deer resistant                        |
| Festuca glauca 'Elijah Blue' -<br>Elijah Blue Fescue           | G | 4a-8b | Y |   |   | F | H = 9-12"<br>W = 9-12"   | ⊙ | Variety            | Low                             |  | Air pollution tolerant<br>Ornamental<br>Deer, rabbit resistant                |
| Glyceria striata -<br>Fowl Manna Grass                         | G | 3b-9b |   | Y |   |   | H = 2-4'                 | ⊙ | Variety, rich      | Moderate,<br>consistently moist | North America                              | Wetland plant<br>Deer resistant<br>Attracts birds, pollinators                |
| Helictotrichon sempervirens -<br>Blue Oat Grass                | G | 4a-9b | Y |   |   | M | H = 2-3'<br>W = 2-3'     | ⊙ | Variety            | Moderate                        |  | Adaptable to salt<br>Air pollution tolerant<br>Deer, rabbit resistant         |
| Hibiscus laevis -<br>Halberd-Leaved Rose Mallow                | G | 4a-9b |   | Y |   | F | H = 4-6'<br>W = 3-4'     | ○ | Variety,<br>acidic | High,<br>consistently moist     | SE Canada,<br>central & E<br>United State  | Heat tolerant<br>Wetland plant<br>Attracts pollinators                        |
| Imperata cylindrica 'Rubra' -<br>Japanese Blood Grass          | G | 5a-9b | Y |   |   |   | H = 2-4'<br>W = 2-4'     | ○ | Variety            | Low                             | Korea, Japan,<br>China, India, E<br>Africa | Air pollution tolerant<br>Ornamental  |
| Juncus effusus - Common Rush                                   | G | 4a-9b |   | Y | Y |   | H = 2-4'<br>W = 2-4'     | ○ | Wet                | High,<br>consistently moist     | Britain, E & S<br>Africa,<br>Australia     | Wetland plant   |
| Koeleria macrantha 'BarKoel' -<br>Turtleturf Prairie Junegrass | G | 4a-9b |   |   |   |   | H = 4-18"<br>W = 4-8"    | ○ | Variety            | Moderate                        |  |   |
| Miscanthus x giganteus -<br>Giant Chinese Silver Grass         | G | 4a-9b | Y |   |   | F | H = 10-13'<br>W = 5'     | ⊙ | Variety            | Moderate                        | Hybrid of Asian<br>species                 | Heat, wind tolerant<br>Ornamental<br>Deer, rabbit resistant<br>Attracts birds |

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| Miscanthus 'Purpurascens' -<br>Flame Grass                         | G | 4a-9b | Y |   |   |   | H = 4-5'<br>W = 2.5-3' | ○ | Variety       | Moderate,<br>consistently<br>moist | Africa, E Asia                         | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |
| Miscanthus sacchariflorus -<br>Silver Banner Grass                 | G | 5a-9b |   | Y | Y |   | H = 5-8'<br>W = 3-4.5' | ○ | Wet           | High,<br>consistently<br>moist     | Japan,<br>Manchuria,<br>Korea, N China | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |
| Miscanthus sinensis 'Adagio' -<br>Adagio Maiden Grass              | G | 5a-9b | Y |   | Y | F | H = 3-5'<br>W = 3-4'   | ○ | Loam          | Moderate                           | Japan, China,<br>Korea                 | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant                   |
| Miscanthus sinensis 'Cabaret' -<br>Cabaret Japanese Silver Grass   | G | 5a-9b | Y |   | Y | F | H = 6-7'<br>W = 3-5'   | ○ | Loam          | Moderate, well<br>drained          | Japan, China,<br>Korea                 | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant                   |
| Miscanthus sinensis 'Gold Bar' -<br>Gold Bar Maiden Grass          | G | 5a-9b | Y |   |   |   | H = 4-5'<br>W = 3-4'   | ○ | Variety       | Low, well-<br>drained              | Japan, China,<br>Korea                 | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |
| Miscanthus sinensis 'Gracillimus' -<br>Gracillimus Maiden Grass    | G | 5a-9b | Y |   | Y | M | H = 4-8'<br>W = 3-6'   | ○ | Variety       | Moderate,<br>consistently<br>moist | Japan, China,<br>Korea                 | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'Graziella' -<br>Graziella Maiden Grass        | G | 5a-9b | Y |   |   |   | H = 5-7'<br>W = 3-4'   | ○ | Variety       | Low, well-<br>drained              | Japan, China,<br>Korea                 | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |
| Miscanthus sinensis 'Silberfeder' -<br>Silver Feather Maiden Grass | G | 4a-9b | Y |   |   |   | H = 6-8'<br>W = 4'     | ⊙ | Variety, rich | Low, well-<br>drained              | Asia                                   | Adaptable to salt<br>Deer, rabbit resistant<br>Attracts birds                             |
| Miscanthus sinensis 'Strictus' -<br>Porcupine Grass                | G | 5a-9b | Y |   |   | M | H = 4-9'<br>W = 2-6'   | ○ | Variety       | Moderate, well<br>drained          | Japan, China,<br>Korea                 | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'varigatus' -<br>Variegated Maiden Grass       | G | 5a-9b | Y |   | Y | M | H = 5-9'<br>W = 4-5'   | ○ | Loam          | Low, well-<br>drained              | Japan, China,<br>Korea                 | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |

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| Miscanthus sinensis 'Pünkchen' LITTLE DOT - Little Dot Maiden Grass         | G | 5a-9b | Y |   |   |   |  | H = 4-7'<br>W = 4-6'     | ○ | Variety                      | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Attracts birds                      |
| Miscanthus sinensis 'Morning Light' - Morning Light Maiden Grass            | G | 5a-9b | Y |   | Y | M |  | H = 4-6'<br>W = 2.5-4'   | ○ | Loam                         | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds    |
| Miscanthus sinensis 'Yaku Jima' - Yaku Jima Maiden Grass                    | G | 5a-9b | Y |   |   |   |  | H = 3-5'<br>W = 3-5'     | ○ | Variety                      | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental  |
| Miscanthus sinensis 'Zebrinus' - Zebra Grass                                | G | 5a-9b | Y |   |   |   |  | H = 5-8'<br>W = 4-6'     | ○ | Variety, rich                | Moderate, well-drained       | Asia                | Deer, rabbit resistant<br>Attracts birds   |
| Panicum virgatum 'Dallas Blues' - Dallas Blues Switch Grass                 | G | 5a-9b | Y | Y | Y | M |  | H = 4-6'<br>W = 2-3'     | ○ | Sandy, clay                  | Low                          | Utah, North America | Air pollution tolerant<br>Deer resistant<br>Attracts birds                                   |
| Panicum virgatum 'Cloud Nine' - Cloud Nine Switch Grass                     | G | 5a-9b |   |   |   |   |  | H = 5-7'<br>W = 2-3'     | ○ | Variety                      | Moderate                     | Utah, North America | Adaptable to salt<br>Attracts pollinators  |
| Panicum virgatum 'Heavy Metal' - Heavy Metal Switch Grass                   | G | 5a-9b | Y | Y | Y | F |  | H = 4-5'<br>W = 1-3'     | ○ | Sandy, clay                  | Low                          | North America       | Air pollution tolerant<br>Deer resistant<br>Attracts birds                                   |
| Panicum virgatum 'Prairie Sky' - Prairie Sky Switch Grass                   | G | 4a-9b | Y |   | Y |   |  | H = 4-6'<br>W = 2-3'     | ○ | Sandy, clay                  | Low                          | E North America     | Air pollution tolerant<br>Attracts birds   |
| Panicum virgatum 'Rotstrahlbusch' - Red Switch Grass                        | G | 5a-9b | Y | Y | Y |   |  | H = 4-5'<br>W = 2-3'     | ○ | Variety                      | Low                          | E North America     | Air pollution tolerant<br>Attracts birds   |
| Panicum virgatum 'Shenandoah' - Shenandoah Switch Grass                     | G | 5a-9b | Y |   | Y | F |  | H = 3-4'<br>W = 3-4'     | ○ | Sandy, clay                  | Low                          | Utah, North America | Air pollution tolerant<br>Deer resistant<br>Attracts pollinators                             |
| Panicum virgatum 'Strictum' - Upright Switch Grass                          | G | 4a-9b | Y |   |   | M |  | H = 4-6'<br>W = 2-3'     | ⊙ | Variety, dry                 | Low                          | Utah, North America | Attracts pollinators   |
| Pennisetum alopecuroides 'Little Bunny' - Little Bunny Dwarf Fountain Grass | G | 6a-9b | Y |   |   |   |  | H = 12-18"<br>W = 18-24" | ○ | average, medium to wet soils | Moderate, consistently moist | E Asia              | Adaptable to salt<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attract birds |
| Pennisetum alopecuroides 'Moudry' - Black Flowering Fountain Grass          | G | 5a-9b | Y |   |   |   |  | H = 24-30"<br>W = 18-24" | ○ | Sandy, clay                  | Low                          |                     | Deer resistant   |
| Pennisetum orientale 'Karley Rose' - Karley Rose Oriental Fountain Grass    | G | 5a-8b | Y |   | Y | M |  | H = 2-4'<br>W = 2-4'     | ⊙ | Variety                      | Low, well-drained            | Asia                | Air pollution tolerant<br>Deer resistant   |

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| Poa pratensis -<br>BioBlue Kentucky Bluegrass Mix                                | G | 5a-8b |   |   |   |   | H = 6"<br>W = 4"         | ☉ | Wet                | High,<br>consistently<br>moist |                          |   |
| Schizachyrium scoparium -<br>Little Bluestem                                     | G | 5a-9b | Y |   | Y |   | H = 2-4'<br>W = 1.5-2'   | ☉ | Variety            | Low, well-<br>drained          | North America            | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators |
| Schizachyrium scoparium 'Blaze' -<br>Blaze Little Bluestem                       | G | 4a-9b | Y |   | Y |   | H = 2-3'<br>W = 1.5-2'   | ☉ | Variety            | Low, well-<br>drained          | North America            | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators |
| Schizachyrium scoparium 'Prairie Blues' -<br>Prairie Blues Little Bluestem       | G | 4a-9b | Y |   | Y |   | H = 32-36"<br>W = 12-15" | ○ | Variety            | Low, well-<br>drained          | North America            | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators |
| Schizachyrium scoparium 'Standing Ovation' -<br>Standing Ovation little bluestem | G | 3b-8b | Y |   | Y | F | H = 3-4'<br>W = 1-2'     | ☉ | Variety            | Low, moderate                  | North America            | Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds                        |
| Spartina pectinata -<br>Prairie Cordgrass  | G | 4a-8b |   | Y |   |   | H = 20-30"<br>W = 20-30" | ☉ | Clay, loam,<br>wet | High,<br>consistently<br>moist | North America            | Wetland plant<br>Deer resistant   |
| Sporobolus airoides -<br>Alkali Sacaton  | G | 4a-9b | Y |   |   |   | H = 4'<br>W = 3'         | ○ | Variety            | Low, well-<br>drained          | North America            | Adaptable to salt<br>Deer resistant   |
| Sporobolus wrightii -<br>Giant sacaton   | G | 5a-8b | Y |   | Y | M | H = 5-7'<br>W = 3-5'     | ○ | Variety            | Low                            | SW United<br>States      | Deer resistant  |
| Sporobolus wrightii 'Windbreaker' -<br>Windbreaker Giant Sacaton                 | G | 5a-9b | Y |   |   |   | H = 8-10'<br>W = 6'      | ☉ | Alkaline           | Low, well-<br>drained          | New Mexico               | Adaptable to salt<br>Wind tolerant<br>Deer resistant  |
| Aquilegia caerulea -<br>Rocky Mountain Columbine                                 | P | 3b-9b |   |   |   |   | H = 1-2'<br>W = 1-2'     | ○ | Variety            | Moderate, well<br>drained      | Utah, W North<br>America | Deer, rabbit resistant<br>Attracts birds  |
| Aquilegia formosa -<br>Western Columbine   | P | 3b-9b |   |   |   |   | H = 24-36"<br>W = 18"    | ○ | Sandy, loam        | Moderate, well<br>drained      | Utah, W North<br>America | Rabbit resistant<br>Attracts pollinators  |
| Aquilegia McKana Group -<br>McKana Hybrid Columbine                              | P | 3b-9b |   |   |   |   | H = 2-2.5'<br>W = 1-1.5' | ○ | Variety            | Moderate, well<br>drained      | N Hemisphere             | Deer, rabbit resistant<br>Attracts birds  |
| Armeria maritima 'Bloodstone' -<br>Bloodstone Thrift                             | P | 3b-9b | Y |   | Y | M | H = 6-8"<br>W = 12"      | ○ | Sandy, loam        | Low                            | North America            | Deer, rabbit resistant  |

Rain Gardens

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| Armeria maritima 'Cotton Tail' - Cotton Tail Thrift                              | P  | 3b-9b | Y |   | Y | M | H = 4-6"<br>W = 4-6"      | ☉ | Sandy, loam             | Low                          | North America                   | Deer, rabbit resistant   |
| Armeria maritima 'Düsseldorfer Stolz' - Dusseldorf Pride Thrift                  | P  | 3b-9b | Y |   |   |   | H = 6-12"<br>W = 6-12"    | ☉ | Variety, dry            | Low, well-drained            |                                 |  |
| Armeria maritima 'Rubifolia' - Red Leaf Thrift                                   | P  | 3b-9b | Y |   | Y | M | H = 8-10"<br>W = 12"      | ☉ | Sandy, loam, dry        | Low, well-drained            |                                 | Deer, rabbit resistant   |
| Armeria maritima 'Splendens' - Splendens Common Thrift                           | P  | 3b-9b | Y |   | Y | M | H = 6-12"<br>W = 6-12"    | ☉ | Variety, dry            | Low, well-drained            |                                 | Deer, rabbit resistant   |
| Asarum caudatum - Wild Ginger  | P  | 7a-9b | Y |   |   |   | H = 3-6"<br>W = 6-18"     | ● | Variety, humusy, acidic | Moderate, consistently moist | W North America                 | Deer resistant   |
| Iris virginica shrevei - Blue Flag Iris  | P  | 5a-9b |   | Y |   |   | H = 1.5-2'<br>W = 1.5-2'  | ☉ | Sandy, acidic, wet      | High, consistently moist     | E United States                 | Wetland plant<br>Deer resistant<br>Attracts pollinators                  |
| Typha latifolia - Broadleaf Cattail  | P  | 3b-9b |   | Y |   |   | H = 4-6'<br>W = 4-6'      | ○ | Wet                     | High, consistently moist     | Utah                            | Wetland plant<br>Bioremediation<br>Deer resistant                        |
| Verbena hastata - Blue Verain  | P  | 3b-8b | N |   |   |   | H = 2-6'<br>W = 1-2.5'    | ☉ | Variety, wet            | High                         | W North America                 | Deer resistant<br>Attracts pollinators                                   |
| Asclepias speciosa Torr. - Showy Milkweed  | P  | 5a-9b | Y |   |   | F | H = 1-3'<br>W = 1-2'      | ○ | Variety                 | Low, well-drained            | Utah, W North America           | Attracts wildlife, pollinators   |
| Diachondra repens - Diochondra   | GC | 7a-9b | Y |   |   |   | H = 2"                    | ○ | Variety                 | Low, well-drained            | Australia                       |  |
| Juniperus horizontalis 'Bar Harbor' - Bar Harbor Juniper                         | GC | 3b-8b | Y |   | Y |   | H = 18-24"<br>W = 5-6'    | ☉ | Sandy, dry              | Low                          | Alaska, Canada, N United States | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant            |
| Juniperus horizontalis 'Hughes' - Hughes Juniper                                 | GC | 3b-9b | Y |   |   |   | H = 1-9'                  | ☉ | Variety                 | Low, well-drained            | North America                   | Urban pollution tolerant<br>Deer resistant                               |
| Nepeta racemosa 'Walker's Low' - Walker's Low Catmint                            | GC | 4a-9b | Y |   |   |   | H = 2-2.5'<br>W = 2..5-3' | ○ | Variety                 | Low, well-drained            | Caucusus, N Iran                | Adaptable to salt<br>Air pollution tolerant<br>Deer, rabbit resistant    |
| Nepeta sibirica 'Souvenir d' André Chaudron' - Souvenir d Andre Chaudron Catmint | GC | 3b-9b | Y |   |   |   | H = 1-3'<br>W = 1-2'      | ○ | Variety                 | Low, well-drained            | Europe                          | Cold tolerant<br>Deer resistant  |
| Nepeta x faassenii 'Select Blue' - Select Blue Catmint                           | GC | 4a-9b | Y |   |   |   | H = 1-1.5'<br>W = 1-2'    | ○ | Variety                 | Low, well-drained            | Europe                          | Air pollution tolerant<br>Disease resistant<br>Deer, pest resistant      |
| Nepeta 'Psfike' - Little Trudy Catmint   | GC | 4a-9b | Y |   |   | M | H = 8-14"<br>W = 12-16"   | ○ | Variety                 | Low, well-drained            | Europe                          | Air pollution tolerant<br>Deer, rabbit resistant<br>Attracts pollinators |

