

Lane, Roger

From: Planning & Development
Sent: Tuesday, January 20, 2015 8:46 AM
To: Lane, Roger
Subject: FW: Enbridge

fyi

From: Andrew Simonds [<mailto:ajsimonds@gmail.com>]
Sent: Saturday, January 17, 2015 9:26 AM
To: Planning & Development
Subject: Enbridge

Dear Sirs and Madams...

I used to live in Wisconsin. I now live in Vermont. Clearly, the natural beauty inherent in both of these places is pivotal to the basic appreciation of life. We all are caretakers of this planet and each other.

You must not let Enbridge increase the capacity of their pipeline. Increasing insurance liabilities is simply an admission that more spills will happen and merely identifies who is going to pay for the cleanup. The consequences of these spills seeps much farther than into the pocketbooks of insurers and the local economies. It will be under your feet, in your skin and inextricably in your earth; our earth.

This is not about the world watching you. This is not about Keystone. This is not about oil prices being so low (again) that Enbridge will have a hard time making money to support, maintain and invest in this endeavor. (Slumberger is about to lay off 9000 employees due to the crashing oil market). This is about doing what it right.

Thank you.

Sincerely,

Andrew Simonds
East Dummerston, VT

Written testimony from Mary Beth Elliott, PhD (Pharmacology)

14 Hidden Hollow Trail, Madison WI 53717

re CUP 2291, please consider placing the following conditions

- To uphold public health, the permit should be issued *conditional on* disclosure of the contents of the chemicals passing through the pipeline.
- To uphold uses, values, and enjoyment of other properties in the neighborhood, the permit should be issued *conditional on* insurance to restore the land and water to its original condition in the event of a spill.
- To uphold public health, safety, and welfare, the permit should be issued *conditional on* the completion of an independent Environmental Impact Statement.

I have serious concerns regarding public health, safety, and welfare if a pipeline rupture were to occur in the Enbridge line 61 pipeline, which is why I think the above conditions should be considered in approving the CUP.

- Public health and safety:

http://www.michigan.gov/mdch/0,4612,7-132-54783_54784_56159-264554--,00.html

The Michigan Department of Community Health, after the July 2010 spill into the Kalamazoo River, surveyed citizens and worked with community doctors to determine acute health effects of those in nearby communities. The Department surveyed four different communities, where between 43% and 75% of people reported one or more problems. Overall, 25% to 35% had spill related headache, respiratory problems, GI problems such as vomiting & nausea, or other problems including dizziness, fatigue, and chest pain. Also, 10% had skin or eye complaints. More than half had two or more of these conditions. A careful survey of a control community far from the spill had far fewer symptoms, about 8 to ten-fold less. Symptoms reported are in concert with those known to occur in response to exposure to polycyclic hydrocarbons found in oil spills.

<http://jama.iamanetwork.com/article.aspx?articleid=186531>

- *Public health and safety:* Although mainly short term effects were noted, three other crucial things should be noted: First, among many other dangerous chemicals founds in tar sands, benzene was measured in the spill environment and in the air people were breathing. Benzene and other chemicals are used to help dilute tar sands so they can flow in a pipeline. Benzene has short term effects but is also carcinogenic (cancer causing) and teratogenic (causes birth defects). Second, although not conclusively proven in humans, studies in animals have shown that a combination of harmful chemicals contained in oil can be synergistic, that is, the danger from the combination is more than just additive. It would not be ethical for scientists to do such studies in people, but the fact that people are exposed to multiple harmful chemicals from oil spills is concerning. Third: Unborn children, especially in the first trimester, are especially sensitive to exposure to harmful chemicals, or even to approved medications which are very safe for children and adults, and there were pregnant women in the exposed communities near the Kalamazoo spill.
- *Public health and safety:* The FDA makes decisions based on the balance between risk and benefits. A new drug to treat the sniffles had better be pretty safe or it will not be considered at all. For a new drug which is effective against an otherwise untreatable cancer, serious side effects may be acceptable if it can save the person's life. The FDA requires that before new medications are approved, they have to undergo laboratory testing, animal testing, and finally that is called Phase I, II, and III human testing to determine dosing, safety as well as benefit to treat disease. Many drugs are rejected outright and never approved because of safety issues. However, in what is called "Phase 4," many approved drugs are taken off the market because less common but serious side effects are seen once the drug is out and used by many people. I always think about these issues when I consider the risk of pipeline spills. Is the risk posed to the health of ourselves, our children and grandchildren, and unborn babies. The chemicals released in the spills, far from being helpful or even harmless, are dangerous, and what benefit to Wisconsinites can make up for this risk? How does this compute when one compares safety issues in everyday life such as what is healthy to eat, what medicines to take, how much to exercise. At least then one is making decisions for yourself and your family, and there are benefits to balance risk. With pipeline, some say..."all risk, no benefit" This is why I think that if CUP is approved, it needs to meet conditions as noted above, to improve safety for residents in the event that there were a spill.

Mary Beth Elliott
10/14/14

Received at ZLRPH 10-28-14
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Enbridge Energy is putting in an application to construct a new pump station in the town of Medina, Wisconsin. This pump station is going to increase the flow of tar sands oil through the pipeline and this increase the risk of pipeline oil spill.

If Dane County should see an oil spill, (and many have been seen along the Enbridge pipeline), the health of many of our neighbors would be endangered. So, Enbridge's application needs to include a plan to keep this pipeline constantly monitored.

Should a spill occur, I would want Enbridge to have a plan detailing just how they would cope with this spill. I would like to see a plan that would include pieces such as;

- How they would alert the surrounding community if an oil spill called for emergency evacuation.
- How they would quickly clean up an oil spill incident.
- How they would finance health care needs of the area's emergency responders who had first stepped up to stop or clean up a spill.

Enbridge needs to train individuals so that they carefully monitor the pump station and the pipeline carrying the oil flow. If this monitor-training is done well, hopefully we can avoid the need to have abilities of communities cleaning up after Enbridge.

Kathryn Schulte

October 28, 2014

To: Dane County Zoning and Land Regulation Committee

Thank you for this public hearing in consideration of granting Enbridge a Conditional Use Permit to construct a pump station in the Town of Medina in Dane County.

I am concerned that Line 61, installed in 2007 to carry 400,000 barrels of crude oil will not have enough capacity to carry the proposed 1.2 million barrels on this upgrade. The increased pressure required to transport this amount of crude oil on a daily basis and the caustic nature of the chemical compound used to move the oil through the pipelines makes Line 61 more susceptible to rupture, and is likely to result in spills on Wisconsin's land and waterways.

The impact spills would have on our citizens and our economy is significant. Tar sands oil is much more difficult to clean-up due to its viscosity. The Enbridge spill in Kalamazoo in 2011 has cost nearly \$1 billion to date and clean-up is not completed. While Enbridge has stated that they have paid for the clean-up, the impact of the spill on the health of those living in the area has not been taken into account. Kalamazoo reports significantly more headache, respiratory problems, skin and eye irritation, and gastrointestinal problems in comparison to comparable but non-exposed Michigan communities.

As you consider the requirements for granting a Conditional Use Permit to Enbridge to construct a pump station in Medina, I ask that you include the following conditions:

- Completion of an independent Environmental Impact Statement
 - assessing air quality risks associated with the holding tank
 - risks to public health, welfare and safety in the event of a spill
 - full disclosure of the chemicals passing through the pipeline
 - assessment of the exposure to those chemicals on human health
- Assurance that Enbridge will take full responsibility for all costs associated with restoring waterways, farmland, homes, businesses, and recreational areas to their original condition.

