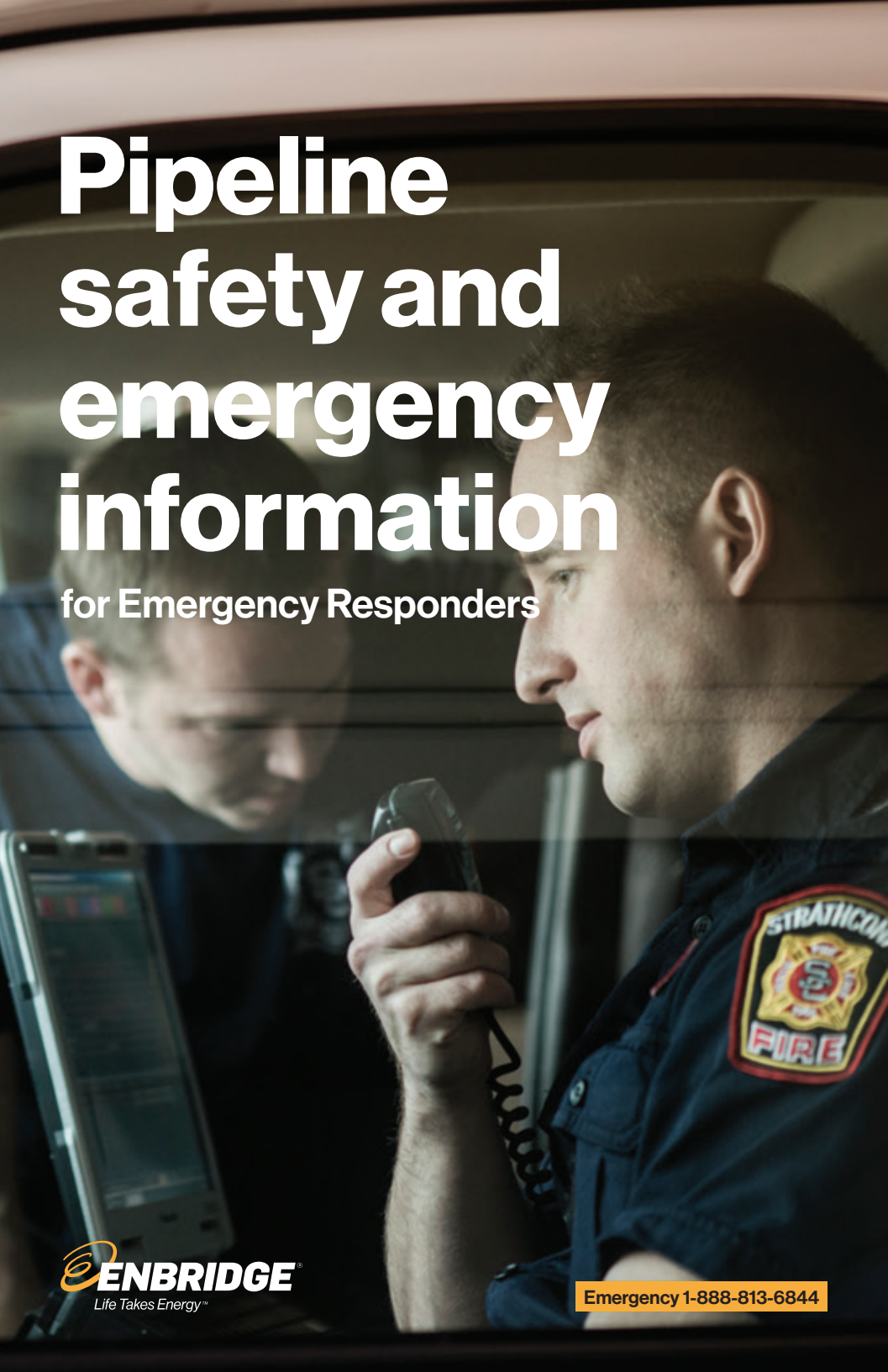
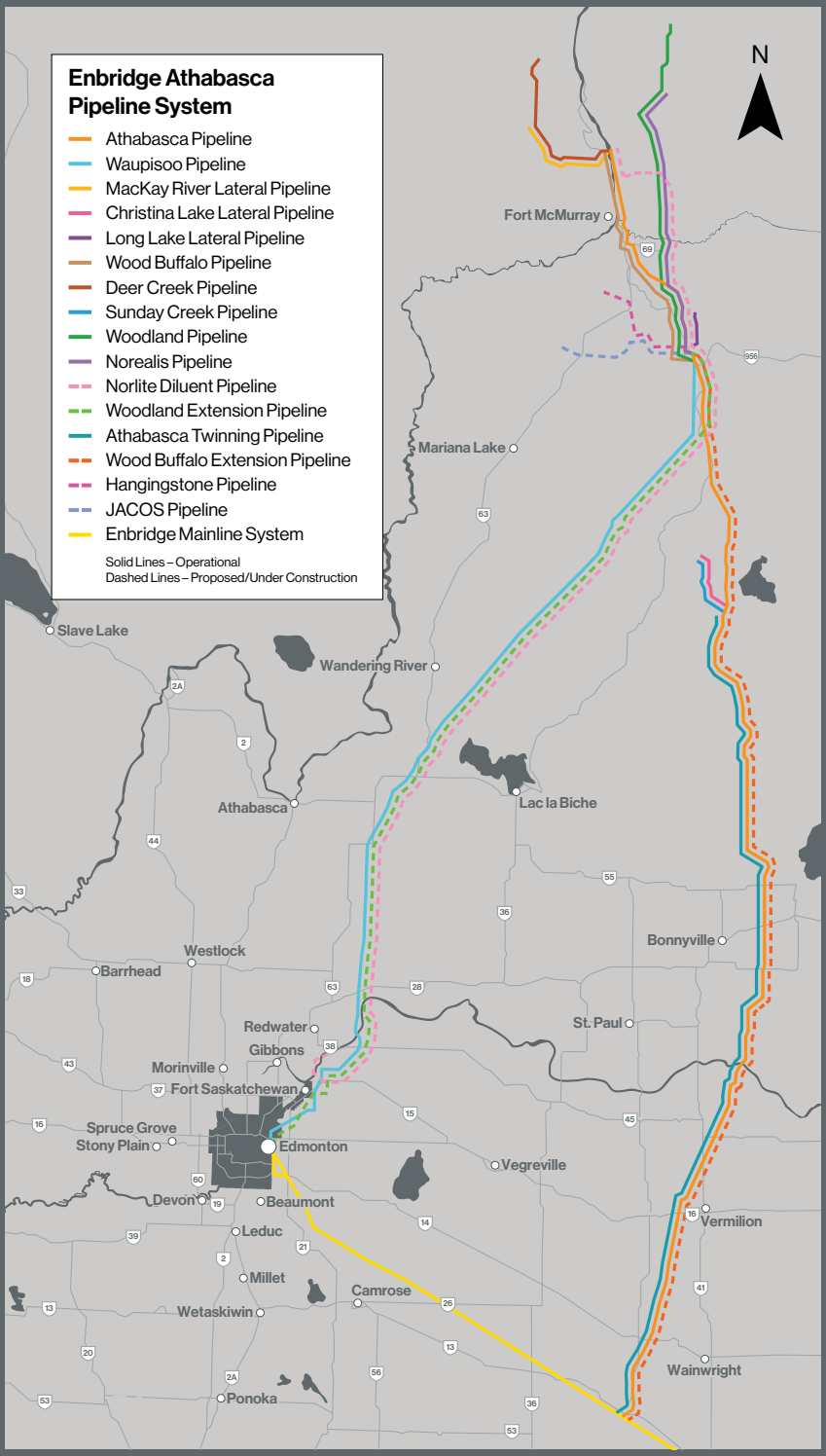
Pipeline safety and emergency information

