Landscaping in Jasper National Park

(outside the Town of Jasper)

Jasper's landscape is an important part of its character and it is critical that outlying commercial accommodations and cottages blend into the surrounding protected National Park wilderness with minimal environmental and cultural resource impacts. The ecosystem will support a wide variety of plant material but native plantings, that have minimal wildlife attractants and support FireSmart Canada principles, are required in these special areas. **With the exception of annual plantings and golf course greens, any new or replaced vegetation must be native to the National Park.**

Maintaining native landscaping benefits the environment, the health and wellbeing of visitors, and creates beautiful spaces for all to enjoy. The Outlying Commercial Accommodation and Hostels in the Rocky Mountain National Parks and the National Parks of Canada Cottages Regulations contain landscaping requirements. Landscaping, including excavation or terrain manipulation, does require a Parks Canada Development Permit. Click the following link to learn more about the landscaping requirements and apply for a Parks Canada Development permit for Landscaping.

The following information is intended to assist you in planning your soft landscaping (vegetative) project for a permit or provide you guidance in replacing existing plantings with suitable alternatives.

Mature Tree Retention or Removal

Mature trees (at least 20 cm diameter at chest height) are an asset to the ecosystem and should be retained whenever possible. They filter air and water, help control storm water, provide protection from wind, shade in summer, screen for privacy, and provide critical wildlife habitat. If your mature tree must be removed due to development, or it is assessed as a hazard, you will be required to obtain a Parks Canada Tree Removal Permit. Where mature trees must be removed, replacement trees will need to be planted at a ratio of at least 1:1. This will be assessed on a case-by-case basis.

Tree removal is strongly recommended to be done before or after the bird nesting period. Parks Canada is required under the *Migratory Bird Act* to protect nesting birds from **April 19 – August 24th**. Therefore, your application may be restricted during this time. Danger trees (those that pose a hazard to property, infrastructure and/or public safety) assessed by a certified arborist can be removed during the nesting bird period with a Tree Removal Permit. It is, however, expected that leaseholders plan to do tree removals outside this period, except in emergency circumstances.

Please note that bird nests are protected at all times. If you find an active nest in a tree you wish to remove, outside of the nesting bird period, you must contact Parks Canada (pc.jasper-realtymunicipalservices.pc@pc.gc.ca) and refrain from removing the tree.

There may be extenuating circumstances where a tree may be removed during the bird nesting period. These exceptional circumstances are rare, but may be granted with additional considerations and mitigations applied. At a minimum, the proponent would need to enlist the services of a registered, licenced professional biologist to do a full inspection of the tree to ensure the absence of nesting birds. If none are found, a permit may be issued.

To apply for a Parks Canada Tree Removal Permit, you will need to fill out a Parks Canada Tree Removal Application including:

- a completed Parks Canada Tree Removal Application:
- tree species and number of trees;
- purpose of removal. If considered hazardous, a written danger tree assessment from a certified danger tree assessor with proof of their certification is required;
- photo(s) of the tree(s);
- dimensioned site plan illustrating the location of the tree(s), structures, and lot lines on the leasehold;
- flag the tree(s) of concern with flagging tape.

Once the form is completed and the tree(s) are flagged, please return the application and supporting documents to pc.jasper-realtymunicipalservices.pc@pc.gc.ca.

Please be advised that, should there be more than 10 trees cut down, a harvesting and landscape plan will be required. The following elements should be included in your plan, at a minimum:

- a written detailed description of what currently exists on site and the proposed project
- indication of any proposed tree removal
- drawings of (a) what currently exists in the proposed work area with dimensions in metric and; (b) the proposed project with dimensions in metric
- a list of species to be planted, with common and scientific names
- additional information may be required as considered necessary

