

Smith Direct Testimony on Behalf of Friends of the Headwaters, Ex. 181

FRIENDS OF THE HEADWATERS

MINNESOTA PUBLIC UTILITIES COMMISSION

MPUC DOCKET NO. PL-6668/CN-13-473
OAH DOCKET NO. OAH-8-2500-31260

DIRECT TESTIMONY OF RICHARD SMITH

NOVEMBER 19, 2014

Q. Please state your name, organization, title and on whose behalf you are testifying.

A. My name is Richard Smith. I am President of the Friends of the Headwaters (FOH) organization, an Intervener in this case, on whose behalf I am testifying.

Q. Have you testified in proceedings before the Public Utilities Commission before?

A. No.

Q. What is your background, education and experience?

A. I am a professional photographer and small business owner, and have been since 1979. Between 1988 and 2008 I owned and operated a commercial advertising photography business. As part of my business, I secured extensive on the job training in design, layout, advertising, graphics, Adobe Acrobat, Photoshop, Lightroom, film and digital photography and editing. I directed production crews of up to fifty persons for major advertising campaigns for top brands and companies in the world. My clients have included 3M, BMW, American Express, Budweiser, McDonalds, Microsoft, Tourism Turkey, the Wall Street Journal, Harpers, the New York Times, Sports Illustrated, The Nature Conservancy and the Foundation for Deep Ecology to name a few.

Since 2010 I have continued my photography business, with an emphasis on environmental and nature photography and clients. Since becoming President of the Friends of the Headwaters, because of the demands or participation in this process, I have reduced the hours devoted to my business by approximately fifty per cent.

I graduated Summa Cum Laude, Phi Beta Kappa from the University of North Dakota with a degree in Psychology and a secondary emphasis on Earth Sciences, geology, ecology, biology, chemistry, geomorphology and mathematics.

I taught ecology and natural sciences at the Environmental Learning Center in Isabella, Minnesota; I also drafted the curriculum for the North Woods Resource Center, an environmental and outdoor recreational learning center near the Boundary Waters Canoe Area Wilderness in Ely, Minnesota, where I worked for four years. This curriculum centered on

natural sciences with an emphasis on ecology. I taught orienteering, map reading (USGS topographic maps), hiking, cross country skiing, snowshoeing and winter camping skills. I worked with children in grades 6 through high school. I worked for a year as Program Director at the Center. For nine years I guided canoe trips in the Boundary Waters Canoe Area Wilderness and the Quetico Provincial Park in Canada and guided extended 21 day trips in northern Ontario as well as forty-two day and a seventy day expeditions in the Northwest Territories of Canada. I did this work in pre-GPS days, so used my extensive map reading skills. I used my photographic skills for various environmental groups who were working to secure protection for the Boundary Waters Canoe Area.

I have lived in Minnesota for 42 years. For the past 14 years, I have lived outside of Park Rapids, in Hubbard County, Minnesota. I moved to my present residence from Minneapolis because of my longstanding love for Northern Minnesota and its natural resources.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to introduce maps and other materials I have prepared in response to the pipeline that is being proposed in this proceeding and to summarize the position of the Friends of the Headwaters.

Q. Please summarize the Friends of the Headwaters' position in this case.

A. FOH is not opposed to pipelines, per se, but is definitely opposed to Enbridge/NDPC's Sandpiper pipeline route as currently proposed. Rather than the Applicant telling Minnesota it *needs* this pipeline as proposed, we believe Minnesota *needs* to make that determination on what is good and safe for Minnesota, not Enbridge/NDPC. Our position is Minnesota does not need another new pipeline corridor passing through the state's most sensitive water resources. Too much is at risk environmentally, economically and culturally. Our position is also that given the large scale nature of this project and that this new corridor is already the proposed site for a second pipeline, the Line 3 Rebuild, that the state should not only conduct a full environmental impact statement (EIS) with a complete environmental and economic risk assessment of the Applicant's proposed route, but also include a number of the System Alternative Routes

proposed by citizen groups. FOH is not confident the DOC-EERA environmental review as ordered by the PUC can be completed in a thorough and comprehensive manner in the short time provided. In order to fully address the Certificate of Need in these proceedings the state must not limit its consideration only to pipeline economics, but must include environmental economics in its assessment. It is our position only a full scope EIS can determine the state's NEED for this pipeline as currently proposed.

The Friends of the Headwaters disputes Enbridge/NDPC's contention that the Sandpiper must end in Superior, Wisconsin. Enbridge has provided no rationale for needing Superior other than "We want it. We need it to connect to our existing system in Superior." SA-04 also connects to their existing system hub near Chicago. It does not prevent Enbridge from then transporting the Bakken crude either south or across Illinois, Indiana, Michigan and across the border to Sarnia, Ontario, Canada on their existing system.

In summary, the Friends of the Headwaters opposes the NEED for the Enbridge/NDPC Sandpiper Pipeline route proposal. 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; groundwater aquifers, fish and wildlife; wild rice; lake and riverfront homes, businesses, and communities; tourism industry; lands and forests; and Lake Superior. The people of Minnesota should not allow a Canadian corporation with its "limited liability" US subsidiary, North Dakota Pipeline Company LLC, to dictate the terms of this project. Friends of the Headwaters does not believe this proposed multiple pipeline corridor with the Sandpiper and now Line 3 can meet the Minnesota's NEED for high standards for quality, safety and sustainability of the lands and especially waters along the route.

The position of Friends of the Headwaters is perfectly summarized in Minnesota's environmental law:

"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." [MEPA 116D.04,Subd.6]

Q. Please describe the developments of your maps.

A. When I first heard about the proposed Sandpiper pipeline, friends, neighbors and other concerned citizens gathered together and formed Friends of the Headwaters. In order to educate ourselves and others about all the environmental aspects of the Applicant proposed Sandpiper route, I began to develop a series of maps using my background, interests and computer graphics ability to graphically illustrate where the proposed pipeline would go and the natural resources it would go through, across or near as it made its way to Wisconsin, and the threats it would, therefore pose to the region. After I spent hundreds of hours studying the potential environmental impact of the proposed route, I continued developing a series of maps showing other routes that were safer because emergency vehicles could more quickly reach spill sites, were less of a threat to fragile and in some cases rare ecological resources, and posed less threat to both surface and groundwater.

