Oil's days are numbered as we
transition
to
environmently friendly
renewable energy resources

Please know that the otters and I will be watching to insure that the EIS for the sandpiper pipeline + Line 3 replacement project defer to MEPA law.

Mill
Dg

From:	Vicki Stute
To:	*COMM_Pipeline Comments
Subject:	Sandpiper Support
Date:	Monday, May 23, 2016 3:38:06 PM
Attachments:	image002.png image003.png image004.png

Dear Jamie MacAlister and the Minnesota Department of Commerce,

As you know, the development of the Sandpiper Pipeline and Line 3 are major economic development projects for the State of Minnesota – not just regionally but for the entire state. Perhaps more importantly is the potential for bad precedent as the project (and also Line 3 replacement) continues down the path of constant regulatory delay.

As President of the Dakota County Regional Chamber of Commerce, I can testify that the benefits of these projects will be felt statewide – not simply along the route. Whether in direct jobs for people in our community or reduced competition for scarce rail capacity – the benefits are clear, obvious and should be no longer be delayed. We also believe that petroleum products should travel in the safest possible vessel – in this case, pipelines instead of the current, over-reliance on rail delivery. It's safer, cleaner and yields additional capacity for other products that cannot travel by pipeline.

A fair, timely, and final evaluation of this project has been delayed for far too long. Any entity attempting to do business in Minnesota relies on a predictable and timely regulatory process. I ask that the Department of Commerce adhere to the 280-day time limit to prepare the EIS to keep the project on track. The scope of the EIS is vital. It needs to serve the public and private purpose of the Sandpiper project. It should not be so narrow that it would be inadequate, but it should also not be too broad. This balance must be met.

The economic benefit, safety of shipping oil through pipelines, and public support for this project should emphasize the importance of seeing this process through, in a timely and effective manner.

Thank you for the work you do for the state of Minnesota and thank you for your dedication in moving this project forward.

Vicki Stute
Vicki Stute, President
Dakota County Regional Chamber of Commerce
3352 Sherman Court, Suite 201
Eagan, Minnesota 55121
D: 651.288-9201
P: 651.452.9872
F: 651.452.8978
vstute@dcrchamber.com

dakota county regional
CHAMBER OF COMMERCE

Committed to business… for YOU.

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From:	David Davis
To:	*COMM_Pipeline Comments
Subject:	Scoping EIS comment for Sandpiper (13-473 & 13-474) and Line 3 Replacement (14-916 & 15-137)
Date:	Friday, May 06, 2016 9:10:07 AM

Dear Ms. MacAlister,

Dear Members of the Minnesota DOC; I am writing this letter in reference to the Sandpiper and Line 3 replacement projects. The economic impact that this project will spread throughout the communities of Minnesota, benefiting all. Your response within the 280 day time limit is important to keep project in schedule. There are no safer or economically way of transporting a product than a pipeline, that is proven. Further delays on this project has a revenue impact on the communities of Minnesota.

Sincerely,

David Davis
PO Box 2441
Hot Springs National Park, AR 71914
superdave79820@yahoo.com

From:	Tucky Dill
To:	*COMM_Pipeline Comments
Subject:	Attn: Jamie MacAlister
Date:	Thursday, May 05, 2016 1:36:32 PM

Dear Jamie,

Please remove David's name off of your mailing list. Sadly, he passed away last August at Mayo.

My best to you and your project.

Tucky Dill

From:	Robert Doane
To:	*COMM_Pipeline Comments
Subject:	Scoping EIS comment for Sandpiper (13-473 & 13-474) and Line 3 Replacement (14-916 & 15-137)
Date:	Tuesday, May 10, 2016 7:20:06 PM

Dear Ms. MacAlister,

Ms. Jamie MacAlister,

Benefits of following existing rights of way:
Sharing ROW will keep costs down at so many levels from negotiating ROW, Enviromental impact studies, Construction costs, Permitting, Maintenance costs after construction maintaining ROW. Sharing the same ROW will minimize all of these concerns and ultimately save and preserve other areas.

Sincerely,

Robert F. Doane
1103 Illinois St
Davis Junction, IL 61020
rdoane798@aol.com

4075 West 51st Street #105
Edina, MN 55424
11 May 2016

Jamie MacAlister
Minnesota Department of Commerce
85-7th Place East Suite 500
Saint Paul, MN 55101

Dear Jamie MacAlister,

The first Environmental Impact Statement done for a pipeline in Minnesota should be a model for future statements. To make it truly useful, the EIS for the Sandpiper and Line 3 that Enbridge proposes to build should be broad enough to consider all options and be reliable enough to be dependable. To do less would not consider the actual impact of a pipeline on the environment.

An EIS for a new pipeline should consider many possible routes, not just those chosen by the applicant. The only route now under examination would cross an area of the state full of lakes as well as the headwaters of the Mississippi River. Risking that much of the state's recreational water, which provides jobs for a great number of people, is unwise, and risking the drinking water supply for Minneapolis is beyond foolhardy. In a rapidly warming, dryer world water may prove to be far more valuable than any other resource, regardless of corporate desires for immediate profit from oil. Allowing our water to be endangered without any way to reverse the damage would be completely irresponsible.

But an EIS is only as good as the data it contains. To ensure that figures are accurate they must be verified by a panel of independent experts. Such a panel would include engineers, hydrologists, soil scientists and economists who have no connection to Enbridge, its contractors or its suppliers. It should also include an individual who provided leadership on the second Keystone 1 EIS, as well as someone who worked on the recent National Academies of Science dilbit report.

The EIS should use Minnesota Environmental Protection Agency statutes as a guide, not ad hoc rules set up by the Department of Commerce or any other agency or group. And Minnesota's lead environmental agencies, the MPCA and the DNR, should be involved in preparing and supervising the EIS, a document that can ensure that we can protect our soil, our water and our citizens.

Sincerely yours,

Mary Theresa Downing

Mary Theresa Downing

RECEIVED
MAY 17 2016
MAILROOM

Ingrid Kimball

From: Donovan Dyrdal <dyr-valley@hughes.net>
Sent: Thursday, May 26, 2016 12:13 PM
To: MacAlister, Jamie (COMM)
Subject: Line 3 Comments for submission
Attachments: 2016.05.26 Comments for Line 3.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Purple Category

Jamie MacAlister
Environmental Review Manager
Minnesota Department of Commerce
Division of Energy Resources-Energy Facilities Permitting
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

Jamie,

I have attached a copy of the exact letter that I am going to attempt to submit via the site that you gave me earlier.

I just want to make sure it is timely filed in case it does not go through on the site delegated for submissions.

Thank you,

Kathy Renwick

May 25, 2016

Donovan and Anna Dyrdal
Farmers/Landowners
12744 180th St NW
Thief River Falls, MN 56701

Jamie MacAlister
Environmental Review Manager
Minnesota Department of Commerce
Division of Energy Resources-Energy Facilities Permitting
85 7th Place East, Suite 500
St. Paul, MN 55101-2198
E-mail: jamie.macalister@state.mn.us

Re: Public Comment: Line 3 Pipeline Replacement Project PUC Docket Numbers PL-9/CN-14-916 and PUC Routing Docket PL-9/PPL-15-137

The comments contained herein address two points regarding the Line 3 Pipeline Replacement Project.

1. First, comment will address the abandonment of the old Line 3 Pipeline.
2. Secondly the installation of the new Line 3R Pipeline.

The old easements (1950) grant a R.O.W. and easement for the purpose of laying, maintaining, operating, patrolling, altering, repairing, renewing and removing in whole or in part a pipe line for the transportation of crude, petroleum , its products and derivatives, whether liquid or gaseous, and/or mixtures thereof, together with the necessary fixtures, equipment and appurtenances, over, through, upon, under and across the described land situated in *insert property description,(intentionally left out by writer)*, **together with the right to clear the right of way and remove or trim trees and brush, and remove other obstructions, for a sufficient distance along both sides of said pipe line so as to prevent damage or interference with its effective operation and patrol; and together with the right of ingress and egress to and from said right of way through and over said above described land for any and all purposes necessary to the exercise by Grantee of the rights herein granted.**

The easement does not say that the Pipeline has a right to decommission and leave the abandoned pipeline in the ground indefinitely to deteriorate and contaminate the ground and its aquifers.

This project labeled as the Line 3 replacement project, is not a replacement project. The new Line 3R will be located in a new area with both an increase in the actual pipe size and increased bpd capacity. Replacement would call for the removal of the old existing Line 3 pipeline, which is not part of the plan. This will be an installation of an entirely new pipeline. Enbridge should remove the old abandoned Line 3 pipeline. If not in its entirety, at least in areas where the pipe is so shallow that it interferes with the right that is reserved in the original easement for the landowner to have the full use and enjoyment of said premises.

Line 3 is one of the three lines, running through our field drainage ditch, which are completely exposed. It acts as a dam, completely blocking or inhibiting the flow of water. Line 3 is one of the three shallow buried lines that we cannot properly farm over due to the lack of coverage. Enbridge will not allow their heavy equipment to traverse the oldest part of the right of way for fear of damaging them during maintenance digs. Yet the Dyrdals' livelihood is encumbered by this shallow pipe line by the fear of causing damage or worse personal injury by using their heavy agricultural equipment on this and the other shallowly buried pipe lines that run through their property.

One of the arguments that have been heard was that removing the pipeline would leave a huge void. This should not be the case; the pipeline company has an obligation to restore the area to its pre-construction condition.

Commission Rule: 7852.3600 PERMIT CONDITIONS FOR RIGHT-OF-WAY PREPARATION, CONSTRUCTION, CLEANUP, AND RESTORATION. § N. The permittee shall, to the extent possible, restore the area affected by the pipeline to the natural conditions that existed immediately before construction of the pipeline. Restoration must be compatible with the safe operation, maintenance, and inspection of the pipeline

Enbridge should remove the old Line 3 pipeline. Line 3 is one of the three completely exposed lines that run through our field drainage ditch. It acts as a dam, completely blocking or significantly inhibiting proper drainage of our fields. Line 3 is one of the three shallow buried lines that we cannot properly farm over due to the lack of coverage. Enbridge will not allow their heavy equipment to traverse the oldest part of the right of way for fear of damaging them. Yet Enbridge will hold the Dyrdals responsible for damage that occurs to these very shallow lines as they try to use the land for its intended agricultural purposes and thus their livelihood.

Possibly another solution would be to cap Line 3 before the beginning of the Dyrdals property and then immediately after their property. Then remove at least the segment of pipeline that runs through the Dyrdals' property. This does not address further deterioration and environmental concerns of land not owned or farmed by Dyrdals', but it is more preferable to the Dyrdals' than leaving the old deteriorating Line 3 in the ground.

Going back to the pre-pipeline era, to make the land productive for agricultural reasons, it was necessary to improve on what little natural drainage existed. Thus, in 1911 Judicial Ditch No. 25 (JD 25) was established and constructed in the Norden Township area. Lateral 5 to JD 25 passes through Section 20 flowing in a southerly direction along the N-S ¼ line for the entire mile and then turns westerly along the south line of Section 20 for 1320 feet at which point it turns south again through the section line township road and into Section 29 where it continues southerly along the 1/16 line on its way to the JD 25 outlet.
In the late 1970's, a determination of benefits was conducted on the JD 25 system in which a determination of benefits was conducted on the JD 25 system in which Lateral 5 was renamed Branch 3 of JD 25. The JD 25 ditch records show that all of Sections 20 and 29 were determined to benefit from JD 25, and particularly Branch 3 (formerly Lateral 5). Therefore, Sections 20 and 29 have been (since 1911) and are currently assessed to the JD 25 system.

Agricultural drainage practices generally consist of surface water removal with private open channel drainage ditches which outlet into legally established public open channel drainage ditches, to which they are assessed. Drainage benefits are considered an encumbrance to the property and go with the property when it is sold to another party. The new landowner thus acquires the vested drainage rights and responsibilities that go with the land. In this case, Dyrdal acquired the vested rights of drainage access to Branch 3, JD 25, and the responsibility to pay assessments to the ditch fund, when the property in Sections 20 and 29 were acquired.

Landowners assessed to legal drainage systems are responsible for constructing their own private ditches or tile drainage systems to effectuate their benefits and get their surface water drainage into the legal ditch system (i.e., Branch 3, JD 25 in this case). Because these landowners pay assessments for the construction, repair, and maintenance of the legal ditch system, they have a vested right to access the legal ditch with their private systems without hindrance or obstruction.

Since acquiring these properties in Sections 20 and 29, Dyrdal has developed a plan for their surface water drainage to access its rightful outlet into Branch 3, JD 25. Currently Enbridge's shallow pipelines are depriving the Dyrdals of the proper utilization of the ditch system that they are being assessed for. Removal of one of the shallow lines is a step in the right direction to correcting the inequitableness of this matter.

I hope that Enbridge and the MNPUC will consider all possibilities when addressing the old line; it can only be a benefit for the environment to remove the pipe all together.

INSTALLATION OF THE NEW LINE 3R

Points of compliance desired by the landowner that be taken into consideration for the installation of the new Line 3R Pipeline are:

1. A survey of pre and post-construction grade elevations, at intervals of 12 locations per every 100 feet in a grid like manner, on and off the proposed right of way.
2. Construction soil sampling and analysis of pre and post-construction soil types at least 24" deep, at intervals of 12 locations per every 100 feet in a grid like manner, on and off the proposed right of way.
3. Both pre and post-construction compaction tests both on and off the proposed right of way, at intervals of 12 locations per every 100 feet in a grid like manner, on and off the proposed right of way. Decompact all travel lanes and turn around areas specifically to meet or exceed areas adjacent to the ROW.
4. Enbridge shall bring in quality topsoil to meet or exceed preconstruction/maintenance digs to alleviate subsidence and lost top soil and soil mixing.
5. A comprehensive preventive plan agreed on in advance of the start of all construction, to deal with any/all noxious weed issues that may occur due to the length of the construction process and restoration. Enbridge states in its project Summary, that the restoration process can take longer than 1 year due to weather conditions and other environmental impacts, that would allow a seed bed of noxious weeds to take a strong foot hold in that time frame, on prime agricultural land.
6. All litter from Enbridge employees and/or its subcontractors is removed on a daily basis.
7. Remove all waste and scrap from construction daily and completely by the end of the construction period.

Professional independent contractors agreed upon by both Enbridge and the Dyrdals should conduct all measurements, testing, and inspections. We do not want to go through another six plus years, as we did with the LSr and Alberta Clipper Projects, of trying to get our land adequately restored to preconstruction status. Enbridge needs to restore land to the pre-construction status as a result from the construction of the new Line 3R if it is to be laid.

One other point I would like to bring to attention regarding the installation of the new Line 3R pipeline and removal of deteriorating old lines, is my concerns for the aquifers. This pipeline R.O.W. corridor cuts thru the sands and gravel of the beach ridges to the East and West of our owned land and has already affected the natural water veins in our area, these areas are also at very high-risk classifications for polluting aquifers in the event of a pipeline release.

Sincerely,

Donovan Dyrdal

From:	Trudy Dunham
To:	*COMM_Pipeline Comments
Subject:	EIS Scoping Comments: Sandpiper and Line 3
Date:	Wednesday, May 25, 2016 10:56:35 PM
Attachments:	EIS-Scope-Testimony-WCfFG-5-9-16.pdf

See attached.

Trudy Dunham
Women's Congress for Future Generations
St. Paul, MN.

Testimony from The Women's Congress for Future Generations
moreinfo@futurefirst.us
Trudy Dunham
May 9, 2016

A significant issue relevant to the proposed pipeline is the impact the pipeline will have on future generations. The EIS should explicitly address the rights of future generations, the Public Trust Doctrine, Environmental Justice, the Precautionary Principle, and Climate Change.

The MN legislature has declared that each person is entitled by right to the protection, preservation, and enhancement of air, water, land, and other natural resources located within the state. That each person has the responsibility to contribute to the protection, preservation, and enhancement thereof. That it is the policy of the legislature to create and maintain within the state conditions under which human beings and nature can exist in productive harmony in order that present and **future generations** may enjoy clean air and water, productive land, and other natural resources with which this state has been endowed. (MN Statute 116B.01)

In order to protect these rights of both present and future generations, the government must honor the Public Trust Doctrine. The Public Trust Doctrine has two parts: that community members, all of us, have an equal right to access clean air and water, and productive land where it is safe to grow food and build homes. The Government's main responsibility is to hold these natural resources (the Commons) in trust for our use, to protect them from harm and exploitation, and pass them on unimpaired to future generations. The EIS should demonstrate that the Public Trust Doctrine has been met.

The argument that portions of our state with lower population are of "low consequence" and thus can be held to lower standards of pipeline management, maintenance, monitoring and emergency response plans is clearly a violation of the Public Trust Doctrine that states all community members have an equal right to clean air, clean water, and productive land. It is also a violation of Environmental Justice Framework that the MN Pollution Control Agency adopted in December 2015. The EIS should ensure that standards for management, maintenance, monitoring and emergency response plans are consistent with the Public Trust Doctrine and the Environmental Justice Framework.

What are the cumulative impacts of this pipeline on the health and well-being of the community and its residents? We know that pipelines corrode. They leak and they rupture. There have been many examples, including Kalamazoo River and Yellowstone River. We know that significant spillage can occur before a leaking pipeline is discovered and repaired. Where the oil goes depends on whether it is a surface or underground spill; on how long before the spill is discovered; and on geology: type of soil, rock, aquifers and rivers. We know that surface oil spills and spills in water travel further, and are more likely to form vapor and become airborne, or to be dissolved in water. Exposure via chronic inhalation and direct skin contact are known to have negative health impacts. Crude oil contains a variety of toxic chemicals,

including Benzene, a known human carcinogen. Breathing fumes from crude oil can cause respiratory problems and other health problems. Crude oil is a known teratogen; it can cause birth defects, changes in fetal development, and decreased fetal survival. Humans aren't the only one negatively impacted by oil spills: the physical properties of oil interfere with the normal functioning of organisms. For example, oil-coated birds lose their capacity to float, stay warm and fly.

We know that crude oil is not readily biodegradable, and that spills are difficult to clean up. We don't know all the negative health effects of exposure to the toxins in oil production and spills. Even short term exposure may prove to be catastrophic, and the consequences may take years to show up in our society. The effects will likely be cumulative. We recognize that toxins will likely interact with other toxins in our environment, causing complex health and environmental problems. In the face of harm and scientific uncertainty, we must take action to prevent harm. We must act ethically to protect future generations rather than waiting until all the evidence is complete to ban a risky activity. The Precautionary Principle states "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically." Let us heed the warnings of prior oil spills and disasters, and the impact they have on human health and the environment. <u>The EIS should comply with the Precautionary Principle, to deny or not allow an action when it threatens harm to humans or our environment. Monitoring for potential harm should be an essential ongoing activity, with reports to the public, the ability of the public to withdraw consent and thus end harmful practices, and to require the polluter to pay for all clean-up and damages.</u>

In order to protect these rights of present and future generations to clean natural resources, it is our (the present generation's) responsibility to slow down and to limit climate change. An initial consideration should be the need for the massive and ongoing amount of oil projected to flow through the pipeline. In this time of dire climate change, when we should all be working to minimize global warming and greenhouse gas emissions, when we have pledged that our nation and our state will meet its obligations under the Paris accord, we see no need to pipe more oil. The oil should remain in the ground. <u>Before any infrastructure is approved or developed to transport oil via pipeline or other means through Minnesota, the EIS should demonstrate that there is 1) an essential, long-term, urgent need within MN and the USA for energy that 2) cannot be reasonably met by cleaner and more efficient energy sources. [Consideration should also be given to research on new renewable, clean energies and technologies.]</u>

In closing, the EIS should consider the rights and the needs of future generations to clean air, water, and energy, to productive land for growing food and living. The Public Trust Doctrine, Environmental Justice Framework, Precautionary Principle and whether oil is essential to meet the long-term energy needs of the USA, and the availability of cleaner, more efficient energy sources, including those in research development.

Ingrid Kimball

From: polly edington <edingtonpolly@hotmail.com>
Sent: Wednesday, May 25, 2016 6:46 AM
To: MacAlister, Jamie (COMM)
Subject: pipeline comment

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Purple Category

Hi Jamie!

I've attended one of your meetings on Sandpiper and Line 3...I'm still not convinced that the best thing to do with Line 3 is to abandon it...may be best cost effective for you but not for those that live near it...

Thanks for listening,
Polly Edington
29627 MacTavish Dr.
GR MN 55744

218-999-9384

PS: I just tried sending this to the pipeline comment email address...it bounced back so called the 800 number the lady graciously gave me your email address!

From: bobiniowa538@aol.com
To: *COMM_Pipeline Comments
Subject: Sandpiper pipline
Date: Wednesday, April 27, 2016 5:06:23 AM

The current route is a poor choice. Pristine lakes and aquifer with very permeable sand above it sets us up for an environmental disaster when the inevitable spill occurs. Please change route to a safer choice. Also with much of tar sand oil production shut down there is no need for this pipeline.

Robert Eggers
13065 Breezy Pine Drive
Park Rapids, Mn

Speaker Registration

Complete to add your name to the speaker's list for tonight's public information meeting.

PLEASE PRINT CLEARLY

Name James Tolan
First *Last*

Did you sign in at the door? If not, please add your address here:

Address 1400A S. Lake Irving Drive S.W.

City Bemidji State MN Zip 56601

Official Comment
Enbridge should not remove or disturb the soil on old pipeline #3 taken discontinued.

Jamie MacAlister
87 7th Place East, Suite 500
St. Paul, MN 55105

May 5,2016

To whom it May Concern:

I am writing in opposition to the proposed Sandpiper Project in which the pipeline will pass though Crow Wing County where I reside.
While the potential for rail accidents is horrific, it would affect far fewer people than a pipeline spill. A spill affects not only humans but plants and animals as well. We do not need oil coming out of our water taps.
It is always the poor who suffer the most when any disaster occurs including an oil spill. What assurance would we have that a spill would be detected early and corrected promptly? Who will pay for the damage?
Big oil is only of several industries that promote the destruction of the earth's resources. One only needs to read what is happening in Latin and South America to see the devastation caused by oil and gas companies and weak governmental control.
Unless closely regulated, the powers-that-be will continue unabated with their greed.
We do not need this pipeline in Minnesota or anywhere else.
Sincerely,

Lorraine Ehrich

Lorraine Ehrich
13806 Memorywood Dr.
Baxter, MN 56425

RECEIVED
MAY 10 2016
MAILROOM

Ingrid Kimball

From: healingsystems69@gmail.com on behalf of Kristen Eide-Tollefson <healingsystems@earthlink.net>
Sent: Thursday, May 26, 2016 6:00 AM
To: MacAlister, Jamie (COMM)
Cc: *COMM_Pipeline Comments
Subject: CURE Comments on the Sandpiper EIS Draft Scope
Attachments: CURE Comment to Sandpiper Scoping Final 5-26.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Purple Category

Please find attached CURE's comments to the MN DOC - EERA for the

Draft Scoping Decision Document for the Sandpiper Pipeline Project
PUC Docket No. PL-6668/CN-13-473
PUC Docket No. PL-6668/PPL-13-474

This cover letter identifies these comments as CURE's, and briefly discusses our experience and interest in the proceeding. Please forward and file this cover letter with our comments. As PUC is established as RGU for this EIS, we would like to also e-file our comments. Though we assume that we can file public comments to these dockets, we will inquire further before filing.

CURE represents community members in the Mississippi River Hiawatha Valley in Southeast Minnesota. Anything that affects this principal watershed of the state, affects our 'backyards'. Our "Great River Road" tourist corridor, one of the busiest in the state, is directly connected to the tourist economies of Northern Minnesota, by Highway 61, which runs along the MIssissippi River, to Itasca State Park, Bemidji, Grand Rapids, Aikin and Brainerd, through Duluth to the border. http://www.fhwa.dot.gov/byways/byways/2279/directions

CURE stands for Communities United for Responsible Energy. Its members have participated in PUC dockets and environmental review proceedings for over 20 years on a wide range of dockets that have to do with the topic of "responsible energy", primarily advocating for community, distributed resources and efficiency as paths to a 'responsible energy future'.

Our participation has included Integrated Resource Plans, transmission plans and projects (including numerous MAPP and Miso meetings); Smart grid and environmental cost dockets; nuclear waste and decommissioning proceedings including the 2009 certificate of need and EIS scoping for the Prairie Island ISFSI expansion. We are familiar with policy, law and agency procedures related to the evaluation of need and environmental review.

We applaud the collaborative approach for this EIS that is being taken by the agency team, under the direction of PUC as RGU, and the lead of DOC. This is a very important docket. We hope it will be, as promised, "the best EIS possible". It needs to be a landmark analysis. The time is past for "business as usual". We must choose our energy future now. CURE contends that building fossil fuel infrastructure for competitive market forces is not "need". The opportunity costs are too great.

Environmental Review and Certificate of Need are the tools we have to align state energy and environmental policy goals with economic decisions involving large energy infrastructure. We depend upon you to make the best use of them, to advance the public interest of the State of Minnesota and protect its natural resource commons.

Most respectfully yours,

Kristen Eide-Tollefson, Frontenac
Sigurd Anderson, Lake City

for CURE - Communities United for Responsible Energy
Goodhue County, Minnesota

2005 Session -- Chapter 97, Article 3, lays out the purpose for transfer from EQB to PUC and DOC, of responsibilities for Siting, Routing and Environmental Review.

> Sec. 17. **To ensure greater public participation in energy infrastructure approval proceedings and to better integrate and align state energy and environmental policy goals with economic decisions involving large energy infrastructure, all responsibilities, as defined in Minnesota Statutes, section 15.039, subdivision 1, held by the Environmental Quality Board relating to power plant siting and routing under Minnesota Statutes, sections 116C.51 to 116C.69; wind energy conversion systems under Minnesota Statutes, sections 116C.691 to 116C.697; pipelines under Minnesota Statutes, chapter 116I; and rules associated with those sections are transferred to the Public Utilities Commission under Minnesota Statutes, section 15.039, except that the responsibilities of the Environmental Quality Board under Minnesota Statutes, section 116C.83, subdivision 6, and Minnesota Rules, parts 4400.1700, 4400.2750, and 4410.7010 to 4410.7070, are transferred to the commissioner of the Department of Commerce. The power plant siting staff of the Environmental Quality Board are transferred to the Department of Commerce. The department's budget shall be adjusted to reflect the transfer.**

The first purpose of this comment is to highlight the purposes and value of "public participation in energy infrastructure approval decisions". Why is this important? First, because energy infrastructure, and specifically fossil fuel infrastructure, is the most impactful of all human infrastructure. Climate change is hard upon us, and every decision that is made to invest in energy infrastructure will affect the timeline and outcome of those impacts.

Second, because it is the role and responsibility of the public, of the citizens of the state, to articulate the values that guide public decision making. We are, in fact, dependent upon this public perspective, to ensure the accountability of public decision making to public values and priorities. It is the decision makers' (RGU) responsibility to constructively engage, listen to, and provide channels for "meaningful participation" - defined as 'having the potential to impact decision outcomes'.

Minnesotans have invested heavily for decades in the quality of Minnesota's environment. Its character is part of our identity and everyday lives. We have passed a constitutional amendment and multiple packages of legislation to protect and enhance our air, waters, and resources; we dedicate LCMR funds to support our natural and cultural legacies. We fund state agencies, each of which is charged with some aspect of of our (human and natural) resource commons. The public investments we make are expressions of public values and to the extent to which they provide public value, they are funded.

In light of these public values and mounting threats of climate change, we make two key requests:

1. **Scope an inventory of public investments into the EIS:** Many millions of dollars have been invested in enhancing and protecting North Country region parks, trails, waters, wild rice lakes, trout streams etc. Local and regional economies – particularly the key tourism and recreation economies of Minnesota's "North Country" – depend upon the quality and character of these natural resources. It is imperative that this environmental impact statement identify public investments -- past, present and planned – in the resources that are potentially impacted by this

project. Tax monies, federal, state or local that have been used to enhance, protect and repair these resources are eligible; federal, state and particularly agency and non-profit programs.

As complete an inventory as possible is necessary to establish an economic basis for evaluating the balance of costs and benefits. We have given deference for many years, to projects with major potential long term impacts, in exchange for a specific number of high paying and important but temporary construction jobs. It is time to develop a way to better assess claims of **costs and benefits** and allow us to better 'account' for the potential economic impact of associated risks to our environment.

2. **Please scope the following into the EIS consideration of climate change factors: (Appendix B. 6E):**
    - According to the testimony of Minnesota's climate experts, Minnesota is the second most impacted state in the nation; our ecosystems are already challenged and stressed.
    - The integrity of social and natural eco-systems significantly increases the chances of human and natural community sustainability and adaptation to climate change;
    - Likewise, degradation of the eco-system increases stress and decreases the likelihood of successful adaptation;
    - Culture plays an important role in climate change adaptation, particularly for Native American communities;
    - The EIS scope should address the effects of both short (construction period) and cumulative, long term potential impacts and risks of pipeline operations – on ecosystem integrity, climate change, and associated stressors to natural and human communities.

Comments to the Scoping Draft Outline:

I. Project Need and Purpose and Alternatives Development

The Needs and Purpose (N&P) Statement of an EIS is central to the ability of environmental review to examine reasonable and prudent alternatives. EQB rule and guidance documents state that alternatives may be excluded if they do not meet "the underlying need for or purpose of the project"*. Section 3.1.2 of the Draft scope elaborates this application of the criteria, and case law upholds its use in the elimination of alternatives.

The present draft scope locates and defines the "underlying purpose of the project" at 3.1.2 under *Criteria for Evaluating Alternatives* included in an EIS. This is not the appropriate location for the Statement. The Preliminary Table of Contents at Appendix B., locates the "Project Purpose" at I.B.

As noted in footnote 14, the current language was adapted by DOC from the project proposer's CON Notice Plan. It was used as the Statement of Purpose in the previous environmental review document where it drove, as is its purpose, the development and elimination of proposed alternatives to Enbridge's route. The agency statement reads: *"The purpose of the project is to transport growing crude oil production from the Bakken Formation in North Dakota to the Superior, Wisconsin terminal and then connect to various other pipelines expanding access to refinery markets in the US Midwest and beyond".*

Brevity is one of the goals of ER documents. However the complexity and controversy generated by this project, and the context of a multitude of existing and potential pipeline projects, requires distinction between the the "underlying" need (e.g transportation of oil from the Bakkan field to markets) and the applicant's route specific statement of purpose. This is essential for any site alternatives to be considered under 3.2 and to identify and evaluate project, route, and system alternatives -- in addition to the specific project opportunity proposed by Enbridge -- that might fulfill the underlying purpose of the conveyance of oil from the Bakkan to markets.

Specific requests for Scoping document changes:

- Please change the Appendix B. Preliminary Table of Contents – I. B. "Project Purpose" to read: "Statement of Need and Purpose" (see discussion under III)
- Insert a placeholder in the Scope between 2.0 and 3.0. for the Statement of Need and Purpose.
- Identify data and analysis needed to evaluate and update the assumptions of the scoping document Statement of Purpose – specifically the assumption of 'growing crude oil production', and the need for 'expanding access' to markets.
- Please add the DAPL --Dakota Access Pipeline -- to analysis at 3.2 Alternative Sites. This project was recently (3-10-16) approved for routing through Iowa (see attached maps) http://wqad.com/2016/03/10/bakken-pipeline-project-approved-in-iowa-branstad-respects-decision/

The DAPL project FAQ Sheet (dated 11-05-15) at: http://www.dakotaaccessfacts.com/ notes that the DAPL " pipeline will transport approximately 450,000 barrels per day with a capacity as high as 570,000 barrels per day or more – which could represent approximately half of Bakken current (sic?) daily crude oil production. Shippers will be able to access multiple markets, including Midwest and East Coast markets as well as the Gulf Coast via the Nederland, Texas crude oil terminal facility of Sunoco Logistics Partners" In analysis for Alternative Sites 3.2 and need claims, PUC should review 2013-2014 FERC discussion of the Enbridge filings for Sandpiper (contentions of no-need) https://www.ferc.gov/051514whats-new/comm-meet/2013/032113/G-5.pdf and https://www.ferc.gov/whats-new/comm-meet/2014//G-1.pdf

II. Adapting the Statement of Need and Purpose (N&P):

Other guidance documents note that the Statement may need to be adapted as the EIS is developed (though not arbitrarily) in response to comments and subject to agency analysis, to ensure an appropriate fit between the Statement and alternatives analysis -- and compliance with the intent and purpose of the EIS. Care must be taken as to how the Statement is handled in the Scope, *because Minnesota rule (7850.2500 Subp. 2) prohibits changes to the final scoping document without approval of the Commissioner, and permission of the project proposer* (4410.2100 Subp. 8)..

Specific Request for Scoping document: Therefore, if there is not concurrence among the EIS agency team as to wording of the Statement of Purpose for the Scope, an appropriately located placeholder should be established, stating that the Statement will be developed as part of the Draft EIS. The EIS draft is subject to public review and comment. This increases transparency and accountability which decreases the likelihood of delays caused by litigation. NEPA litigation frequently involves challenges to an agency's determination of purpose and need. Finally, in terms of public process, the public will have a chance to review and comment on the decision factors if they are established in the EIS. This is full disclosure.

Because the current Statement of Purpose has repeatedly been raised as a point of contention, with claims that it has inappropriately constrained the development and qualification of alternatives, it would be helpful to note in the Scoping Document the role of the Statement of (Need and) Purpose in the evaluation of alternatives. And outline the information (data) requirements that may be necessary to develop a full and sufficient statement of need and purpose for the proposed project (see additional guidance references below).

III. Guidance on the N&P Statement

The need and purpose statement, as discussed in numerous state and federal guidance documents, is critical because it sets the stage for the development and evaluation of alternatives in the Record of Decision. NEPA scoping guidance provides a Summary of Purpose and Need (P&N): "A well crafted, succinct Purpose and Need Statement, drives the range of reasonable Alternatives that can be considered… As such, careful consideration should be given to be clear and accurate, but to allow sufficient flexibility to select Alternative courses of action, as reasonable and prudent. **"**

The EQB guidance document to RGUs for consultants provides similar advice: "In applying exclusion criteria, *the RGU must not be overly restrictive in defining the project's purpose and need*. Occasionally, an RGU will claim desirable but nonessential elements as part of the project's purpose or need, thus eliminating alternatives that should be included. In many cases, these are cost-related factors and, while important, they cannot overrule environmental considerations. At the same time, the RGU should not examine extraneous alternatives just to make an EIS more complicated". The length of N&P Statements ranges from one paragraph to one page, to 15 pages in a major federal EIS.

IV. Need or Purpose - or - Need and Purpose?

Please note, that in the Sandpiper EIS it is appropriate and important to address both need and purpose for the projects. The MN Court of Appeals has determined that approval of the pipeline and its route would constitute a major governmental action that requires an environmental impact statement.

The ruling specified that the EIS must be completed before a decision is made on the certificate of need, to ensure that "decision makers are fully informed regarding the environmental consequences of the pipeline, before determining whether there is a need for it". And further, that such action "seems particularly critical here because once a need is determined, the focus will inevitably turn to where the pipeline should go, as opposed to whether it should be built at all".

Therefore it is essential that the PUC as RGU, its lead and key participating agencies (DOC, PCA and DNR) who have been charged with the preparation of the document, gather sufficient information to enable the purpose of and need for the project to be succinctly stated, so that it can be evaluated and reviewed by the public, other agencies, and interested parties. Please see guidance from other state and federal sources on development of this statement, referenced below.

V. Additional guidance needed?

Because case law upholds using the statement of need and purpose as a criterion for the elimination of alternatives, and the development and evaluation of alternatives is one of the prime purposes of the EIS – it may be necessary to consult other guidance documents to ensure that this statement meets the purposes of the environmental review document.

While EQB guidance documents are clear about the application of need and purpose as a criterion in elimination of alternatives, it is much less helpful in providing guidance for assembling and evaluating the adequacy of an N&P statement. Because this has also been a problem in NEPA, there have been a large number of suits, leading to the development of substantial case law and further guidance by state and federal agencies, an example of which is excerpted from the linked document below:

https://www.greateratlantic.fisheries.noaa.gov/nepa/docs/nmfsneronepaguidancepurposeandneed.pdf

> ***Summary****: "The purpose and need section should be prepared early-on by the manager for the project team, or it should be assembled under the direction of the manager. The preparer(s) should systematically review the needs-related information, and identify the purpose(s) based on both information reviews and input via interagency coordination and external scoping inputs. Consideration also should be given to effective means for communicating the needs and purposes [to the public]. Further, it should be recognized that the "purpose and need" section will need to be revised as the EIS is completed. The draft of the purpose and need section will evolve when the impact study is conducted. In fact, it should be considered as a work-in-progress until the draft EIS is released for agency and public review. The purpose and need section in the final EIS may need to be "fine-tuned" as a result of agency and public input."*
>
> *Finally, the preparation of the description of the underlying need can be aided by the repeated consideration of the following series of questions (Lee, 1997, p.85):*
> • ***"Why?"*** *For example: what is the basic problem or deficiency with the existing situation? Why is this a problem? …What facts support the need? If the study has been underway for several years, what steps will be taken to make sure that the data underlying the purpose and need is still valid? How will the supporting information for the purpose and need be documented?*
> • ***"Why here?"*** *For example: why is this problem or deficiency occurring here? Why not somewhere else? …Is there a single purpose of the project, or does the project serve multiple purposes? If there are multiple purposes, are some more important than others? What are the true "drivers" of the project? How is the need for this project distinct from the need for other similar projects that are being proposed.*
> • ***"Why now?"*** *For example: Why does the problem need to be addressed now (urgency)? Why not earlier or later?... If planning decisions are being used to support the purpose and need, how much time has passed since those decisions were made? Is there a need to re-consider or update those planning decisions? What data is available to evaluate the needs for the project area? If there are data gaps, how will those gaps be addressed?... What could happen if the problem were not addressed now? What has happened since it was not addressed earlier, and will happen if the situation is allowed to continue*.

VI. Section 3 - Alternatives Development (see note on 3.2 in section I above)

Appendix B: Preliminary Table of Contents: There seems to be a discrepancy between this document and the required scope of alternatives to be considered listed in the Draft Scope at 3.1. Can this be assumed to be reconciled in the final scoping document? Where does System Alternatives analysis belong in the outline? Where will the Site Alternatives noted in 3.2 of the Draft Scope be developed in the EIS? Will existing Enbridge pipeline corridors that are being proposed for abandonment, be considered as an alternative route option? If so, why, if not, why not?

VII. Section 4 - Environmental, Economic and Social Analysis.

General considerations:

A. In the final Scoping document, please explain how the EIS will:

- Use "an interdisciplinary approach which will ensure the integrated use of the natural, environmental and social sciences" (4410.2200);
- "Identify and develop methods and procedures that will ensure that environmental amenities and values, whether quantified or not, will be given at least equal consideration...." (116D.03);
- "Study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources" (116D.03) -- as this applies.

B. In the final scoping document please explain how the EIS will make recommendations, relative to the two strategies of avoidance and mitigation of potential environmental impacts.

