

Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018



Enbridge is committed to meeting the key milestones identified within the agreement signed between the State of Michigan and Enbridge on November 27, 2017. The information below describes the steps taken to ensure all US agencies and authorities were engaged to satisfy this milestone: *By December 31, 2017, Enbridge will request pre-application consultation with the US regulatory agencies for which such pre-application consultation are necessary regarding the contents and requirements for the US authorizations and approvals for the replacement of the St. Clair River crossing.*

PRE-APPLICATION MEETING REQUEST OUTREACH

Enbridge has mailed pre-application meeting request letters to all US regulatory agencies and authorities identified as potentially needing to issue permits or approvals as follows.

December 13 and 14, 2017 – Mail Out

- Pre-application meeting request letters, dated December 13, 2017 sent by certified mail to 40 agencies/authorities requesting a meeting to discuss the details of the St. Clair HDD and providing information on how to contact Enbridge with any questions or concerns;
- Fact sheet providing general information about the horizontal directional drill (HDD) process; and
- Fact sheet describing the seven key actions that we are undertaking to move toward a long-term solution for the future of Line 5.

See **Appendix 1** for copies of these materials.

The following table lists the regulatory agencies and authorities that were identified by Enbridge to receive a pre-application meeting request letter.

Recipients of the Pre-Application Meeting Request Letters	
Environmental Agencies/Authorities	
Mr. Andy Hartz Environmental Manager MDEQ Southeast Michigan District Water Resources Unit 27700 Donald Court Warren, MI 48092	Mr. Jon Russel State Administration Manager MDEQ Water Resources Division Field Operation Section – Lakes Erie and Huron Constitution Hall 525 West Allegan Street P.O. Box 30473 Lansing, MI 48909
Ms. Kate Fairchild Environmental Quality Analyst MDEQ Southeast Michigan District Water	Ms. Amy Lounds Environmental Manager MDEQ Water Resources Division Field Operation

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Recipients of the Pre-Application Meeting Request Letters	
Resources Unit 27700 Donald Court Warren, MI 48092	Section – Lakes Erie and Huron Constitution Hall 525 West Allegan Street P.O. Box 30473 Lansing, MI 48909
Ms. Diana Klemans State Administration Manager MDEQ Water Resources Division Surface Water Assessment Section Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909	Mr. Jon Milne Environmental Manager MDEQ Water Resources Division Surface Water Assessment Section Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909
Mr. Mike Alexander Environmental Manager MDEQ Water Resources Division Surface Water Assessment Section Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909	Ms. Ronda Wuycheck, Chief Michigan Department of Natural Resources Office of the Great Lakes Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909
Ms. Lori Sargent Wildlife Division Michigan Department of Natural Resources Constitution Hall 525 West Allegan Street PO Box 30180 Lansing, MI 48909	Mr. Dan Kennedy Endangered Species Coordinator Michigan Department of Natural Resources Constitution Hall 525 West Allegan Street PO Box 30444 Lansing, MI 48909
Mr. Andy LeBaron Environmental Quality Analyst MDEQ Water Resources Division Surface Water Assessment Section Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909	Ms. Christine Alexander State Administration Manager MDEQ Water Resources Division Permits Section Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909
Mr. Tarek Buckmaster Unit Chief, Lakes Erie and Huron Permits Unit MDEQ Water Resources Division Permits Section Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909	Mr. Rick Ruzs Environmental Manager, Groundwater Permits Unit MDEQ Water Resources Division Permits Section Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909

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Recipients of the Pre-Application Meeting Request Letters	
Ms. Hae-Jin Yoon Environmental Manager MDEQ Water Resources Division Industrial and Storm Water Unit Southeast Michigan District 27700 Donald Court Warren, MI 48092	Ms. Cheryl Petroski-Wilson Environmental Quality Analyst MDEQ Water Resources Division Industrial and Storm Water Unit Southeast Michigan District 27700 Donald Court Warren, MI 48092
Mr. Steve Sliver Assistant Division Director MDEQ Waste Management and Radiological Protection Division Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909	Ms. Annette Switzer MDEQ Air Quality Division Permits Section Constitution Hall 525 West Allegan Street PO Box 30473 Lansing, MI 48909
Scott Hicks Supervisor US Fish and Wildlife Service Field Office 2651 Coolidge Road East Lansing, MI 48823	John Dingledine Assistant Field Office Supervisor US Fish and Wildlife Service Field Office 2651 Coolidge Road East Lansing, MI 48823
Tameka Dandridge US Fish and Wildlife Service Field Office 2651 Coolidge Road East Lansing, MI 48823	Chief Eric J. Warda US Army Corps of Engineers 477 Michigan Avenue Detroit, MI 48226
Robert Kaplan Acting Regional Administrator US EPA Region 5 77 W. Jackson Blvd. Chicago, IL 60604	Chris Korleski Director, Water Division US EPA Region 5 77 W. Jackson Blvd. Chicago, IL 60604
Regulatory - Federal	
International Boundary Commission 1717 H Street, NW Suite 845 Washington, D.C. 20006	Captain Jeffrey Novak Coast Guard Sector Detroit 110 Mt. Elliot Street Detroit, MI 48207
Regulatory - State	
Brian Ballinger Director Michigan Public Service Commission PO Box 30221 Lansing, MI 48909	Brian Conway State Historic Preservation Officer Michigan State Historic Preservation Office 735 East Michigan Avenue Lansing, MI 48912
Martha MacFarlane-Faes Deputy State Historic Preservation Officer Michigan State Historic Preservation Office	Dean Anderson State Archaeologist Michigan State Historic Preservation Office

