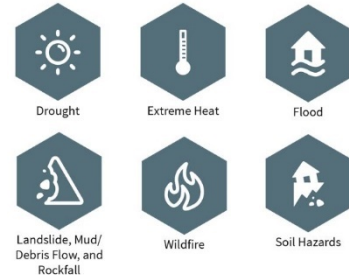


# Landscaping Ordinance



## Hazards Addressed



## How it Works

Landscaping regulations establish minimum standards for the amount and types of landscaping, the location of landscaping, buffer and screening standards (to address visual impacts from development activities or site features), fence requirements, and installation and maintenance. Many codes also include standards for tree preservation, water efficiency and conservation, and low-impact development.

In addition to providing a more aesthetic environment, landscaping regulations can help reduce risk to natural hazards, including flood, drought, geologic hazards, wildfire, and extreme heat. Requiring a certain amount of landscaping reduces the amount of impervious coverage on a site, allowing water to percolate into the site instead of being conveyed across the site. Designating appropriate plant species for a dry climate can improve the water-efficiency of a site, which is especially important during periods of prolonged drought. Installing plants and ground cover helps stabilize steep and unstable slopes. Establishing standards for the type and location of landscaping can also reduce wildfire risk to structures.

## Implementation

Landscaping regulations are typically adopted as part of the zoning and development regulations either as a standalone chapter or article, or as a component of the larger development standards article or chapter. Formal adoption by the local governing body is required to enact or modify the landscaping standards.

Landscaping regulations typically include the following fundamental elements, which are further described in the *model landscaping ordinance*.

The following items should be considered when developing a landscape ordinance:

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**Planning for Hazards:** Land Use Solutions for Colorado

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- **Purpose and Intent.** The purpose and intent statement is the jurisdiction’s opportunity to describe the reasoning behind, and benefits of, the landscaping ordinance, and its relationship to mitigating hazards.
  - **Applicability.** The applicability section describes the types of development activities that are subject to the regulations, including thresholds for compliance for infill and redevelopment projects. This is important because one of the biggest challenges in planning for hazards is the ability to impact existing development.
  - **Site Landscaping.** Site landscaping standards establish the essential landscaping rules for new development and redevelopment, such as how much landscaping is required, and where landscaping should be located. These standards are critical to mitigation efforts such as managing stormwater, preventing structure-to-structure ignitions during a wildfire, or reducing water use and creating resilience to drought events. Often these standards vary depending on the use type or zoning district (e.g., residential vs. commercial or industrial).
  - **Parking Lot Landscaping.** Landscaping within parking areas is often separated from other site landscaping regulations because of the large amount of impervious surface involved. Even on sites with ample open space, it is still important to break up large areas of parking with plant material to help slow the flow of water across the site and to reduce the urban heat island effect. Another key consideration for many Colorado communities is establishing adequate areas for snow storage that are adjacent to paved areas. Such standards allow for infiltration of melting and runoff, and can ensure the protection of landscaped areas by requiring planting boxes, elevated planters, timbers, or other means.
  - **Landscaping Materials.** The type of landscaping material used can be as important as the amount of landscaping called for. Plant species native to Colorado or the West, or otherwise drought-tolerant species, require less irrigated water, and can survive prolonged periods of drought. To address wildfire risk, local plant lists may differentiate appropriate species based on their flammability. In addition to specifying which plant species are allowed or recommended, communities may also want to identify species that are prohibited, for the reasons indicated above. Many communities also limit the amount of turf grass, or other high-water usage plants, by establishing maximum percentages.
  - **Tree Preservation.** Protecting existing trees provides a way to reduce the urban heat island effect, reduce energy use, and allow water to infiltrate the ground instead of being conveyed away from the site. Communities vary in complexity of their tree-preservation standards. Some award credits for protecting existing trees, whereas more stringent standards require a minimum tree canopy to be maintained and identify specific species for tree replacement upon die off. Tree preservation standards can also be in direct conflict with wildfire risk reduction, since many communities require the removal or thinning of existing trees to maintain defensible space.