## Rain Gardens

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| Teucrium chamaedrys 'Prostratum' -<br>Compact Creeping Germander | GC | 5a-9b | Y |  |   |   | H = 6-12"<br>W = 1-3'    | ○ | Variety                 | Low, well-<br>drained      | S Europe,<br>Mediterranean,<br>Britain              | Deer, rabbit resistant<br>Attracts wildlife   |
| Veronica oltensis -<br>Thyme-leaf Speedwell                      | GC | 4a-9b | Y |  |   | S | H = 12"<br>W = 24"       | ⊙ | Variety                 | Low, well-<br>drained      |   | Adaptable growing conditions  |
| Veronica liwanensis -<br>Turkish veronica                        | GC | 3b-9b | Y |  |   | S | H = 2"<br>W = 18"        | ○ | Variety                 | Low                        |   | Adaptable to salt<br>Deer resistant   |
| Veronica 'Reavis' -<br>CRYSTAL RIVER® veronica                   | GC | 3b-7b | Y |  |   | F | H = 1-3"<br>W = 18-30"   | ○ | Variety                 | Low                        |   | Deer resistant  |
| Veronica x 'P018S' -<br>SNOWMASS® blue-eyed veronica             | GC | 3b-9b | Y |  |   |   | H = 1-2"<br>W = 18"      | ○ | Variety                 | Low, moderate              |   | Deer resistant<br>Attracts pollinators  |
| Campsis radicans f. flava -<br>Yellow Trumpetvine                | V  | 5a-9b | Y |  |   | F | H = 15-40'<br>W = 5-12'  | ⊙ | Variety                 | Low, well-<br>drained      | SE United<br>States                                 | Heat tolerant<br>Urban pollution tolerant<br>Deer, rabbit resistant<br>Attracts pollinators |
| Clematis ligusticifolia -<br>Western White Clematis              | V  | 5a-9b | Y |  |   | F | H = 20'<br>W = 18'       | ○ | Variety                 | Low, well-<br>drained      | W North<br>America,<br>Alberta, British<br>Columbia | Rabbit resistant<br>Attracts pollinator   |
| Vitis labrusca 'Concord' -<br>Concord Grape                      | V  | 5a-8b |   |  |   |   | H = 15-20'<br>W = 15-20' | ⊙ | Loam, rich,<br>humusy   | Moderate, well-<br>drained | North America                                       | Ornamental<br>Deer, rabbit resistant  |
| Vitis labrusca 'Niagara' -<br>Niagara Grape                      | V  | 5a-8b |   |  |   | F | H = 15-20'<br>W = 15-25" | ⊙ | Loam, rich,<br>humusy   | Moderate, well-<br>drained | North America                                       | Ornamental  |
| Vitis 'Himrod' -<br>Himrod Grape                                 | V  | 5a-8b |   |  |   | F | H = 15-20'<br>W = 15-25" | ⊙ | Loam, rich,<br>humusy   | Moderate, well-<br>drained | Asia Minor;<br>Turkey                               | Ornamental<br>Deer, rabbit resistant  |
| Vitis 'St. Theresa' -<br>St. Theresa Grape                       | V  | 5a-8b |   |  |   |   | H = 15-20'<br>W = 3-8'   | ○ | Alkaline                | Moderate                   |   | Cold tolerant<br>Ornamental   |
| Vitis x 'St. Theresa Seedless' -<br>St. Theresa seedless grape   | V  | 4a-8b |   |  |   |   | H = 15'-20'<br>W = 3-8'  | ○ | Loam, clay,<br>alkaline | Moderate                   | Rocky<br>Mountain<br>Regions                        | Adaptable growing conditions  |
| Yucca filamentosa -<br>Adam's Needle                             | SU | 5a-9b | Y |  | Y |   | H = 4-8'<br>W = 2-3'     | ○ | Sandy                   | Low, well-<br>drained      | SE United<br>States                                 | Adaptable to salt<br>Air pollution tolerant<br>Deer, rabbit resistant                       |
| Yucca filamentosa 'Bright Edge' -<br>Bright Edge Yucca           | SU | 4a-9b | Y |  |   |   | H = 2-3'<br>W = 3-4'     | ⊙ | Rocky                   | Low                        | SE United<br>States                                 | Adaptable to salt<br>Deer resistant   |

| Vegetated Strips Plants List   |            |       |                   |                    |                 |             |                          |             |                       |                                  |                             |  |
|--|------------|-------|-------------------|--------------------|-----------------|-------------|--------------------------|-------------|-----------------------|----------------------------------|-----------------------------|--|
| Scientific Name -<br>Common Name   | Plant Type | Zone  | Drought Tolerance | Flooding Tolerance | Erosion Control | Growth Rate | Mature Size (HxW)        | Light Needs | Soil Needs            | Water Needs                      | Native                      | Benefits   |
| Acer campestre -<br>Hedge Maple  | T          | 4a-8b | Y                 |                    |                 |             | H = 25-35'<br>W = 25-35' | ○           | Variety               | Low, well-drained                | Europe, W Asia              | Adaptable to salt<br>Urban, air pollution tolerant         |
| Acer campestre 'Carnival' -<br>Carnival Hedge Maple                                | T          | 4a-8b | Y                 |                    |                 | S           | H = 10'<br>W = 10'       | ○           | Variety, alkaline     | Consistently moist, well-drained |                             | Pollution tolerant<br>Attracts birds, pollinators          |
| Acer glabrum -<br>Rocky Mountain Maple   | T          | 5a-9b | Y                 |                    |                 |             | H = 10-30'<br>W = 10-30' | ○           |                       | Low                              | Utah                        | Adaptable to salt  |
| Acer negundo 'Sensation' -<br>Sensation Boxelder                                   | T          | 4a-6b |                   |                    |                 | F           | H = 30'<br>W = 25'       | ☉           | Variety               | Moderate                         |                             |  |
| Acer palmatum sp. -<br>Japanese Maples   | T          | 5a-8b |                   |                    |                 | S           | H = 10-25'<br>W = 10-25' | ○           | Variety, rich, acidic | Moderate, well-drained           | Japan, Korea                | Pest resistant   |
| Acer platanoides -<br>Norway Maple   | T          | 4a-7b | Y                 |                    |                 |             | H = 40-50'<br>W = 30-50' | ○           | Variety               | Moderate, well-drained           | NE Europe to Caucasus       | Heat tolerant<br>Urban, air pollution tolerant             |
| Acer platanoides 'Columnare' -<br>Columnar Norway Maple                            | T          | 4a-7b |                   |                    |                 | S           | H = 20-60'<br>W = 15-20' | ○           | Variety, rich         | Moderate                         | N Europe                    |  |
| Acer platanoides 'Crimson Sentry' -<br>Crimson Sentry Norway Maple                 | T          | 3b-7b | Y                 |                    |                 | S           | H = 20-30'<br>W = 10-15' | ○           |                       | Moderate, well-drained           |                             | Adaptable to salt<br>Urban, air pollution                  |
| Acer pseudoplatanus 'Spaethii' -<br>Purple Sycamore Maple                          | T          | 5a-9b |                   |                    |                 | M           | H = 40-80'<br>W = 50-60' | ○           | Variety               | Moderate, well-drained           |                             | Adaptable to salt<br>Wind tolerant<br>Urban, air pollution |
| Acer pseudoplatanus 'Tunpetti' REGAL PETTICOAT -<br>Regal Petticoat Sycamore Maple | T          | 4a-9b | Y                 |                    |                 | M           | H = 40-60'<br>W = 30-60' | ☉           | Variety               | Low                              | N Europe                    | Adaptable to salt<br>Wind tolerant<br>Urban, air pollution |
| Acer rubrum -<br>Red Maple   | T          | 3b-9b | Y                 | Y                  |                 | M           | H = 40-70'<br>W = 30-50' | ○           | Variety, acidic       | Moderate, well-drained           | E and central North America | Cold tolerant<br>Air pollution tolerant<br>Attracts birds  |
| Acer saccharinum -<br>Silver Maple   | T          | 4a-9b | Y                 | Y                  |                 | F           | H = 50-80'<br>W = 35-70' | ○           | Sandy, variety        | Moderate                         | E North America             | Adaptable to salt<br>Urban, air pollution tolerant         |

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| Acer tataricum ssp. Ginnala -<br>Amur Maple                                 | T | 3b-8b | Y |   |   | M | H = 15-25'<br>W = 10-20'  | ○ | Variety, rich            | Moderate, well-<br>drained         | NE Asia, NW<br>United States                       | Deer resistant; tolerates salt,  |
| Acer x freemanii 'Jeffersred' -<br>Autumn Blaze Maple                       | T | 3b-8b | Y | Y |   | F | H = 40-55'<br>W = 30-40'  | ⊙ | Acidic                   | High, well-<br>drained             | Cultivated   | Urban pollution tolerant<br>Deer resistant   |
| Aesculus hippocastanum -<br>Horsechestnut                                   | T | 3b-8b |   |   |   | M | H = 50-75'<br>W = 40-65'  | ○ | Rich                     | Moderate, well-<br>drained         | SE Europe,<br>Asia                                 | Rabbit resistant<br>Attracts pollinators   |
| Aesculus x arnoldiana 'Autumn Splendor' -<br>Autumn Splendor Horse Chestnut | T | 4a-7b | N |   |   | M | H = 35' x 30'             | ○ | Variety                  | Moderate,<br>consistently<br>moist |  | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife                           |
| Alnus incana sp. Tenufolia -<br>Thinleaf Alder                              | T | 3b-5b |   |   | Y | F | H = 40'<br>W = 60'        | ○ | Clay, variety            | Moderate,<br>consistently<br>moist | Europe,<br>Caucasus,<br>W Canada,<br>United States | Cold tolerant<br>Urban pollution<br>Nitrogen fixer<br>Attracts birds   |
| Alnus rubra -<br>Red Alder  | T | 4a-5b |   |   | Y | F | H = 40-100'<br>W = 10-34" | ○ | Clay, variety            | High,<br>consistently<br>moist     | W North<br>America                                 | Wind tolerant<br>Nitrogen fixer  |
| Alnus sinuata -<br>Sitka Alder  | T | 4a-5b |   |   | Y | F | H = 3-20'<br>W = 6-10'    | ○ | Clay, variety            | High,<br>consistently<br>moist     | W North<br>America                                 | Nitrogen fixer   |
| Amelanchier laevis 'Spring Flurry' -<br>Spring Flurry Serviceberry          | T | 3b-6b |   |   |   | M | H = 10-30'<br>W = 10-20'  | ○ |                          | Moderate, well-<br>drained         |  | Urban pollution<br>Deer resistant<br>Attracts birds, pollinators   |
| Betula nigra -<br>River Birch   | T | 4a-9b | Y | Y | Y | F | H = 40-70'<br>W = 40-60'  | ○ | Variety, rich,<br>acidic | High,<br>consistently<br>moist     | E United<br>States                                 | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Deer resistant<br>Attracts birds, pollinators |
| Betula occidentalis -<br>Water Birch  | T | 3a-5b | Y | Y |   | F | H = 10-40'<br>W = 10-30'  | ○ | Variety                  | Moderate,<br>consistently<br>moist | Utah, W<br>North<br>America, S<br>Canada           | Adaptable to salt<br>Wind tolerant<br>Ornamental   |
| Betula papyrifera -<br>Paper Birch  | T | 3b-6b |   |   | Y | F | H = 50-70'<br>W = 25-50'  | ○ | Variety                  | Moderate, well-<br>drained         | North<br>America                                   | Adaptable to salt<br>Pioneer species<br>Deer resistant   |
| Betula pendula -<br>Silver Birch  | T | 3b-6b |   |   |   | F | H = 30-40'<br>W = 15-30'  | ○ | Variety, rich            | Moderate, well-<br>drained         | Europe,<br>Asia, W<br>Siberia                      | Wind tolerant<br>Ornamental<br>Pioneer species<br>Deer resistant   |

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| Betula pubescens -<br>White Birch                                | T | 3b-3b |   | Y |  | F | H = 30-65'<br>W = 32'    | ○ | Variety,<br>acidic              | High,<br>consistently<br>moist | N & central<br>Europe,<br>Russia,<br>Siberia | Wind tolerant<br>Wetland plant<br>Nitrogen fixer<br>Pioneer species<br>Attracts wildlife  |
| Carpinus betulus 'Fastigiata' -<br>Pyramidal European Hornbeam   | T | 4a-8b | Y |   |  | M | H = 30-45'<br>W = 20-35' | ○ | Variety                         | Low, well-<br>drained          | E, S, &<br>central<br>Europe; W<br>Asia      | Urban pollution tolerant  |
| Catalpa speciosa -<br>Catalpa                                    | T | 5a-9b | Y | Y |  | F | H = 40-70'<br>W = 20-50' | ○ | Variety, rich                   | Low, well-<br>drained          | United<br>States                             | Adaptable to salt<br>Urban, air pollution tolerant<br>Deer resistant<br>Attracts pollinators  |
| Celtis occidentalis 'Prairie Pride' -<br>Prairie Pride Hackberry | T | 3b-9b | Y | Y |  | M | H = 50-60'<br>W = 40-50' | ○ | Variety                         | Low, well-<br>drained          | E & central<br>North<br>America              | Adaptable growing conditions<br>Heat, cold, wind tolerant<br>Urban pollution tolerant<br>Attracts birds                                 |
| Cercis canadensis -<br>Eastern Redbud                            | T | 5a-9b | Y |   |  | M | H = 20-30'<br>W = 25-35' | ○ | Variety,<br>acidic,<br>alkaline | Moderate, well-<br>drained     | E & central<br>North<br>America              | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife  |
| Cercis canadensis 'Forest Pansy' -<br>Forest Pansy Redbud        | T | 5a-9b |   |   |  | M | H = 20-30'<br>W = 25-35' | ○ | Variety                         | Moderate, well-<br>drained     | E & central<br>North<br>America              | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife  |
| Cercis canadensis 'Ruby Falls' -<br>Ruby Falls Redbud            | T | 6a-9b |   |   |  | M | H = 6-8'<br>W = 4-6'     | ○ | Variety,<br>alkaline            | Moderate, well-<br>drained     | E & central<br>North<br>America              | Ornamental<br>Deer resistant<br>Attracts pollinators  |
| Cercis canadensis 'The Rising Sun' -<br>Rising Sun Redbud        | T | 6a-9b | Y |   |  | M | H = 8-12'<br>W = 8-15'   | ○ | Variety                         | Moderate                       |  | Adaptable growing conditions<br>Heat, cold tolerant<br>Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators |
| Cercis occidentalis -<br>Western Redbud                          | T | 6a-9b | Y |   |  | M | H = 15'<br>W = 10'       | ○ | Variety                         | Moderate, well-<br>drained     | SW United<br>States                          | Nitrogen fixer<br>Attracts pollinators, wildlife  |
| Chilopsis linearis -<br>Desert Willow                            | T | 7a-9b | Y | N |  | M | H = 10-30'<br>W = 15-20' | ⊙ | Variety,<br>alkaline            | Low, well-<br>drained          | Utah, SW<br>United<br>States, N<br>Mexico    | Adaptable to salt<br>Ornamental<br>Attracts birds, pollinators  |

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| Corylus colurna -<br>Turkish Filbert                  | T | 4b-7b | Y |  |   | S | H = 40-80'<br>W = 30-50'  | ○ | Variety, rich,<br>acidic              | Moderate, well<br>drained          | SE Europe,<br>Asia Minor,<br>W Asia | Heat, wind tolerant<br>Urban pollution tolerant<br>Ornamental<br>Xeriscape friendly<br>Attracts wildlife   |
| Crataegus douglasii -<br>Black/ Douglas Hawthorn      | T | 4a-6b | Y |  | Y |   | H = 10-25'<br>W = 10-25'  | ○ | Variety                               | Moderate, well<br>drained          | United<br>States                    | Wind tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Wetland plant<br>Attracts birds, pollinators   |
| Crataegus laevigata -<br>English Hawthorn             | T | 4a-8b | Y |  |   | M | H = 15-20'<br>W = 15-20'  | ○ | Variety,<br>alkaline                  | Moderate, well<br>drained          | Europe, N<br>Africa                 | Cold, wind tolerant<br>Air pollution tolerant<br>Fire resistant<br>Ornamental<br>Attracts birds, pollinators   |
| Fraxinus pennsylvanica -<br>Green Ash                 | T | 3b-9b | Y |  |   | F | H = 50-70'<br>W = 35-50'  | ⊙ | Variety,<br>humusy                    | Moderate,<br>consistently<br>moist | United<br>States, S<br>Canada       | Adaptable growing conditions<br>Adaptable to salt<br>Heat, cold, wind tolerant<br>Urban, air pollution tolerant<br>Deer, rabbit resistant<br>Attracts birds, pollinators |
| Ginkgo biloba -<br>Maidenhair Tree                    | T | 3b-8b | Y |  |   | S | H = 50-100'<br>W = 30-60' | ⊙ | Variety, rich,<br>acidic,<br>alkaline | Moderate, well<br>drained          | S China                             | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Disease resistant<br>Deer, pest resistant   |
| Ginkgo biloba 'Fairmount' -<br>Fairmount Ginkgo       | T | 5a-8b | Y |  |   | M | H = 30-50'<br>W = 8-30'   | ○ | Variety                               | Low                                |                                     | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Deer resistant  |
| Ginkgo biloba 'PNI 2720' -<br>Princeton Sentry Ginkgo | T | 3b-8b | Y |  |   | S | H = 40-50'<br>W = 20-30'  | ⊙ | Variety,<br>acidic,<br>alkaline       | Low                                |                                     | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Deer, rabbit resistant  |