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Recipients of the Pre-Application Meeting Request Letters	
735 East Michigan Avenue Lansing, MI 48912	735 East Michigan Avenue Lansing, MI 48912
Local Consultation and Authorizations	
Kirk Weston Managing Director St. Clair County Road Commission 21 Airport Drive St. Clair, MI 48079	Karry Hepting St. Clair County Administrator / Controller 200 Grand River Ave. Suite 203 Port Huron, MI 48060
Commissioner Timothy LaLonde St. Clair County Road Commission 21 Airport Drive St. Clair, MI 48079	Chairman Charlie Lewis St. Clair Conservation District 2830 Wadhams Road Kimball twp MI 48074
Mike Malcolm Environmental Sanitarian St. Clair County Health Department Division of Environmental Health 3415 28 th Street Port Huron, MI 48060	Mayor Pro Tem Kathy Hayman City of Marysville 1111 Delaware Marysville, MI 48040
Mayor Daniel Damman City of Marysville 111 Delaware Marysville, MI 48040	Mr. Randy Fernandez City Manager, City of Marysville 1111 Delaware Marysville, MI 48040
Mr. Barry Kreiner Public Service Director, City of Marysville 200 East 14 th Street Marysville, MI 48040	Mr. Sean Quain City of Marysville Building Department 200 East 14 th Street Marysville, MI 48040

See **Appendix 2 and 3** for delivery confirmation receipts to each of the above recipients.

December 8 to 15, 2017 – Personal Engagement

- In addition to mailing the letters Enbridge also made phone calls and sent emails to primary regulatory agencies to establish meeting times to discuss the Project. The following table describes the details of this outreach as of December 20, 2017.

Agency/Authority	Date of Engagement	Pre-Application Meeting
St. Clair River Bi-National Public Advisory Council	Email: Dec 8	To be confirmed
Michigan Public Service Commission (David Chisela & Nathan Miller)	Phone Call: Dec 11	Jan 17, 2018
City of Marysville (Mayor	In person meeting Dec 11, 2017	Jan 15, 2018

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Agency/Authority	Date of Engagement	Pre-Application Meeting
Daniel Damman)		
Department of Environmental Quality (Andy Hartz)	Phone call: left message – Dec 14 Follow-up Email – Dec 19 Response to email from A. Hartz of DEQ – Dec 20	To be confirmed - in response email A. Hartz stated they will contact us soon to set meeting
US Army Corps of Engineers (Dorothy Newell)	Phone call: left message – Dec 14 Follow-up phone call: left message – Dec 19 Phone call – Dec 20	To be confirmed - Spoke to Bob Morningstar who has been assigned to Project, agreed to meet in January
St. Clair Health Dept (Mike Malcolm)	Phone call: left message – Dec 15 Follow-up phone call: left message – Dec 19	To be confirmed
International Boundary Commission (JT Moore)	Phone call and email follow-up: Dec 19, 2017	Jan 19, 2018
Department of State (Melissa Simpson)	Phone Call: Dec 15, 2017	To be confirmed

December 18, 2017 – Online Meeting Requests

- After sending letters to relevant staff within the Michigan Department of Environmental Quality Enbridge also submitted an Pre-Application Meeting Request via the DEQ MiWaters website.

See **Appendix 4** for a copy of the MiWaters request.

December 19, 2017 – Mail Out to Department of State

- After speaking with a representative from the Department of State, a follow- up letter dated December 29, 2017, was also sent requesting a meeting to discuss the Project early in the New Year.

See **Appendix 5** for a copy of the letter sent to the Department of State.

NEXT STEPS

Enbridge will continue to arrange pre-application meetings and will provide another progress update to the State in January with details on the status of these meetings.

**Enbridge Pipelines
Line 5 HDD of St. Clair Project
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Appendix 1 – Pre-Application Meeting Request Letter



Enbridge
Suite # – Building # Street Name
City, State/Province Zip/Postal Code
Country

Year day, Month

Recipient First Name Last Name

Title

Address 1

Address 2

|

Dear Recipient,

On November 27, Enbridge entered into an agreement with the State of Michigan regarding the future of Line 5. As part of this agreement, Enbridge has made a commitment to replace the segment of Line 5 that crosses the St. Clair River using horizontal direction drill technology (HDD). Included with this letter is a handout that provides additional information and visuals explaining the HDD process.

