PIPELINE DAMAGE PREVENTION

WHAT IS A RIGHT-OF-WAY (ROW)?

A Right-of-Way (ROW) is a strip of land that contains one or more buried pipelines. ROWs vary in width and may cross farmland, forests, rivers, or developed areas. Pipeline marker signs show the approximate location of pipelines.

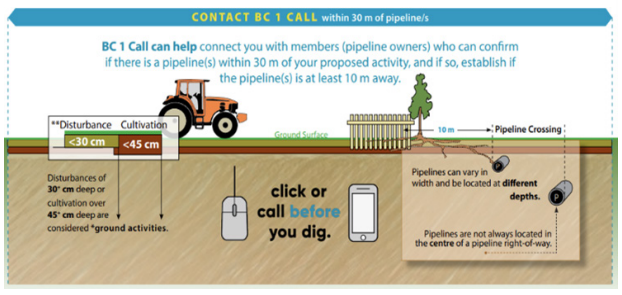
Depth and exact location can vary.

In addition to the ROW, pipeline regulators have established a 30m (100') area, measured on either side of the pipeline, where ground disturbance activities to a depth of more than 30cm (12") require permission from NRM.

ACTIVITIES NOT PERMITTED ON A ROW WITHOUT WRITTEN PERMISSION FROM NRM:

- Operating heavy equipment (unless approved agricultural activity)
- Storing vehicles, trailers, boats, or materials
- Building structures (homes, sheds, fences, pools, etc.)
- Burning brush piles or campfires
- Using explosives
- Ground disturbance deeper than 30 cm (12")
- Agricultural activities deeper than 45 cm (18")
- Digging, trenching, drilling, augering
- Grading, stripping, plowing
- Tree planting or removal, stump removal
- Installing fence posts, piles or underground utilities
- Constructing roads, driveways, or parking areas

THIS ZONE EXISTS TO PROTECT YOU, THE PIPELINE, AND THE ENVIRONMENT



Along the ROW, pipeline marker signs are placed at varying intervals like at road, railway and fence crossing locations. They only show approximate locations of buried pipeline(s) - the actual location and depth vary within the ROW. Pipeline marker signs provide the company name, emergency contact number and product information.

WORKING SAFELY NEAR PIPELINES

Before doing **any ground disturbance**, always Call or Click Before you Dig

Click Before You Dig: clickbeforeyoudig.com

Alberta One-Call: 1-800-242-3447 **BC 1 Call:** 1-800-474-6886

Before doing **any work within an NRM ROW** or conducting **ground disturbance within the 30m (100') of an NRM pipeline**, landowners are required to:

- Call or CLICK before you dig.
- Obtain written consent from NRM: NRM Crossing Agreements: 1-866-262-3654 or emailing crossings@nrm.ca
- Wait for the pipeline(s) to be located – there is no charge for this service
- Follow instructions of the NRM representative
- Immediately notify NRM if you contact the pipe or its coating by calling the NRM 24 Hour Emergency Number: **1-844-667-8477**

For more information regarding important Damage Prevention Regulations

- **BC Energy Regulator** - www.bc-er.ca/ what-we-regulate/oil-gas/pipelines/
- **Alberta Energy Regulator** - www.aer.ca/providing-information/by-topic/pipelines/working-around-oil-and-gas-pipelines
- **Canada Energy Regulator** - www.cer-rec.gc.ca/en/safety-environment/damage-prevention/

POTENTIAL HAZARDS

NRM pipelines and facilities transport and process natural gas and related products. While an uncontrolled release is highly unlikely, it is important to understand potential hazards.

POTENTIALLY HAZARDOUS SUBSTANCES MAY INCLUDE:

Hydrogen Sulphide (H_2S) – is a naturally occurring gas found in geological formations.

- At low concentrations has a rotten egg smell, causes eye and throat irritation, coughing, and shortness of breath
- Toxic, unconsciousness, and potentially fatal at high concentrations
- May be heavier or lighter than air depending on conditions

Sulphur Dioxide (SO_2) – SIs a by-product of the combustion of H_2S and is produced if H_2S ignites

- Colourless, water soluble, suffocating gas
- Respiratory issues including wheezing, chest tightness, shortness of breath
- Skin, throat & eye damage
- May be fatal at high exposure

Natural Gas Liquids (NGL) - Colourless, clear liquid comprised of naturally occurring elements found in natural gas

- These components can include: Ethane, propane, butane, condensate, pentane-plus
- Respiratory irritation, frostbite & skin/eye damage, cardiac effects
- NGL's are separated from natural gas during processing
- After separation, they are kept in liquid form for: Storage, shipping, consumption
- Butane and propane can explode if heated

Condensate - It is a mixture of hydrocarbons, it is separated as a liquid from natural gas during processing.