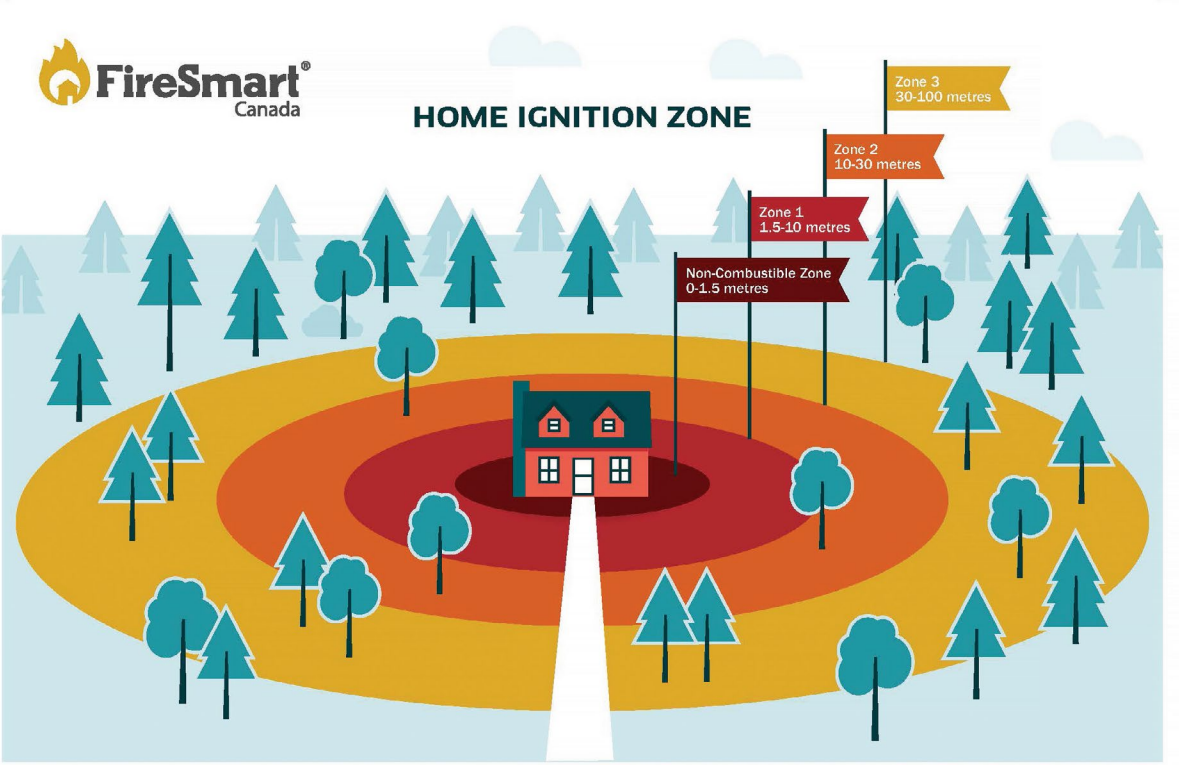
Space permitting, contractors and leaseholders are expected to replace, at a minimum, the same number of trees that were removed. In some cases, it may be more. Refer to the attached Town of Jasper Planting List for allowable plant species.

General Guidelines for Planting

The following general guidelines are provided to assist you in planning your landscape project:

STEP 1: WHERE TO PLANT

Follow the zone guidelines set out by FireSmart Canada. The design of the landscape immediately adjacent to buildings is a critical factor in determining the likelihood of a building or structure surviving wildfire.



Zones

Non-combustible Zone (0-1.5 m from building) – no planting of trees in this area.

Zone 1 (1.5 – 10 m from building) – no planting of coniferous trees in this area. You may plant deciduous native trees like aspen, poplar, cottonwood and birch. This is encouraged.

Landscape with approved (see planting list below) short grasses, flowers, shrubs, in low density. Do not use bark or pine needle mulches in this zone as they are highly combustible. Gravel mulch and decorative crushed rock mulch significantly reduces the risk of wildfire.