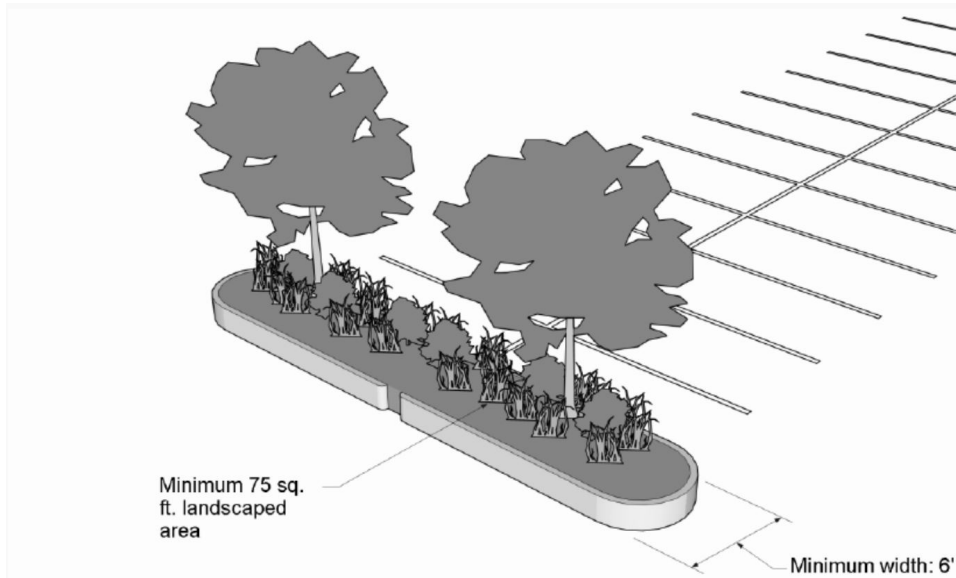
- 
- **Landscaping Plan Evaluation.** Planners should consider hazard mitigation as part of a larger set of site development principles, and landscaping should be part of that evaluation to demonstrate how communities are protecting sensitive areas. The landscaping ordinance should establish a clear process for the review and approval of landscape plans associated with a site development application.
  - **Installation and Maintenance.** Once a development is approved, and a building permit is issued, it is important to establish enforceable regulations for the installation of landscape materials. Landscaping can only be effective when it is properly maintained, so replacement standards for dead or dying vegetation are also often included. Irrigation systems are particularly important for water efficiency purposes, ensuring that minimal water resources are used, and that prolonged use of irrigation is not required for xeriscape landscaping areas.

When a development is proposed, the landscaping standards are typically evaluated as part of the overall development application. During the evaluation, the planner (or in some cases, a landscape architect or engineer) reviews the applicant's landscape plan for compliance with the various provisions in the landscaping regulations. This evaluation can also be conducted as part of a building permit review process if a site plan or specific development application is not associated with the proposed project. A site inspection – which often includes landscaping installation as part of the inspection – is typically conducted on a site prior to issuing a certificate of occupancy. Some communities also require financial security be posted to assure that landscaping is installed in a timely manner (within a year), and that the landscaping survives a certain number of growing seasons.

## Where It's Been Done

Most communities regulate landscaping to some degree through their land use and development regulations; however, few have stated hazard mitigation as a major consideration behind such standards.

The **Town of Carbondale, Colorado**, recently adopted updated land use regulations in their Unified Development Code (UDC). Landscaping and screening standards were included as part of the development standards (Section 5.4; Chapter 17.05). Management of impervious coverage was an important consideration during the drafting of the UDC, and therefore the Town included several regulations to manage such impervious coverage. One of those features is the landscape island and rain garden requirement within parking areas. Not only does the Town require landscaped islands to break up large areas of parking, but they also require those areas to be designed to collect runoff and allow it to percolate into the ground through natural features in those islands. The figure below from Carbondale's UDC shows curb-cuts in the parking lot island to allow water to enter the island.



