



LANDSCAPING GUIDELINES



If you are a property owner or resident on a Kinder Morgan right-of-way, this booklet will assist you in planning your landscaping in proximity to our pipelines.

About This Booklet

This booklet has been prepared in conjunction with a landscape designer for use by property owners having a Kinder Morgan right-of-way on their property. It is intended to offer suggestions and ideas for landscaping and planting on or around the right-of-way. Because there are restrictions that apply to what can be planted on the right-of-way, these guidelines have been developed as a resource tool for anyone considering gardening or landscaping changes.

Certain activities on the right-of-way require the prior written approval of Kinder Morgan. As each situation must be assessed individually, the inclusion of any suggested landscaping activity in this booklet does not constitute approval by Kinder Morgan. Please contact Kinder Morgan before starting any significant landscaping projects on the right-of-way.

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About Kinder Morgan

Kinder Morgan owns and operates a number of pipeline systems and terminals in North America. The Trans Mountain Pipeline System transports crude oil and refined products from Alberta to British Columbia's lower mainland and into Washington state. The Express Pipeline System transports crude oil from Alberta to the US Rocky Mountain and Midwest Regions. The Cochin Pipeline System transports natural gas liquids from Alberta to Ontario. Despite the change in our operating name, we continue to offer the same commitment to efficient, reliable, and safe operation of our pipeline systems.

A Right-of-Way on Your Property

Most of our pipelines are located within a right-of-way, on land owned by others, and are regulated through right-of-way agreements. A right-of-way agreement (also referred to as an "easement") is an agreement between the owner of a property and an individual, company, or municipality which grants the right-of-way holder the right to use the property in some way. This legal binding agreement, which is usually registered on the certificate of title, has been negotiated between the original property owner (the grantor) and the right-of-way holder (the grantee) and outlines the rights and obligations of both parties.

Partners In Pipeline Safety

Safety is a priority at Kinder Morgan. We care about your safety, the safety of the communities in which we operate, and the protection of the environment. Pipelines are the safest, most efficient way to transport crude oil and other petroleum products. We use a wide variety of methods to ensure safe operations of the pipeline systems. Some of our initiatives include continuous monitoring of our pipeline systems, having a rigorous preventative maintenance program, conducting regular air and ground patrols, and promoting ongoing public awareness of our facilities. We consider landowners and the general public our Partners In Pipeline Safety.

Call Before You Dig

Did you know that a significant number of pipeline incidents occur as a direct result of third-party (or non-pipeline company) activities? Despite pipelines being the safest method of transporting large volumes of products, damage to pipelines often occurs as a result of work taking place near the pipeline without first notifying the pipeline operator.

Pipeline markers along the right-of-way indicate the general location of the buried pipeline, but not the exact location. **Please contact us well in advance of commencing any activities which disturb the ground** on or near the pipeline right-of-way—*Call Before You Dig*. A Kinder Morgan representative will respond (free of charge) to determine the exact location of the pipeline and will mark the location with paint or flags. The representative will also advise you if formal approval—a crossing agreement—is required before you begin. In the event that a crossing agreement is required, our representative will provide a contact to send your plans to—it will take approximately two weeks for the approval to be granted. Please refer to the local *Call Before You Dig* number on the back of this booklet.

Planning Your Landscape Design

This booklet will help you plan changes to your property and ensure that the right-of-way requirements are maintained. It also suggests examples of plants suitable for growing on the right-of-way.

Your Property

Considering the elements of your property (i.e. climate, soils, drainage, slopes, house position, auxiliary structures, large trees, driveways, roads and location of any utility rights-of-way) is essential for achieving a successful landscape plan. Added to these elements are items you may use to enhance your landscape (i.e. vegetable garden, play area, privacy, security, shade, lawn and plants).

Getting Started

Start with a scale drawing of your property. You may have received a legal plan when you purchased the property; copies can also be obtained from your local municipal office.

Using a ruler and grid paper, or a copy of the plan, draw the basic elements of your property to scale. This allows you to position the main features of the property.