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| Gleditsia triacanthos 'Impcole' - Imperial Honeylocust        | T | 4a-8b | Y |  |   | F | H = 30-40'<br>W = 25-35' | ○ | Variety, rich             | Low, well-drained          | US cultivar            | Adaptable growing conditions<br>Adaptable to salt<br>Heat, cold, wind tolerant<br>Urban, air pollution tolerant<br>Deer resistant  |
| Gleditsia triacanthos 'Shademaster' - Shademaster Honeylocust | T | 5a-8b | Y |  |   | F | H = 45-70'<br>W = 30-50' | ○ | Variety                   | Low, well-drained          |                        | Adaptable growing conditions<br>Heat, cold, wind tolerant<br>Air pollution tolerant<br>Deer resistant  |
| Gleditsia triacanthos 'Skyline' - Skyline Honeylocust         | T | 3b-8b | Y |  |   |   | H = 35-75'<br>W = 25-50' | ○ | Variety, rich             | Low                        | United States          | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant  |
| Juniperus osteosperma - Utah Juniper                          | T | 3b-7b | Y |  |   |   | H = 20'<br>W = 10'       | ⊙ | Variety                   | Low, well-drained          | Utah, SW North America | Cold tolerant  |
| Koelreuteria paniculate - Golden Raintree                     | T | 5a-9b | Y |  |   |   | H = 30-40'<br>W = 30-40' | ⊙ | Variety                   | Low to moderate            | E Asia to N China      | Wind tolerant<br>Air pollution tolerant  |
| Maackia amurensis - Amur Maackia                              | T | 3b-7b |   |  | N | S | H = 20-35'<br>W = 15-30' | ⊙ | Variety, alkaline, acidic | Moderate, well-drained     | Russia, E Asia         | Adaptable growing conditions<br>Adaptable to salt<br>Cold tolerant<br>Urban pollution tolerant<br>Ornamental<br>Nitrogen fixer<br>Deer resistant<br>Attracts pollinators |
| Magnolia grandiflora - Southern Magnolia                      | T | 7a-9b |   |  |   |   | H = 60-80'<br>W = 30-50' | ○ | Rich                      | Medium, consistently moist | SE United States       | Wind tolerant<br>Air pollution tolerant<br>Attracts birds  |
| Morus alba - White Mulberry                                   | T | 3b-9b | Y |  |   | M | H = 20-50'<br>W = 30-50' | ○ | Variety, rich, alkaline   | Low, well-drained          | China                  | Adaptable to salt<br>Wind tolerant<br>Air pollution tolerant<br>Pest resistant   |
| Morus alba 'Chaparral' - Chaparral Weeping Mulberry           | T | 4a-8b | Y |  |   | F | H = 6-12'<br>W = 8-15'   | ○ | Variety, rich             | Moderate, well-drained     |                        | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds  |
| Morus alba 'Kingan' - Kingan Mulberry                         | T | 5a-9b | Y |  |   | F | H = 30-50'<br>W = 30'    | ○ | Variety                   | Low, well-drained          |                        | Adaptable to salt<br>Heat tolerant<br>Urban, air pollution tolerant  |

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| Olea europaea 'Swan Hill' -<br>Swan Hill Olive                 | T | 8a-9b | Y |   |   | M | H = 30-35'<br>W = 20-30'  | ☉ | Variety,<br>alkaline         | Low, well-<br>drained                                | United<br>States                                   | Adaptable growing conditions<br>Heat tolerant |
| Olea europaea 'Tolley's Upright' -<br>Tolley's Upright Olive   | T | 8a-9b | Y |   |   | S | H = 22'<br>W = 13'        | ○ | Variety,<br>hummusy,<br>rich | Moderate, well<br>drained                            |  |   |
| Populus angustifolia -<br>Narrowleaf Cottonwood                | T | 3b-8b |   |   | Y |   | H = 45-65'<br>W = 45-65'  | ☉ | Rich                         | High, well-<br>drained                               | Utah, W<br>North<br>America,<br>Alberta,<br>Mexico |   |
| Populus fremontii -<br>Fremont Cottonwood                      | T | 4a-6b |   |   |   | F | H = 40-80'<br>W = 30-50'  | ☉ | Rich                         | Moderate,<br>consistently<br>moist, well-<br>drained | SW United<br>States                                | Attracts pollinators                          |
| Populus tremuloides -<br>Quaking Aspen                         | T | 3b-6b | Y | Y |   | F | H = 20-50'<br>W = 10-30'  | ☉ | Variety,<br>hummusy,<br>rich | Moderate,<br>consistently<br>moist, well-<br>drained | Canada to<br>Mexico                                | Wetland plant<br>Attracts birds, pollinators  |
| Populus trichocarpa -<br>Black Cottonwood                      | T | 4a-6b | Y |   |   | F | H = 30-100'<br>W = 25-30' | ☉ | Gravel                       | Moderate,<br>consistently<br>moist, well-<br>drained | North<br>America                                   | Attracts pollinators                          |
| Prunus padus -<br>Bird Cherry                                  | T | 3b-6b |   |   |   |   | H = 20-40'<br>W = 20-40'  | ○ | Variety                      | Moderate   | Europe,<br>Siberia,<br>Himalayas                   | Attracts pollinators                          |
| Prunus virginiana -<br>Chokecherry                             | T | 3b-7b | Y |   |   |   | H = 20-30'<br>W = 15-20'  | ○ | Loam                         | Low, well-<br>drained                                | Utah,<br>Canada,<br>United<br>States               | Deer resistant<br>Attracts pollinators        |
| Pyrus calleryana 'Chanticleer' -<br>Chanticleer Flowering Pear | T | 5a-9b | Y |   |   |   | H = 25-40'<br>W = 13-20'  | ☉ | Hummusy                      | Low,<br>consistently<br>moist, well-<br>drained      | China,<br>Taiwan                                   | Deer resistant<br>Attracts pollinators        |
| Quercus bicolor -<br>Swamp White Oak                           | T | 3b-8b |   |   |   |   | H = 50-60'<br>W = 50-60'  | ☉ | Variety,<br>acidic           | High   | United<br>States                                   | Adaptable to salt<br>Attracts birds           |
| Quercus robur f. fastigiata -<br>Columnar English Oak          | T | 5a-8b | Y |   |   |   | H = 50-60'<br>W = 10-20'  | ☉ | Variety                      | Low to<br>moderate, well<br>drained                  | Europe, SW<br>Asia                                 | Air pollution tolerant                        |
| Quercus rubra -<br>Northern Red Oak                            | T | 5a-8b | Y |   |   | M | H = 50-80'<br>W = 35-75'  | ☉ | Sandy,<br>acidic             | Low, well-<br>drained                                | E North<br>America                                 | Air pollution tolerant<br>Rabbit resistant    |

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| Robinia 'Purple Robe' -<br>Purple Robe Locust                      | T | 3b-8b | Y |   |   |   | H = 30-40'<br>W = 20-30' | ☉ | Loam,<br>sandy, rich   | Moderate                            | North<br>America                              | Deer resistant  |
| Salix amygdaloides -<br>Peachleaf Willow                           | T | 4a-5b |   | Y |   | F | H = 13-65'               | ○ | Loam, sandy            | High                                | North<br>America                              | Attracts pollinators  |
| Sophora japonica 'Halka' -<br>Millstone Japanese Pagoda Tree       | T | 5a-8b |   |   |   |   | H = 45'<br>W = 35'       | ☉ | Variety                | Low                                 |   | Attracts pollinators  |
| Sophora japonica 'Regent' -<br>Regent Japanese Pagodatree          | T | 5a-8a | Y |   |   |   | H = 40-75'<br>W = 30-75' | ○ | Loam,<br>sandy, rich   | Low, well-<br>drained               | China,<br>Korea                               | Air pollution tolerant<br>Attracts pollinators                            |
| Syringa reticulata 'Ivory Silk' -<br>Ivory Silk Tree Lilac         | T | 3b-7b |   |   |   |   | H = 15-25'<br>W = 10-20' | ○ | Rich, acidic           | Moderate, well<br>drained           |   | Urban pollution tolerant<br>Deer resistant<br>Attracts birds, pollinators |
| Taxodium distichum 'Shawnee Brave' -<br>Shawnee Brave Bald Cypress | T | 4a-9b |   |   | Y |   | H = 15-75'<br>W = 15-20' | ☉ | Variety,<br>acidic     | Moderate                            | United<br>States                              | Air pollution tolerant<br>Deer resistant                                  |
| Thuja occidentalis -<br>American Arborvitae                        | T | 3b-7b |   |   |   |   | H = 20-40'<br>W = 10-15  | ○ | Variety                | Moderate, well<br>drained           | E United<br>States, E to<br>central<br>Canada | Air pollution tolerant<br>Attracts birds                                  |
| Tilia cordata 'Greenspire' -<br>Greenspire Linden                  | T | 4a-8b | Y |   |   |   | H = 40-50'<br>W = 35-40' | ○ | Variety                | Low                                 |   | Urban pollution tolerant<br>Attracts pollinators                          |
| Tilia tomentosa -<br>Silver Linden                                 | T | 4a-8b | Y |   |   |   | H = 50-70'<br>W = 30-50' | ○ | Variety,<br>loam, rich | Moderate, well<br>drained           | SE Europe to<br>Asia Minor                    | Attracts pollinators  |
| Tilia tomentosa 'Sterling' -<br>Sterling Silver Linden             | T | 4a-8a | Y |   |   |   | H = 50'<br>W = 25'       | ○ | Variety                | Low                                 |   | Attracts pollinators  |
| Ulmus parvifolia 'Emer II' ALLEE -<br>Allee Lacebark Elm           | T | 4a-9b | Y |   |   |   | H = 60-70'<br>W = 35-55' | ☉ | Variety,<br>loam, rich | Moderate                            | Japan,<br>China,<br>Korea                     | Air pollution tolerant  |
| Ulmus x 'Morton' ACCOLADE -<br>Accolade Elm                        | T | 4b-9b |   |   |   |   | H = 50-60'<br>W = 25-40' | ☉ | Loam, rich             | Moderate                            |   | Adaptable growing conditions<br>Air pollution tolerant                    |
| Ulmus 'Frontier' -<br>Frontier Elm                                 | T | 5a-9b | Y |   |   | S | H = 30-40'<br>W = 20-30' | ☉ | Variety                | Low to<br>moderate, well<br>drained |   | Urban pollution tolerant  |
| Ulmus 'Homestead' -<br>Homestead Elm                               | T | 3b-9b | Y | Y |   | F | H = 40-60'<br>W = 30-40' | ☉ | Variety,<br>peaty      |                                     |   | Urban pollution<br>Deer, rabbit resistant                                 |
| Zelkova serrata -<br>Japanese Zelkova                              | T | 5a-8b | Y |   |   |   | H = 50-80'<br>W = 50-80' | ☉ | Loam, rich             | Moderate                            | Japan,<br>Taiwan, E<br>China                  | Urban, air pollution tolerant   |
| Zelkova serrata 'Green Vase' -<br>Green Vase Zelkova               | T | 5a-9a |   |   |   |   | H = 60-80'<br>W = 40-60' | ☉ | Loam, rich             | Low                                 | Japan,<br>Taiwan, E<br>China                  | Air pollution tolerant  |

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| Zelkova serrata 'Kiwi Sunset' -<br>Kiwi Sunset Zelkova  | T  | 5a-8b |   |   |   | M | H = 15-30'<br>W = 12-18'  | ☉      | Rich                     | Low, well-<br>drained | E Asia                       | Ornamental   |
| Zelkova serrata 'Village Green' -<br>Village Green Zelkova                                      | T  | 5a-8b | Y |   |   |   | H = 40-60'<br>W = 30-50'  | ☉      | Loam, rich               | Low                   | Japan,<br>Taiwan, E<br>China | Air pollution tolerant   |
| Baccharis pilularis -<br>Coyote Brush   | SH | 8a-9b | Y |   | Y | F | H = 8-24"<br>W = 6'<br>(groundcover<br>r)<br>H = 4-8'<br>W = 4-8'<br>(upright<br>shrub) | ○      | Variety                  | Low, well-<br>drained | W United<br>States           | Adaptable growing conditions<br>Heat, cold, wind tolerant<br>Deer resistant<br>Attracts birds, pollinators                           |
| Berberis aquifolium -<br>Barberry   | SH | 5a-8b | Y |   |   | S | H = 3-6'<br>W = 2-5'  | ●      | Variety, rich,<br>acidic | Well-drained          | N North<br>America           | Ornamental<br>Deer resistant<br>Attracts birds, pollinators  |
| Berberis aquifolium repens -<br>Creeping Oregon Grape   | SH | 5a-8b | Y |   | Y | M | H = 12-18"<br>W = 12-18"  | ☉<br>● | Variety, rich,<br>acidic | Well-drained          |                              | Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife   |
| Berberis thunbergii f. atropurpurea -<br>Japanese Barberry                                      | SH | 4a-8b | Y |   | Y | M | H = 3-6'<br>W = 4-7'  | ☉      | Variety,<br>loam         | Low, well-<br>drained | Japan, E<br>Asia             | Heat, cold tolerant<br>Urban pollution tolerant<br>Xeriscape friendly<br>Deer, pest resistant<br>Attracts birds                      |
| Berberis thunbergii f. atropurpurea 'Atropurpurea<br>Nana' -<br>Crimson Pygmy Japanese Barberry | SH | 4a-8b | Y | N | Y | M | H = 18-24"<br>W = 24-36"  | ☉      | Variety                  | Low, well-<br>drained |                              | Heat, cold tolerant<br>Urban pollution tolerant<br>Xeriscape friendly<br>Deer, pest resistant<br>Attracts birds                      |
| Berberis thunbergii f. atropurpurea 'Golden Ring' -<br>Golden Ring Japanese Barberry            | SH | 4a-9b | Y | N | Y | M | H = 3-4'<br>W = 3-4'  | ○      | Variety                  | Low, well-<br>drained |                              | Heat, cold tolerant<br>Urban pollution tolerant<br>Xeriscape friendly<br>Deer, pest resistant<br>Attracts birds                      |
| Berberis thunbergii f. atropurpurea 'Helmond Pillar' -<br>Helmond Pillar Japanese Barberry      | SH | 4a-8b | Y | N | Y | M | H = 4-5'<br>W = 1-2'  | ○      | Variety                  | Low, well-<br>drained |                              | Adaptable to salt<br>Heat, cold tolerant<br>Urban pollution tolerant<br>Xeriscape friendly<br>Deer, pest resistant<br>Attracts birds |

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| Berberis thunbergii f. atropurpurea 'Rose Glow' -<br>Rose Glow Japanese Barberry | SH | 4a-8b | Y | N | Y | M | H = 3-6'<br>W = 4-8'     | ⊙ | Variety          | Low, well-<br>drained      |                                  | Adaptable to salt<br>Heat, cold tolerant<br>Urban pollution tolerant<br>Xeriscape friendly<br>Deer, pest resistant<br>Attracts birds                                 |
| Berberis thunbergii 'Goruzam' -<br>Golden Ruby Barberry                          | SH | 4a-8b | Y | N | Y | F | H = 24"<br>W = 24"       | ○ | Variety          | Low, well-<br>drained      |                                  | Adaptable to salt<br>Heat, cold tolerant<br>Urban pollution tolerant<br>Xeriscape friendly<br>Deer, pest resistant<br>Attracts birds                                 |
| Berberis thunbergii 'Maria' -<br>Sunjoy Gold Pillar Japanese Barberry            | SH | 4a-8b | Y | N | Y | M | H = 3-4'<br>W = 2-4'     | ⊙ | Variety          | Low, well-<br>drained      |                                  | Adaptable to salt<br>Heat, cold tolerant<br>Urban pollution tolerant<br>Xeriscape friendly<br>Deer, pest resistant<br>Attracts birds                                 |
| Berberis thunbergii 'Orange Rocket' -<br>Orange Rocket Barberry                  | SH | 4a-9b | Y | N | Y | F | H = 4-8'<br>W = 2-5'     | ○ | Variety          | Low                        |                                  | Adaptable growing conditions<br>Adaptable to salt<br>Heat, cold tolerant<br>Urban pollution tolerant<br>Xeriscape friendly<br>Deer, pest resistant<br>Attracts birds |
| Berberis thunbergii 'Pyguzam' -<br>Pygmy Ruby Japanese Barberry                  | SH | 4a-8b | Y | N | Y | S | H = 12-18"<br>W = 2-3'   | ⊙ | Variety          | Moderate, well-<br>drained |                                  | Heat tolerant<br>Urban, air pollution tolerant<br>Deer resistant<br>Attract birds  |
| Callistemon 'Little John' -<br>Little John Dwarf Bottlebrush                     | SH | 8a-9b | Y |   |   | S | H = 3'<br>W = 5'         | ⊙ | Loam, acidic     | Low, well-<br>drained      |                                  | Deer resistant<br>Attracts birds   |
| Celtis occidentalis -<br>Common Hackberry  | SH | 4a-9b | Y |   |   |   | H = 40-60'<br>W = 40-60' | ○ | Rich             | Low, well-<br>drained      | NE & central<br>North<br>America | Air pollution tolerant<br>Attracts birds, pollinators  |
| Cotinus coggygia 'Ancot' GOLDEN SPIRIT -<br>Smoke Tree, 'Golden spirit'          | SH | 4b-7b | Y |   |   |   | H = 8-15'<br>W = 8-15'   | ○ | Variety,<br>loam | Low, well-<br>drained      | Europe to<br>central<br>China    | Deer resistant   |
| Holodiscus discolor -<br>Oceanspray  | SH | 5a-9b |   |   |   |   | H = 4-5'<br>W = 3'       | ○ | Variety          | Low                        | Utah, W<br>North<br>America      |  |