Source: Carbondale UDC, effective 2016

The **City of Indianapolis, Indiana**, recently adopted an updated consolidated zoning and subdivision ordinance that included new standards for landscaping. As with the Carbondale example, managing the City’s impervious coverage was central to the update. To that end, Indy ReZone implements a unique incentive-based approach to encourage green infrastructure, called the *Green Factor*. Initially conceived by the City of Seattle, the *Green Factor* gives flexibility to developers to incorporate landscaping, buffering, and screening techniques that promote the integration of water quality, thoughtful design, and use of native plant materials.

Developers are required to fill out a worksheet documenting how their proposal achieves the minimum “green factor.” Low-impact development options such as bioswales, rain gardens, and green roofs are worth more than traditional landscaping techniques, and previously undeveloped or underdeveloped sites must attain a higher Green Factor.

<b>Landscaped areas with unpermeable or semi-permeable surfaces</b>		
Area of trees, shrubs, ground covers, or other plants typically less than 2 ft tall at maturity	10 sq. ft. per	0.3
Large shrubs or ornamental specimens [1]		0.5
<b>Landscaped areas with unpermeable and depth of 24 in. or more</b>		
Required: 75% soil matrix, ground covers, grass, perennials, or other plants typically less than 2 ft tall at maturity		1.0
Area of other areas with matrix, ground covers, grass, perennials, or other plants typically less than 2 ft tall at maturity		0.7
Large shrubs or ornamental specimens [1]	10 sq. ft. per	0.5
Small trees [2]	50 sq. ft. per	0.5
Medium trees [3]	100 sq. ft. per	0.5
Large trees [4]	200 sq. ft. per	0.5
<b>Undeveloped Areas</b>		
Undeveloped areas less than 10,000 sq. ft.		0.5
Undeveloped areas 10,000 sq. ft. or more		0.5
Significant trees over 10 in. dbh (measured 4.5 ft. tall, not 1.37 m dbh)	250 sq. ft. per	0.5
Tree Preservation Credits (see per foot, 100 L.F. for preserved Significant or Heritage Trees)	250 sq. ft. per	0.5
<b>Impervious Surface Reduction</b>		
Permeable parking for vehicles, walkways, etc.		1.4
Permeable pavement or building exterior		1.4
PODS roof [5]		0.1
Landscaped walls, areas of soil covered		0.1
Other areas, unpermeable materials or surfaces, such as asphalt [6]		1.5
<b>Green roofs</b>		
Area of green roof with more than 2 in. soil and more than 4 in. growing depth		1.2
Area of green roof with less than 4 in. growing depth		1.4
<b>Other measures</b>		
See credit in the 1st 7 and 8	150 sq. ft. per	0.4
<b>Measures applied to building facades</b>		
Permeable or semi-permeable walls		1.8
Landscaping that consists entirely of drought-tolerant or native species, as defined by the municipality		0.4
Landscaped areas where at least 50% of annual		

Green Factor worksheet for Indianapolis, IN.  
Source: Indy ReZone, effective 2016

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**Summit County, Colorado**, recently adopted a suite of amendments to its Land Use & Development Code to integrate wildfire hazard reduction with land use planning. Among the new and updated regulations are new defensible space requirements (Section 3604.P), flexible landscaping standards to accommodate defensible space provisions (Section 3603), requirements for non-combustible fencing within 10 feet of structures (Section 3505.17), and limitations on firewood storage within 30 feet of structures (Section 3815.02). These code amendments were the result of a larger effort to consider a holistic approach to wildfire risk reduction in the County through the Community Planning Assistance for Wildfire (CPAW) program.

## Advantages and Key Talking Points

Benefits of implementing landscaping regulations include:

- Mitigating the amount of impervious coverage on a lot.
- Detaining and slowing the conveyance of water during flood conditions.
- Reducing the urban heat island effect.
- Protecting sensitive areas by ensuring adequate buffers are provided.
- Improving water efficiency by requiring native species and limiting the amount of turf grass.
- Providing defensible space from structures (wildfire mitigation).
- Stabilizing steep and unstable slopes.
- Reducing risk to existing development within hazardous areas.