First, I want to assure you that Line 5 is operating safely and there are no immediate concerns with the operation of the line. Second, you are receiving this letter because the replacement and HDD of Line 5 beneath the St. Clair River will take place within or around your community, and you may require Enbridge to obtain permits or agreements throughout the course of the project. To that end, Enbridge respectfully requests a meeting or pre-application consultation at your earliest convenience to discuss project details and answer any questions your respective department may have regarding the replacement project.

While we are only in the preliminary planning phase of this project, we firmly believe consultation with key stakeholders is integral to the success of the project. Please contact me at your earliest convenience: (XXX)-XXX-XXXX or first.last@enbridge.com to arrange a suitable time to meet.

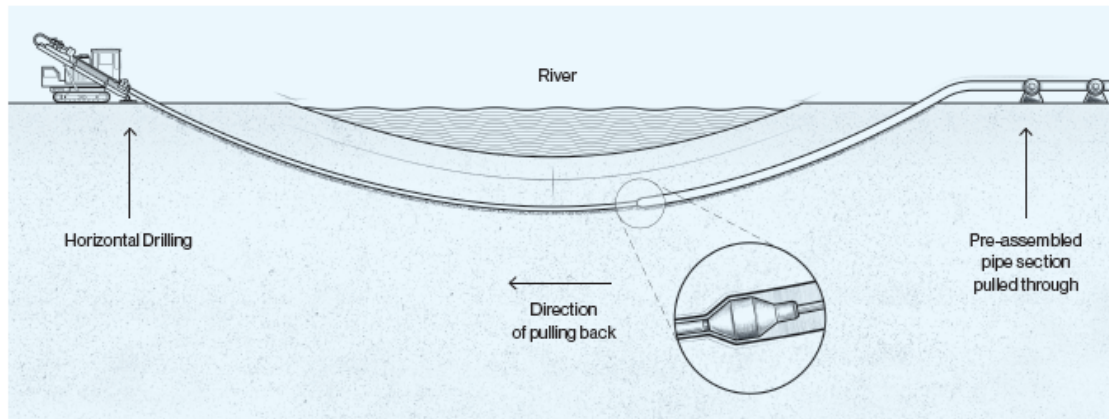
Sincerely,

Sender's Name

Title

Horizontal Directional Drilling

Specialized construction for large waterways and sensitive areas



What is horizontal directional drilling?

Horizontal Directional Drilling (HDD) is a construction technique whereby a tunnel is drilled under a waterway or other designated area, and a pipeline or other utility is pulled through the drilled underground tunnel.

The underground tunnel follows an arc line from the entry point, down under the special crossing area, and then resurfaces on the opposite side. Using advanced technology and highly trained technicians, a drill head guides the drilling pipe electronically to ensure the angle, depth, and exit point adhere to carefully designed engineering plans.

Throughout the drilling process, the tunnel is kept open and lubricated by circulating a watery mud-slurry mixture, typically composed of about 95 percent water and 5 percent bentonite clay—a natural, non-toxic substance. The drilling mud also helps coat the walls of the tunnel and remove drill cuttings.

When the tunnel is 12 inches wider than the diameter of the pipe going through it, the welded pipeline segment can be pulled through the underground arched tunnel from one end to the other end. These pipeline segments are typically made of thicker steel and have a protective first layer of coating to prevent corrosion and a second abrasion-resistant coating to protect the pipe during the pull through the tunnel. The two ends of the pipeline segment can then be welded together with the rest of that pipeline system.

Why is HDD used?

Long-distance underground pipelines are built across open areas, such as rural farmlands and urban utility corridors. Typically, construction crews clear an approved route, dig a specially prepared trench, lower welded sections of pipeline into the trench, and carefully replace removed soil for the restoration process.

Usually, this method is preferred for open area installation and can be completed in a way that minimizes environmental and stakeholder impact, even in sensitive areas.



For large rivers or certain sensitive crossings, directional drilling is an appropriate and preferred construction method, depending on geologic conditions and other factors. HDD construction is considered suitable for large river crossings, extreme congestion (e.g. crossing rail yards), or other unique site-specific situations because it minimizes impacts on the area above the drill.

Although land around the drill entry and exit locations is disturbed during HDD activities, it will be restored to its pre-drill state.

Enbridge Pipelines

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What can I expect during directional drilling?

Drilling equipment creates noise during operations. Therefore, Enbridge will, when possible, restrict drilling activity to daylight hours if the equipment is close to occupied buildings or homes. Construction crews may also reduce noise by using structures on the drill site that are designed to buffer and reduce surrounding sound levels.



The length of time needed for drilling depends on the distance of the underground drill; the geology; the pipeline's diameter; and, the progress of drilling operations. Sometimes, drilling can be completed in just a few weeks. Other times it may take a few months to complete. Advanced planning can provide an estimated completion time for any specific drill site. These timetables, however, can be affected by unforeseen conditions.