Thank you for your efforts to do all within your power to protect Wisconsin's citizens, land and waterways.

Sincerely,



Mary G. Jenny
818 Hiawatha Drive
Madison, WI 53711

October 28, 2014
Dane County Zoning and Land Regulation Committee Public Hearing
Dane County, Wisconsin

My name is Harry E. Bennett and I reside in Madison, Wisconsin. I am here to comment about the Conditional Use Permit request for the Enbridge Pumping Station project in Dane County. I am concerned about the impacts to the agricultural activities in the area which is the zoned use of the proposed project. I have worked as a marketer since 2004 for an organic producer cooperative, marketing organic agricultural commodities for approximately 100 farmers in seven states. I also owned and operated a diverse organic farm from 1974 until 2010 when I moved to Madison. I am acutely aware of the problems brought on by climate change to farmers, agriculture is probably the most climate dependent of human activities. It is settled science that climate change is driven by increased levels of CO₂ in the atmosphere and that the largest single source of that excess CO₂ is the emissions from fossil fuels.

The Enbridge pumping station project is part of an expansion of the carrying capacity of Line 61 pipeline which carries bitumen, a Canadian oil sands product. With the completion of the 12 proposed booster pumps on the line 61 the current flow of 400,000 bpd will increase to 1.2 million bpd, an increase of 800,000 bpd. Using a 2009 Cambridge Energy Research Associates (CERA) study estimate of the "well-to-wheels" CO₂ emissions, a calculation accounting for all activities for emissions: extraction, processing, transport, refining and end use, the CO₂ emissions for Canadian oil sands are 100 kg or 220 pounds of CO₂ per barrel. The 800,000 bpd per day increase in flow of Line 61 will result in 88,000 tons of CO₂ per day or 32,120,000 tons of CO₂ per year. On page 7 of the application for CUP the applicant addresses Zoning Standard #3, "that the establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for the uses permitted in the district." To which they respond "Compatibility of Enbridge's proposed pump stations with the neighboring agricultural uses has been demonstrated based on the nearly 50 years that Enbridge has had an existing pump station at this site." I believe that in light of what we now know about the effects of continuing to load the atmosphere with more and more CO₂ that the neighboring agricultural activities are going to experience many adverse effects from a warming climate in the next 50 years should this booster pump project be successful and the increased amount of Canadian oil sands generated CO₂ is added to the atmosphere.

A requirement for the Conditional Use Permitting of the Enbridge Pump Station in Dane County should be a plan for the mitigation of the new CO₂ emissions that the pump station will enable on Enbridge Line 61 for the benefit of the zoned agricultural uses. The plan could be carbon sequestration by a number of methods, any plan should be developed and presented by the applicant with a required review by a third party to verify the validity of the proposed carbon offset. I am providing two supporting documents to the committee, both from work by the Intergovernmental Panel on Climate Change (IPCC). "The Alberta Oil-Sands and Climate" a paper on the calculations of bitumen carbon content; and a paper by Dr. Chuck Rice, Kansas State University Distinguished Professor, a recognized expert on carbon sequestration.

Dane County Zoning and Land Regulation Committee

October 28, 2014

Testimony on Enbridge Conditional Use Permit (CUP) Application

My name is Bruce Noble. I am a resident of Dane County.

Thank you for this opportunity to offer testimony on the Enbridge Pipeline 61 Corridor Conditional Use Permit application. This application regards the proposed Waterloo Pumping Station in Section 14, Town of Medina, County of Dane.

See Attachment 1 that shows a map of the NE corner of Dane County illustrating the route of the Enbridge Pipeline 61 Corridor traveling SE from Highway 151 to Veith Road. The apostrophe locates the pumping station on Cherry Lane. It should be noted that the Enbridge 61 Corridor contains 4 pipelines, 61, 13, 14 and 6A. Special reference is made to P61 in the application. Enbridge refers to the product in this line as “North American Crude” without specifying its mined origin, that is “bitumen or tar sands.” It’s companion pipeline, P13, contains the chemical diluent that allows this crude to be transported.

What is North American Crude?

Enbridge Energy states in its application that P61 will contain “North American Crude oil from Canada, Montana and North Dakota.” North American Crude oil is also referred to as “heavy crude.” Heavy crude is known to be “bitumen or tar sands” mined in Alberta. Bakken oil, fracked from the Bakken Formation in North Dakota, Montana, Saskatchewan and Manitoba, is also referred to as “heavy crude.”

What is Diluent?

Bitumen, mined in Alberta as tar sands, is too viscous to be transported so it must be diluted. The diluent is a subject of some controversy since Enbridge has not revealed its chemical composition. However, other agencies and journalists (Read Dilbit Disaster) have been able to determine the contents of this slurry found in the Kalamazoo River. The Michigan Department of Environmental Quality has published its findings from the Kalamazoo River spill. These chemicals were not attributable to sources other than the spill. (Attachment 2)

Focus of this Testimony

The following discourse concentrates attention on Dane County ordinances, section 10.255(2)(h) and in particular Standard 1: “That the establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, comfort or general welfare;”

The pertinent questions of this discourse are:

1. Do all four pipelines that carry petroleum products into, within and out of the pumping station present a risk to public health and safety? Yes. Enbridge says that all petroleum products are hazardous. However, some are more hazardous than others. In addition to P61 already mentioned, Pipeline 6a is said to be rated for “heavy crude,” i.e. Tar Sands oil. If true, both can carry Tar Sands oil and Bakken oil. Bakken oil is highly volatile and has been implicated in the burning of a town in Quebec after a spill. The public, and most importantly public officials, is not aware of the products, product changes and product chemical composition carried in the pipelines, including the diluent. Preparedness is not possible without such information.
2. Do the CUP Standards include detriments, endangerments, impairments, diminishments, impediments to life in the Town of

Medina from pipeline failures outside the pumping station. Yes. On its face, the pumping station enhancement provides the means to an end, i.e. pumping station to probable downstream spills? Standards 2 and 3 imply impacts outside the pumping station by use of phrases like “of other property in the neighborhood” and “of surrounding property.”

Preparedness

How can Dane County better prepare itself for the probability of pipeline failure? Make sure Enbridge is completely transparent about its products and chemical composition. That is the only way policy makers, Hazmat personnel and first responders can give us the safety we have come to expect. In personal communication with Ben Callan, WI DNR Zoning Specialist, it was learned that statutes currently say that Enbridge has a choice to reveal this information. They simply choose to not be transparent. Enbridge has claimed proprietary rights regarding the diluent. Industry interest must not supercede public interest, the right to know the hazards to health and safety.

Risk of Failure

Following is a list of documented Enbridge performance failures that suggest endangerments to public health and safety should an oil spill occur in Dane County:

1. There have been just over 800 pipeline failures in the Enbridge transportaion system since 1999, a rate of 4.4 per month. It is documented that Enbridge has been assessed a number of penalties for violations.
2. There have been 3 spills in Wisconsin since 2007 (Clark Count, 50,000 gallons; Rusk County, 176,000 gallons; Adams County, 66,000 gallons. This represents a rate of one spill every 28 months. Enbridge was assessed \$1.1 million for pipeline failure in Wisconsin (2008).*
3. It should be noted that the largest spill in the United

States occurred in Marshall, Michigan in 2010. More than 800,000 gallons were released into the Kalamazoo River with restoration still being conducted.