## Challenges

Challenges include the following:

- Landscaping regulations are adopted by ordinance, usually requiring a code amendment that can take time and resources (especially for smaller communities).
- Depending on the complexity of the regulations, administering the landscaping ordinance may require staff trained in landscape architecture.
- Landscaping regulations have to be coordinated with other site development features, and balanced with other political priorities. For example, requiring substantial landscape screening to lessen the visual impacts of new development is sometimes at odds with defensible space standards.

## Key Facts

<b>Administrative capacity</b>	Planning staff with requisite training and certification; landscape architect on staff or under contract (depending on complexity of regulations)
<b>Mapping</b>	Not required
<b>Regulatory requirements</b>	Zoning and/or land development regulations

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<b>Maintenance</b>	Minimal on the draft, but can make up a large percentage of the code enforcement complaints
<b>Adoption required</b>	Yes
<b>Statutory reference</b>	Counties C.R.S. § 30-28-111; § 31-23-301
<b>Associated costs</b>	Staff time for drafting and adoption process (may require outside landscape consultant depending on complexity of regulations)

## Examples

<b>City of Aurora</b> Unified Development Code	<a href="https://www.auroragov.org/UserFiles/Servers/Server_1881137/File/Business%20Services/Zoning%20and%20Codes/Zoning%20Update/1%20Aurora%20UDO%20Final%20Draft%20REVISED%207-3-19.pdf">https://www.auroragov.org/UserFiles/Servers/Server_1881137/File/Business%20Services/Zoning%20and%20Codes/Zoning%20Update/1%20Aurora%20UDO%20Final%20Draft%20REVISED%207-3-19.pdf</a>
<b>Town of Buena Vista</b> Unified Development Code Section 4.4	<a href="http://buenavistaco.gov/DocumentCenter/View/2655/BV-UDC-Final">http://buenavistaco.gov/DocumentCenter/View/2655/BV-UDC-Final</a>
<b>Town of Carbondale</b> Unified Development Code Section 5.4	<a href="https://www.carbondalegov.org/document_center/Planning/Unified%20Development%20Code.pdf">https://www.carbondalegov.org/document_center/Planning/Unified%20Development%20Code.pdf</a>
<b>Indy ReZone</b> Green Factor Chapter 744, Article V	<a href="https://www.indy.gov/activity/zoning-and-subdivision-ordinance-indy-rezone">https://www.indy.gov/activity/zoning-and-subdivision-ordinance-indy-rezone</a>
<b>Sedona, AZ</b> Land Development Code	<a href="http://www.sedonaaz.gov/your-government/departments/community-development/land-development-code">http://www.sedonaaz.gov/your-government/departments/community-development/land-development-code</a>
<b>Summit County</b> Land Use and Development Code	<a href="http://co.summit.co.us/255/Land-Use-Development-Code">http://co.summit.co.us/255/Land-Use-Development-Code</a>

## For More Information

California Model Water Efficient Landscape Ordinance

<https://planning.smcgov.org/water-efficient-landscape-ordinance-welo>

Colorado State University: Native Plant Master

<http://conativeplantmaster.colostate.edu/>

Community Planning Assistance for Wildfire (CPAW)

<https://planningforwildfire.org/>

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Home Landscaping for Fire

<https://anrcatalog.ucanr.edu/pdf/8228.pdf>

International Wildland-Urban Interface Code

<https://codes.iccsafe.org/content/IWUIC2015>

Urban Runoff: Low Impact Development

<https://www.epa.gov/nps/urban-runoff-low-impact-development>

Water Wise Landscaping Best Practices Manual (Sustainability Information)

<https://www.colorado.gov/pacific/dola/publications-handouts>

## Model Code and Commentary

The landscaping ordinance contains the development standards for how much, what type, and the location and design of landscaping on a site. Although perhaps not the most intuitive connection to hazard mitigation, the landscaping ordinance presents several opportunities for reducing risk to flood, drought, geologic hazards, wildfire, and extreme heat. This model code and commentary describes how certain elements of a landscaping ordinance may reduce risk, and provides sample language for consideration.

The following sections provide example language for each of the common elements. Model language is in blue shading. Commentary is located in italics in the column at the right. The model language used in this document is based on existing ordinances from communities around the state and nation. The language is illustrative only; consult local counsel to tailor language for your jurisdiction.