Zone 2 (10 – 30 m from building) – both coniferous and deciduous trees can be planted in this zone. Spacing is important. There should be 3 m between adult coniferous trees, from drip line to drip line (between outer branch tips of each tree). To achieve this, plant saplings/small trees at least 8 m apart.

Deciduous trees can be planted closer together (~4 m). Again, planting deciduous native varieties is preferred over coniferous trees.

Zone 3 (30 – 100 m from building) – if the area surrounding the new buildings is large enough to include this zone, deciduous and coniferous trees can be planted here, following spacing guidelines discussed above.

Planting Near Utility Lines

If your lot has a formal utility right-of-way, ensure not to plant trees or shrubs on these areas as access must not be impeded for future utility installation or maintenance. Trees should be planted a minimum of 5 m from your septic line to mitigate root damage to the service line.

STEP 2: PLANTING CONSIDERATIONS

No fruit-bearing trees and shrubs

Fruit-bearing trees and shrubs, including native species, attract wildlife- ungulates and bears. Driven by their keen sense of smell and hearty appetite, bears may lose their shyness around people as they look for calorie-rich foods. Bears can climb into trees in search of ripening food, breaking branches in the process, and getting a food reward that will bring them back repeatedly. This may also lead to a bear seeking other food sources such as garbage or pet food, thereby putting their life at risk.

Plant native

Only native species with low palatability to wildlife are allowed for projects outside the townsite of Jasper. Non-native plants pose a significant ecological threat to native plant and wildlife communities. They spread rapidly without their natural insect predators and disease controls. They also displace native plant species that stabilize soils and provide forage and cover for wildlife. Personal gardens and built landscapes are entry points for many non-native plants. The most effective way to control non-native plants is to prevent their establishment.

Some common, non-invasive annuals, are permitted for planting in baskets and flower boxes. While these plants will attract the bees and butterflies, most will also be appetizing for elk and deer. Annual plants may include:

- Begonias
- Petunias
- Impatiens
- Geraniums
- Marigold (not palatable for elk and deer)
- Calibrachoas (million bells)
- Ageratum
- Vincas
- Pentas
- Portulaca
- Salvias

Low Fire Risk Species

Low flammability vegetation is recommended for any areas adjacent to facilities or infrastructure. Not many coniferous trees are included in the recommended plant list below due to their high flammability rating, which pose a greater fire risk to buildings and infrastructure.

Deciduous Trees

Deciduous trees (with leaves) are attractive for ungulates (elk and deer). **After planting, these trees must be protected with cage or bark armor and often stakes until they are mature and established enough to withstand ungulate browse and other wildlife attention.** This typically takes 3 – 5 years, depending on the species, age and frequency of ungulate browsing.

STEP 3: WHAT TO PLANT

Trees and Shrubs for Landscaping Outside the Jasper Townsite

This list contains plant species that are native to Jasper National Park and unlikely to become ecological problems through cross-pollinating with native plants or spreading into the natural environment. Required plant species are those that are native to Jasper National Park.

Wherever possible, these plants should be derived from local stocks to reduce the risk of introducing non-native varieties. All species listed are now, or soon to be, available from Alberta sources as seed or plants; they are considered non-invasive and are not normally prone to disease. Parks Canada may also be able to provide native saplings and shrub cuttings for landscaping from areas slated for construction or development.

Deciduous trees, particularly aspen poplar (*Populus tremuloides*), are seeing decreases in the park due to ungulate browsing. We encourage leaseholders to plant these trees in their yards. Similarly, Douglas-fir (*Pseudotsuga menziesii*) are the preferred coniferous tree for planting, due to their fire-resistant nature.