for Emergency Responders



ENBRIDGE®
Life Takes Energy™

Emergency 1-888-813-6844


Enbridge Athabasca Pipeline System
Athabasca Pipeline
Waupisoo Pipeline
MacKay River Lateral Pipeline
Christina Lake Lateral Pipeline
Long Lake Lateral Pipeline
Wood Buffalo Pipeline
Deer Creek Pipeline
Sunday Creek Pipeline
Woodland Pipeline
Norealis Pipeline
Norlite Diluent Pipeline
Woodland Extension Pipeline
Athabasca Twinning Pipeline
Wood Buffalo Extension Pipeline
Hangingstone Pipeline
JACOS Pipeline
Enbridge Mainline System
Solid Lines – Operational
Dashed Lines – Proposed/Under Construction
N
Fort McMurray
Mariana Lake
Slave Lake
Wandering River
Athabasca
Lac la Biche
Bonnyville
Westlock
Barrhead
Redwater
Gibbons
St. Paul
Morinville
Fort Saskatchewan
Spruce Grove
Stony Plain
Edmonton
Vegreville
Devon
Beaumont
Vermilion
Leduc
Millet
Camrose
Wetaskiwin
Wainwright
Ponoka

At Enbridge, we exist to help fuel the quality of life for millions of people across North America. Whether it's oil, gas or renewable power, our North American energy network connects millions of people with the energy that fuels everything they do, every day.

We Transport Energy

Before energy can power people's lives, it has to reach them. Enbridge answers that need with a sophisticated transportation network for the oil, liquids and natural gas that fuel your family vacations, cook your meals and warm your home. We also have a growing ability to move the electricity that keeps you connected. And in all we do, we take pride in an outstanding record of safety.

We Distribute Energy

Enbridge owns and operates Canada's largest natural gas distribution company. For more than 165 years, we have provided safe, reliable service in Ontario, Quebec, New Brunswick and New York State. And we'll continue to be there, cooling your summers and taking the chill out of your winters.

We Generate Energy

We never stop thinking about the future of energy and sustainability. That's why we're one of the largest renewable energy companies in Canada. Our green energy assets in Canada and the U.S. produce enough power to supply more than half a million homes with the electricity they need to do laundry or surf the web. We're also investing in geothermal power, using heat from the earth to generate electricity with zero emissions. The bottom line? Enbridge is an energy company, and we're committed to connecting you with the energy you will need to fuel your life in the future.