- Establish avoidance as the standard for protection -- for high quality, rare or vulnerable resources -- for instance pristine or groundwater resources
- Ensure that the burden rests upon the proposer to demonstrate that there is no alternative to routes that create hazards and threats to resources identified in the EIS.

4.4.3 Consideration of local and regional economies – As residents of the Mississippi River Valley, we are pleased to see a commitment to analysis of tourism and recreational resources and economies. In this analysis it is critical to recognize the extent to which The health and sustainability of the culture, people, and natural resources of the region are interdependent.

Request for inclusion in Scope: A section on "existing conditions", describing the interdependence of the natural and socio-cultural ecosystems with the region's tourist and recreational economies -- situated between 1.2 and 1.3, or at 4.4 -- would aid in analysis and understanding of potential impacts, including but not limited to the following factors:

- Local and regional economies are based upon the quality of the natural and cultural resources, including some of Minnesota's most pristine and iconic waters, e.g. Source of the Mississippi.
- The resources that may be impacted by the project are central to the identity of "The Land of Sky Blue Waters"; and the identity of Minnesotans in all regions, and beyond.
- The environmental character of Northern Minnesota ("Up North") is its 'brand';
- The cultural heritage of Minnesota's tribes is central to the identity of the region,

4.4.4 Cultural Resources and Natural Resources 4.4.5.4. The Wild Rice lakes of the region are a unique resources that serves as an outstanding example of this interdependence. An interdisciplinary approach that incorporates natural, environmental and social sciences -- is critical to understanding the scope of potential impacts to these lakes for Native American people of the region. As well as to the resource. Wild Rice is an essential part of the tourist economy, character and experience and is valued by the state as part of Minnesota's identity. Minnesota designated **wild rice** as the official **state grain** in 1977. Wild Rice and the Ojibway People by Thomas Vennum, Minnesota Historical Society Press, is highly recommended as a resource for understanding the connection between these cultural and physical resources. http://www.amazon.com/Wild-Ojibway-People-Thomas-Vennum/dp/087351226X

Other - Environmental Concerns regarding Unused or Abandoned Pipelines in existing Enbridge corridors: Compared to natural gas, oil is subject to light-handed regulation –No Barriers to Entry: construction and operation of pipelines NOT regulated by FERC – No Barriers to Exit: termination and abandonment of pipelines NOT regulated by FERC. **http://www.ingaa.org/File.aspx?id=18255**

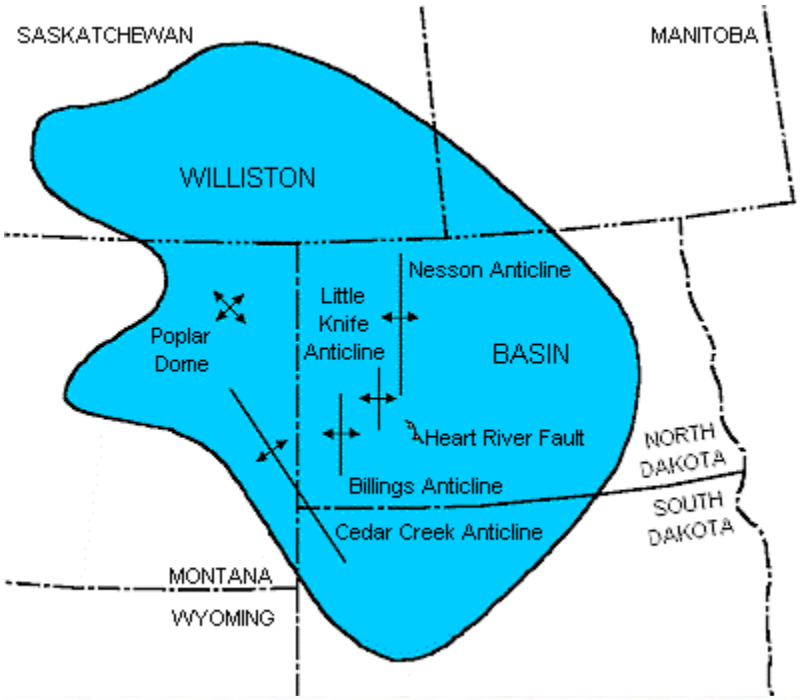
According to articles cited below, there are no abandonment guidelines, other than the federal requirements for disconnecting from active service. Therefore it appears that concerns regarding abandoned pipelines could be addressed in the EIS, as regulation is not preempted by the federal government if the lines are abandoned. The source cited below notes that "it is necessary to know as much information as possible about an abandoned pipeline because most pipeline companies will say any out of use line is only temporarily idled, even if has been out of use for 20 years". The linked resources document liabilities that fall to landowners for abandoned lines.

Request for inclusion in the Scope: Request a mapped inventory of unused, idled and abandoned Enbridge lines in Minnesota to clarify their status, and showing those corridors which have been discussed in the CON and previous environmental review proceedings. Specify in the inventory which have been formally abandoned, and which are idled or unused and for how long they have been idled; if they have a history of repurposing, to indicate this; and what kinds of liquids have been conveyed or may be conveyed by the lines in the future. Please consider if this issue is appropriate for phased and connected actions and/or cumulative impacts. Please consider this issue for the Environmental Justice section, in response to concerns raised by residents of reservations with abandoned (?) lines.

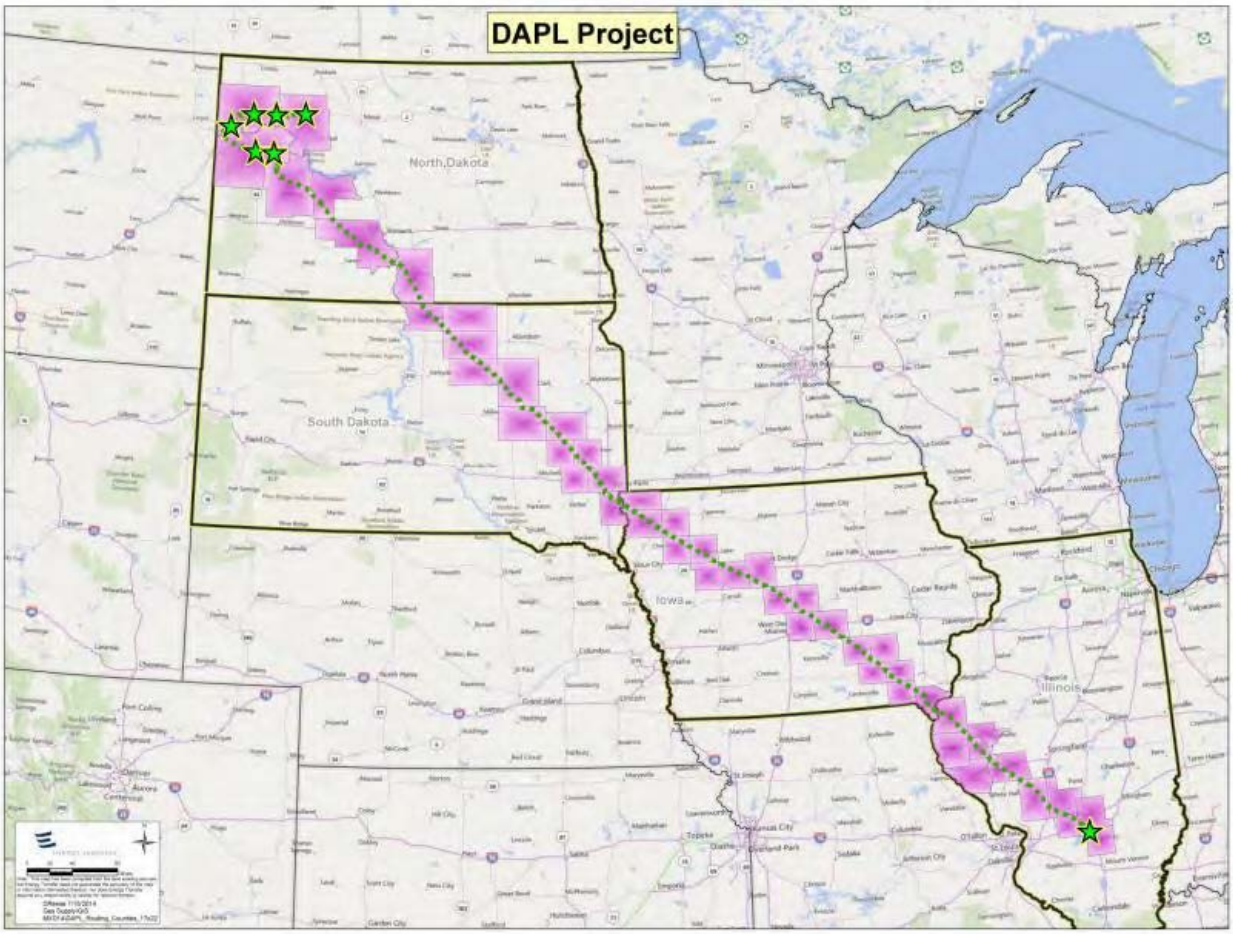
http://www.pipelinelaw.com/2014/10/10/pipeline-abandonment-safety-supply-concerns-heart-recent-developments/; **https://pgjonline.com/2009/06/10/who-owns-abandoned-pipelines/**

*The following are a number of factors a court or jurisdiction might consider in determining whether an easement or right-of-way (including the buried pipeline) has been canceled, extinguished and thus effectually reverted to the landowner:

1. Whether the line is merely idle or is completely abandoned.
2. The length of time the line has been idled or abandoned.
3. Whether the grantee company continues to maintain, test and /or patrol the line.
4. Whether the company continues to show the line and/or the easement as an asset in its records and/or continues to pay taxes on the line and/or the easement.
5. Whether there are other lines in the same easement which have not been idle or abandoned.
6. Whether the company has constructed or acquired new lines on other routes which make the idle or abandoned line and the easement in which it runs unnecessary.
7. Whether the company has idled or abandoned the facilities at either end of the line thereby making it unlikely that the line would be returned to service.
8. Whether it is cost prohibitive to return the line to service.
9. Whether the company has released or abandoned other segments of the easement thereby making it impossible to use the line or a replacement line at some future time.
10. The company plans for future use of the line or replacement line in the same easement or corridor (citation in link above)



The DAPL Project



ENERGY TRANSFER

RECENTLY COMPLETED ENBRIDGE LINES

Alberta Clipper is a 1,607-km (1,000-mile) crude oil pipeline that provides service between Hardisty, Alberta, and Superior, WI. Initial capacity is 450,000 barrels per day (bpd), with ultimate capacity of up to 800,000 bpd available.

The Southern Lights Project also included the LSr Project, a new 504-kilometre (315-mile) crude oil pipeline from Cromer, Manitoba to Clearbrook,MN. This line was brought into operation in February 2009, and the line was filled with oil shortly thereafter.

Ingrid Kimball

From: Jane Ekholm <janevanhunnik@hotmail.com>
Sent: Thursday, May 26, 2016 8:05 PM
To: *COMM_Pipeline Comments
Subject: Public comment
Attachments: PROPOSED RESOLUTION Final version submitted 5-26-16.docx

PROPOSED
RESOLUTION FOR PUBLIC COMMENT to
MN Dpt. Of Commerce Pubic Information &Environmental Scoping meeting of
May 11. 2016 in MacGregor, MN

WHEREAS, this resolution is in response to:

A. the request for **public comment** by the permitting agency, the Department of Commerce, for two pipeline projects by Enbridge, a foreign company from a friendly nation, conducting business in the United States by constructing a pipeline for the purposes of transporting Bakken Oil product from North Dakota to Superior, WI; and

B. the permitting process for **North Dakota and Wisconsin** are complete or near completion;

C. the proposal which consists of **two (2) projects**, the Sandpiper Pipeline construction along a new route, and Line three (3) Replacement and abandonment of lines located along MN Highway #2; and

D. A **Certificate of Need** is required MN Stat. 216B. 243, MN Rue 7853; the routing of pipelines designated under MN Stat. 216 G. MN Rules 7852; and an EIS (Environmental Impact Statement) is required MN Rule 4410; and

E. An MOU (Memorandum of Understanding) exists between DNR (Dept. of Natural Resources), PCA (Pollution Control Agency), and the permitting agency, for the purposes of addressing environmental concerns with **qualified personnel**; and

F. Petroleum products in small quantities (one part per million) are known sources of **carcinogenic** and possibly mutagenic compounds; and

G. Public health and safety are values that unite **diverse groups of people**, as well as mutual economic interests; and

WHEREAS, previously <u>known issues</u> of concern discussed at the above Scoping meeting were:

A. **Spill analysis**, migration potential, clean up, and economic impacts, specifically:

- a.. Impacts to **drinking water** sources dependent on groundwater quality,
- b. Impacts to surface water sources on which tourism economy, flora and fauna **resources** are dependent,
- c. Impacts to wild rice beds, and other cultural and spiritual values on which all **people, indigenous and otherwise**, are dependent;

B . **Decommissioning/Abandonment of Line Three** by way of abandonment represents shirking of ongoing liability, placing the **liability of a foreign company** on American taxpayers.

C. The **omission** of addressing alternate routes within the permit; specically of concern

1. Maps **omit most surface water** bodies along the proposed pipeline route, giving the impression of a lower potential for impact;

2. Proposed pipeline site is through extremely **sensitive waters and lands**, specifically crossing the Pine River watershed and wetland region, the Mississippi River (drinking water source to the Twin Cities), and related natural systems;

D. Only **22 new permanent jobs** statewide will result from this project, therefore referencing jobs as leverage for approval is misleading.

E. Proposed location of the new pipeline, as an **alternative to rail** is misleading with respect to:

1. Transport is up to the individual **companies who may choose** rail or truck to maintain quality which may be lost in tar or oil sand chemical slurry. Consequently the pipeline is only one possible means of transport; and

2. Access to sensitive remote sites in need of mitigation may not exist, allowing release of immeasurable amounts of product to inaccessible sensitive lands with no hope of **timely clean up or containment.**

J. The potential for **environmental justice** issues should be addressed with respect to easements located in rural areas of low and moderate income where landowners are not in a position to turn down additional funds, nor to litigate, making them more vulnerable;

K. In the event of a spill, the **precedent and intent** of the applicant to leave the cost of possible contamination clean up to the taxpayer is revealed by the request to abandon Line 3.

WHEREAS, new items submitted, herein, for consideration include:

1. The limited **ability to track** the interchange of contaminated waters between surface water and groundwater, in the case of a spill;
2. Inability to comply with the terms of the **1855 Treaty** by limiting contaminated water migration to political boundaries in the permitting process;
3. Disruption of the diverse spiritual and moral **values common to all** indigenous and non-indigenous, people who derive their culture and livelihood from a natural setting.
4. Items not discussed at the scoping meeting were brought to the attention of this citizen after the scoping meeting by an Anonymous contact, **a member of the public** (who fears reprisal) and on whose land a 'pin-hole' leak has resulted in:

- The pumping of about 64,000 gallons of product/ year from their property; and
- About 21 monitoring wells around their private drinking water well; and
- Allegedly, no product has migrated to their well; and
- Their property value is severely impacted; and
- The current property owner was not informed of the easements on the land, by an attachment to the deed or other information at the time of purchase, allowing him/her to make an informed purchase.

THEREFORE BE IT RESOLVED: that due consideration is given to:

A. the response to **public** comment,
B. the need to respect political boundaries and **cooperate** with the states of North Dakota and Wisconsin, as well as Canada for the public good.
C. Economic, cultural, spiritual, moral, natural and ethical **values and resources**

BE IT FURTHER RESOLVED in the spirit of compromise

a. Upgrade of **existing permits** and replacement of existing pipelines along Hwy 2 should be, allowed and required, due to leaks and spills that have threatened water quality, flora, fauna, and property values specifically in areas of historic spills near Bemidji, and Grand Rapids; and
b. **Abandonment** of any existing lines should not be allowed. Existing permits should be honored and upgraded to levels of the best available technology; and
c. **Financial assurance** for existing lines along Highway 2 with an approved plan (by DNR and PCA) for adequate access for repair, containment and future incremental abandonment be established as the use of fossil fuels are diminished; and
d. There is **no sustainable economic benefit** to the State of Minnesota for new construction of a pipeline.

e. The **potential impacts** cannot totally, be identified. The threatened resources and values of the State identified in terms of economics, ecology and tax base from both short term and long term perspectives.
f. Decision-makers should be held accountable for the outcome, based on the best available information.
g. The **original purpose** of the pipeline, to transport Bakken oil or tar slurry, no longer appears viable with the decreased cost of petroleum product being inadequate to make 'fracking' technology cost effective.
h. The move **toward clean energy** is likely to reduce the demand for carbon related product, thus reducing the industry stockholder's' ability to honor provisions for financial assurance, or have the resources to be adequately responsive, in the event of need.

Respectfully submitted,
Jane Ekholm, Cass County resident

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Respectfully submitted,

Jane Ekholm, Cass County resident

From: Katie Engelmann
To: *COMM_Pipeline Comments
Subject: eis comments
Date: Monday, May 23, 2016 10:29:37 AM

The Sandpiper pipeline is proposed to be routed through Polk County, Minnesota of which I am a resident. I would like to suggest a multitude of considerations that should be brought forth during the scoping of this project. While the following are my own views on the project, I hope that an honest and comprehensive EIS will provide greater analysis of all potential human and environmental impacts, and potential project alternatives.

First and foremost, the pipeline is a support system to oil extraction by the method of hydraulic fracturing from the Bakken fields in North Dakota. Catastrophic climate change impacts are already occurring in Minnesota and globally. As a citizenry, we should be focusing on curtailing such extraction instead of supporting it. Currently the oil and gas industry enjoys exclusions and exemptions to major federal environmental statutes intended to protect human health and the environment including: Comprehensive Environmental Response, Compensation and Liability Act, Resource Conservation and Recovery Act; Safe Drinking Water Act, Clean Water Act, Clean Air Act, National Environmental Policy Act, Toxic Release Inventory under the Emergency Planning and Community Right-to-Know Act. As a result of this lack of oversight, human health, wildlife communities and the environment are being endangered. Until more thoughtful state regulations are enacted in North Dakota and until the petroleum industry at large is held accountable to remedy the negative impacts on human health and the environment, Minnesota should not put our human communities, land or water systems at risk of degradation. Fracking and its effects are taking place on public land such as National Grasslands. This act of private gain on public land, especially with such lack of regulation and oversight is abominable.

The proposed preferred Sandpiper route poses threats not only to waterways and wetlands in Polk County, but along the entire route. While I am concerned about the pipeline crossing the Red River of the North and Red Lake River watercourses, I am equally concerned about the route crossing the state's most famous river, the Mississippi. Both the Sandpiper and Line 3 replacement are proposed to cross this pristine headwaters area which is a valuable and cherished natural resource to residents of Minnesota and across the nation. The Sandpiper and Line 3 replacement pipelines will also cross Hay Creek, Shell River, Crow Wing River and numerous sensitive wetland areas. The bounty of freshwater resources in northern Minnesota including wild rice beds, lakes and rivers and fisheries generate $7.2 billion annually. This doesn't include the tourism industry which grosses $11.9 billion in sales. These are real and permanent jobs. I am concerned that multiple pipelines will be allowed to follow this corridor if approved. These pipelines threaten not only pristine ecosystems, but also human communities, cultural and economic livelihoods.

The price of oil has dropped drastically from the start of the 'Bakken Boom'. Production of oil in the Bakken region has declined rapidly within the last year, resulting in a steep decline in

new wells and infrastructure. Building a pipeline in Minnesota for a waning industry is not sustainable development. The current no build alternative that allows for road or railway transport will continue meeting the need to transport oil to refinery destinations. The Sandpiper will not eliminate or reduce the oil being transported by rail and truck. It will only allow more transportation to occur. Rail and truck transport allow flexibility to reach refineries and are the most feasible method given the short term production expectations.

The impact on communities in North Dakota associated with the 'Bakken Boom' have experienced unsustainable population growth leading to human trafficking, crime, drug use and trafficking, lack of adequate and safe housing, shortage of police and emergency response workers, cost of living increases and many health problems. This industry does not support the health and wellbeing of our neighbors in North Dakota.

The only thing constant in the 'Bakken Boom' is change. Minnesota's natural resources should not be placed at permanent risk for the economic advancement of the North Dakota Pipeline Company and its desire to transport hazardous material. This project is not in the best interest of current or future citizens of Minnesota, only for those who expect to make money. Instead of muddling along on our current march toward energy independence by evermore domestic production it is time we redefine milestones and work toward a significant transition away from oil. I am one among many, who will not stay idly silent, while the purity of what constructs our beautiful state, its rivers and lakes, are threatened.

Katie Engelmann

MINNESOTA DEPARTMENT OF COMMERCE

Comment Form: Scoping

Energy Environmental Review and Analysis

Please provide your contact information. This information and your comments will be publicly available.

Name: Dwight Engen Phone: 952-200-9676

Street Address: 994 Bavaria Hills circle

City: Chaska State: MN ZIP: 55318

Email: dwightengen@yahoo.com

My comments pertain to:

- ☐ **Sandpiper Pipeline Project**
- ☐ **Line 3 Replacement Project**
- ☑ **Both Projects**

I support these projects for these Reasons:

1) Reliable energy
2) Great Jobs / Good pay / Union Benefits paid to skilled workers
3) Future Energy
4) Energy Independence
5) less dependency on foreign oil
6) Quality & Integrity standards By the Skilled Union Trades
7) Safety is a priority of the Industry, Enbridge & the workers

If including additional pages please number them and tell us how many you are providing: _____ pages

MINNESOTA DEPARTMENT OF COMMERCE

Comment Form: Scoping
Energy Environmental Review and Analysis

Please provide your contact information. This information and your comments will be publicly available.

Name: JOE FOWLER Phone: 612-802-9823

Street Address:

City: State: ZIP:

Email:

My comments pertain to:

- ☐ **Sandpiper Pipeline Project**
- ☐ **Line 3 Replacement Project**
- ☐ **Both Projects**

I TINK PIPLINES ARE great. & my DAD SAID I WAS CONCIZVED in his CAMPER AN A PIPELINE.

I I CAN WORK PIPELINE I ~~gg~~ CAN get my teeth FIXED

If including additional pages please number them and tell us how many you are providing: _____ pages

From: David Franseen
To: *COMM_Pipeline Comments
Subject: Scoping EIS comment for Sandpiper (13-473 & 13-474) and Line 3 Replacement (14-916 & 15-137)
Date: Tuesday, April 26, 2016 3:20:08 PM

Dear Ms. MacAlister,

I am confident that the EIS process can be completed within the required 280 days.

In the last 3 years rail transport of bakken and canadian oil field products through Minnesota have had negative impacts on the safety of our citizens and our commercial grain commodity and processing sectors.
Both of these negative free-market effects would be minimized by the proposed pipeline projects referenced above.

Northern Minnesota is currently economically depressed, and this too causes significant social costs to the residents outside of this area. These projects would ameliorate the effects this current economic condition has on the State as a whole.

Please work to expedite the completion of this EIS.

Sincerely,

David Franseen
2411 W Skyline Pkwy
Duluth, MN 55806

Ingrid Kimball

From: Kevin Lee <klee@mncenter.org>
Sent: Thursday, May 26, 2016 1:52 PM
To: *COMM_Pipeline Comments
Subject: Scoping Comments of FOH & MCEA
Attachments: FOH and MCEA Comments on Scoping in Sandpiper and Line 3 Replacement.pdf

Dear Ms. MacAlister,

On behalf of Minnesota Center for Environmental Advocacy and Friends of the Headwaters, I submit the Scoping Comments and attached exhibits in regards to the scoping of the environmental impact statements for the Sandpiper Pipeline and Line 3 Replacement Projects. The comments themselves are attached to this email, and the exhibits are downloadable with the provided links. Copies of these comments are also being submitted via the online portal and U.S. Mail.

Please do not hesitate to contact me should you have any questions or concerns.

Exhibit 1_Expert Report of Dr Gunton with CV.pdf

Exhibit 2_Bakken Production Volumes Statistics ...

Exhibit 3_Construction Starts on Dakota Access ...

Exhibit 4_DAPL_FactSheet32-110515.pdf

Exhibit 5_Rail Transportation of Bakken Crude -...

Exhibit 6_Keystone FEIS Exec Summary.pdf

Exhibit 7_Enbridge FORM 10-Q.pdf

Exhibit 8_FinalDARP_EA_EnbridgeOct2015.pdf

Exhibit 9_Keystone FEIS Att K.pdf

Exhibit 10_Spills of Diluted Bitumen from Pipel...

Exhibit 11_Marathon - Where We Operate.pdf

Exhibit 12_Mackinac-Line-5-Worst-Case-Spill-Sce...

Exhibit 13_TransCanadaKeystone Root Cause Repor...

Exhibit 14_AC Transmission Lines and Corrosion ...

Exhibit 15_Bull Moose Transmission Line.pdf

Exhibit 16_Stolen Direct.pdf

Exhibit 17_Smith Direct.pdf

Exhibit 18_Stolen Surrebuttal.pdf

Exhibit 19_Smith Surrebuttal.pdf

Exhibit 20_Enbridge Inc_Crude_Pipeline_Map.pdf

Exhibit 21_nepa_revised_draft_ghg_guidance_sear...

Exhibit 22_INGAACriteriaforPipelinesCo-Existing...

Exhibit List.pdf

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Minnesota Center for Environmental Advocacy
and
Friends of the Headwaters

Comments on the EAW and Draft Scoping Document for the Sandpiper Pipeline Project and the Line 3 Replacement Project

Submitted to the Minnesota Department of Commerce and the Public Utilities Commission

May 26, 2016

The EISs now being scoped are, in part, the result of years of work by FOH. FOH members have contributed thousands of volunteer hours in order to protect the Headwaters of the Mississippi from the dual threats of the proposed Sandpiper and Line 3 pipelines. The Headwaters of the Mississippi is a unique place, and its rivers, lakes, streams, wild rice waters and wetlands are uniquely threatened by both the immediate impacts of pipeline construction and the catastrophic impacts of a potential oil spill, a risk that will persist throughout the lifespan of these pipelines, which could easily be 50 years or more. FOH has never opposed all pipelines, but has sought from the beginning to show that there is a better place to put these pipelines. It brought forth alternative locations, including SA-04 and SA-05, to demonstrate its point.

The EIS is a critical step for these pipelines because it provides by far the best vehicle for considering alternatives to the applicant's proposal. While the Commission was persuaded that alternative locations for the proposed Sandpiper pipeline should be investigated in the Certificate of Need hearings, the Certificate of Need process never provided the platform that it should have to thoroughly investigate these alternatives. The limitation under the Certificate of Need proceedings is that, under the rules, the party presenting the alternative bears the burden of proof to show that there is a "more reasonable and prudent alternative" to the applicant's proposal.[1] This burden of proof, if interpreted literally under the rule,[2] raises real questions about whether *any* party could ever propose a "more reasonable and prudent alternative" unless they happen to be a pipeline company willing to build that alternative.

But an EIS can succeed where the Certificate of Need process failed, because "alternatives" under MEPA are different than "alternatives" under the Certificate of Need rule. Under MEPA, the statutory mandate is to consider "appropriate alternatives to the proposed action."[3] The MEPA rules clarify that the EIS must "compare the potentially significant impacts of the proposal with those of other reasonable alternatives to the project."[4] The EIS "must address one or more alternatives" of a range of types, including:

- alternative sites,
- alternative technologies,
- modified designs or layouts,
- modified scale or magnitude, and
- alternatives incorporating reasonable mitigation measures.[5]

If the EIS does not analyze alternatives of each type, it must explain why it failed to do so.[6]

Thus, under MEPA, there is no longer a problem with the burden of proof. The Commission and its delegate, the Department of Commerce, must make their own determination about alternatives to be considered in the EIS, and must engage in the work itself, without relying solely on the public (or the applicant) to provide all information about potential alternatives

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[1] Minn. R. 7853.0130(B).
[2] As FOH noted in its exceptions to Judge Lipman's recommendations on the Certificate of Need, the authorizing law for this rule, Minn. Stat. § 216B.243, does not assign a burden of proof for alternatives, and thus FOH and MCEA continue to maintain that the Commission can turn to the statute, and not the rule, when evaluating alternatives in Certificate of Need proceedings.
[3] Minn. Stat. § 116D.04.
[4] Minn. R. 4410.2300(G).
[5] *Id.*
[6] *Id.*

Once completed, the EIS itself will dictate which alternatives may enter the Certificate of Need process. After the Commission has selected the range of alternatives to be considered through the scoping decision, the Commission must ultimately select its own preferred alternative as part of the final determination on the adequacy of the EIS. MEPA specifically prohibits the Commission from selecting a proposal that:

> is likely to cause pollution, impairment or destruction of the air, water, land or other natural resources located within the state so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction.[7]

Importantly, MEPA requires that the Commission look beyond the Applicant's private financial and business preferences when considering "feasible and prudent alternatives." The same provision of MEPA concludes, with crystal clarity: "Economic considerations alone shall not justify such conduct."[8] If the applicant's preferred route is not the environmentally preferred route, that will be decided before this project returns to the Certificate of Need hearings. A properly scoped EIS therefore provides a much more thorough assessment of reasonable alternatives than is typically seen in Certificate of Need proceedings, limited as they are by prohibitively restrictive burdens of proof.

But environmental review only works if the Commission's scoping decision reflects the public interest, and not the company's private interest. If the Commission decides that this EIS should be limited to analyzing NDPC's proposed corridor, than the State of Minnesota and its legacy of clean water will be at the mercy not only of this Applicant, but every other pipeline company for the foreseeable future who wishes to utilize eminent domain to cut a swath across the state for a new pipeline. These are the first state-only EISs on crude oil pipelines in Minnesota history, and the Commission stands at a historic crossroads. If the Commission scopes this EIS narrowly and does not allow a wide-ranging consideration of alternatives, the precedent will be set, and future pipeline EISs will look the same, absent legal challenge. Put simply, the Commission need not reject all pipelines, but if there are areas of the state that should be protected from pipelines, and FOH firmly believes that there are, now is the time to make that determination. Such an opportunity may never come again.

SECTION 1: STATEMENT OF PURPOSE AND NEED

1.1 Inappropriately Narrow Statement of Purpose and Need

The Statements of Purpose and Need are Phrased so Narrowly as to Severely Restrict Analysis of Reasonable Alternatives in the EIS. The information developed in the EIS must inform two critical decisions: Do we need these pipelines to transport oil? And if so, where should they go? In order to supply information relevant to these two broad questions, the definitions of purpose and need that inform the scope of the EIS must also be broad.

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[7] Minn. Stat. § 116D.04, subd. 6.
[8] *Id.*

The various problems with the statements of Purpose and Need, identified below, collectively demonstrate that when preparing this EIS, the Department will rely on NDPC, Marathon, and Enbridge expertise at its peril. While MEPA allows an agency to utilize the applicant's work, when appropriate, it also obligates the agency to be responsible for any such work if it appears in the EIS.[9] In other words, the agency must either do the work itself, or thoroughly and independently evaluate any work prepared by the applicant.

While this duty is incumbent upon the Responsible Governmental Unit (RGU) throughout the MEPA process, the RGU's duties are even more pronounced in relation to the purpose and need section of an EIS, where public and not private interests must predominate.

1.1.1 The Purpose Statements in the EAW and DSDD for the Sandpiper Project Have Been Stated Too Narrowly

The scope of an EIS is largely determined by the statement of purpose and need for the project. State regulations provide that any alternative that does not meet the purpose and need of the proposed project may be eliminated from consideration in the EIS.[10] Each of the four statements of purpose and need – for the Sandpiper EAW, the Sandpiper DSDD, the L3R EAW, and the L3R DSDD – are phrased so narrowly that they effectively limit the choice of reasonable alternatives, contrary to state and federal laws on environmental review. The statements of purpose included in these scoping documents represent statements of private, corporate need, and state and federal law clearly prohibit environmental review based on such a constricted premise.

Because the alternatives analysis is the heart of the environmental impact statement, state and federal law is clear that agencies should not "slip past the strictures" of environmental review by "contriv[ing] a purpose so slender as to define competing 'reasonable alternatives' out of consideration."[11] To avoid this, agencies cannot simply rely on statements of what is "desirable from the standpoint of the applicant"; they must also consider alternatives that are practical or feasible from the standpoint of common sense.[12]

None of the statements of purpose in the scoping documents for Sandpiper/L3R consider any purpose other than what the applicant prefers, and none bear a significant relationship to the types of public purposes that traditionally justify PUC decisions. The Sandpiper EAW, for instance, appears to have been drafted by the applicant, and states that production volumes in the Williston Basin have resulted in a need for "more oil pipeline capacity to reduce the use of trains and tracks for oil transport."[13] The only stated reason that such capacity would need to go through Clearbrook or Superior, however, is to "use existing NDPC and Enbridge pipeline facilities."[14] Clearly, if the stated purpose is to increase pipeline capacity by connecting to Enbridge's existing facilities, then many reasonable means of bringing Bakken crude to market would be eliminated from consideration, ultimately undermining the very purpose of environmental review. Similarly, the Sandpiper DSDD frames the project's purpose as transporting growing volumes of Bakken crude production to

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[9] Minn. R. 4410.0400, subp. 2.
[10] Minn. R. 4410.2300.
[11] *Simmons v. U.S. Army Corps of Eng'rs*, 120 F.3d 664, 666 (7th Cir. 1997).
[12] 46 Fed. Reg. 18,026 (1981).
[13] Environmental Assessment Worksheet for the Sandpiper Pipeline Project (hereinafter "SPP EAW"), Minnesota Public Utilities Commission, April 11, 2016, at 7.
[14] *Id.*

"refinery markets in the US Midwest and beyond" via the terminal at Superior.[15] If Superior is a crucial component of the project's purpose, then there is only one way to meet that need: to go through Superior. This is not what environmental review is for. It is not intended to provide a *post hoc* validation of the applicant's private, corporate preference. It is not the state's obligation to facilitate the expansion of the applicant's infrastructure network, but by adopting the applicant's statement of purpose and need, the Department has done just that. The Department has transferred a private, corporate preference into a public preference, in violation of state law.

1.1.2 The Purpose Statements in the EAW and DSDD for the L3R Project Have Been Stated Too Narrowly

The DSDD for the L3R Project states that the underlying purpose is to "address safety and integrity concerns of the existing Line 3 pipeline."[16] With this very narrow purpose, the DSDD proposes to restrict analysis of several reasonable alternatives, including rail and trucking. The DSDD reasons that rail and trucking will not address pipeline safety and integrity concerns, but it concludes that rail and trucking "will be looked at as an alternative to continuing to operate the Line 3 pipeline." MCEA and FOH are uncertain as to the meaning of these apparently contradictory statements, and recommend that the statement of purpose be broadened to reflect what the document appears to implicitly acknowledge: that the underlying purpose is to deliver diluted bitumen to oil refinery markets in the U.S., by safe and environmentally responsible means. The fact that the L3R proposal would virtually double the capacity of the existing line is a clear indication that the purpose of the project is not merely to address safety and integrity concerns. The increased capacity of the new pipeline as proposed is also not solely the result of enhanced pressure capabilities. The new pipeline will be two inches larger in diameter than the existing pipeline, and there is no identified safety concern that indicates a need for a larger diameter. The purpose of the project, rather, is to deliver large quantities of petroleum products to the refineries that can utilize it. This more accurate framing of the underlying purpose clarifies that alternatives such as rail and trucking are properly examined as alternatives in the EIS.

1.2 Sandpiper EAW and DSDD Purpose and Need

The internal inconsistency of the stated purpose for the Sandpiper project demonstrates the need to take a broader look at the underlying purposes behind the proposal. The EAW states that the purpose is to increase delivery capacity to "refineries located throughout the Midwest, Midcontinent, and East Coast via the existing Minnesota Pipe Line System at Clearbrook, Minnesota, via an existing terminal in Superior, Wisconsin."[17] But going through Enbridge's existing system is only one way to increase delivery capacity to refineries across the Midwest and East Coast. The statements in the scoping documents mistake *means* with *purpose*. The means to an end are not the purpose of that end. Perhaps the clearest indicator of this confusion is the statement of purpose in the DSDD for the Sandpiper Project, which states that the purpose "is to transport growing crude oil production from the Bakken Formation in North Dakota to the Superior, Wisconsin, terminal and then

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[15] Draft Scoping Decision Document for Sandpiper Pipeline Project (hereinafter "SPP DSDD"), Docket Nos. PL-6668/CN-13-473; PL-6668/PPL-13-474, Minnesota Department of Commerce-Energy Environmental Review and Analysis, April 8, 2016 at 6.
[16] Draft Scoping Decision Document for Line 3 Replacement Project (hereinafter "L3R DSDD"), Docket Nos. PL-15-137/CN-14-916, Minnesota Department of Commerce-Energy Environmental Review and Analysis, April 8, 2016 at 5.
[17] SPP EAW at 30.

connect to various other pipelines expanding access to refinery markets in the US Midwest and beyond."[18] Pipelines terminating at Enbridge's terminal at Superior are one means of "transport[ing] growing crude oil production . . . to refinery markets in the US Midwest and beyond," but many other alternatives will achieve that same end without going through Superior.

The statement of purpose and need in the scoping documents must therefore be modified to encapsulate the true purpose, which is to deliver Bakken crude to the oil refinery market that can utilize it, thereby "expanding access to refinery markets in the US Midwest and beyond."[19] The EIS must analyze the means of achieving that end, including the applicant's preference for utilizing its existing infrastructure but also including any other means of achieving that same end.

1.3 Outdated Oil Market Conditions in Sandpiper Purpose and Need

The Report of Dr. Gunton, attached as Exhibit 1, provides more detail on the changes in the oil markets since the Sandpiper Project was initially proposed.[20] The oil market changes bear serious implications both for the overall need for the project and for the analysis of alternatives to the project in the EIS, and yet none of the scoping documents even acknowledge the drastic changes occurring in the Bakken. The Sandpiper EAW, for instance, states that "crude oil production in the Williston Basin . . . has risen rapidly in recent years"[21] and exceeded existing pipeline capacity, necessitating additional pipeline capacity from North Dakota. When the applicant conducted its open season in January of 2014, production volumes in the Bakken were indeed increasing rapidly. In that month, production had increased 30% from the previous January.[22] However, production peaked in December of that year, and since the peak production has actually declined 14%.[23] Production at individual wells has declined even further. Daily production per well has precipitously declined to a volume not seen since 2008.[24] Production volumes per well peaked in mid-2012, and have been declining ever since.[25]

Clearly it is no longer true that "crude oil production in the Williston Basin" is "growing." The statement of purpose and need in the Sandpiper DSDD, which states that the purpose of the projects is to "transport growing crude oil production from the Bakken formation," is demonstrably inaccurate and should be revised to reflect the fact that production volumes have in fact peaked and are in a state of accelerating decline.