JNP Planting List: non-urban

Common name	Scientific name	General max height	FireSmart risk	Site conditions
Deciduous Trees				
Balsam Poplar	*Populus balsamifera*	25 m	VL	Moist sites, open to partial shade
Paper Birch	*Betula papyrifera*	30 m	VL	Shade intolerant, well drained sandy/silty sites
Trembling Aspen	*Populus tremuloides*	30 m	VL	Dry-moist, sunny sites, open forest
Evergreen Trees *should be minimum 10 m distance from buildings*				
Alpine Fir	*Abies lasiocarpa*		H	
Lodgepole Pine	*Pinus contorta latifolia*	30 m	H	Dry-moist, sunny sites, open forest
Rocky Mt. Douglas Fir	*Pseudotsuga menziesii glauca*	40 m	M	Dry-moist, sunny sites, open forest
White Spruce	*Picea glauca*	40 m	H	Moist to wet sites, open or closed forest
Whitebark pine	*Pinus albicaulis*	20 m	H	Slow growing native Alberta pine – endangered spp.

Common name	Scientific name	Attracts bears or ungulates	FireSmart risk	Site conditions
Deciduous Shrubs				
Arctic willow	*Salix arctica*		VL	
Bebb's Willow	*Salix bebbiana*	browse	VL	
Bog or Shrub Birch	*Betula glandulosa*		L	Moist and dry sites, adaptable
Buckbrush	*Symphoricarpos occidentalis*		L	Good tall groundcover
Canadian Buffaloberry	*Shepherdia canadensis*	minor bear attractant	L	minor bear attractant – NO MORE THAN 10 PLANTS per site
Common Wild Rose	*Rosa woodsii (later flowering)*		L	
Green alder	*Alnus crispa*		VL	
Meadowsweet	*Spiraea betulifolia*		L	Prefers canopy, not very vigorous
Mountain or River Alder	*Alnus tenuifolia*		VL	Prefers moister sites
Prickly Rose	*Rosa acicularis (earlier flowering)*		L	Most commercial shrub roses are non-native varieties
Pussy Willow	*Salix discolor*	browse	VL	
Red Osier Dogwood	*Cornus stolonifera*	browse	L	Prefers moister sites
Shrubby Cinquefoil	*Potentilla fruticosa*		L	Many cultivars on market
Smooth Willow	*Salix glauca*	browse	VL	
Snowberry	*Symphoricarpos albus*		L	
Wolf Willow or Silverberry	*Elaeagnus commutata*		L	
Evergreen Shrubs				
Creeping Juniper	*Juniperus horizontalis*		xeriscape	Not recommended within 10 m of flammable structures due to fire hazard. Good for dry and exposed sites.
Kinnikinnick or Bearberry	*Arctostaphylos uva-ursi*	minor bear attractant	xeriscape	Good groundcover – NO MORE THAN 10 PLANTS/site

Most preferred Acceptable

FireSmart risk scale
VL = very low, L = low, M = moderate, H = high, VH = very high

Common name	Scientific name	Attracts bears or ungulates	Site conditions
Grasses			
Alpine Bluegrass	*Poa alpina*	moderate	
Awned Wheatgrass	*Agropyron subsecundum*	moderate	
Broadglumed Wheatgrass	*Agropyron violaceum*	moderate	
Fowl Bluegrass	*Poa palustris*	moderate	
Fringed Brome	*Bromus ciliatus*	moderate	
Glaucous Bluegrass	*Poa glauca*	moderate	
Hairy Wildrye	*Elymus innovatus*	moderate	
June Grass	*Koeleria cristata*	moderate	
Northern Wheatgrass	*Agropyron dasystichum*	moderate	
Plains Reedgrass	*Calamagrostis montanensis*	moderate	Will **NOT** accept related, but non-native B. inermis, as a substitute
Plains Rough Fescue	*Festuca hallii*		
Pumpelly brome	*Bromus pumpellianus*		
Richardson's Needle Grass	*Stipa richardsonii*		Common understory dominant in lodgepole pine forests
Rocky Mountain Fescue	*Festuca saximontana*	moderate	
Sandberg bluegrass	*Poa secunda*	moderate	
Slender Wheatgrass	*Agropyon trachycaulum*		
Spike trisetum	*Trisetum spicatum*	moderate	
Spikeoat	*Helictotrichon hookeri*	moderate	
Streambank Wheatgrass	*Agropyron riparium*	moderate	
Ticklegrass	*Agrostis scabra*	moderate	
Tufted Hairgrass	*Deschampsia caespitosa*		
Western Wheatgrass	*Agropyron smithii*	moderate	

* All of the above grasses are highly suitable for naturalized or low-use reclamation areas with infrequent or no mowing. Plant with *Oxytropis* or *Astragalus*.