Features to include:

- 🌿 property lines and lengths
- 🌿 position and dimensions of house

- 🌿 right-of-way and pipeline location (contact us for additional information)
- 🌿 driveways, sheds, fences, clotheslines, swing sets, playhouses, and other auxiliary structures
- 🌿 utilities servicing the property (i.e. power lines, gas lines, water lines, irrigation system, drains, septic fields, wells)
- 🌿 locations of outside electrical outlets and water taps
- 🌿 trees, hedges, lawn areas, garden beds

Helpful Tips:

1. Make a few photocopies of your original scale drawing before filling in the details.
2. Use a pencil, then once the field drawing is done, transfer the information into ink and photocopy.
3. There is no need to fill in every small detail; capture the main components.
4. Establish 'North' and mark the direction on your drawing. (see Figure 1, page 6)

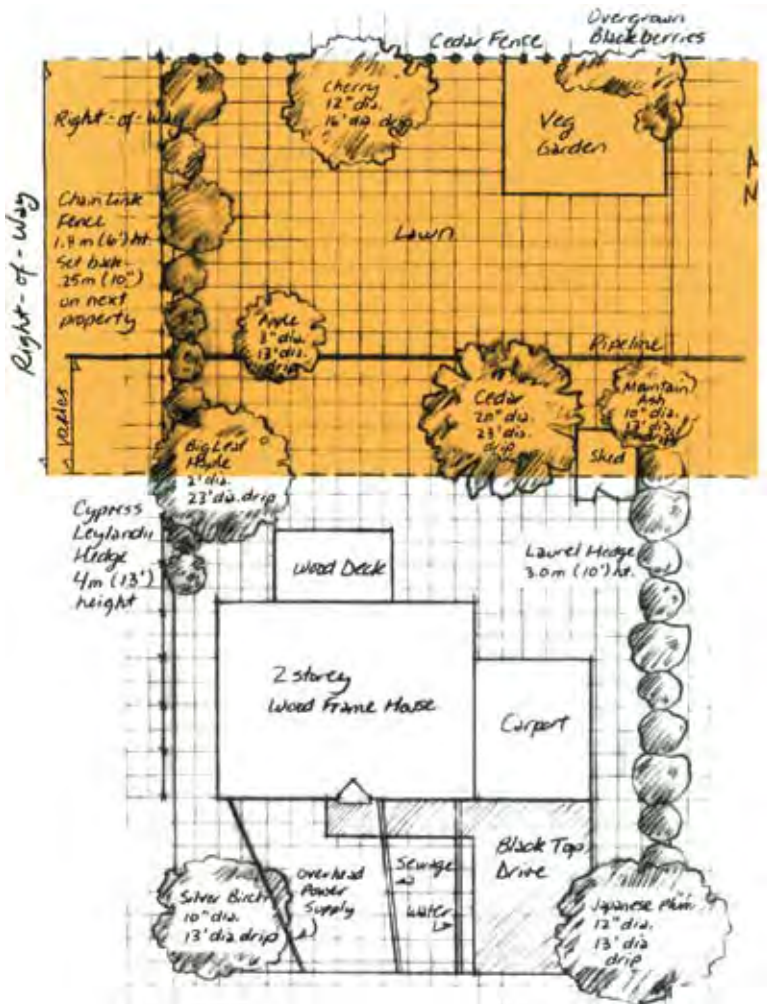
Your Landscape Design

Now that you have a drawing of what is on your property, designing the changes can begin.

Working Within the Limitations of the Property

You should understand the height limitations of vegetation planted within the right-of-way. Flowerbeds, vegetable gardens, lawns, and low shrubbery are permitted within the right-of-way.

Figure 1. A landscape with trees and structures encroaching on the Kinder Morgan right-of-way.



Structures such as sheds, playhouses, concrete patios, pools, hot tubs, decks, ponds, and overhangs are not permitted on the right-of-way. Fences, gates, and other permanent items within the right-of-way do require a formal permit (see page 8 - Auxiliary Structures and Fences).

