



LANDSCAPING GUIDELINES

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

KINDER MORGAN
CANADA

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About Kinder Morgan

Kinder Morgan operates a number of pipeline systems 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 system transports natural gas liquids from Alberta to Ontario. We are committed to efficient, reliable and safe operation of our pipelines.

A Right-of-Way on Your Property

Most of our pipelines are located within a right-of-way, on land owned by others as set out in right-of-way agreements. A right-of-way agreement (also known as an 'easement') is a legally binding document between Kinder Morgan and a landowner, which grants Kinder Morgan the right to use the land for its pipeline operations. A change in ownership of the property does not alter the agreement. If the property is sold, the rights and responsibilities under the agreement pass on to the next owner unchanged. If you would like a copy of any agreements or easements pertaining to your property, please contact the Land Title office in your area.

Partners in Pipeline Safety

We are committed to keeping our pipelines safe, protecting the environment and ensuring the safety of the communities where we operate. We use a variety of methods to ensure safe operations of our pipeline systems, such as continuous monitoring of the pipeline, corrosion detection and prevention, regular air and ground patrols of the right-of-way and ongoing public awareness programs. Regular training and exercises prepare our staff for emergency response in the unlikely event of an incident. 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 results from work conducted near the pipeline without notifying the pipeline operator.

Permanent pipeline markers located along the right-of-way show only the approximate location of the buried pipelines. Depth and location of pipelines vary within the right-of-way. The pipe seldom runs in a straight line between any two markers and they are not always placed directly over the pipe. Only qualified Kinder Morgan employees can determine the specific location and depth of the pipeline. Please contact us well in advance of commencing any activities which disturb the ground on or near the pipeline right-of-way. Call the local Call Before You Dig number on the back of this booklet and then contact Kinder Morgan's office in your area. 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 a formal approval — a proximity permit — is required before you begin. If the proximity permit is required, our representative will provide you with a contact to send your plans to.

Work cannot begin until the proximity permit is in place, the pipeline has been marked and, where required, a Kinder Morgan representative is on site.

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 includes examples of plants suitable for growing on the right-of-way.

Your Property

For a successful landscape plan, you need to consider your property's elements such as climate, soils, roads, drainage, slopes, driveways, large trees, house position, auxiliary structures and location of any utility right-of-way(s). To enhance your landscape, you may want to add a play area, vegetable garden, plants and flower beds, or other items for shade, privacy and security.

Getting Started

Start with a scale drawing of your property. You may have received a legal plan when you purchased the property; or you can get a copy 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 will help you position the main features of the property.

Features to include:

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

- right-of-way and pipeline location (this information can be obtained by calling a Kinder Morgan office in your area)
- driveways, sheds, fences, clotheslines, swing sets, playhouses and other structures
- utilities servicing the property such as power lines, gas lines, water lines, irrigation system, drains, septic fields, wells
- locations of outside electrical outlets and water taps
- trees, hedges, lawn areas and garden beds

Helpful Tips

1. *Make a few photocopies of your original scale drawing before filling in the details.*
2. *Use a pencil; 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.*

Your Landscape Design

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

Working Within the Limitations of the Property

It is important that you understand the height limitations of vegetation planted within the right-of-way. Items permitted within the right-of-way include flower beds, vegetable gardens, lawns and low shrubbery.

Items that are not permitted on the right-of-way include sheds, playhouses, concrete patios, pools, hot tubs, decks, ponds and overhangs. Fences, gates and other permanent items within the right-of-way require a proximity permit (see page 7 - 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 and place the grid over your drawing. It will help you to better determine the location and size of other features.

Design Features

There may be some features on your drawing, such as a tree or shed on the right-of-way, that should be removed. There may also be features that you would like to add, for example, a vegetable garden, lawn area or pathway. These features can be laid out in a proportional design with the help of the scale drawing and your grid. (see Figures 1 & 2, pages 8 & 9)

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. You may be required to remove vegetation that does not meet these requirements.