- Condensate vapours are toxic if inhaled
- The vapours are highly flammable
- Vapours are heavier than air
- They may accumulate in low-lying areas

WARNING SIGNS OF A RELEASE

YOU MIGHT SEE:

- Dead or dying vegetation
- Water bubbling or blowing into the air
- Dirt blowing into the air
- Frost build up on the ground
- Fire coming from the ground
- A heat wave above a storage vessel
- Flames coming from a storage vessel
- A white vapour cloud

YOU MIGHT HEAR

- Aggressive hissing or loud whistling sound, similar to a jet engine

YOU MIGHT SMELL:

- Rotten eggs
- A pungent odour similar to burning a match
- Nothing. **Do not rely on smell alone.**

WHAT YOU SHOULD DO

If you suspect a release:

- Shelter in place. Close all windows and doors.
- Turn down furnace or turn off air conditioning.
- Do NOT use ignition sources (lighters, stoves, etc.)
- **Call 911.**
- Call NRM's 24-hour emergency number: **1-844-667-8477**
- Monitor local radio/TV. Keep phone lines clear.
- Wait for instructions.

WHAT WE WILL DO

If necessary, we will activate our ERP for the area, we have comprehensive public protection plans and procedures for:

- Assessing emergency situations
- Mobilizing response personnel
- Establishing communication and coordination

We will contact residents with updates, instructions, and details about the situation. If we cannot reach you, we will visit your home to confirm your safety and provide information. We will also come to your residence if you need evacuation or transportation support. Roadblocks will be set up around the EPZ to keep traffic in and out of the hazard area.

NORTHRIVER MIDSTREAM

COMMUNITY PREPAREDNESS:
SAFETY & EMERGENCY INFORMATION

NorthRiver Midstream (NRM) is a Canadian owned natural gas gathering and processing company that operates assets within Northeast British Columbia and Northwest Alberta.

You have been identified as a stakeholder within the emergency planning zone (EPZ) of NRM pipelines, facilities and/or wells. Your safety is our priority. As part of the public safety process, we are contacting you to verify emergency contact information and ensure your awareness of:

- Potentials Hazards
- How to prevent pipeline damage
- How to recognize warning signs
- What to do in an emergency
- How NRM will respond

This brochure includes a detailed map of our local operations, along with evacuation routes and reception centers.

CONTACT INFORMATION

NRM 24 Hour Emergency Number: 1-844-667-8477

NRM Crossing Agreements: 1-866-262-3654

BC 1 Call: 1-800-474-6886

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

PUBLIC PROTECTION MEASURES

In the unlikely event of an uncontrolled release, NRM may use any of the following public protection measures to mitigate the impact of hazardous substances on members of the public.

Shelter-In-Place - Remaining indoors for short-term protection from exposure to toxic gas releases. Steps to follow if "shelter-in-place" procedures are implemented:

- Gather all residents inside and close all window and doors
- Turn down the furnace and turn off appliances or equipment that either blow air outside (e.g. bathroom/ kitchen exhaust fans) or suck in outdoor air (e.g. air conditioning systems)
- Do not use any forms of ignition (e.g. lighters, gas/wood stoves)
- Leave inside doors open and wait in an upstairs interior room
- Keep your phone lines clear, monitor local radio/ television stations, and wait for further direction
- Do not leave the house or start any vehicles until you have been advised that it is safe to do so

Evacuation – Organized, phased, and supervised withdrawal of members of the public from dangerous or potentially dangerous areas to safe areas. Steps to follow if "evacuation" procedures are implemented:

- Gather all residents and pack required medications
- Lock all windows and doors
- Turn down thermostat and shut off air exchange fans
- Drive safely on the route provided and proceed directly to a reception centre to check-in
- Wait for further instructions

Ignition – In conjunction with sheltering or evacuation, the release may be ignited at the source to reduce exposure to the hazard. The combustion of H2S results in the produced SO2 being carried high into the atmosphere allowing additional time for the public to safely evacuate.