The maps I created were intended to inform the Commerce Department, this proceeding, and the Public Utilities Commission of the location where the risk of oil spills would be most damaging to the natural environment. According to a 2003 MPCA report to the National Transportation Safety Board, there were "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....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 spill 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.”

These maps were submitted as part of our comments to the Commerce Department in the preliminary stages of this proceeding, and have served as the basis for our presentations to the Public Utilities Commission, organizations, and other government bodies since that time. They have also served as the basis for now-designated system alternatives that are being studied by the Minnesota Department of Commerce for presentation on December 16 (target date). Each map attached to this testimony shows three routes/system alternatives: The black line shows the route the Applicant wants to use. The Red line shows a route developed by the Minnesota Pollution Control Agency, although, as I mentioned, it later stated that the third route/system alternative proposed by FOH is the best from an environmental perspective. The blue line shows FOH’s preferred route, SA-04.

SA-04 was developed with a number of goals in mind. It would:

- still provide construction jobs and dollars;
- retain the pipeline’s tax benefits for the state;
- remove the risks to our lakes, rivers, wetlands, wild rice lakes and drinking water sources for residents of Northern Minnesota, as well as those who depend on Mississippi River water throughout the state, including the Greater Minneapolis/St. Paul Metro area.
- protect businesses that rely on outdoor recreation, including fishing, hunting and wildlife watching, which bring in \$4.3 billion in annual retail sales. (Fishing alone generates \$342 million annually in tax revenue for the state.) Figures are based on a study completed during the recessionary economic period of 2007-09, which is the latest study with local and county data. (See <http://www.exploreminnesota.com/industry-minnesota/research-reports/researchdetails/download.aspx?id=811>)
- protect clear lakes, which mean high lakeshore property values, a key factor in property tax assessments;

By contrast, the maps show the serious problems with the route proposed by the Applicant. These serious problems must be addressed in the CON proceedings. FOH believes a full scope EIS comparing all the economic, environmental and cultural factors of the Applicant's route against the System Alternative routes is needed before any Certificate of Need is granted to the Applicant.

- The MPCA conducted a comparative environmental analysis for this docket of the proposed routes. A high score was least damaging to the environment; a low score the most damaging. FOH's SA-04 scored the highest. Enbridge's preferred route scored the lowest of the 8 system alternatives.

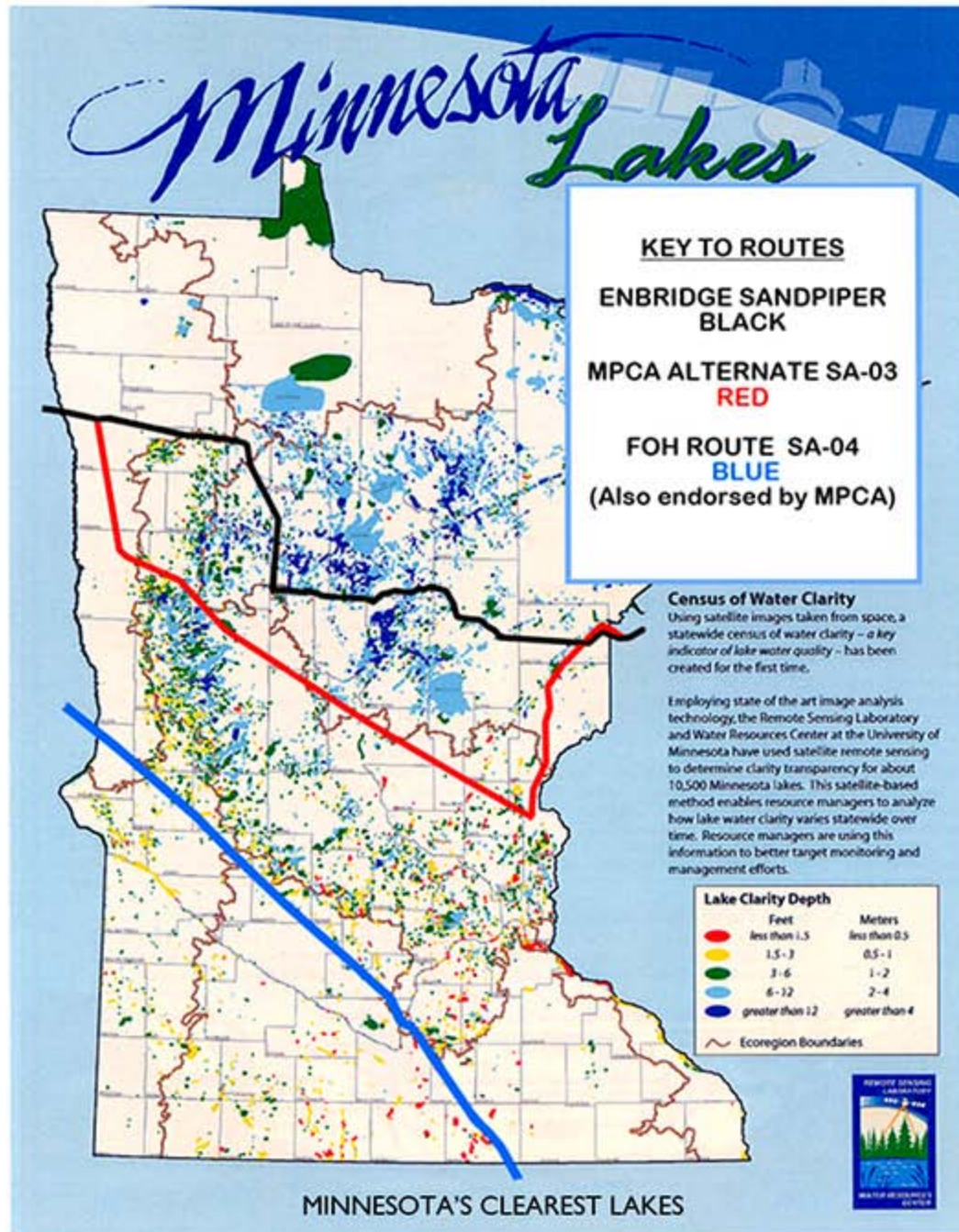
Q. Please describe the specific maps you created.