Is there regulatory oversight?

Yes, in the United States, the design and construction of petroleum pipelines is governed by the Office of Pipeline Safety, a department under the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

As part of the planning, technical codes and standards are followed in preparing detailed geotechnical investigations and engineering surveys. Depending on the location and purpose of the HDD, some local, state or federal authorizations or permits may also be required.

In Canada, the design and construction of petroleum pipelines is governed by the National Energy Board. As part of the planning, technical codes and standards are followed in preparing detailed geotechnical investigations and engineering surveys. Depending on the location and purpose of the HDD, some local, provincial or federal authorizations or permits may also be required. Enbridge plans and performs HDD crossings according to exacting standards, and meets or exceeds regulatory requirements.

Are there environmental risks?

HDD is chosen as a construction technique to reduce or avoid environmental impact. As with any construction process, however, HDD is not 100 percent risk-free.

Normally, the drilling mixture of water and bentonite clay remains within the tunnel, including the surface entry and exit points, as it circulates during drilling. This maintains the tunnel's shape. However, the drilling mud can sometimes surface elsewhere through natural cracks or voids in subsurface soils. This is an unintended release of drilling mud referred to as inadvertent return.

Highly specialized construction technicians using advanced monitoring equipment along with visual monitoring watch for potential problems. Often, the bentonite mixture itself will seal a hole, preventing and minimizing seepage.

However, if a significant amount of drilling mud surfaces outside the drilling area, Enbridge may need to suspend drilling operations and implement more extensive clean-up and containment measures. Being only 5 percent bentonite, if the mixture enters a waterway, it is usually sufficiently diluted by the river so that no active cleanup is necessary. In any case, Enbridge will work directly with the appropriate environmental agencies throughout the drilling operation.



In some unusual situations, attempts to complete directional drilling may not be successful. In the event this occurs, Enbridge may need to propose and seek permits for alternative ways to cross the area using traditional construction techniques and implement appropriate environmental protection measures in consultation with designated environmental agencies.



Toll-free: 1-888-263-3654
E-mail: line5info@enbridge.com
Web: enbridge.com




Seven ways to protect Michigan's water

Trust is earned, and while we have a long way to go, we remain committed to doing what it takes to rebuild trust and uphold our pledge to protect our Great Lakes while safely meeting Michigan's energy needs. We have been listening to the concerns of the people of Michigan about protecting water, and have formally entered into an agreement with the State of Michigan. This agreement includes seven key actions that we are undertaking to move toward a long-term solution for the future of Line 5.

We will...

1

by June 2018, **evaluate three options for the eventual replacement of the dual pipelines** in the Straits of Mackinac:

- a  placing a new pipeline in a tunnel under the Straits
- b  installing a new pipeline below the lakebed of the Straits using horizontal directional drilling (HDD)
- c  creating a trench on the bottom of the Great Lakes and placing a new pipeline in a secondary containment structure or system

4

by June 2018, **evaluate additional state-of-the-art tools and underwater technologies** that could help further inspect Line 5 in the Straits and assess the condition of the coating on the twin pipelines.



5

work with the State on plans to enhance safety and reduce potential impacts at other Line 5 water crossings.



2



temporarily shut-down the operation of Line 5 when adverse weather conditions create sustained waves higher than 8 feet in the Straits.



6

replace the Line 5 St. Clair River crossing as soon as we receive the necessary federal (Canada and U.S.) and state approvals. The new pipe will be installed underneath the river bed using HDD.



3



put into place additional safety measures to further mitigate a potential anchor strike from boats in the Straits.



7

increase coordination with the State regarding the operations, maintenance and future of Line 5 and promote greater transparency between Enbridge and the State of Michigan. State representatives will have access to our data, studies, and will collaborate with us every step of the way.



Enbridge Pipelines
Line 5 HDD of St. Clair Project
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Appendix 2 – Delivery Confirmation Receipts sent December 13

U.S. Postal Service™ Delivery Confirmation™ Receipt

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Article Sent
Mike Malcolm
Environmental Sanitarian
St Clair Cty Hlth Dept Div of Env Hlth
3415 28th Street
Port Huron, MI 48060

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Kirk Weston
Managing Director
St. Clair County Road Commission
21 Airport Drive
St. Clair, MI 48079

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21 Airport Drive
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2830 Wadhams Road
Kimball Twnship, MI 48074

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US EPA Region 5
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Robert Kaplan
Acting Regional Administrator
US EPA Region 5
77 W Jackson Blvd
Chicago, IL 60604

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US Fish & Wildlife Svc Field Office
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US Fish & Wildlife Svc Field Office
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Scott Hicks
Supervisor
US Fish and Wildlife Service Field
Office
2651 Coolidge Rd
E Lansing, MI 48823

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Karry Hepting
St. Clair County
Administrator/Controller
200 Grand River Ave., #203
Port Huron, MI 48060