## Purpose and Intent

The purpose of this [section/article/chapter] is to ensure that landscaping is provided to:

1. Protect and enhance the visual appeal of the [city/town/county];
2. Contribute to high-quality development;
3. Conserve water resources by using sustainable design and maintenance techniques and plant species that are low water-use and regionally appropriate;
4. Improve water quality;
5. Reduce stormwater runoff in parking areas and other impervious areas;

## Commentary:

***Purpose and Intent:** The purpose and intent statement is the jurisdiction's opportunity to describe the reasoning behind, and the benefits of, the landscaping ordinance. This section should elevate the importance of promoting landscaping approaches that are appropriate for hazard mitigation and drought adaptation during the site planning process.*



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6. Improve air quality;
  7. Reduce the risk to wildfire; and
  8. Buffer potentially incompatible neighboring land uses.

## Applicability

The applicability section establishes what types of development and/or redevelopment are required to comply with the landscaping provisions.

For hazard mitigation, it is important to consider how the landscaping standards may apply to expansions, redevelopment, and infill.

### **New Development or Redevelopment**

These landscaping standards shall apply to all new development and redevelopment, unless otherwise exempted in this Code.

### **Expansions or Enlargements**

These landscaping standards shall apply to the following:

1. The gross floor area of an existing structure is expanded or enlarged by [25 percent or more]; or
2. The gross floor area of an existing structure is expanded or enlarged by [15 percent or more] within [a mapped hazard area]; or
3. There is a change of use of the existing building that requires an increase of off-street parking by [25 percent or more]; or
4. Any expansion or enlargement of a structure or land use that requires a [conditional/special use permit], as determined by the [Director/Manager].

***Applicability:** Some communities establish thresholds for the types of expansions and redevelopment that may trigger compliance with landscaping standards. In doing so, communities can base those thresholds on type of use proposed, size (square footage), type of application, or location (zoning district or other mapped area). For hazard mitigation purposes, compliance with certain landscaping components can be tied to mapped hazard areas (like the WUI, high-hazard areas, or in areas with steep slopes).*

***Addressing existing development:** One of the most difficult challenges in mitigating hazards is addressing existing development. The applicability section can establish what types of activities to existing development require compliance with the landscaping standards.*

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## Site Improvements

These landscaping standards shall apply when major parking area improvements are made including reconfiguring, reconstructing, or other similar projects. Resurfacing and re-stripping projects are not considered major improvements.

Communities often adopt exemptions to identify areas or uses and activities that are not subject to the landscaping ordinance (or specified sections of the landscaping ordinance). One reason communities include exemptions to code standards is to avoid creating nonconformities (features that complied with the regulations when they were installed, but no longer comply after adoption of code updates). For example, if a new landscaping standard was adopted that limits turf grass for residential lots, any lots with more than the established limit would be deemed nonconforming. These policy issues can be challenging from a code enforcement standpoint. Another reason to exempt certain uses or activities is to encourage redevelopment and infill on otherwise challenging properties.

## Exemptions

These landscaping standards shall not apply to the following areas or activities:

1. OPTION 1, (stricter approach): Individual single-family or two-family residential uses that are not part of a new subdivision, [*unless located in a mapped hazard area*];
2. OPTION 2, (less strict): Development of fewer than 10 single-family or two-family dwelling units, [*unless located in a mapped hazard area*].
3. Any nonresidential or mixed-use development of less than [*5,000 square feet*]; or
4. Any expansions or enlargements that do not meet the thresholds identified in Section [*x.x*] above.

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## Site Landscaping

Site landscaping standards describe what areas are required to be landscaped, and to what degree.

A common example of site landscaping standards is to require a minimum percentage of landscaped area on a site, which may vary by zoning district. The percentages can vary widely, with rural residential zoning districts requiring more landscaped area than urbanized nonresidential or mixed-use districts. It is important to consider the potential impacts that landscaped areas may have related to risk reduction and hazard mitigation. For example, although a higher percentage of landscaping may reduce impervious area (which is better landscaping can also equate to additional fuels during a wildfire, or increased water requirements. These competing interests should be discussed when developing the landscaping ordinance.