Auxiliary Structures

Auxiliary structures such as sheds, playhouses, concrete patios, pools, hot tubs, decks, ponds and overhangs are not permitted on the right-of-way. Contact the One Call number in your area and Kinder Morgan well in advance of constructing any auxiliary structures near the right-of-way.

Fences

If you plan on constructing a fence on your property, you should be aware of the applicable municipal bylaws, 'set backs' and other restrictions. In addition, you will require Kinder Morgan's written approval (in the form of a proximity permit) prior to constructing fences within the right-of-way. Fences may cross over the pipeline, but should not run parallel, on top of, or alongside the pipeline (contact your local Kinder Morgan office for location information). The distance from the centerline of the pipe to the centerline of a post should be at least 2 metres (6.5 feet). Check your local bylaws for the maximum permitted fence height and materials. All materials you plan on using for your fence, the fence post locations and all changes to the plans provided to Kinder Morgan must be approved in writing by Kinder Morgan prior to construction.

You can create original landscaping features by adorning your fence with plants. Select the plants carefully as some are too vigorous. Some suitable climbers include Climbing Roses, Clematis, Virginia Creeper, Honeysuckle and Pyracantha.

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

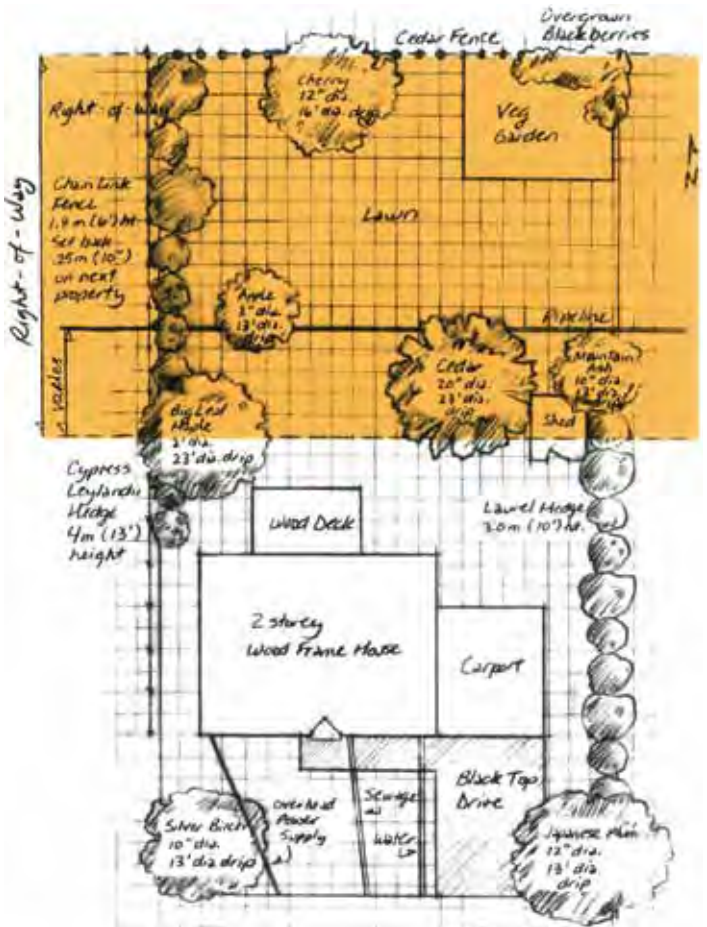




Figure 2. A re-designed landscape with no encroachments on the Kinder Morgan right-of-way.