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Captain Jeffrey Novak
Coast Guard Sector Detroit
110 Mt. Elliot Street
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Chief Eric J. Warda
US Army Corps of Engineers
477 Michigan Avenue
Detroit, MI 48226

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Brian Conway
State Historic Preservation Officer
Michigan State Historic Preservation
Office
735 East Michigan Avenue
Lansing, MI 48912

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Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018



Appendix 3 – Delivery Confirmation Receipts Sent December 14

Ms. Lori Sargent
MI Dept of Natural Resources
Constitution Hall
525 W Allegan Street
PO Box 30180
Lansing, MI 48909

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Mr. Andy LeBaron
MDEQ Water Resources Div Surface Water
Assessment Section
Constitution Hall
525 West Allegan Street
PO Box 30473
Lansing, MI 48909

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Mr. Dan Kennedy
MI Dept of Natural Resources
Constitution Hall
525 W Allegan Street
PO Box 30444
Lansing, MI 48909

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Ms. Christine Alexander
MDEQ Water Resources Div Permits Section
Constitution Hall
525 West Allegan Street
PO Box 30473
Lansing, MI 48909

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Mr. Tarek Buckmaster
MDEQ Water Resources Div Permits Section
Constitution Hall
525 West Allegan St
PO Box 30473
Lansing, MI 48909

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Mr. Rick Ruz
MDEQ Water Resources Div Permits Section
Constitution Hall
525 West Allegan St
PO Box 30473
Lansing, MI 48909

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Ms. Hae-Jin Yoon
MDEQ Water Resources Div Industrial &
Storm Water Unit
SE Michigan District
27700 Donald Court
Warren, MI 48092

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Cheryl Petroski-Wilson
MDEQ Water Resources Div Industrial &
Storm Water Unit
SE Michigan District
27700 Donald Court
Warren, MI 48092

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Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018



Mr. Jon Russell
MDEQ Water Resources Div Field
Operations Section-Lakes Erie & Huron
Constitution Hall
525 West Allegan Street
P.O. Box 30473
Lansing, MI 48909

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Ms. Amy Lounds
MDEQ Water Resources Div Field
Operations Section-Lakes Erie & Huron
Constitution Hall
525 West Allegan Street
P.O. Box 30473
Lansing, MI 48909

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Mr. Andy Hartz
Ms. Kate Fairchild
MDEQ Southeast MI District Water
Resources Unit
27700 Donald Court
Warren, MI 48092

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Mr. Jon Milne
MDEQ Water Resources Div Surface Water
Assessment Section
Constitution Hall
525 W Allegan Street
PO Box 30473
Lansing, MI 48909

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Ms. Kate Fairchild
MDEQ Southeast MI District Water
Resources Unit
27700 Donald Court
Warren, MI 48092

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Ms. Diana Klemans
MDEQ Water Resources Div Surface Water
Assessment Section
Constitution Hall
525 W Allegan Street
PO Box 30473
Lansing, MI 48909

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Mr. Mike Alexander
MDEQ Water Resources Div Surface Water
Assessment Section
Constitution Hall
525 W Allegan Street
PO Box 30473
Lansing, MI 48909

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Ms. Rhonda Wuycheck
MI Dept of Natural Resources
Constitution Hall
525 W Allegan Street
PO Box 30473
Lansing, MI 48909

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Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018



Mr. Steve Sliver
MDEQ Waste Mgmt & Radiological
Constitution Hall
525 W Allegan St
PO Box 30473
Lansing, MI 48909

Ms. Annette Switzer
MDEQ Air Quality Division
Constitution Hall
525 W Allegan St
P.O. Box 30473
Lansing, MI 48909

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USPS TRACKING # **9114 9011 5981 8905 0776 10**
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For Tracking or inquiries go to USPS.com
or call 1-800-222-1811.

International Boundary Comm
1717 H Street, NW
Suite 845
Washington, DC 20006

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Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018



Appendix 4 MiWaters Request

Pre-Application Meeting Request Part 301 (Inland Lakes and Streams), Part 303 (Wetlands Protection)

version 1.5

(Submission #: HNA-298M-RAS24, version 1)

Summary

Submission#:	HNA-298M-RAS24	Date Submitted:	12/18/2017 9:00 AM
Form:	Pre-Application Meeting Request Part 301 (Inland Lakes and Streams), Part 303 (Wetlands Protection)	Status:	Submitted
Submitted By:	Paul Turner	Submission Creator:	Paul Turner
Active Steps:			
Reference #:			
Description:	Pre-Application Meeting Request Part 301 (Inland Lakes and Streams), Part 303 (Wetlands Protection)		

Notes

There are currently no Submission Notes.

Details

Applicant Information

The name of the company OR individual requesting any type of authorization must be provided as part of the contact information below.