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| Agrostis sp. -<br>Redtop Bentgrass   | G | 3b-6b |   | Y | Y |   | H = 3-4'                 | ○ | Variety            |                                 | Eurasia                                  | Adaptable to salt<br>Wetland plant  |
| Bouteloua gracilis -<br>Blue Grama   | G | 3b-9b | Y |   |   |   | H = 9-24"<br>W = 18-24"  | ⊙ | Variety            | Low                             | W United States                          | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant<br>Attracts birds |
| Bouteloua gracilis 'Blonde Ambition' -<br>Blonde Ambition grama grass            | G | 4a-9b | Y |   |   |   | H = 30-36"<br>W = 30-36" | ○ | Variety            | Low                             | North America                            | Deer resistant  |
| Buchloë dactyloides -<br>Buffalo Grass   | G | 3b-9b | Y |   | Y |   | H = 2-5"<br>W = 72"      | ⊙ | Variety            | Low                             | North America,<br>Great Plains           | Heat tolerant   |
| Buchloë dactyloides 'Cody' -<br>Cody Buffalo Grass                               | G | 3b-9b | Y |   | Y |   | H = 4-6"<br>W = 72"      | ⊙ | Variety            | Low                             | North America,<br>Great Plains           | Heat tolerant   |
| Buchloë dactyloides 'Legacy' -<br>Legacy Buffalo Grass                           | G | 3b-9b | Y |   |   | F | H = 4-6"<br>W = 72"      | ⊙ | Clay,<br>alkaline  | Low                             |  | Attracts birds  |
| Calamagrostis x acutiflora 'Eldorado' -<br>Eldorado Feather Reed Grass           | G | 4a-9b | Y |   |   | M | H = 4-6'<br>W = 2-2.5'   | ⊙ | Variety            | Low                             |  | Attracts birds  |
| Calamagrostis x acutiflora 'Karl Foerster' -<br>Karl Foerster Feather Reed Grass | G | 4a-9b | Y |   | Y | M | H = 3-5'<br>W = 1.5-2.5' | ⊙ | Variety, rich      | Low                             | Europe, Asia                             | Air pollution tolerant<br>Deer resistant  |
| Calamagrostis x acutiflora 'Overdam' -<br>Overdam Feather Reed Grass             | G | 5a-9b | Y |   | Y | M | H = 3-5'<br>W = 2'       | ⊙ | Variety, rich      | Low                             | Europe, Asia                             | Air pollution tolerant<br>Deer resistant  |
| Calamagrostis brachytricha -<br>Korean feather reed grass                        | G | 4a-9b | Y |   |   |   | H = 24-40"<br>W = 20-24" | ○ | Variety            | Low                             |  | Deer resistant  |
| Carex 'Silver Sceptre' -<br>Silver Scepter Sedge                                 | G | 5a-9b |   |   |   |   | H = 9-12"<br>W = 9-18"   | ● | Variety            | High                            | Japan                                    | Deer resistant  |
| Carex buchananii -<br>Fox Red Curly Sedge  | G | 4b-9b | Y |   |   | S | H = 2-3'<br>W = 2-3'     | ○ | Variety, rich      | Consistently moist              | New Zealand                              | Deer, rabbit resistant  |
| Cynodon dactylon -<br>Bermuda Grass  | G | 7a-9b | Y |   | Y | F | H = 24"<br>W = 20"       | ⊙ | Variety            | Low to moderate                 | Europe,<br>Africa,<br>Australia,<br>Asia | Heat tolerant   |
| Deschampsia cespitosa 'Northern Lights' -<br>Northern Lights Tufted Hair Grass   | G | 4a-9b |   |   | Y | M | H = 1-3'<br>W = 1-3'     | ○ | Variety,<br>acidic | Moderate,<br>consistently moist |  | Air pollution tolerant<br>Deer resistant<br>Attracts birds                      |

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| Deschampsia cespitosa var. vivipara -<br>Tufted Hair Grass | G | 4a-9b |   |   |   |   | H = 2-3'<br>W = 1-2'     | ○ | Variety, rich | High,<br>consistently<br>moist     |   | Air pollution tolerant<br>Attracts birds                                      |
| Festuca spp. -<br>BioMeadow Fine Fescue Mix                | G | 4a-9b |   |   |   |   | H = 8-12"<br>W = 6-8"    | ○ |               | Moderate                           |   | Adaptable to salt   |
| Festuca arundinacea -<br>Dwarf Tall Fescue                 | G | 5a-8b |   |   |   |   | H = 24-36"<br>W = 12-18" | ○ | Clay          | Moderate                           |   | Adaptable to salt   |
| Festuca arundinacea 'Bolero' -<br>BioTurf Dwarf Fescue Mix | G | 5a-8b | Y |   |   | S | H = 2-3'<br>W = 12-18"   | ○ | Clay          | Moderate                           |   | Heat tolerant<br>Deer resistant   |
| Festuca arundinacea 'Bonsai' -<br>Bonsai Dwarf Tall Fescue | G | 5a-8b |   |   |   |   | H = 24-36"<br>W = 12-18" | ○ | Clay          | Moderate                           |   | Deer resistant  |
| Festuca glauca 'Elijah Blue' -<br>Elijah Blue Fescue       | G | 4a-8b | Y |   |   | F | H = 9-12"<br>W = 9-12"   | ⊙ | Variety       | Low                                |   | Air pollution tolerant<br>Ornamental<br>Deer, rabbit resistant                |
| Glyceria striata -<br>Fowl Manna Grass                     | G | 3b-9b |   | Y |   |   | H = 2-4'                 | ⊙ | Variety, rich | Moderate,<br>consistently<br>moist | North<br>America                          | Wetland plant<br>Deer resistant<br>Attracts birds, pollinators                |
| Helictotrichon sempervirens -<br>Blue Oat Grass            | G | 4a-9b | Y |   |   | M | H = 2-3'<br>W = 2-3'     | ⊙ | Variety       | Moderate                           |   | Adaptable to salt<br>Air pollution tolerant<br>Deer, rabbit resistant         |
| Juncus effusus -<br>Common Rush                            | G | 4a-9b |   | Y | Y |   | H = 2-4'<br>W = 2-4'     | ○ | Wet           | High,<br>consistently<br>moist     | Britain, E &<br>S Africa,<br>Australia    | Wetland plant   |
| Miscanthus x giganteus -<br>Giant Chinese Silver Grass     | G | 4a-9b | Y |   |   | F | H = 10-13'<br>W = 5'     | ⊙ | Variety       | Moderate                           | Hybrid of<br>Asian<br>species             | Heat, wind tolerant<br>Ornamental<br>Deer, rabbit resistant<br>Attracts birds |
| Miscanthus 'Purpurascens' -<br>Flame Grass                 | G | 4a-9b | Y |   |   |   | H = 4-5'<br>W = 2.5-3'   | ○ | Variety       | Moderate,<br>consistently<br>moist | Africa, E<br>Asia                         | Heat tolerant<br>Air pollution tolerant<br>Ornamental                         |
| Miscanthus sacchariflorus -<br>Silver Banner Grass         | G | 5a-9b |   | Y | Y |   | H = 5-8'<br>W = 3-4.5'   | ○ | Wet           | High,<br>consistently<br>moist     | Japan,<br>Manchuria,<br>Korea, N<br>China | Heat tolerant<br>Air pollution tolerant<br>Ornamental                         |
| Miscanthus sinensis 'Adagio' -<br>Adagio Maiden Grass      | G | 5a-9b | Y |   | Y | F | H = 3-5'<br>W = 3-4'     | ○ | Loam          | Moderate                           | Japan,<br>China,<br>Korea                 | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant       |

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| Miscanthus sinensis 'Cabaret' -<br>Cabaret Japanese Silver Grass        | G | 5a-9b | Y |  | Y | F | H = 6-7'<br>W = 3-5'   | ○ | Loam          | Moderate, well<br>drained          | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant                   |
| Miscanthus sinensis 'Gold Bar' -<br>Gold Bar Maiden Grass               | G | 5a-9b | Y |  |   |   | H = 4-5'<br>W = 3-4'   | ○ | Variety       | Low, well-<br>drained              | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |
| Miscanthus sinensis 'Gracillimus' -<br>Gracillimus Maiden Grass         | G | 5a-9b | Y |  | Y | M | H = 4-8'<br>W = 3-6'   | ○ | Variety       | Moderate,<br>consistently<br>moist | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'Graziella' -<br>Graziella Maiden Grass             | G | 5a-9b | Y |  |   |   | H = 5-7'<br>W = 3-4'   | ○ | Variety       | Low, well-<br>drained              | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |
| Miscanthus sinensis 'Silberfeder' -<br>Silver Feather Maiden Grass      | G | 4a-9b | Y |  |   |   | H = 6-8'<br>W = 4'     | ⊙ | Variety, rich | Low, well-<br>drained              | Asia                      | Adaptable to salt<br>Deer, rabbit resistant<br>Attracts birds                             |
| Miscanthus sinensis 'Strictus' -<br>Porcupine Grass                     | G | 5a-9b | Y |  |   | M | H = 4-9'<br>W = 2-6'   | ○ | Variety       | Moderate, well<br>drained          | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'varigatus' -<br>Variegated Maiden Grass            | G | 5a-9b | Y |  | Y | M | H = 5-9'<br>W = 4-5'   | ○ | Loam          | Low, well-<br>drained              | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'Pünktchen' LITTLE DOT -<br>Little Dot Maiden Grass | G | 5a-9b | Y |  |   |   | H = 4-7'<br>W = 4-6'   | ○ | Variety       | Low, well-<br>drained              | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Attracts birds                   |
| Miscanthus sinensis 'Morning Light' -<br>Morning Light Maiden Grass     | G | 5a-9b | Y |  | Y | M | H = 4-6'<br>W = 2.5-4' | ○ | Loam          | Low, well-<br>drained              | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'Yaku Jima' -<br>Yaku Jima Maiden Grass             | G | 5a-9b | Y |  |   |   | H = 3-5'<br>W = 3-5'   | ○ | Variety       | Low, well-<br>drained              | Japan,<br>China,<br>Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |

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| Miscanthus sinensis 'Zebrinus' -<br>Zebra Grass                    | G | 5a-9b | Y |   |   |   | H = 5-8'<br>W = 4-6'     | ○ | Variety, rich      | Moderate, well-<br>drained     | Asia                                   | Deer, rabbit resistant<br>Attracts birds  |
| Panicum virgatum 'Dallas Blues' -<br>Dallas Blues Switch Grass     | G | 5a-9b | Y | Y | Y | M | H = 4-6'<br>W = 2-3'     | ○ | Sandy, clay        | Low                            | Utah, North<br>America                 | Air pollution tolerant<br>Deer resistant<br>Attracts birds  |
| Panicum virgatum 'Cloud Nine' -<br>Cloud Nine Switch Grass         | G | 5a-9b |   |   |   |   | H = 5-7'<br>W = 2-3'     | ○ | Variety            | Moderate                       | Utah, North<br>America                 | Adaptable to salt<br>Attracts pollinators   |
| Panicum virgatum 'Heavy Metal' -<br>Heavy Metal Switch Grass       | G | 5a-9b | Y | Y | Y | F | H = 4-5'<br>W = 1-3'     | ○ | Sandy, clay        | Low                            | North<br>America                       | Air pollution tolerant<br>Deer resistant<br>Attracts birds  |
| Panicum virgatum 'Prairie Sky' -<br>Prairie Sky Switch Grass       | G | 4a-9b | Y |   | Y |   | H = 4-6'<br>W = 2-3'     | ○ | Sandy, clay        | Low                            | E North<br>America                     | Air pollution tolerant<br>Attracts birds  |
| Panicum virgatum 'Rotstrahlbusch' -<br>Red Switch Grass            | G | 5a-9b | Y | Y | Y |   | H = 4-5'<br>W = 2-3'     | ○ | Variety            | Low                            | E North<br>America                     | Air pollution tolerant<br>Attracts birds  |
| Panicum virgatum 'Shenandoah' -<br>Shenandoah Switch Grass         | G | 5a-9b | Y |   | Y | F | H = 3-4'<br>W = 3-4'     | ○ | Sandy, clay        | Low                            | Utah, North<br>America                 | Air pollution tolerant<br>Deer resistant<br>Attracts pollinators  |
| Panicum virgatum 'Strictum' -<br>Upright Switch Grass              | G | 4a-9b | Y |   |   | M | H = 4-6'<br>W = 2-3'     | ⊙ | Variety, dry       | Low                            | Utah, North<br>America                 | Attracts pollinators  |
| Spartina pectinata -<br>Prairie Cordgrass                          | G | 4a-8b |   | Y |   |   | H = 20-30"<br>W = 20-30" | ⊙ | Clay, loam,<br>wet | High,<br>consistently<br>moist | North<br>America                       | Wetland plant<br>Deer resistant   |
| Achillea millefolium 'Lilac Beauty' -<br>Lilac Beauty Yarrow       | P | 3b-9b | Y | N |   | F | H = 18-36"<br>W = 18-36" | ⊙ | Variety            | Low, well-<br>drained          | North<br>America,<br>Europe, W<br>Asia | Heat tolerant<br>Nitrogen fixer<br>Deer, rabbit, pest resistant<br>Attracts pollinators                                       |
| Achillea millefolium 'Little Susie' -<br>Little Susie Yarrow       | P | 3b-9b | Y | N |   | F | H = 10-24"<br>W = 12-24" | ⊙ | Variety            | Moderate, well-<br>drained     |  | Heat tolerant<br>Nitrogen fixer<br>Deer, rabbit resistant<br>Attracts pollinators   |
| Achillea millefolium 'Paprika' -<br>Paprika Yarrow                 | P | 3b-9b | Y | N |   | F | H = 18-24"<br>W = 18-24" | ⊙ | Variety            | Low, well-<br>drained          |  | Adaptable to salt<br>Urban, air pollution tolerant<br>Nitrogen fixer<br>Deer, rabbit resistant<br>Attracts birds, pollinators |
| Achillea millefolium 'Pink Grapefruit' -<br>Pink Grapefruit Yarrow | P | 3b-9b | Y |   |   | F | H = 12-36"<br>W = 12-30" | ⊙ | Variety            | Low, well-<br>drained          | North<br>America,<br>Europe, W<br>Asia | Heat tolerant<br>Disease resistant<br>Deer, rabbit resistant<br>Attracts pollinators  |

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|---|---|-------|---|--|--|---|--------------------------|---|-------------------------|--|--|---|
| Origanum vulgare -<br>Oregano                                       | P | 4a-8b | Y |  |  |   | H = 12-36"<br>W = 12-24" | ☉ | Loam                    | Low, well-<br>drained                                | Europe,<br>central Asia                                | Deer resistant<br>Attracts pollinators  |
| Sidalcea 'Party Girl' -<br>Party Girl Prairie Mallow                | P | 5a-7b |   |  |  |   | H = 24-36"<br>W = 18-24' | ☉ |                         | Moderate,<br>consistently<br>moist, well-<br>drained | W & central<br>North<br>America                        | Attracts birds, pollinators   |
| Stachys byzantina 'Helen von Stein' -<br>Helen von Stein Lamb's Ear | P | 4a-8b | Y |  |  |   | H = 12-18"<br>W = 18-24" | ○ |                         | Low, well-<br>drained                                |  |   |
| Stachys byzantina 'Primrose Heron' -<br>Primrose Heron Lambs Ear    | P | 4a-8b | Y |  |  |   | H = 12-18"<br>W = 12-18" | ☉ | Loam                    | Low, well-<br>drained                                | United<br>States                                       | Air pollution tolerant<br>Deer, rabbit resistant  |
| Thymus pseudolanuginosus -<br>Woolly Thyme                          | P | 5a-8b | Y |  |  | S | H = 3"<br>W = 12"        | ☉ | Variety                 | Moderate   |  | Adaptable to salt<br>Air pollution tolerant<br>Deer, rabbit resistant<br>Attracts pollinators |
| Verbena hastata -<br>Blue Verain                                    | P | 3b-8b | N |  |  |   | H = 2-6'<br>W = 1-2.5'   | ☉ | Variety, wet            | High   | W North<br>America                                     | Deer resistant<br>Attracts pollinators  |
| Clematis ligusticifolia -<br>Western White Clematis                 | V | 5a-9b | Y |  |  | F | H = 20'<br>W = 18'       | ○ | Variety                 | Low, well-<br>drained                                | W North<br>America,<br>Alberta,<br>British<br>Columbia | Rabbit resistant<br>Attracts pollinator   |
| Vitis labrusca 'Concord' -<br>Concord Grape                         | V | 5a-8b |   |  |  |   | H = 15-20'<br>W = 15-20' | ☉ | Loam, rich,<br>humusy   | Moderate, well-<br>drained                           | North<br>America                                       | Ornamental<br>Deer, rabbit resistant  |
| Vitis labrusca 'Niagara' -<br>Niagara Grape                         | V | 5a-8b |   |  |  | F | H = 15-20'<br>W = 15-25" | ☉ | Loam, rich,<br>humusy   | Moderate, well-<br>drained                           | North<br>America                                       | Ornamental  |
| Vitis 'Himrod' -<br>Himrod Grape                                    | V | 5a-8b |   |  |  | F | H = 15-20'<br>W = 15-25" | ☉ | Loam, rich,<br>humusy   | Moderate, well-<br>drained                           | Asia Minor;<br>Turkey                                  | Ornamental<br>Deer, rabbit resistant  |
| Vitis 'St. Theresa' -<br>St. Theresa Grape                          | V | 5a-8b |   |  |  |   | H = 15-20'<br>W = 3-8'   | ○ | Alkaline                | Moderate   |  | Cold tolerant<br>Ornamental   |
| Vitis x 'St. Theresa Seedless' -<br>St. Theresa seedless grape      | V | 4a-8b |   |  |  |   | H = 15'-20'<br>W = 3-8'  | ○ | Loam, clay,<br>alkaline | Moderate   | Rocky<br>Mountain<br>Regions                           | Adaptable growing conditions  |