1.4 Dr. Gunton's Report as a Separate Comment

The report, attached as Exhibit 1, details changes in the oil markets since the Sandpiper Project was initially proposed and analyzes the impact of those changes on the scoping process for the SPP EIS, particularly with regard to the DSDD's assessment of the project's purpose and need. Although it is submitted as an

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[18] SPP DSDD at 6.
[19] SPP DSDD at 6.
[20] Ex. 1 (Dr. Thomas Gunton & James Hoffele, *Evaluation of Minnesota Draft Scoping Decision Document for Sandpiper Pipeline Project*, May 21, 2016).
[21] SPP EAW at 6.
[22] *See* Ex. 2 (North Dakota Industrial Commission, Dep't of Mineral Resources, Oil & Gas Division, "Historical Monthly Bakken Oil Production Statistics," https://www.dmr.nd.gov/oilgas/stats/statisticsvw.asp, last retrieved May 2, 2016).
[23] *Id.*
[24] *Id.*
[25] *Id.*

attachment to the comments of FOH and MCEA, the report is an independent comment on the SPP DSDD, and should be responded to by the agency.

SECTION 2: ALTERNATIVES PROPOSED FOR INCLUSION IN THE EIS

2.1 Alternatives Must Include SA-03, SA-04 and SA-05

Alternatives to the Applicant's preferred route for Sandpiper must include alternatives that do not terminate in Superior, Wisconsin, including, at a minimum, SA-03, SA-04, SA-05 and alternatives terminating in Patoka, Illinois. As noted above, the more appropriate statement of purpose and need for the Sandpiper Project is:

> The purpose of this project is to transport crude oil from Bakken oilfields to the refineries that demand it, in a manner that is safe and environmentally responsible.

This statement accords with state and federal environmental review principles that caution against uncritically accepting the applicant's account of the project's need. Properly framed, it is therefore clear that the EIS must include an analysis of alternatives that do not necessarily terminate at Enbridge's terminal in Superior, Wisconsin. Any alternative that offers a reasonable means of transporting Bakken light sweet crude to oil refineries that demand it, particularly in the American Midwest and Midcontinent regions, should be analyzed and compared to the applicant's preferred route. This would include system alternatives such as SA-04 (terminating in Joliet, IL), SA-05 (Joliet, IL), and other as yet-unidentified alternatives that could terminate in Patoka, Illinois, where anchor shipper Marathon maintains its system pipeline hub and the destination point for the great majority of crude oil proposed for shipment by the project. One such alternative could be the route of the Energy Transfer Partners' Dakota Access Pipeline, which is now fully permitted and will begin construction in the spring of 2016 with operations commencing in late 2016. The Dakota Access Pipeline begins at the Williston Basin near Stanley, North Dakota and terminates near Marathon's pipeline hub in Patoka, Illinois.[26] The pipeline is projected to transport up to half of all crude production originating in the Bakken oilfields.[27]

In addition to the alternatives discussed above, Dr. Gunton's report (Ex. 1) also details several transportation corridors and methods that would serve as alternate means of transporting Bakken crude to the refinery market.[28] FOH and MCEA hereby incorporate those comments by reference.

2.2 L3R Alternatives that May Not Include Continued Operation of the Existing Line 3.

Because the true underlying purpose of the existing Line 3 is to deliver heavy diluted bitumen from Canada to the American refineries that demand it and can utilize it, the purpose of the L3R project is to do so in a manner that is safe and environmentally responsible. The applicant's preferred alternative clearly fits this statement of purpose and need, as complete replacement of an aging pipeline is one way to deliver this petroleum product to American refineries. Other alternatives, however, would be to utilize different forms of crude transportation, such as rail and trucking, but the L3R scoping documents appear to exclude such alternatives, noting that they would not address safety and integrity issues in the existing Line 3.[29] Despite concluding that rail and trucking will not meet the stated purpose of the project, the DSDD nevertheless

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[26] Ex. 3 (Richard Nemec, *Construction Starts on Dakota Access Pipeline,* Natural Gas Intelligence, May 2, 2016).
[27] *Id.*
[28] *See* Ex. 1 at 3-5.
[29] L3R DSDD at 7.

concludes that rail and trucking "will be looked at as an alternative to continuing to operate the Line 3 pipeline."[30] As described above, MCEA and FOH are uncertain as to the meaning of these apparently contradictory statements, but a properly broadened statement of purpose would clarify that alternatives such as rail and trucking are properly examined as alternatives in the EIS.

2.3 Alternatives Based on Actual Demand

Alternatives utilizing alternate modes of transportation (rail, trucking) for either the Sandpiper Project or the L3R Project must be based on actual demonstrated demand for crude oil shipped via rail and truck, not on the volumes and destinations assumed by the Project As Proposed. Both the Sandpiper Project and the L3R Project will increase the transportation capacities of existing petroleum pipeline corridors.[31] The L3R Project would "restore the line to its historic intended operating capacity of 760,000 barrels per day (bpd) from its current capacity of 390,000 bpd."[32] Sandpiper "is being designed to expand by 265,000 bpd to an ultimate annual capacity of 640,000 bpd" from Clearbrook to Superior, and up to 365,000 bpd from Beaver Lodge to Clearbrook.[33] Absent future upgrades, the Sandpiper Project as currently proposed would transport 225,000 bpd from Beaver Lodge to Superior.[34]

Transportation choices do not take place in a vacuum. It is not reasonable to assume that if the Sandpiper project was not built (the No Action Alternative), producers would instead ship via rail or truck the same volumes that Sandpiper would otherwise carry. It is similarly unreasonable to assume that, if a rail or trucking alternative were chosen instead of Sandpiper, producers would utilize that transportation to the same extent that they would utilize a pipeline. Shipping decisions would instead be based on case-by-case consideration of fixed costs, which would be different in a rail or trucking alternative.

The DSDD should clarify that the alternatives of rail and trucking must not be evaluated as if they would transport Sandpiper's volumes, unless the alternative proposed actually increases capacity to ship oil via that method. The Draft EIS should conduct a separate analysis of alternatives in which rail or trucking were modestly scaled up to meet transportation needs from the Bakken, but projections of use of those alternatives should be based on actual economic analysis, not just an assumption that the same volumes would be shipped as Sandpiper and the Line 3 Replacement propose to ship.

2.4 Pipe Thicknesses as Modified Scale or Magnitude Alternatives to the Sandpiper Project

Both the Sandpiper and the L3R DSDDs state that "the EIS will not be evaluating alternatives of different pipe dimensions or different pipe metal thickness. Due to engineering requirements and requirements under PHMSA, this EIS will not address variations in different pipe dimensions or different pipe metal thickness as an alternative; pipe thickness will be discussed as a mitigation option."[35] These statements are overly conclusory, and provide no verifiable justification for excluding an alternative other than simply providing a

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[30] *Id.*

[31] Although the Applicant's preferred route for the Sandpiper Project deviates from its existing system, the preferred route nevertheless connects two endpoints that are connected today, and thus the preferred route maintains the same fundamental connectivity, albeit with increased capacity.

[32] Environmental Assessment Worksheet for the Line 3 Replacement Project (hereinafter "L3R EAW"), Minnesota Public Utilities Commission, April 11, 2016, at 6-7.

[33] SPP EAW at 6.

[34] SPP DSDD at 8.

[35] L3R DSDD at 12-13; SPP DSDD at 13-14.

generic reference to engineering and regulatory requirements. Presumably these requirements do not preclude consideration of higher engineering standards as a project option that might affect capacity, integrity and corresponding risks of releases. At a minimum, specific engineering or regulatory requirements that affect the viability of pipe thickness as an alternative must be identified and discussed, and an explanation must be given detailing why those requirements render the alternative unsuitable. Because environmental review is fundamentally an information-gathering exercise, cursory or generic statements that a particular alternative is unsuitable are not sufficient.[36]

2.5 Alternatives that Would Transport Lower Volumes

As described in more detail in Dr. Gunton's report, attached as Exhibit 1, production volumes in the Williston Basin have been declining since 2014.[37] The Sandpiper Project was originally proposed at a time when production volumes were continuing to increase, and the proposal reflects those assumptions. Those volumetric trends have since reversed, and it is now reasonable to consider alternatives that may increase pipeline capacities more modestly than the project as proposed. Such alternatives could include upgrading pump stations on the existing Line 81 corridor to increase capacity of the existing system. Modestly increased transportation capacities may now satisfy the needs posed by the current production volumes in the Williston Basin, while also avoiding many environmental impacts caused by the proposed project. Under the criteria of 4410.2300(G) requiring consideration of alternatives of modified scale or magnitude, then, such lower transportation volume alternatives should be analyzed in the EIS.

2.6 Contrasting Landscapes With Respect to Potential Impacts of Oil Releases

Many alternatives have been proposed for study in the EIS, including several by FOH. The Applicant's proposed routes cross landscapes often characterized by morainal hills, high value wetlands, rivers, and other natural resources, and that have fewer roads than alternative proposed locations to the west and southwest. Alternatives such as SA-04 cross much flatter landscapes with substantially higher road densities. FOH and MCEA contend that oil releases on the flatter terrain are easier to contain and much less likely to quickly move away from the pipeline. Oil releases on flat terrain with lots of roads are much less likely to cause long-term impacts and are more likely to permit rapid response to a pipeline ruptures. The EIS should therefore ensure that these two landscape types are thoroughly contrasted in the alternatives analysis.

[36] Minn. R. 4410.2300(G).
[37] Ex. 1 at 6 (Expert Report of Dr. Gunton).

2.7 No-Action Alternative for the Sandpiper Component of the EIS

2.7.1 The Analysis of the No-Action Alternative Must Incorporate the Increased Pipeline Capacity Provided by the Dakota Access Pipeline Currently Under Construction, As Well As Other Current and Future Proposals for Pipeline Capacity

As required by Minn. R. 4410.2300(G), a no-action alternative must be included in the EIS. The DSDD for the Sandpiper Project states that the "No Action Alternative assumes transport of Bakken oil will continue by other means, including rail, interstate highways and other pipeline systems."[38] Currently, Energy Transfer Partners' proposed Dakota Access Pipeline has received all necessary regulatory approvals, and construction for the pipeline has begun.[39] The project will provide new pipeline capacity of between 450,000 and 570,000 bpd, representing well over half of all production in the Bakken.[40] The new pipeline will terminate in Patoka, Illinois, providing access to oil markets in the Midwest, East Coast, and Gulf Coast.[41] Because Dakota Access Pipeline has moved from the proposal stage to the construction stage, the capacity that it will provide should be analyzed in the No Action Alternative as part of the assumptions concerning available transportation capacity.

But the Dakota Access Pipeline is not the only project that will provide crude oil transportation from the Bakken. As detailed in Dr. Gunton's report, current forecasts estimate *surplus* pipeline capacity from the Bakken of up to 866,000 bpd in 2020. Including rail, total surplus capacity is forecasted at up to 2.5 million bpd.[42] The analysis of the No Action Alternative in the EIS must include an assessment of total surplus transportation capacity that would exist should the Sandpiper Project not be built.

2.7.2 The Analysis of the No-Action Alternative Must Incorporate an Economic Analysis of the Effect of Continued Low Oil Prices on Production Volumes in the Williston Basin

As described in more detail in Dr. Gunton's report (Ex. 1), there is substantial evidence that, in an environment of continued low oil prices, total production volumes in the Bakken will decline. The EIS should therefore include the economic analysis exploring the relationship between oil prices, transportation capacity, transportation cost and production volumes, so that the environmental impacts associated with those production volumes can be compared.

2.7.3 The Analysis of the No-Action Alternative Must Clarify that It Will Avoid the Environmental Impacts of Increased Production Volumes in the Williston Basin, Including But Not Limited to Ground Water Contamination, Climate Change Impacts, Methane and Ethane Leakage, and Air Quality Impacts

Because denial of applicant's proposal will likely result in continued decreasing production volumes in the Williston Basin (as described in Dr. Gunton's report, Ex. 1), the environmental impacts associated with extraction of crude oil in the Williston Basin, including ground water contamination, methane and ethane

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[38] SPP DSDD at 14.
[39] Ex. 3 (Natural Gas Intelligence Article on Dakota Access Pipeline Construction).
[40] Ex. 4 (Dakota Access Pipeline Factsheet); Ex. 2 (Bakken Oil Production Statistics).
[41] *Id.*.
[42] Ex. 1 at 4 (Expert Report of Dr. Gunton).

leakage, climate change and air quality impacts, will be lessened in the No Action Alternative. The analysis of the No Action Alternative should clarify that denial of the applicant's proposal will avoid those environmental impacts.

2.7.4 The Environmental Impacts of Subsection 2.6.3 Must be Quantified as an Economic Value of Damages Utilizing Regulatory Impact Analysis Tools Such as the Social Cost of Carbon or Its Equivalent

To the extent practicable, all environmental impacts avoided by the No Action Alternative should be quantified and expressed as economic damages avoided. The environmental impacts avoided by the No Action Alternative – avoided climate change impacts, methane and ethane leakage, ground water contamination and air quality impacts – are all readily quantifiable by widely available regulatory impact analysis tools, such as the Federal Social Cost of Carbon. The Social Cost of Carbon can be used to estimate the avoided damages from avoided CO2 emissions as a result of low oil prices constraining extraction activities in the Williston Basin (thus avoiding combustion of the petroleum products that would have been produced by those extraction activities), and it can also be used to estimate avoided damages from methane and ethane leakage in extraction, once those gases are converted to tons of CO2 equivalent.

2.7.5 The No Action Alternative Must Indicate that Denial of the Applicant's Proposal Will Not Result in Higher Rail Traffic Volumes in Minnesota

As described in sections 2.7.2 and Dr. Gunton's report, Bakken production volumes in the No Action Alternative are likely to continue their currently decreasing trend. The applicant's original CON application, however, asserts that the No Action Alternative would involve greater rail transportation through Minnesota, arguing that "as Bakken production increases, so would train traffic carrying crude oil through Minnesota."[43] These assumptions are no longer true, and it now appears that Bakken production will *not* continue to increase in the absence of the Sandpiper Project's capacity. As described above, as oil markets stay in a low-price environment and the only transportation options are comparatively more expensive, producers respond by restricting production. This is empirically demonstrated by indicators of Bakken production from the last two years.[44] Rail shipments from the Bakken have also correspondingly declined.[45] Rail traffic from the Bakken peaked in 2014 and has been declining since that time.[46] This trend will continue in the No Action Alternative. The analysis of the No Action Alternative must therefore clarify that denial of the Sandpiper Project will not increase rail traffic through Minnesota.

2.7.6 The No Action Alternative Must Indicate that Denial of the Sandpiper Project Will Not Result in Higher Consumer Prices for Petroleum Products

Because petroleum transportation is diverse and interconnected in the U.S., there is no empirical evidence that consumer prices for petroleum products like gasoline are significantly affected by the construction of

[43] Docket Nos. PL-6668/PPL-13-473; PL-6668/CN-13-473, *Enbridge Pipelines (North Dakota) LLC Sandpiper Pipeline Project Environmental Information Report*, filed Nov. 8, 2013, at 2-2.
[44] Ex. 1 at 5-6 (Expert Report of Dr. Gunton).
[45] Ex. 5 (EIA Crude Oil Rail Transportation Statistics).
[46] *Id.*

new pipelines. In fact, "varying pipeline availability has little impact on the prices that that U.S. consumers pay for refined products such as gasoline."[47]

2.8 No-Action Alternative for the L3R Component of the EIS

2.8.1 The "No Action" Alternative for L3R Must Be Identified in the Draft EIS

Enbridge must clarify what would happen if the L3R project did not go through. Presumably, the choices are that Enbridge would either continue to run the line at increased cost, or it would decommission it because it would no longer be economical to operate. Either way, the "no action" alternative is a key part of the EIS because it gives decision-makers a baseline against which to compare impacts of the project.

If Enbridge would continue to operate the existing Line 3, the EIS should consider an additional alternative to decommission Line 3 entirely, utilizing alternative means of transportation for all volumes transported by the existing line.

2.8.2 The Analysis of the No-Action Alternative Must Incorporate an Economic Analysis of the Effect of Continued Pipeline Restrictions on the Production Volumes of the Alberta Oil Sands Deposits

As described in more detail in Dr. Gunton's report (Ex. 1) there is substantial evidence indicating that, in an environment of continued low oil prices and high transportation costs from restricted pipeline capacity, total production volumes in the Alberta oil sands region will decline.[48] The Final Supplemental Environmental Impact Statement for the Keystone XL Project noted that:

> Oil sands production is expected to be most sensitive to increased transport costs in a range of prices around $65 to $75 per barrel. Assuming prices fell in this range, higher transportation costs could have a substantial impact on oil sands production levels— possibly in excess of the capacity of the proposed Project—because many in situ projects are estimated to break even around these levels. Prices below this range would challenge the supply costs of many projects, regardless of pipeline constraints, but higher transport costs could further curtail production.[49]

The EIS should therefore include an economic analysis exploring the relationship between pipeline capacity and production volumes, so that the environmental impacts associated with those production volumes can be compared. The Draft EIS should address the fact that increased pipeline capacity will increase extraction and production of bitumen from the Alberta oil sands region in a low oil price market, identify the impacts of that increase, and clarify that the No Action Alternative will avoid the impacts of that increased extraction and production.

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[47] Ex. 6 at ES-12 (Keystone XL SEIS Executive Summary).
[48] Ex. 1 at 8 (Expert Report of Dr. Gunton); *see also* Ex. 6 at ES-12 (Keystone XL SEIS Executive Summary).
[49] Ex. 6 at ES-12.

2.8.3 The Analysis of the No-Action Alternative Must Clarify that It Will Avoid the Environmental Impacts of Increased Production Volumes of Alberta Oil Sands, Including But Not Limited to Water Withdrawals, Water Contamination, Energy Consumption, Air Quality Impacts and Climate Change Impacts

Because denial of applicant's proposal will likely result in decreased production volumes in the Alberta oil sands region,[50] the environmental impacts associated with extraction of oil sands and the production of bitumen products, including water withdrawals, water contamination, energy consumption, air quality impacts and climate change impacts, will be lessened in the No Action Alternative. The analysis of the No Action Alternative should clarify that denial of the applicant's proposal will avoid those environmental impacts.

2.8.4 The Environmental Impacts of Subsection 2.7.2 Must be Quantified as an Economic Value of Damages Utilizing Regulatory Impact Analysis Tools Such as the Social Cost of Carbon or its Equivalent

The environmental impacts avoided by the No Action Alternative – water withdrawals, water contamination, energy consumption, air quality impacts and climate change impacts – are all readily quantifiable by widely available regulatory impact analysis tools, such as the Federal Social Cost of Carbon. The Social Cost of Carbon can be used to estimate the avoided damages from avoided CO2 emissions as a result of low oil prices and low pipeline capacity constraining extraction activities in the Alberta oil sands region (thus avoiding combustion of the petroleum products that would have been produced by those extraction activities), and it can also be used to estimate avoided damages from other greenhouse gases, once those gases are converted to tons of CO2 equivalent. To the extent practicable, all environmental impacts avoided by the No Action Alternative should be quantified and expressed as economic damages avoided.

SECTION 3: ANALYSIS OF THE PROPOSED PROJECT'S ENVIRONMENTAL, ECONOMIC, EMPLOYMENT AND SOCIOLOGICAL IMPACTS

3.1 Method for Assessing Impacts of Crude Oil Releases

Of all potential impacts of a pipeline, impacts to water from an oil spill may well be the most catastrophic. While FOH and MCEA expect the EIS to identify mitigation measures, we also expect the EIS to provide an independent assessment of potential oil spill scenarios and the devastating consequences on nearby lakes, rivers, streams and wetlands.

3.1.1 The EIS's Treatment of the Environmental Impacts of Oil Spills Must Include Narrative Descriptions in Addition to Any Numerical Risk Assessment

An EIS that analyzes the environmental impacts of oil spills by relying primarily on numerical risk assessments and engineering forecasts of oil release amounts (based on shutdown systems and other safety measures) is inadequate. The purpose of an EIS is full disclosure of potential impacts in a manner understandable to citizens and agencies.[51] Both the Sandpiper and L3R Projects are complex and

[50] Ex. 1 at 8; Ex. 6 at ES-12.
[51] *See, e.g.,* Minn. R. 4410.2300 ("An EIS shall be written in plain and objective language."); Minn. R. 4410.0300 (The purpose of the an EIS is to "provide usable information to the project propose,

controversial proposals that have the attention of many citizens and decision-makers that lack the technical expertise to appreciate impact analysis that is primarily technical and numerical. The oil spill risk assessment in the EISs for the proposed pipelines should be narrative-based, similar to the Oak Ridge National Laboratory's 2012 study submitted with the Direct Testimony of Paul Stolen in previous Sandpiper proceedings.[52] That study looked at a range of shut-down times and described the consequences that might ensue. The sites selected for modeling should include this type of narrative impact analysis in addition to any technical, numerical risk assessments.

3.1.2 The EIS Should Economically Quantify the Environmental Impacts of Oil Spills Modeled by OILMAPLAND and SIMAP

The DSDD for the Sandpiper Project and the L3R Project state that large volume spill modeling will be conducted by RPS ASA using OILMAPLAND and SIMAP modeling software.[53] For any such spill modeling in the combined EIS, the environmental impacts of the modeled spills must be economically quantified as a projected estimate of socioeconomic damages. The accounting of damages is a routine practice, and there is no reason why an EIS would not include a quantification of modeled oil spill impacts. If a spill were to occur of the type modeled in the EIS, federal law requires that the environmental impacts be quantified in a Natural Resource Damage Assessment.[54] Federal regulations require that the degree and extent of oil spill damages are quantified relative to a baseline, and that quantification forms the basis for a demand for payment issued to the responsible party.[55] Because this process would be a requirement if a spill were to occur, the modeling of oil spill impacts in the EIS must include the economic quantification process as part of the EIS itself. One possible methodology for this quantification analysis is contained in the Oak Ridge National Laboratory's 2012 study referenced above.[56]

3.1.3 The Economic Damages for Oil Spills Modeled in the EIS Must Be Compared Against the Coverage and Limits Included in the Applicant's Liability Insurance Policy

In the event that an oil spill should occur, any response or restoration costs that are not covered by the applicant's liability insurance policy would be borne by the responsible party. If such uninsured costs exceeded the responsible party's liquid assets, the responsible party's bankruptcy could result in the costs being borne by public funds. In 2014, for instance, Enbridge estimated that its total cost estimate for the Line 6B crude oil release near Marshall, Michigan was $1.21 billion.[57] Larger oil spills modeled in the EIS would of course incur larger estimated restoration costs, and to the extent that any potential cost estimates exceeded the limits of NDPC's liability insurance coverage, those costs could cause a liquidity crisis and potential bankruptcy proceeding that would imperil public funds. In order to provide some indication of the likelihood of a spill-induced corporate bankruptcy, the EIS should include a comparison of potential spill liabilities with

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governmental decision makers and the public concerning the primary environmental effects of a proposed project.").

[52] Ex. 16, at Apx. 1 (Direct Testimony of Paul Stolen, eDocket No. 201411-104748-02, Docket No. PL-6668/CN-13-473, Nov. 19, 2014).

[53] SPP DSDD at 27, L3R DSDD at 26.

[54] 15 C.F.R. Part 990, promulgated pursuant to the Oil Pollution Act of 1990.

[55] 15 C.F.R. § 990.52, 15 C.F.R. § 990.62.

[56] Ex. 16 at Apx. 1, Ex. 4.

[57] Ex. 7 at 19.

the applicant's insurance coverage and limits. Such an analysis requires transparency by NDPC and Enbridge on existing or projected insurance coverage.[58]

3.1.4 Oil Spill Modeling Should Not Be Based on Data Provided by NDPC

Both DSDDs indicate that "the Applicant will provide data on maximum spill volumes, spill frequency and the types of crude oil being transported" for the purposes of modeling large volume oil spills.[59] The project applicant's vested economic interest in limiting oil spill modeling requires that the RGU conduct an independent analysis of the risk of large volume oil spill releases. Spill volumes and frequencies are consistently underestimated by entities proposing pipeline projects, and federal agencies have noted that many estimates of Enbridge's 2010 Line 6B oil spill have been "substantially greater" than Enbridge's estimate.[60] There have also been discrepancies in the pipeline operator's estimate of shut down times in the event of a spill, as compared to actual shut down times. Data provided by the applicant is similarly unlikely to provide an adequate basis for evaluating the environmental impacts of a potential spill, and the oil spill modeling for the Sandpiper/L3R EIS must accordingly be based on an independent assessment of projected spill volumes and frequencies.

3.1.5 The Estimate of Spill Frequency Must be Based on Realistic Assumptions that Include the Incidence of Human Error

Because risk analysis is so greatly influenced by the probability of an event, the oil spill modeling included in the EIS is crucially dependent on accurate assumptions regarding spill frequency. Reliance on NDPC data for spill frequency assumptions is clearly inadequate, as NDPC's economic interest in minimizing the risk of oil spills ensures that any supplied data would be affected by a conflict of interest. Moreover, while NDPC and Enbridge will certainly propose mitigation measures designed to decrease the risk of a spill, human error poses a risk that cannot be mitigated. The probability of oil spills must therefore be independently evaluated in the EIS. Other studies indicate that human error is a significant cause of oil releases from facilities associated with pipelines, such as storage tanks.[61] The spill volumes resulting from incorrect operations of tank facilities, furthermore, tend to be larger than mainline spill volumes.[62] The EIS for the Sandpiper and L3R Projects must therefore include a consideration of the frequency of human error in equipment operations, the resulting likelihood that such human error would cause oil releases, and the environmental impacts of those potential releases.

3.1.6 Oil Spill Modeling for the L3R Project Must Include Diluted Bitumen

The L3R DSDD states that the oil spill models "will be run for a set of scenarios that include the following crude oil types: light sweet Bakken crude oil, Cold Lake Blend and Cold Lake Winter Blend."[63] Although the proposed pipeline is physically designed to transport a variety of crude products, including light, medium and heavy crudes, the primary purpose of the L3R Project is to transport diluted bitumen from Hardisty, Alberta. Diluted bitumen is a fundamentally different product than Bakken light sweet crude, and oil spills of diluted

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[58] Minn. R. 4410.2400 ("No material may be incorporated [into an EIS] by reference unless it is reasonably available for inspection by interested persons within the time allowed for comment.").
[59] *See, e.g.*, L3R DSDD at 25.
[60] *See* Ex. 8 at i (Final Damage Assessment and Restoration Plan for Line 6B Spill).
[61] *See* Ex. 9 at 3 (Keystone XL SEIS Attachment K).
[62] *Id.*
[63] L3R DSDD at 26.

bitumen differ significantly in their environmental impact.[64] Any EIS that conducted oil spill modeling for the L3R Project without modeling the effects of a diluted bitumen spill would clearly be inadequate. The EIS should also include the results of the National Academy of Sciences recent study concerning the environmental impacts of diluted bitumen spills.[65] That study "brought together diverse expertise on the chemistry and environmental impacts of crude oils and broad experience in spill response," and its findings were independently reviewed by an extensive committee of experts.[66] Among its key findings was the conclusion that "spills of diluted bitumen pose particular challenges when they reach water bodies. In some cases, the residues can submerge or sink to the bottom of the water body."[67]

3.1.7 The Environmental Impacts of a Diluted Bitumen Spill Must Incorporate the Findings of the National Academy of Sciences

The EIS should address the implications of the NAS study of bitumen to the sensitive locations, including wetlands crossed by the proposed routes. The study suggests that it may be impossible to clean up diluted bitumen from certain locations, and/or that the attempts to clean up oil releases from such areas will in effect destroy these areas. The implication of this finding is that should Line 3 be permitted in the location desired by the Applicant the state of Minnesota would need to make this decision based on an assumption that no significant oil releases would ever occur for the life of the project.

3.1.8 The FSDDs Must Identify the Representative Sites Proposed for Oil Spill Modeling

Both DSDDs describe a modeling process consisting of 2-D modeling at five representative sites and 3-D modeling at two sites.[68] None of these proposed modeling sites are identified. It is accordingly impossible to assess whether the selected sites are indeed representative, or whether they represent best-case scenario oil spill locations. The selection of representative sites cannot be delegated to the applicant or to RPS ASA, the environmental modeling consultant for the EIS. The location of those sites is a critical detail in ensuring that the oil spill modeling assesses realistic scenarios based on a variety of sites along the proposed route. The selected sites should, at a minimum, sample critical terrains, ecosystems, water bodies, habitats, High Consequence Areas and Natural Disaster Hazard Areas crossed by the proposed route. Although the DSDDs indicate an awareness that releases at High Consequence Areas and Natural Disaster Hazard Areas represent particularly significant impacts, the documents do not provide any indication of the analysis of those impacts that will occur in the EIS. At a minimum, the oil spill modeling must incorporate High Consequence Areas and Natural Disaster Hazard Areas as representative sites. At least one site must be located beneath the bed of a large volume flowing river such as the Mississippi or St. Croix. These representative sites must be chosen by the RGU in the FSDD.

3.1.9 Oil Spill Modeling in the EIS Must Include Representative Sites on Enbridge's Pipeline System Outside the Tioga-Superior Segment, Including Sites at a Variety of Terrains, Ecosystems, Water Bodies and Habitats Crossed by Enbridge's System South and East of North Dakota

The direct effect of the Sandpiper Project and the L3R Project will be to increase the volumes of crude oil products being transported by Enbridge's pipeline system. This includes not only the proposed project within

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[64] See Ex. 10 (NAS Study of Spills of Diluted Bitumen).
[65] *Id.*.
[66] *Id.* at viii, xiii.
[67] *Id.* at 3.
[68] L3R DSDD at 26, SPP DSDD at 28.

the borders of Minnesota, but the entirety of Enbridge's system south and east of North Dakota. The higher volumes enabled by the two projects will continue on to refineries in the Midwest, Midcontinent, and Gulf Coast regions.[69] These higher volumes being transported throughout the U.S. will necessarily increase either the volumes or frequency of spills occurring on Enbridge's system outside Minnesota. As an illustration, the 2010 oil spill near Marshall, Michigan occurred on Enbridge's Line 6B, which connects to Enbridge's hub outside Chicago.[70] The Chicago hub is supplied in part by connections from Superior, Wisconsin. [71] Both projects would therefore cause higher volumes of crude oil products to be transported through pipelines such as Line 6B, which accordingly increases the environmental impact of any oil spill that occurs, whether the location of that spill is within Minnesota or outside its borders. Any oil spill modeling in the EIS must therefore model potential spill sites at a variety of terrains, ecosystems, water bodies, habitats, High Consequence Areas and Natural Disaster Hazard Areas crossed by Enbridge's entire system south and east of North Dakota, not just those located in Minnesota.

3.1.10 Representative Sites Outside the Tioga-Superior Corridor Must Include Potential Worst Case Scenarios Such as a Line 5 Spill in the Straits of Mackinac

As described above, the increased capacities of the Sandpiper and L3R Projects will increase the volumes of crude oil products being transported by all of Enbridge's pipeline system, not just the segments proposed for Minnesota. From Superior, these increased oil volumes will be shipped southward and eastward on existing pipelines. One such pipeline that will connect with both Sandpiper and L3R is Enbridge's Line 5, which passes under the Straits of Mackinac, the waterway joining Lakes Michigan and Huron. The increased transportation volumes of both proposed projects will cause a corresponding increase in the risk of a spill outside Minnesota, including in Line 5. The potential impacts of a spill in the Straits of Mackinac has been studied and modeled by the University of Michigan's Water Center, and the results of that study should be incorporated in the both EISs as a means of analyzing the increased risks of such a catastrophic spill resulting from the higher pipeline volumes enabled by the two proposed pipelines.[72]

3.1.11 The EIS Must Evaluate the Potential Impact of a Large or Small Volume Oil Release on the Trout Streams Crossed by the SPP Project

The Sandpiper Project EAW identifies six trout streams crossed by the applicant's preferred route.[73] The DSDD for the project, however, does not specify that the oil spill modeling will incorporate an analysis of the effects of an oil spill on these designated trout streams. The FSDD must indicate that the analysis of potential oil spill impacts will include the impacts of a large or small volume oil release on the designated trout streams and the habitat therein crossed by the project as proposed.

3.1.12 The EIS Must Evaluate the Environmental Impact of the Spacing and Locations of the Automatic Shutoff Valves Designed to Limit Oil Releases in the Event of a Rupture

The oil spill modeling incorporated into the EIS should evaluate the effect of the project's proposed locations of mainline valves capable of limiting releases in the event of a rupture. The modeling should also incorporate

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[69] SPP DSDD at 6, Ex. 20; Direct Testimony of C. Michael Palmer, Docket No. PL-6668/CN-13-473, Aug. 8, 2014, at 7.
[70] Ex. 20 (Enbridge Pipeline Map).
[71] *Id.*
[72] Ex. 12 (University of Michigan Straits of Mackinac Oil Spill Study).
[73] SPP EAW at 107.

an analysis of alternate locations as an aid in assessing potential mitigation options, as alternate locations of mainline valves could be strategically placed to mitigate impacts to particularly sensitive environments.[74]

3.1.13 The EIS Must Evaluate the Environmental Impact of Oil Spills with Ignition

As described in the Direct Testimony of Paul Stolen, oil spill modeling must incorporate the potential effects of an oil spill with ignition. Neither DSDD in this matter specifies that the oil spill modeling will incorporate the increased environmental impacts of an oil spill featuring ignition of a pool fire, flash fire, or vapor cloud explosion.[75] Bakken crude is known to be particularly volatile, and poses a significant risk of ignition upon release.[76] The effects of such spills have been evaluated and quantified by studies conducted by federal agencies, and given the DSDD's statements that the oil spill modeling will be conducted in accordance with federal PHMSA regulations,[77] the effects of oil spills with ignition must be included in the EIS.

3.1.14 The EIS Must Evaluate a Catastrophic Oil Spill Scenario in Which a Large Oil Spill with Ignition Damages Co-Located Pipelines

Environmental review principles require the evaluation of low probability, high-risk environmental impacts. Such impacts for the Sandpiper Project and the L3R Project would include a catastrophic oil spill with ignition, in a sensitive area, in which co-located pipelines are also damaged, increasing the volume of the release. Neither DSDD requires the modeling of such a scenario, and is therefore inadequate in assessing the likelihood and the impacts of such an event. The FSDD must require modeling for catastrophic scenarios, even those that are low probability, because the consequences would be so severe. Such consequences are unaccounted for in the EIS as currently scoped.

3.1.15 The EIS Must Evaluate the Potential for Groundwater Contamination by a Large or Small Volume Oil Release

The DSDDs for the two projects state that the EIS will analyze the potential for groundwater contamination within 1,000 feet of the pipeline corridor.[78] This boundary is based on "work done previously in Exponent's risk assessment of the Keystone XL Pipeline."[79] Although reliance on previously completed work is allowed by state environmental review regulations,[80] that work must be relevant to the current project. To the extent that the groundwater contamination modeling incorporated into the EIS for SPP and L3R is based on particular mixes of petroleum products that are unique to the Keystone XL proposal, or the terrain on which that pipeline was proposed, that modeling may not accurately represent the risks to groundwater posed by the SPP and L3R projects. Different crude oil products may pose different risks upon release into surface waters or onto permeable soils. The particular risks to groundwater posed by the transport of Bakken light sweet crude and diluted bitumen on SPP and L3R, respectively, must be independently evaluated in the EIS. That analysis should also include specific information about the aquifers crossed by the proposed projects,

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[74] *See* Ex. 16 at 27 (Stolen Direct).
[75] *See Id.* at Ex. A, 86-87.
[76] PHMSA Safety Alert, January 2, 2014, *Preliminary Guidance from Operation Classification*, available at http://phmsa.dot.gov/pv_obj_cache/pv_obj_id_111F295A99DD05D9B698AE8968F7C1742DC70000/filename/1_2_14%20Rail_Safety_Alert.pdf., last retrieved May 24, 2016.
[77] L3R DSDD at 26, SPP DSDD at 27.
[78] SPP DSDD at 28.
[79] *Id.*
[80] *See, e.g.*, Minn. R. 4410.2200; 4410.2400.

particularly shallow groundwater aquifers that may be especially vulnerable to contamination by large or small volume releases.

3.1.16 The EIS Must Analyze the Probability and Impacts of Small Leaks with an Unusually Long Detection Period

The DSDDs for the two pipelines indicate that the impacts of pinhole leaks will be assessed based on the assumption that a small volume leak would be detected within a matter of "several months."[81] The proposed projects, however, cross a significant acreage of remote and inaccessible areas, and it is therefore possible that a small leak would remain undetected for a longer period of time than assumed in the EIS as currently scoped. A small leak underneath a river bed could pose an especially damaging risk of evading detection for longer than "several months." The probability and impacts of such an event must be analyzed in the EIS.

3.1.17 The Oil Spill Analysis Must Evaluate the Potential Impacts of an Oil Spill Occurring During Winter Conditions, Including Under Ice

Minnesota's climate present unique obstacles in oil spill response and recovery. Access to a spill site can be severely restricted or prohibited in winter conditions, particularly if the location of the rupture is beneath ice cover. Montana's experience with the spill into the Yellowstone River in January 2015 was only one example of this problem. In that case, over 40,000 gallons of crude spilled into the river, and groundwater was contaminated while cleanup was hindered due to ice on the river. Any oil spill analysis included in the EIS must assess the probability and risks of an oil spill occurring during the winter months, including the possibility that the volumes of released oil would be affected by diminished access to the site during the response time.

3.2 'Upstream' Environmental Impacts of Increased Crude Extraction at Production Sites

3.2.1 The Environmental Impacts of Increased Crude Extraction in the Williston Basin, Including But Not Limited To Methane Leakage, Ethane Leakage, Air Quality Impairments and Ground, Surface and Drinking Water Contamination Must be Analyzed as Impacts of the Sandpiper Pipeline Proposal

A new crude oil pipeline can make a difference to suppliers of crude oil, as well as refiners and other users. Indeed, a large crude oil pipeline can change the face of the crude oil market across the nation. It can increase both supply and demand for crude oil. That, of course, is why NDPC wishes to build it. But changing the face of the crude oil market has consequences, and many of those are environmental.

An EIS must include "a thorough but succinct discussion of potentially significant adverse or beneficial effects generated, be they direct, indirect, or cumulative."[82] If the Sandpiper and Line 3 pipelines cause increased production of Bakken oil and/or tar sands oil in Canada, the two products they will carry, then that is surely an indirect adverse impact of the pipeline under MEPA.

As described in Dr. Gunton's report, the increased pipeline capacity provided by the Sandpiper Proposal will increase the pace of extraction in the Williston Basin, reversing recent declines caused by low oil prices and limited pipeline transportation availability. With the new, cheaper pipeline capacity of Sandpiper coming

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[81] SPP DSDD at 28; L3R DSDD at 26.
[82] Minn. R. 4410.2300(H).

online, individual wells' break-even points will be lowered, and Bakken production volumes will begin to increase once again, even in a continued low oil price market. Well producers' investment decisions are based on current oil prices and the costs of production, of which transportation costs are a significant portion. Lowering these transportation costs will of course change those investment decisions, leading to more wells and more extraction by hydraulic fracturing. The federal courts have made clear that NEPA requires an EIS to consider the increased production (and ultimately consumption) that is the direct result of lowered transportation costs for fossil fuels.[83] This increased extraction activity carries a significant environmental footprint, all of which is currently ignored in the Sandpiper DSDD.