The attached pages contain the respective maps with the descriptions and graphics which were created. Although I agree these maps are primarily about routes I believe the environmental aspects of the maps presented must be addressed in these CON proceedings. The long term environmental health, economic welfare and cultural vitality of Minnesota's northern lake country and its clean water resources must be consider in the NEED for this pipeline and proposed location.

SEE ATTACHMENTS BELOW

Q. Does this conclude your testimony?

A. Yes.

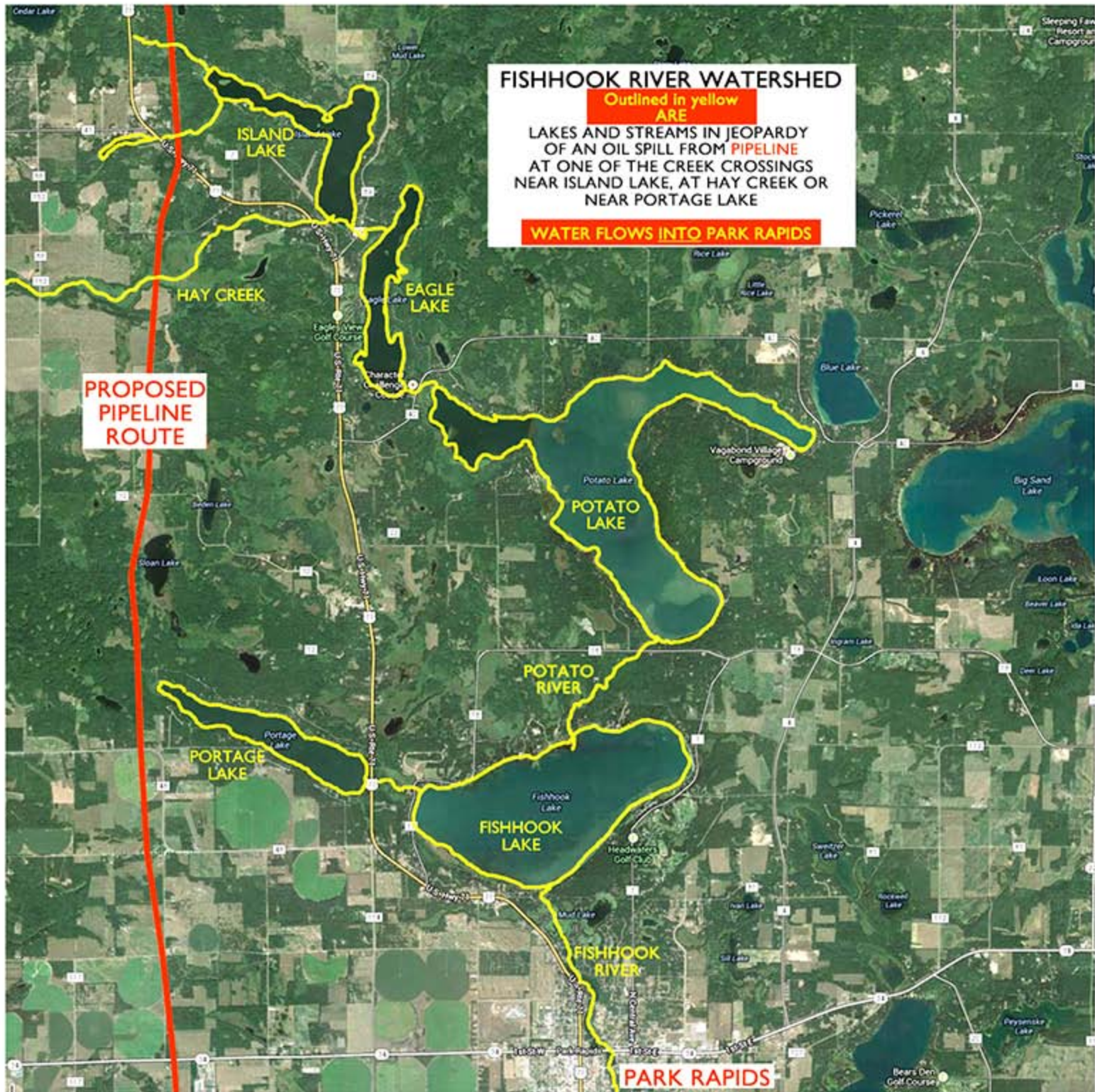


The Minnesota Water Resources Center at the University of Minnesota compiled the data on this map. Using satellite remote sensing they surveyed 10,500 lakes in the state, then ranked them for clarity. The dark blue lakes have the greatest clarity. A member of the Friends of the Headwaters found the map at a Minnesota Pollution Control Agency office. Using my Adobe Photoshop skills I scaled and overlaid the Enbridge/NDPC proposed Sandpiper route (in black) onto this map to indicate its proximity to these high value waters. I later added the two system alternative routes, SA-03 (red) and SA-04 (blue), to the map to illustrate how they compare in proximity to the state's clearest lakes.

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.