| Green Roofs Plants List   |            |       |                   |                    |                 |             |                          |             |                          |                           |  |  |
|---|------------|-------|-------------------|--------------------|-----------------|-------------|--------------------------|-------------|--------------------------|---------------------------|--|--|
| Scientific Name -<br>Common Name  | Plant Type | Zone  | Drought Tolerance | Flooding Tolerance | Erosion Control | Growth Rate | Mature Size (HxW)        | Light Needs | Soil Needs               | Water Needs               | Native   | Benefits   |
| Acer pseudoplatanus 'Tunpetti' REGAL<br>PETTICOAT -<br>Regal Petticoat Sycamore Maple | T          | 4a-9b | Y                 |                    |                 | M           | H = 40-60'<br>W = 30-60' | ☼           | Variety                  | Low                       | N Europe   | Adaptable to salt<br>Wind tolerant<br>Urban, air pollution                                   |
| Catalpa speciosa -<br>Catalpa   | T          | 5a-9b | Y                 | Y                  |                 | F           | H = 40-70'<br>W = 20-50' | ○           | Variety, rich            | Low, well-<br>drained     | United States  | Adaptable to salt<br>Urban, air pollution tolerant<br>Deer resistant<br>Attracts pollinators |
| Citrus limon -<br>Lemon   | T          | 9a-9b |                   |                    |                 |             | H = 10-20'<br>W = 10-15' | ☼           | Loam, clay               | Moderate, well<br>drained | Asia   |  |
| Juniperus osteosperma -<br>Utah Juniper   | T          | 3b-7b | Y                 |                    |                 |             | H = 20'<br>W = 10'       | ☼           | Variety                  | Low, well-<br>drained     | Utah, SW<br>North<br>America                           | Cold tolerant  |
| Laurus nobilis -<br>Sweet Bay   | T          | 8a-9b | Y                 |                    |                 | S           | H = 10-30'<br>W = 5-20'  | ○           | Rich                     | Moderate, well<br>drained | N Africa, W<br>Asia, S Europe                          | Attracts birds   |
| Olea europaea 'Swan Hill' -<br>Swan Hill Olive  | T          | 8a-9b | Y                 |                    |                 | M           | H = 30-35'<br>W = 20-30' | ☼           | Variety,<br>alkaline     | Low, well-<br>drained     | United States  | Adaptable growing conditions<br>Heat tolerant  |
| Olea europaea 'Tolley's Upright' -<br>Tolley's Upright Olive                          | T          | 8a-9b | Y                 |                    |                 | S           | H = 22'<br>W = 13'       | ○           | Variety,<br>humusy, rich | Moderate, well<br>drained |  |  |
| Ulmus parvifolia 'Emer II' ALLEE -<br>Allee Lacebark Elm                              | T          | 4a-9b | Y                 |                    |                 |             | H = 60-70'<br>W = 35-55' | ☼           | Variety, loam,<br>rich   | Moderate                  | Japan, China,<br>Korea                                 | Air pollution tolerant   |
| Ulmus pumila -<br>Siberian Elm  | T          | 4a-9b | Y                 |                    | Y               |             | H = 50-70'<br>W = 40-70' | ☼           | Loam, rich               | Low to<br>moderate        | Eastern<br>Siberia,<br>northern<br>China,<br>Turkestan | Adaptable growing conditions<br>Air pollution tolerant                                       |
| Juniperus scopulorum 'Blue Arrow' -<br>Blue Arrow Juniper                             | T          | 4a-9b |                   |                    | Y               | M           | H = 12-15'<br>W = 2'     | ☼           | Variety                  | Low                       |  | Adaptable to salt<br>Urban pollution tolerant<br>Deer, rabbit resistant                      |

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|---|----|-------|---|--|---|---|--------------------------|---|--------------|--|---|--|
| Juniperus scopulorum 'Skyrocket' -<br>Skyrocket Juniper               | T  | 3b-8b | Y |  | Y | F | H = 15-20'<br>W = 2-5'   | ☉ | Variety      | Low  |   | Adaptable to salt<br>Urban pollution tolerant<br>Deer, rabbit resistant<br>Attracts birds  |
| Juniperus scopulorum 'Woodward' -<br>Woodward columnar juniper        | T  | 3b-9b | Y |  |   | M | H = 20'<br>W = 4'        | ○ | Variety      | Low  | Rocky<br>Mountains,<br>North<br>America           | Deer resistant<br>Attracts birds   |
| Juniperus virginiana 'Hillspire' -<br>Hillspire Eastern Red Cedar     | T  | 3b-9b | Y |  | Y |   | H = 15-30'<br>W = 5-15'  | ☉ | Variety      | Low  | E United<br>States                                | Air pollution tolerant<br>Deer resistant   |
| Pinus mugo -<br>Mugo Pine   | T  | 3b-7b |   |  |   |   | H = 8-20'<br>W = 10-30'  | ○ | Loam, sandy  | Low, well-<br>drained                                | Central<br>Europe to<br>Bulgaria                  | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant                              |
| Pinus mugo 'Carsten's Wintergold' -<br>Carsten's Wintergold Mugo Pine | T  | 3b-7b |   |  |   | S | H = 12-24"<br>W = 12-24" | ☉ | Loam, rich   | Low, well-<br>drained                                |   | Deer, rabbit resistant<br>Attracts birds   |
| Pinus mugo 'Jakobsen' -<br>Pinus mugo 'Jakobsen'                      | T  | 3b-7b | Y |  |   | M | H = 12-18"<br>W = 24"    | ☉ | Variety      | Low, well-<br>drained                                |   | Rabbit resistant   |
| Buxus microphylla 'Golden Triumph' -<br>Golden Triumph Boxwood        | SH | 5a-9b |   |  |   | S | H = 2-3'<br>W = 3-4'     | ○ | Rich         | Moderate, well<br>drained                            |   | Deer, rabbit resistant   |
| Buxus microphylla 'Green Gem' -<br>Boxwood 'Green Gem'                | SH | 4a-9b |   |  |   | S | H = 3-4'<br>W = 3-4'     | ○ | Loam         | Moderate,<br>consistently<br>moist, well-<br>drained | Europe, Asia,<br>Africa and<br>Central<br>America | Deer, rabbit resistant   |
| Callistemon 'Little John' -<br>Little John Dwarf Bottlebrush          | SH | 8a-9b | Y |  |   | S | H = 3'<br>W = 5'         | ☉ | Loam, acidic | Low, well-<br>drained                                |   | Deer resistant<br>Attracts birds   |
| Caragana arborescens -<br>Siberian Peashrub                           | SH | 3b-8b | Y |  |   |   | H = 15-20'<br>W = 12-15' | ☉ | Loam         | Low, well-<br>drained                                | E Russia, N<br>China                              | Attracts pollinators   |
| Caragana arborescens 'Pendula' -<br>Weeping Pea Shrub                 | SH | 3b-5b | Y |  |   |   | H = 6-8'<br>W = 4-8'     | ○ | Variety      | Low  |   | Adaptable to salt<br>Deer resistant<br>Attracts pollinators                                |
| Juniperus chinensis 'Daub's Frosted' -<br>Daub's Frosted Juniper      | SH | 4a-9b | Y |  | Y | F | H = 1-2'<br>W = 3-6'     | ☉ | Variety      | Low, well-<br>drained                                |   | Adaptable growing conditions<br>Urban pollution tolerant<br>Deer, rabbit resistant         |
| Juniperus chinensis 'Kaizuka' -<br>Kaizuka Juniper                    | SH | 5a-9b | Y |  | Y |   | H = 15-30'<br>W = 10-15' | ☉ | Variety      | Moderate, well<br>drained                            | China, Japan,<br>Mongolia,<br>Himalayas           | Adaptable growing conditions<br>Air pollution tolerant<br>Deer resistant<br>Attracts birds |
| Juniperus chinensis 'Spearmint' -<br>Spearmint Juniper                | SH | 3b-9b | Y |  | Y |   | H = 10-15'<br>W = 3-5'   | ☉ | Variety      | Moderate, well<br>drained                            | China, Japan,<br>Mongolia,<br>Himalayas           | Adaptable growing conditions<br>Air pollution tolerant<br>Deer resistant                   |

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|--|----|-------|---|--|---|---|--------------------------|---|------------------------|---------------------------|--|---|
| Juniperus communis -<br>Common Juniper                         | SH | 3b-6b | Y |  | Y |   | H = 1-15'<br>W = 8-12'   | ☉ | Variety, rocky,<br>dry | Low, well-<br>drained     | Temperate N<br>Hemisphere              | Adaptable growing conditions<br>Air pollution tolerant<br>Deer resistant                                |
| Juniperus communis 'Repanda' -<br>Juniperus communis 'Repanda' | SH | 3b-9b | Y |  | Y |   | H = 1-2'<br>W = 3-8'     | ☉ | Variety                | Low, well-<br>drained     | Utah, North<br>America                 | Adaptable growing conditions<br>Deer, rabbit resistant<br>Attracts pollinators                          |
| Juniperus horizontalis 'Bar Harbor' -<br>Bar Harbor Juniper    | SH | 3b-9b | Y |  | Y |   | H = 8-12"<br>W = 5-6'    | ☉ | Variety, sandy         | Low, well-<br>drained     | Alaska,<br>Canada, N<br>United States  | Adaptable growing conditions<br>Air pollution tolerant<br>Deer resistant                                |
| Juniperus horizontalis 'Blue Chip' -<br>Blue Chip Juniper      | SH | 3b-9b | Y |  | Y |   | H = 6-8"<br>W = 7-10'    | ☉ | Variety, sandy         | Low, well-<br>drained     | Alaska,<br>Canada, N<br>United States  | Adaptable growing conditions<br>Air pollution tolerant<br>Deer resistant                                |
| Juniperus horizontalis 'Hughes' -<br>Hughes Juniper            | SH | 3b-9b | Y |  | Y | M | H = 12"<br>W = 9'        | ☉ | Variety                | Low, well-<br>drained     | North<br>America                       | Adaptable growing conditions<br>Air pollution tolerant<br>Deer resistant                                |
| Juniperus horizontalis 'Monber' -<br>Icee Blue Juniper         | SH | 3b-9b | Y |  | Y | M | H = 4-6"<br>W = 6-8'     | ☉ | Variety, sandy         | Low, well-<br>drained     | Alaska,<br>Canada, N<br>United States  | Adaptable growing conditions<br>Deer, rabbit resistant<br>Attracts pollinators                          |
| Juniperus horizontalis 'Wiltonii' -<br>Blue Rug Juniper        | SH | 3b-9b | Y |  | Y | F | H = 4-6"<br>W = 6-8'     | ☉ | Variety, sandy         | Moderate, well<br>drained | Alaska,<br>Canada, N<br>United States  | Adaptable growing conditions<br>Deer, rabbit resistant<br>Attracts pollinators                          |
| Juniperus osteosperma -<br>Utah Juniper                        | SH | 3b-7b | Y |  | Y | S | H = 20'<br>W = 10'       | ☉ | Variety,<br>alkaline   | Low, well-<br>drained     | Utah, North<br>America                 | Adaptable growing conditions  |
| Juniperus sabina 'Buffalo' -<br>Buffalo Juniper                | SH | 3b-8b | Y |  | Y | M | H = 12"<br>W = 8-10'     | ☉ | Variety                | Low, well-<br>drained     |  | Adaptable growing conditions<br>Deer, rabbit resistant  |
| Juniperus sabina 'Skandia' -<br>Skandia Juniper                | SH | 4a-7b | Y |  | Y | M | H = 12-18"<br>W = 8-10'  | ☉ | Variety                | Low, well-<br>drained     | Central and S<br>Europe                | Adaptable growing conditions<br>Deer, rabbit resistant  |
| Juniperus scopulorum -<br>Rocky Mountain Juniper               | SH | 4a-9b | Y |  | Y | S | H = 30-40'<br>W = 10-15' | ☉ | Variety,<br>alkaline   | Low, well-<br>drained     | Utah, W North<br>America and<br>Mexico | Adaptable growing conditions<br>Wind tolerant   |
| Juniperus scopulorum 'Gray Gleam' -<br>Gray Gleam Juniper      | SH | 4a-7b | Y |  | Y | S | H = 15'<br>W = 5-7'      | ☉ | Dry                    | Low, well-<br>drained     |  | Adaptable growing conditions<br>Deer, rabbit resistant  |
| Juniperus scopulorum 'Skyrocket' -<br>Skyrocket Juniper        | SH | 3b-8b | Y |  | Y | F | H = 15-20'<br>W = 2-5'   | ☉ | Variety                | Low, well-<br>drained     |  | Adaptable growing conditions<br>Adaptable to salt<br>Urban pollution tolerant<br>Deer, rabbit resistant |
| Juniperus scopulorum 'Tabletop' -<br>Tabletop Juniper          | SH | 3b-7b | Y |  | Y | S | H = 5-6'<br>W = 6-8'     | ☉ | Variety,<br>alkaline   | Low, well-<br>drained     |  | Deer resistant<br>Attracts birds  |

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| Juniperus x pfitzeriana 'Monsan' -<br>Sea of Gold Juniper                        | SH | 3b-9b | Y |  | Y | M | H = 3'<br>W = 4'         | ☉ | Variety                | Low, well-<br>drained              |  | Adaptable growing conditions<br>Urban pollution tolerant<br>Deer, rabbit resistant         |
| Juniperus x pfitzeriana 'Sea Green' -<br>Sea Green Juniper                       | SH | 3b-9b | Y |  | Y |   | H = 4-6'<br>W = 6-8'     | ☉ | Variety, rocky,<br>dry | Moderate, well<br>drained          |  | Adaptable growing conditions<br>Air pollution tolerant<br>Deer resistant<br>Attracts birds |
| Bouteloua gracilis -<br>Blue Grama   | G  | 3b-9b | Y |  |   |   | H = 9-24"<br>W = 18-24"  | ☉ | Variety                | Low                                | W United<br>States                       | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant<br>Attracts birds            |
| Bouteloua gracilis 'Blonde Ambition' -<br>Blonde Ambition grama grass            | G  | 4a-9b | Y |  |   |   | H = 30-36"<br>W = 30-36" | ○ | Variety                | Low                                | North<br>America                         | Deer resistant   |
| Buchloë dactyloides -<br>Buffalo Grass   | G  | 3b-9b | Y |  | Y |   | H = 2-5"<br>W = 72"      | ☉ | Variety                | Low                                | North<br>America,<br>Great Plains        | Heat tolerant  |
| Buchloë dactyloides 'Cody' -<br>Cody Buffalo Grass                               | G  | 3b-9b | Y |  | Y |   | H = 4-6"<br>W = 72"      | ☉ | Variety                | Low                                | North<br>America,<br>Great Plains        | Heat tolerant  |
| Buchloë dactyloides 'Legacy' -<br>Legacy Buffalo Grass                           | G  | 3b-9b | Y |  |   | F | H = 4-6"<br>W = 72"      | ☉ | Clay, alkaline         | Low                                |  | Attracts birds   |
| Calamagrostis x acutiflora 'Eldorado' -<br>Eldorado Feather Reed Grass           | G  | 4a-9b | Y |  |   | M | H = 4-6'<br>W = 2-2.5'   | ☉ | Variety                | Low                                |  | Attracts birds   |
| Calamagrostis x acutiflora 'Karl Foerster' -<br>Karl Foerster Feather Reed Grass | G  | 4a-9b | Y |  | Y | M | H = 3-5'<br>W = 1.5-2.5' | ☉ | Variety, rich          | Low                                | Europe, Asia                             | Air pollution tolerant<br>Deer resistant   |
| Calamagrostis x acutiflora 'Overdam' -<br>Overdam Feather Reed Grass             | G  | 5a-9b | Y |  | Y | M | H = 3-5'<br>W = 2'       | ☉ | Variety, rich          | Low                                | Europe, Asia                             | Air pollution tolerant<br>Deer resistant   |
| Calamagrostis brachytricha -<br>Korean feather reed grass                        | G  | 4a-9b | Y |  |   |   | H = 24-40"<br>W = 20-24" | ○ | Variety                | Low                                |  | Deer resistant   |
| Carex buechananii -<br>Fox Red Curly Sedge                                       | G  | 4b-9b | Y |  |   | S | H = 2-3'<br>W = 2-3'     | ○ | Variety, rich          | Consistently<br>moist              | New Zealand                              | Deer, rabbit resistant   |
| Cynodon dactylon -<br>Bermuda Grass  | G  | 7a-9b | Y |  | Y | F | H = 24"<br>W = 20"       | ☉ | Variety                | Low to<br>moderate                 | Europe,<br>Africa,<br>Australia,<br>Asia | Heat tolerant  |
| Deschampsia cespitosa 'Northern Lights' -<br>Northern Lights Tufted Hair Grass   | G  | 4a-9b |   |  | Y | M | H = 1-3'<br>W = 1-3'     | ○ | Variety, acidic        | Moderate,<br>consistently<br>moist |  | Air pollution tolerant<br>Deer resistant<br>Attracts birds                                 |