*All Wisconsin spills noted above occurred without the proposed enhancement.

Risk and Pipeline Enhancement

Given the past history of Enbridge pipeline failures it is not likely risk will decrease. If anything, enhancement of flow and pressure made possible by the proposed Waterloo Pumping Station will increase risk. Flow will be increased in the proposal from 400,000 barrels per day to 1.2 million barrels per day and pressure from 400 psi to over 1,000 psi. It will be argued that permission was granted in 2006 for such an enhancement.

2006 Permit Argument

This argument is also flawed by the history of Enbridge failures, all occurring before enhancement. The probable risk of another failure is high, on average 4.4 spills per month at any point in the Enbridge system. (A small Dane County spill near Marshall is not discussed here.) On average, approximately 371 failures have occurred in the Enbridge transportation system in the 7 years since the Enbridge 2006 permits were approved in Wisconsin. This number includes the 3 spills in Wisconsin and the 800,000 gallon spill in Michigan. With 3 Wisconsin spills in 7 years, on average, a spill occurs in the state every 28 months. The last major spill in Wisconsin occurred in Grand Marsh in July, 2012, two years after the Kalamazoo River spill.

Health Impacts

The Michigan Department of Community Health surveyed citizens in four communities after the Kalamazoo River spill in 2010. Forty-five to seventy-five percent of people reported one

or more problems. “Overall, 25% to 35% had spill related headaches, respiratory problems, GI problems such as vomiting and nausea” as well as “other problems including dizziness, fatigue, and chest pain. Also, 10% had skin or eye complaints.”

“Benzene was measured in the spill environment,” i.e. the tar sands oil and in the air. Benzene exposure has short term effects like those noted above but is also known to be carcinogenic (causes cancer) and teratogenic (causes birth defects).

Conclusion

At this time, due to the current Wisconsin regulatory environment and the American addiction to oil, it is not the recommendation of this testimony to stop the pipeline. Rather the intent herein is to provide a pathway in which health and safety can be best protected now. It is believed that transparency leading to increased preparedness is the next best step forward. This does not relegate other solutions, resolutions and requests for Environmental Impact Statements to a back seat.

The probable risks of spills, with the ever increasing extraction of hard to access petroleum, seems irrefutable. It is deemed critical to health and safety preparedness that certain caveats to permission for a Conditional Use Permit for the Waterloo Pumping Station would represent a significant step forward.

It should not be assumed that Hazmat personnel and first responders have the necessary protocols and training necessary to maximally protect the public. Anecdotal evidence in Dane County indicates that this assumption would not be correct. (More information upon request.)

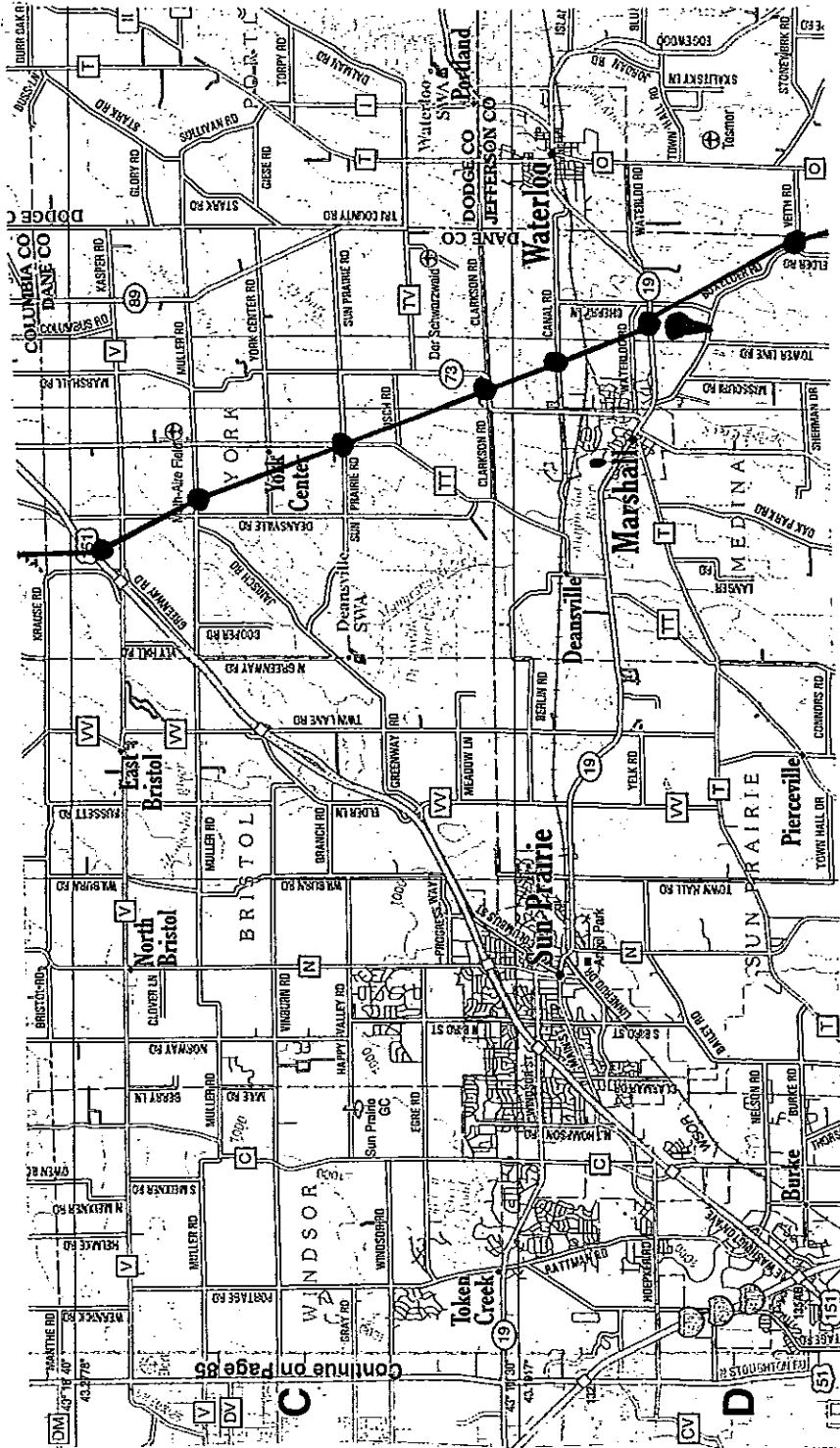
The public has a right to know what health and safety hazards they face.

Public officials need to be aware of pipeline contents in order to prepare public policy and regulatory requirements that protect health and safety of Dane County citizens in the case of an oil spill disaster.

THEREFORE, be it resolved that Enbridge Energy Company make explicit, to appropriate Dane County officials, the products that flow through its pipelines (61,13,14,6a and any future lines), as well as any change in product it makes within and between the pipelines, and divulge the chemical composition of all contents, including the diluent. And that, said information be readily available to the public at large.

Thank you.

Enbridge Pipeline 61
Dane County Wisconsin



Grassroots Pipeline Awareness
Group

**CHEMICALS IN KALAMAZOO RIVER SPILL:
Report from Michigan Department of Environmental Quality**

Organic

1, 2, 3 Trimethylbenzene

1, 2, 4 Trimethylbenzene

1, 3, 5 Trimethylbenzene

Benzene

Cyclohexane

Ethylbenzene

Isopropylbenzene

Napthlaene

n- Propylbenzene

Phenanthrene

p- Isopropyltoulene

sec- Butylbenzene

Toluene

Zylenes, Total

Inorganic (metals)

Beryllium

Iron

Mercury Molybdenum

Nickel

Titanium

Vanadium

Depending on the amount, length and frequency of exposure all of these chemicals can cause eye, skin and respiratory irritations. Some have serious disease effects including death. High flammability is characteristic of some of the gases such as Benzene, also a known carcinogen.