Bakken crude is a tight oil resource recovered by hydraulic fracturing techniques. These techniques have a variety of well-known and well-documented environmental impacts, including methane and ethane leakage, air quality impairments, and ground, surface and drinking water contamination.[84] These impacts significantly affect global climate change, human health, water quality and wildlife, but none are included for analysis in the EIS.

3.2.2 The Environmental Impacts of Increased Oils Sands Extraction in the Alberta Oil Sands Region, Including But Not Limited To: Emissions of Polycyclic Aromatic Hydrocarbons to the Air, Water and Soil; Air Quality Impairments; Adverse Effects on Wildlife and Habitats; and Ground, Surface and Drinking Water Contamination Must be Analyzed as Impacts of the L3R Proposal

As described above, the increased pipeline capacity provided by the L3R Proposal will increase the pace of extraction in the Alberta Oil Sands Region. The Line 3 replacement doubles the capacity of the line, resulting in over 300 bpd additional crude oil shipped out of the tar sands region. Moreover, the EIS must compare the effects of the project to the "no action" alternative. In this case, presuming that the existing Line 3 is no longer financially viable, then the "no action" alternative would be to retire the existing Line 3, but not replace it. In that case, the impact of the proposed Line 3 is the entire volume of tar sands at 750 bpd. The EIS must compare 750 bpd shipped out of the tar sands region on Line 3 to zero bpd.

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[83] *Mid States Coalition for Progress v. Surface Transportation Board*, 345 F.3d 520, 549 (8th Cir. 2003) ("But the proposition that the demand for coal will be unaffected by an increase in availability and a decrease in price, which is the stated goal of the project, is illogical at best. The increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other potential fuel sources, such as nuclear power, solar power, or natural gas").

[84] *See* EA Kort, ML Smith, LT Murray, A Gvakharia, AR Brandt, J Peischl, TB Ryerson, C Sweeney, and K Travis, *Fugitive Emissions from the Bakken Shale Illustrate Role of Shale Production In Global Ethane Shift*, Geophys. Res. Lett., 43, doi: 10.1002/2016GL068703; J Peischl, A Karion, C Sweeney, EA Kort, ML Smith, AR Brandt, T Yeskoo, KC Aikin, SA Conley, A Gvakharia, M Trainer, S Wolter, and TB Ryerson, *Quantifying Atmospheric Methane Emissions from Oil and Natural Gas Production in the Bakken Shale Region of North Dakota*, J. Geophys. Res., May 11, 2016, available at http://onlinelibrary.wiley.com/doi/10.1002/2015JD024631/abstract, last retrieved May 12, 2016; Joshua P. Schwarz, John S. Holloway, Joseph M. Katich, Stuart McKeen, Eric A. Kort, Mackenzie L. Smith, Thomas B. Ryerson, Colm Sweeney, and Jeff Peischl, Black Carbon Emissions from the Bakken Oil and Gas Development Region, *Environmental Science & Technology Letters*, 2015; NE Lauer, JS Harkness, and A Vengosh, *Brine Spills Associated with Unconventional Oil Development in North Dakota,* Environmental Science & Technology, April 27, 2016, available at http://pubs.acs.org/doi/abs/10.1021/acs.est.5b06349, last retrieved May 12, 2016;

With the doubled pipeline capacity of a new Line 3 coming online, individual production projects' break-even points will be lowered, and production volumes will accelerate, even in a continued low oil price market.[85] Production projects in the oil sands region are based on current oil prices and the costs of production, of which transportation costs are a significant portion. Lowering these transportation costs will of course change those investment decisions, leading to more extraction and ultimately more consumption. The federal courts have made clear that NEPA requires an EIS to consider the increased production (and ultimately consumption) that is the direct result of lowered transportation costs for fossil fuels.[86] This increased extraction activity carries a significant environmental footprint, all of which is currently ignored in the L3R DSDD.

The environmental impacts of oil sands extraction and processing have been documented for decades. Primarily, those impacts are: (1) impacts on water quality from waste water releases; (2) water quality impacts from water withdrawal and use; (3) greenhouse gas emissions, (4) air pollutants (including SOx, NOx, volatile organic chemicals such as polycyclic aromatic hydrocarbons, and particulate emissions), (5) tailings disposal, and (6) land disturbances, including habitat fragmentation or destruction.[87]

3.3 "Downstream" Impacts of Increased Petroleum Production, Transport and Use.

3.3.1 The EIS Should Examine the Impacts of Increased Bakken and Tar Sands Petroleum Use.

Federal courts have held that increased production from a new transportation corridor is an indirect impact that must be analyzed under MEPA.[88] In one case, a rail company sought to build a new rail line from the coal mines of Wyoming's Powder River Basin to service power plants in Minnesota.[89] At the Eighth Circuit, the Sierra Club argued that the rail line would increase the emissions of various noxious pollutants by increasing access to the low-sulfur coal. The Surface Transportation Board, which prepared the EIS, argued that its new rail line would not affect the demand for coal, but the court found this unlikely, as the stated purpose of the project was to increase availability and decrease the price of Powder River Basin coal. The rail company also argued that any such impact was too speculative to be determined, but the court also dismissed this argument. It held that increased use and access to low-sulfur coal fall under "indirect effects" that must

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[85] Ex. 6 at ES-12 (Keystone XL SEIS Executive Summary) (noting that increased pipeline capacity will increase oil sands production in a low oil price market).

[86] *Mid States Coalition for Progress*, 345 F.3d at 549 ("But the proposition that the demand for coal will be unaffected by an increase in availability and a decrease in price, which is the stated goal of the project, is illogical at best. The increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other potential fuel sources, such as nuclear power, solar power, or natural gas").

[87] Council of Canadian Academies, *Technological Prospects for Reducing the Environmental Footprint of Canadian Oil Sands: Executive Summary*, 2015, available at http://www.scienceadvice.ca/uploads/ENG/AssessmentsPublicationsNewsReleases/OilSands/OilSandsExecSummEn.pdf, last retrieved May 12, 2016; A Parajulee and F Wania, *Evaluating officially reported polycyclic aromatic hydrocarbon emissions in the Athabasca oil sands region with a multimedia fate model,* March 4, 2014, PNAS 111: 3344-3349.

[88] MEPA is modeled on the National Environmental Policy Act, and Minnesota state courts often turn to federal courts for guidance on interpreting MEPA. *See, e.g., Minnesota Center for Environmental Advocacy v. Minnesota Pollution Control Agency*, 644 N.W.2d 457, 468 n.10 (Minn. 2002) (noting that NEPA is similar to MEPA in their primary procedural requirements, and that "therefore looking to federal case law is appropriate and helpful in this case.").

[89] *Mid States Coalition for Progress*, 345 F.3d at 520.

be analyzed under NEPA. Even if the *extent* of the impact is uncertain, the *nature* of the impact is not, and therefore it must analyzed with as much detail as possible.[90]

Similarly, in this case, the EIS must include the indirect impacts of increased usage of crude oil from both the Bakken associated with Sandpiper, and the tar sands, associated with Line 3. While it is may be difficult if not impossible to predict the precise uses of the crude oil shipped via the proposed Sandpiper and Line 3 pipelines, it is possible to make rough estimates. MEPA requires such calculations even where there is some uncertainty.[91] For instance, the EPA has determined that carbon dioxide emissions per barrel of crude oil may be analyzed using a formula of "heat content times the carbon coefficient times the fraction oxidized times the ratio of the molecular weight of carbon dioxide to that of carbon (44/12)."[92] Using this formula, the EPA calculated that the average carbon emissions per barrel of crude oil in the U.S. is 0.43 metric tons CO_2. The EIS could likely provide a more refined analysis specific to Bakken and tar sands crude oils. Similar calculations could also be performed for other pollutants from refining crude oil.

3.3.2 The EIS Should Examine the "Downstream" Impact of Increased Impacts of Increased Crude Oil Transport.

Increasing the volume of oil shipped into Superior, Wisconsin will increase the volume of oil shipped out of Superior, Wisconsin to other refineries, especially in the Chicago area and lower Midwest. In the now-defunct Certificate of Need proceedings for the Sandpiper Pipeline, Marathon Petroleum made no secret of the fact that Superior, Wisconsin was not the final destination for the Bakken crude to be shipped on the Sandpiper. The same is certainly true for the oil on Line 3, as the refining capacity in Superior, Wisconsin is already greatly exceeded by the volume of oil coming in. All of that oil will need to be shipped elsewhere, either by pipeline, train or truck.

As a result of increased volume of oil arriving in Superior, the following indirect impacts may occur:

- New pipelines may need to be built;
- Existing pipelines may need to be expanded;
- Additional oil may be shipped on aging pipelines, resulting in increased pressure;
- Additional oil may be shipped on aging pipelines, resulting in prolonged life for those pipelines and increased risk of spill;
- Increased rail or truck traffic carrying crude oil out of Superior, Wisconsin.

There may be other indirect impacts that we have not identified here. All of these impacts are "indirect" impacts under MEPA, and must be analyzed.

When analyzing these impacts, NDPC's preferred route must be compared with similar indirect impacts of the system alternatives. SA-04 and SA-05 were proposed by FOH in part because those proposed alternatives terminate closer to the refineries that are the final destination for the oil, at least in the case of Sandpiper.

In addition, when analyzing Line 3, the EIS should compare the indirect impacts to the "no-action alternative" of not replacing Line 3. If the oil currently shipped on Line 3 is no longer shipped to Superior,

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[90] *Id.* at 549-550.
[91] Minn. R. 4410.2500.
[92] U.S. EPA, *GHG Equivalencies Calculator – Calculations and References*, https://www.epa.gov/energy/ghg-equivalencies-calculator-calculations-and-references, last accessed May 24, 2016.

Wisconsin, then the indirect impacts may include retirement of existing pipelines out of Superior, WI; less utilization of existing pipelines out of Superior, WI; less rail or truck traffic out of Superior; etc. The impact of replacing Line 3 is to avoid those potentially advantageous outcomes.

3.4 Environmental Impacts of Pipeline Construction

3.4.1 The EIS must analyze the construction and permanent "footprints" of the two projects on the differing landscapes crossed by the proposed pipelines and not rely on Enbridge's estimates and descriptions

Construction of pipelines has both temporary and permanent impacts. Permanent impacts are caused by removal of, for example, forest vegetation over the permanent right of way for the project life. This in turn causes other impacts, including impacts to wildlife or of increased runoff. Another important potential permanent or long-term impact is from topsoil mixing over the trench or on side-hill cuts needed to construct the 50-60 foot wide flat work area needed for pipe installation. This results in, for example, increased erosion on hillsides, sediment reaching streams, and invasion of exotic species of plants. Other long term impacts include forest removal on hilly terrain outside of the permanent right-of-way that is needed for spoil storage and ROW needs during construction.

In addition, even temporary impacts must be accurately characterized in the EIS to assess impacts. The temporary area needed for pipeline construction in hilly terrain is much wider than that needed in flat terrain. Normally, the affected area in flat terrain can be limited to a 100-120 foot width for one pipeline. On hilly terrain, the temporary ROW can be as much as 350-400 feet in width, requirement extensive forest clearing in forested areas.

The EIS should independently analyze:

- The temporary and permanent size of the construction zone needs--the "footprint"--on flat terrain vs. hilly terrain.
- The geographic extent of topsoil mixing and over the trench and on side-hill cuts and on temporary and permanent access roads for these scenarios: 1) the Applicant's proposal to only separate topsoil in agricultural areas and leave the rest up to landowner desires; 2) the geographic extent of topsoil mixing if the Applicant's permit--if eventually given--requires topsoil separation on all locations over the trench and where there are side-hill cuts deeper than the topsoil (where topsoil is potentially lost by burial in parent material).
- The impacts of topsoil loss to burial in substrate based on the estimates of geographic extent cited above.
- The increases in ROW width due to topsoil separation in hilly terrain vs. flat terrain.
- The pros and cons of constructing the two pipelines at the same time, should they eventually be permitted.
- The pros and cons of winter construction on wetlands and uplands, including the difficulties in topsoil separation and replacement on frozen ground.
- The specific extent of land clearing and pipeline separation from existing pipelines and other linear facilities, and the extent to which the two new pipelines will or will not be able to maintain the 25 foot separation proposed by the Applicant. This will provide a more objective and accurate indication of the width of the expanded pipeline corridor. Such information is crucial to the analysis

of other impacts such as to wildlife and the cumulative impacts of adding pipelines. It is also crucially needed to determine whether the Applicant's portrayal of following existing corridors is accurate or reasonable. Due to many obstacles as additional pipelines have been added to the existing pipeline corridors, locating the new pipeline 25 feet from an existing pipeline is often not possible. Sometimes the new pipelines must cross over to the other side of the existing pipelines, or they must deviate from the existing pipeline corridor. The result is a much different actual on-the-ground impact than that indicated by the Applicant's limited environmental assessment.

3.5 Wetland Impacts

When analyzing the potential impacts of the project, the Commission should consider the purpose of the Wetland Conservation Act, which is to:

A. achieve no net loss in the quantity, quality, and biological diversity of Minnesota's existing wetlands;
B. increase the quantity, quality, and biological diversity of Minnesota's wetlands by restoring or enhancing diminished or drained wetlands;
C. avoid direct or indirect impacts from activities that destroy or diminish the quantity, quality, and biological diversity of wetlands; and
D. replace wetland values where avoidance of activity is not feasible and prudent.[93]

Under Minnesota law, the project must be designed to prevent or avoid impacts on wetlands.

3.5.1 Impacts to Wetlands Due to Construction

Impacts to wetlands from construction are described as temporary, but the EIS should analyze whether that is the case. It is not enough to simply assume that because the soil is replaced, the wetland will be restored. It seems unlikely that sensitive wetlands can maintain their integrity when they are excavated, a pipeline put underneath, and then the materials put back. Previous pipeline projects through wetlands make this clear – once the construction is completed, the wetland has been permanently altered. Potential impacts to wetlands from construction include, but are not limited to:

- Some types of wetlands take decades or even centuries to form and cannot tolerate this type of treatment.
- Disturbance or destruction of wetlands is likely to present the opportunity for introduction of invasive plants, or loss of native plants.
- Disturbance is likely to change drainage patterns, which could cause wetlands to become drier or wetter. This could also have an indirect impact on nearby wetlands.
- Permanent impacts from spills of oil, gas, drilling fluid or other materials used during construction.

[93] Minn. R. 8420.0100, subp. 1.

3.5.2 The EIS Should Clarify Actual Impacts to Wetlands

Constructing the pipeline clearly would result in permanent impacts to wetlands, yet the EAW misleadingly claims that "only 1.0 acres would be permanently filled wetlands." Sandpiper EAW, p. 90. Table 7-1 on p. 31 of the Sandpiper EAW similarly suggests that all wetland cover except for one acre will be maintained after construction. While only one acre may be permanently filled, there is no doubt that the other 958.2 acres will be altered, in many cases to be unrecognizable; a different type of wetland or even no longer wetlands at all. The EAW currently reads to suggest as if none of these wetlands will be permanently affected, let alone lost. The analysis should be refined to determine which acres will be permanently affected, and how.

3.5.3 The EIS Must Analyze the Effects of Oil Releases in Wetlands Including the Effects of Bitumen

The EIS must analyze the effects of an oil release on wetlands, including especially sensitive, high-value wetlands, and assess whether bitumen can ever be cleaned up from such wetlands. It must also analyze the destructive effects of the bitumen clean-up processes themselves. It should assess the long term consequences and costs of both the spill and clean-up efforts and the time frame for when such wetlands will return to their current condition, whether it be 10 years or 500 or more years. Examples of such wetlands are those in the LaSalle Creek/LaSalle Lake area, along the Mississippi River, and the Upper Rice Lake area.

3.6 Impacts on Aquatic Life, Including Habitat Loss

In addition to permanent changes to wetlands, pipeline construction may also cause permanent changes to habitat for aquatic plants and animals. Although potential impacts on fish and other aquatic life beyond the pipeline boundaries are addressed briefly in the EAWs under cumulative impacts, these are also direct impacts of the proposed pipelines.

3.7 Environmental Impacts of Surface Uses

3.7.1 The Proposed Consideration of the Impacts of Access Roads Necessary for Construction and Maintenance is Unreasonably Narrow

Although the DSDDs for both projects include access roads in their descriptions of the project, neither document gives any indication that the EIS will specifically include the environmental impacts of those roads. The new roads attract a variety of third party uses, including ATVs, motorbikes and snowmobiles, regardless of whether those uses are permitted by Enbridge or the state. The environmental impact of those uses are currently unaccounted for in the proposed scope of the EIS, which would therefore exclude consideration of impacts such as habitat fragmentation, soil erosion and compaction, poor air quality, aesthetic impairments, invasive species, turbidity impacts on designated trout streams and excessive noise. These impacts may be heightened by the intensity of the surface uses, which should therefore be analyzed in the EIS.

3.7.2 The Proposed Consideration of the Impacts of the Cleared Right of Way is Unreasonably Narrow

A cleared right of way produced by a pipeline project attracts a variety of third party uses, including ATV use and snowmobile use. These uses cause direct environmental impacts through soil compaction and erosion, and also pose a risk of interference with the pipeline itself, including the risk of rupture. This is particularly

acute where surface uses have the potential to erode soil cover above the pipeline, compromising the structural integrity of the pipeline itself. The EIS should consider the probability and intensity of such surface uses and evaluate the environmental impact of the increased surface activity resulting from the pipeline construction. These impacts include habitat fragmentation, soil erosion and compaction, poor air quality, aesthetic impairments, excessive noise, turbidity impacts on designated trout streams and the risk of compromised pipeline integrity or rupture.

3.7.3 The EIS Must Consider Impacts Resulting from Surface Clearance for the Impressed Current Cathodic Protection System

The proposed Sandpiper Project requires the construction of an impressed current cathodic protection system, which involves a 20-30 foot wide construction workspace 600 feet perpendicular to the pipeline.[94] The surface of this workspace must be routinely cleared of all woody plants. As noted in the sections above, these cleared areas attract a variety of third party uses, and the environmental impact of those uses must be evaluated in the EIS.

3.8 Potential for Failure of Mitigation Measures

3.8.1 Impacts Resulting from the Failure of Mainline Shutoff Valves

The Sandpiper Project and the L3R Project both propose to install mainline shutoff valves (21 for Sandpiper and 22 for L3R) that can be remotely controlled from the NDPC Control Center.[95] Although the DSDDs for the two projects both propose to include oil spill modeling in the EIS, neither document identifies any analysis of the potential impacts of failures in the mainline intelligent valve control system, despite the fact that federal data indicate equipment failures cause 32% of pipeline spills.[96] These impacts could be the result of faulty valve operation or failures in the communication system between the valve and NDPC's Control Center (such as by interference from solar magnetic storms),[97] either of which would potentially increase potential oil releases by an order of magnitude in the event of a rupture. The EIS must also indicate the significant limitations of mainline valve shutoff systems in an oil spill event, particularly that a rupture would typically allow the release of the entire volume of petroleum in the affected segment. Valve shutoffs have the potential to prevent further releases from the pipeline, but the EIS must clarify the minimum and maximum quantities that would be released in a rupture event, even assuming optimal mainline valve operation as well as mainline valve failure.

3.8.2 Impacts Caused by Corrosion Resulting from Failure or Inadequacy of the Cathodic Protection System

Cathodic protection is designed to protect the pipeline from the corrosive effects electrical currents induced in the pipeline by the earth's magnetic field or by stray AC or DC voltage interference. By directing the current to an anode, the cathodic protection system is intended to direct the corrosive effects to structures external to the pipeline itself, therefore protecting the pipeline integrity. The effectiveness of these cathodic

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[94] SPP EAW at 27.
[95] SPP EAW at 12; L3R EAW at 25.
[96] Ex. 9 at 11 (Keystone XL SEIS Attachment K)
[97] *See* U.S. Dep't of Homeland Security, Industrial Control Systems Cyber Emergency Response Team, *Solar Magnetic Storm Impact on Control Systems*, March 26, 2011, available at https://ics-cert.us-cert.gov/advisories/ICSA-11-084-01, last accessed May 23, 2016.

protection systems must be evaluated in the EIS, including the probability and impacts of pipeline corrosion resulting from cathodic protection system failure. In 2012, for instance, a portion of TransCanada's newly built Keystone pipeline was discovered to be severely corroded, despite the presence of the same impressed current ground bed cathodic protection system proposed for the Sandpiper and L3R Projects.[98] The report investigating that incident found that "highly accelerated rates of corrosion on buried pipelines" can be caused by microbial activity, stray direct current interference, and stray alternating current interference.[99] The report notes that one source of AC current interference is induced current caused by electromagnetic interference in collocated right of ways.[100] Possible sources of this interference include existing pipelines collocated in the right of way (particularly "foreign" cathodic protection systems) and high voltage transmission lines in close proximity to the pipeline.[101] High voltage transmission lines in particular have been studied as a likely source of pipeline corrosion, with one recent study concluding that "on pipelines suffering from A.C. interference traditional pipe-to-soil potential measurements do not guarantee efficient cathodic protection against corrosion."[102] The incidences of pipeline corrosion investigated by the report "rais[ed] the possibility that the Cathodic Protection in some areas was inadequate and/or interference conditions were rendering the CP system ineffective and likely accelerating corrosion."[103] The DSDDs for the Sandpiper and L3R Projects give no indication that the environmental impacts of such corrosive activity will be analyzed, and is accordingly inadequate.

3.9 Phased and Connected Actions

3.9.1 The Line 3 and Sandpiper Pipeline EIS Should Also Cover Transmission Lines and Similar Related Actions.

The EIS should cover all related actions, including transmission lines. Confusingly, the notice for the Environmental Assessment of the Bull Moose Transmission Line Project and Clearbrook West Transmission Line Project have been noticed separately from the pipeline EISs, despite the fact that the transmission lines serve the applicant's proposed route for Sandpiper and Line 3.[104]

The Commission is legally obligated to include all "phased and connected actions" in the EIS.[105] These phased and connected actions include new transmission lines necessary for the operation of the pipelines, all "associated facilities" mentioned in the EAWs, and any other related projects not yet defined that are in the same geographic area and are necessary to the operation of the pipelines.

Also, all phased and connected actions must be identified at the time of the Draft EIS. Analysis of these actions may not be put off until a later date. The EAW states that there may be additional transmission lines required that are not yet specified. Any additional transmission lines must be identified and the impacts analyzed as part of the Draft EIS.

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[98] *See* Ex. 13 at 4 (Transcanada Keystone Corrosion Root Cause Report)
[99] *Id.* at 9.
[100] *Id.* at 11.
[101] *Id.* at 32; Ex. 14 at 6 (AC Transmission Line and Corrosion Study).
[102] Ex. 14 at 6 (AC Transmission Line and Corrosion Study)
[103] Ex. 13 at 31 (Transcanada Keystone Corrosion Root Cause Report).
[104] Ex. 15 (screen shot taken 5/9/2016).
[105] Minn. R. 4410.2000, subp. 4.

Even if the Commission were not legally obligated to include associated facilities and transmission lines, the Commission has the discretion to include these actions under the EIS as "related actions."[106] Putting these connected actions such as the transmission lines on separate tracks creates the appearance of bias because it looks as if the agency is proceeding with the applicant's preferred route by approving facilities that are only required to support the applicants preferred route. This was the problem that arose when the Bull Moose and Clearbrook West Transmission lines were noticed simultaneously - but separately - from the Sandpiper and Line 3 EISs. There is no reason to approve the Bull Moose or Clearbrook West Transmission lines if NDPC's proposed pipelines do not proceed in NDPC's preferred location. Thus there is no reason to keep them on a separate track for environmental review. It creates the perception that the Commission intends to approve NDPC's proposed route, illegally presupposing the outcome of the EIS.

3.10 Cumulative Impacts

Minn. R. 4410.2300(H) states that an EIS shall include a discussion of potentially significant cumulative effects, which are defined by rule as

> the impact on the environment that results from incremental effects of the project in addition to other past, present, and reasonably foreseeable future projects regardless of what person undertakes the other projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.[107]

The Draft Scoping Decision Documents for the Sandpiper and L3R Projects identify a few cumulative impacts that will be discussed in the EIS, including cumulative impacts of collocating two pipelines in one right of way and the impacts of high-voltage transmission lines and substations needed to serve pipeline pump stations.[108] Aside from those two impacts, the DSDDs articulate a 'cumulative impact methodology' intended to identify existing or proposed projects that may interact with the Sandpiper or L3R Projects. One such project that is not identified in the scoping documents is Minnesota Pipe Line Company, LLC's Reliability Project for Line 4,[109] which proposes to install pump stations and other upgrades to an existing pipeline that receives crude oil from Enbridge's facilities in Clearbrook, MN.

A particularly notable omission from the draft scoping documents is any mention of the cumulative impacts of climate change. The pipelines proposed by the applicant have a projected lifespan measured in many decades, and within that time climate change will cause numerous, wholesale change upon the landscapes of Minnesota. Warmer temperatures and changes in precipitation patterns will reduce the extent of wetlands in our state, further exacerbating any wetlands impact caused by the proposed pipelines. Climate change may also affect river flows or soil cover through increased evapotranspiration or extreme precipitation events, respectively, which could in turn affect the appropriate burial depth for the pipeline in order to mitigate potential oil spills. Minnesota is especially vulnerable to increases in extreme weather events that have the potential to quickly scour soil cover protecting the pipeline from interference by surface uses.[110] The FSDD

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[106] Minn. R. 4410.2000, subp. 5.
[107] Minn. R. 4410.0200, subp. 11.
[108] SPP DSDD at 29.
[109] Docket No. PL-5/CN-14-320, *ORDER GRANTING CERTIFICATE OF NEED*, August 31, 2015.
[110] Pryor, S. C., D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, and G. P. Robertson, 2014: Ch. 18: Midwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 418-440; Saunders, S., Findlay, D., Easley, T., Spencer, T. (2012). Doubled Trouble: More

should clarify that the EIS will discuss these cumulative impacts in addition to those identified by the DSDD and the implementation of the DSDD's cumulative impact methodology.

3.11 Climate Change Impacts

Climate change impacts must be incorporated into the EISs for the proposed projects. Guidance from the Council on Environmental Quality states that "[c]limate change is a fundamental environmental issue, and the relation of Federal actions to it falls squarely within NEPA's focus."[111] Because the procedural requirements of MEPA hew so closely to those of its federal counterpart, any state-only EIS must also incorporate a full analysis of climate change impacts in an EIS.[112] The CEQ guidance further states that when addressing climate change, agencies should consider both "(1) the potential effects of a proposed action on climate change as indicated by its GHG emissions; and(2) the implications of climate change for the environmental effects of a proposed action."[113] As such, the EIS should quantify the greenhouse gas emissions that would result both directly and indirectly from the Sandpiper and L3R proposals and investigate how these emissions would affect the climate system.

Pursuant to the guidance, the acting agency should use "projected GHG emissions and when appropriate, potential changes in carbon sequestration and storage as the proxy" for potential climate change impacts.[114] The EIS must quantify the greenhouse gas emissions that would be produced during construction of the pipeline facilities. These include direct emissions such as construction vehicle and machine usage, and open burn land clearing as well as indirect emissions from electricity use. Additionally, CEQ's definition for emissions includes the "release of stored GHGs as a result of destruction of natural GHG sinks…as well as future sequestration capability."[115] Thus the EIS must quantify the loss of current and future carbon sequestration and storage from the clearing and destruction of forested areas and wetlands that would occur during construction of the Sandpiper and L3R projects.

As noted by the CEQ Guidance, per 40 CFR §§ 1508.7, 1508.8, agencies must consider cumulative (incremental), direct, and indirect effects when analyzing proposed actions.[116] The guidance clarifies that acting agencies should account for "emissions from activities that have a reasonably close causal relationship to the Federal action" including emissions predicate to the agency action (upstream emissions) and emissions that occur as consequence of the agency action (downstream emissions).[117] Emissions from the operation of facilities built for the two proposals should also be quantified. Additionally, as previously mentioned, Dr. Gunton's report found that the Sandpiper and L3R pipelines will increase the pace of extraction in the Williston Basin by decreasing transportation costs for producers.[118] This increase in extraction and production will produce further causally related downstream emissions that the EIS must quantify.

Midwestern Extreme Storms. The Rocky Mountain Climate Organization and the Natural Resources Defense Council.

[111] Ex. 21 (Council on Environmental Quality, *NEPA Revised Draft GFG Guidance*, 2 (Dec. 2014)).

[112] *See supra* note 80.

[113] *Id.* at 3.

[114] *Id.* at 8.

[115] *Id.* at 1, 8.

[116] *Id.* at 10; 40 CFR §§ 1508.7, 40 CFR §§ 1508.8.

[117] *Id.* at 11*; see also* 40 CFR § 1508.8.

[118] Ex. 1 at 8 (Expert Report of Dr. Gunton).

The guidance also acknowledges that climate change "can increase the vulnerability of a resource, ecosystem, human community, or structure, which would then be more susceptible to climate change and other effects and result in a proposed action's effects being more environmentally damaging."[119] This makes the consideration of both climate change adaptation[120] and resilience[121] especially critical when coupled with the considerations of environments already vulnerable to the specific effects of climate change.[122] In addition to the previously mentioned impacts on wetlands the EIS must analyze, the EIS should analyze how climate change may directly affect wetlands and other vulnerable ecosystems or exacerbate other impacts resulting from the Sandpiper and L3R proposals. Such effects should be incorporated into the oil spill modeling results, so that the interaction between climate change and spill impacts may be more fully understood. Similarly, the EIS should incorporate the effects of climate change into its analysis of the Proposal's impact on aquatic life.

SECTION 4: EIS FORMAT AND APPROACH

4.1 Cooperation With the Army Corps of Engineers

State law requires agencies to cooperate for the purposes of environmental review as much as possible. Under MEPA, the Commission "shall, to the extent practicable, avoid duplication and ensure coordination between state and federal environmental review and between environmental review and environmental permitting."[123] State agencies "shall…seek to strengthen relationships between state, regional, local and federal-state environmental planning, development and management programs."[124]

In this case, it appears that the Army Corps of Engineers will conduct environmental review as well, but NDPC has asked Army Corps to refrain from notifying the public at this time. The applicant should not be permitted to limit cooperation between state and federal agencies merely by requesting a delay in the federal agency's processes. For all their concern about efficiency and timing, NDPC appears to be actively preventing cooperation between state and federal agencies that would "avoid duplication and ensure coordination." Moreover, assuming that the Department and the Commission will be conducting additional pipeline EISs that also fall under Army Corps jurisdiction in the future, this would also appear to be a prime opportunity to "strengthen relationships" between state and federal agencies with overlapping jurisdiction. The Draft EIS should be performed in conjunction with the Army Corps of Engineers' review under NEPA, or it should explain why such cooperation is not practicable.

4.2 Combining Sandpiper and L3R into a Single EIS

There should be a single EIS completed for the Sandpiper pipeline, Line 3, and all related actions, including associated facilities and transmission lines. It is not clear why the Department chose to scope Line 3 and Sandpiper separately, especially since the documents are duplicative, but there should not be a separate EIS for each project.

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[119] Ex. 21 at 22 (CEQ *NEPA Revised Draft GFG Guidance*).
[120] *Id.* at 23 n.52.
[121] *Id.* at 23 n.53.
[122] *Id.* at 24.
[123] Minn. Stat. § 116D.04, subp. 2a(d).
[124] Minn. Stat. § 116D.03.

First, the Commission ordered an EIS that covers both Line 3 and Sandpiper, not two separate EISs. In its order in the Line 3 docket, the Commission authorized the Department to "prepare a combined EIS to address issues related to both dockets in accordance with Minn. Stat. ch. 116D and Minn. R. ch 4410." The Commission further clarified that it was authorizing a "combined environmental review of the need and routing dockets that considers the cumulative impact of the Sandpiper Pipeline Project and the Line 3 Project."[125] Thus, the most natural reading of the Commission's order is that the Department complete a single EIS for both projects, not two EISs.

Second, MEPA requires that the EIS for each project address the other project as a "phased and connected action."[126] "Multiple projects and multiple stages of a single project that are connected actions or phased actions must be considered in total when determining the need for an EIS and in preparing the EIS."[127] A "phased action" is defined as "two or more projects to be undertaken by the same proposer that a RGU determines…will have the same environmental effects on the same geographic area; and are substantially certain to be undertaken sequentially over a limited period of time."[128] Two projects are "connected actions" if "one project would directly induce the other; one project is a prerequisite for the other and the prerequisite project is not justified by itself; or neither project is justified by itself."[129] The proposed Sandpiper Pipeline and Line 3 are certainly phased actions. The record is not sufficiently developed to determine whether they are connected actions. In any event, in preparing the EIS, they should be treated as a single project under MEPA.

Third, a single EIS will avoid confusion and unnecessary burden on the public. When the public is asked to comment on two draft EISs for two pipelines proposed for a single corridor, it should be permitted to submit a single comment for both pipelines. The public should not be asked to comment separately on two pipelines as part of two different EISs.

Fourth, a single EIS will reduce the burden on the Department. If Sandpiper and Line 3 EISs are prepared separately, each EIS will need to address the other pipeline entirely.[130] MEPA requires that any project be analyzed in conjunction with other reasonably foreseeable actions.[131] If each pipeline is analyzed separately, the EISs will still significantly overlap due to this requirement. It would be much more efficient simply to analyze them in a single document. Moreover, the Department will find itself responsible for sorting out which public comments should be applied to Sandpiper and which ones apply to Line 3. This process would

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[125] Order Joining Need and Routing Dockets, *In the matter of the Application of Enbridge Energy, Limited Partnership for a Certificate of Need for the Line 3 Replacement Project in Minnesota from the North Dakota Border to the Wisconsin Border*, Docket No. PL-9/CN-14-916; *In the matter of the Application of Enbridge Energy, Limited Partnership for a Routing Permit for the Line 3 Replacement Project in Minnesota from the North Dakota Border to the Wisconsin Border*, Docket No. PL-9/PPL-15-137, at 3.
[126] Minn. R. 4410.2000, subp. 4.
[127] *Id.*
[128] Minn. R. 4410.0200, subp. 60.
[129] Minn. R. 4410.0200, subp. 9c.
[130] Minn. R. 4410.2300(H) ("there shall be a thorough but succinct discussion of potentially significant adverse or beneficial effects generated, be they direct, indirect, or cumulative."); Minn. R. 4410.2000, subp. 4 (connected actions and phased actions); Minn. R. 4410.0200, subp. 9c (defining "connected actions"); Minn. R. 4410.0200, subp. 60 (defining "phased action"); Minn. R. 4410.0200, subp. 11 (defining "cumulative impact").
[131] *Id.*

be both burdensome and fraught, as any comments incorrectly assigned (and therefore not addressed as the commenter intended) could form the basis for legal challenge.

Fifth, even if the Commission disagrees that it is required by law to order a single EIS, it has the discretion to do so, and it should exercise its discretion. An RGU may order a "related action EIS" – a "single EIS for independent projects with potential cumulative environmental impacts on the same geographic area if the RGU determines that review can be accomplished in a more effective or efficient manner through a related actions EIS."[132] Such an approach is certainly warranted here for the above-stated reasons.

4.3 Conducting a Tiered EIS

Where an agency must make consecutive decisions on a project, MEPA regulations permit an agency to conduct a tiered EIS:

> An RGU may use a series of tiered EISs to fulfill environmental review requirements for an action where decisions on which alternative to select must be made in stages, progressing from the general to the specific. Prior to each decision which would eliminate from further consideration any alternatives under consideration, a tiered EIS must be completed which addresses the issues and alternatives relevant to the decisions to be made in that tier, at a level of detail appropriate to that tier. The level of detail in earlier tiers need not be as great as that in later tiers, provided that it is sufficient to reasonably inform decision makers of the significant environmental, economic, employment, and sociological impacts of the choices made in that tier.[133]

A tiered EIS allows an agency to conduct an EIS on a limited number of alternatives relevant to a particular decision, then conduct a second process, more narrow, to a subsequent decision. The second stage may be "tiered" to the first stage, such that any analysis of environmental impacts conducted in the first stage need not be duplicated.[134]

In this case, the first tier could address system alternatives - I.e., the location of the pipeline - and the second stage could address routing concerns. At the conclusion of the first tier, the Commission would make a determination on the preferred system alternative based on the criteria in MEPA. At the conclusion of the second tier, the commission would make a determination on the best route alternative(s) based on the criteria within MEPA.

This structure would avoid a host of potential issues. First, it would avoid the problem where the EIS analyzes 54 potential route alternatives for the applicant's preferred system alternative, but no route alternatives for other system alternatives. Not only would this be a lot of wasted work if the applicant's preferred route is not selected, it creates the appearance of bias because the agency has worked to refine the applicant's preferred alternative but not the other system alternatives.

Second, it avoids confusion to the public. Already this is expected to be a large EIS; encouraging public comment on particular alternatives at different stages will focus public comment and increase the quality of public participation. It allows the public to digest the proposal in smaller pieces.

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[132] Minn. R. 4410.2000, subp. 5.
[133] Minn. R. 4410.4000.
[134] *Id.* ("A tiered EIS may incorporate by reference material developed in an earlier tier.").

Third, it fulfills the mandate of the Court of Appeals. The Court of Appeals was concerned, at least in part, about timing. MEPA specifically prohibits state agencies from granting permits or other approvals prior to completion of the EIS. Conducting the first tier of the EIS on system alternatives, then the certificate of need proceedings, complies with the timing requirements of the Court and is consistent with the provision permitted "tiered" EISs.[135]

Finally, it is permissible under MEPA at the scoping stage. The RGU may change the form of an EIS "if circumstances indicate the need or appropriateness of an alternative form."[136]

Although this model seems ideally suited for the situation at hand, there are few, if any, examples of tiered EISs in Minnesota. FOH and MCEA suggest that if the Commission chooses this option, it should allow an additional comment period to allow the public and agencies assist in determining how to split up issues between the tiers.

4.4 Cardno/Entrix as Contractor

FOH and MCEA understand that the Department has hired Cardno/Entrix as its consultant for the EIS. Cardno Entrix has a direct conflict because it has worked for Enbridge Energy. Moreover, Cardno has a public record of preparing EISs for pipelines that underestimate environmental impacts.

While agencies are empowered to hire consultants to assist with preparation of an EAW or EIS under MEPA, any consultants hired should be independent and neutral. The primary purpose of MEPA is to provide usable information to the project proposer, governmental decision makers and the public concerning the primary environmental effects of a proposed project.[137] An EIS cannot serve that purpose if it is not prepared by an objective party.

Additionally, this Public Utilities Commission is responsible under MEPA for "verifying the accuracy of environmental documents."[138] The Commission has made its own job much harder if it intends to rely on a contractor who has a conflict of interest.