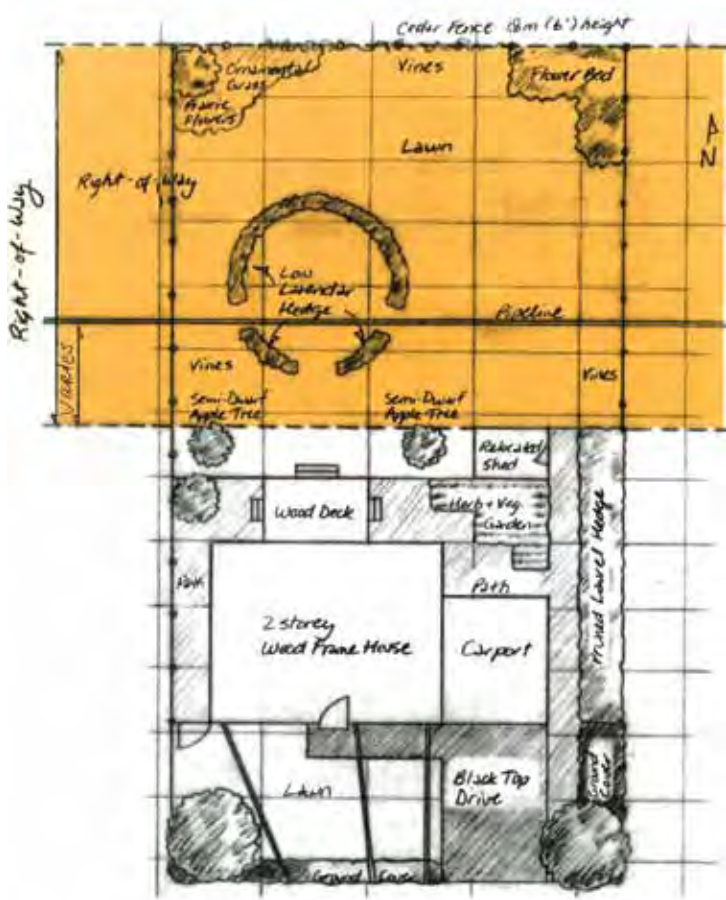


Figure 3

Right-of -Way: Before



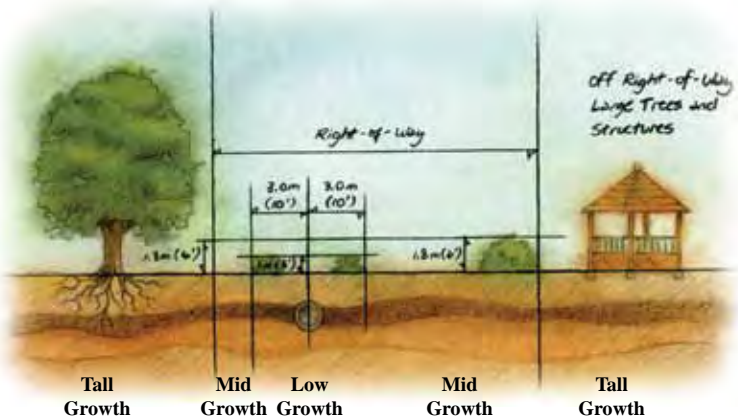
Right-of -Way: After



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

Dividing your property into plant growth areas will help you plan the types of vegetation and their location on your property, while ensuring vegetation compatibility with the right-of-way. (see Figure 4 on page 11)

Low Growth Area

(plants up to 1 metre or 3 feet high)

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

Mid Growth Area

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

- right-of-way areas not within 3 metres (10 feet) of the pipeline
- areas where tall vegetation will screen a desirable view

Tall Growth Area

(plants 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.

KINNIKINICK

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, pink flowers turning to 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 plants. 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 varieties 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 *Pieris japonica*
JAPANESE ANDROMEDA

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 alongside the pipeline. Only certain hedging species are permitted to be planted on the Kinder Morgan right-of-way. You must call Kinder Morgan prior to planting hedging within the right-of-way for approval of the hedging species and planting locations. You may be required to remove any unapproved and improper vegetation.

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

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Note: Large evergreens 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)).
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Other Ideas for Colour and Texture Using Perennials and Annuals

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

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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 varieties 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, it is important 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;
- as you may be required to remove improper vegetation that extends over the rights-of-way, please contact Kinder Morgan with any questions before planting.



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.



Prior approval from Kinder Morgan is required for most activities within the right-of-way. For further information, please call **1 (888) 767-0304**

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 three days in advance:

Call Before You Dig

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

BC One Call: 1 (800) 474-6886

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

Washington State One Call: 811

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