Applicant Information

Contact

Prefix: Mr.	First Name: Paul	Last Name: Turner
Company: Enbridge Energy	Title: Environmental Specialist	Ext: NONE PROVIDED
Phone: 2185224891	Fax: NONE PROVIDED	Email: paul.turner@enbridge.com

Address

Address Line 1: 26 East Superior Street

Address Line 2: NONE PROVIDED

Description: NONE PROVIDED

City: Duluth	State: MN	Postal Code: 55802
---------------------	------------------	---------------------------

Country: USA	County: NONE PROVIDED
---------------------	------------------------------

Applicant's Additional Roles:

Owner

Contact Information (1 of 1)

Contact Type:

Agent

Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018



Contact Information

Contact

Prefix: Mr.	First Name: Steve	Last Name: Kapeller
Company: Barr Engineering Co.	Title: Environmental Engineer	Ext: NONE PROVIDED
Phone: 7349224430	Fax: 7349224401	Email: skapeller@barr.com
Address		
Address Line 1: 3005 Boardwalk		
Address Line 2: Suite 100		
Description: NONE PROVIDED		
City: Ann Arbor	State: MI	Postal Code: 48108
Country: USA	County: NONE PROVIDED	

Site/Project Information

Site/Project Name

Enbridge Line 5 St. Clair River Crossing

Site Location

42.915391036123616,-82.46422048335944
NONE PROVIDED

Site/Project Address

Between 1040 and 1050 River Road
Marysville, MI 48040

General Information

Project/Site Specific Information

Please fill out the following general information about your proposed project, if needed submit additional information as attachments.

Project Description

On November 27, Enbridge entered into an agreement with the State of Michigan regarding the future of Line 5. The full agreement is attached. As part of this agreement, Enbridge has made a commitment to replace the segment of Line 5 that crosses the St. Clair River using horizontal direction drill technology (HDD). It is anticipated that any impacts to wetlands, waterbodies and floodplains will be temporary. Enbridge respectfully requests a meeting or pre-application consultation in late January or at your earliest convenience, to discuss project details and answer any questions your respective department may have regarding the replacement project. Enbridge is also contacting the ACCE as the St. Clair River is a Section 10 water. Enbridge requests a joint pre-application meeting with the MDEQ and ACCE.

Estimated Total Project Area in Acres

4.0

Estimated Impact Acreage

0

Estimated Cubic Yards of fill

0

Waterbody Name

St. Clair River

Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018



Wetlands Involved?

Unsure

Wetland Delineation Conducted?

No

Lakes or Streams Involved?

Yes

Floodplains Involved?

Yes

Other resources involved?

NONE PROVIDED

Pre-Application Form- Attachment

NONE PROVIDED

Comment: NONE PROVIDED

Plans and Maps- Attachment

Enbridge+Agreement+11-27-17.pdf - 12/13/2017 03:05 PM

L5SCX_Prelim_Project_Map_and_Site_Plan_12-15-2017.pdf - 12/18/2017 08:54 AM

Comment:

Fee Information

The following describes how the fee information is broken down. Single-family residential lot less than 1 acre in size Meeting in district office ----- No Charge Meeting on site ----- \$100.00 Other pre-application meeting in district office ----- \$150.00 Other meeting on project site First acre or portion of acre of project area ----- \$250.00 Each additional acre or portion of acre ----- \$50.00 Maximum ----- \$1,000.00 Example: 4.7 acres = \$250 + (4 x \$50) = \$450.

Fee amount to be paid upon submission of form:

150

Meeting Details

The meeting is requested to be held at the:

DEQ District Office

Who should the DEQ contact if we have questions?

Applicant

Proposed project size (acres):

4.0

Attachments

Date	Attachment Name	Context
12/13/2017 3:05 PM	Enbridge+Agreement+11-27-17.pdf	v1 - General Information
12/18/2017 8:54 AM	L5SCX_Prelim_Project_Map_and_Site_Plan_12-15-2017.pdf	v1 - General Information

Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018



Date	Attachment Name	Context
Status History		
Date	User	Processing Status
12/13/2017 11:54:23 AM	Paul Turner	Draft
12/18/2017 9:00:01 AM	Paul Turner	Submitted
Processing Steps		
Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Paul Turner	12/18/2017 9:00:01 AM

**Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018**



Appendix 5 – Letter Sent to US Department of State

David H. Coburn
202 429 8063
dcoburn@steptoe.com

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com



December 19, 2017

VIA EMAIL AND OVERNIGHT DELIVERY

Melissa M. Simpson
Senior Advisor to the Assistant Secretary
Bureau of Energy Resources
U.S. Department of State
2201 C Street, NW
Washington, DC 20520

**Re: Request for Consultation with the US Department of State Concerning
Replacement of St. Clair River Crossing**

Dear Ms. Simpson:

Following up our telephone conversation of December 15, 2017, I am writing on behalf of Enbridge to request consultation with the U.S. Department of State ("Department") concerning Enbridge's replacement of the border segment of Line 5 that crosses the U.S.-Canada international boundary at the St. Clair River near Marysville, Michigan ("St. Clair River Crossing"). The Line 5 St. Clair River Crossing is operated and maintained in accordance with a Presidential Permit that was issued by President Dwight D. Eisenhower on April 28, 1953.