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| Deschampsia cespitosa var. vivipara -<br>Tufted Hair Grass | G | 4a-9b |   |   |   |   | H = 2-3'<br>W = 1-2'     | ○ | Variety, rich | High,<br>consistently<br>moist     |   | Air pollution tolerant<br>Attracts birds                                      |
| Festuca spp. -<br>BioMeadow Fine Fescue Mix                | G | 4a-9b |   |   |   |   | H = 8-12"<br>W = 6-8"    | ○ |               | Moderate                           |   | Adaptable to salt   |
| Festuca arundinacea -<br>Dwarf Tall Fescue                 | G | 5a-8b |   |   |   |   | H = 24-36"<br>W = 12-18" | ○ | Clay          | Moderate                           |   | Adaptable to salt   |
| Festuca arundinacea 'Bolero' -<br>BioTurf Dwarf Fescue Mix | G | 5a-8b | Y |   |   | S | H = 2-3'<br>W = 12-18"   | ○ | Clay          | Moderate                           |   | Heat tolerant<br>Deer resistant   |
| Festuca arundinacea 'Bonsai' -<br>Bonsai Dwarf Tall Fescue | G | 5a-8b |   |   |   |   | H = 24-36"<br>W = 12-18" | ○ | Clay          | Moderate                           |   | Deer resistant  |
| Festuca glauca -<br>Blue Fescue                            | G | 4a-9b | Y |   |   |   | H = 9-12"<br>W = 12-18"  | ⊙ | Variety       | Low, moderate                      |   | Air pollution tolerant<br>Ornamental  |
| Festuca glauca 'Boulder Blue' -<br>Border Blue Fescue      | G | 4a-9b | Y |   |   |   | H = 6-15"<br>W = 6-12"   | ⊙ | Variety       | Low                                |   | Air pollution tolerant<br>Ornamental<br>Deer resistant                        |
| Festuca glauca 'Elijah Blue' -<br>Elijah Blue Fescue       | G | 4a-8b | Y |   |   | F | H = 9-12"<br>W = 9-12"   | ⊙ | Variety       | Low                                |   | Air pollution tolerant<br>Ornamental<br>Deer, rabbit resistant                |
| Helictotrichon sempervirens -<br>Blue Oat Grass            | G | 4a-9b | Y |   |   | M | H = 2-3'<br>W = 2-3'     | ⊙ | Variety       | Moderate                           |   | Adaptable to salt<br>Air pollution tolerant<br>Deer, rabbit resistant         |
| Miscanthus x giganteus -<br>Giant Chinese Silver Grass     | G | 4a-9b | Y |   |   | F | H = 10-13'<br>W = 5'     | ⊙ | Variety       | Moderate                           | Hybrid of<br>Asian species                | Heat, wind tolerant<br>Ornamental<br>Deer, rabbit resistant<br>Attracts birds |
| Miscanthus 'Purpurascens' -<br>Flame Grass                 | G | 4a-9b | Y |   |   |   | H = 4-5'<br>W = 2.5-3'   | ○ | Variety       | Moderate,<br>consistently<br>moist | Africa, E Asia                            | Heat tolerant<br>Air pollution tolerant<br>Ornamental                         |
| Miscanthus sacchariflorus -<br>Silver Banner Grass         | G | 5a-9b |   | Y | Y |   | H = 5-8'<br>W = 3-4.5'   | ○ | Wet           | High,<br>consistently<br>moist     | Japan,<br>Manchuria,<br>Korea, N<br>China | Heat tolerant<br>Air pollution tolerant<br>Ornamental                         |
| Miscanthus sinensis 'Adagio' -<br>Adagio Maiden Grass      | G | 5a-9b | Y |   | Y | F | H = 3-5'<br>W = 3-4'     | ○ | Loam          | Moderate                           | Japan, China,<br>Korea                    | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant       |

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| Miscanthus sinensis 'Cabaret' - Cabaret Japanese Silver Grass        | G | 5a-9b | Y |  | Y | F | H = 6-7'<br>W = 3-5'   | ○ | Loam          | Moderate, well-drained       | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant                   |
| Miscanthus sinensis 'Gold Bar' - Gold Bar Maiden Grass               | G | 5a-9b | Y |  |   |   | H = 4-5'<br>W = 3-4'   | ○ | Variety       | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |
| Miscanthus sinensis 'Gracillimus' - Gracillimus Maiden Grass         | G | 5a-9b | Y |  | Y | M | H = 4-8'<br>W = 3-6'   | ○ | Variety       | Moderate, consistently moist | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'Graziella' - Graziella Maiden Grass             | G | 5a-9b | Y |  |   |   | H = 5-7'<br>W = 3-4'   | ○ | Variety       | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |
| Miscanthus sinensis 'Silberfeder' - Silver Feather Maiden Grass      | G | 4a-9b | Y |  |   |   | H = 6-8'<br>W = 4'     | ⊙ | Variety, rich | Low, well-drained            | Asia                | Adaptable to salt<br>Deer, rabbit resistant<br>Attracts birds                             |
| Miscanthus sinensis 'Strictus' - Porcupine Grass                     | G | 5a-9b | Y |  |   | M | H = 4-9'<br>W = 2-6'   | ○ | Variety       | Moderate, well-drained       | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'varigatus' - Variegated Maiden Grass            | G | 5a-9b | Y |  | Y | M | H = 5-9'<br>W = 4-5'   | ○ | Loam          | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'Pünktchen' LITTLE DOT - Little Dot Maiden Grass | G | 5a-9b | Y |  |   |   | H = 4-7'<br>W = 4-6'   | ○ | Variety       | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Attracts birds                   |
| Miscanthus sinensis 'Morning Light' - Morning Light Maiden Grass     | G | 5a-9b | Y |  | Y | M | H = 4-6'<br>W = 2.5-4' | ○ | Loam          | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds |
| Miscanthus sinensis 'Yaku Jima' - Yaku Jima Maiden Grass             | G | 5a-9b | Y |  |   |   | H = 3-5'<br>W = 3-5'   | ○ | Variety       | Low, well-drained            | Japan, China, Korea | Heat tolerant<br>Air pollution tolerant<br>Ornamental                                     |

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| Miscanthus sinensis 'Zebrinus' -<br>Zebra Grass                                  | G | 5a-9b | Y |   |   |   | H = 5-8'<br>W = 4-6'     | ○ | Variety, rich | Moderate, well<br>drained | Asia                                   | Deer, rabbit resistant<br>Attracts birds  |
| Schizachyrium scoparium -<br>Little Bluestem                                     | G | 5a-9b | Y |   | Y |   | H = 2-4'<br>W = 1.5-2'   | ⊙ | Variety       | Low, well-<br>drained     | North<br>America                       | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators                               |
| Schizachyrium scoparium 'Blaze' -<br>Blaze Little Bluestem                       | G | 4a-9b | Y |   | Y |   | H = 2-3'<br>W = 1.5-2'   | ⊙ | Variety       | Low, well-<br>drained     | North<br>America                       | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators                               |
| Schizachyrium scoparium 'Prairie Blues' -<br>Prairie Blues Little Bluestem       | G | 4a-9b | Y |   | Y |   | H = 32-36"<br>W = 12-15" | ○ | Variety       | Low, well-<br>drained     | North<br>America                       | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators                               |
| Schizachyrium scoparium 'Standing Ovation' -<br>Standing Ovation little bluestem | G | 3b-8b | Y |   | Y | F | H = 3-4'<br>W = 1-2'     | ⊙ | Variety       | Low, moderate             | North<br>America                       | Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds  |
| Achillea millefolium 'Lilac Beauty' -<br>Lilac Beauty Yarrow                     | P | 3b-9b | Y | N |   | F | H = 18-36"<br>W = 18-36" | ⊙ | Variety       | Low, well-<br>drained     | North<br>America,<br>Europe, W<br>Asia | Heat tolerant<br>Nitrogen fixer<br>Deer, rabbit, pest resistant<br>Attracts pollinators                                       |
| Achillea millefolium 'Little Susie' -<br>Little Susie Yarrow                     | P | 3b-9b | Y | N |   | F | H = 10-24"<br>W = 12-24" | ⊙ | Variety       | Moderate, well<br>drained |  | Heat tolerant<br>Nitrogen fixer<br>Deer, rabbit resistant<br>Attracts pollinators   |
| Achillea millefolium 'Paprika' -<br>Paprika Yarrow                               | P | 3b-9b | Y | N |   | F | H = 18-24"<br>W = 18-24" | ⊙ | Variety       | Low, well-<br>drained     |  | Adaptable to salt<br>Urban, air pollution tolerant<br>Nitrogen fixer<br>Deer, rabbit resistant<br>Attracts birds, pollinators |
| Achillea millefolium 'Pink Grapefruit' -<br>Pink Grapefruit Yarrow               | P | 3b-9b | Y |   |   | F | H = 12-36"<br>W = 12-30" | ⊙ | Variety       | Low, well-<br>drained     | North<br>America,<br>Europe, W<br>Asia | Heat tolerant<br>Disease resistant<br>Deer, rabbit resistant<br>Attracts pollinators  |
| Armeria maritima 'Bloodstone' -<br>Bloodstone Thrift                             | P | 3b-9b | Y |   | Y | M | H = 6-8"<br>W = 12"      | ○ | Sandy, loam   | Low                       | North<br>America                       | Deer, rabbit resistant  |

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| Armeria maritima 'Cotton Tail' - Cotton Tail Thrift                                   | P | 3b-9b | Y |  | Y | M | H = 4-6"<br>W = 4-6"     | ☉ | Sandy, loam           | Low  | North America                   | Deer, rabbit resistant                                 |
| Armeria maritima 'Düsseldorfer Stolz' - Dusseldorf Pride Thrift                       | P | 3b-9b | Y |  |   |   | H = 6-12"<br>W = 6-12"   | ☉ | Variety, dry          | Low, well-drained                          |                                 |  |
| Armeria maritima 'Rubifolia' - Red Leaf Thrift  | P | 3b-9b | Y |  | Y | M | H = 8-10"<br>W = 12"     | ☉ | Sandy, loam, dry      | Low, well-drained                          |                                 | Deer, rabbit resistant                                 |
| Armeria maritima 'Splendens' - Splendens Common Thrift                                | P | 3b-9b | Y |  | Y | M | H = 6-12"<br>W = 6-12"   | ☉ | Variety, dry          | Low, well-drained                          |                                 | Deer, rabbit resistant                                 |
| Ocimum basilicum 'Fino Verde' - Fino Verde Basil                                      | P | 9a-9b |   |  |   |   | H = 12-36"               | ☉ | Loam                  | Moderate, consistently moist               |                                 | Pest resistant   |
| Origanum distamnus - Dittany of Crete   | P | 7a-9b | Y |  |   |   | H = 6-12"<br>W = 18-24"  | ☉ | Loam                  | Low to moderate, well-drained              | Crete, Europe                   | Heat tolerant<br>Deer, rabbit resistant                |
| Origanum vulgare - Oregano  | P | 4a-8b | Y |  |   |   | H = 12-36"<br>W = 12-24" | ☉ | Loam                  | Low, well-drained                          | Europe, central Asia            | Deer resistant<br>Attracts pollinators                 |
| Rosa rugosa - Pink Rugosa Rose  | P | 3b-9b | Y |  | Y | M | H = 3-8"<br>W = 3-8"     | ○ | Variety, loam, acidic | Moderate, well-drained                     | E Russia, Korea, Japan, N China | Adaptable growing conditions<br>Air pollution tolerant |
| Rumex sanguineus ssp. sanguineus - B+B392loody Sorrel/ Red Dock                       | P | 6a-9b |   |  |   |   | H = 12-18"<br>W = 12-18" | ☉ | Loam                  | Moderate, consistently moist, well-drained | Europe, Asia                    | Ornamental   |
| Salvia microphylla x greggii 'EGGBEN001' Plant Patent #24,152 - Heatwave Glitter Sage | P | 6a-9b | Y |  |   |   | H = 24"<br>W = 24"       | ○ |                       | Low, well-drained                          | S and SW United States          | Attracts birds, pollinators                            |
| Salvia microphylla x greggii 'EGGBEN003' Plant Patent #24,155 - Heatwave Glimmer Sage | P | 6a-9b | Y |  |   |   | H = 24"<br>W = 24"       | ○ |                       | Low, well-drained                          | S and SW United States          | Deer resistant<br>Attracts birds, pollinators          |
| Salvia microphylla x greggii "EGGBEN004' Plant Patent #24154 - Heatwave Sparkle Sage  | P | 6a-9b |   |  |   | F | H = 30"<br>W = 36"       | ☉ | Loam                  | Low, well-drained                          | North America                   | Deer, rabbit, pest resistant                           |
| Salvia microphylla x greggii 'EGGBEN005' Plant Patent #24,151 - Heatwave Blaze Sage   | P | 6a-9b |   |  |   | F | H = 30"<br>W = 36"       | ☉ | Loam                  | Low, well-drained                          | North America                   | Deer, rabbit, pest resistant                           |
| Salvia nemorosa 'Blue Marvel' - Blue Marvel Sage                                      | P | 4a-9b | Y |  |   | M | H = 10-12"<br>W = 10-12" | ☉ | Rich                  | Low, well-drained                          |                                 | Adaptable to salt<br>Deer resistant                    |

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| Salvia nemorosa 'Rose Marvel' Plant Patent Applied For -<br>Rose Marvel Salvia  | P | 4b-9b |   |  |  | M | H = 10-12"<br>W = 10-12" | ☉ | Rich           | Low, well-drained                          |                         | Deer, rabbit resistant  |
| Santolina virens -<br>Green Lavender Cotton                                     | P | 8a-9b | Y |  |  | M | H = 24"<br>W = 24"       | ☉ | Sandy          | Low, well-drained                          | France                  | Heat tolerant<br>Deer, rabbit resistant   |
| Santolina virens 'Lemon Fizz' -<br>Lemon Fizz Lavender Cotton                   | P | 7a-9b | Y |  |  |   | H = 18-24"<br>W = 18-24" | ○ | Rocky, gravel  | Low, well-drained                          |                         | Attracts pollinators  |
| Sedum 'Cherry Tart' Plant Patent #24,603 -<br>Sunsparkler Cherry Tart Stonecrop | P | 4a-9b |   |  |  | M | H = 6"<br>W = 18"        | ○ | Loam, sandy    | Low, well-drained                          |                         | Deer resistant  |
| Sedum '17-03' Pink Plant Patent Applied For -<br>Purple Crush Stonecrop         | P | 4a-9b |   |  |  | M | H = 15"<br>W = 15"       | ○ | Loam, sandy    | Low, well-drained                          |                         | Attracts pollinators  |
| Sedum album chloroticum 'Baby Tears' -<br>Baby Tears Stonecrop                  | P | 4a-9b | Y |  |  | M | H = 4-6"<br>W = 12"      | ○ | Loam, sandy    | Low, well-drained                          |                         | Deer resistant<br>Attracts pollinators  |
| Sedum aldolphii -<br>Golden Sedum   | P | 7a-9b | Y |  |  | F | H = 12"<br>W = 24"       | ☉ | Variety, sandy | Low, well-drained                          | Mexico                  |   |
| Sedum oreganum -<br>Oregon Stonecrop  | P | 3b-9b | Y |  |  |   | H = 8"<br>W = 12"        | ☉ | Variety        | Low, well-drained                          | W North America         | Deer resistant<br>Attracts pollinators  |
| Sedum spathulifolium -<br>Broadleaf Stonecrop                                   | P | 4a-9b | Y |  |  |   | H = 2-8"<br>W = 12-36"   | ○ | Variety        | Low, well-drained                          | W North America         | Deer, rabbit resistant<br>Attracts pollinators  |
| Sedum spurium 'Bronze Carpet' -<br>Bronze Carpet Stonecrop                      | P | 3b-9b | Y |  |  | F | H = 4-6"<br>W = 24"      | ○ | Loam, acidic   | Low, well-drained                          | Caucus                  | Air pollution tolerant<br>Deer, rabbit resistant  |
| Sedum spurium 'Schorbuser Blut' -<br>Dragon's Blood Stonecrop                   | P | 3b-9b | Y |  |  | F | H = 4-6"<br>W = 24"      | ○ | Loam, acidic   | Moderate, well-drained                     | Caucus                  | Air pollution tolerant<br>Deer, rabbit resistant  |
| Sedum x cremnosedum 'Little Gem' -<br>Little Gem Stonecrop                      | P | 8a-9b | Y |  |  |   | H = 3"<br>W = 5"         | ☉ | Sandy, rocky   | Low, well-drained                          |                         |   |
| Sisyrinchium 'Devon Skies' -<br>Devon Skies Blue-Eyed Grass                     | P | 7a-9b | Y |  |  |   | H = 3-6"<br>W = 9-12"    | ☉ |                | Moderate, consistently moist, well-drained | North and South America | Heat tolerant   |
| Sisyrinchium angustifolium 'Lucerne' -<br>Lucerne Blue-Eyed Grass               | P | 5a-9b |   |  |  | F | H = 6-12"<br>W = 6-12"   | ○ |                | Low, well-drained                          | North America           | Ornamental  |
| Thymus pseudolanuginosus -<br>Woolly Thyme                                      | P | 5a-8b | Y |  |  | S | H = 3"<br>W = 12"        | ☉ | Variety        | Moderate                                   |                         | Adaptable to salt<br>Air pollution tolerant<br>Deer, rabbit resistant<br>Attracts pollinators |
| Thymus serpyllum -<br>Creeping Thyme  | P | 5b-9b | Y |  |  |   | H = 4-6"<br>W = 4-12"    | ☉ | Sandy, rocky   | Low, well-drained                          | N Europe                | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant<br>Attracts pollinators         |