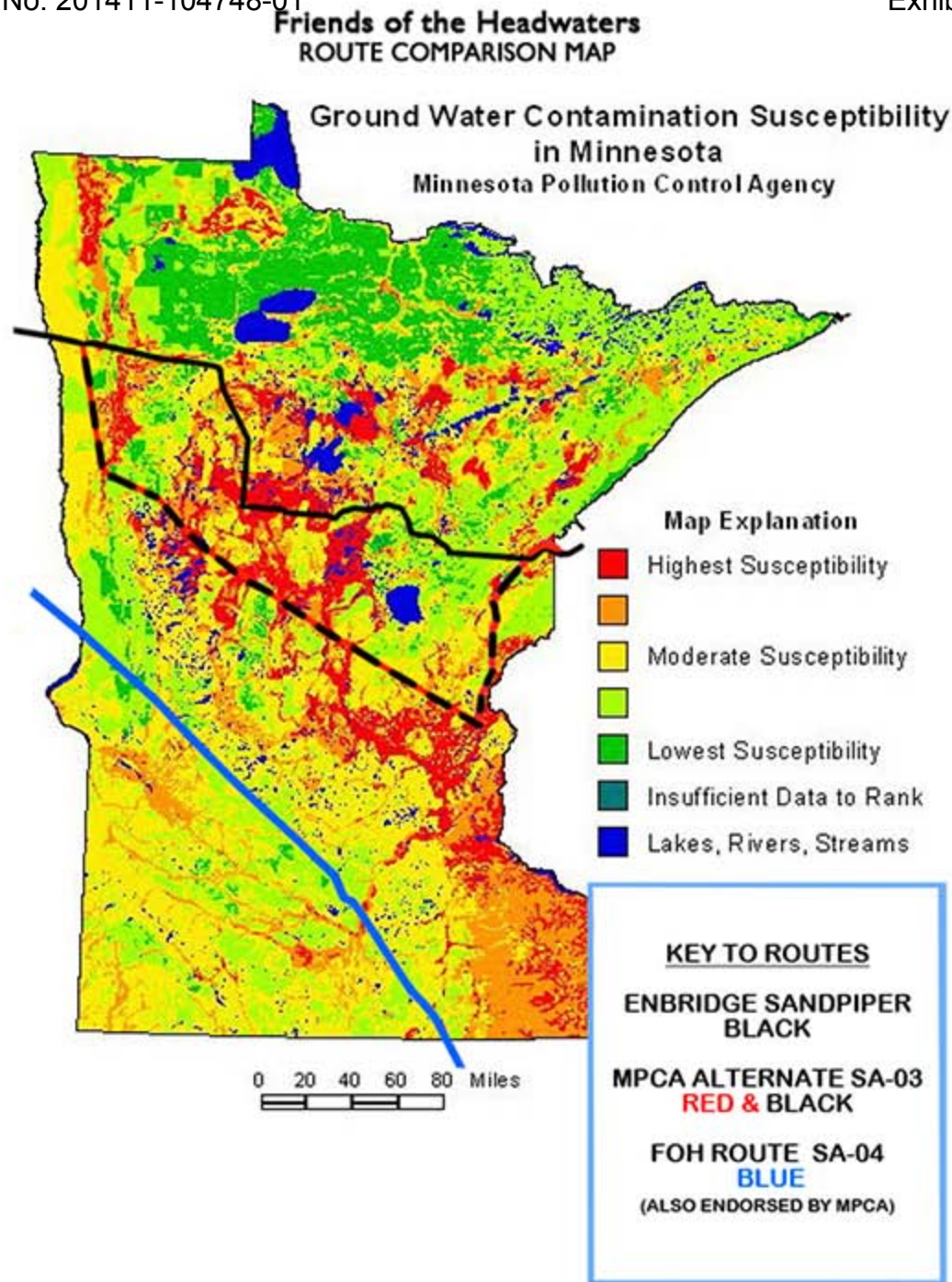
www.exploreminnesota.com/industry-minnesota/research-reports/researchdetails/download.aspx?id=811



MINNESOTA'S CLEAREST LAKES MEAN HIGH PROPERTY VALUES

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

Utilizing Google Maps I created this map of the Fishhook Watershed in Hubbard County. This map is my \$2 Billion dollar map. That is the county's accessed property value of the water influenced properties along the yellow outlined shorelines of the watershed. The pipeline crosses three tributaries of this watershed as well as passing in close proximity to one of its lakes. Multiply those property values for the other lake chains and watersheds along the proposed Sandpiper route. Whitefish, Pine River, Fifty Lakes, Big Sandy, Lake Superior, and others.