The replacement of the Line 5 St. Clair River Crossing will occur as a result of the November 27, 2017 Agreement (previously forwarded to you) that was entered into between the State of Michigan and Enbridge concerning Line 5. Under Section I.B of that Agreement, Enbridge has made a commitment to replace the Line 5 St. Clair River Crossing using horizontal direction drill technology (HDD). Section I.B of the Agreement further requires Enbridge to request consultations by December 31, 2017 with the US regulatory agencies for which such consultations are necessary regarding the proposed replacement project.

First, Line 5 is operating safely and there are no immediate concerns with the safety of the line. Second, in accordance with the Agreement, Enbridge is hereby requesting a meeting with the Department to discuss the replacement of the St. Clair River Crossing under the terms of the existing Presidential Permit. Enbridge would also be pleased to answer any questions that the Department may have concerning the replacement project. Included with this letter is a handout that provides

**Enbridge Pipelines
Line 5 HDD of St. Clair Project
Progress Report as of January 2, 2018**



Ms. Melissa M. Simpson

December 19, 2017

Page 2 of 2



additional information and visuals explaining the HDD process. We intend to provide additional information to make a meeting productive with the Department at some point in January.

We will be in touch with you in January to further discuss a meeting date and time and look forward to any questions you might have in the interim.

Sincerely,

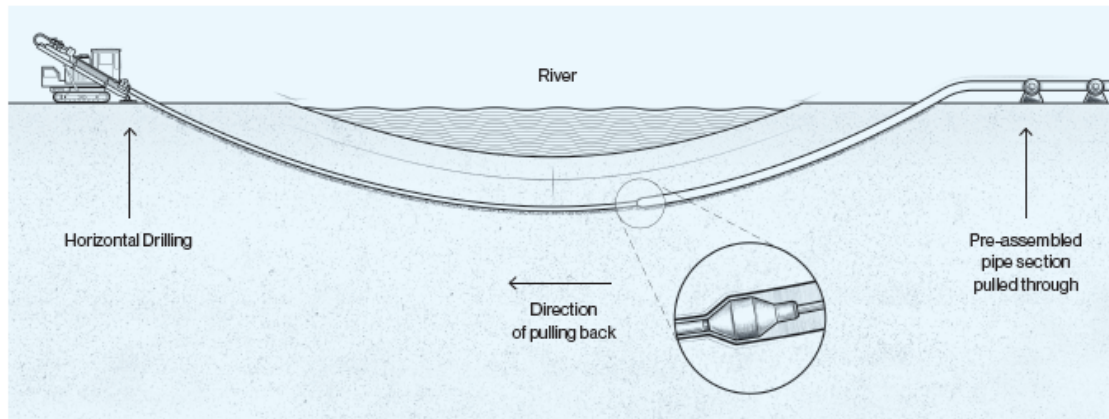
A handwritten signature in black ink, appearing to read 'David H. Coburn'.

David H. Coburn
Josh Runyan
Attorneys for Enbridge

Enclosure

Horizontal Directional Drilling

Specialized construction for large waterways and sensitive areas



What is horizontal directional drilling?

Horizontal Directional Drilling (HDD) is a construction technique whereby a tunnel is drilled under a waterway or other designated area, and a pipeline or other utility is pulled through the drilled underground tunnel.

The underground tunnel follows an arc line from the entry point, down under the special crossing area, and then resurfaces on the opposite side. Using advanced technology and highly trained technicians, a drill head guides the drilling pipe electronically to ensure the angle, depth, and exit point adhere to carefully designed engineering plans.

Throughout the drilling process, the tunnel is kept open and lubricated by circulating a watery mud-slurry mixture, typically composed of about 95 percent water and 5 percent bentonite clay—a natural, non-toxic substance. The drilling mud also helps coat the walls of the tunnel and remove drill cuttings.

When the tunnel is 12 inches wider than the diameter of the pipe going through it, the welded pipeline segment can be pulled through the underground arched tunnel from one end to the other end. These pipeline segments are typically made of thicker steel and have a protective first layer of coating to prevent corrosion and a second abrasion-resistant coating to protect the pipe during the pull through the tunnel. The two ends of the pipeline segment can then be welded together with the rest of that pipeline system.

Why is HDD used?

Long-distance underground pipelines are built across open areas, such as rural farmlands and urban utility corridors. Typically, construction crews clear an approved route, dig a specially prepared trench, lower welded sections of pipeline into the trench, and carefully replace removed soil for the restoration process.

Usually, this method is preferred for open area installation and can be completed in a way that minimizes environmental and stakeholder impact, even in sensitive areas.