Cardno Entrix has a history of working for government agencies while concealing a conflict of interest. Even worse, Cardno has a history of preparing documents that reveal its conflict of interest by failing to adequately evaluate the risks of the project. In 2010, Cardno Entrix was hired to prepare the EIS for the proposed Keystone XL pipeline. Notably, Cardno was hired at TransCanada's recommendation.[139] The EIS was prepared and it appeared, as President Obama began his first term, that the pipeline was on the brink of approval:

> Then the real bomb dropped: Cardno Entrix, the Houston (Tex.) company [the] State [Department] had contracted with to complete an environmental impact statement on Keystone—the substance of the evaluation Obama referred to—turned out to be a preexisting client of TransCanada and, as such, appeared to have a blatant conflict of interest. After several members of Congress requested a

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[135] Minn. R. 4410.
[136] Minn. R. 4410.2100, subp. 7.
[137] Minn. R. 4410.0300, subp. 3.
[138] Minn. R. 4410.0400, subp. 1.
[139] "Pipeline Review Is Faced with Question of Conflict," *New York Times*, Oct. 7, 2011, available at http://www.nytimes.com/2011/10/08/science/earth/08pipeline.html?_r=0, last accessed May 24, 2016.

> review of the process, the inspector general was brought in to investigate and to establish new conflict of interest guidelines.[140]

Although the inspector general ultimately concluded that Cardno was not unduly influenced by its association with TransCanada, the State Department hired a new contractor to conduct a supplemental EIS that was considered superior by many.

Ironically, one of the major failings of the Keystone XL Pipeline EIS prepared by Cardno was that it failed to address the potential impacts of a spill of diluted bitumen, the particular crude oil being shipped from Canada on the pipeline.[141] But Cardno was one of the contractors hired to clean up the spill in Kalamazoo, so it should have had unique knowledge of the challenges.

And herein lies the problem for the Sandpiper and Line 3 EIS. Even a quick google search reveals that Cardno Entrix has recently or is currently working for Enbridge on the Kalamazoo River cleanup.[142] FOH has requested documents from Department regarding Cardno Entrix and the search for conflicts that the Department may or may not have undertaken. We have not yet received the requested documents. But as one NEPA expert put it:

> "Cardno Entrix should never have been selected to perform the environmental study on Keystone XL because of its relationship with TransCanada and the potential to garner more work involving the pipeline. The company provides a wide range of services, including assisting in oil spill response."
>
> Cardno Entrix had a "financial interest in the outcome of the project," Mr. Houck said, adding, "Their primary loyalty is getting this project through, in the way the client wants."[143]

In any event, the Commission should be extremely wary of a contractor with a blatant conflict of interest who has already been exposed once for preparing an inadequate EIS in favor of the industry it serves.

5.0 SPECIAL STUDIES OR RESEARCH

5.1 Socioeconomic and Environmental Impacts on Homeowners From the Use of Eminent Domain and the Construction of Pipelines and Related Facilities on Private Property

When a pipeline is permitted by the Public Utilities Commission, the pipeline company has virtually limitless ability to install the pipeline and associated facilities on private property. Minnesota law states that transporting crude oil via pipeline is "declared to be in the public interest and necessary to the public welfare, and the taking of private property therefore is declared to be for a public use and purpose."[144] The legislature

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[140] "Secrets, Lies, and Missing Data: New Twists in the Keystone XL Pipeline," *Bloomberg Businessweek*, July 12, 2013, available at http://www.bloomberg.com/news/articles/2013-07-11/secrets-lies-and-missing-data-new-twists-in-the-keystone-xl-pipeline, last accessed May 24, 2016.
[141] "Pipeline Review is Faced with Question of Conflict," *supra* note 112.
[142] The project is discussed on Cardno's website at http://www.cardno.com/en-au/Projects/Pages/Projects-Kalamazoo-River-and-Talmadge-Creek-Restoration.aspx, last accessed May 24, 2016.
[143] "Pipeline Review is Faced with Question of Conflict," *supra* note 112.
[144] Minn. Stat. § 117.48.

has further declared that any pipeline company "shall have and enjoy the power of eminent domain to be exercised in accordance with this chapter."[145]

Some of the risks posed by pipelines on private property are different than on public property. The following is a non-exhaustive list of potential impacts on private property:

- Loss of value of land from pipeline easements
- Cumulative loss of value of land from multiple pipeline easements (i.e. multiple pipelines, or pipelines plus transmission lines)
- Impacts on crop production and quality of farm land
- Displacement of buildings, including homes

While NDPC may argue that they are compensating landowners for these impacts, the EIS should investigate whether landowners are adequately compensated. In addition, impacts on farmland production and value have a public as well as a private cost that must be analyzed.

If there are questions about landowner compensation raised by the EIS, the PUC may wish to consider restrictions on the use of eminent domain as well as alternate strategies for compensation of crop damage.

CONCLUSION

For the foregoing reasons and in accordance with state and federal law, FOH and MCEA respectfully request that the final scoping documents for the Sandpiper Pipeline and the Line 3 Replacement Project incorporate the suggestions contained herein.

[145] *Id.*; *see also* Minn. R. 7852.3200 ("After an applicant is issued a pipeline routing permit…the permittee may exercise the power of eminent domain as provided by Minnesota Statutes, section 117.48.").

Evaluation of Minnesota Draft Scoping Decision Document for Sandpiper Pipeline Project

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1. Introduction

The purpose of this report is to comment on the Draft Scoping Decision Document (DSDD) prepared by the Minnesota Department of Commerce (MDOC) for the Sandpiper Pipeline Project (the Project). We begin by providing an overview of the Project and a brief description of the proponent's justification and rationale for the Project. In our discussion of need for the Project, we assess whether the stated purpose of the Project of shipping oil to an endpoint in Superior, Wisconsin is appropriate and whether other transportation projects that ship Bakken oil to other locations should be considered as alternatives to the Project. The implications of major changes in oil markets since 2014 (principally the decline in the price of crude oil and the prospect of new pipelines coming online in the near future) are analyzed. Finally, additional social, economic, and environmental impacts that should be addressed in the Environmental Impact Statement (EIS) for the Project, but are not referenced in the DSDD, are identified.

2. Overview of Sandpiper Project

The Sandpiper Project is a proposed 616-mile oil pipeline to be constructed and operated by North Dakota Pipeline Company LLC (NDPC), a joint venture between Enbridge Energy Partners, L.P. and Williston Basin Pipe Line LLC, a subsidiary of Marathon Petroleum Corporation. The Project would transport 225 thousand barrels per day (kbpd) of crude oil from Beaver Lodge Station, south of Tioga, North Dakota, to a new terminal facility at Clearbrook, Minnesota via a 24-inch pipeline. From Clearbook, the pipeline would transport 375 kbpd of Bakken crude oil a distance of 229 miles and terminate at a terminal and tank farm in Superior, Wisconsin. The Bakken crude can then be carried via the Enbridge Mainline for delivery to refineries in the Midwest and Eastern Canada. If approved, the Project will also include construction of a new oil terminal with two 150,000-barrel tanks and pump station near the existing terminal and storage tanks in Clearbrook as well as pipeline inspection gauge launcher and receiver types and mainline valve facilities at Pine River, Minnesota.

In August 2015, the Minnesota Court of Appeals ruled that Sandpiper requires a full EIS before the state can grant a certificate of need. The state's Public Utilities Commission had authorized Sandpiper without an EIS. This has delayed the proposed start-up date of the Project to 2019.

3. Rationale for Sandpiper

The rationale for the Sandpiper Project provided in the application and testimony of Paul Eberth,[1] Michael Palmer,[2] and Neil Earnest[3] includes the following points:

- Sufficient market demand exists for the crude oil to be delivered by Sandpiper.
- Sandpiper will operate at, or close to, capacity throughout the forecast period (2016 to 2035).
- Shipper commitments for 155 kbpd of the capacity on Sandpiper indicate demand for the Project and supports commercial viability of the Project.
- Sandpiper's transport of crude oil to the Midwest and Eastern Canada markets will displace rail transportation, which is generally more costly and less efficient than pipeline transportation.
- Improved market access and lower transport costs provided by Sandpiper would provide Bakken producers with pre-tax economic benefit of approximately $5 billion over the forecast period.

4. Assessment of Need for Sandpiper

In this section, the rationale and need for the Project are assessed. This assessment shows that there are significant issues regarding the DSDD's treatment of the project's need and rationale.

4.1 Purpose of the Project

The foremost deficiency associated with the assessment of the need for Sandpiper is the unreasonably narrow stated purpose of the Project. The DSDD states, "[t]he alternative must meet the underlying purpose of the project."[4] The DSDD adopts the proponent's definition of the Project from a public notice issued in June 2013, which is "to transport growing crude oil production from the Bakken Formation in North Dakota to the Superior, Wisconsin, terminal and

[1] See Direct Testimony of Paul Eberth on behalf North Dakota Pipeline Company LLC, MPUC Docket No. PL-6668/CN-13-473, August 8, 2014.
[2] See Direct Testimony of C. Michael Palmer on behalf North Dakota Pipeline Company LLC, MPUC Docket No. PL-6668/CN-13-473, August 8, 2014.
[3] See Direct Testimony of Neil Earnest on behalf North Dakota Pipeline Company LLC, MPUC Docket No. PL-6668/CN-13-473, August 8, 2014.
[4] MDOC 2016, p. 6.

then connect to various other pipelines expanding access to refinery markets in the US Midwest and beyond."[5]

This definition of the purpose of the Project does not capture the Project's broader reason for being proposed, which is to transport Bakken oil to viable market destinations. By using the narrow definition of specifying Superior as a destination for Bakken oil shipments as the Project's purpose, other viable transportation alternatives that meet Sandpiper's primary objective of transporting Bakken oil to markets may be omitted from consideration.

Currently, Bakken oil is also shipped south of the Williston Basin via pipelines and rail in addition to the North Dakota Pipeline System that carries crude east to Clearbrook and then to Superior, Wisconsin. For example, the Bridger, Butte, and Belle Fourche pipelines serve refineries in Cheyenne, Wyoming, and Denver, Colorado. Further, the Palermo Rail Terminal project, designed to have an initial capacity of 100 kbpd with the flexibility to be expanded to 200 kbpd, will have direct access to the Sacagawea Pipeline and facilitate access to the East and West Coast once construction is completed. There are alternative routing options available for transporting Bakken oil to markets that do not include Superior. Therefore, the DSDD should require that the assessment of the Project take into account all current, proposed, and planned Bakken oil transportation capacity capable of shipping Bakken oil to markets instead of relying on a narrow definition of market access that excludes viable options.

Second, existing and planned Bakken transportation capacity must be compared to forecasted Bakken oil shipments in the assessment of need and rationale for the Project. A comprehensive analysis of the supply and demand for Bakken oil transportation services is essential to assess the need for Sandpiper, the existence of reasonable and prudent alternatives to Sandpiper, and whether the consequences of approving Sandpiper are more favourable than not approving it. This analysis of supply and demand for Bakken oil transportation services should be included in the Special Studies referenced in the DSDD,[6] but most critically, the results of this analysis must inform the selection of alternatives analyzed in the EIS, including the No Action Alternative.

The data on Bakken supply and demand for transportation services show why a comprehensive supply and demand analysis of Bakken transportation capacity is important. Current transportation capacity in the Bakken region exceeds oil production, and this gap is

[5] MDOC 2016, p. 6.
[6] MDOC 2016, p. 30.

expected to grow (Table 1). Even if rail capacity is excluded, there is still expected to be surplus transportation capacity of between 516 and 866 kbpd in 2020. If rail is included, the surplus capacity could exceed 2,400 kbpd.

While some degree of surplus capacity is inevitable as new pipeline projects come into operation and is beneficial to provide some degree of flexibility in the oil transportation system, the forecast surplus capacity if all projects are built is excessive: it is equivalent to about ten Sandpiper projects of unused capacity. Surplus capacity, on Sandpiper or other pipelines serving the Bakken, could impose a significant cost on the oil sector and on economies of the states the pipeline traverses, like Minnesota. Clearly not all proposed projects are needed or prudent and an evaluation of all the alternatives is necessary to determine whether Sandpiper is needed and the negative consequences of approving Sandpiper in terms of contributing to surplus transportation capacity.[7]

Table 1. Oil Transportation Supply and Demand, Bakken Region

	2016 (kbpd)	**2020 (kbpd)**
Pipeline/Refinery Capacity	851	1,541
Sandpiper	0	225
Rail Capacity	1,590	1,590
All Transportation Total	2,441	3,356
Production (March 2016)	1,109	900 – 1,250
Surplus Transportation Capacity Without Rail	**-258**	**516 – 866**
All Surplus Transportation Capacity	**1,332**	**2,106 – 2,456**

Sources: North Dakota Pipeline Authority (NDPA) (2016a; 2016b); Kringstad (2016).

The evaluation of transportation alternatives to Sandpiper should be based on a comprehensive benefit cost analysis of each option that includes all economic, social and environmental costs. It is also important that the cost comparison of existing and proposed pipelines and rail capacity be based on the marginal cost of transporting Bakken oil. To do this, it is important to distinguish between variable cost and fixed cost. For existing projects, the

[7] The proponent states that they have shipper contracts for Sandpiper that will ensure Sandpiper capacity is used. The likelihood of fulfillment of these contractual obligations depends on the terms of the contracts, which should be assessed in the project review. However, even if the contracts ensure Sandpiper is used, the costs of surplus capacity created by Sandpiper will still exist and will be imposed on other shippers who will lose the shipments diverted to Sandpiper.

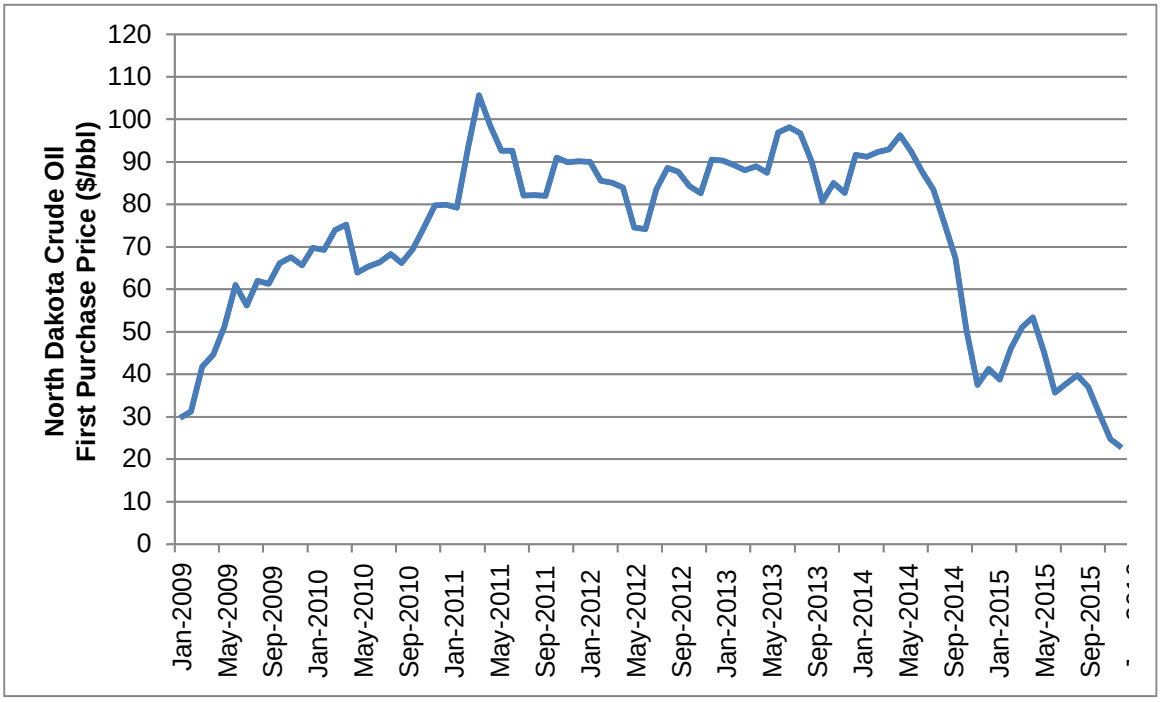
marginal cost of shipments is just the variable cost (capital has already been invested and the capital costs are sunk costs), while for a proposed project not yet constructed the marginal cost is variable cost plus the fixed costs required to provide a return to the new capital investment. The variable cost of operating pipelines is significantly less than the fixed cost so the marginal cost of shipments on an existing pipeline will be much lower than the marginal costs for a proposed pipeline like Sandpiper[8]. The cost comparisons of alternatives provided in the proponent's application prepared by Muse, Stancil & Co. ("Muse") do not make this distinction and therefore overstate the cost of existing transportation capacity relative to proposed new capacity, such as Sandpiper. The result is that the relative benefits of the Sandpiper Project are overstated. Furthermore, the analysis of the Project does not assess the costs of any surplus capacity that Sandpiper may create. The absence of an analysis of the costs of surplus capacity as a requirement by the DSDD is a deficiency that should be remedied. Estimates of surplus capacity costs should be included in the DSDD as part of the benefit cost analysis (BCA) for the Project.

4.2 Oil Market Changes

Since the Project application and the Muse benefits analysis were submitted in 2013-14, there have been important changes in the market that impact the economic prospects for Sandpiper. The steep decline in oil prices that started in summer 2014 has lead to an enduring low oil price scenario for Bakken crude. As shown in Figure 1, North Dakota oil prices have fallen from an average of $96 per barrel (bbl) in June 2014 to about $38/bbl in January 2015. There has not been any indication of a rebound either as prices averaged less than $23/bbl in February 2016. This has led oil analysts to lower their oil price forecasts, with some forecasting that oil will remain in the $50/bbl to $70/bbl range for the next several decades (Wolak 2015). The International Energy Agency (IEA) has also recently reduced their longer-term forecasts and included a long-term low price scenario (IEA 2015).

[8] For example, Enbridge mainline pipeline variable costs average about 23% of the total pipeline cost, while the remaining 76% is required to cover fixed costs (calculated from data in Enbridge 2014). This means that the marginal cost of shipments on an existing pipeline with a toll of $3.00 per barrel would be $.69 per barrel while the marginal cost of a proposed pipeline with a toll of $3.00 would be $.69 per barrel to cover variable cost plus $2.31 per barrel to cover fixed costs of the new capital investment. The ratio of variable to fixed costs will vary among pipelines and between pipelines and other modes of transportation such as rail. Variable costs for rail shipments, for example, will be a higher proportion of total costs than for pipelines. Therefore the marginal cost analysis will need to examine the specific costs of each transportation option.

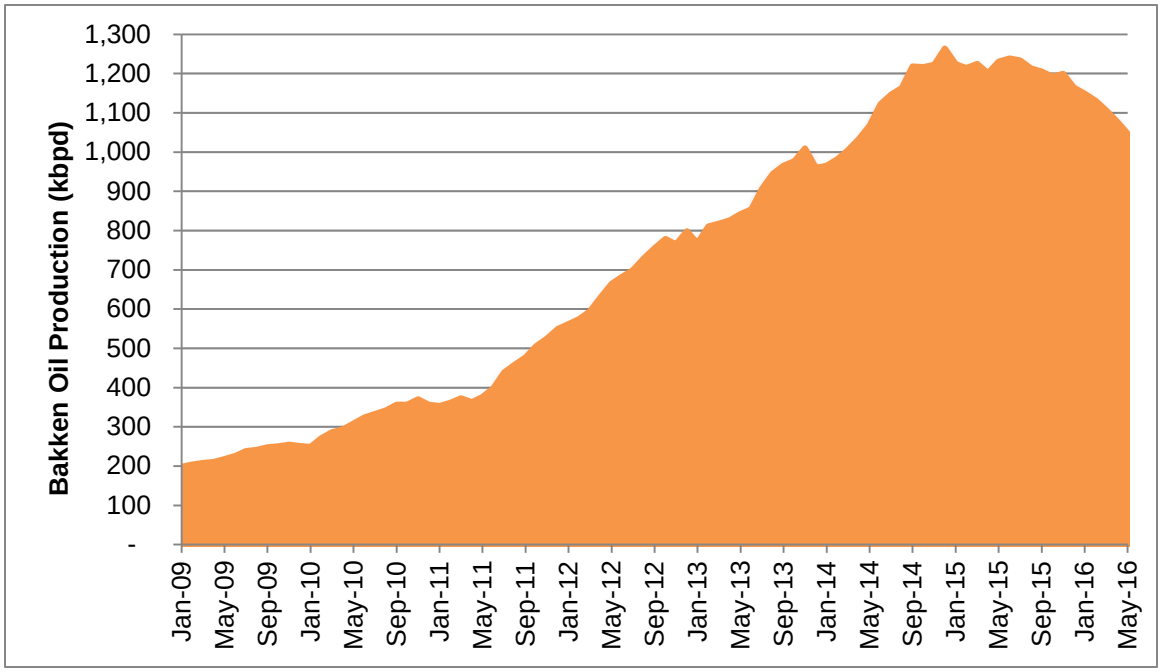
Figure 1 North Dakota Oil Price (Jan 2009 - Feb 2016)



Source: EIA (2016)

The decline in oil prices has fundamentally altered the economics of investment in oil development. The U.S. Energy Information Administration (EIA) forecasts total U.S. crude oil production to decline by 800 kbpd in 2016 and 600 kbpd in 2017 (EIA 2016). In the Bakken, drilling activity has slowed as a result of the price decline from a high of 194 rigs in September 2014 to only 32 active rigs in March 2016 (Kringstad 2016). The corresponding reduction in Bakken oil production is evident from Figure 2. The sharp decline in oil prices precedes the peak in Bakken oil production, and production has since declined by approximately 216 kbpd. This downward pressure on production reduces forecast shipments and further aggravates the potential for excess transportation capacity. These changes in oil markets show that the forecast used in the Muse market analysis for the Project, which is based on pre-2014 oil prices, is no longer valid.

Figure 2 - Bakken Region Oil Production



Source: EIA (2016)

The marginal cost of production relative to oil prices is an important consideration for forecasting future Bakken production levels, and therefore for evaluating transportation alternatives. It is also a critical factor in assessing the environmental and socioeconomic impacts of the No Action Alternative. If declining production levels reduce the need for transportation capacity, then the No Action Alternative addresses the same need as the proposed project: delivering appropriate volumes of Bakken crude to the refineries that demand it.

The Bakken oil formation is host to about 6,288 wells capable of producing a minimum of 400 bpd. The completed well costs of these wells are in the range of $6-8 million. However, according to Kringstad (2016), at a $35/bbl oil price and a 20% internal rate of return (after production taxes and royalties), none of the wells in the Bakken region would be economical at production levels below 600 bpd. In fact, when oil prices are $35/bbl, wells completed at a cost of $7 million must be capable of producing more than 1,000 bpd to earn greater than a 20% IRR. Only about 8% of the $6-8 million wells in the Bakken region can produce more than 1,000 bpd. In other words, the breakeven wellhead price for the majority of Bakken wells is much higher than $35/bbl (in the $45-75/bbl range). Since the North Dakota crude oil price is currently

below even the $35/bbl mark, a major rise in oil prices would be required for Bakken production to return and surpass mid-2014 levels as projected in the Muse analysis.

While our assessment points to lower Bakken production in the near term, Sandpiper could contribute to higher Bakken production volumes under certain conditions. If oil prices recover and/or producers are able to achieve deep cuts in their costs that make new investments in the Bakken region viable again, it is possible Sandpiper could result in incremental oil production by providing lower transportation costs.

4.3 New Projects Not Considered

Several of the major new projects included in the North Dakota Pipeline Authority transportation analysis summarized in Table 1 are not included in the Muse analysis submitted by the proponent in support of Sandpiper. The new projects, their expected in-service dates, and the changes in capacity omitted from the Muse analysis are shown in Table 2. All are scheduled to be in operation before Sandpiper, with the exception of the TransCanada Upland Pipeline. In total, the Muse analysis omits 608 kbpd of transportation capacity and regional refinery expansion. The largest change is due to the 450 kbpd of capacity expected to be available through the Energy Transfer Partners Bakken Pipeline in 2017. These new projects that have been proposed since the Muse analysis was completed are additional alternatives to Sandpiper that need to be assessed.

Table 2. Williston Basin Crude Oil Export Capacity Not Included in Muse Analysis

Project	In-service date	Change in Capacity from Muse (kbpd)
Butte Expansion	Q3 2014	-10*
Keystone XL Pipeline	Permit denied	-100*
Kinder Morgan Double H Pipeline	Q1 2015	+8*
Energy Transfer Partners Bakken Pipeline	Late 2016	+450
TransCanada Upland Pipeline	2020	+220
Dakota Prairie Refinery	Q2 2015	+20
Thunder Butte Refinery	2018	+20
Pipeline/Refining Total		**+608**

Source: NDPA (2016a)

*Included in Muse analysis, but capacity has changed. Difference in capacity shown.

4.4 Summary

In summary, changes in oil markets, Bakken production, and the forecast potential transportation capacity since the Muse analysis was conducted impact the rationale for Sandpiper. As discussed, the price of oil has not recovered since its collapse in 2014. A lower oil price has lead to a downturn in Bakken oil production, and as a result, the production forecast used in the Muse analysis is now too high. In addition, new proposed transportation and refinery projects could mean that, if approved, the capacity provided by Sandpiper in 2019 will contribute to costly surplus capacity. At the scoping stage, this implies that the current transportation needs for Bakken crude may be met by either No Action at all, or by alternative projects that are expected to be in operations before Sandpiper. Constructing unneeded pipeline infrastructure would impose long-term costs on the oil and gas sector, as well as costs to government in the form of lower tax revenue. For these reasons, it is essential that the DSDD include a re-evaluation of the need for the Project, a comprehensive assessment of alternatives, and an estimate of the costs of any surplus capacity created by the Project.

5. Other Issues in Scoping

We identify the following three additional omissions in the DSDD that should be required as part of the EIS for the Sandpiper Project[9]:

1. The DSDD needs to include an assessment of damage costs for a worst-case scenario oil spill. The Enbridge Kalamazoo River spill, which is estimated to have cost $1.21 billion (Enbridge 2014), shows that the magnitude of spill damages can be substantial and consequently it is important to assess the financial capacity of NDPC (insurance and assets) to cover the costs associated with a worst-case spill and its legal obligation to pay damage costs and compensate third parties.

2. The DSDD needs to include a review of the spill response capacity of NDPC. The importance of assessing spill response is again illustrated by the Kalamazoo River spill near Marshall, Michigan in July 2010. Enbridge's emergency response was characterized by the National Transportation Safety Board (NTSB) as being

[9] It is important to note that the DSDD stipulates that the EIS will also analyze the potential impacts of the Line 3 Replacement (L3R) Project as part of the EIS's cumulative impacts discussion given the L3R route parallels the Sandpiper route between Clearbrook, Minnesota, and Superior, Wisconsin. Although our assessment of need focuses on Sandpiper, the omissions in scoping we have identified also apply to the environmental assessment for the L3R Project.

"not sufficiently focused on source control and demonstrated a lack of awareness and training in the use of effective containment methods" (2012, p. 119). The pipeline ruptured for over 17 hours despite monitoring systems and after the spill was detected, Enbridge experienced considerable difficulties locating contractors and other necessary resources to contain the spill (NTSB 2012).

3. The DSDD needs to include an assessment of upstream impacts of the Project. If, as Muse concludes, Sandpiper will provide Bakken producers with pre-tax economic benefits through higher netback prices for their product, the impacts of any incremental production need to be included in the EIS. The Canadian Government has developed a methodology to assess the upstream greenhouse gas (GHG) emissions from projects under review (Department of Environment and Climate Change 2016). In their definition, the upstream includes all industrial activities from the point of resource extraction, which are generally the extraction, processing, handling and transportation of the product. The assessment of upstream GHGs should consist of both a quantitative estimation of the GHG emissions released as a result of upstream production associated with Sandpiper, and a discussion of the projects' potential impact on national and global GHG emissions.

6. Benefit Cost Evaluation

The best method to assess the costs and benefits of the Project and whether the consequences of approving Sandpiper are more favourable than the consequences of not approving it is benefit cost analysis (BCA). BCA is a standard requirement for approval of many major projects in the United States and should be used to assess projects such as Sandpiper. The objective of BCA is to identify all the positive and negative consequences of a project and to assess the relative significance of these consequences to determine whether a project generates a net gain or net loss to society. BCA is based on a well-developed theoretical foundation, its methodology and application is outlined in numerous publications, and it is required for various types of approvals in many jurisdictions. Since potential environmental effects associated with the Line 3 Replacement (L3R) Project must be incorporated in the cumulative impacts analysis of the EIS for Sandpiper, costs and benefits associated with L3R should factor into a BCA for Sandpiper too. Therefore, the Final Scoping Decision Document

should require a BCA of Sandpiper, the L3R Project, and alternatives as part of its "Special Studies or Research" identified in part 5 of the DSDD.

7. Conclusion

In this report, we have examined the purpose of the Sandpiper Pipeline Project and the proposed scope of the DSDD. Subsequent to the submission and review of the application for Sandpiper there have been major changes in oil markets that impact the need for and potential costs and benefits of Sandpiper. The dramatic decline in oil prices has reduced current and forecast Bakken oil production. At the same time, there are more new oil transportation projects proposed for the Bakken region, which increase the number of alternatives to Sandpiper and the likelihood of building costly excess transportation capacity that could exceed over 2 million bpd by 2020. These developments require a comprehensive reassessment of the need for and costs and benefits of approving Sandpiper. To ensure the Project is needed and in the public interest, the final scoping decision document needs to:

- Expand the objective of Sandpiper from the narrow definition of shipping oil to Superior, Wisconsin to the primary objective of shipping Bakken oil to market and consider all other viable options that meet this primary objective.
- Require a comprehensive oil transportation supply and demand analysis for the Bakken region that incorporates major changes that have occurred since the original application (additional projects, lower production forecasts).
- Evaluate all the alternative projects for transporting Bakken oil to market by conducting a benefit cost analysis.
- Estimate the costs of any surplus capacity created by building Sandpiper.
- Assess the terms of shipper service transportation agreements for Sandpiper to identify provisions or factors that allow shippers to abrogate terms of the contract.
- Assess other potential impacts of the Project, specifically:
    - Damage costs for worst-case oil spills.
    - The financial capacity of the proponent (insurance and assets) to cover the costs associated with a worst-case spill and its legal obligation to pay damage costs and compensate third parties.
    - Estimate of upstream emissions and environmental impacts.

Again we emphasize the importance of undertaking a comprehensive BCA as part of the EIS to quantitatively estimate the costs and benefits of the Project with potential L3R impacts incorporated. This approach would allow for a comparison of all viable transportation options and help identify the option or mix of options that meets the transportation needs of the Bakken oil sector in the most cost-effective social, environmental, and economic manner.

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Resume

Dr. Thomas Gunton
Director and Professor, School of Resource and Environmental Management
Simon Fraser University
8888 University Drive
Burnaby BC
V5A 1S6

Summary

Dr. Gunton is currently Professor and Director of the Resource and Environmental Planning Program at Simon Fraser University, which is recognized as one of the leading international schools providing advanced interdisciplinary training for resource professionals. Dr. Gunton has had extensive professional experience including holding the positions of Deputy Minister of Environment, Lands and Parks, Deputy Minister of Cabinet Policy Secretariat and Deputy Minister of Finance (Treasury Board) for the Government of British Columbia. He has also held senior positions with the Government of Manitoba, including Assistant Deputy Minister of Energy and Mines where he was in charge of major natural resource project development and evaluation, Senior Economic Analyst in the Ministry of Economic Development and was visiting professor in resource and environmental economics at the University of Manitoba.

Dr. Gunton regularly provides advice to private sector and public sector clients. His work includes evaluation of resource development projects, regional development strategies and negotiation and collaborative models for resolving resource and environmental conflicts. While working for the BC government he managed a number of major initiatives including: a new Environmental Assessment Act, a new Forest Practices Code, a forest sector strategy, a new regional land use planning process, a major expansion of the provincial parks system, a redesign of the regulatory and royalty system for oil and gas development and new air pollution regulations. He was also the chief negotiator for the province on a number of major resource development projects including Kemano completion and oil and gas royalties. Dr. Gunton has been an expert witness for various regulatory agencies including the National Energy Board, the Ontario Energy Board, and the Manitoba Public Utilities Commission. He has also been an expert witness before the BC Arbitration Panel providing evidence on natural resource markets and pricing.

Dr. Gunton's works on management issues in a number of resource sectors including forestry, land use, energy, mining and fisheries. He is Chair of the Sustainable Planning Research Group and heads a research team providing advice to First Nations on impacts and risk assessment of oil and gas development and pipeline proposals including the Enbridge Northern Gateway project (NGP). He was senior supervisor of recently completed (2014) PhD research evaluating risk assessment and benefit-costs for the Enbridge Northern Gateway Pipeline. Dr. Gunton also recently prepared a draft of the Federal Sustainable Development Act for the Suzuki Foundation that was passed unanimously by the Parliament of Canada in 2008. Dr, Gunton has published over 80 refereed articles in scientific journals and over 100 technical reports for private and public sector clients on resource and environmental issues and project development. He was

recently awarded (2014) a large four year Mitacs research grant ($400,000) to assess social, environmental and economic impacts of natural resource development on First Nations in BC. Dr. Gunton has been working with First Nations for over 15 years to assess the impact of major projects on First Nations interests and to help negotiate impact benefit agreements between project developers and First Nations. He is currently assessing the impacts of the Kinder Morgan Pipeline for First Nations and is acting as an expert witness for First Nations in the NEB hearings on the Kinder Morgan Pipeline.

Current Employment

Professor and Director of the Resource and Environmental Planning Program, School of Resource and Environmental Management, Simon Fraser University. (1980-present).

Responsibilities

Teaching graduate courses in public policy analysis, regional resource development, dispute resolution. (courses include: environmental impact assessment, cost-benefit analysis, economic impact assessment, multiple accounts evaluation (social, environmental, fiscal, economic assessment techniques), conflict resolution techniques, regional development.) Senior Superviser of over 40 graduate theses on resource and environmental management

Previous Employment

1. Deputy Minister, Cabinet Policy Secretariat, Government of British Columbia, 8/96 to 8/00.

2. Deputy Minister, Ministry of Environment, Lands and Parks, Government of British Columbia, 10/93 to 7/96.

3. Deputy Minister, Treasury Board Secretariat, Ministry of Finance and Corporate Relations, and Secretary to Treasury Board. 08/92 to 10/93.

4. Director, School of Resource and Environmental Management, Simon Fraser University, 08/88 to 12/91.

5. Assistant Deputy Minister, Department of Energy and Mines, Province of Manitoba, Policy Planning and Project Development Division, 8/86 to 8/88

6. Senior Economic Analyst. Department of Energy and Mines, Province of Manitoba, Policy Planning and Project Development, 1984. (project and policy evaluation)

7. Visiting Professor, Department of Economics 1983, University of Manitoba, (teaching senior course in resource and environmental economics).

8. Senior Economic Analyst, Department of Economic Development, Province of Manitoba, 1983

9. Consultant to private and public sector clients 1980-present including. Major activities include: economic and environmental evaluation of major resource and energy projects and markets, participation as expert witness before agencies including NEB, OEB, MPUC, BC Arbitration Panel (on resource pricing and energy markets).

Refereed Publications over 80
Professional Reports Prepared over 100
Research Funding $1,668,000

Education

University of Waterloo BA, MA (Planning). (Field: regional planning and natural resource analysis and policy including law, ecology, economics and public policy)

University of British Columbia, Ph.D., Planning (Field: Natural resource policy, regional development planning, planning theory and public policy).

James Hoffele
5455 Dominion St.
Burnaby, B.C. V5G 1E1
604.345.3735
jhoffele@gmail.com

Education

2012–2015
Masters of Resource Management (Planning)
Simon Fraser University (SFU), Burnaby, British Columbia

2011–2012
Teacher Education B.Ed. (Junior/ Intermediate)
Brock University, St. Catharines, Ontario

2007–2011
Concurrent B.A. Integrated Studies (Honours), Education, Minor in Geography
Brock University, St. Catharines, Ontario

Work Experience

Environmental Coordinator
Strategic Initiatives with Environmental Programs at Vancouver Fraser Port Authority
September 2015 – Present

- Supporting daily operation of EcoAction Program for Ships through administration of program requirements including receiving and processing applications for reduced harbor due rates, and confirming environmental performance of corresponding applicants/ships.
- Assisting in the environmental review of assigned project proposals as required under the Port's Environment Policy and the Canadian Environmental Assessment Act, and preparing project environmental assessment reports and schedules of environmental conditions as required.
- Supporting noise and air projects, initiatives and programs through assisting with coordination of data management, analyzing data, quality assurance, continuous improvement processes and reporting.

Permitting Coordinator (Co-op)
Infrastructure Sustainability at Vancouver Fraser Port Authority
December 2014 – August 2015

- Coordinating all associated permits and approvals for habitat enhancement projects in accordance with the Port's habitat banking agreement with Fisheries and Oceans Canada.
- Assisting in Environmental Impact Statement development, consulting service procurement for environmental studies, risk management, and progress reporting for Roberts Bank Terminal 2 Project.

Environmental Consultant with Dr. Thomas Gunton
Living Ocean Society
March – June 2015, May 2016

- Co-authored socio-environmental cost-benefit analysis of Kinder Morgan's proposed Trans Mountain pipeline expansion project for submission as expert evidence to the National Energy Board.
- Evaluated the project's social value based on construction, operation, excess Western Canada oil supply capacity, associated air emissions, risk assessment of oil spills, employee benefits, and oil price uplift effects.

Junior Project Scientist (Internship) with Air Quality and Climate Change Group
SNC-Lavalin, Vancouver
May 2014 – September 2014

- Conducted analysis and research for projects related to regional air quality, pollutant dispersal, policy development, and noise monitoring.
- Learned and applied in-house Port Emission Inventory Tool to analyze greenhouse gas and air contaminant emissions for Prince Rupert Port Authority's 12 terminals.

Environmental Consultant with Dr. Mark Jaccard
City of Vancouver
April 2014 – June 2014, October 2014 – January 2015

- Assessed and estimated the lifecycle greenhouse gas emissions of proposed Trans Mountain pipeline expansion. The report is being used to inform City of Vancouver's motion filed with the National Energy Board to include the economic effects of climate

change in its federal review of the project.

- Led and completed a second report for City of Vancouver analyzing the economic impact on the proposed Trans Mountain pipeline expansion if governments enact policy to fulfill their stated climate targets.

Teaching Assistant for Sustainable Energy and Materials Management undergraduate course
SFU, Burnaby
January 2014 – May 2014

- Facilitated three undergraduate tutorials consisting of approximately 20 students each.
- Provided students with an understanding of the human-induced flows of energy and materials as well as the institutional arrangements, decision-making processes and policy mechanisms for fostering the global adoption of more sustainable technologies and behaviors.

Climate Coordinator
Sustainable SFU, Lower Mainland, BC
September 2013 – May 2014

- Promoted climate change action and energy use reduction at SFU through supporting a fossil fuel divestment campaign, assisting with a climate justice conference, and coordinating an energy reduction program in cooperation with Facilities Management and BC Hydro.

Graduate Student Researcher
Energy and Materials Research Group
SFU, Burnaby, BC
September 2012 – September 2014

- Worked with a diverse energy group that uses an energy-economy model (CIMS) to analyze the cost- effectiveness of technologies, strategies, behaviours and policies to increase energy efficiency and mitigate climate change.
- Under the supervision of Dr. Mark Jaccard and using data obtained from multiple energy-economy modeling teams, I conducted an analysis of the likely decline in production of different fossil fuel resources if global temperatures are limited to a 2o C increase.