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| Thymus serpyllum 'Elfin' -<br>Elfin Thyme  | P  | 5b-9b | Y |  |   |   | H = 1-3"<br>W = 8-12"  | ☉ | Loam                 | Low, well-<br>drained                                | Europe, W<br>Asia, N Africa           | Air pollution tolerant<br>Deer resistant<br>Attracts pollinators                   |
| Thymus serpyllum 'Pink Chintz' -<br>Pink Chintz Thyme  | P  | 5a-9b | Y |  |   |   | H = 3-4"<br>W = 4-12"  | ☉ | Sandy, rocky         | Low, well-<br>drained                                | Europe, W<br>Asia, N Africa           | Air pollution tolerant<br>Deer resistant<br>Attracts pollinators                   |
| Thymus vulgaris -<br>English Thyme   | P  | 5a-9b | Y |  |   |   | H = 6-12"<br>W = 6-12" | ☉ | Sandy, rocky,<br>dry | Low, well-<br>drained                                | Southern<br>Europe                    | Air pollution tolerant<br>Deer resistant<br>Attracts pollinators                   |
| Ajuga x 'Toffe Chip' Plant Patent # 18,805 -<br>Toffe Chip Carpet Bugle  | GC | 4a-9b |   |  |   |   | H = 3-9"<br>W = 12-18" | ○ | Loam,<br>humusy      | Moderate, well-<br>drained                           |                                       | Deer, rabbit resistant   |
| Campanula 'Samantha' -<br>Samantha Bellflower  | GC | 5a-9b |   |  |   | S | H = 4-6"<br>W = 10-24" | ○ | Variety              | Moderate,<br>consistently<br>moist, well-<br>drained |                                       | Rabbit, pest, disease resistant  |
| Diachondra repens -<br>Diochondra  | GC | 7a-9b | Y |  |   |   | H = 2"                 | ○ | Variety              | Low, well-<br>drained                                | Australia                             |  |
| Delosperma cooperi 'Jewel of Desert Garnet'<br>Plant Patent #23, 471 -<br>Jewel of Desert Garnet Ice Plant       | GC | 5a-9b | Y |  | Y | M | H = 4-6"<br>W = 15-20" | ☉ | Loam, sandy          | Low, well-<br>drained                                | South Africa                          | Heat tolerant<br>Rabbit resistant<br>Attracts pollinators                          |
| Delosperma cooperi 'Jewel of Desert<br>Moonstonet' Plant Patent #23, 49 -<br>Jewel of Desert Moonstone Ice Plant | GC | 5a-9b | Y |  | Y | M | H = 4-6"<br>W = 15-20" | ☉ | Loam, sandy          | Low, well-<br>drained                                |                                       | Rabbit resistant<br>Attracts pollinators   |
| Juniperus horizontalis 'Bar Harbor' -<br>Bar Harbor Juniper  | GC | 3b-8b | Y |  | Y |   | H = 18-24"<br>W = 5-6' | ☉ | Sandy, dry           | Low  | Alaska,<br>Canada, N<br>United States | Adaptable to salt<br>Air pollution tolerant<br>Deer resistant                      |
| Juniperus horizontalis 'Hughes' -<br>Hughes Juniper  | GC | 3b-9b | Y |  |   |   | H = 1-9'               | ☉ | Variety              | Low, well-<br>drained                                | North<br>America                      | Urban pollution tolerant<br>Deer resistant   |
| Juniperus horizontalis 'Plumosa Compacta' -<br>Compact Plumosa Juniper   | GC | 3a-9b | Y |  |   | M | H = 6-24"<br>W = 2-10' | ☉ | Loam                 | Low, well-<br>drained                                | Alaska,<br>Canada, N<br>United States | Adaptable growing conditions<br>Adaptable to salt<br>Heat tolerant                 |
| Juniperus horizontalis 'Prince of Wales' -<br>Prince of Wales Juniper  | GC | 3a-9b | Y |  | Y | M | H = 12"<br>W = 10'     | ☉ | Sandy, dry           | Low, well-<br>drained                                | Alaska,<br>Canada, N<br>United States | Adaptable growing conditions<br>Urban pollution tolerant<br>Deer, rabbit resistant |
| Juniperus horizontalis 'Youngstown' -<br>Youngstown Andorra Juniper  | GC | 3a-9b | Y |  | Y | M | H = 6-12"<br>W = 4-6'  | ☉ | Sandy, dry           | Low, well-<br>drained                                | Alaska,<br>Canada, N<br>United States | Adaptable growing conditions<br>Urban pollution tolerant<br>Deer, rabbit resistant |
| Juniperus sabina 'Buffalo' -<br>Buffalo Juniper  | GC | 3a-8b | Y |  | Y | M | H = 12"<br>W = 10'     | ☉ | Variety              | Low, well-<br>drained                                |                                       | Adaptable growing conditions<br>Deer, rabbit resistant                             |

|   |    |       |   |  |   |   |                        |   |              |                       |                    |  |
|---|----|-------|---|--|---|---|------------------------|---|--------------|-----------------------|--------------------|--|
| Juniperus sabina 'Skandia' -<br>Skandia Juniper                   | GC | 4a-7b | Y |  | Y | M | H = 12-18"<br>W = 8'   | ☉ | Variety      | Low                   |                    | Adaptable growing conditions<br>Deer, rabbit resistant         |
| Veronica oltensis -<br>Thyme-leaf Speedwell                       | GC | 4a-9b | Y |  |   | S | H = 12"<br>W = 24"     | ☉ | Variety      | Low, well-<br>drained |                    | Adaptable growing conditions                                   |
| Veronica liwanensis -<br>Turkish veronica                         | GC | 3b-9b | Y |  |   | S | H = 2"<br>W = 18"      | ○ | Variety      | Low                   |                    | Adaptable to salt<br>Deer resistant                            |
| Aloe 'Carmine' -<br>Retro Succulents Carmine Aloe                 | SU | 9a-9b | Y |  |   | S | H = 8"<br>W = 10"      | ○ | Sandy, rocky | Low                   |                    | Deer, rabbit resistant   |
| Aloe 'Guido' -<br>Retro Succulents Guido Aloe                     | SU | 9a-9b | Y |  |   | S | H = 6-8"               | ○ | Sandy, rocky | Low                   |                    | Deer, rabbit resistant   |
| Echeveria agavoides 'Lipstick' -<br>Lipstick Echeveria            | SU | 9a-9b |   |  |   | M | H = 6"<br>W = 6-12"    | ○ | Rocky        | Low, well-<br>drained |                    | Deer, rabbit resistant   |
| Echeveria elegans -<br>Mexican Snowball                           | SU | 9a-9b | Y |  |   | F | H = 8"<br>W = 12"      | ○ | Rocky        | Low, well-<br>drained |                    | Deer, rabbit resistant   |
| Echeveria imbricata -<br>Blue Rose Echeveria                      | SU | 9a-9b | Y |  |   |   | H = 4-8"<br>W = 4-6"   | ○ | Rocky        | Low, well-<br>drained | Mexico             | Deer, rabbit, disease resistant<br>Attracts birds, pollinators |
| Echeveria setosa -<br>Firecracker Echeveria                       | SU | 9a-9b | Y |  |   | S | H = 3"<br>W = 5-36"    | ○ | Rocky        | Low, well-<br>drained | Mexico             | Deer resistant   |
| Echeveria 'Black Prince' -<br>Black Prince Echeveria              | SU | 9a-9b |   |  |   | M | H = 4"<br>W = 10"      | ○ | Rocky        | Low                   |                    | Deer resistant   |
| Echeveria 'Perle von Nurnberg' -<br>Perle von Nurnberge Echeveria | SU | 9a-9b | Y |  |   | F | H = 8-10"<br>W = 6-8"  | ○ | Rocky        | Low, well-<br>drained |                    | Deer resistant   |
| Echeveria 'Ruffles' -<br>Ruffles Echeveria                        | SU | 9a-9b | Y |  |   | F | H = 9"<br>W = 12"      | ○ | Rocky        | Low                   | Mexico             |  |
| Hesperaloe parviflora -<br>Red yucca                              | SU | 5a-9b | Y |  |   | M | H = 3-4'<br>W = 3-4'   | ○ | Loam         | Low, well-<br>drained | Texas, Mexico      | Deer resistant   |
| Hesperaloe parviflora 'Perpa' -<br>Brakelights Red Yucca          | SU | 5a-9b | Y |  |   |   | H = 24"<br>W = 24"     | ☉ | Sandy        | Low, well-<br>drained | North<br>America   | Deer resistant   |
| Hesperaloe parviflora 'Yellow' -<br>Yellow Yucca                  | SU | 5a-9b | Y |  |   |   | H = 2-4'<br>W = 3-6'   | ☉ | Sandy, dry   | Low, well-<br>drained | W North<br>America | Attracts birds, pollinators                                    |
| Sempervivum 'Royal Ruby' -<br>Royal Ruby Hens and Chicks          | SU | 4a-9b | Y |  |   | S | H = 3-6"<br>W = 12-15" | ○ | Rocky        | Low, well-<br>drained |                    | Adaptable to salt<br>Deer resistant                            |

| Tree Box Filters Plants List                                     |            |       |                   |                    |                 |             |                          |             |                 |                              |                                  |   |
|--|------------|-------|-------------------|--------------------|-----------------|-------------|--------------------------|-------------|-----------------|------------------------------|----------------------------------|---|
| Scientific Name -<br>Common Name                                 | Plant Type | Zone  | Drought Tolerance | Flooding Tolerance | Erosion Control | Growth Rate | Mature Size (HxW)        | Light Needs | Soil Needs      | Water Needs                  | Native                           | Benefits  |
| Acer ginnala -<br>Amur Maple                                     | T          | 3b-8a | Y                 |                    |                 |             | H = 15-20'<br>W = 15-20' | ○           | Clay, rich      | Consistently moist           | NE Asia, NW United States        |   |
| Acer macrophyllum -<br>Big Leaf Maple                            | T          | 6a-7b |                   |                    |                 |             | H = 40-75'<br>W = 40-75' | ○           | Variety, acidic | Moderate, well-drained       | British Columbia, S Alaska to CA |   |
| Acer negundo 'Sensation' -<br>Sensation Boxelder                 | T          | 4a-6b |                   |                    |                 | F           | H = 30'<br>W = 25'       | ☼           | Variety         | Moderate                     |                                  |   |
| Acer rubrum -<br>Red Maple                                       | T          | 3b-9b | Y                 | Y                  |                 | M           | H = 40-70'<br>W = 30-50' | ○           | Variety, acidic | Moderate, well-drained       | E and central North America      | Cold tolerant<br>Air pollution tolerant<br>Attracts birds   |
| Acer saccharinum -<br>Silver Maple                               | T          | 4a-9b | Y                 | Y                  |                 | F           | H = 50-80'<br>W = 35-70' | ○           | Sandy, variety  | Moderate                     | E North America                  | Adaptable to salt<br>Urban, air pollution tolerant  |
| Acer tataricum -<br>Tatarian Maple                               | T          | 3b-8b | Y                 |                    |                 | M           | H = 25-30'<br>W = 25'    | ○           | Variety         | Moderate, well-drained       | SE Europe, W Asia                | Adaptable growing conditions<br>Adaptable to salt<br>Urban pollution tolerant   |
| Acer tataricum 'GarAnn' PP 15,023 -<br>HOT WINGS® Tatarian maple | T          | 4a-9b | Y                 |                    |                 | M           | H = 15-25'<br>W = 15-20' | ○           | Variety         | Moderate                     | SE Europe, W Asia                | Adaptable growing conditions<br>Adaptable to salt<br>Urban pollution tolerant<br>Attracts pollinators<br>Wildlife resistant |
| Acer x freemanii 'Jeffersred' -<br>Autumn Blaze Maple            | T          | 3b-8b | Y                 | Y                  |                 | F           | H = 40-55'<br>W = 30-40' | ☼           | Acidic          | High, well-drained           | Cultivated                       | Urban pollution tolerant<br>Deer resistant  |
| Betula occidentalis -<br>Water Birch                             | T          | 3a-5b | Y                 | Y                  |                 | F           | H = 10-40'<br>W = 10-30' | ○           | Variety         | Moderate, consistently moist | Utah, W North America, S Canada  | Adaptable to salt<br>Wind tolerant<br>Ornamental  |
| Betula papyrifera -<br>Paper Birch                               | T          | 3b-6b |                   |                    | Y               | F           | H = 50-70'<br>W = 25-50' | ○           | Variety         | Moderate, well-drained       | North America                    | Adaptable to salt<br>Pioneer species<br>Deer resistant  |

|  |   |       |   |   |  |   |                          |   |                              |                                |   |   |
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| Betula pendula -<br>Silver Birch                                 | T | 3b-6b |   |   |  | F | H = 30-40'<br>W = 15-30' | ○ | Variety, rich                | Moderate, well-<br>drained     | Europe, Asia, W<br>Siberia                | Wind tolerant<br>Ornamental<br>Pioneer species<br>Deer resistant  |
| Betula pubescens -<br>White Birch                                | T | 3b-3b |   | Y |  | F | H = 30-65'<br>W = 32'    | ○ | Variety, acidic              | High,<br>consistently<br>moist | N & central<br>Europe, Russia,<br>Siberia | Wind tolerant<br>Wetland plant<br>Nitrogen fixer<br>Pioneer species<br>Attracts wildlife  |
| Celtis occidentalis -<br>Common Hackberry                        | T | 4a-9b | Y | Y |  | F | H = 40-60'<br>W = 40-60' | ○ | Variety, rich                | Low, well-<br>drained          | E & central<br>North America              | Adaptable growing<br>conditions<br>Adaptable to salt<br>Heat, cold, wind tolerant<br>Urban pollution tolerant<br>Attracts pollinators, wildlife |
| Celtis occidentalis 'Prairie Pride' -<br>Prairie Pride Hackberry | T | 3b-9b | Y | Y |  | M | H = 50-60'<br>W = 40-50' | ○ | Variety                      | Low, well-<br>drained          | E & central<br>North America              | Adaptable growing<br>conditions<br>Heat, cold, wind tolerant<br>Urban pollution tolerant<br>Attracts birds                                      |
| Cercis canadensis -<br>Eastern Redbud                            | T | 5a-9b | Y |   |  | M | H = 20-30'<br>W = 25-35' | ○ | Variety, acidic,<br>alkaline | Moderate, well-<br>drained     | E & central<br>North America              | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife  |
| Cercis canadensis 'Forest Pansy' -<br>Forest Pansy Redbud        | T | 5a-9b |   |   |  | M | H = 20-30'<br>W = 25-35' | ○ | Variety                      | Moderate, well-<br>drained     | E & central<br>North America              | Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife  |
| Cercis canadensis 'Ruby Falls' -<br>Ruby Falls Redbud            | T | 6a-9b |   |   |  | M | H = 6-8'<br>W = 4-6'     | ○ | Variety, alkaline            | Moderate, well-<br>drained     | E & central<br>North America              | Ornamental<br>Deer resistant<br>Attracts pollinators  |
| Cercis canadensis 'The Rising Sun' -<br>Rising Sun Redbud        | T | 6a-9b | Y |   |  | M | H = 8-12'<br>W = 8-15'   | ○ | Variety                      | Moderate                       |   | Adaptable growing<br>conditions<br>Heat, cold tolerant<br>Urban pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators      |
| Nyssa sylvatica -<br>Black Gum                                   | T | 3b-9b |   | Y |  |   | H = 30-50'<br>W = 20-30' | ○ | Wet, acidic                  | High                           | E North<br>America                        | Attracts birds  |