FINAL

10/28/14 CUP 2291

My name is Mary Beth Elliott. I have lived in Madison since 1968 and am a PhD trained research scientist, recently retired from a faculty post at UW-Madison.

I am speaking to you tonight to encourage you to place conditions on the permit for the Waterloos pumping station. *NAS-2014 → Will assess prop* First, the condition that insurance be required to restore the land and water to its original condition in the event of a spill from the pipeline. Second, to protect public health and the environment, completion of an independent Environmental Impact Statement should be a condition for permit approval. *EIS*

I am particularly concerned because the pipeline would carry 1.2million bpd. This is 2.1 million gallons per hour of 583 gallons per second.

If a tar sands spill were to occur in Dane County, this could threaten farmlands, homes, families, damage our wetlands and woodlands, and kill or injure birds, mammals, turtles, fish, and other wildlife.

Some of you may have heard of the 2010 Enbridge pipeline rupture near Marshall, Michigan, where more than 800,000 gallons of tar sands contaminated the Kalamazoo River. I'm using this example as it is well documented regarding cleanup, the role of EPA, and costs. Also tar sands sink to the bottom of rivers, and the Michigan spill and the Enbridge line in WI both carry tar sands.

When an oil spill occurs, EPA monitors oil spill responses, coordinates federal efforts and supports regional and community responses. EPA also identifies parties legally responsible for cleanup and costs. Importantly, it is EPA that oversees the cleanup. Despite the huge body of work from EPA pushing Enbridge to clean up after Kalamazoo, it took more than four years for most of the oil to be cleaned up.

I am showing you this long list from EPA to provide the gestalt, highlighting THREE things.

FIRST, Enbridge requested to restart line 6B just 15 days after the rupture and spill, but this request was denied. *MBE*

SECOND, it is concerning that Enbridge was slow to respond to EPA's requests for cleanup, submitting plans the EPA found unsuitable and not meeting deadlines for plans that had been approved.

THIRD, 11 months ago, Enbridge requested another delay in dredging, which EPA denied. EPA's letter stated "EPA believes that Enbridge has continuously failed to prepare adequate contingency plans for a project of this nature."

Although EPA is not responsible for doing the cleanup itself, EPA oversight of oil spills is expensive. This graph illustrates the share of EPA's oil spill costs, where red is Enbridge and blue is all other companies. The EPA reports that they won't be hindered for overseeing oil spills, but they will be slowed due to limited funding for things such as capping old abandoned oil wells. You can see EPA's resources are being stretched by Enbridge.

My final point is about wildlife recovery. Thank goodness, most of the oil from Kalamazoo has been recovered, and there are hopeful reports that wildlife is rebounding. HOWEVER a full recovery is uncertain, without a proper assessment and study to show that. Trustees were appointed by the governor, representing Michigan DNR, tribal constituencies, USFWS, and others entities. (

This is the first page of what the Trustees submitted to Enbridge, including a plan and budget of about \$9000,000, to carefully assess remaining environmental damage before proper restoration could be planned. Enbridge declined to participate, that is, to provide funds for assessment so this was not done.

Everyone hopes that in Dane county, and in WI, we do not have a large spill. If so, I have serious concerns about the economic burden as well as environmental and other damages that would fall on us as citizens and taxpayers. So please consider the conditions to protect us.

Thank you for listening and considering the request for conditions, and for your diligence in taking care of Dane County's environment.

PLEASE INCLUDE THESE WRITTEN COMMENTS
IN THE RECORD REGARDING CONDITIONS FOR
THE PROPOSED ENBRIDGE PUMP STATION
NEAR WATERLOO. THANK YOU.

Show documents on mounting board, and refer to in remarks.
30 sec.

DR. CARL WHITING
1112 EDGEHILL DR.
MADISON, WI
53705

A letter to the editor of the *Waterloo/Marshall Courier* is dated Sept. 10th, 2014
Titled:

Pipeline Facts, by Aaron Madsen of Enbridge,

and contains the following statement:

"The containment system being constructed for the proposed Waterloo station will safely hold more than 30 minutes of fluid, at the full flow rate of the line – and will be lined with a 12 inch layer of impervious clay."

This statement, meant to reassure, points to a critically important condition necessary to protect the surrounding community in the event this retention or containment basin were indeed needed.

Using 1.2 million barrels per day as a starting point, "more than 30 minutes of fluid, at the full flow rate of the line", would mean that Enbridge plans to hold--on pump station property—in excess of 787,500 gallons of diluted bitumen, or very nearly the amount which got loose and flowed into the Kalamazoo River, did unprecedented damage and sickened many people in neighboring Michigan. 787,000 gallons of that stuff would easily overflow an Olympic sized swimming pool, but if the clay liner holds, the community of Marshall is protected, right?

Well, let's go to the Kalamazoo spill at Marshall, Michigan, where a man named John LaForge had just received a call from his wife at home. The following is from Pulitzer Prize-winning reporting by Elizabeth McGowan and Lisa Song of Inside Climate News, dated June 26, 2012:

".....a fire truck was parked in front of their house, where Talmadge Creek rippled toward the Kalamazoo River.

LaForge headed home. By the time he arrived, the stink was so intense that he could barely keep his breakfast down.

Something else was wrong, too.

... a black goo coated swaths of his golf course-green grass. ... Walking on the tarry mess was like stepping on chewing gum. (We might pause here to ask how chewing gum flows down a pipe, until we remember that the chemicals which had made that chewing gum soluble were by then drifting in the local atmosphere)

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LaForge said he was stooped over the creek, looking for the source of the gunk, when two men in a white truck marked Enbridge pulled up just before 10 a.m. (One would expect the Enbridge employees in this truck to rush down to join LaForge at the creek bank. But instead, they headed for the house) The article continues:

One rushed to LaForge's open front door and disappeared inside with an air-monitoring instrument.

The man emerged less than a minute later, and uttered the words that still haunt LaForge today: It's not safe to be here. You're going to have to leave your house. Now.

Their lives had been turned upside down by the first major spill of Canadian diluted bitumen in a U.S. river.

"People don't realize how your life can change overnight," LaForge told an InsideClimate News reporter as they drove slowly past his empty house in November 2011. "It has been devastating."

What the La Forges, and other residents of Marshall, Michigan had been exposed to was the off-gassing of toxic chemicals Those volatile chemicals, now free of the pipe, had entered the surrounding atmosphere, and people were breathing them in.

This is from the Michigan Department of Community Health, dated November 2010

Acute Health Effects of the Enbridge Oil Spill

Neurological effects were reported most frequently (94/ 64.8%), with headache being the predominant of all neurological effects reported 83 (57.2%). Eighty-six individuals (59.3%) had at least one gastrointestinal clinical effect, with nausea predominating, and 68 (46.9%) had at least one respiratory clinical effect with cough and choke predominating (**Table 2**).

The volume of dilbit that off-gassed this toxic blend is approximately the amount of dilbit the retention pond at the Waterloo pump station will be designed to hold. But what has been designed to hold in the volatile diluent gasses? What will keep those gasses from sickening the majority of citizens in our community? I see an open pit (blithely labled here that it will also be used for snow removal.)