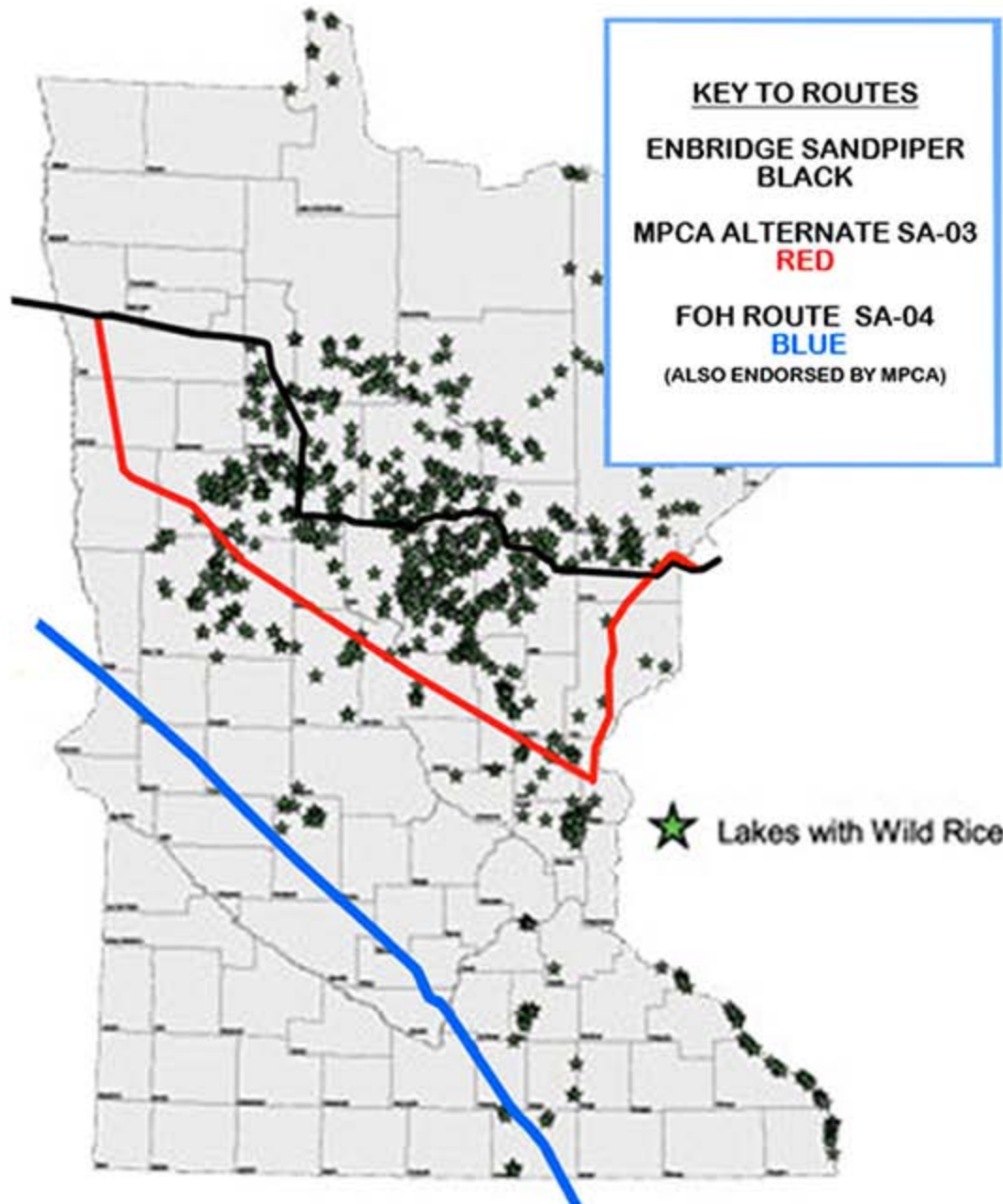
This map was found on the Minnesota Pollution Control Agency's website. Again, I overlaid the company's proposed route as well as the two system alternative routes.

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.

The Straight River aquifer supports the county's largest employer, the RDO/LambWeston Company, which grows and makes french fries for MacDonaldis besides other potato products. The aquifer 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.

Nothing is more critical than our drinking water sources.