Proportion

The right proportions give balance to your landscape. To achieve this, look closely at your property and drawing and select a feature, such as an entranceway or deck area. Translate the size of this feature into a grid size and place this grid over your drawing. This will allow you to better determine the location and size of other features.

Design Features

There may be some features on your drawing that should no longer be kept, such as a tree or shed on the right-of-way. There will also be some features that you may wish to add, for example, a vegetable garden, lawn area, or pathway. With the help of the scale drawing and your grid, these features can be laid out in a proportional design. (see Figures 2 & 3, pages 9 & 10)

Maximum Vegetation Heights on Right-of-Way

The mature growth height of vegetation must not exceed 1 metre (3 feet) within 3 metres (10 feet) of the pipeline and 1.8 metres (6 feet) on remaining portions of the right-of-way. (see Figure 4, page 11)

Do not plant tall growing vegetation on the right-of-way. Tree canopies overhanging the right-of-way, which restrict aerial inspection, right-of-way identity, and operational pipeline access,

are considered to be within the right-of-way, even if the trunk is outside the boundary. Large canopy trees should be planted well outside the right-of-way boundary.

Auxiliary Structures and Fences

Auxiliary structures such as sheds, playhouses, concrete patios, pools, hot tubs, decks, ponds, and overhangs are not permitted on the right-of-way. *Call Before You Dig* prior to constructing any auxiliary structures near the right-of-way.

Approval must be obtained from Kinder Morgan prior to constructing fences within the right-of-way. You should also be aware of municipal bylaws, “set backs”, and other restrictions. Fences may cross over the pipeline but should not run parallel, on top of, or along-side the pipeline (call us for location information). Fence posts must not be installed within 1.5 metres (5 feet) of the pipeline. The maximum permitted fence height and the materials are likely regulated by your municipality—check your local bylaws. In any event, please confirm with Kinder Morgan the materials you plan on using and the fence post locations prior to constructing your fence.

Many plants are suitable for growing on fences. All require some maintenance. Select the species carefully as some are too vigorous. Some suitable climbers include: Climbing Roses, Clematis, Virginia Creeper, Honeysuckle, and Pyracantha.

Figure 2. A re-designed landscape with no encroachments on the Kinder Morgan right-of-way.