Enbridge is the largest operator of regional crude oil pipelines serving the oil sands region of Northern Alberta, with multiple lines often existing within the same right-of-way (ROW). Enbridge currently owns and operates the 30-inch (762 millimetre) diameter Athabasca Pipeline which travels from our Athabasca Terminal north of Fort McMurray to our terminal in Hardisty, Alberta. Enbridge owns and operates a 12-inch (324 millimetre) lateral pipeline from the Mackay River facility to the Athabasca Terminal and two 8-inch (219 millimetre) pipelines from Christina Lake to our Kirby Lake Terminal.

The Waupisoo Pipeline is 30-inches (762 millimetres) in diameter and approximately 380 kilometres long. The pipeline system transports oil sands crude bitumen from our Cheecham Terminal to Edmonton via Stonefell Terminal near Bruderheim, Alberta.

Enbridge's Woodland Pipeline is a 36-inch (914 millimetre), 140 kilometre system that connects the Kearl Oil Sands Project to Enbridge's Cheecham Terminal. The line allows further downstream connection to the existing pipeline transportation system.

Operational since 2012, the Wood Buffalo Pipeline is a 30-inch (762 millimetre) pipe that runs approximately 95 kilometres. The system parallels Enbridge's Athabasca Pipeline, providing incremental capacity between Enbridge's Athabasca Terminal and its Cheecham Terminal.

Enbridge also operates the Deer Creek Lateral Pipeline, which is owned by Total, from the Total-Joselyn station to our Athabasca Terminal. There is an 8-inch (219 millimetre) and 12-inch (324 millimetre) pipe that runs approximately 63 kilometres in length.

A safe operator

Enbridge takes its responsibility for safe pipeline operation very seriously. Being responsible for pipeline safety, however, does not mean we're in it alone. We work year-round to ensure safe, reliable operations, and we regularly communicate important information to local governments, emergency services, utilities, contractors, landowners, tenants, regulators and neighbours.

While our pipelines are buried out of sight beneath the ground in the ROW, we never lose sight of the bigger picture of our potential impact on the air, water and land around us, and our responsibility to preserve all elements of our environment.

In fact, our activities—everything from pipeline design, construction, testing, maintenance, operation and safety practices—are subject to government regulations, which we meet or exceed.

We constantly monitor all of our activities and take every step to make sure we protect the environment. Our control centres constantly monitor and control our network of pipelines, keeping operators continuously apprised of conditions and trends along the ROW. Enbridge also has emergency response teams and equipment situated along the ROW in case of an emergency.

Pipeline right-of-way (ROW)

A ROW is a strip of land of varying widths that contains one or more pipelines.

Safety and the pipeline ROW

The ROW:

- Allows our workers access for inspection, maintenance, testing or emergencies
- Identifies an area that restricts certain activities to protect public safety

The ROW exists in many kinds of ecosystems, from river crossings and cultivated fields to sub-Arctic tundra and urban areas. Because of this, there is no distinct look to the ROW.

While permanent pipeline markers are located at roads, railways, water courses and varying intervals along the ROW, these indicate only the approximate location of the buried pipelines. The depth and location of the pipelines vary within the ROW. Markers indicate the general position of the buried pipeline, but should never be used as a reference for the exact location.

There may be other pipelines in the area. As emergency responders, you should familiarize yourself with all pipeline systems in the area.

All pipeline markers provide a telephone number for reporting pipeline emergencies (**1-888-813-6844**), and indicate the product being transported in that pipeline.


WARNING
HIGH PRESSURE
OIL PIPELINE
ENBRIDGE
Call Before You Dig: 1-800-242-3447
Emergency Toll Free: 1-888-813-6844
Enbridge Pipelines (Athabasca) Inc.

Enbridge owns and operates many petroleum storage facilities along its crude oil pipeline systems in Canada. A storage facility can be recognized by the large tanks that are used to hold crude oil or petroleum products.

Crude Oil Storage

Enbridge storage tanks are used to safely store petroleum and to help ensure a sufficient supply of crude oil moves through our pipeline systems to refineries and other market destinations.

Enbridge takes its responsibility for safety very seriously. We have strict procedures in place at each of our petroleum storage facilities, including restricted entry and special training requirements for anyone who works on or near our storage tanks, station pipelines and metering facilities, and terminal valves.

We maintain and routinely practice emergency response plans for each of our storage facilities, which enables us to work promptly and effectively with local emergency responders. In the unlikely event of a storage facility incident, Enbridge will conduct a swift, safe and thorough repair in close cooperation with regulatory authorities and will responsibly mitigate impacts to the environment or property.