- Winner of Joseph-Armand Bombardier Canada Graduate Scholarship

Professional Development

Mitacs Step: Foundations of Project Management I & II

- Participated in two 16-hour workshops to further develop skills in managing both large and small-scale projects, setting realistic goals and milestones, and clear team communication.
- Power Writing Workshop
- Completed three-day business and technical writing workshop lead by David Vale designed to help professionals gain an increased ability to affect readers precisely as they wish in their emails, letters, and reports.

BCIT Project Management Essentials

- Learned the essentials of project management including project definition, work breakdown systems, scope of work, activity development, network diagrams, scheduling, resource leveling, time cost trade-offs, estimating, earned value, reporting and progress measurement during the life of the project.
- First in suite of courses for BCIT associate certificate in Project Management.
- RWDI Introductory Air Modelling Course
- Gained a better understanding of the key meteorological processes that impact air quality to be able to select the appropriate model(s) to address specific air quality issues.
- Assessed suitable modelling approaches for Metro Vancouver Model Plans and permit applications to assess necessary input data and critically review air quality modelling studies.

Envision Sustainability Professional

- Trained in the use of the Envision rating system and credentialed by the Institute of Sustainable Infrastructure.
- Envision provides a holistic framework for planning, evaluating and rating the community, environmental and economic benefits of all types and sizes of infrastructure projects. It encourages, evaluates, grades, and gives recognition to infrastructure projects that use transformational, collaborative approaches to assess identified sustainability indicators over the course of the project's life cycle.

Board Director at The Starfish Canada

- Elected to The Starfish Canada's Board of Directors in March 2016 for a two year term to provide direction to this non-profit environmental organization that has a strong online presence. Through blogging, events, and workshops this organization celebrates and amplifies environmental, solutions-based stories across the nation, with a focus on youth-based initiatives.

MINNESOTA DEPARTMENT OF COMMERCE

Comment Form: Scoping

Energy Environmental Review and Analysis

Please provide your contact information. This information and your comments will be publicly available.

Name: William Fox Phone: 612-240-0085

Street Address: 20692 Hwy 210

City: Mc Gregor, I State: MN ZIP: 55760

Email: foxden1025@yahoo.com

My comments pertain to:

- ☐ **Sandpiper Pipeline Project**
- ☐ **Line 3 Replacement Project**
- ☒ **Both Projects**

This project is environmentally safe and differentiately go for our area.
Hope it proceeds quickly.

If including additional pages please number them and tell us how many you are providing: 1 pages

FRIENDS of the HEADWATERS

May 26, 2016

RECEIVED
MAY 27 2016
MAILROOM

Ms. Jamie MacAlister
Environmental Review Manager
Minnesota Department of Commerce
85 7th Place East, Suite 500
Saint Paul, MN 55101

Re: PUC Docket Numbers (Sandpiper: PL-6668/CN-13-473 and PPL-13-474, Line 3: PL-9/CN-14-916 and PPL-15-137)

Dear Ms. MacAlister,

Please find enclosed copies of Friends of the Headwaters (FOH) previously submitted commentary for both the Sandpiper and Line 3 dockets. Also included is a full set of maps developed by FOH. These materials are to be included with the materials MCEA/FOH are jointly filing (via MCEA) and are to be entered into the record for the Sandpiper/Line 3R draft scoping decision per the PUC's and the Minnesota Appellate Court's ruling for a robust and comprehensive environmental impact study (EIS) on these two pipeline projects.

FOH has concerns that the Department of Commerce may intend to rely on NDPC's previously submitted work on the Route Permit, even though that material was not prepared as part of an EIS, and the Commissioners have ordered that the Route Permit scoping document be withdrawn. An EIS record on environmental impacts must be much broader and more robust than what NDPC has previously submitted.

The enclosed commentary and maps identify and illuminate the numerous environmental and socio-economic issues that all need to be included, analyzed and evaluated in this EIS process. In order to insure a full, robust and comprehensive EIS, we expect that to be the case.

Sincerely,

Richard Smith
President

Friends of the Headwaters
P.O. Box 583
Park Rapids, MN 56470
www.friendsoftheheadwaters.org

POSITION PAPER

ENBRIDGE/NORTH DAKOTA PIPELINE COMPANY (NDPC) LLC
SANDPIPER PIPELINE PROJECT

Public Utilities Commission (PUC) Docket Number: PL-6668/PPL-13-473
Public Utilities Commission (PUC) Docket Number: PL-6668/PPL-13-474

August 20,2014

Prepared by
Richard Smith
Friends of the Headwaters (FOH)
P.O. Box 583
Park Rapids, MN 56470

Friends of the Headwaters opposes the Enbridge/NDPC Sandpiper pipeline as currently projected to cross Minnesota's lake country from Grand Forks, ND to Superior, WI. We believe this proposed corridor will NOT protect the high quality waters only this route. Enbridge/NDPC could not have picked a worse route across Minnesota's critical and valuable water resources.

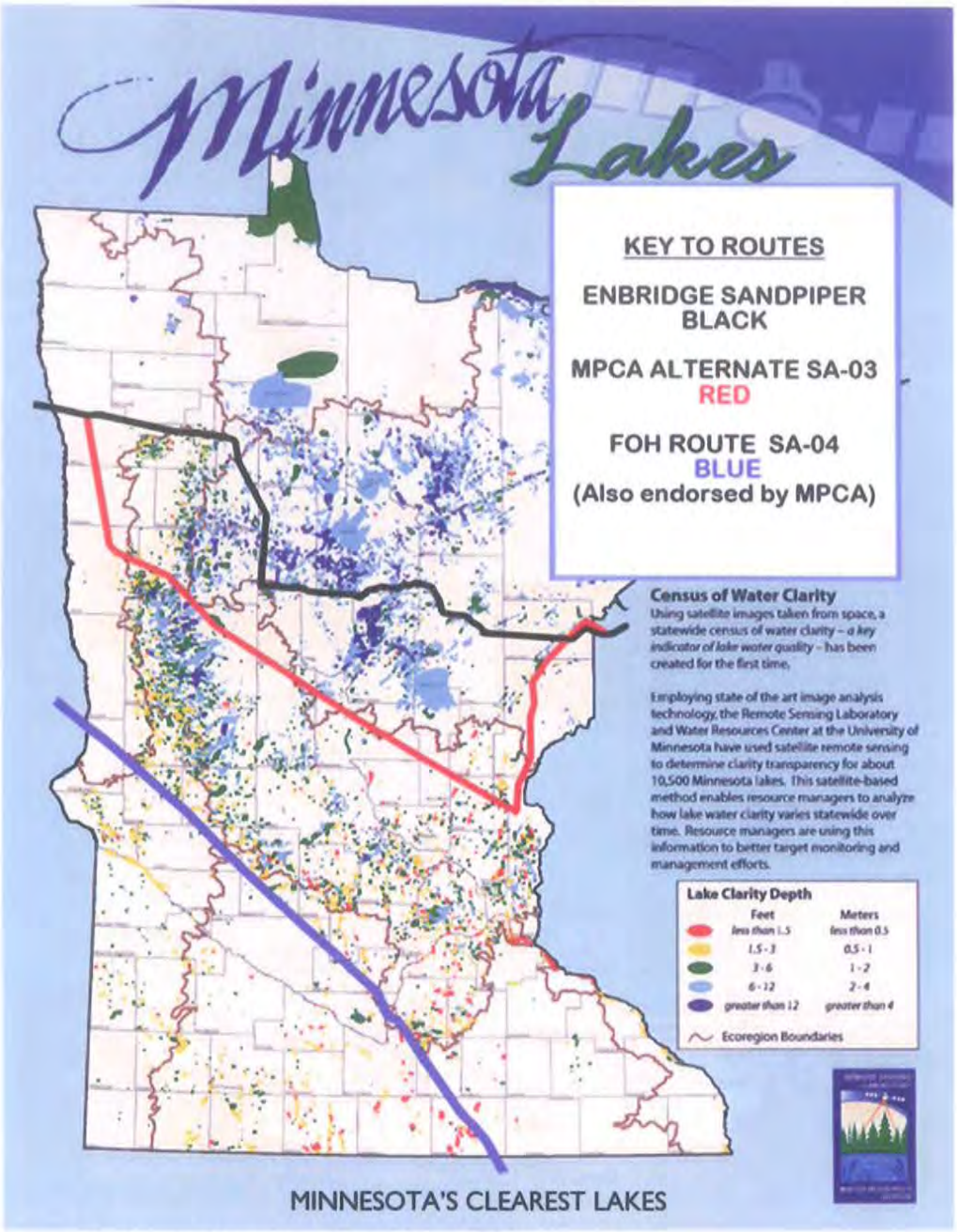
Therefore given the magnitude and scope of this project and the company's request to construct a large stretch of a totally new pipeline corridor with the already announced prospects of building an additional pipeline, the larger Line 3 Rebuild, in this new corridor, FOH is asking the Commissioners to give very serious consideration to the overall environmental and economic consequences of NDPC's proposed route through Minnesota's cherished water resources.

FOH believes there is a better way to accommodate the industry's demand for this new pipeline without exposing Minnesota's most sensitive waters to the potential risks inherent with pipeline facilities. Our suggested alternative route or routes would still provide construction jobs and dollars and retain the pipeline tax benefits for the state. These alternative routes would remove the risks to our lakes, rivers, wetlands, wild rice lakes and drinking water sources. These are issues that concern all Minnesotans who spend a great deal of money to be in, on and around water. This is also an issue about drinking water not only for Minnesota's northern communities and residents, but also the millions who reside in the Greater Minneapolis/St.Paul Metro area. For many that drinking water source is the Mississippi River.

Although FOH does not have remotely near the financial resources of Enbridge, through thoughtful, diligent research and many, many volunteer hours, FOH has produced viable testimony substantiating its proposed routes of which we are presenting below. Some of these maps were presented to you during my testimony at your August 7 hearing. (As an aside, thank you for your endurance and patience on what was a very long day for you all. The opportunity was most appreciated by many who spoke.) The maps have been altered to feature the two routes, NDPC's and SA-03, which you approved for inclusion in the CEA plus FOH's preferred route, SA-04.

Please note: these initial maps are to illustrate and compare the three routes to particular environmental features.

Friends of the Headwaters
ROUTE COMPARISON MAP



Clear lakes are the key to Minnesota's tourism business.

Fishing alone generates $342 million annually in tax revenue for the state. $4.3 billion in annual retail sales is earned from fishing, hunting and wildlife watching.*
*National Sportfishing Association

For Hubbard County tourism was $99M annually with 60% in June - Aug.
For Crow Wing County it was $150M with 49% in June - Aug.

A tourist dollar is spent by a person with a residence beyond 50 miles of the county.

Note that this study was completed during a recessionary economic period 2007-08. This is the latest study with local and county data.

http://www.exploreminnesota.com/industry-minnesota/research-reports/researchdetails/download.aspx?id=811

Clear lakes mean high lake shore property values which is a key factor in available property taxes to their respective counties.

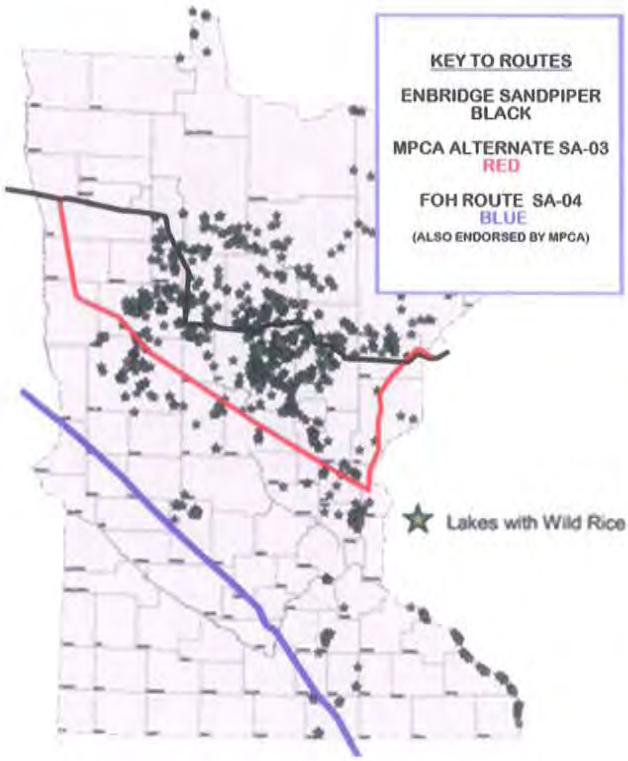
The Fishhook Watershed in Hubbard County is worth $2 billion alone.

NDPC's proposed route crosses the largest tributary, Hay Creek, to the Fishhook Chain of Lakes, 4700 water acres.

If a large rupture on the order of the Enbridge 1991 Grand Rapids, MN spill (1.7 million gallons) occurs at Hay Creek near the top of that watershed, it would dramatically impact the property values on those lakes resulting in a significant loss of tax revenue to the county, state, Park Rapids and its school district. It will be years before the county recovers from the damage. Not only will it incur the loss of tax revenues, but also the loss of residents, small businesses, tourists, and property values.

Multiple those property values for the other lake chains along the proposed Sandpiper route. Whitefish, Pine River, Fifty Lakes, Big Sandy, Lake Superior, and others.

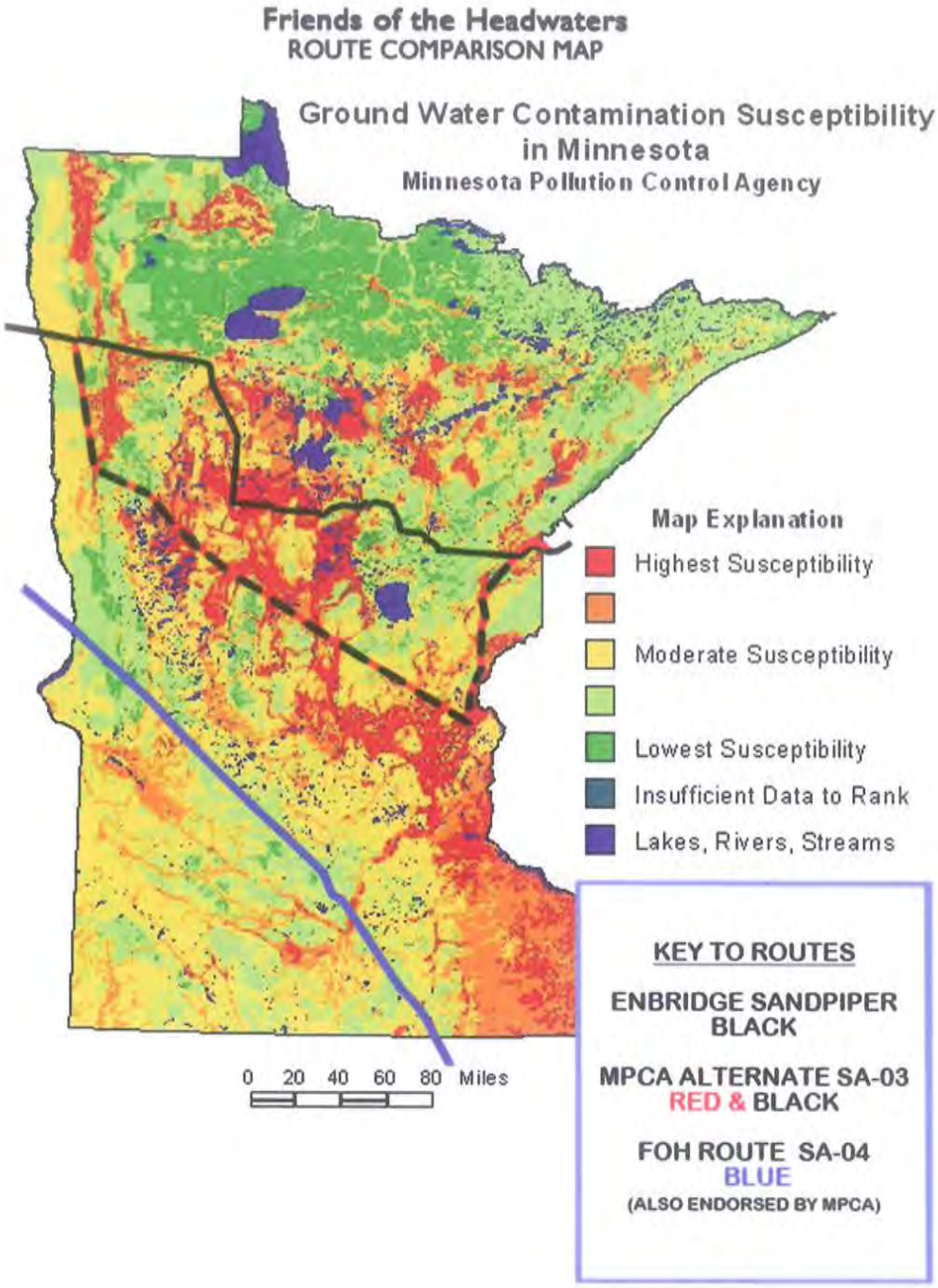
Friends of the Headwaters
ROUTE COMPARISON MAP



Could Enbridge have picked a worse route for jeopardizing the state's prime wild rice lakes and wetlands?

Wild rice is Minnesota's native grain and a part of our heritage and history. For the Ojibwe Nation it is their culture and identity. To them wild rice is priceless.

Research done during the Polymet Mine hearings showed wild rice to be extremely sensitive to sulfides and sulfates, which are found in most crude oils to varying degrees. Will a proper risk analysis be executed to determine the financial and social damage to the Ojibwe and all MInnesotans from a spill in these wild rice waters? Will that risk assessment also include the potential damage to Minnesota's waterfowl populations which depend on wild rice.



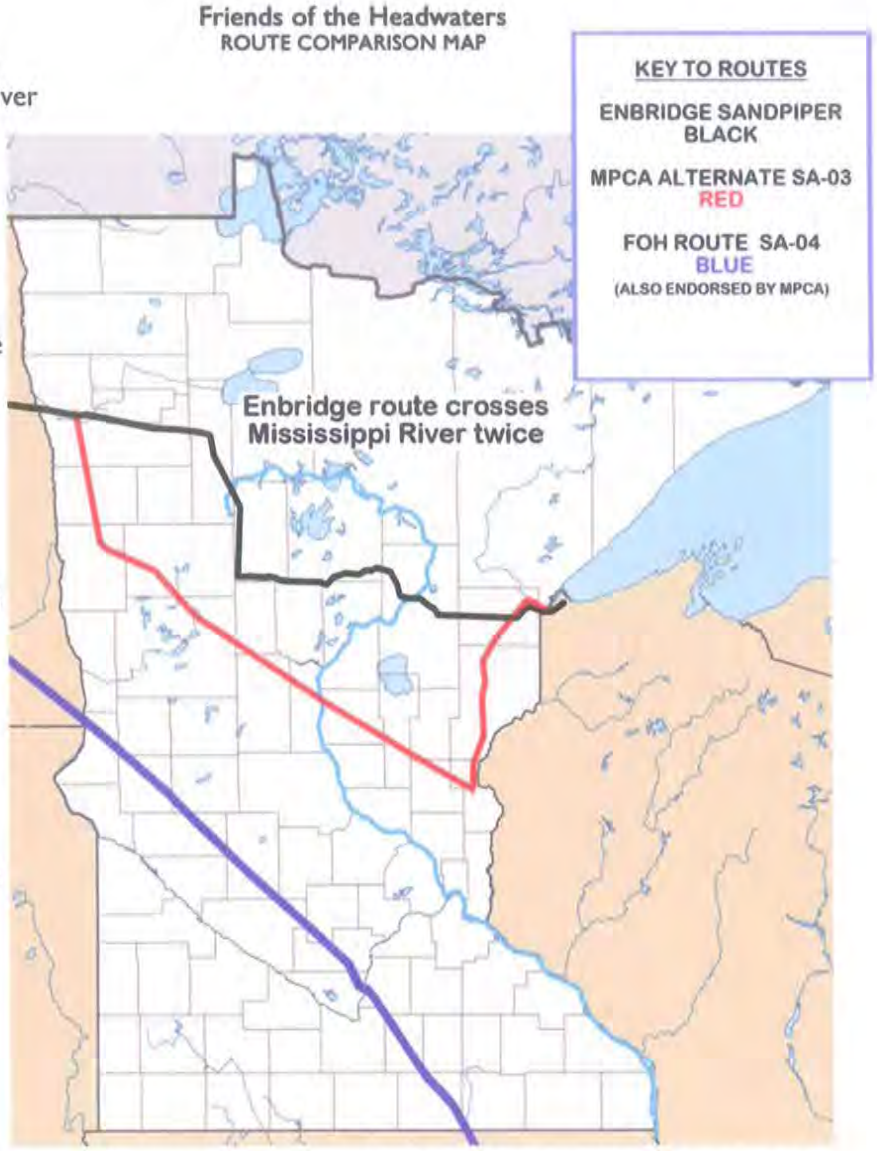
Nothing is more critical than our drinking water sources.

Those bright red areas on the above map, besides being extremely susceptible to contamination, also just happen to be critical aquifers. Besides providing drinking water these aquifers also irrigate thousands of acres of farmland for Minnesota's farmers and the state's agri-business economy.

RDO/Lamb Weston Company in Park Rapids earns $500 million in annual revenue from potatoes. The Straight River aquifer not only grows great potatoes for MacDonald's french fries; it supports the county's largest employer; it supplies all the drinking water for the county seat, Park Rapids and provides clear, cold water for a nationally renowned brown trout stream. All that at that right turn elbow in the Enbridge/NDPC route.

Will the CEA evaluate the full environmental and economic consequences of a spill scenario in the Straight River aquifer? Will it include benzene, naphathalene, toluene in the analysis?

NDPC's proposed route will cross the Mississippi River twice. A spill on the river will expose downriver communities dependent on the river as a drinking water source to a toxic mix of carcinogenic chemicals.



Stan Sattinger, a registered mechanical engineer, provided this information on the risk to drinking water posed by the Alberta Clipper Line 67. Since the larger Line 3 Rebuild is planned to run parallel to the proposed Sandpiper corridor, the info herein on Line 67 should also apply here.

"A study by Professor John Stansbury of the Department of Civil Engineering of the University of Nebraska addressed worst-case spills from the proposed Keystone XL pipeline's crossings of the Missouri and Yellowstone Rivers. He predicted that benzene concentrations at either event would rise to 19 times the Safe Drinking Water Act Maximum Contaminant Level (MCL) for benzene at the spill location, and that concentrations in the plume would remain above the MCL for a distance of 450 miles downstream.

The benzene concentrations for a worst-case spill from the upgraded Line 67 at the town of Ball Club, Minnesota, crossing of the Mississippi River have been calculated using Prof. Stansbury's methods. At the spill location, the concentration would reach 32 times the MCL, and it would remain above the MCL over a distance of 280 miles as the plume travelled downstream. The drinking water intakes for the communities of Grand Rapids, Libby, Aitkin, Brainerd, Royalton, and St. Cloud would be affected. Serious health risks would be created for tens of thousands of Minnesota residents, and aquatic habitats and recreational activities would be compromised. Other chemical constituents from the spill would pose additional risks to humans and to aquatic species in the river.

This kind of analysis is not mandated by Section 7853.0620 Subpart 1, Point discharges to water, or any other section of Minnesota Rules, but I believe that it should be. This increased risk to drinking water supplies in Minnesota is a risk that should not be taken."

Note: his Mississippi River crossing point (Ball Club, west of Grand Rapids) is much farther upstream than the second proposed Sandpiper/Line 3 Rebuild/Mississippi River crossing point. A benzene spill on the river would pose a greater risk to drinking water supplies due to closer proximity to downstream communities including the Greater Minneapolis/St. Paul metropolitan region.

The first crossing point is a few miles downstream of our oldest state park, Itasca, home to the headwaters of the river. At that crossing the daily pipeline volume, 375,000 BPD or 15.750,000 gallons per day, will exceed the average daily volume of the young river by fourfold.

Enbridge proposed route has high risk potential for the headwaters of three major watersheds, Red River of the North, Lake Superior and the Mississippi plus exposure to the St. Croix National Wild and Scenic River watershed.

The MPCA listed 28 stream crossings along the Enbridge/NDPC Sandpiper route that if a spill or rupture were to occur, emergency response crews would not be able to access within 2000 ft of the crossing.

All pipelines leak eventually. While conducting a complete EIS for the Pebble Mine near Bristol Bay, Alaska, the EPA examined the history of pipeline spills relative to the age and mileage of all pipelines.They determined that every pipeline will leak at least once every 30 years over every 30 miles of length. Not surprising the history of Enbridge spills along their northern corridor in Minnesota fits that profile quite well. To quote from a 2003 MPCA report to the NTSB: "nearly three dozen non-third-party spills, leaks or ruptures on just one Enbridge 34 inch line between 1972 and 2003. About 87% of the petroleum gallons spilled from all Minnesota pipelines in the period 1991 to 2002 was from that Enbridge line. This is equal to about 48% of the reported gallons of petroleum spilled from all sources in Minnesota during that period. Included in the Enbridge 34 inch line spills are the 1.7 million gallon rupture in 1991 in Grand Rapids and the 250,000 gallon rupture on July 4, 2002 in Cohasset. 300,000 gallons of the Grand Rapids spilled flowed to a river. Luck with the timing of the spill and river ice conditions kept thousands of gallons of crude from entering the Mississippi River. Oil in the Mississippi would likely have fouled the St. Cloud, St. Paul, and Minneapolis drinking water intakes for months. Likewise the Cohasset spill could have easily entered the Mississippi River if it had happened in a different segment of that 34 inch pipeline."

How much higher are the construction costs of multiple bores under rivers and streams? What are the contingency plans and costs for controlling "frackouts" in stream beds during a bore. *Friends of the Headwaters* has learned a "frackout" occurred on nearly every stream or river bore during this area's last pipeline construction project in 2007. What are the costs and issues for winter construction of wetland areas along the route? How do the company and clean-up agencies access those wetlands areas in non-winter seasons if and when a leak/spill/rupture occurs? What are the economic consequences of summer construction and congestion issues with roads and traffic? How will availability of lodging not just for construction crews but also for tourists be affected. How will the compatibility of construction workers be with tourists, residents and local businesses. How trustworthy and reliable will these workers be with respect to property and paying for services. Some resort owners have informed *Friends of the Headwaters* they will not provide lodging for pipeline workers due to previous pipeline worker negative experiences. Will Enbridge/NDPC be financially responsible for covering damages or lost income from disreputable and irresponsible workers? *Friends of the Headwaters* believes only a properly executed EIS will provide the comprehensive assessment for the above scenarios.

The Class V Sensitivity map regards soils especially sensitive to the discharge of petroleum based materials. Compare those 'sensitive' areas along the Sandpiper route to the similar bright red areas indicated on the "Soils susceptible to ground water contamination" map.

The second soils map illustrates various soil types. The dark green area consists of mollisols, the soil order with lower infiltration rates. FOH's SA-04 traverses the lowest risk soils to infiltration, the migration and contamination of oil spill effluents.

Note: Enbridge's Mark Curwin, Senior Director for Strategic Coordination of Major Project Executions in the US, stated their construction preference is to build pipelines across farmland.

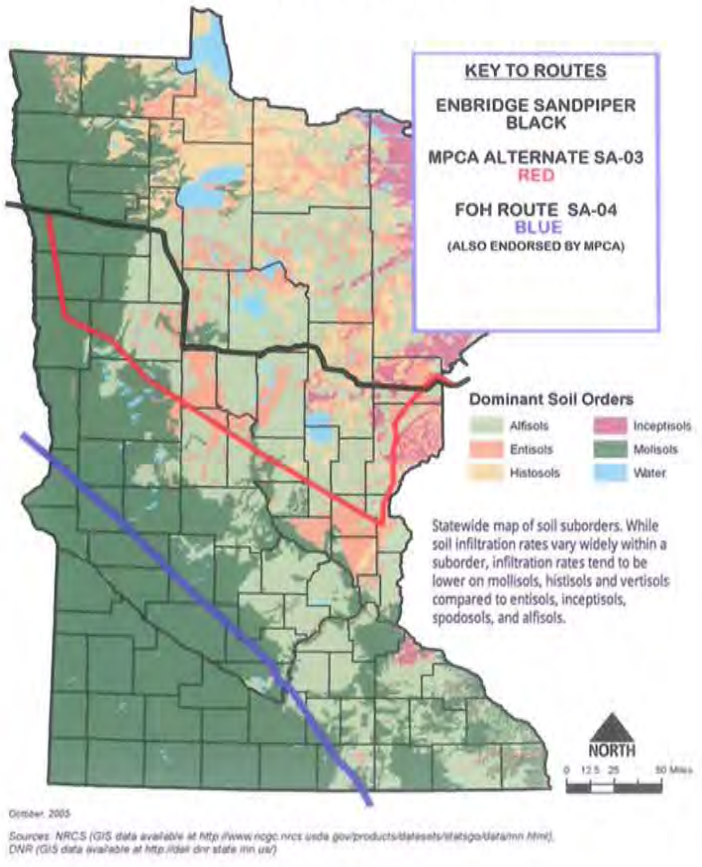
He made these remarks at a public meeting in Park Rapids on Jan. 29, 2014.

Mr. Curwin gave the reasons
of better soils,
easier construction,
easier access,
less natural habitat destruction,
cheaper and quicker.

After construction the farmland can be put back into crop production.

Access to leaks and spills is much easier.

Winter wetland construction would be at a minimum.



Should the state be sacrificing its natural resources to a new energy corridor when an existing corridor, the Enbridge/Alliance natural gas pipeline corridor, is already available and crosses the state at its lowest risk point to the environment and economy.

The MPCA conducted a comparative environmental analysis of the proposed routes (SA-01 to SA-08) listed on the DOC EERA's map . A high score was least damaging to the environment, a low score the most damaging.

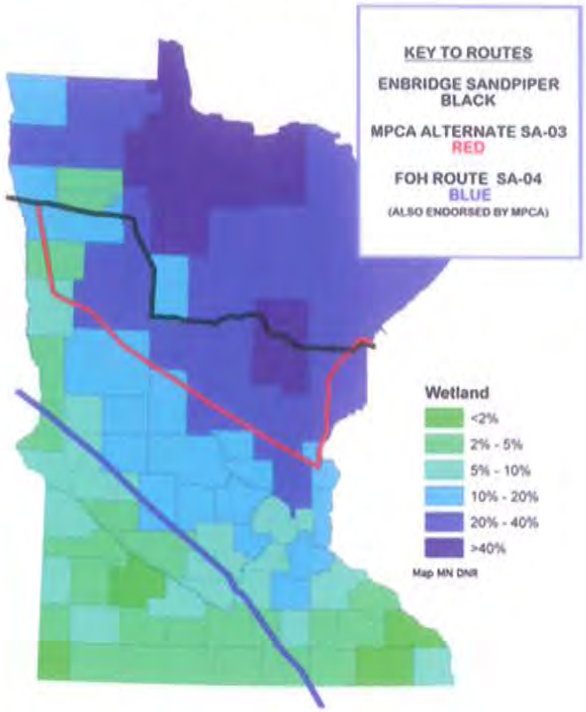
FOH's SA-04 scored the highest,

Enbridge Sandpiper - the lowest.

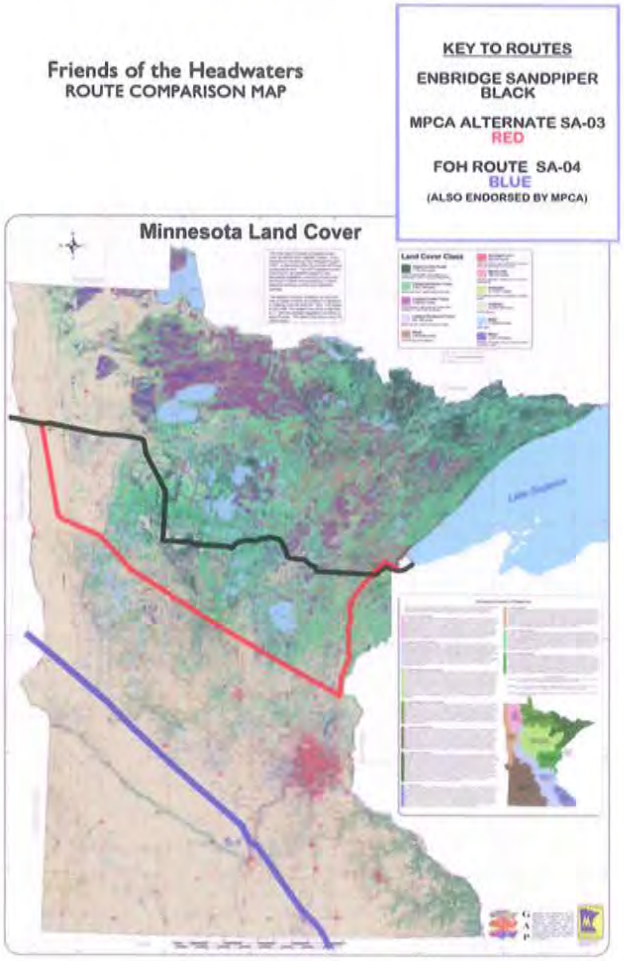
AT RISK: MINNESOTA'S

CLEAREST AND CLEANEST LAKES
GROUND WATER AQUIFERS
WILD RICE LAKES
WETLANDS
MOST SENSITIVE SOILS TO SPILLS
DIVERSITY OF VEGETATION
SENSITIVE ECOLOGICAL ZONES
THE LAKE SUPERIOR BASIN
HIGH VALUE RECREATIONAL AND RESIDENTIAL WATERS

Friends of the Headwaters
ROUTE COMPARISON MAP

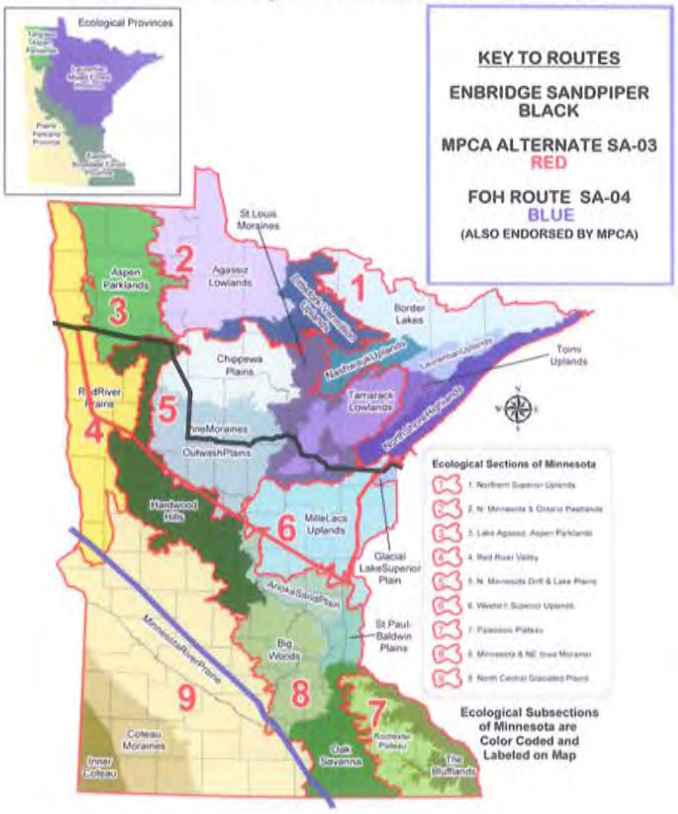


Friends of the Headwaters
ROUTE COMPARISON MAP



Friends of the Headwaters
ROUTE COMPARISON MAP

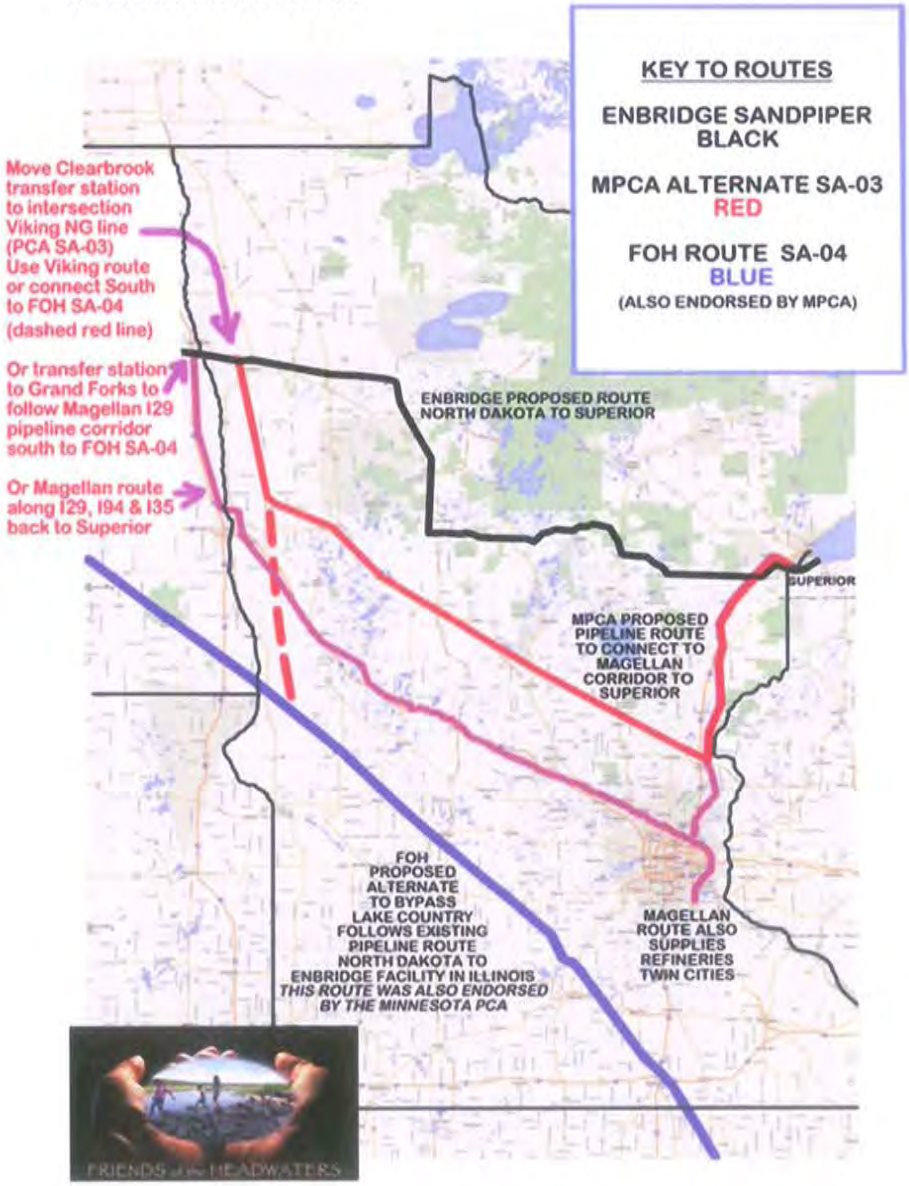
Minnesota Ecological Sections and Subsections



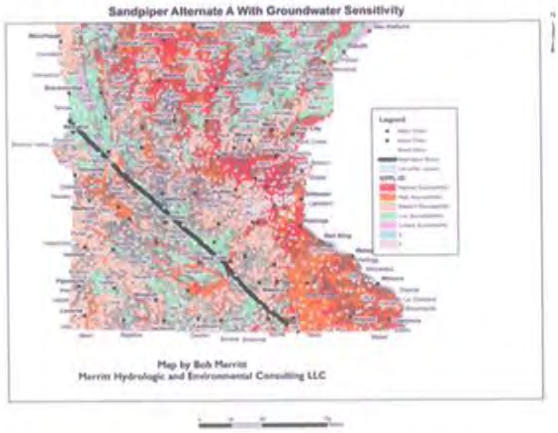
As illustrated above the risks to Minnesota's environment and especially its valuable and critical northern water resources and water-based economy are too great. Why is the state sacrificing these waters for so little gain when so much is at risk. Most of the oil traversing the state is traveling elsewhere. Now that a mostly new pipeline corridor is being proposed by Enbridge, a company with less than a stellar record, it is time for the state to slow down and strongly consider all the factors as to where this pipeline should be located. And as previously stated, the company's intention is to apply to the state for a permit next year to build another larger pipeline, the Line 3 Rebuild, next to the Sandpiper pipeline.