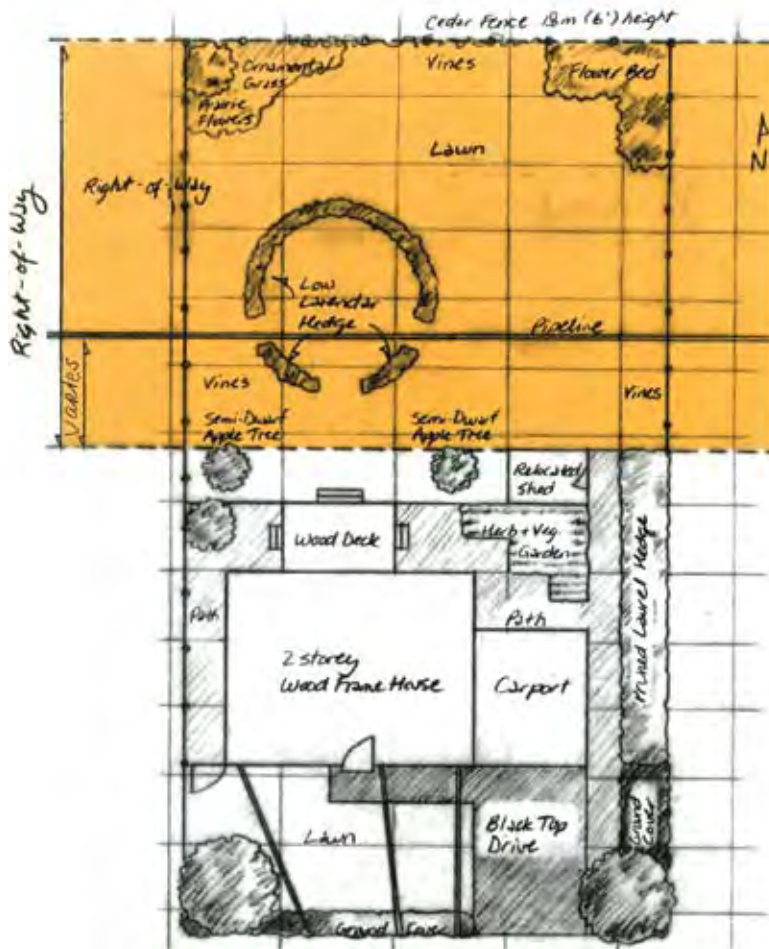


Figure 3

Right-of-Way: Before

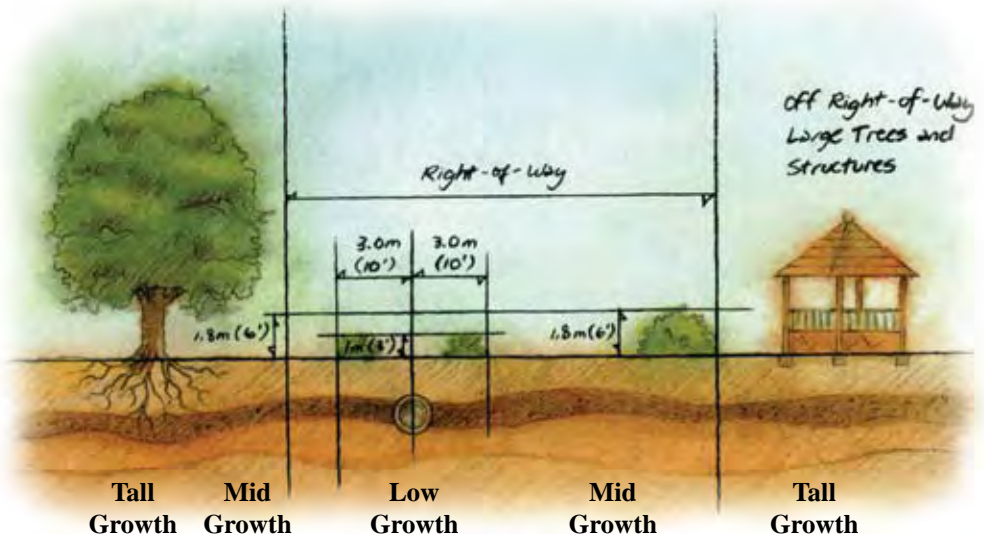


Right-of-Way: After



The mature growth height of vegetation must not exceed 1 metre (3 feet) within 3 metres (10 feet) of the pipeline and 1.8 metres (6 feet) on remaining portions of the right-of-way. (see Figure 4)

Figure 4. Right-of-Way Plant Height Restrictions



Suitable Plants on Right-of-Way

A helpful way of planning the types of vegetation and their locations on your property, while ensuring that the vegetation is compatible with the right-of-way, is to divide the property into Plant Growth Areas.

Low Growth Area

(up to 1 metre or 3 feet high)

- ☛ directly over and within 3 metres (10 feet) of the pipeline

Mid Growth Area

(1 to 1.8 metres or 3 to 6 feet high)

- ☛ within the right-of-way, but not within 3 metres (10 feet) of the pipeline
- ☛ areas below a desirable view

Tall Growth Area

(1.8 metres or 6 feet high and up)

- ☛ outside of and not overhanging the right-of-way
- ☛ areas away from the house where either screening or focal points are desirable

Site Conditions and Plant Characteristics

Climate and soil are key factors determining which plants will thrive on your property. It is important to select plants that suit the conditions of your property. Consider site and plant characteristics including mature size of plant, plant hardiness zone, soil type, site exposure (sun, shade, wind) and plant care (watering, pruning, nutrition).

The following section provides examples of plants suitable for growing on the right-of-way. To be sure of your selection, discuss your requirements with your local nursery or garden centre staff before making a purchase.

Plant Suggestions for the Low Growth Area (up to 1 metre or 3 feet high)

Ground Covers

These are low growing, spreading plants with strong growth habits, good for mass planting and low maintenance.