Given our thorough maintenance, testing, training, monitoring and safety programs, a leak or incident is unlikely. However, it is prudent for you to know how to recognize a storage facility leak or other incident:

- Pool of odorous liquid on the ground inside or nearby the facility
- Discoloured sheen on water surfaces inside or nearby the facility
- Oily sheen on water surfaces inside or nearby the facility
- Roaring, blowing or hissing sound inside or nearby the facility
- Fire, smoke or oil on or near a storage tank, inside or nearby the facility
- Unusually strong petroleum, skunk or rotten egg odour inside or nearby the facility

Note: During normal operations, a slight odour may be noticed when oil volumes are being received and delivered simultaneously.

It is important that you do not create an ignition source if you suspect anything abnormal along a pipeline route or at a petroleum storage facility. Potential ignition sources include: smoking materials or open flames, cell phones, pagers, flashlights, keyless entry remotes and motor vehicles.

The Enbridge pipeline system doesn't just run through communities—it connects them. Enbridge employees live near you and work with you every day, and millions of people depend on the liquid hydrocarbons we transport.

Keeping the pipelines safe for everyone is our most important job. Our pipelines meet or exceed high government standards, and over half a century of experience has proven that pipeline transport is the single safest method of oil and petroleum transport available.

Stakeholders living and working in the vicinity of our pipelines can be assured that Enbridge is a respected and reliable operator with a strong commitment to safe construction, operations and maintenance of our pipeline system. Our personnel have helped us become a recognized leader in researching and implementing leak detection and preventative testing technologies.

Enbridge values the cooperation and safety awareness of thousands of stakeholders who live and work along the pipeline ROW, including local police, fire, environmental and other emergency services.

While rare, pipeline incidents can occur. If potential trouble occurs anywhere on the line, protecting the public is our first priority.

Although our field response teams are immediately dispatched, in some cases local emergency response organizations receive the initial notification. Preparedness and quick response help to minimize the threat to the public and damage to the environment.

We value the expertise you possess as emergency responders. We're committed to strengthening our partnerships through meetings, training exercises, personal contact and information updates such as this brochure. We always appreciate hearing from you and encourage you to call at your convenience whenever you have questions or concerns.

Preparedness means developing integrated response plans based on open communication and teamwork. Enbridge strives to ensure that local emergency services have the information they require to respond appropriately. We hold regular emergency response training and exercises in select locations throughout the year to keep employees' skills fresh, and to ensure our coordination with local emergency responders is strong and effective.

Emergency procedures

As emergency responders, you are trained to deal with a wide variety of potentially dangerous conditions. In the case of a pipeline leak or rupture, your early presence on the scene can help us determine what problem has occurred, what damage or disruption is either present or preventable, and how we can work together to manage the situation.

Maintaining open communication and a close working relationship with local authorities and emergency responders is essential for us in safeguarding the communities along our pipeline routes.

It is important to remember that the liquid hydrocarbons carried on Enbridge's system are flammable, potentially hazardous, and explosive under certain conditions.

The general characteristics of the products carried on the system are similar in terms of flammability and general composition.

Safety Data Sheets (SDS) contain information about regulatory classification, health hazards, toxicity, first aid and fire information for the products in the pipeline.

Enbridge transports close to 100 unique commodity types. SDS information regarding products is available at various locations across our system.

In the event there is an incident on our pipeline, Enbridge representatives will provide emergency responders with the SDS for the product in the pipeline.

Characteristics of Liquid Hydrocarbons

Product	Appearance	Odour	Special Behaviour	Volatility
Crude Oil	Black liquid	Similar to gasoline or diesel fuel	Flows with the land profile Flow depends on temperature and viscosity, can be thick and slow moving, or light and able to move quickly	Flammable and has explosive properties, especially when first released (light ends vapourize)
Synthetic Crude, Condensate or Refined Products	Light brown or yellow liquid	Similar to gasoline or diesel fuel*	Flows with the land profile	Extremely flammable and explosive

* Some crudes and condensates contain hydrogen sulfides (H2S), which have a rotten egg smell and are toxic in high concentrations.

Enbridge local emergency response teams are generally summoned to a pipeline incident in one of several ways:

- The Enbridge 24-hour control centre detects or is notified of and confirms a potential problem and, depending on the situation, notifies emergency responders directly.
- A landowner, tenant or member of the public suspects a potential problem and phones the toll-free emergency response number.
- An Enbridge representative is already on the scene and contacts emergency responders for assistance (such as monitoring access, controlling traffic, fighting fires or evacuating residents).

Preparedness means developing integrated response plans based on open communication and teamwork.

Dealing with calls

The guidelines below may augment your standard procedure for handling emergency calls that relate to pipeline emergencies. This information is also provided to landowners.

1. Advise the caller that Enbridge emergency response crews will be contacted immediately and will arrive at the site as soon as possible.
2. If the caller reports a strong hydrocarbon smell, advise the following at your discretion:
   - If you can do so safely, turn off any mechanized equipment. Put out cigarettes or other lit materials.
   - Don't start your car or any other equipment that could be a potential ignition source.
   - Leave the area quickly. Move to a safe position upwind of the potential leak site.
   - Avoid contact with escaping liquids or gases.
3. If an evacuation centre has been designated, advise the caller of the location.
4. Contact Enbridge using our toll-free, 24-hour emergency number **1-888-813-6844**. This number is also located on all pipeline marker signs along the ROW.