**Friends of the Headwaters
ROUTE COMPARISON MAP**

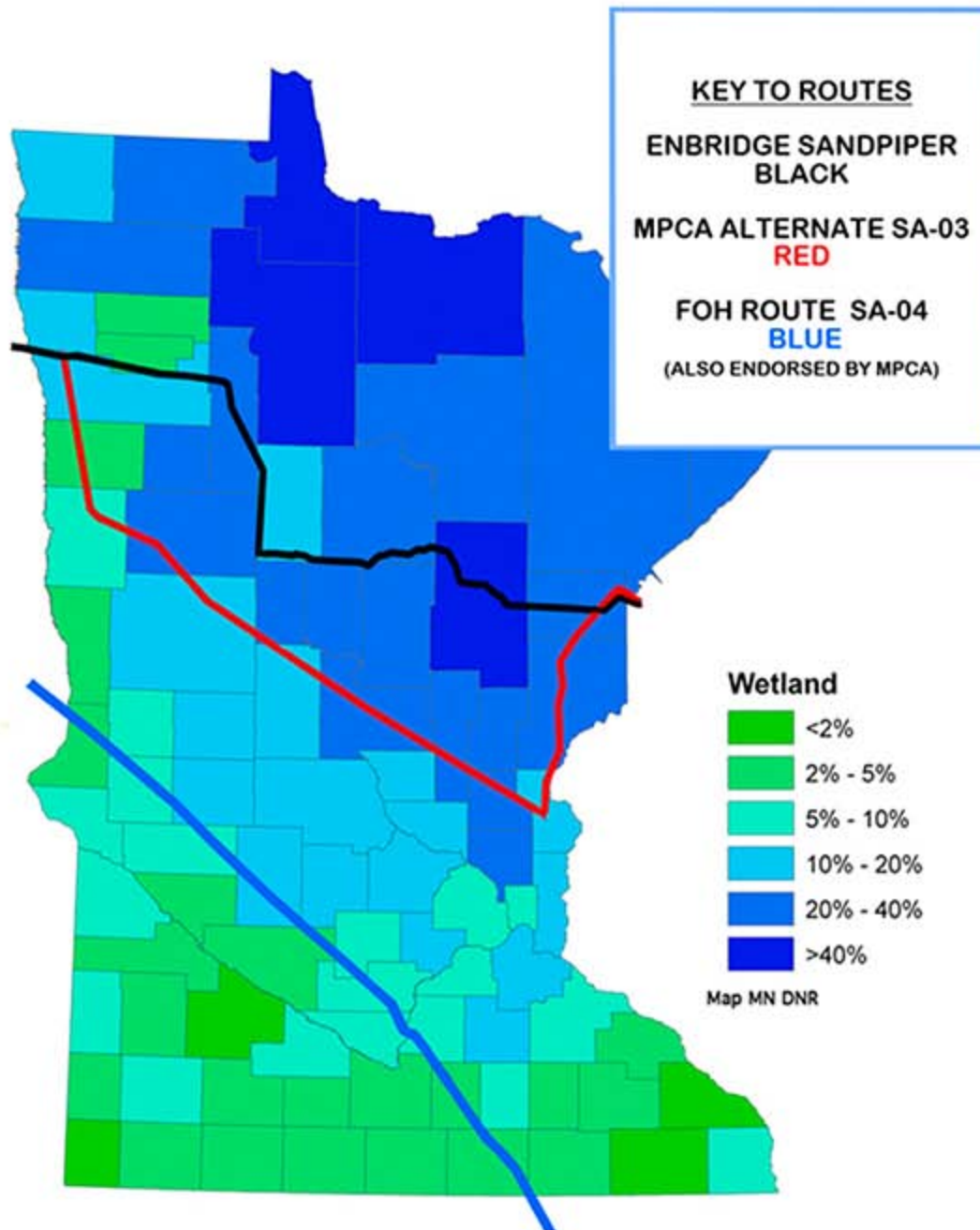


Located on the Minnesota Department of Natural Resources website, this map identifies the locations of Minnesota's wild rice lakes . Again, using my Photoshop skills I layered the company's proposed route as well as the two system alternative routes, SA-03 and SA-04. The intention was to illustrate the extreme risk to the state's wild rice waters by the proposed Enbridge/NDPC Sandpiper route. Could Enbridge have picked a worse route for jeopardizing the 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.

Wild rice is also critical to Minnesota's nesting and migratory waterfowl.

**Friends of the Headwaters
ROUTE COMPARISON MAP**



This comparative map juxtaposes the proposed Sandpiper route and the two system alternatives in relationship to the state's prime wetlands areas as identified on this map developed by the Minnesota Department of Natural Resources and found on its website. Again, the intention was to illustrate the risk to the state's wetlands. Note the correlation of this wetlands map to the previous wild rice map.

These wetlands are also critical to Minnesota's nesting and migratory waterfowl.

**Friends of the Headwaters
 ROUTE COMPARISON MAP**

MAJOR BASINS AND WATERSHEDS OF MINNESOTA



These three maps were located at various sources on the Internet. The maps identify the respective river basins and watersheds of Minnesota. Using Photoshop I wanted to show how the routes relate to these watersheds.

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

Enbridge/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 that are present in Bakken crude such as benzene, toluene, naphalene.

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.



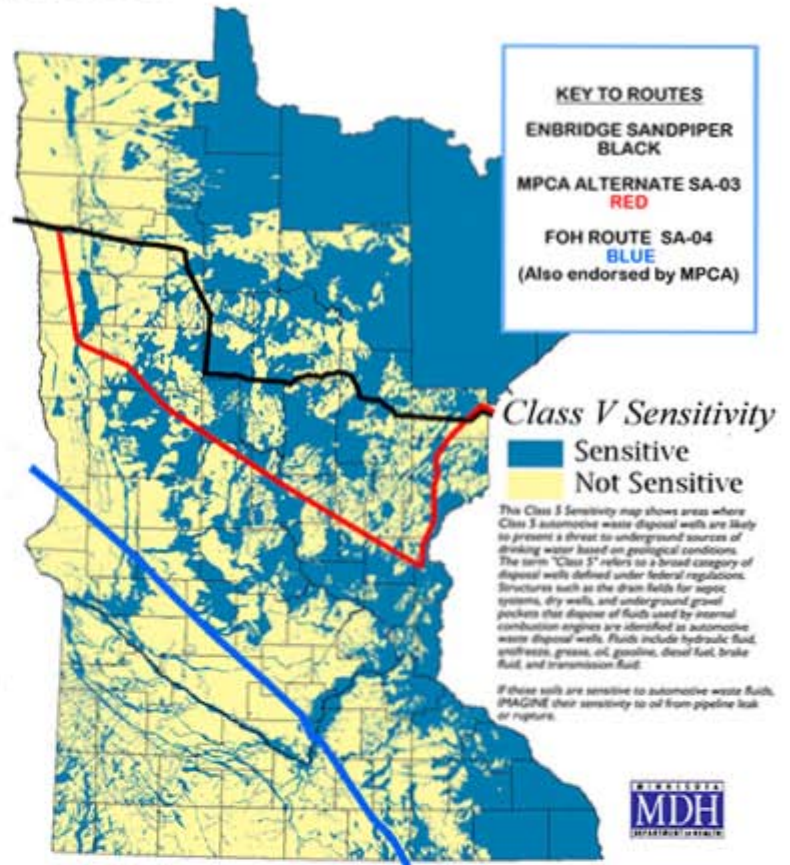
eDocket No. 201411-104748-01

Exhibit 181

**Friends of the Headwaters
ROUTE COMPARISON MAP**

Retrieved from the Minnesota Department of Health's website, 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 previously on page 3. Again, overlaying the routes allowed me to illustrate the environmental risk of the Sandpiper route as compared to the system alternatives.

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. Sources for the soil orders map were the NRCS/USDA and the Minnesota DNR.



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.

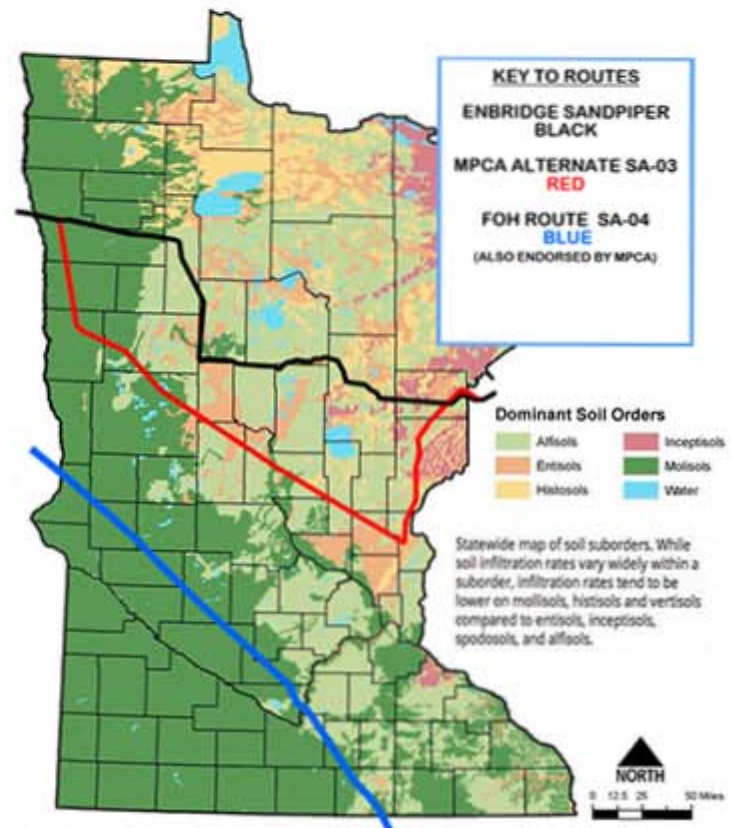
He made these remarks at a public meeting in Park Rapids on Jan. 29, 2014.