KINNIKINNICK

Arctostaphylos uva-ursi

A western native with trailing evergreen habit, pink flowers and red berries. Plant in well-drained acid soils in sunny position.

COTONEASTER

Cotoneaster horizontalis

A semi-evergreen with small, dark green leaves, and pink flowers that turn into red berries. Grows in all soils in sun to light shade.

JUNIPER 'BLUE CARPET'

Juniperus horizontalis

A silver blue evergreen that becomes a dense trailing ground cover. Plant in well-drained soils in sun to light shade.

CREEPING MAHONIA

Mahonia repens

A northern native with evergreen leaves that turn bronze in winter. Bright yellow flowers turning to blue berries. Grows in well-drained soils in sun or shade.



**LINGONBERRY
OR FOXBERRY**

Vaccinium vitis-idaea

LINGONBERRY OR FOXBERRY

Vaccinium vitis-idaea

A northern native cultivated for its evergreen leaves, pink flowers, red berries and compact spreading growth. Grows in moist organic soils in shade. With ample water it will take sun.

ARCTIC WILLOW

Salix arctica

A northern native with gray-green deciduous leaves and up-right white catkins. An extremely hardy dwarf shrub with a trailing habit. Will grow in poor soils in full sun.

SALAL

Gaultheria shallon

A northwest native with evergreen, shiny oval leaves, pink flowers and purple berries. Plant in well-drained soils in sun or shade.

WINTERCREEPER

Euonymus fortunei

Evergreen vine with several yellow or green variegated varieties. Thrives in most soils and in sun or shade. Provides good colour accent for garden.

Low Growing Shrubs

POTENTILLA

Potentilla fruticosa

Native to all northern latitudes, especially in mountain areas. Many varieties, from dwarf to larger shrubs with light green deciduous leaves, yellow, pink, and red flowering cultivars. All like well-drained soils in full sun.

NEST SPRUCE

Picea abies 'Nidiformis'

A dense, flat-topped conifer bush. An extremely hardy and wind resistant evergreen with light green new growth. Plant in well-drained soils in full sun.

HEATHERS

'Culluna', 'Cassiope', 'Daboecia' and 'Erica'

Low evergreen flowering shrub, many forms and colours. Ask your local nursery for a variety suited to local conditions. Flowering season depends on variety. Plant in moist, well-drained soils in sun.



HEATHER

FALSEBOX*Pachistima myrsinites*

A northwest native, a compact evergreen with leaves of dark green and small, fragrant white flowers. Plant in well-drained soils in sun or semi-shade.

ROSE DAPHNE*Daphne cneorum*

Slow growing, evergreen shrub with cultivars suitable for sun or light shade. Spring bloomer is one of the most fragrant shrubs available.

SPIREA*Spirea ssp.*

A hardy deciduous shrub with several low growing varieties. Flowers are white to red with a range of spectacular foliage colours. Grows well in most soils in sun to shade. Ask your local nursery for a variety to suit your garden.

**SPIREA***Spirea ssp.*

SILVER SAGEBRUSH*Artemisia cana*

A prairie native with a checkered past as a range weed. This silver evergreen will survive under harshest conditions, giving local colour and contrast to your garden.

SHRUBBY PENSTEMON*Penstemon fruticosus*

Native to the sunny slopes of the Cascades and Rocky Mountains. A low, compact evergreen shrub with a mass of rose-purple tubular flowers in early summer. Plant in well-drained soils in sun.

EVERGREEN AZALEAS*Azalea japonica ssp.*

A spring flowering evergreen in a wide range of colours and forms. Ask for the low growing varieties. Plant in moist organic soils, in full sun to partial shade.

Plant Suggestions for the Mid Growth Area (1 to 1.8 metres or 3 to 6 feet high)

Shrubs

ROSES*Rosa ssp.*

Roses have been cultivated for a multitude of growth habits, flower colour, and hardiness. Ask your local nursery about the 'Explorer Series' developed in Canada, for example: Rosa 'David Thompson'. There are many native rose species that can be used for informal hedges and attracting birds.