***Engineering and Technical Standards:** The zoning or development code should not always include detailed technical and engineering standards related to landscaping requirements. Most communities maintain separate standards manuals or technical specifications that contain detailed information related to site development (such as appropriate plant species, parking lot island curb design specifications, and when a soil amendment may be required). The benefit to leaving these outside of the zoning ordinance is that minor modifications to the detailed specs would not require an act of council/commission/trustees/etc.*

## Minimum Percentage of Site Area to be Landscaped

Residential (Single-family and duplex)	Residential (Multifamily)	Commercial and Mixed- use	Industrial
30 percent	30 percent	20 percent	10 percent

Some communities do not establish minimum landscaping percentages at all, and rather rely on other standards to limit the amount of impervious area on a site. In such cases, a general provision for landscaped areas should be stated.

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## Required Landscaped Areas

Except for areas with native vegetation cover, any part of a site not used for buildings, parking, driveways, walkways, utilities, or other site improvements shall be landscaped with appropriate materials pursuant to Section [x.x –cross-reference materials standards].

## Perimeter Landscape Buffers

Perimeter buffers can be required to ease transitions to adjacent land uses and to provide a uniform landscaping aesthetic within certain zoning districts or along key corridors. For hazard mitigation purposes, landscape buffers can be used to contain, divert, or convey water away from structures during a flooding event. Buffers can also be used as fuel breaks in heavily forested areas. To ensure that hazard mitigation principles are possible within perimeter landscape buffers, communities should be flexible in terms of how much landscaping is required within the buffer, and allowing alternative designs when appropriate. General authority to approve alternative designs is provided later in this model in the landscaping evaluation procedures.

Perimeter landscape buffers, if required, should be coordinated with adopted stream buffer standards. Information on **stream buffers** can be found here: [planningforhazards.com/stream-buffers-and-setbacks-model-and-commentary](http://planningforhazards.com/stream-buffers-and-setbacks-model-and-commentary).)

## Parking Lot Landscaping

Limiting the amount of parking required is possibly the most effective way to reduce impervious surface in parking areas; however, that reduction is achieved in the parking regulations and not in the landscaping ordinance. Parking lot landscaping is often addressed as a separate section within the landscaping ordinance. Communities vary in terms of the degree of design within parking areas. Variables include how much landscaping is required; whether or not landscaped islands are required; how stormwater is treated within a parking area; and whether or not additional perimeter landscaping is required.

*Where should parking lot landscaping regulations be located? Some communities locate parking lot landscaping regulations within the parking regulations in the zoning or development code, while others find it more intuitive to locate them in the landscaping regulations. There is no “best practice” other than to justify a logical decision based on preference and to appropriately cross-reference in both parking and landscaping sections.*

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Thoughtful considerations for the types of landscaping (species/materials), and the amount of landscaping required in parking areas can help reduce the impacts during a flooding event and can help conserve water in times of drought. Additionally, any reduction in the amount of impervious area in a parking lot will reduce the heat island effect, especially during periods of extreme heat.

Some communities require certain stormwater management improvements in parking areas. For example, the Town of Carbondale requires landscaped islands or rain gardens as part of the parking area design standards. The model language below is based on that example.

## Landscaped Islands and/or Rain Gardens Required

Landscaped islands and/or rain gardens shall be provided in parking areas along the ends of parking rows, adjacent to lot lines, and used to define the location and pattern of primary internal access drives.

### A. Nonresidential and Mixed-Use Districts

In all nonresidential and mixed-use zoning districts, landscaped islands and/or rain gardens shall be used to separate rows of more than [12] parking spaces.

### B. Residential Districts

In residential districts, landscaped islands and/or rain gardens shall be used to separate rows of more than [six] parking spaces.

### Curb Design in Parking Areas

Internal landscape areas shall be curbed for protection of the landscape materials, but planted areas shall be installed at a lower grade than the parking lot pavement, and curbing shall allow drainage from the pavement to enter and percolate through the landscaped areas.