We ask that the Dane County Zoning Commission respond to the public health requirements stipulated by the Conditional Use permitting process to require an independent, and properly credentialed body to assess the health risks of such a potentially large volume of airborne toxin, and to require that body to supervise Enbridge in constructing a holding facility which fully guards against the off-gassing of retained dilbit.

PROPOSED
CONDITION





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

November 21, 2013

Enbridge Energy, Limited Partnership
c/o Mr. Rich Adams
Vice President, Operations
Superior City Centre
Second Floor
1409 Hammond Ave.
Superior, Wisconsin 54880

Re: Response to Enbridge Energy, Limited Partnership's letters of November 2, 2013 and November 11, 2013 regarding completion of work required by U.S. EPA's March 14, 2013 Administrative Order

Dear Mr. Adams:

Thank you for your submittal and letter of November 2, 2013 and November 11, 2013, respectively. In response to your November 2nd submittal seeking approval for a submerged oil removal plan for the Morrow Lake Delta and Morrow Lake ("the Delta"), U.S. EPA verifies that the dredging methods proposed are consistent with those already approved and that the activities in that plan have been required since May 13, 2013.

EPA has reviewed Enbridge's November 11th letter, which proposed a two phased plan for completion of the work required by the March 14, 2013 Administrative Order ("Order") issued by U.S. EPA. Enbridge also requested that U.S. EPA approve a ten month extension to the December 31, 2013 completion date currently required by the Order. U.S. EPA does not believe that the information provided justifies your proposed delay and the Agency, therefore, denies your request. U.S. EPA directs Enbridge to continue to perform the required work until all tasks outlined in the Order are complete and to prepare a plan for project completion, as described in this letter.

NOV 2013

Although we recognize that the work required by the Order is unlikely to be completed by December 31, 2013, U.S. EPA believes that had Enbridge taken appropriate steps earlier as requested, it would not require an extension now. In particular, U.S. EPA believes that Enbridge has continuously failed to prepare adequate contingency plans for a project of this nature. For example, U.S. EPA acknowledges that failure to obtain a site plan approval for use of the CCP property for a dredge pad was a setback in the timely completion of the work in the Delta. However, Enbridge failed to prepare any contingency plans recognizing the possibility of such an occurrence. Enbridge has known since at least the middle of July 2013 that there was serious opposition to its proposed use of the CCP property. When it became clear in August 2013 that opposition to the site use might delay the project, U.S. EPA directed Enbridge to "conduct a

more detailed review of your options in short order.” Although your letter claims that Enbridge “has considered such alternatives,” your logs indicate that Enbridge did not hold initial discussions with the majority of these property owners until long after the final decision to abandon plans for use of the CCP property. These contact logs do not demonstrate that Enbridge fully explored and reviewed alternative options in a timely manner so as to avoid delay in completion of the work. Although Enbridge claims that use of identified alternative properties would be denied by Comstock Township, Enbridge did not present any site plans to the Township for approval (other than use of the county park for staging of frac tanks). To the extent that any of Enbridge’s contingency plans include the use of land for dredge pads, U.S. EPA believes that Enbridge should begin multiple submissions for property use until one is accepted. Specifically, site approval and access for sites D, H¹, L and K should be pursued without further delay.

Enbridge claims that it cannot install winter containment in the Delta to prevent the potential migration of sediments to the lake. To support that claim, Enbridge has attached a letter from STS directing Enbridge to remove anchors and associated soft containment during winter months as these structures could damage STS’s turbines. However, none of the correspondence provided by Enbridge discusses the use of more secure containment methods, such as metal sheet piling, which may not pose the same risks as soft containment structures. Enbridge should consider using sheet piling to construct cells which would both allow winter work and contain the sediment during that work. Enbridge should therefore try to obtain access from STS for this specific work, and for other appropriate work, for the winter timeframe. Use of sheet pile cells would allow continued operations during the winter, especially in the southern zone of the Delta outside of the main river channel. Removal of oiled sediments prior to the spring thaw will lessen the potential oiled sediment transport in the spring to Morrow Lake via increased river velocities from rain and ice melt.

Finally, U.S. EPA is unwilling to allow Enbridge to wait until after the likely spring high velocity river flush to reinstall the E-4 containment structures. U.S. EPA has reviewed Enbridge’s modeling, which Enbridge claims supports its requested timeline, and has found it incomplete. The model has not incorporated, and does not match, field observation of flow velocities and water levels and their potential to impact upstream critical structures if containment is in place. Moreover, U.S. EPA completely disagrees with Enbridge’s assertion that there is no evidence of migration of submerged oil during high flow events. The results of three years of poling and sheen tracking demonstrate that Line 6B oil is mobile during periods of high flow. Now that Enbridge has a five year permit from MDEQ for the E-4 containment system, U.S. EPA reiterates that this containment must be in place immediately upon thaw conditions in the spring.

By this letter, U.S. EPA directs Enbridge to continue work until all tasks outlined in the Order are complete. U.S. EPA directs Enbridge to prepare a comprehensive plan detailing methods and timing for the completion of all remaining work required by the Order in the Delta, even if that

¹ Your November 11 letter states that U.S. EPA “asked Enbridge to delay consideration of this site” until an estate proceeding was complete. U.S. EPA did not ask Enbridge to delay; rather, on October 31, 2013, U.S. EPA advised Enbridge that the Agency would provide Enbridge with an appropriate contact for the site. U.S. EPA gave that contact information to Enbridge on November 4, 2013.

work extends into a timeframe of delinquency. Enbridge must include contingencies in this plan and describe in detail how compliance and coordination with all impacted and appropriate units of local and state government will be achieved, including permitting, for all facets of the proposed action so that Enbridge can get the work required by the Order completed.

Although Enbridge's proposed two phase approach may have components that can be incorporated into a final plan, it should not be considered the approved way forward. U.S. EPA believes that pausing the work cycle until new piling can be done in June or July of 2014 could again result in a wasted construction season in the Delta. Enbridge should consider and utilize a combination of techniques in the plan. For example, several dredge pad sites have been identified by Enbridge. Enbridge should obtain approval for one of these sites, or a combination of smaller sites, so as to support hydraulic dredging in conjunction with the current approved approach and any potential dry excavation techniques. Enbridge should also consider other winter work techniques, such as cell build out and dewatering in the Delta via sheet piling.

As always, U.S. EPA will continue to work with Enbridge to develop adequate plans and complete the work required by the Order. However, nothing in this letter excuses any noncompliance with the Order nor does it serve as the granting of any extension to any deadline in the Order. U.S. EPA reserves all its rights to pursue an enforcement action for any noncompliance with the Order.

If you have any questions, please contact me immediately at (734) 692-7688.

Sincerely,



Jeffrey Kimble
Federal On-Scene Coordinator
U.S. EPA, Region 5

cc: K. Peaceman, U.S. EPA, ORC
C. Mikalian, U.S. EPA, ORC
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M. Ducharme, MDEQ
D. Coburn, Steptoe & Johnson
W. Hassler, Steptoe & Johnson
Records Center, U.S. EPA, Reg. V

The Alberta oil-sands and climate

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Calculating the carbon content of fossil fuels

We calculate the carbon content of fuels in grams per barrel (g/bbl) and per Joule (g/J). In all cases we assume 100% oxidation, in line with the IPCC¹, although the ultimate burned fraction may be lower.