DWARF MUGO PINE*Pinus mugo 'Pumilio'*

An extremely hardy compact evergreen shrub. Ideal for adding structure in well-drained, exposed gardens.

FLOWERING CURRENT*Ribes ssp.*

Many native and cultivated varieties, these attractive deciduous shrubs have spectacular spring flowers and summer berries. Ask your local nursery for a variety to suit your conditions. Plant in well-drained soil, sun to shade.

WEIGELA*Weigela florida*

Deciduous shrub with varieties displaying various leaf colours and outstanding floral displays. Plant in well-drained soil and a sunny location.

JAPANESE BARBERRY*Berberis thunbergii*

Upright, arching, rounded shrub with a dense profusion of thorny stems. Several red to yellow leaf varieties provide excellent colour accent within the garden.

TRUE CRANBERRY*Vaccinium macrocarpum*

A northwest native, an evergreen broad-leaf shrub with pink flowers. Plant in moist, well-draining organic soils in partial shade.

**LILY OF THE VALLEY BUSH OR
JAPANESE ANDROMEDA**

Pieris japonica

A broad-leaf evergreen with white spring flowers, the new leaves are rose coloured turning to mixtures of green, gold and silver. Plant in moist well-drained organic soils in sun or partial shade.

RHODODENDRONS

Rhododendron ssp.

There are many choices but care must be taken as some varieties are not hardy and grow very large. The 'Bell' type with oval leaves and bell shaped flowers, such as 'Bow Bells' do well even in full sun. Plant in moist, well-drained organic soils.



RHODODENDRON

Rhododendron ssp.

Hedges

Hedges under 1.8 metres or 6 feet high may cross over onto the right-of-way, but should not run parallel, on top, or along-side the pipeline. Only certain hedging species are permitted to be planted on the Kinder Morgan right-of-way. Call us prior to planting hedging within the right-of-way to approve the hedging species and planting locations.

It is important to choose the right type of hedging material for the boundary of your property. All hedges require nutrients, watering and suitable pruning. If not maintained, most hedging plants will grow out-of-shape. Hedging species include:

COLUMN CEDARS

Thuja occidentalis

Compact trees requiring occasional pruning. Plant in organic soil and keep watered. Emerald Cedar: bright green, dense columnar shape, attractive hedge. Brandon Cedar: bright green, dense columnar shape, excellent screen.

HICK'S YEW

Taxus media

A dense, dark green column hedging tree that takes pruning well. Plant in well-drained soils.

BOXWOOD

Buxus sempervirens

A small-leafed dense shrub, suitable for low to mid size hedges, takes pruning well. Plant in drained soils in sun.

*Note: Large conifers are not suitable for planting as hedges on the right-of-way. (i.e. Leyland Cypress (*Cupressocyparis leylandii*), Western Red Cedar (*Thuja plicata*), and Lawson False Cypress (*Chamaecyparis lawsoniana*)).*

Other Ideas for Colour and Texture Using Perennials and Annuals

Once the shrubs are planted, you may wish to fill out your garden with more colour and texture. Here are some suggestions that might suit your plans.

ORNAMENTAL GRASS

There is a wide variety of clump-forming grasses, both native and introduced, that can add height, texture, and colour to the planted areas of your garden. Some suggestions: Fountain Grass (*Pennisetum ssp.*), Porcupine Grass (*Miscanthus sinensis*), and Pine Grass (*Calamagrostis rubescens*). Grasses planted in combination with Rudbeckia, Daisies, Sunflowers, Asters, Day-Lilies and Sedums make a spectacular, easy-care display.

PRAIRIE, MONTANE, INTERIOR RANGELAND, AND COASTAL MEADOW FLOWERS

The flowers native to your growth area can provide a wide range of colours and textures with very little maintenance. Nursery cultivars derived from the plants of your area are often the most practical solution to challenging conditions. The following are suggestions for different growth areas.