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.



October, 2003

Sources: NRCS (GIS data available at <http://www.nrcs.usda.gov/products/datasets/statgo/datasets.html>); DNR (GIS data available at <http://dhr.state.mn.us/>)

**Friends of the Headwaters
ROUTE COMPARISON MAP**

These two maps were located on the Minnesota Department of Natural Resources' website.

Besides showing the environmental risks to Minnesota's watersheds and aquifers, its soil types, I also wanted to illustrate the routes as to how they traversed the state's land cover and ecological zones. The purpose was to compare the respective routes and their potential damage to our forest lands.

The Enbridge route will dramatically involve more forest cover than the system alternatives, SA-03 and SA-04.

The MPCA conducted a comparative environmental analysis of these proposed routes. A high score was least damaging to the environment, a low score the most damaging.

FOH's SA-04 scored the highest.

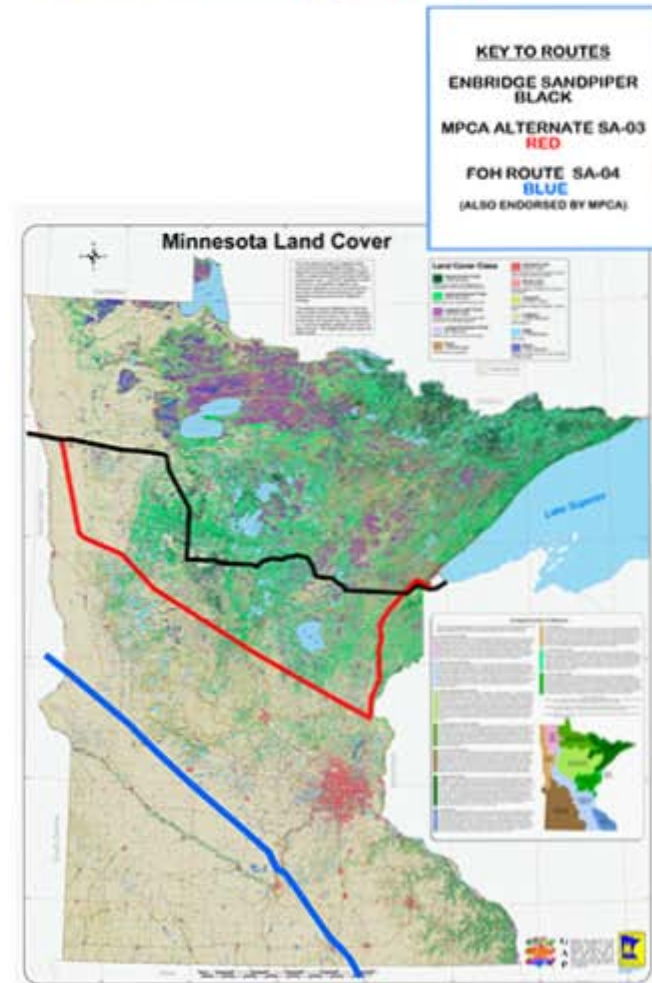
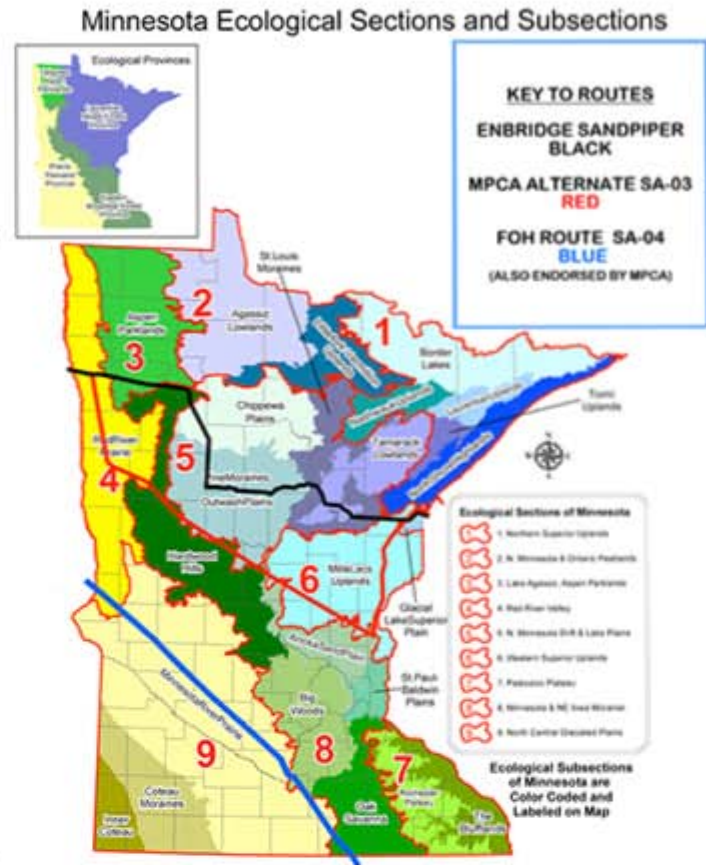
Enbridge Sandpiper - the lowest.