Bitumen carbon content

We begin by making the following assumptions about crude bitumen:

1. A density of $1 \text{ g/cm}^3 = 1 \times 10^6 \text{ g/m}^3$ ^{2,3}.
2. A carbon fraction of 83%^{4,5}.

Then we can estimate the carbon content per barrel of bitumen as:

$$1 \times 10^6 \frac{\text{g}}{\text{m}^3} \times 0.159 \frac{\text{m}^3}{\text{bbl}} \times 0.83 = 1.32 \times 10^5 \text{ g/bbl bitumen} \quad (1)$$

The density of bitumen depends on temperature though at 20°C values are reported to be close to $1 \times 10^6 \text{ g/m}^3$ ^{2,3,6}. Density and carbon content may well vary amongst Alberta bitumen reserves by several percent⁷, with a corresponding small impact on our carbon-content calculation. We use the carbon content of $1.32 \times 10^5 \text{ g/bbl bitumen}$ together with the estimates of oil sands reserves/resources to calculate the total carbon content and potential for global warming of the Alberta oil sands in the main text. However, there may be additional emissions associated with oil sands utilization that we discuss below.

Global oil, gas and coal reserves and resources

We use the conversion factors listed below directly from the IPCC¹, which are the same as those given in the BP Statistical review of world energy (2011). Choosing slightly different conversion

factors (e.g. discriminating by type of coal) would affect our estimates, but the uncertainty in total carbon content (and potential warming) due to uncertainties in the conversion factors are much smaller than the uncertainties in resource size and the carbon climate ratio.

For oil, BP lists 73,300 kgCO₂/TJ which is equivalent to 2.0×10^{-5} gC/J. This is the same value listed by the IPCC¹.

Oil is listed to contain 3.07 tonnes CO₂ per tonne of oil equivalent (toe), and since 1 tonne = 7.33 barrels this yields 1.14×10^5 gC/bbl.

For Natural Gas, BP lists 56,100 kgCO₂/TJ which is equivalent to 1.53×10^{-5} gC/J. This is the same value listed by the IPCC.

Natural Gas is listed to contain 2.35 tCO₂/toe, and since 1 tonne = 7.33 barrels this yields 8.74×10^4 gC/bbl.

For coal, BP lists 94,600 kgCO₂/TJ which is equivalent to 2.58×10^{-5} gC/J. This is the same value listed by the IPCC for coking coal.

Coal is listed to contain 3.96 tCO₂/toe, and since 1 tonne = 7.33 barrels this yields 1.47×10^5 gC/bbl.

We explicitly calculate the amount of carbon from the resource estimates in the supplementary Tables.

Life cycle emissions

The quantities of carbon contained in different fossil fuel resources, listed in Table 1, and the associated potentials for global warming, are based only on the resource size and carbon content of the fuel. Additional emissions associated with extracting and processing the fuels have not been included.

For transport fuels, a "well-to-wheel" (WTW) approach includes emissions incurred during extracting, refining and transporting of the crude product, which are added to the emissions associated with ultimate use in an internal combustion engine. Charpentier et al.⁹, reviewed 13 previous studies of emissions associated with the Alberta oil sands. The Charpentier et al. data include emissions from greenhouse gasses (CH₄, N₂O) other than carbon dioxide, converted to CO₂ equivalents. However, due to information gaps and inconsistencies between the contributing studies, the

comparison of WTW emissions must be undertaken with caution⁹.

Bitumen can either be extracted by surface mining (about 20% of the reserve is thought to be accessible this way⁸) or a more energy intensive in-situ process (which applies to 80% of the reserve). After extraction, most bitumen is subsequently upgraded to synthetic crude oil (SCO), and eventually refined into gasoline, diesel and other products⁹. We call the surface mining and upgrading path SM&UP, and the in-situ and upgrading path IS&UP.

For reformulated gasoline on a WTW basis, Charpentier et al. give emissions of 260–320 and 320–350 gCO₂eq/km for SM&UP and IS&UP respectively, relative to 250–280 gCO₂eq/km for conventional crude. From these results we can see that gasoline produced from oil-sands bitumen is generally associated with higher emissions than that from conventional crude on WTW basis. A similar conclusion has been reached by other recent studies^{7,12}.

Note that the studies analyzed differ in their boundaries for the inclusion of emissions categories, whether, for example, venting, flaring and fugitive emissions from tailings ponds are included. Also, extraction processes vary from site to site, as does the quality of bitumen, thus requiring differing levels of upgrading. These factors and others all lead to uncertainties amongst studies as to the actual emissions associated with bitumen and conventional crude oil production.

Also note that emissions can be assigned to different stages in the process; for example, well-to-refinery gate (WTR) emissions include emissions due to extraction and upgrading to SCO; well-to-tank (WTT) emissions also include those associated with the refining and distribution; tank-to-wheel (TTW) emissions are those resulting from the final combustion of the fuel in a vehicle. It is worth noting that TTW emissions for a given vehicle are the same, regardless of the original source of the fuel. In addition they account for 70–80% of total emissions associated with the life-cycle of the fuel¹². Thus, differences in emissions intensities amongst fuels occur in the wells-to-tank stage. Therefore, comparison of fuel types on a WTT basis always exhibit a greater variability than comparisons on a WTW basis, since most of the emissions occur in the final combustion phase¹².

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Calculating the Potential for Global Warming of different Fossil Fuel Resources

gC = mean gC=low gC=high
 CCR=1.5 CCR=1.0 CCR=2.1

We use the resource plus reserve data from Rogner et al (2011), table 7.1, and per Joule carbon content factors from IPCC (2006), with CCR values from Mathews et al. (2009).

In this classification system, 'resources' are defined as "concentrations of naturally occurring solid, liquid, or gaseous material in or on the Earth's crust in such form that economic extraction is potentially feasible." Rogner (2011:7)

Rogner et al. (2011)	Energy content (low) (J)	Energy content (high) (J)	Unit Carbon content (g/J)	Total Carbon (low) (g)	Total Carbon (high) (g)	Total Carbon (mean) (g)	ΔT (mean) ($^{\circ}C$)	ΔT (5%) ($^{\circ}C$)	ΔT (95%) ($^{\circ}C$)
Oil									
- Conventional	9.07E+21	1.38E+22	2.00E-05	1.81E+17	2.75E+17	2.28E+17	0.34	0.18	0.58
- Unconventional	1.50E+22	2.04E+22	2.00E-05	3.01E+17	4.08E+17	3.54E+17	0.53	0.30	0.86
Gas									
- Conventional	1.22E+22	1.60E+22	1.53E-05	1.87E+17	2.45E+17	2.16E+17	0.32	0.19	0.51
- Unconventional	6.03E+22	1.89E+23	1.53E-05	9.23E+17	2.89E+18	1.91E+18	2.86	0.92	6.07
Coal	3.08E+23	4.56E+23	2.58E-05	7.95E+18	1.18E+19	9.86E+18	14.79	7.95	24.71
Total				9.55E+18	1.56E+19	1.26E+19	18.85	9.55	32.73

Calculating the Potential for Global Warming of the Alberta oil sands

We use the resource and reserve data from ECRB (2011), our own per unit carbon content factors (see supplementary text), with CCR values from Mathews et al. (2009).