### *Stormwater Improvements within Parking Lots*

*Carbondale, CO:* The Town of Carbondale requires landscaped islands and/or rain gardens in parking lots. See their recently adopted Unified Development Code (UDC) here:

[carbondailegov.org/UDC%20with%20Appendix%20May%2017%202016.pdf](http://carbondailegov.org/UDC%20with%20Appendix%20May%2017%202016.pdf)

Navigate to Section 5.4.3.C.

*Duluth, MN:* The City of Duluth, Minnesota requires that curbing within parking areas allow drainage into landscaped areas.

[library.municode.com/mn/duluth/codes/legislative\\_code?nodeId=Chapter%2050%20-%20Article%20IV%20-%20Development%20Standards](http://library.municode.com/mn/duluth/codes/legislative_code?nodeId=Chapter%2050%20-%20Article%20IV%20-%20Development%20Standards)

Navigate to Section 50-25.4

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For many snow-prone mountain communities in Colorado, the issue of snow storage is important. An effective approach to addressing snow storage is to ensure adequate set-asides for snow storage adjacent to paved areas are provided, while also protecting landscaped areas. Some model language for snow storage standards most relevant to the landscaping ordinance is provided below, based on Summit County's standards:

### **Location**

[To the maximum extent practicable,] snow storage areas shall be located in:

- A. Sunny areas to help speed the snow melting process.
- B. Revegetated areas to help with slowing the absorption of runoff, and prevent ponding.

### **Drainage**

Drainage from snowmelt areas shall:

- A. Divert snowmelt away from walks, driveways, parking areas, and other paved surfaces.
- B. Divert snowmelt away from shaded areas to avoid freezing and ice hazards.
- C. Protect waterways and adjacent properties by providing methods for filtering runoff before drainage leaves the site.
- D. Minimize erosion.

### **Protection of Landscaping**

Landscaping adjacent to snow storage areas that may be damaged or destroyed by snow storage activities shall be protected by the use of planters, elevated landscaping elements, timber walls, or other mechanisms approved by the [Director/Engineer/City/County].

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## Landscaping Materials and Water Conservation

This section addresses the types of planting materials allowed and the number of plant units required.

For hazard mitigation purposes, the type and amount of landscaping is important. For flooding, landscaping can determine how the site performs when flooded, and how much water can be conveyed and/or detained on site. For wildfire, some types of landscaping materials are more flammable than others, and the amount of vegetation equates to the amount of potential fuel. For drought and extreme heat, some species are more tolerant to periods of drought or extreme temperatures and require less water. Certain species may also be more prone to becoming projectiles during extreme wind or tornadoes. Native species are the most suitable, and many communities maintain a list of appropriate native species. Native species can survive under normal climatic conditions and are therefore more water efficient. See the model language below, tailored from an example in Sedona, Arizona:

**A.** A recommended list of native and adaptive plants suitable for landscaping in the area is listed in [*the administrative manual*]. Plants proposed to be used that are not on that list shall be demonstrated to have low water usage, and be drought tolerant and freeze resistant.

**B.** Selected plants shall meet the following minimum standards:

1. A minimum of 50 percent of plant species on a development site shall be native species as identified in [*the administrative manual*].
2. All required trees shall be a minimum of 8 feet high at planting; and
3. All required shrubs shall be a minimum of 2 feet high at planting.

*Sedona, Arizona: Sedona's Land Development Code is currently being updated as part of a comprehensive rewrite project. Current drafts of the rewrite remove the specific requirements for evergreen species since those are discouraged by Firewise principles due to their burn properties. Learn more about the code update at: [sedonaldcupdate.com](http://sedonaldcupdate.com)*

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Communities also vary in how they regulate the number of plants and/or trees. There can be differentiations based on use type (e.g., different for golf courses vs. single-family residential vs. shopping centers), different standards for private yards vs. treelawns, and exceptions allowed for urban environments.

Many landscaping ordinances also include standards for reducing the amount of high-water usage landscaping. Water-efficient landscaping materials help communities conserve water without sacrificing other objectives such as aesthetics and/or flood control. Some communities regulate the amount of native plants required – to avoid species that may require a lot of water. Other communities provide a list of specific water-efficient plants that are appropriate or refer to a regional- or state-approved plant species list.