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 Enbridge/Alliance corridor is the proposed route of SA-04.

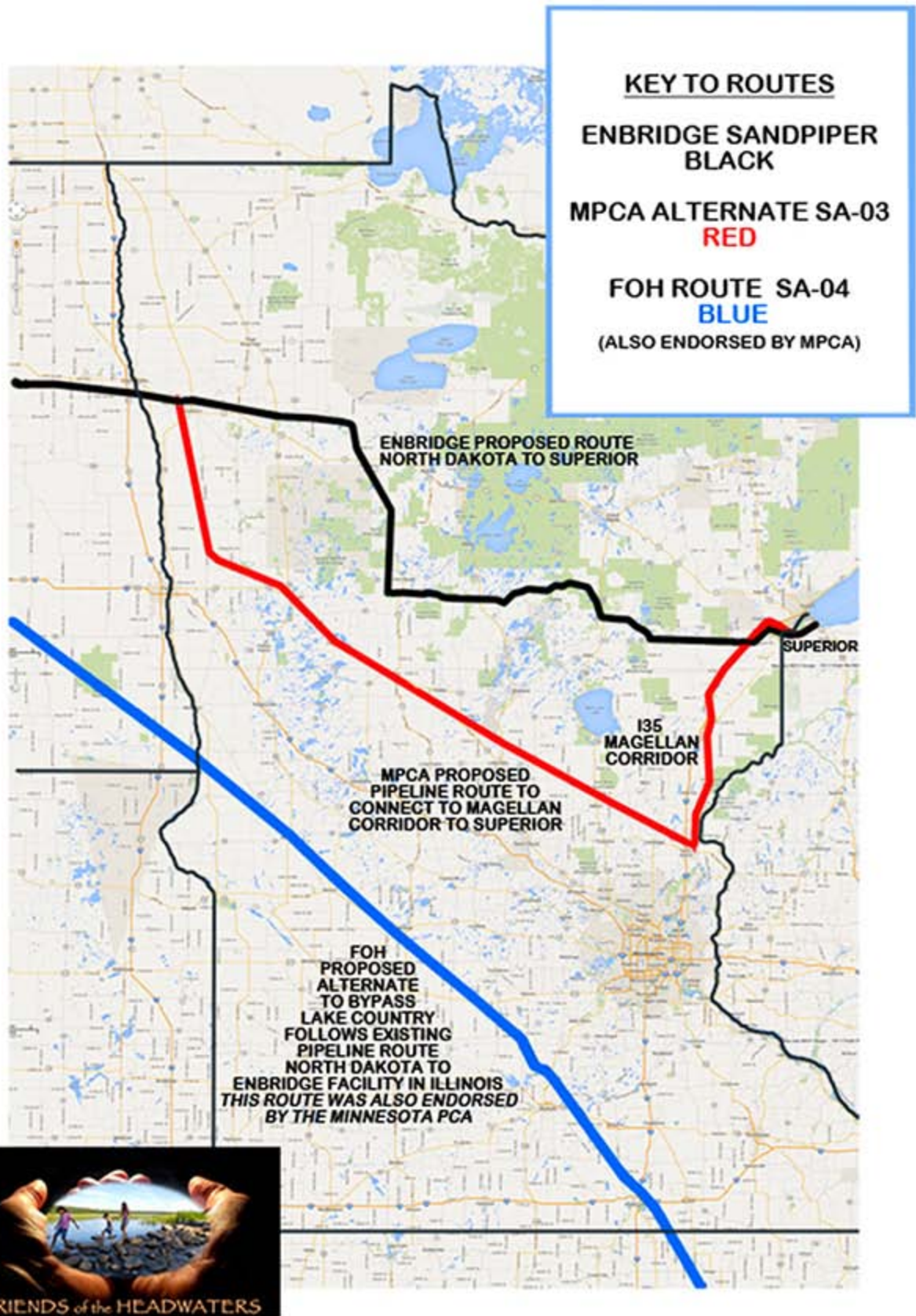
I produced these assembled maps because I believe Minnesota does not NEED Enbridge/NDPC's Sandpiper pipeline route as currently proposed traverse the state's northern water resources

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
- THE HEADWATERS OF THE MISSISSIPPI RIVER AND ITASCA STATE PARK
- HIGH VALUE RECREATIONAL AND RESIDENTIAL WATERS



**Friends of the Headwaters
ROUTE COMPARISON MAP**

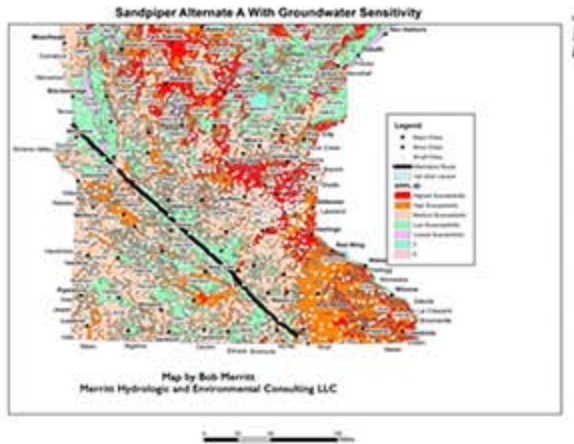


I produced this map to show the relationship of the Company route and the two system alternatives in relationship to a roadmap of the state. The maps on the next page provide more detail yet for SA-04 and the justification for my reasoning.

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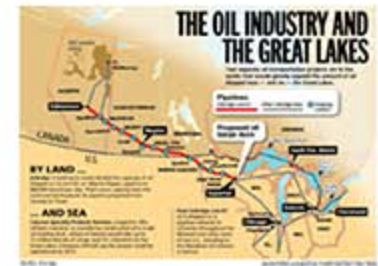
Two additional maps by Bob Merritt, hydrologist, showing FOH SA-04 in better detail.

Exhibit 181



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.