ECRB (2011)	Amount (bbl bitumen)	bbl carbon content (g/bbl)	Total Carbon (g)	ΔT (mean) (°C)	ΔT (5%) (°C)	ΔT (95%) (°C)
Bitumen in place	1.8E+12	1.32E+05	2.38E+17	0.36	0.24	0.50
Bitumen established	1.69E+11	1.32E+05	2.23E+16	0.03	0.02	0.05
Bitumen active development	2.60E+10	1.32E+05	3.43E+15	0.01	0.003	0.01

Calculating the Potential for Global Warming of different Fossil Fuel Reserves

We use the reserve data from the BP Statistical review of world energy (2011), per unit carbon content factors from IPCC (2006), with CCR values from Mathews et al. (2009).

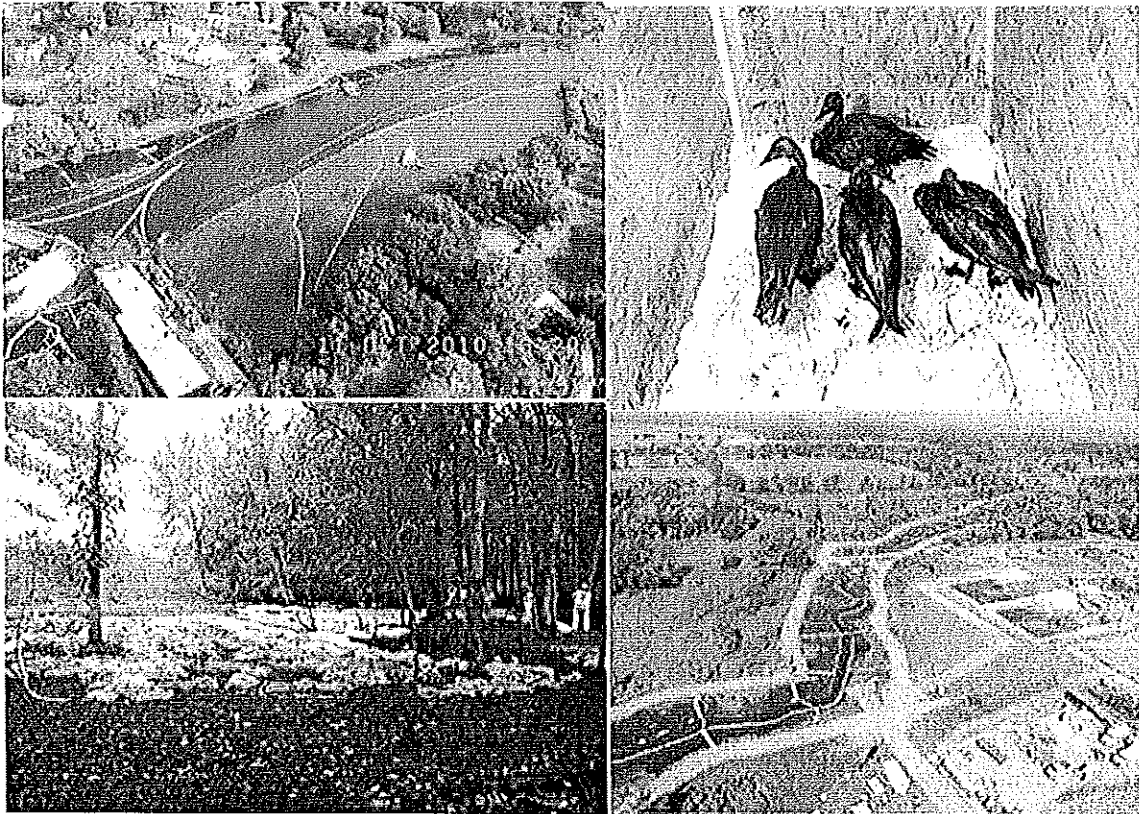
BP (2011)	Amount (Gt)	Gtoe	bbloe (*1e9)	Unit carbon content (g/bbloe)	Total Carbon (g)	ΔT (mean) (°C)	ΔT (5%) (°C)	ΔT (95%) (°C)
Oil			1.38E+12	1.14E+05	1.58E+17	0.24	0.16	0.33
Gas			1.23E+12	8.70E+04	1.07E+17	0.16	0.11	0.23
Coal	860.938	573.96	4.21E+12	1.46E+05	6.14E+17	0.92	0.61	1.29
Total					8.79E+17	1.32	0.88	1.85

I can provide PDF

for write - Thanks
MB Elliott

Interim, Partial Claim for Assessment Costs
Enbridge Line 6B Pipeline Discharge

} Enbridge
} refused
} to pay



January 29, 2013

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1. Executive Summary

This document provides information regarding the Trustees' plans to assess injuries to natural resources resulting from the discharge of oil by Enbridge Energy into Talmadge Creek, the Kalamazoo River, and adjoining floodplains. This Interim, Partial Claim for Assessment Costs provides information regarding the assessment procedures and methods that the Trustees have proposed. It also provides a schedule of when assessment work will be conducted along with cost estimates by federal Trustees.

The Trustees are assessing two broad categories of injuries and losses: 1) ecological and 2) human use service losses. ~~For both of these categories, Trustees are evaluating injuries and service losses caused by the discharge of oil, as well as injuries and losses as a result of response and remedial activities undertaken because of the discharge of oil. Ecological injuries and service losses under review include floodplain habitat; in-stream habitat losses to aquatic organisms; impacts to the fluvial geomorphology of the river (e.g. erosion of shoreline, banks and river bottom); and impacts including mortality to birds and other organisms directly affected by oil.~~ Human use loss assessment will focus on recreational service losses as a result of closure of the river to all public use. Section 4 outlines more specific information regarding the assessment methods that will be used for each of these categories.

Trustees anticipate that assessment work will take approximately 18 months to complete once funding has been received. A schedule of when assessment reports will be complete is provided in Section 5. Federal Trustees estimate their costs to total \$980,091.

2. Assessment Claim Overview

2.1 Claimant (Trustee) Information and Coordination

The following officials or their designees are acting on behalf of the public as Trustees for natural resources:

1. The Director of the Michigan Department of Environmental Quality (MDEQ);
2. The Director of the Michigan Department of Natural Resources (MDNR);
3. The Attorney General of the State of Michigan;
4. The Regional Director of the U.S. Fish and Wildlife Service (FWS), Region 3, as Authorized Official, acting on behalf of the Secretary of the U.S. Department of the Interior (DOI);
5. The Director of the Office of Response and Restoration, National Oceanic and Atmospheric Administration (NOAA), acting on behalf of the Secretary of Commerce;
6. The Tribal Council Chairperson for the Nottawaseppi Huron Band of the Potawatomi Tribe (NHBP); and
7. The Tribal Chairman for the Match-E-Be-Nash-She-Wish Band of the Pottawatomi Tribe (the Gun Lake Tribe). (The Trustees).¹

¹ This Interim, Partial Claim details the activities and the contributions of all signatories to the Memorandum of Understanding establishing the Trustee Council responding to this matter. The participation of the State of Michigan Trustees (the MDEQ, DNR, and the Michigan Attorney General) is detailed in this document, but the State of Michigan Trustees are not requesting any funds in this Interim, Partial Claim to the National Pollution Funds Center. Similarly, the Nottawaseppi Huron Band of the Potawatomi Tribe and the Match-E-Be-Nash-She-Wish Band of the Pottawatomi Tribe are signatories to the Memorandum of Understanding establishing the Trustee Council, and the Tribes' activities and

MDEQ worked with Enbridge to compile and reconcile multiple datasets, including the Trustees' floodplain survey and various observations collected for response/remediation purposes, into a single geographic information system database to document the extent of oiling and the nature and extent of impacts from response/remedial activities within the floodplain.