What you shouldn't do

1.

Never attempt to operate pipeline valves or extinguish any pipeline fires. Doing so may prolong or worsen an incident—or even cause another leak in the pipeline. Enbridge control centre personnel can shut down some valves automatically, while trained Enbridge personnel are required to manually close other valves.

2.

If a fire occurs at an Enbridge storage facility, unless lives are at risk, we ask that fire crews stay outside of the station property until Enbridge representatives arrive. The danger from electrical sources is great, particularly if an electrical cubicle building or substation is involved.

3.

Storage facilities should not be entered without permission unless there is an immediate risk to public safety.

Key actions for emergency responders

1.

Immediately phone the Enbridge emergency toll-free number. Our monitoring system may have already alerted us to the disruption, but please call to be sure.

Toll-Free
Emergency Number
1-888-813-6844

2.

Once on-site, meet with Enbridge representatives and establish safe procedures for securing the area or other emergency measures.

3.

If the Enbridge representative has not yet arrived, there are some important steps emergency responders can take:

- Shut off all engine and ignition sources in the vicinity of the leak
- Secure the site and evacuate nearby residents or onlookers if required
- Monitor for hazardous atmospheres
- Control and redirect traffic
- Ensure Enbridge representatives have immediate access to the site
- Implement your local emergency plan

Planning ahead

Planning ahead allows us to work together as an effective team if an emergency occurs. Enbridge's visits with local authorities and emergency response organizations are an opportunity to discuss a coordinated approach to handling pipeline incidents.

Immediate response

In the event of an incident, our emergency plan will immediately go into effect. Enbridge will work with local emergency responders to identify and solve the problem. Personnel from Enbridge's control centre have the ability to quickly shut down and isolate sections of the pipeline. Local emergency responders will be notified. They may secure the area and move residents to a safe location depending on the situation. Trained emergency response crews will arrive to deal with the release and repair the damaged pipe or facility.

A coordinated approach

When an incident occurs, Enbridge emergency response teams are responsible for ensuring the problem is dealt with quickly and efficiently. Enbridge personnel will ensure the safety of the responders and public, protect the environment from further harm and conduct all necessary follow-up steps to ensure the community is returned to its original condition.

Enbridge uses the Incident Command System (ICS) for managing a response to an emergency.

Its organizational structure is designed to coordinate with other responding agencies.

Elements of response management enabled through use of the ICS:

- Incident Action Plan—define objectives, strategies, resources that contribute to public safety, responder safety and the environment
- Site safety and security
- Communications plan
- Containment and recovery
- Clean-up and waste management
- Public information management

In addition to handling traffic control and evacuation, securing the site, and firefighting, local responders become aware of Enbridge's response via their role in the ICS in order to effectively, safely and efficiently conduct those roles for which they are responsible.

Basic Incident Command System Structure

Command	Operations	Planning	Logistics	Finance
Overall management and determination of priorities and objectives	Reduce or eliminate the hazard, implement containment and control measures for the safety of responders, the public and the environment, and restore normal operations	Collection, evaluation and dissemination of tactical information, development of an Incident Action Plan (IAP), and coordination of resource identification	Supplying support needs	All financial matters

The ICS is a flexible, scalable tool that provides a common framework, uses common terminology and has standardized job aids.

These attributes help ensure that the incident swiftly transitions from the reactive to proactive phase by setting up a chain of command, establishing a set of priorities and strategies, and coordinating resources to address those priorities, often with our emergency response partners. By using the ICS, trained personnel from throughout the organization can be deployed to support an incident.

Open this page to view the ICS chart.

ENBRIDGE

ICS 207 Organiz

Incident Name:	Operational Period:

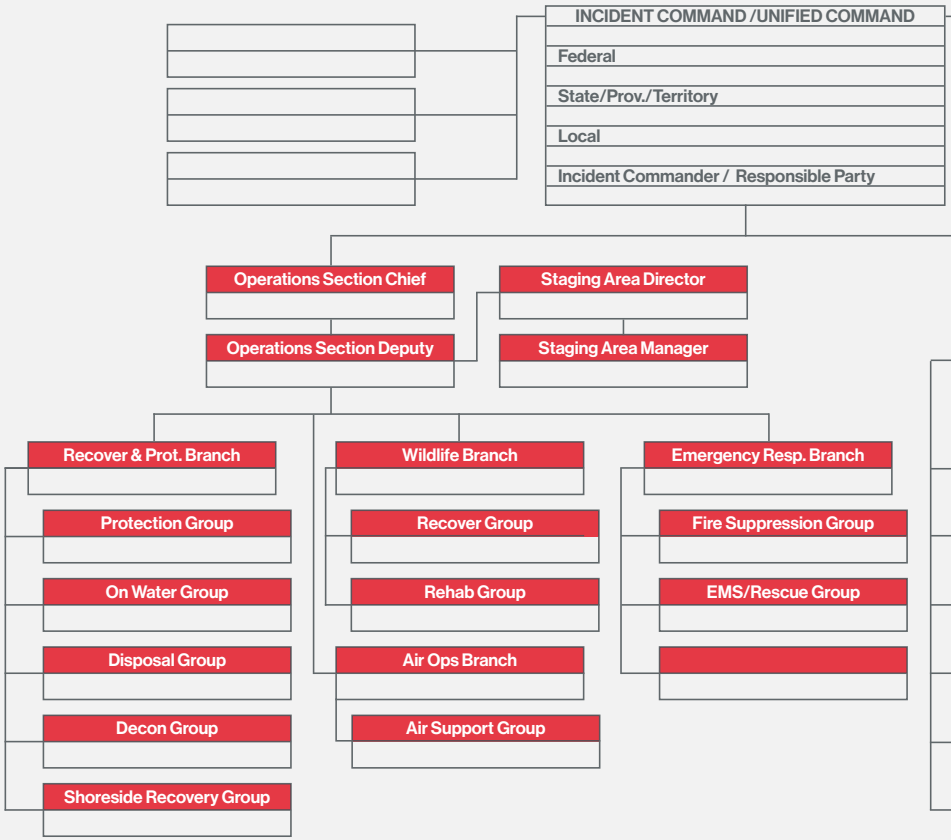
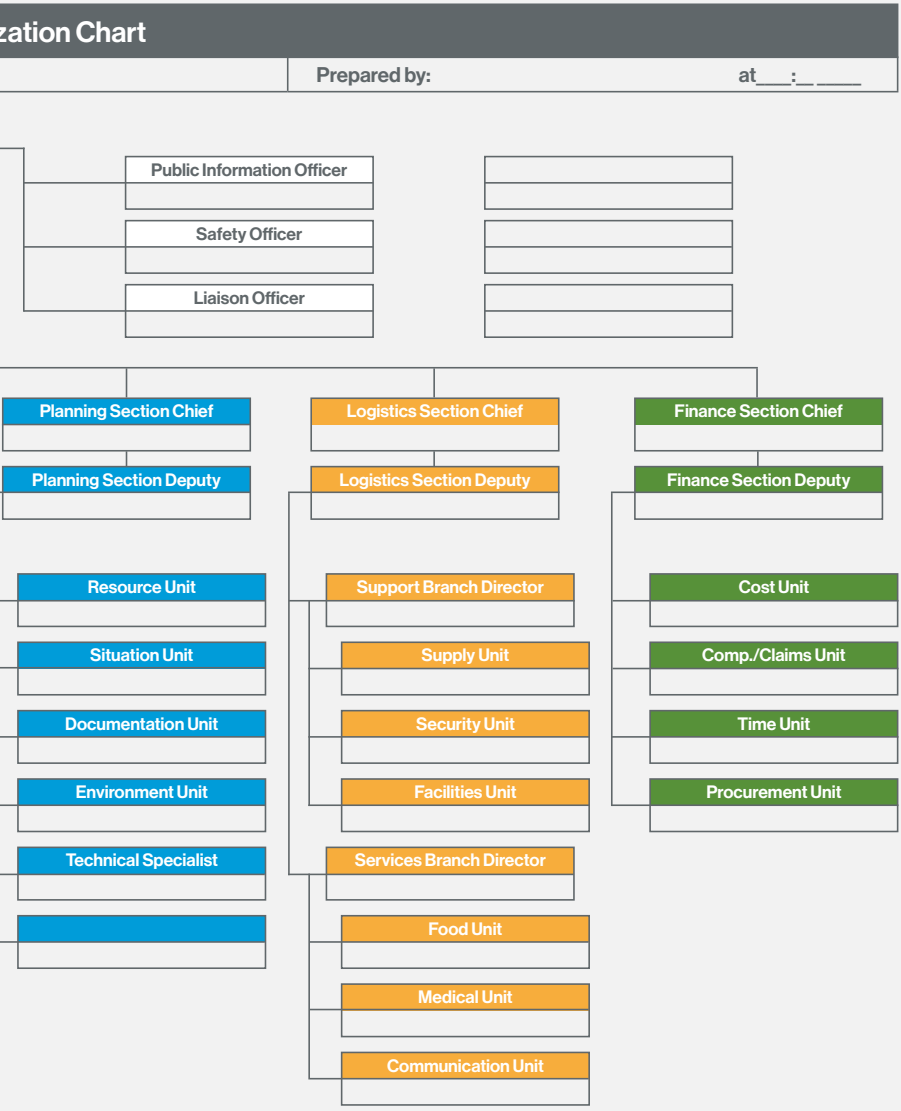


Illustration shows suggested ICS positions. ICS is scalable; the positions are filled according to the needs of the in


zation Chart
Prepared by:
at___:_ ____
Public Information Officer
Safety Officer
Liaison Officer
Planning Section Chief
Planning Section Deputy
Logistics Section Chief
Logistics Section Deputy
Finance Section Chief
Finance Section Deputy
Resource Unit
Situation Unit
Documentation Unit
Environment Unit
Technical Specialist
Support Branch Director
Supply Unit
Security Unit
Facilities Unit
Services Branch Director
Food Unit
Medical Unit
Communication Unit
Cost Unit
Comp./Claims Unit
Time Unit
Procurement Unit
cident. If positions are not filled, the responsibility is assumed by the Section Chief or Incident Commander.