Prairie Areas

Milk Vetches (*Astragalus ssp.*), Sunflowers (*Helianthus ssp.*), Blue Flax (*Linum lewisii*), Prairie Asters (*Aster ssp.*), Cone Flowers (*Ratibiba ssp.*), and Yellow Evening Primrose (*Oenothera biennis*).

Montane Areas

Lupines (*Lupinus ssp.*), Yarrow (*Achillea millefolium*), Harebells (*Campanula ssp.*), and Smooth Blue Beard-tongue (*Penstemon nitidus*).

Interior Rangeland

Mariposa Lily (*Calochortus macrocarpus*), Brown-eyed Susan (*Gaillardia aristata*), Scarlet Gilia (*Gilia aggregata*), Indian Paintbrush (*Castilleja ssp.*), Buckwheat (*Efiogonum ssp.*), and Hawkweed (*Hieracium ssp.*).

Coastal Meadows

Camas (*Camassia ssp.*), Fawn Lilies (*Erythronium ssp.*), Shootingstars (*Dodecatheon ssp.*), Violets (*Viola ssp.*), Red Columbine (*Aquilegia formosa*), and Western Trillium (*Trillium ovatum*).

MORE PLANTS FOR SHADED AREAS

Mosses, Ferns, Sedges, Lilies, Hostas, Ajuga, Saxifrage, Bergenia, Primrose, Mint, Spring bulbs, and annuals such as Impatiens and Begonias.

MORE PLANTS FOR FULL SUN

Sedums, Thyme, Yucca, Pinks, Sunflowers, Clarkia, Salvia, Bearded Iris, and annuals such as Geraniums and Petunias.

Plant Suggestions for the Tall Growth Area (1.8 metres or 6 feet and up)

For areas adjacent to the right-of-way, care should be taken to select shrubs and trees that will not cause problems by outgrowing the space available. For example, tree canopies overhanging the right-of-way which restrict aerial inspection are considered to be within the right-of-way even if the tree trunk is outside the right-of-way boundary:

- avoid planting too close to the right-of-way, house, utility lines, drains, and septic fields;
- when purchasing fruit trees, ask about the root stock (dwarf, semi-dwarf) and range of sizes available. This applies also to ornamental trees such as Dogwoods, Crab Apples, Flowering Cherries, Mountain Ash, Maples, and many others.



Before



After



By keeping the pipeline right-of-way clear of any structures you are helping Kinder Morgan maintain a safe pipeline. Thank you for being our Partners in Pipeline Safety.

Kinder Morgan operates the following systems:

Cochin

Express

Trans Mountain

PRIOR APPROVAL FROM KINDER MORGAN CANADA IS REQUIRED FOR MOST ACTIVITIES WITHIN THE RIGHT-OF-WAY. PLEASE CALL ONE OF THE FOLLOWING FOR FURTHER INFORMATION:

Alberta and Saskatchewan: 1-866-677-0771

British Columbia and Washington state: 1-866-268-3001

Kinder Morgan will mark the location of the pipeline FREE OF CHARGE. For your free locate, please contact the appropriate One Call service as listed below:

Call Before You Dig

Alberta One-Call: 1-800-242-3447

British Columbia One Call: 1-800-474-6886

Sask 1st Call: 1-866-828-4888

Washington State One Call: 1-800-424-5555

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TRANS MOUNTAIN:

Sherwood Park, AB*

Tel: 780-449-5900

Fax: 780-449-5901

Toll Free: 1-866-677-0771

Burnaby, BC

Tel: 604-268-3000

Fax: 604-268-3001

Toll Free: 1-866-268-3001

Kamloops, BC*

Tel: 250-371-4000

Fax: 250-371-4001

Jasper, AB

Tel: 780-852-4233

Fax: 780-852-4035

Bellingham, WA

Tel: 360-398-1541

Fax: 360-398-7432

Hope, BC

Tel: 604-869-5993

Fax: 604-869-2721

COCHIN:

Regina, SK

Tel: 306-949-0555

Fax: 306-543-1855

EXPRESS:

Hardisty, AB

Tel: 780-888-2239

Fax: 780-888-2537

* Denotes regional office