3.2.2. Preassessment Activities for Human Use Impacts

Within days after the spill, Trustees and Enbridge informally assessed human activity and recreational use/access locations along the impacted portion of the river. Trustees also gathered and compiled readily available information on pre-spill recreational use along the affected portion of the river, including information on angling, park use, and shoreline use.

The NHBP conducted preliminary interviews with tribal elders to evaluate whether further study of cultural use losses was warranted.

3.3. Notice of Intent to Conduct Restoration Planning

On March 1, 2012, Trustees issued the Notice of Intent (NOI) to Conduct Restoration Planning for the Natural Resource Damage Assessment and Restoration (NRDAR) case associated with the Enbridge Line 6B Oil Spill in Marshall, Michigan. In it, Trustees communicated the determination that Trustees have jurisdiction to conduct a NRDA and that doing so is appropriate. Based on information collected since July 2010, Trustees have made a preliminary determination that natural resources and services have been injured. These injuries are expected to continue and response actions are not expected to address the injuries. However, feasible restoration alternatives exist to address such injuries. As such, Trustees stated their intent to proceed with an NRDA to identify natural resource injuries and proposed restoration alternatives. The NOI was distributed to the public via agency websites, through informal meetings with stakeholders, and media outlets. The NOI was provided to the responsible party electronically and via FedEx.

3.4. Coordination between Trustees and Responsible Party


Immediately after the spill, Trustees and Enbridge cooperatively developed and implemented certain preassessment study plans (See 3.2.1). In 2011, Trustees corresponded and met with representatives from Enbridge to discuss entry of a Funding and Participation Agreement, but consensus on language was not reached and no Agreement was executed. Trustees formally invited Enbridge's participation on March 1, 2012, in a letter to Enbridge Energy enclosing the Trustees' Notice of Intent to conduct restoration planning and invitation to participate in Natural Resource Damage Assessment.

Trustees developed an Interim, Partial Claim for Natural Resource Damage Assessment Costs pursuant to 33 U.S.C. § 2713 for contractor costs associated with assessing recreational use. That assessment plan was presented to Enbridge via a letter on April 4, 2012. On June 20, 2012, Enbridge Energy responded and declined to participate.

Trustees developed an Interim, Partial Claim for Natural Resource Damage Assessment Costs pursuant to 33 U.S.C. § 2713 for costs associated with assessing vegetation. These costs were for field work and

for developing a report on the data collected. That assessment plan was presented to Enbridge via a letter on July 26, 2012. On October 10, 2012, Enbridge Energy responded and declined to participate.

Table 3-1. Summary of Interim, Partial Claims for Natural Resource Damage Assessment Costs pursuant to 33 U.S.C. § 2713 that Trustees have presented to Enbridge.



Type of Assessment Claim presented	Amount requested	Date Trustees presented Enbridge with Claim	Date Enbridge responded to Trustees	Answer from Enbridge
Recreational Use	\$167,100	April 4, 2012	June 20, 2012	Declined to participate
Vegetation Survey	\$636,479	July 26, 2012	October 10, 2012	Declined to participate

3.5. Coordination between Trustees and Remedial/Response Agencies

Response agencies notified Trustees when the incident occurred. Trustees worked with Response agencies to ensure NRDA field crews were able to safely access the site. Trustees shared information with Response agencies that was used for their operational decision-making. Where possible, Trustees obtained relevant Response data (e.g. water and sediment chemistry results) for our data needs rather than collecting data independently.

4. Proposed Assessment Procedures

4.1. Proposed Assessment Methods

4.1.1. Assessment Methods for Ecological Impacts

Preassessment activities identified ecological injuries and service losses, including injuries to floodplain habitat, in-river injuries to fish and other aquatic biota and aquatic habitat, impacts to the fluvial geomorphology of the river, and impacts, including mortality, to birds, turtles and other biota that were directly oiled. Based on preassessment outcomes, Trustees will focus future assessment effort toward these affected resources, but may expand in the future based on the scope and ongoing nature of the Response and potential for new injuries to be identified.

Trustees will compile analytical data from Response activities and obtain MDEQ's toxicity-based cleanup thresholds for oil constituents in soil, sediment, and water in order to evaluate their utility for NRDA. In addition to the toxicity thresholds developed by MDEQ, Trustees will identify adverse effects levels from the scientific literature, and will use these levels along with measured chemistry results to assess the potential toxic effects of the oil on relevant biota. If warranted, chemistry exceedances of the adverse effects levels will be analyzed over space and time to quantify the toxic effects of the oil. The anticipated federal Trustees' costs associated with this activity are included in Trustees' budget estimates of this Interim, Partial Claim for Assessment Costs. Additionally, federal Trustees' costs associated with writing summary reports of chemistry data are included in the budget of this Interim, Partial Claim for Assessment Costs.

intend to consult with turtle experts who will focus on both the types of injuries that may have occurred and the types of restoration that can address those injuries. This Interim, Partial Claim for Assessment Costs includes federal Trustees' costs associated with working with resource experts as well as coordinating and conducting an Avian REA and a Turtle REA.

Trustees will also consider injury assessment for resources such as amphibians, mussels, ground water, in-stream aquatic vegetation beds, channel morphology changes, and other special habitat features such as vernal pools, if additional information warrants their consideration. Trustees are not seeking funding for their assessment at this time.

4.1.2. Assessment Methods for Human Use Impacts

Trustees have developed and submitted to the National Pollution Funds Center (NPFC) a Recreational Use Assessment Plan that was presented to Enbridge in April 2012 to survey recreational use in the affected area in 2012. On June 20, 2012, Enbridge declined to fund or participate in the Recreational Use Assessment and the Trustees submitted the plan to the NPFC for adjudication. The Trustees implemented portions of the plan with limited internal funding from the FWS.

The Recreational Use Assessment Plan provides more detailed information regarding how data will be collected and used to determine damages. In summary, total damages will be determined using a site-specific travel cost model to estimate the change in value between actual and baseline conditions. A report will be developed to document assessment work and results.

The Recreational Use Assessment Plan assumes that data collection will continue through November 2013. As the Recreational Use Assessment Plan included only contractor costs, this Interim, Partial Claim for Assessment Costs includes the federal Trustees' staff costs associated with planning, coordinating, and providing oversight of the 2012 field efforts, as well as assisting the contractor with drafting and finalizing the associated report in December 2013. If recreational use has not returned to baseline levels in 2013, then the Trustees will consider continuing data collection in 2014, at which time Trustees would develop an associated interim claim.

The Nottawaseppi Huron Band of Potawatomi developed a plan for preliminary evaluation of impacts to tribal uses of natural resources. The plan includes interviews with tribal resource specialists, small group interviews with tribal members regarding the effects of the oil spill on current and future use and perception of the natural resources, and an analysis and interpretation of the resulting data. No funds are being requested for this plan as part of this Interim, Partial Claim for Assessment Costs.

4.2. Natural Recovery Estimation

As required under 15 CFR 990.52(c), the Trustees will estimate the rate at which natural recovery would occur without restoration, but including incident response actions. The annual state monitoring programs for fish and macroinvertebrates and the Trustees' Rapid Vegetation Assessment all provide multiple years of data and can be compared with pre-spill data to estimate the rate of return of those resources to baseline conditions. In addition, Trustees will coordinate with remedial agencies to obtain monitoring data.