Emergency response training exercises are a key part of our emergency response preparedness. Enbridge response personnel receive regular training, both classroom and field demonstration. Frequent exercise participation by all emergency response staff is critical to maintaining response readiness. If you would like to participate in our next exercise in your area, please contact your local Enbridge representative by dialing one of the phone numbers listed on the last page of this brochure.

Types of training for Enbridge personnel

- Pipeline operating practices and procedures (including emergency response)
- Implementation and activation of Emergency Response Plans
- Safety procedures
- Selection and use of personal protective equipment
- Material hazards and risk assessment techniques
- Basic first aid skills
- Initiating notifications
- ICS organization during an emergency
- Media communications
- Tactical training for containment and recovery, including booms and skimmers

Types of exercises

- Workshops
- Tabletop Exercises
- Drills
- Functional Exercises and Equipment Deployments
- Full-scale Exercises

Media communications

A coordinated approach to media communications allows accurate, important information to be provided to the public with minimum confusion or delay. Enbridge has trained and qualified spokespeople to coordinate public statements and respond to media inquiries. Our spokespeople can be reached at **1-888-992-0997**.

Online emergency responder education program

Enbridge has launched an online Emergency Responder Education Program and 9-1-1 Dispatch Module, which will give you unlimited access to free online training on safely and effectively responding to pipeline emergencies. You can complete it all at once or at your own pace.

Through the course, participants will learn:

- The basics of gas and liquids pipeline operations
- The potential hazards associated with the products transported by Enbridge
- Pipeline emergency response tactics
- How to apply the information to real-life situations

The training is available at **mypipelinetraining.com**. It can be completed in one session or in multiple sessions. A wallet card and certificate are provided upon completion of the program.

Exercise participation

If you would like to participate in an emergency response exercise, please call the number for your area listed on the last page of this brochure and ask to speak to an emergency response coordinator.

Prevention is the key. While Enbridge has developed effective emergency response procedures, we continue to focus on all of the tools, technologies and strategies that ensure safe and reliable operations.

Maintaining pipeline integrity

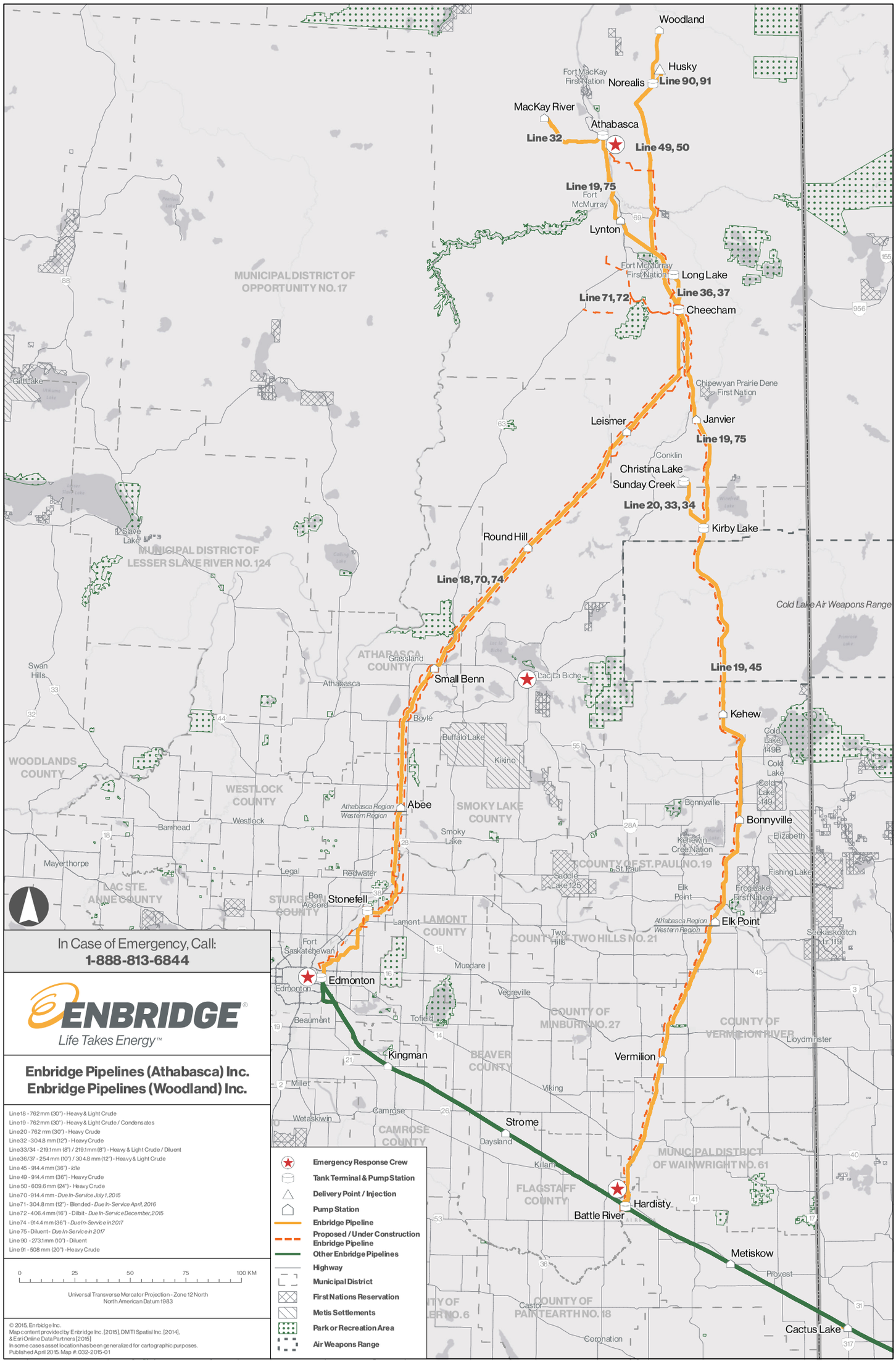
From the purchase of high quality steel pipe manufactured to meet stringent criteria, to the cathodic protection system we employ to prevent corrosion once the pipe is installed, Enbridge makes the safety of the system a priority before and during its operation with a variety of processes and technologies.