#### **Plant Materials**

Plants shall be provided pursuant to the [city/town/county] approved [plant list/planting guide].

#### **Plant Materials (more discretion)**

Native, low-water, drought-tolerant, adaptive plants shall be used for all landscaping. Plants shall be suitable for the local soil conditions and climate.

Some communities place a maximum limit on the amount of turf grass used for new developments, and in more complex scenarios have separate watering rates depending on the amount of turf grass. Communities should consider the applicability of such limitations. For example, consider whether turf grass limitations will apply to single-family or duplex dwelling uses beyond those associated with a new subdivision.

*External plant materials sources: For communities that do not have a landscape architect on staff, and do not have an approved plant list, a reference in the development code can be provided to an external source of information for guidance on appropriate native species. The Colorado State University “Native Plant Master” is a good source of lists for Colorado-appropriate plant materials. Visit: [conativeplantmaster.colostate.edu/](http://conativeplantmaster.colostate.edu/)*



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## Water Conservation

1. The water [City/County/Town] recognizes the importance of conservation and the protection of its water resources. The [City/County/Town] encourages the use of low-water planting materials and other landscaping techniques used to limit the amount of water use.
2. Xeriscape landscaping shall be incorporated into the overall landscaped area [to the maximum extent practicable]. Xeriscape landscaping shall require water irrigation for a period of three years to establish the landscaping. After three years no irrigation is required.
3. Turf grass limitation OPTION 1, (stricter approach): Grassed areas shall be planted with drought-resistant species pursuant to the [adopted City/County/Town plant list]. The [Director] may approve another variety or species for areas on the site that are heavily shaded.
4. Turf grass limitation OPTION 2, (less strict approach): [To the maximum extent practicable], the total amount of high-water use landscaping, pursuant to the [City/County/Town]'s specifications, shall not exceed [50 percent] of the required landscaped area and the total amount of high-water use turf grass shall not exceed more than [30 percent] of the required landscaped area.
5. The [Director] may approve greater areas of turf grass when it can be demonstrated that the proposed species and irrigation methods will not demand high water usage.
6. Plants or turf grass in a high water use zone shall not be planted on slopes or berms with a 4-to-1 (4:1) slope or steeper.

*The “Green Factor”:* The City of Indianapolis recently updated their zoning ordinance (2016) to implement several sustainable development features, including the “Green Factor.” The Green Factor gives flexibility to developers to incorporate landscaping, buffering, and screening techniques that promote the integration of water quality, thoughtful design, and use of native plant materials. Developers are required to fill out a worksheet documenting how their proposal achieves the minimum green factor. Low-impact development options are worth more than traditional landscaping techniques, and previously undeveloped or underdeveloped sites must attain a higher Green Factor. For more information, visit: [indy.gov/eGov/City/DMD/Current/Pages/ordinance.aspx](http://indy.gov/eGov/City/DMD/Current/Pages/ordinance.aspx)  
Navigate to Chapter 744, Section 509.

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## Low-Impact Development (LID) Standards

Low-impact development standards help reduce stormwater runoff and improve water quality through the use of natural on-site features (green infrastructure), in lieu of conveying and/or storing water in piped infrastructure. These systems help reduce risk to natural hazards by improving permeability, and thus preventing conveyance during flood conditions (with an added benefit of improving water quality), help conserve water through the use of water-efficient plantings, and reduce the heat island effect by replacing hardscape with natural systems.

Communities can emphasize the importance of green infrastructure by providing descriptions of low-impact development (LID) options and including incentives, such as reduced parking requirements.

See the [Stormwater Ordinance](#) model code language for more.

***Low-Impact Development:*** *Low-impact development (LID) standards mostly include green infrastructure solutions for managing stormwater runoff and improving water quality. The inclusion of such standards in landscaping ordinances is increasingly common; however, where the focus is on grading and drainage, the LID standards should be located with other grading and drainage standards in the zoning or development code.*