Generally low flammability except when dry. Relatively low risk unless tall grass is adjacent to other flammable materials (eg: conifers, woodpiles, built structures)

The above native grasses are not suited for high maintenance, regularly-mowed turf. Green turf areas should be minimized in JNP due to elk attraction and high maintenance requirements which can lead to demand for cosmetic herbicide.

Where high-use public areas require turf, high quality non-native Kentucky Bluegrass/Creeping Red Fescue mixes similar to the following may be acceptable:

60 – 70% Kentucky Bluegrass selected, elite cultivars
20 – 30% "Boreal" Creeping Red Fescue
10 – 15% Perennial Ryegrass, turf-type cultivars

Common name	Scientific name	Attracts bears or ungulates	Site conditions
Wildflowers			
Alpine Aster	*Aster alpinus*	low	Improved cultivars available
Alpine Hedysarum	*Hedysarum alpinum*	low	
Alpine Loco-weed	*Oxytropis cusickii*	low	
Alpine Milk vetch	*Astragalus alpinus*	low	
American Milk Vetch	*Astragalus americanus*	low	
Black-Eyed Susan	*Gaillardia aristata*	low	Very showy
Blue or Harebell	*Campanula rotundifolia*	low	
Blue-Eyed Grass	*Sisyrinchium montanum*	low	
Broad-leaved Fireweed	*Epilobium latifolium*	low	
Bunchberry	*Cornus canadensis*	low	Likes moist soils rich in humus
Canada Goldenrod	*Solidago canadensis*	moderate	
Common Yarrow	*Achillea millefolium*	low	Since species invasive, use of non-white cultivars not recommended
Compound Fleabane	*Erigeron compositus*	low	
Coralbell	*Heuchera brizoides*	low	Many cultivars
Cordilleran Arnica	*Arnica mollis*	low	
Cow Parsnip	*Heracleum lanatum*	low	Prefers moist, rich soils
Creeping Phlox	*Phlox subulata*	low	Many cultivars, groundcover
Crimson Columbine	*Aquilegia formosa*	low	
Cut-leaved Anemone	*Anemone multifida*	low	
Daylily	*Hemerocallis hybrida*	low	Many cultivars available
Early Blue Violet	*Viola adunca*	low	
Early Yellow Locoweed	*Oxytropis sericea*	low	
Evergreen Candytuft	*Iberis sempervirens*	low	
False Solomon's Seal	*Smilacina racemosa*	low	Good groundcover
Fireweed	*Epilobium angustifolium*	low	Spreads through seed & rhizomes
Garden Phlox	*Phlox paniculata*	low	Many cultivars, strong scent
Golden Corydalis	*Corydalis aurear*	low	
Graceful Cinquefoil	*Potentilla gracilis*	low	
Late Yellow Locoweed	*Oxytropis monticola*	low	
Lindley's Aster	*Aster ciliolatus*	low	
Northern Bedstraw	*Galium boreale*	moderate	
Northern Hedysarum	*Hedysarum boreale*	low	
Old Man's Whiskers	*Geum triflorum*	low	Looks good all season long
Pasture Sagewort	*Artemisia frigida*	low	
Pearly Everlasting	*Anaphalis margaritacea*	low	
Prairie Crocus	*Anemone patens*	low	