These measures include:

- Sophisticated monitoring and control systems that operate 24-hours a day, 365 days a year
- Regular pipeline ROW patrols by aircraft and in some areas by land
- Investigative dig programs to ensure pipeline integrity
- Meeting and exceeding industry standards and regulations
- Public awareness education
- The stationing of emergency response staff and equipment at strategic locations along the pipeline route
- Research and development on technologies designed to prevent corrosion and cracking
- Tests to confirm pipeline integrity on new pipelines/systems
- The use of durable coating systems and cathodic protection (use of low voltage electric current) to protect pipe from external corrosion
- The use of increasingly sophisticated in-line inspection technologies to measure the size and location of even minute changes in the integrity of every line in our system

Security

Enbridge views the security of our facilities as an integral part of our Emergency and Security Management Program. As such, we continue to exercise our plans and participate in industry groups such as the American Petroleum Institute and the Canadian Energy Pipeline Association. These third-party organizations help us benchmark our progress, allowing us to consistently meet or exceed industry expectations for security. Maintaining open communications and close working relationships with local authorities and emergency responders also help our efforts to protect your community.



In Case of Emergency, Call:
1-888-813-6844

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Enbridge Pipelines (Athabasca) Inc.
Enbridge Pipelines (Woodland) Inc.

Line 18 - 762 mm (30") - Heavy & Light Crude
Line 19 - 762 mm (30") - Heavy & Light Crude / Condensates
Line 20 - 762 mm (30") - Heavy Crude
Line 32 - 304.8 mm (12") - Heavy Crude
Line 33/34 - 219.1 mm (8") / 219.1 mm (8") - Heavy & Light Crude / Diluent
Line 36/37 - 254 mm (10") / 304.8 mm (12") - Heavy & Light Crude
Line 45 - 914.4 mm (36") - *Idle*
Line 49 - 914.4 mm (36") - Heavy Crude
Line 50 - 609.6 mm (24") - Heavy Crude
Line 70 - 914.4 mm - *Due In-Service July 1, 2015*
Line 71 - 304.8 mm (12") - Blended - *Due In-Service April, 2016*
Line 72 - 406.4 mm (16") - Dilbit - *Due In-Service December, 2015*
Line 74 - 914.4 mm (36") - *Due In-Service in 2017*
Line 75 - Diluent - *Due In-Service in 2017*
Line 90 - 273.1 mm (10") - Diluent
Line 91 - 508 mm (20") - Heavy Crude

0 25 50 75 100 KM

Universal Transverse Mercator Projection - Zone 12 North
North American Datum 1983

In some cases asset location has been generalized for cartographic purposes.
Published April 2015. Map #: 032-2015-01

How to reach us

Emergency Number | **1-888-813-6844**

We appreciate your calls, any time of the year, any time of day. This page contains important phone numbers you can use to contact an Enbridge representative.

If you have any comments or questions, please contact us. Please call your local regional office listed to the right and ask to speak to an Enbridge representative or an emergency response coordinator.

Western Region
Alberta south of Abee and Elk Point
1-877-449-2689 (Toll-Free)

Athabasca Region
Alberta north of Abee and Elk Point
1-780-762-4778 (Collect)

For general information about Enbridge Pipelines (Athabasca) Inc.
1-877-640-8665
CdnPublicAwareness@enbridge.com

More information can also be found online at **enbridge.com/emergencycontacts**
If you suspect there is a problem with an Enbridge pipeline, please call us toll-free, 24-hours a day: **1-888-813-6844**

Enbridge Pipelines (Athabasca) Inc.
Enbridge Pipelines (Woodland) Inc.
Public Awareness Program 2015