For large rivers or certain sensitive crossings, directional drilling is an appropriate and preferred construction method, depending on geologic conditions and other factors. HDD construction is considered suitable for large river crossings, extreme congestion (e.g. crossing rail yards), or other unique site-specific situations because it minimizes impacts on the area above the drill.

Although land around the drill entry and exit locations is disturbed during HDD activities, it will be restored to its pre-drill state.

Enbridge Pipelines

Line 5 HDD of St. Clair Project

Progress Report as of January 2, 2018



What can I expect during directional drilling?

Drilling equipment creates noise during operations. Therefore, Enbridge will, when possible, restrict drilling activity to daylight hours if the equipment is close to occupied buildings or homes. Construction crews may also reduce noise by using structures on the drill site that are designed to buffer and reduce surrounding sound levels.



The length of time needed for drilling depends on the distance of the underground drill; the geology; the pipeline's diameter; and, the progress of drilling operations. Sometimes, drilling can be completed in just a few weeks. Other times it may take a few months to complete. Advanced planning can provide an estimated completion time for any specific drill site. These timetables, however, can be affected by unforeseen conditions.

Is there regulatory oversight?

Yes, in the United States, the design and construction of petroleum pipelines is governed by the Office of Pipeline Safety, a department under the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

As part of the planning, technical codes and standards are followed in preparing detailed geotechnical investigations and engineering surveys. Depending on the location and purpose of the HDD, some local, state or federal authorizations or permits may also be required.

In Canada, the design and construction of petroleum pipelines is governed by the National Energy Board. As part of the planning, technical codes and standards are followed in preparing detailed geotechnical investigations and engineering surveys. Depending on the location and purpose of the HDD, some local, provincial or federal authorizations or permits may also be required. Enbridge plans and performs HDD crossings according to exacting standards, and meets or exceeds regulatory requirements.

Are there environmental risks?

HDD is chosen as a construction technique to reduce or avoid environmental impact. As with any construction process, however, HDD is not 100 percent risk-free.

Normally, the drilling mixture of water and bentonite clay remains within the tunnel, including the surface entry and exit points, as it circulates during drilling. This maintains the tunnel's shape. However, the drilling mud can sometimes surface elsewhere through natural cracks or voids in subsurface soils. This is an unintended release of drilling mud referred to as inadvertent return.

Highly specialized construction technicians using advanced monitoring equipment along with visual monitoring watch for potential problems. Often, the bentonite mixture itself will seal a hole, preventing and minimizing seepage.

However, if a significant amount of drilling mud surfaces outside the drilling area, Enbridge may need to suspend drilling operations and implement more extensive clean-up and containment measures. Being only 5 percent bentonite, if the mixture enters a waterway, it is usually sufficiently diluted by the river so that no active cleanup is necessary. In any case, Enbridge will work directly with the appropriate environmental agencies throughout the drilling operation.



In some unusual situations, attempts to complete directional drilling may not be successful. In the event this occurs, Enbridge may need to propose and seek permits for alternative ways to cross the area using traditional construction techniques and implement appropriate environmental protection measures in consultation with designated environmental agencies.



Toll-free: 1-888-263-3654
E-mail: line5info@enbridge.com
Web: enbridge.com

Seven ways to protect Michigan's water

Trust is earned, and while we have a long way to go, we remain committed to doing what it takes to rebuild trust and uphold our pledge to protect our Great Lakes while safely meeting Michigan's energy needs. We have been listening to the concerns of the people of Michigan about protecting water, and have formally entered into an agreement with the State of Michigan. This agreement includes seven key actions that we are undertaking to move toward a long-term solution for the future of Line 5.

We will...

1

by June 2018, **evaluate three options for the eventual replacement of the dual pipelines** in the Straits of Mackinac:

a



placing a new pipeline in a tunnel under the Straits

b



installing a new pipeline below the lakebed of the Straits using horizontal directional drilling (HDD)

c



creating a trench on the bottom of the Great Lakes and placing a new pipeline in a secondary containment structure or system

2



temporarily shut-down the operation of Line 5 when adverse weather conditions create sustained waves higher than 8 feet in the Straits.

3



put into place additional safety measures to further mitigate a potential anchor strike from boats in the Straits.

4

by June 2018, **evaluate additional state-of-the-art tools and underwater technologies** that could help further inspect Line 5 in the Straits and assess the condition of the coating on the twin pipelines.

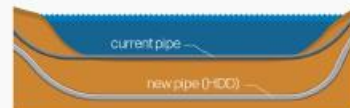


5



work with the State on plans to enhance safety and reduce potential impacts at other Line 5 water crossings.

6



replace the Line 5 St. Clair River crossing as soon as we receive the necessary federal (Canada and U.S.) and state approvals. The new pipe will be installed underneath the river bed using HDD.

7



increase coordination with the State regarding the operations, maintenance and future of Line 5 and promote greater transparency between Enbridge and the State of Michigan. State representatives will have access to our data, studies, and will collaborate with us every step of the way.