Common name	Scientific name	Attracts bears or ungulates	Site conditions
Wildflowers			
Prairie Groundsel	*Senecio canus*	low	
Prairie Sagewort	*Artemisia ludoviciana*	low	
Pussy Toes	*Antennaria parvifolia*	low	
Red Indian Paintbrush	*Castilleja miniata*	low	Difficult to grow
Reflexed Loco-weed	*Oxytropis deflexiai*	low	
Rocky Mountain Goldenrod	*Solidago spathulata*	moderate	
Shining Arnica	*Arnica fulgens*	low	
Shooting Star	*Dodecatheon pulchellum*	low	
Showy Aster	*Aster conspicuus*	low	
Showy Locoweed	*Oxytropis splendens*	low	Beautiful all summer long
Slender Blue Beardtongue	*Pentstemon procerus*	low	
Smooth Fleabane	*Erigeron glabellus*	low	
Smoothing Aster	*Aster laevis*	low	
Star-flowered Solomon's Seal	*Smilacina stellata*	low	Good groundcover
Tall Larkspur	*Delphinium glaucum*	low	Needs staking or protected site
Tufted Fleabane	*Erigeron caespitosus*	low	
Twinflower	*Linnaea borealis*	low	Low groundcover
Veiny Meadow Rue	*Thalictrum venulosum*	low	
White Camas	*Zigadenus elegans*	low	
White Dryad	*Dryas octopetala*	low	Pioneering species
Wild Bergamot	*Monarda fistulosa*	low	Native Alberta species; not native to Jasper
Wild Blue Flax	*Linum lewisii*	low	
Wild Lily-of-the-Valley	*Maianthemum canadense*	low	
Wild Mint	*Mentha arvensis*	low	
Wild Strawberry	*Fragaria virginiana*	low	
Wild White Geranium	*Geranium richardsonii*	low	
Yellow Columbine	*Aquilegia flavescens*	low	
Yellow Dryad	*Dryas drummondii*	low	Pioneering species
Yellow Paintbrush	*Castilleja occidentalis*	low	Difficult to grow

Frequently Asked Questions

1. Approximately 20 trees have been removed from a construction site. Once building is complete, there will not be room to plant at least another 20 trees to satisfy the minimum 1:1 ratio. What are the options?

a. As a priority, plant as many trees in the disturbed area as possible, following the guidelines provided.

b. Discuss with Parks Canada options to replant trees elsewhere in the park.

c. Douglas fir and deciduous trees (poplar, birch) are the preferred species for re-planting.

d. Depending on the tree species removed from the construction site, you may be asked to plant more trees than those removed. This will increase survivability.

2. Can I plant a tree, shrub or flower species that is not on the list?

No, you cannot. Personal gardens and human-built landscapes are entry points for many non-native plants. The most effective way to control non-native plants is to prevent their establishment, especially in wilderness settings outside the townsite.

3. How do I know if a plant is invasive?

Visit https://abinvasives.ca/ for the most up to date list of invasive plant species in Alberta. There are many! The most common invasive plant species in and around the Town of Jasper include:

Oxeye daisy (*Chrysanthemum leucanthemum*)

Yellow clematis (*Clematis tangutica*)

Dalmatian toadflax (*Linaria dalmatica*)

Scentless chamomile (*Matricaria perforate*)

Yellow hawkweed (*Hieracium pretense*)

Tall buttercup (*Ranunculus acris*)

4. I'd like to use wood chips. Is this a good idea?

Firesmart Canada recommends that wood chips not be used with 1.5 m of structures. They can be used outside this zone, with proper watering (wood chips hold water well). Do not place wood chips around trees. When landscaping against your building, consider using gravel mulch, rock mulch, or a combination of plant mulch and decorative rock mulch to reduce the risk.

5. I'd like to plant a lawn. What seed mix should I use?

Jasper National Park encourages a movement away from standard lawns to more of a natural environment (rock gardens with natural grasses and natural flowers from our planting list). This is especially important in areas outside the Jasper townsite. This approach blends nicely with the surrounding landscape, takes little maintenance and discourages wildlife from entering your yard to forage. Choose from the provided grass species and combine at least 3 different grasses in your mix.