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| Taxodium distichum 'Shawnee Brave' -<br>Shawnee Brave Bald Cypress               | T  | 4a-9b |   |   | Y |   | H = 15-75'<br>W = 15-20' | ☉  | Variety, acidic          | Moderate                   | United States                              | Air pollution tolerant<br>Deer resistant   |
| Thuja occidentalis -<br>American Arborvitae                                      | T  | 3b-7b |   |   |   |   | H = 20-40'<br>W = 10-15' | ○  | Variety                  | Moderate, well-<br>drained | E United States,<br>E to central<br>Canada | Air pollution tolerant<br>Attracts birds   |
| Aronia arbutifolia 'Brilliantissima' -<br>Brilliant Red Chokeberry               | SH | 4a-9b | Y | Y | Y | S | H = 5-8'<br>W = 3-5'     | ○  | Variety, peaty           | Moderate, well-<br>drained | E North<br>America                         | Adaptable to salt<br>Urban, air pollution tolerant<br>Ornamental<br>Wetland plant<br>Deer resistant<br>Attracts birds, pollinators |
| Aronia melanocarpa var. elata -<br>Black Chokeberry                              | SH | 4a-9b | Y | Y | Y | M | H = 5-8'<br>W = 5-10'    | ○  | Variety, peaty           | Low, well-<br>drained      | E North<br>America                         | Ornamental<br>Wetland plant<br>Deer resistant<br>Attracts birds, pollinators   |
| Berberis aquifolium -<br>Barberry  | SH | 5a-8b | Y |   |   | S | H = 3-6'<br>W = 2-5'     | ●  | Variety, rich,<br>acidic | Well-drained               | N North<br>America                         | Ornamental<br>Deer resistant<br>Attracts birds, pollinators  |
| Berberis aquifolium repens -<br>Creeping Oregon Grape                            | SH | 5a-8b | Y |   | Y | M | H = 12-18"<br>W = 12-18" | ☉● | Variety, rich,<br>acidic | Well-drained               |  | Ornamental<br>Deer resistant<br>Attracts pollinators, wildlife   |
| Celtis occidentalis -<br>Common Hackberry  | SH | 4a-9b | Y |   |   |   | H = 40-60'<br>W = 40-60' | ○  | Rich                     | Low, well-<br>drained      | NE & central<br>North America              | Air pollution tolerant<br>Attracts birds, pollinators  |
| Agrostis sp. -<br>Redtop Bentgrass   | G  | 3b-6b |   | Y | Y |   | H = 3-4'                 | ○  | Variety                  |                            | Eurasia                                    | Adaptable to salt<br>Wetland plant   |
| Buchloë dactyloides 'Legacy' -<br>Legacy Buffalo Grass                           | G  | 3b-9b | Y |   |   | F | H = 4-6"<br>W = 72"      | ☉  | Clay, alkaline           | Low                        |  | Attracts birds   |
| Calamagrostis x acutiflora 'Eldorado' -<br>Eldorado Feather Reed Grass           | G  | 4a-9b | Y |   |   | M | H = 4-6'<br>W = 2-2.5'   | ☉  | Variety                  | Low                        |  | Attracts birds   |
| Calamagrostis x acutiflora 'Karl Foerster' -<br>Karl Foerster Feather Reed Grass | G  | 4a-9b | Y |   | Y | M | H = 3-5'<br>W = 1.5-2.5' | ☉  | Variety, rich            | Low                        | Europe, Asia                               | Air pollution tolerant<br>Deer resistant   |
| Calamagrostis x acutiflora 'Overdam' -<br>Overdam Feather Reed Grass             | G  | 5a-9b | Y |   | Y | M | H = 3-5'<br>W = 2'       | ☉  | Variety, rich            | Low                        | Europe, Asia                               | Air pollution tolerant<br>Deer resistant   |
| Calamagrostis brachytricha -<br>Korean feather reed grass                        | G  | 4a-9b | Y |   |   |   | H = 24-40"<br>W = 20-24" | ○  | Variety                  | Low                        |  | Deer resistant   |
| Carex 'Silver Sceptre' -<br>Silver Scepter Sedge                                 | G  | 5a-9b |   |   |   |   | H = 9-12"<br>W = 9-18"   | ●  | Variety                  | High                       | Japan                                      | Deer resistant   |
| Carex buchananii -<br>Fox Red Curly Sedge  | G  | 4b-9b | Y |   |   | S | H = 2-3'<br>W = 2-3'     | ○  | Variety, rich            | Consistently<br>moist      | New Zealand                                | Deer, rabbit resistant   |

|  |   |       |   |   |   |   |                          |   |                 |                                 |  |  |
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| Cynodon dactylon -<br>Bermuda Grass  | G | 7a-9b | Y |   | Y | F | H = 24"<br>W = 20"       | ☉ | Variety         | Low to moderate                 | Europe, Africa,<br>Australia, Asia         | Heat tolerant  |
| Deschampsia cespitosa 'Northern Lights' -<br>Northern Lights Tufted Hair Grass | G | 4a-9b |   |   | Y | M | H = 1-3'<br>W = 1-3'     | ○ | Variety, acidic | Moderate,<br>consistently moist |  | Air pollution tolerant<br>Deer resistant<br>Attracts birds     |
| Deschampsia cespitosa var. vivipara -<br>Tufted Hair Grass                     | G | 4a-9b |   |   |   |   | H = 2-3'<br>W = 1-2'     | ○ | Variety, rich   | High,<br>consistently moist     |  | Air pollution tolerant<br>Attracts birds                       |
| Elocharis palustris -<br>Creeping Spike Rush                                   | G | 3b-8b |   | Y |   |   | H = 2-4'<br>W = 1-2'     | ○ | Wet             | High,<br>consistently moist     | United States,<br>Canada,<br>Europe, Asia  | Wetland plant  |
| Eriogonum caespitosum -<br>Mat Buckwheat                                       | G | 4a-9b |   |   |   |   | H = 4"<br>W = 3'         | ○ | Rocky           |                                 | W United States                            | Cold tolerant<br>Attracts pollinators                          |
| Festuca spp. -<br>BioMeadow Fine Fescue Mix                                    | G | 4a-9b |   |   |   |   | H = 8-12"<br>W = 6-8"    | ○ |                 | Moderate                        |  | Adaptable to salt  |
| Festuca arundinacea -<br>Dwarf Tall Fescue                                     | G | 5a-8b |   |   |   |   | H = 24-36"<br>W = 12-18" | ○ | Clay            | Moderate                        |  | Adaptable to salt  |
| Festuca arundinacea 'Bolero' -<br>BioTurf Dwarf Fescue Mix                     | G | 5a-8b | Y |   |   | S | H = 2-3'<br>W = 12-18"   | ○ | Clay            | Moderate                        |  | Heat tolerant<br>Deer resistant                                |
| Festuca arundinacea 'Bonsai' -<br>Bonsai Dwarf Tall Fescue                     | G | 5a-8b |   |   |   |   | H = 24-36"<br>W = 12-18" | ○ | Clay            | Moderate                        |  | Deer resistant   |
| Festuca glauca -<br>Blue Fescue  | G | 4a-9b | Y |   |   |   | H = 9-12"<br>W = 12-18"  | ☉ | Variety         | Low, moderate                   |  | Air pollution tolerant<br>Ornamental                           |
| Glyceria striata -<br>Fowl Manna Grass   | G | 3b-9b |   | Y |   |   | H = 2-4'                 | ☉ | Variety, rich   | Moderate,<br>consistently moist | North America                              | Wetland plant<br>Deer resistant<br>Attracts birds, pollinators |
| Imperata cylindrica 'Rubra' -<br>Japanese Blood Grass                          | G | 5a-9b | Y |   |   |   | H = 2-4'<br>W = 2-4'     | ○ | Variety         | Low                             | Korea, Japan,<br>China, India, E<br>Africa | Air pollution tolerant<br>Ornamental                           |
| Juncus effusus -<br>Common Rush  | G | 4a-9b |   | Y | Y |   | H = 2-4'<br>W = 2-4'     | ○ | Wet             | High,<br>consistently moist     | Britain, E & S<br>Africa,<br>Australia     | Wetland plant  |
| Koeleria macrantha 'BarKoel' -<br>Turtleturf Prairie Junegrass                 | G | 4a-9b |   |   |   |   | H = 4-18"<br>W = 4-8"    | ○ | Variety         | Moderate                        |  |  |
| Panicum virgatum 'Dallas Blues' -<br>Dallas Blues Switch Grass                 | G | 5a-9b | Y | Y | Y | M | H = 4-6'<br>W = 2-3'     | ○ | Sandy, clay     | Low                             | Utah, North<br>America                     | Air pollution tolerant<br>Deer resistant<br>Attracts birds     |
| Panicum virgatum 'Cloud Nine' -<br>Cloud Nine Switch Grass                     | G | 5a-9b |   |   |   |   | H = 5-7'<br>W = 2-3'     | ○ | Variety         | Moderate                        | Utah, North<br>America                     | Adaptable to salt<br>Attracts pollinators                      |

|   |   |       |   |   |   |   |                          |   |                                    |                                    |                     |   |
|---|---|-------|---|---|---|---|--------------------------|---|------------------------------------|------------------------------------|---------------------|---|
| Panicum virgatum 'Heavy Metal' -<br>Heavy Metal Switch Grass                        | G | 5a-9b | Y | Y | Y | F | H = 4-5'<br>W = 1-3'     | ○ | Sandy, clay                        | Low                                | North America       | Air pollution tolerant<br>Deer resistant<br>Attracts birds                                      |
| Panicum virgatum 'Prairie Sky' -<br>Prairie Sky Switch Grass                        | G | 4a-9b | Y |   | Y |   | H = 4-6'<br>W = 2-3'     | ○ | Sandy, clay                        | Low                                | E North America     | Air pollution tolerant<br>Attracts birds  |
| Panicum virgatum 'Rotstrahlbusch' -<br>Red Switch Grass                             | G | 5a-9b | Y | Y | Y |   | H = 4-5'<br>W = 2-3'     | ○ | Variety                            | Low                                | E North America     | Air pollution tolerant<br>Attracts birds  |
| Panicum virgatum 'Shenandoah' -<br>Shenandoah Switch Grass                          | G | 5a-9b | Y |   | Y | F | H = 3-4'<br>W = 3-4'     | ○ | Sandy, clay                        | Low                                | Utah, North America | Air pollution tolerant<br>Deer resistant<br>Attracts pollinators                                |
| Panicum virgatum 'Strictum' -<br>Upright Switch Grass                               | G | 4a-9b | Y |   |   | M | H = 4-6'<br>W = 2-3'     | ⊙ | Variety, dry                       | Low                                | Utah, North America | Attracts pollinators  |
| Pennisetum alopecuroides 'Little Bunny' -<br>Little Bunny Dwarf Fountain Grass      | G | 6a-9b | Y |   |   |   | H = 12-18"<br>W = 18-24" | ○ | average,<br>medium to wet<br>soils | Moderate,<br>consistently<br>moist | E Asia              | Adaptable to salt<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attract birds    |
| Schizachyrium scoparium -<br>Little Bluestem  | G | 5a-9b | Y |   | Y |   | H = 2-4'<br>W = 1.5-2'   | ⊙ | Variety                            | Low, well-<br>drained              | North America       | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators |
| Schizachyrium scoparium 'Blaze' -<br>Blaze Little Bluestem                          | G | 4a-9b | Y |   | Y |   | H = 2-3'<br>W = 1.5-2'   | ⊙ | Variety                            | Low, well-<br>drained              | North America       | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators |
| Schizachyrium scoparium 'Prairie Blues' -<br>Prairie Blues Little Bluestem          | G | 4a-9b | Y |   | Y |   | H = 32-36"<br>W = 12-15" | ○ | Variety                            | Low, well-<br>drained              | North America       | Heat tolerant<br>Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts pollinators |
| Schizachyrium scoparium 'Standing Ovation'<br>-<br>Standing Ovation little bluestem | G | 3b-8b | Y |   | Y | F | H = 3-4'<br>W = 1-2'     | ⊙ | Variety                            | Low, moderate                      | North America       | Air pollution tolerant<br>Ornamental<br>Deer resistant<br>Attracts birds                        |
| Spartina pectinata -<br>Prairie Cordgrass   | G | 4a-8b |   | Y |   |   | H = 20-30"<br>W = 20-30" | ⊙ | Clay, loam, wet                    | High,<br>consistently<br>moist     | North America       | Wetland plant<br>Deer resistant   |

|  |    |       |   |  |   |   |                           |   |                            |                                    |                          |   |
|--|----|-------|---|--|---|---|---------------------------|---|----------------------------|------------------------------------|--------------------------|---|
| Sporobolus airoides -<br>Alkali Sacaton  | G  | 4a-9b | Y |  |   |   | H = 4'<br>W = 3'          | ○ | Variety                    | Low, well-<br>drained              | North America            | Adaptable to salt<br>Deer resistant                                   |
| Sporobolus wrightii -<br>Giant sacaton   | G  | 5a-8b | Y |  | Y | M | H = 5-7'<br>W = 3-5'      | ○ | Variety                    | Low                                | SW United<br>States      | Deer resistant  |
| Sporobolus wrightii 'Windbreaker' -<br>Windbreaker Giant Sacaton                       | G  | 5a-9b | Y |  |   |   | H = 8-10'<br>W = 6'       | ⊙ | Alkaline                   | Low, well-<br>drained              | New Mexico               | Adaptable to salt<br>Wind tolerant<br>Deer resistant                  |
| Aquilegia caerulea -<br>Rocky Mountain Columbine                                       | P  | 3b-9b |   |  |   |   | H = 1-2'<br>W = 1-2'      | ○ | Variety                    | Moderate, well-<br>drained         | Utah, W North<br>America | Deer, rabbit resistant<br>Attracts birds                              |
| Aquilegia formosa -<br>Western Columbine   | P  | 3b-9b |   |  |   |   | H = 24-36"<br>W = 18"     | ○ | Sandy, loam                | Moderate, well-<br>drained         | Utah, W North<br>America | Rabbit resistant<br>Attracts pollinators                              |
| Aquilegia McKana Group -<br>McKana Hybrid Columbine                                    | P  | 3b-9b |   |  |   |   | H = 2-2.5'<br>W = 1-1.5'  | ○ | Variety                    | Moderate, well-<br>drained         | N Hemisphere             | Deer, rabbit resistant<br>Attracts birds                              |
| Armeria maritima 'Bloodstone' -<br>Bloodstone Thrift                                   | P  | 3b-9b | Y |  | Y | M | H = 6-8"<br>W = 12"       | ○ | Sandy, loam                | Low                                | North America            | Deer, rabbit resistant  |
| Armeria maritima 'Cotton Tail' -<br>Cotton Tail Thrift                                 | P  | 3b-9b | Y |  | Y | M | H = 4-6"<br>W = 4-6"      | ⊙ | Sandy, loam                | Low                                | North America            | Deer, rabbit resistant  |
| Armeria maritima 'Düsseldorfer Stolz' -<br>Dusseldorf Pride Thrift                     | P  | 3b-9b | Y |  |   |   | H = 6-12"<br>W = 6-12"    | ⊙ | Variety, dry               | Low, well-<br>drained              |                          |   |
| Armeria maritima 'Rubifolia' -<br>Red Leaf Thrift                                      | P  | 3b-9b | Y |  | Y | M | H = 8-10"<br>W = 12"      | ⊙ | Sandy, loam,<br>dry        | Low, well-<br>drained              |                          | Deer, rabbit resistant  |
| Armeria maritima 'Splendens' -<br>Splendens Common Thrift                              | P  | 3b-9b | Y |  | Y | M | H = 6-12"<br>W = 6-12"    | ⊙ | Variety, dry               | Low, well-<br>drained              |                          | Deer, rabbit resistant  |
| Asarum caudatum -<br>Wild Ginger   | P  | 7a-9b | Y |  |   |   | H = 3-6"<br>W = 6-18"     | ● | Variety,<br>humusy, acidic | Moderate,<br>consistently<br>moist | W North<br>America       | Deer resistant  |
| Verbena hastata -<br>Blue Verain   | P  | 3b-8b | N |  |   |   | H = 2-6'<br>W = 1-2.5'    | ⊙ | Variety, wet               | High                               | W North<br>America       | Deer resistant<br>Attracts pollinators                                |
| Asclepias speciosa Torr. -<br>Showy Milkweed   | P  | 5a-9b | Y |  |   | F | H = 1-3'<br>W = 1-2'      | ○ | Variety                    | Low, well-<br>drained              | Utah, W North<br>America | Attracts wildlife, pollinators  |
| Diachondra repens -<br>Diochondra  | GC | 7a-9b | Y |  |   |   | H = 2"                    | ○ | Variety                    | Low, well-<br>drained              | Australia                |   |
| Nepeta racemosa 'Walker's Low' -<br>Walker's Low Catmint                               | GC | 4a-9b | Y |  |   |   | H = 2-2.5'<br>W = 2..5-3' | ○ | Variety                    | Low, well-<br>drained              | Caucusus, N<br>Iran      | Adaptable to salt<br>Air pollution tolerant<br>Deer, rabbit resistant |
| Nepeta sibirica 'Souvenir d' André Chaudron'<br>-<br>Souvenir d Andre Chaudron Catmint | GC | 3b-9b | Y |  |   |   | H = 1-3'<br>W = 1-2'      | ○ | Variety                    | Low, well-<br>drained              | Europe                   | Cold tolerant<br>Deer resistant                                       |

|   |    |       |   |  |   |                         |   |         |                       |        |  |
|---|----|-------|---|--|---|-------------------------|---|---------|-----------------------|--------|--|
| Nepeta x faassenii 'Select Blue' -<br>Select Blue Catmint | GC | 4a-9b | Y |  |   | H = 1-1.5'<br>W = 1-2'  | ○ | Variety | Low, well-<br>drained | Europe | Air pollution tolerant<br>Disease resistant<br>Deer, pest resistant      |
| Nepeta 'Psfike' -<br>Little Trudy Catmint                 | GC | 4a-9b | Y |  | M | H = 8-14"<br>W = 12-16" | ○ | Variety | Low, well-<br>drained | Europe | Air pollution tolerant<br>Deer, rabbit resistant<br>Attracts pollinators |

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