FOH proposes the state reject the company's requested route and consider the following option:
Move the Sandpiper proposed transfer station scheduled to be built near Clearbrook, but not at its current Clearbrook plant, west towards Crookston where the Sandpiper pipeline intersects the Viking natural gas pipeline corridor OR move the transfer station to North Dakota where the Sandpiper intersects the Magellan oil pipeline corridor. From either of those locations the Sandpiper can turn south along those existing corridors and connect to SA-04. SA-04 in its entirety connects to an existing Enbridge facility in Flanagon, IL. From Flanagon, oil can be moved on the Enbridge system either east to Canada or south to the Gulf, both of which are supply points Enbridge says they must meet. If it is necessary to meet an obligation to MinnCan and the Flint Hills Refinery in the south Metro, Enbridge can use the abandoned MinnCan Wood River pipeline to move oil north to Flint Hills. The Wood River line runs between Minneapolis and Missouri.

Friends of the Headwaters
ROUTE COMPARISON MAP

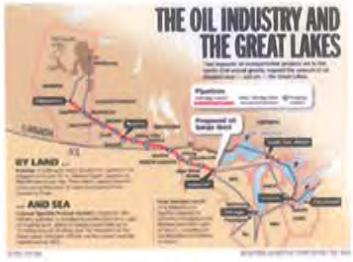


Two additional maps by Bob Merritt, hydrologist, showing FOH SA-04 in better detail.



Minnesota still gets to keep jobs the construction will provide as well as North Dakota plus Iowa and Illinois.

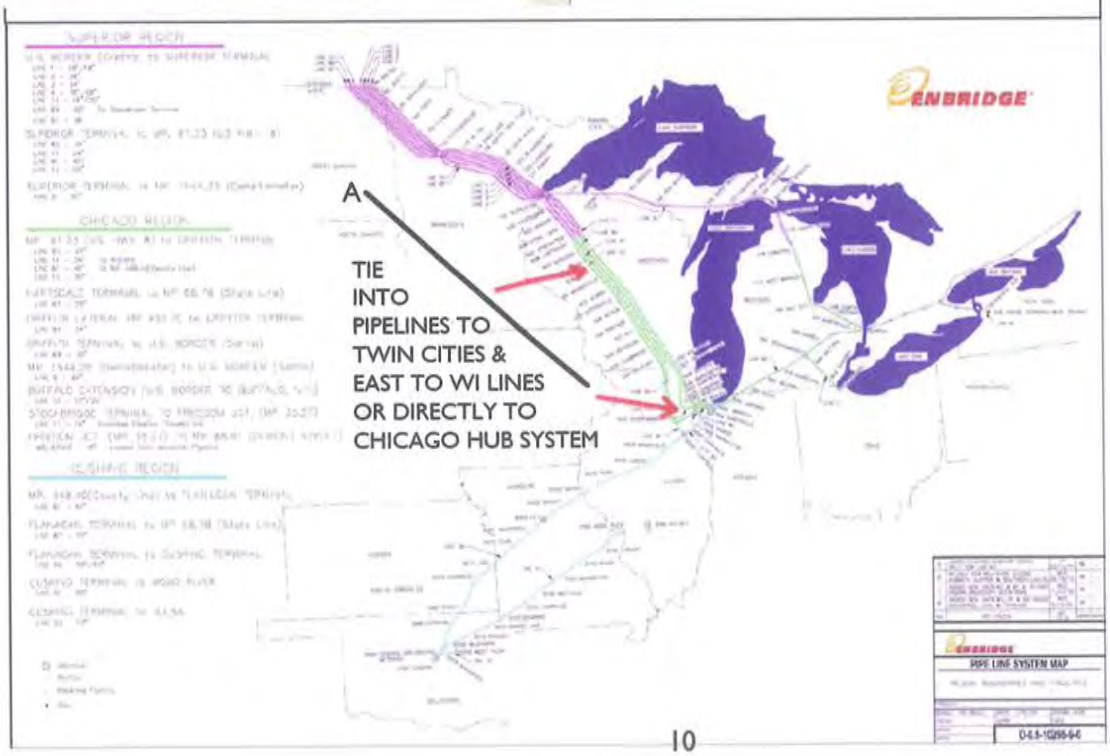
Although the route does not end in Superior, it still ties into the existing Enbridge system in Illinois with routing options to Michigan and Ontario that avoid our greatest freshwater lakes of Lake Superior and the Mackinac Straits of Lakes Michigan and Huron.



Since it's an existing corridor the company should have access to the mapping previously done for the pipeline already there. FOH SA-04 also intersects pipelines in southern Minnesota owned and operated by other companies which provide the option of re-routing Bakken crude to the refineries in Rosemont and Saint Paul Park in the south Twin Cities Metro.

The Illinois Hub also allows Enbridge access to its pipelines to Oklahoma and points south.

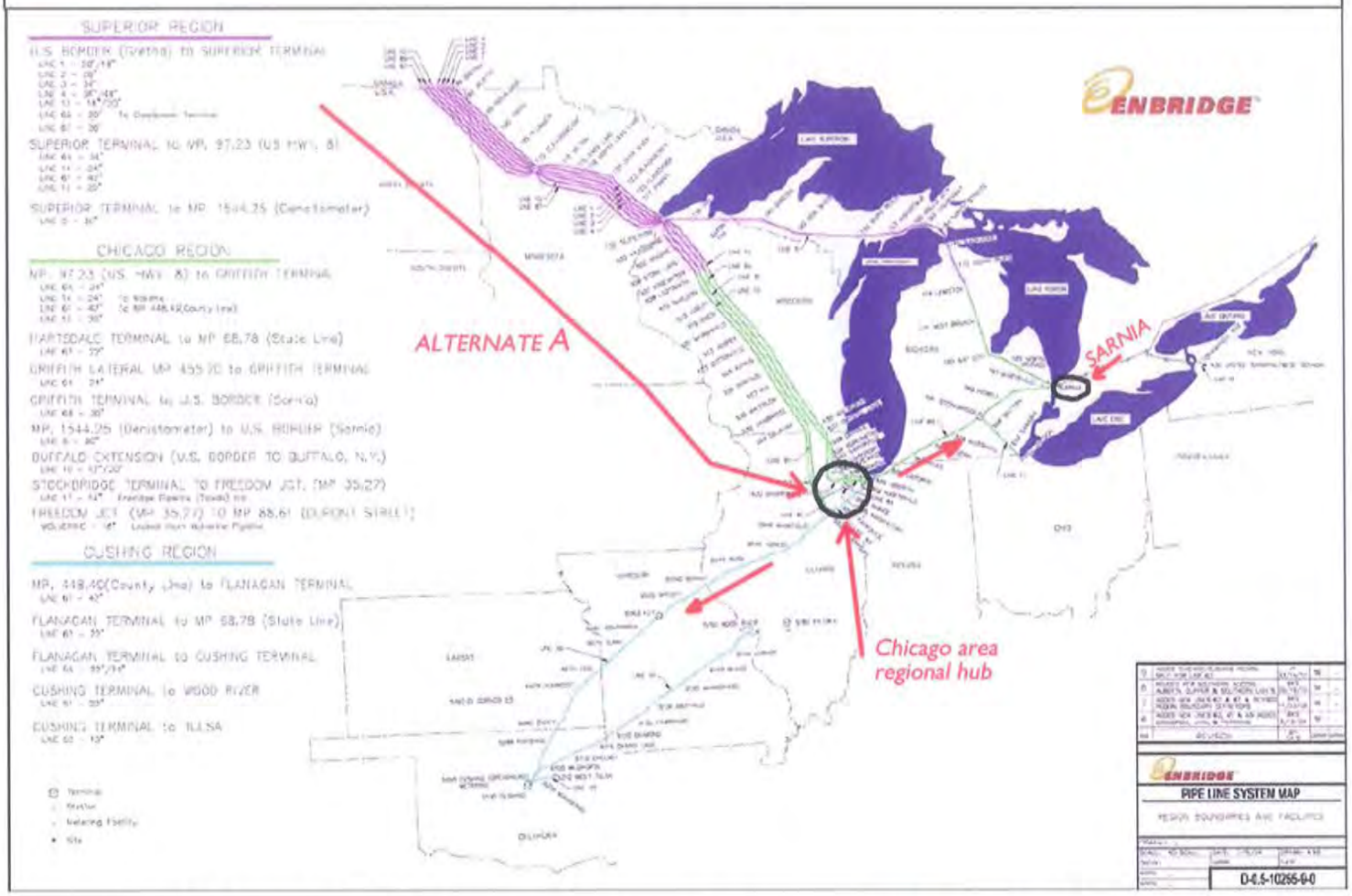
Now Serving the Bakken



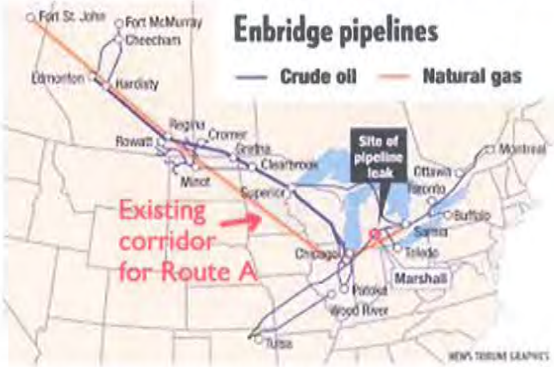
Wisconsin Petroleum Pipelines

The *FRIENDS of the HEADWATERS* disputes Enbridge/NDPC's contention that the Sandpiper must end in Superior, Wisconsin. Enbridge has provided no rationale for the route ending in Superior other than "We want it. It connects to our existing system in Superior." The Alternate Route SA-04 proposed by *FRIENDS of the HEADWATERS* also connects to their existing system hub near Chicago, Illinois. It does not prevent Enbridge from then transporting the Bakken crude either south to Oklahoma and the Gulf Coast nor across Illinois, Indiana, Michigan and across the border to Sarnia, Ontario, Canada on their existing system.

Figure 7853.0510-2
Pipeline System Map



FOH SA-04 already fits into their existing pipeline corridor system as evidenced by the map at right. Alternate Route A also appears to be a more direct route from the North Dakota Bakken Oil Fields to the primary energy markets of the US Midwest.



Friends of the Headwaters believes the citizens of Minnesota have the right to determine the route parameters of this pipeline corridor, not Enbridge/NDPC. The considerations of the Sandpiper pipeline and the Line 3 Rebuild proposed to run alongside the Sandpiper should not be dictated to the citizens of Minnesota by the company. The company already has too many pipelines crossing Minnesota's most valuable waters and lands.

The cumulative risk of adding additional lines to this region is too high to have the routing parameters set by what Enbridge 'wants'. They should not be allowed to frame the debate on this issue. The citizens of Minnesota and this state's governing and regulatory agencies need to reject this framing by Enbridge/NDPC

and reframe the discussion regarding the need and route of the proposed Sandpiper pipeline as what is beneficial to Minnesota, its people, its communities and its natural resources. Until Enbridge/NDPC adequately provides a detailed explanation for demanding why the Sandpiper pipeline must end in Superior, Wisconsin, *Friends of the Headwaters* believes all alternative routes must be given full consideration, even those proposing a system overhaul of how and where Enbridge wants to cross the state.

If Enbridge/NDPC were truly committed to protecting our lakes, rivers, wetlands, aquifers and lands as they publically state they are, then prove it by not just giving Minnesotans statistics about how safe their pipelines are (their history says otherwise), but by actually moving their proposed route to the lowest risk part of the state as portrayed on the previously presented illustrated maps.

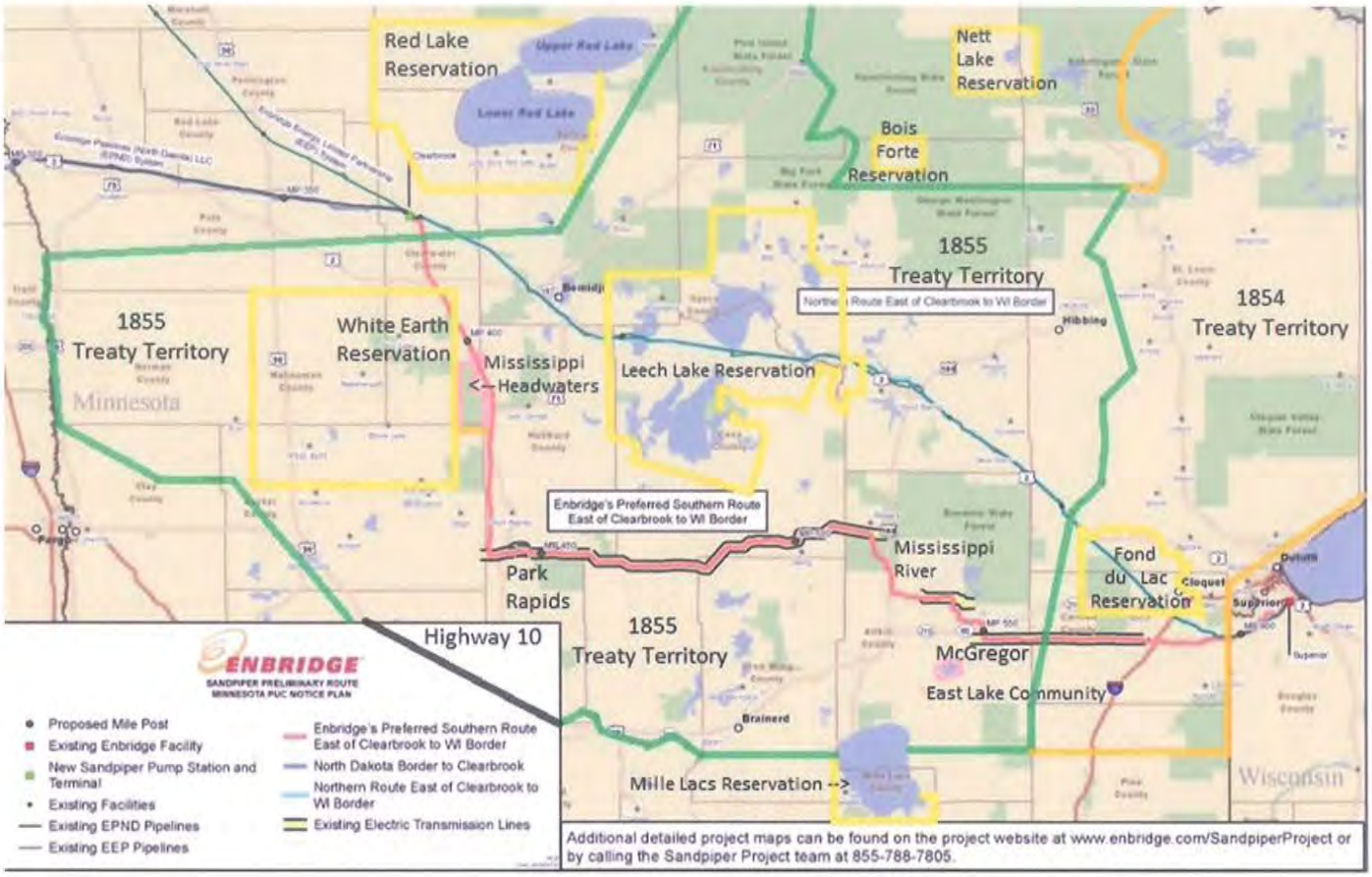
Costs should not be a factor. After all, once the Sandpiper is constructed, 375,000 barrels of oil will pass through it daily. At the current world price for a barrel of oil that amounts to $40 million dollars per day or $14.6 billion dollars annually. Even though Enbridge is charging a fee to move the amount of oil, it should not take too many years to recoup their construction costs. Plus it appears from the map below the company has plans to expand the pipeline system through Wisconsin. The money allocated for that extension could easily be applied to the extra construction costs of building Alternate Route A.

Since the company is adamant about Superior as a destination for the Bakken crude, perhaps this proposed extension in Wisconsin could be used to move the oil from the end of FOH SA-04 back north to Superior.

Enbridge has ambitious expansion plans not just in Minnesota but nationally it appears.

If their intensions are to expand rapidly towards the southern U.S. Alternative Route A would conform to those expansion plans more directly than their current proposed Sandpiper corridor.

In summary the *FRIENDS of the HEADWATERS* opposes the Enbridge/NDPC Sandpiper Pipeline route proposal as marked on the map below. What does it say about a company that would neglect to feature the state's most famous river, the Mississippi, on their proposed route map? Perhaps this is evidence of their true concern for Minnesota's valuable and cherished water resources.



Enbridge already has too large a footprint across Minnesota's Headwaters Country.

Too much is at risk, not only with the state's clearest lakes; ground water aquifers; fish and wildlife; wild rice; lake and riverfront homes, businesses, and communities; tourism industry; lands and forests; but there's also Lake Superior.

Does Enbridge's insistence on the pipeline ending at Superior portend a future of shipping oil on the Great Lakes? Ironic that a ship icon just happens to be on the adjacent map.

The people of Minnesota should not allow a Canadian corporation with its North Dakota Pipeline Company US subsidiary to dictate the terms of this project.

A project of this magnitude as planned through the heart of *"The Land of 10,000 Lakes"* must conform to the standards prescribed in MEPA.

"No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct."

Friends of the Headwaters does not believe this proposed multiple pipeline corridor with the Sandpiper and now Line 3 Rebuild can meet the high standards set above for quality, safety and sustainability of the lands and especially waters along the route.

"Cherish the natural resources as a sacred heritage, for your children and your children's children."
Teddy Roosevelt

Thank you for your attention and consideration.

Jamie MacAlister, Environmental Review Manger
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101

In the Matter of the Applications of Enbridge Energy, Limited Partnership for a Certificate of Need and a Pipeline Routing Permit for the Line 3 Pipeline Replacement Project in Minnesota from the North Dakota Border to the Wisconsin Border
Public Utilities Commission (PUC) Docket Numbers:
PL-9/CN-14-916 – Certificate of Need
PL-9/PPL-15-137 – Route Permit

Friends of the Headwaters (FOH) provides the following statement.

NO FURTHER ACTION ON LINE 3 NOR THE SANDPIPER ROUTE PERMIT PROCESS SHOULD OCCUR UNTIL THE APPEALS COURT ORDERED EIS ON THE SANDPIPER CERTIFICATE OF NEED IS EXECUTED AND COMPLETED. A FULL ENVIRONMENTAL IMPACT STATEMENT (EIS) MUST ALSO BE EXECUTED ON THE LINE 3 REPLACEMENT PROJECT BEFORE A CERTIFICATE OF NEED IS ISSUED BY THE MINNESOTA PUBLIC UTILITIES COMMISSION.

Comment 1. An EIS must address the Line 3 pipeline as well as the Sandpiper pipeline.

Minnesota's Public Utilities Commission (PUC) must make a decision to conduct an EIS on the Line 3 proposed pipeline for the following reasons. These include but are not limited to the following:

A. The Minnesota Court of Appeals has ordered an EIS on the Enbridge/North Dakota Pipeline Company Sandpiper pipeline project.

B. A good portion of Line 3 is proposed to share a new corridor with the Sandpiper pipeline. They may only be a few yards apart in this corridor. Both lines are proposed to be constructed at approximately the same time.

C. As proposed the Line 3 project is the placement of a larger pipeline mostly into a new location other than the existing Line 3 corridor. Therefore it is a new pipeline, not a "replacement". FOH strongly objects to Enbridge's continual mischaracterization of this project as a mere "replacement."

D. The Sandpiper administrative hearing record has established a high degree of concern for significant environmental impacts on much of the route proposed for Line 3. This concern was expressed by *all* the experts having natural resource and environmental expertise who participated in the Sandpiper administrative procedures *except for those employed by Enbridge*.

E. The PUC made a decision to address the cumulative impacts of Sandpiper and Line 3 taken together in their Sandpiper written order for the Certificate of Need. The CEA included in the written order has been vacated by the Appeals Court decision.

F. Line 3 will affect ten thousand acres or more of land when taken together with Sandpiper. It will also affect many bodies of water, wetlands, wild rice lakes and other natural resources.

G. No risk assessment and consequence analysis has been accomplished by any party on Sandpiper or Line 3.

Comment 2. The Appellate Court's order of an EIS has yet to be addressed by the PUC.

By ordering an EIS the Court's unanimous decision also voided the Certificate of Need for the Sandpiper pipeline. This casts doubt not only on the administrative process that was completed for Sandpiper but also on what remains to be done. Since a portion of Line 3 is proposed to co-locate with the Sandpiper, the court order has ramifications for Line 3.

The EIS is a more deliberate, comprehensive, administrative and scientific process. With more public input, more checks and balances and a full risk analysis the EIS is considerably more thorough than the CEA process planned for the Sandpiper route permit. There is no basis whatsoever for concluding that the same outcome will occur from a CEA. An EIS means a new look with respect to all alternatives. There will be new substantive findings. In fact, one can easily envision an entirely different outcome given the evidence, expertise and opinions of Minnesota's two environmental and natural resource agencies, the Department of Natural Resources and the Pollution Control Agency, and with oversight by the Minnesota Environmental Quality Board.

The PUC's Notice for Public Comments on Line 3 contains a good example of how the implications of the Appeals Court EIS order are not yet integrated into the PUC process.

In the Notice:

Item 3 asks if there are *"alternative routes or route segments that should be considered? (Related to the Route Permit)"*

Item 4 asks if there are *"alternatives to the project that should be considered? (Related to the Certificate of Need)"*

As described by Enbridge their "project" specifies a particular location with prescribed start and endpoints and few, if any, alternative routes for its suggested CEA. <u>This is not how an EIS works.</u> All alternative routes, source and endpoints must be studied from the very beginning of an EIS analysis with an emphasis on whether the project is needed at all.

Another example was the partial attempt to examine other end points for the Sandpiper project other than Superior. This resulted in the poorly done, and very shallow, look at "system alternatives" during the Sandpiper review. Obviously, the EIS on Sandpiper will be giving these and any other route and system alternatives a much more serious look in order to comply with EIS requirements.

Therefore, FOH recommends to the PUC a four-pronged approach to executing an EIS on Sandpiper:

1) Fully comprehend and accept that the outcome of preparing an EIS on Sandpiper will be quite different than the outcome of the administrative process previously conducted.

2) The PUC suspends any of its conclusions on Sandpiper including opinions on which alternative routes need to be analyzed as well as the merits of the CEA prepared by Commerce on the Sandpiper project,

3) Conducts a proper, comprehensive and honest EIS on BOTH projects together, and

4) Follows the reasoning on project purposes and resulting identification of alternatives described in Comment #4 below.

Comment 3. An EIS on a liquid pipeline is a new ball game for Minnesota.

The Minnesota government has never done an EIS on a large-diameter liquid pipeline. Ever. Therefore, it needs to take a very logical step and examine recent environmental impact statements and supporting studies on similar pipelines. We stress recent studies. As FOH pointed out during the unfinished Sandpiper administrative process, a number of recent and very damaging pipeline accidents and oil releases have heightened the review of such pipelines and necessitated a thorough look at risk and consequences.

The PUC notice specifically asks for input on these questions:

1. What human and environmental impacts should be studied in the environmental analysis?

2. Are there any specific methods to address these impacts that should be studied in the environmental analysis?

These are highly relevant questions for which we have a clear and compelling answer. Use the Keystone XL EIS and its accompanying studies. Their excellent results and methodologies will provide answers to these questions. This is especially important because there are no consulting companies in Minnesota who have experience preparing such studies. It is likely that Minnesota agencies will need to reach outside the state, something which also happened on the Keystone XL studies.

Comment 4. Overview of project alternatives.

Both federal and state regulations stress the need for the proper and serious examination of alternatives since this is the heart of environmental review. In other words, impacts to the human and natural environments can be reduced by finding better locations for a project. This kind of analysis is crucial for linear projects, since when end points change, alternative routes become more evident. Given this, pipeline projects are entirely different from other linear projects such as high voltage transmission line (HVTL) projects. It is a huge mistake to use HVTL projects as a model for pipelines. Service areas and electrical demands do a good job of determining end points for those projects. This is not true of pipelines, where refinery location, corporate priorities and secret contract information drive the end point locations. These define the corporate priorities - not public needs or benefits.

A. Project facts related to alternatives analysis.

There are four overriding factual statements about the purpose of the Line 3 proposal that must drive the alternatives analysis:

1. The physical aspect of the project is the physical pipeline, but the purpose of the project is to carry product. Therefore the project's purpose and its subsequent alternatives analysis must focus on the source and end points of the products the physical pipeline carries. There are multiple locations between these beginning and end points that would achieve the project's purpose.

2. Two of the three project purposes as stated by Enbridge refer to the entire Enbridge system:

"Second, the Project will reduce on-going and forecasted apportionment to the refining industry in PADD II, Eastern Canada, and the Gulf Coast, including Flint Hills and Northern Tier Energy in Minnesota.

"Third, the restored operational flexibility will allow Enbridge to more efficiently operate the Enbridge Mainline System, optimize its pipeline system and reduce power utilization on a per barrel basis."

3. Most of the Enbridge system is outside of Minnesota, as shown on the various maps included in the application. The vast majority of product

goes to the Chicago area; then east and south. Therefore the end point(s) of most of the product carried by the project are not in Superior but are much farther south.

4. The pipeline will be larger and of higher capacity than the existing Line 3.

B. Given these facts, Enbridge's analysis of project alternatives is completely deficient.

It is clearly to Enbridge's benefit to focus its "need" discussion on the big picture—the need and desires of refineries in general, use of its existing system, and such things as shortages making apportionment among users necessary. It also is clearly to Enbridge's benefit to focus on its desire to place the physical pipeline in the location it desires—along its existing pipelines and, when it deems this not feasible, the shortest alternative to reach Superior. It has done both of these things in its CN and Route Permit applications.

What are missing are alternative routes to reach and/or accomplish the two purposes listed above. More importantly, also missing is the information in its application to determine whether alternative end points and routes might actually be in the public interest, be beneficial to users, or to refineries, and eliminate or reduce apportionment.

This is not surprising: it is not the role of a private entity to provide objective information that another project might be more beneficial to the public interest or the private interest of other users.

This cherry-picking of data by Enbridge, and the resulting bias of analysis is plainly evident if one looks at how many pages in the route application Enbridge spends trying to demonstrate that its mainline corridor in Minnesota is congested and problematic. Meanwhile it is completely silent on discussing congestion and constraints along its proposed route from Clearbrook to Park Rapids. In fact, this corridor already has 3-4 pipelines which are forcing high impacts because of the clear environmental problems along this clearly inappropriate pipeline corridor.

For example, Enbridge talks about the number of "cross-overs" on its mainline corridor—accomplished by boring a line under existing lines to reach the other side because of obstacles to building the line along one side. In fact, there are numerous cross-overs on the existing corridor between Clearbrook and Park Rapids. (Source: Paul Stolen, retired DNR, experience with MinnCan corridor) Why isn't this discussed in the application?

C. "System alternatives" studied for the Sandpiper project.

There was a partial effort to study alternative endpoints for the Sandpiper project in the uncompleted Sandpiper review. The EIS will develop a more formal, deliberative and objective effort without allowing the Enbridge information to dominate as it did during the past administrative process. A similar, but more more comprehensive approach is needed for Line 3 with objective examination of other endpoints besides Superior.

D. Conclusion about an overview of project alternatives.

The project purpose as stated by Enbridge requires the need for a much more broadly defined alternatives analysis including a thorough, independent review of Enbridge's product apportionment, commitments to refiners, and alternative physical routes and physical structures to meet these commitments. Such a review would result in identification of other alternatives to meet the project purpose.

In summary, the following considerations yield a conclusion that significantly different routes other than expanding Enbridge's mainline corridor or following Enbridge's proposed southern route must be considered. This essentially means establishing another pipeline corridor in a safer location that also likely is a more direct route to Enbridge's customers.

1. As noted above, the approach to defining alternatives must be accomplished by addressing the project's purpose by integrating the proposed project into the entirety of the Enbridge system of supplying refineries, not the purpose of going to Superior, Wisconsin.

2. Enbridge's mainline corridor is described by Enbridge as being congested east of Clearbrook, and also having problems obtaining approval from Indian Tribes and the U.S. Forest Service.

3. The administrative record on the Sandpiper project, incomplete and inadequate because an EIS has not been accomplished, did nonetheless demonstrate major problems with the proposed Sandpiper corridor. This proposed corridor from Clearbrook to Park Rapids is congested in the same manner as Enbridge's mainline corridor.

4. Minnesota and federal law and regulations state that economic considerations alone are not given pre-eminence in reviews and permits, and that alternatives with less impact must be given a hard look.

Comment 5. Risk assessment and consequence analysis.

FOH received a report prepared by Paul Stolen concerning the need for a scientifically sound assessment of risk and consequences of oil releases for the Sandpiper and Line 3 projects. Based on information in the report we are deeply concerned with many aspects of this report, including the vulnerability of highly complex centralized and satellite operated control systems such as used by Enbridge, and by the recent evidence of new pipelines rapidly corroding or rupturing. We agree with his conclusions

Comment 6. Specific alternative routes

The following routes should be examined for the Line #3 Replacement project. These alternative routes reflect FOH's position that no new pipelines should be constructed through Minnesota's northern water landscape. Rather this new energy corridor should be placed in a location that has the lowest risk environmentally for the state and is the easiest to mitigate should a spill occur. These routes also provide jobs and tax revenues for the state while preserving the high water quality of Minnesota's lakes, streams, and aquifers and insuring the future of these waters for generations to come.

Alternate Route A (This is designated as SA-04 in the Sandpiper docket)

Alliance pipeline corridor from Alberta, Canada to Illinois

Alternate Route B

Viking and Alliance pipeline corridors with short link of new corridor

Alternate Route C

Keystone 1 and Alliance pipeline corridors

See attached maps for description and illustration of route alternatives A, B & C.

There is one other alternative replacement proposal for Line 3 which deserves serious consideration and study by Minnesota's governing agencies and the public. Enbridge's stated reasons for replacing Line 3 are its age, 50 years old, and its numerous integrity anomalies (corrosion, cracks, holes, leaks, spills) along the line due to its age. FOH is aware there are two older pipelines, over 60 years old, also sharing the Enbridge Mainline northern corridor with Line 3. Is this a situation wherein it is advisable to replace all three old pipelines with one large pipeline with the equivalent capacity of the three old lines.

It is evident to FOH that Enbridge will be coming back to the state in the near future with an application to replace one of those 60 year old pipes. Do the Minnesota government, the Company and the public want to expend the time, money and resources to re-fight, re-litigate, and potentially incur long and expensive delays again?

The Appeals Court order for an EIS before any further pipeline proceedings can occur has provided Minnesota with the perfect opportunity to address this matter with a more deliberative and comprehensive process. A properly conducted EIS that encompasses and examines all of the state's features will greatly inform the decision of how and where a new hazardous liquids energy corridor, if necessary, should cross the state.

PART 2

In the Matter of the Applications of Enbridge Energy Ltd Partnership for a Certificate of Need and a Pipeline Routing Permit for the Line 3 Pipeline Replacement Project in Minnesota
Public Utilities Commission (PUC) Docket Numbers: PL-9/CN-14-916 (Certificate of Need), PL-9/PPL-15-137 (Route Permit)

September 28, 2015

Prepared by
Richard Smith
Friends of the Headwaters
P.O. Box 583
Park Rapids, MN 56470

Friends of the Headwaters ("FOH") opposes the Enbridge Energy Line 3 pipeline as currently projected to cross Minnesota's lake country from North Dakota to Superior, Wisconsin.

The Line 3 Pipeline Replacement project is proposed to co-locate alongside the, as yet approved, Enbridge dba NDPC Sandpiper pipeline "southern corridor" from Clearbrook, MN to Superior.

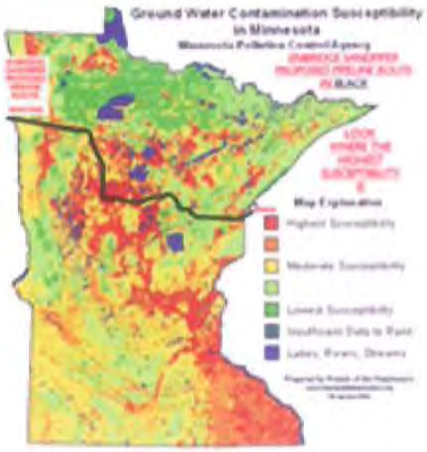
We believe Enbridge's proposed Sandpiper/Line 3 "southern corridor" will NOT protect the high quality waters along this route.

Friends of the Headwaters also believes Enbridge intends to proliferate other pipelines into this corridor with their southern route proposal.

Enbridge is proposing to replace Line 3 because it is an aging 50 year old line with numerous "integrity anomalies", corporate speak for corrosion, leaks, ruptures and spills. Line 3 currently resides alongside two older pipelines (in their 60s) yet. Does Enbridge propose to relocate those into this southern corridor?

Besides our important residential and recreational lakes Minnesota's best wild rice lakes are also extremely vulnerable to this proposed pipeline. Those lakes are culturally and economically significant to Minnesota's Ojibwa tribes as well as being important food sources for our migratory waterfowl populations.

The "southern corridor" will severely jeopardize the Straight River aquifer in southern Hubbard County. The aquifer is critical as the sole drinking water source for the county seat, Park Rapids. as well as supporting the county's primary agricultural crop, potatoes. Annual revenue from the potato crop approaches $500 million. A leak/rupture in the aquifer would severely impact this agricultural revenue, damage Park Rapids' potable water source, and despoil a renowned brown trout stream, as well.



Hubbard County natural resources support a vibrant tourism community with nearby Itasca State Park, America's second oldest state park after Niagara Falls and home to the headwaters of America's most famous river, the Mississippi, and with its family-owned lake country resort businesses. The Minnesota Tourism Office estimates $100 million dollars per year are spent in the county, 60% of that during vacation season. A catastrophic oil spill on the level of Enbridge's Kalamazoo River spill would devastate the county's tourism business.

Given the high risks to the county, state and private lands and waters along the proposed southern route, *FOH* strongly disagrees with the PUC/DOC's position that a full environmental impact study (EIS) is not necessary for the confirmation of Enbridge Line 3 route proposal. A PUC/DOC conducted CEA (comparative environmental analysis) will fail to meet MEPA standards. *FOH* believes a complete EIS with the requisite and cumulative leak/spill scenarios and assessments for the lakes and rivers, trout streams, wild rice beds, lake homes and resorts, ground water sources, farmlands, wetlands, wildlife, local communities and their economies will validate *FOH's* position of moving this joint Line 3/Sandpiper route to a lower risk part of the state.

On September 14, 2015 the Minnesota Appellate Court agreed with Friends of the Headwaters and by unanimous decision ordered the PUC to conduct an EIS for the Sandpiper Certificate of Need docket. The Court's order also voided the PUC's written order previously granting Enbridge/NDPC its Certificate of Need. Since Line 3 is proposed to be co-located in the Sandpiper Corridor, FOH believes all Line 3 proceedings must be stayed until the proper EIS is executed and completed on Sandpiper and a final resolution on all permits is determined.

Therefore, *FOH* is proposing some alternate routes for the Enbridge Energy Line 3 Replacement pipeline and Sandpiper pipeline that do not traverse any of Minnesota's clearest and cleanest lakes, rivers, trout streams, and fragile aquifers. Details and maps to follow.

Before preparing these alternate routes *Friends of the Headwaters* first used the document
7852.1900 "Criteria for Pipeline Route Selection"
made available at the August 18, 2015 PUC/Enbridge Line 3 Public Hearing in Park Rapids, MN to determine the fallibility of Enbridge Energy's proposed southern corridor route. *Friends of the Headwaters'* comparative economic and environmental analysis of the impact of Enbridge Energy's Line 3 pipeline upon the listed "Criteria for Pipeline Route Selection" fell short of meeting the requirements to maintain, sustain and protect the lands, waters and people along the proposed corridor.

Under Subp. 3. Criteria:
A. human settlement, existence and density of populated areas, existing and planned future land use, and management plans.

Hubbard County realizes $34 million dollars annually in tax revenue(2012 data). 59% of its properties are water-influenced, meaning either on or have a view of a lake or river. Those parcels yield a $20 million dollar figure. The Fishhook Chain of Lakes watershed is principally affected by the Line 3 pipeline. The value of the water-influenced properties on the Fishhook Watershed is about $2 billion.

If a large rupture on the order of the Enbridge 2010 Kalamazoo River, Michigan spill (1 million gallons) occurred at Hay Creek near the top of that watershed, it would dramatically impact the property values on those lakes resulting in a significant loss of tax revenue to the county, state, Park Rapids and its school district. It will be years before the county recovers from the damage. Not only will it incur the loss of tax revenues, but also the loss of residents, small businesses, tourists, and property values.

B. the natural environment, public and designated lands, including but no limited to natural areas, wildlife habitat, water, and recreational lands.

Any pipeline leak/spill/rupture will severely impact the sustainable, environmental quality of life in Hubbard County. Itasca State Park, Mississippi River headwaters, LaSalle Scientific and Natural Area, Straight River brown trout fishery, Hay Creek, the Fishhook Chain of Lakes watershed, Straight River aquifer, Shell River, the Crow Wing River, and the many other nearby lakes all support and provide numerous recreational opportunities - swimming, fishing, hunting, hiking, biking, bird watching, boating, and others. $100 million tourism dollars/yr are at risk for Hubbard Cty alone. $600 million annually for the northern counties on the proposed route.

C. lands of historical, archaeological and cultural significance

The history of Native Americans and the early explorers in and around Itasca State Park is an asset to drawing tourists to the park (500,000 annually). The wild rice waters in Hubbard and Clearwater Counties are culturally and economically significant. The proposed Line 3 & Sandpiper route is dangerously close to Upper Rice Lake, the Anishinaabeg's best wild ricing lake in Clearwater County. The wild rice harvested there is commercially and domestically important to the White Earth Ojibwe.

D. economies within the route, including agricultural, commercial or industrial, forestry, recreational, and mining operations.

All future business, residential, retirement and agricultural growth will be impacted by any pipeline leak/spill/rupture. Over 500 jobs and $500 million dollars in revenue/year are generated by the potato crop alone. Besides potatoes and the commodity crops of corn and beans, fresh fruit and vegetables are also grown and marketed locally to residents and tourists by smaller farms operating within the Straight River aquifer. Farm incomes and tourists dollars drive the local small business economy.

Although some small businesses may see a short term gain from pipeline construction, the long term economic vitality of the community, its businesses and people may not recover from a spill.

Enbridge touts the tax payments it will be making annually to Hubbard County. The public has heard the figure of $5 million for the Sandpiper, but relative to the value of the Bakken and Alberta tar sands oils proposed to pass through the county each year, that tax revenue seems woefully short for the risks assumed. What costs will the county incur for infrastructure repair after construction? What will be the costs of training police, fire, paramedic and medical personnel in the special hazards of oil spills and fires? We haven't heard anything about the PUC requiring a significant Escrow account to ensure funds are available when a pipeline fails. Does the PUC know Enbridge has sued these same northern counties for a refund on previously paid property tax dollars?

The state and its northern counties derive income from their forest lands. Those forest taken out of production along "Greenland" portions of the proposed route will mean a loss of timber jobs and income, as well as a loss of habitat for wildlife, especially birds.

E. pipeline cost and accessibility

How much higher are the construction costs of multiple bores under rivers and streams? What are the contingency plans and costs for controlling "frackouts" in stream beds during a bore. *FOH* has learned a "frackout" occurred on nearly every stream or river bore during this area's last pipeline construction project. What are the costs and issues for winter construction of wetlands along the route? How do the company and clean-up agencies access those wetlands in non-winter seasons if a leak/spill/rupture occurs? What are the economic consequences of summer construction and congestion issues with roads and traffic? How will lodging, not just for construction crews, but also for tourists be affected. How will the compatibility of construction workers be with tourists, residents and local businesses. How trustworthy and reliable will these workers be with respect to property and paying for services. FOH knows some resort owners have will not provide lodging for pipeline workers due to previous pipeline worker negative experiences. Will Enbridge be financially responsible for covering damages or lost income from disreputable and irresponsible workers? Only a full EIS will provide the public and governing agencies this information.

F. use of existing rights-of-way and right-of-way sharing and paralleling.

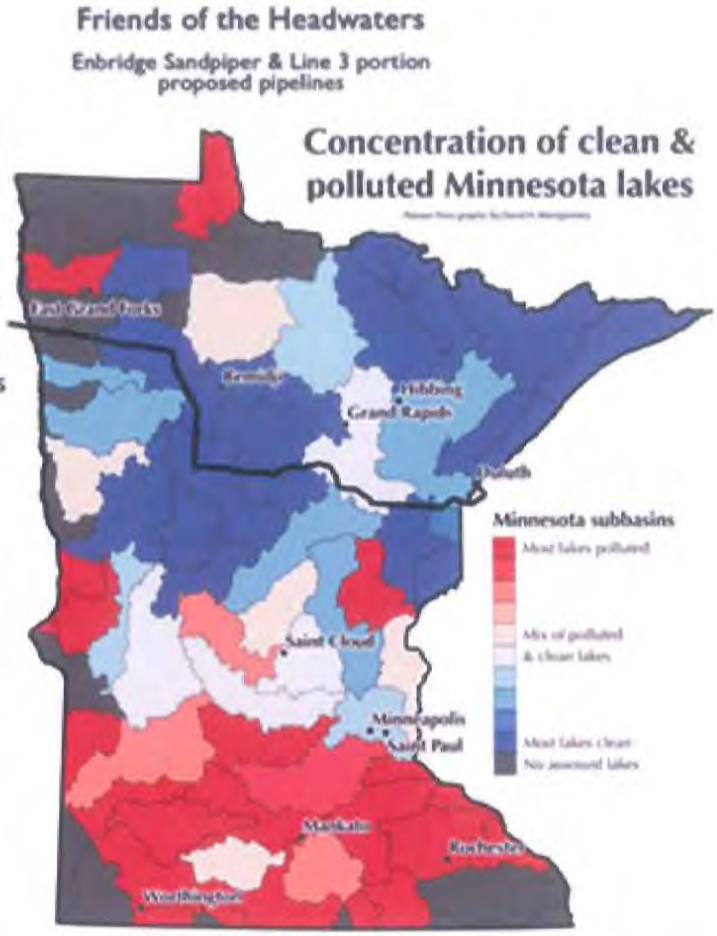
Although Enbridge is proposing to use existing energy corridors in Hubbard County numerous landowners along the route have complained of poor easement usage, property damage, poor restoration or reclamation efforts, and generally bad relations with other pipeline companies. They are skeptical of Enbridge claims to treat them better given accounts they have seen or heard from landowners on the Enbridge northern

pipeline corridor. Landowners along the proposed route are also concerned of the liability issues regarding detection and reporting of any leaks or spills. Attorneys have warned landowners to be wary of the language within the Enbridge easement contract.

G. natural resources and features

FOH has no faith in Enbridge word they can safely protect the lands and waters of Minnesota's lake country.

All pipelines leak eventually. While conducting a complete EIS for the Pebble Mine near Bristol Bay, Alaska, the EPA examined the history of pipeline spills relative to the age and mileage of all pipelines. They determined that every pipeline will leak at least once every 30 years over every 30 miles of length. Not surprisingly the history of Enbridge spills along their northern corridor in Minnesota fits that profile quite well. To quote from a 2003 MPCA report to the NTSB: "nearly three dozen non-third-party spills, leaks or ruptures on just one Enbridge 34 inch line occurred between 1972 and 2003. About 87% of the petroleum gallons spilled from all Minnesota pipelines in the period 1991 to 2002 was from that Enbridge line. This is equal to about 48% of the reported gallons of petroleum spilled from all sources in Minnesota during that period. Included in the Enbridge 34 inch line spills are the 1.7 million gallon rupture in 1991 in Grand Rapids and the 250,000 gallon rupture on July 4, 2002 in Cohasset. 300,000 gallons of the Grand Rapids spilled flowed to a river. Luck with the timing of the spill and river ice conditions kept thousands of gallons of crude from entering the Mississippi River. Oil in the Mississippi would likely have fouled the St. Cloud, St. Paul, and Minneapolis drinking water intakes for months. Likewise the Cohasset spill could have easily entered the Mississippi River if it had happened in a different segment of that 34 inch pipeline."



The Mississippi River Headwaters, Itasca State Park, the Straight River aquifer and brown trout stream, the Shell and Crow Wing Rivers, the Fishhook Chain of Lakes, Upper Rice Lake and other wild rice lakes, the Pine River and Whitefish Lake Watershed, the Big Sandy region, and some of the clearest lakes in the state are all at risk from this proposed Enbridge "southern corridor" and their stated plans to make it a multiple pipeline corridor.

H. the extent to which human or environmental effects are subject to mitigation by regulatory control and by application of the permit conditions contained in Minn. Rule, part 7852.3600 for pipeline right-of-way preparation, construction, cleanup, and restoration practices.

Enbridge's history with the Alberta Clipper line, Line 3 and other lines in the northern corridor is well known as stated above. The PUC completely ignored the numerous landowner complaints of Enbridge's poor behavior, cleanup, follow-up, and restoration efforts or lack thereof on the Certificate of Route and Need Applications for the Alberta Clipper line. *FOH* has learned some landowners are losing buildings, well houses, wood lots, and in some cases homes to Enbridge's easement demands. Eminent domain actions are especially disliked.

I. cumulative potential effects of related or anticipated future pipeline construction

Enbridge has stated the Line 3 Replacement will occur in the proposed Sandpiper "southern corridor". FOH has advocated for a full, comprehensive EIS (environmental impact study) to be conducted by the proper state and federal regulatory authorities as absolutely essential. And the Minnesota Appellate Court agreed. An EIS must be conducted. All leak/spill/rupture risk scenarios must be assessed and fully described for high value resources. The EIS must also compare all reasonable and prudent alternative routes.

J. *"the relevant applicable policies, rules, and regulations of other state and federal agencies, and local governmental land use laws including ordinances adopted under Minnesota Statutes, section 299J.05, relating to the location, design, construction, or operation of the proposed pipeline and associated facilities."*

A project of this magnitude as planned through the heart of *"The Land of 10,000 Lakes"* must conform to the standards prescribed in MEPA.

"No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct."

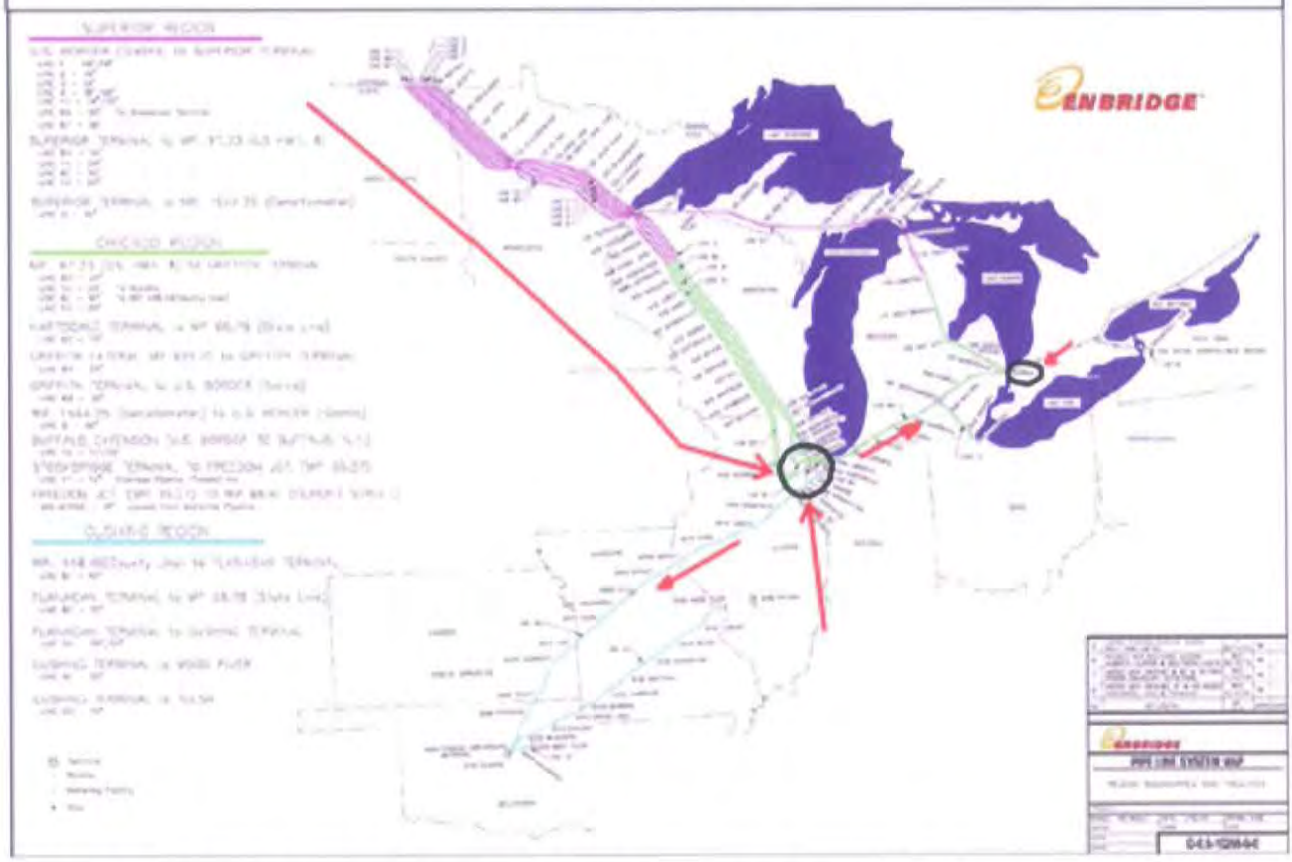
Since *Friends of the Headwaters* does not believe this proposed multiple pipeline "southern" corridor with the Sandpiper and Line 3 Replacement can meet the high standards set above for quality, safety and sustainability of the lands and especially waters along the route, *FOH* is proposing a "real" southern corridor for Sandpiper and the Line 3 Replacement project. Map below previously produced for Sandpiper proceedings. The suggested corridor is the same for Line 3 Replacement only extending from Alberta.

ALTERNATE ROUTE "A" (Designated SA-04 in Sandpiper docket)

ALTERNATE ROUTE A utilizes an existing energy corridor of which Enbridge is a 50% shareholder with Alliance Company of Canada. This corridor shares crossing points with Enbridge's Line 3 corridor in Alberta, Canada and links to the Enbridge system near Flanagan, Illinois. At this point it is connected to the remainder of Enbridge's pipeline system. The Line 3 Replacement project can follow this corridor.

FOH believes another pipeline replacement option should be considered utilizing this corridor. Given Enbridge's stated reason for replacing Line 3, its age (over 50) and serious integrity anomaly issues, and given Enbridge has two other aging pipelines, both 60+, perhaps the option of replacing all three aging pipelines with one very large diameter pipeline with equivalent capacity should be considered and studied. In light of the Appeals Court order for an EIS it makes sense to execute that EIS on a large scale in Minnesota and regionally to determine the ideal and environmentally lowest risk location for a new energy corridor that will take into account the longevity and future use and transport of hazardous liquid materials. That location is not through Minnesota's pristine northern lake country region as well as that of Wisconsin and Lake Superior.

Figure 7853.0510-2
Pipeline System Map



ALT ROUTE A traverses almost exclusively agricultural lands below Minnesota's primary lake country. This area is sparsely populated with mostly small towns among the farmlands.

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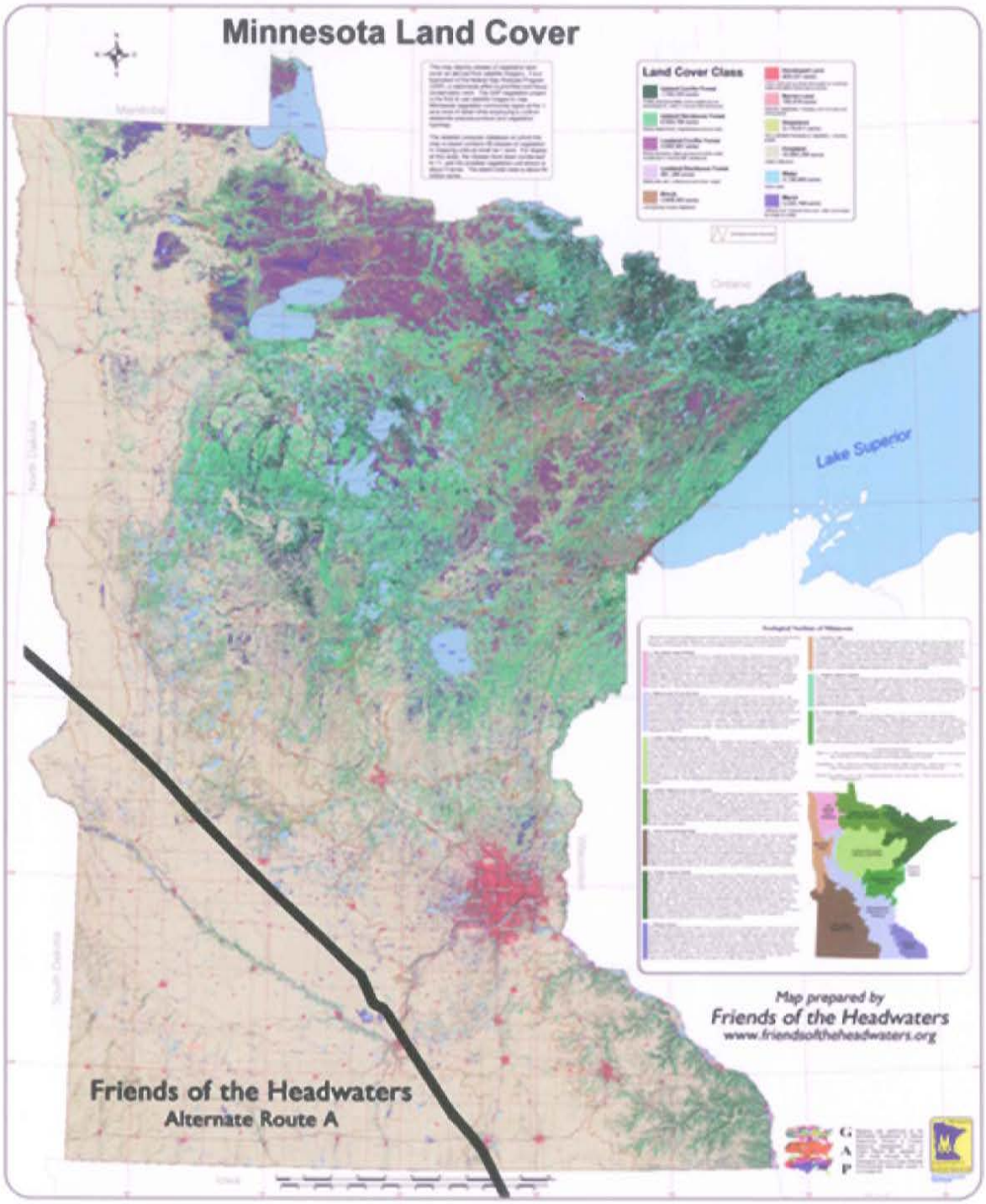
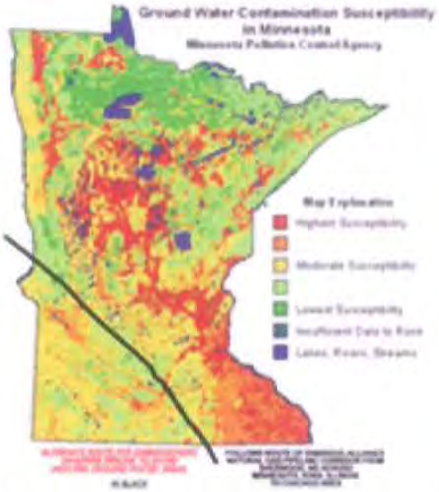
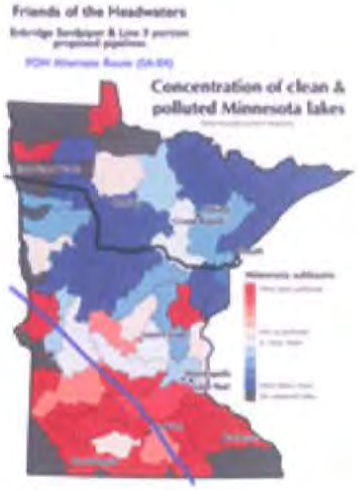
Note: Enbridge's Mark Curwin, Senior Director for Strategic Coordination of Major Project Executions in the US, stated their construction preference is to build pipelines across farmland. He made these remarks at a public meeting in Park Rapids on Jan. 29, 2014. In attendance were two Minnesota legislators, Roger Erickson and Rod Skoe, as well as local Hubbard County government, agency and business officials. Mr. Curwin gave the reasons of better soils, easier construction, easier access, less natural habitat destruction, cheaper and quicker. After construction the farmland can be put back into crop production. Access to leaks and spills is much easier. Winter wetland construction would be at a minimum.



ALT ROUTE A avoids all the major risk areas of the lake country: high quality lakes and streams, sensitive aquifers, culturally significant wild ricing waters, and valuable lakeshore and vacationland assets.





Minnesota still gets to keep jobs the construction will provide as well as North Dakota plus Iowa and Illinois. Jobs for Americans.

Although the route does not end in Superior, it still ties into the existing Enbridge system in Illinois with routing options to Michigan and Ontario that avoid our greatest freshwater lakes of Lake Superior and the Mackinac Straits of Lakes Michigan and Huron, including the northern lake country of Wisconsin and the St. Croix Nat'l Wild and Scenic River. The Illinois Hub also allows Enbridge access to its pipelines to Oklahoma and points south.

Since it's an existing corridor the company should have access to the mapping previously done for the pipeline already there. ALT ROUTE A also intersects in southern Minnesota pipelines owned and operated by other companies which provide the option of re-routing Bakken or tar sands oil to the refineries in Rosemont and St Paul Park in the south Twin Cities Metro.

As currently planned with the exception of a few tax dollars and short term construction monies Minnesotans derive no long term benefits from these pipelines and assume all the risks from leaks/spills/ruptures. And eventually these pipelines will leak or break. THE EPA Pebble Mine statistics said so and Enbridge's spill history in Minnesota proves it true.

Friends of the Headwaters therefore recommends to the PUC, DOC and other state agencies that they enforce our MEPA statutes and deny the Certificate of Route permit for the Enbridge proposed Line 3 pipeline corridor through Minnesota's prime lake country. A perfectly viable, low risk alternative is available south of our best waters.

Friends of the Headwaters believes a barrel of water IS worth more than a barrel of oil.

"Cherish the natural resources as a sacred heritage, for your children and your children's children."
Teddy Roosevelt

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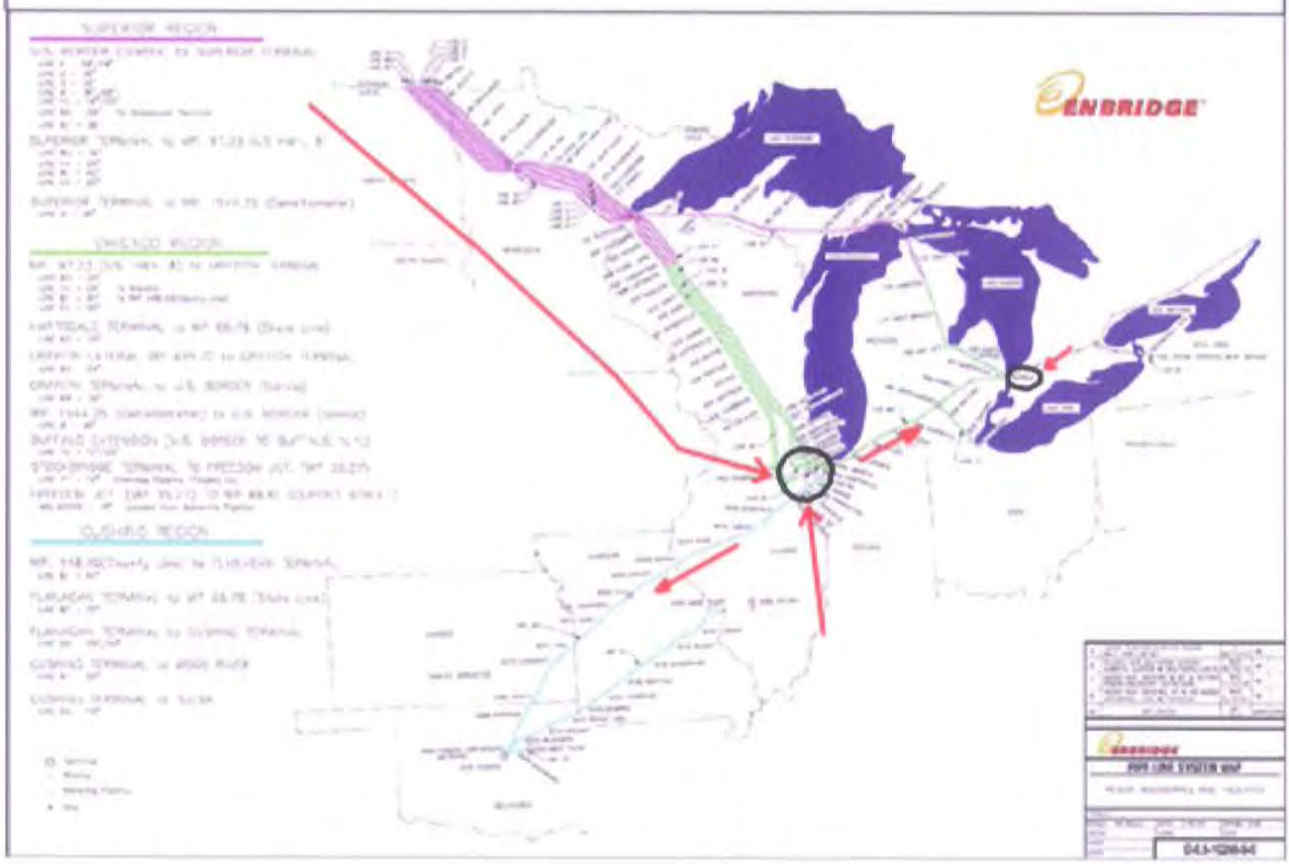

ALT ROUTE A traverses almost exclusively agricultural lands below Minnesota's primary lake country. This area is sparsely populated with mostly small towns among the farmlands.

ALTERNATE ROUTE "A" (Designated SA-04 in Sandpiper docket)

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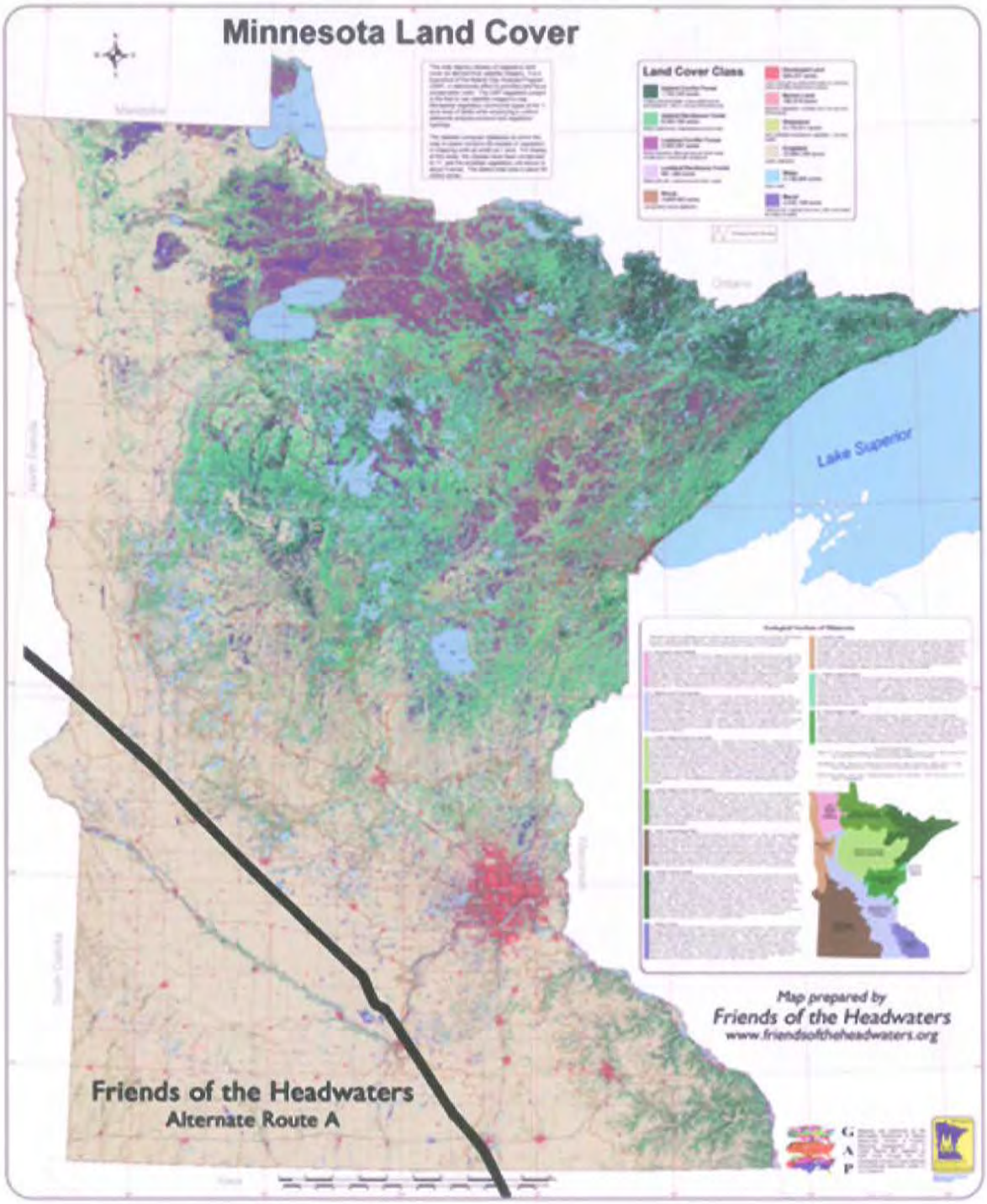
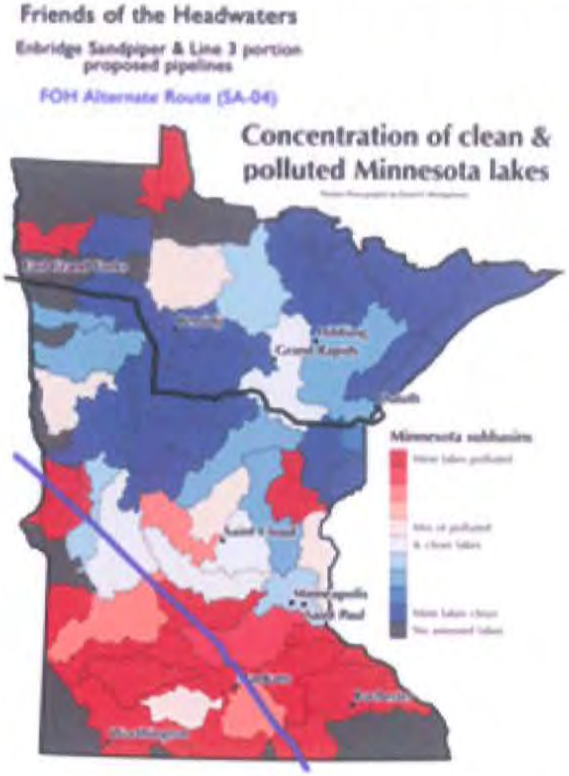


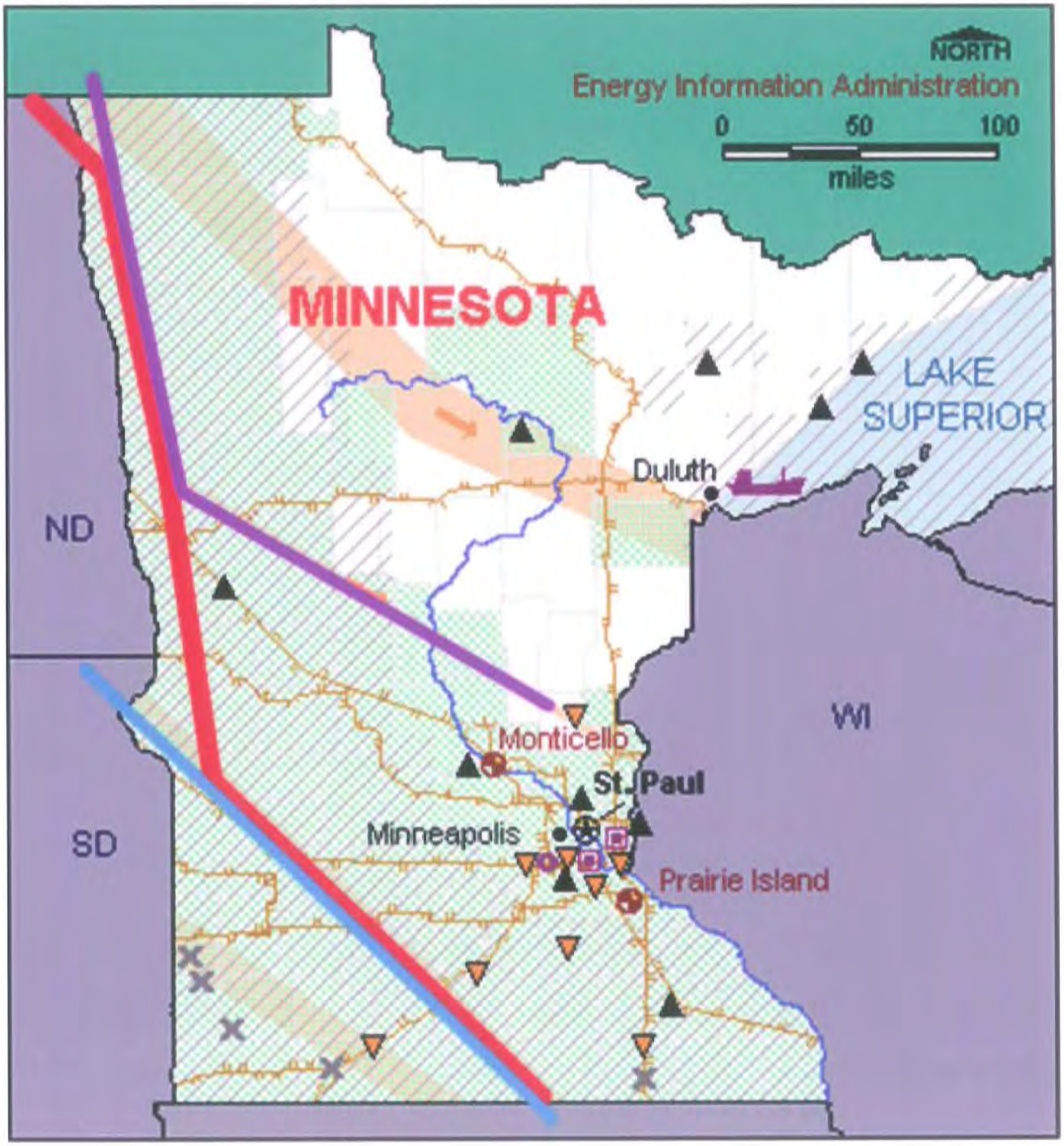
ALTERNATE ROUTE A
(Designated SA-04, Sandpiper docket)

It is plainly clear from these maps the differences between Enbridge's proposed Line 3 and Sandpiper "southern" corridor and FOH's proposed alternate energy corridor for Minnesota. During the Sandpiper proceedings the PCA rated these routes. FOH's scored lowest risk to environment. Enbridge's the highest risk.



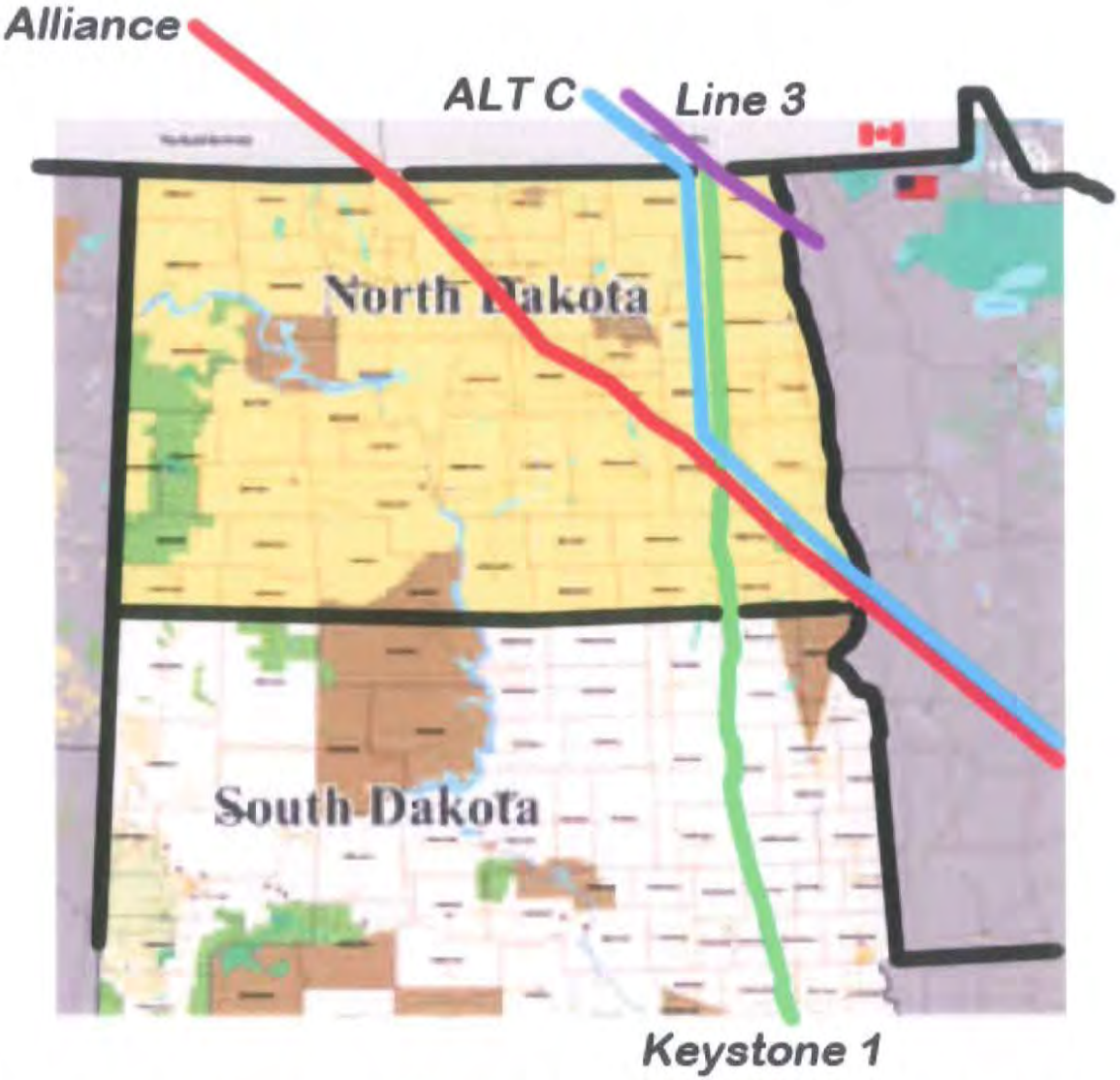
ALTERNATE ROUTE B

Alternate route B (red) uses Viking & Alliance (SA-04)(Sandpiper docket) pipeline corridors. It will require short link of new corridor from Viking to Alliance corridor. At intersection point of Enbridge "mainline" corridor and Viking corridor (purple), Line 3 Replacement follows Viking south. Where Viking turns southeast, Line 3 continues south (new corridor) until meeting Alliance corridor (blue). Line 3 joins Alliance and continues onto the Enbridge facilities in Flanagan, Illinois and Enbridge pipeline system.



ALTERNATE ROUTE C

Alternate C (blue) uses the Keystone 1 corridor (green) and Alliance (SA-04)(Sandpiper docket) pipeline corridor (red). Enbridge's Line 3 Replacement (ourple) at its junction with Keystone would turn south and join that corridor in North Dakota until intersecting the Alliance corridor. At which point Line 3 would follow the Alliance corridor and continue onto to Enbridge facilities in Flanagan, Illinois. As previously noted, it is now connected to Enbridge's pipeline network servicing the Midwest, eastern Canada and Gulf Coast.



As previously suggested this route could also be used for the option of building a large new pipeline to replace the three aging lines currently in the Enbridge Mainline "northern" corridor.