

# Minnesota Lakes

ENBRIDGE/NDPC SANDPIPER PROPOSED PIPELINE IN RED

FRIENDS OF THE HEADWATERS  
PROPOSED ALTERNATE ROUTE TO AVOID  
MINNESOTA'S LAKE COUNTRY  
IN BLACK

NDPC  
SANDPIPER  
PROPOSED  
PIPELINE  
ROUTE

GRAND FORKS

LOOK  
WHERE THE  
CLEAREST LAKES  
ARE

## Census of Water Clarity

Using satellite images taken from space, a statewide census of water clarity – a key indicator of lake water quality – has been created for the first time.

Employing state of the art image analysis technology, the Remote Sensing Laboratory and Water Resources Center at the University of Minnesota have used satellite remote sensing to determine clarity transparency for about 10,500 Minnesota lakes. This satellite-based method enables resource managers to analyze how lake water clarity varies statewide over time. Resource managers are using this information to better target monitoring and management efforts.

### Lake Clarity Depth

	Feet	Meters
<span style="color: red;">●</span>	less than 1.5	less than 0.5
<span style="color: yellow;">●</span>	1.5 - 3	0.5 - 1
<span style="color: green;">●</span>	3 - 6	1 - 2
<span style="color: blue;">●</span>	6 - 12	2 - 4
<span style="color: darkblue;">●</span>	greater than 12	greater than 4

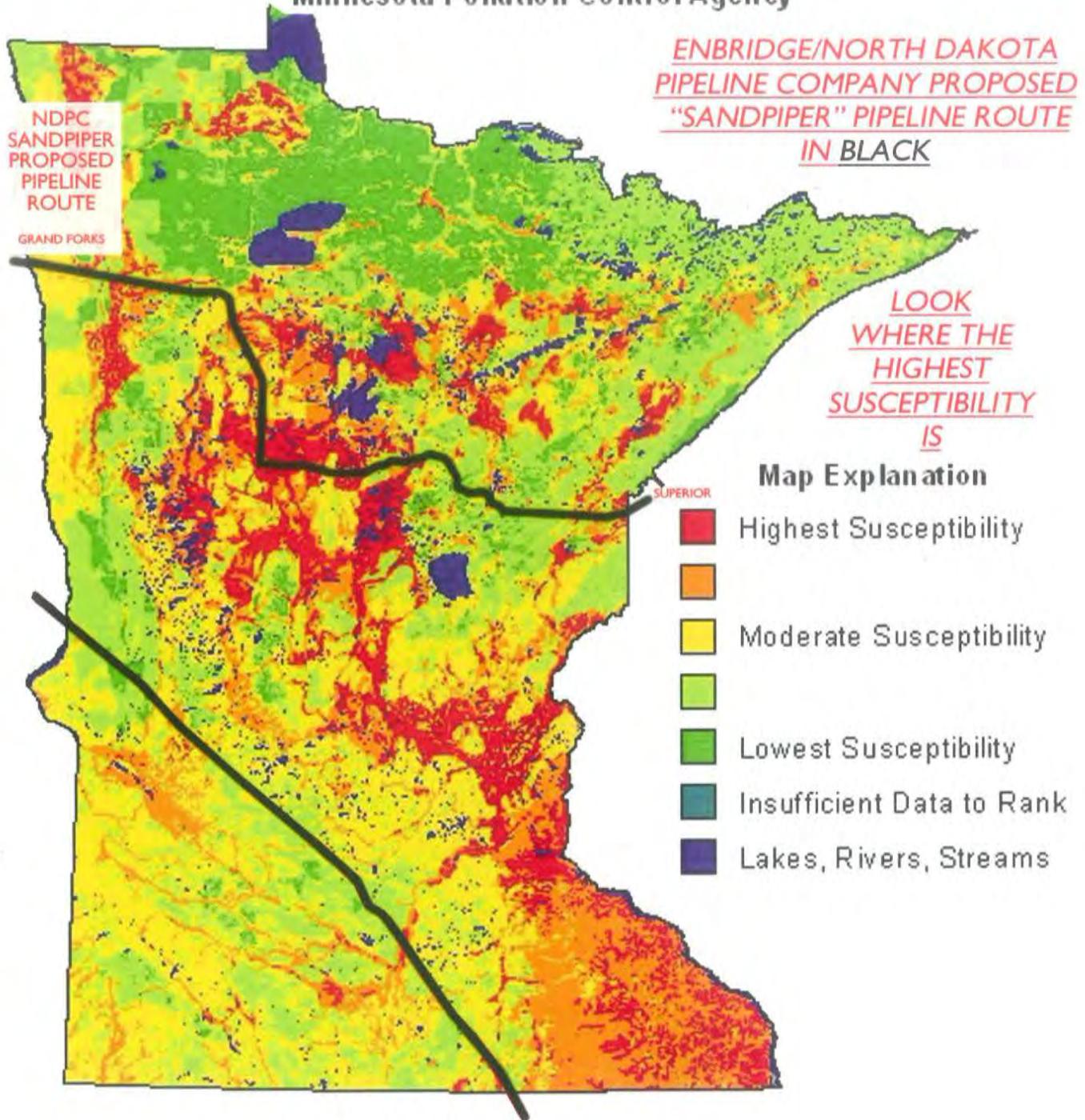
~ Ecoregion Boundaries

FOLLOWS ROUTE OF ENBRIDGE-ALLIANCE  
NATURAL GAS PIPELINE CORRIDOR FROM SHERWOOD, ND  
ACROSS MINNESOTA, IOWA, ILLINOIS  
TO CHICAGO AREA



# Ground Water Contamination Susceptibility in Minnesota

Minnesota Pollution Control Agency



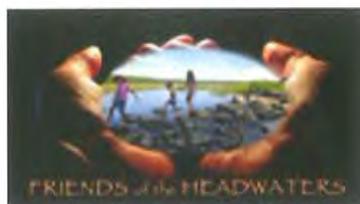
ENBRIDGE/NORTH DAKOTA  
PIPELINE COMPANY PROPOSED  
"SANDPIPER" PIPELINE ROUTE  
IN BLACK

LOOK  
WHERE THE  
HIGHEST  
SUSCEPTIBILITY  
IS

## Map Explanation

-  Highest Susceptibility
-  Moderate Susceptibility
-  Moderate Susceptibility
-  Lowest Susceptibility
-  Insufficient Data to Rank
-  Lakes, Rivers, Streams

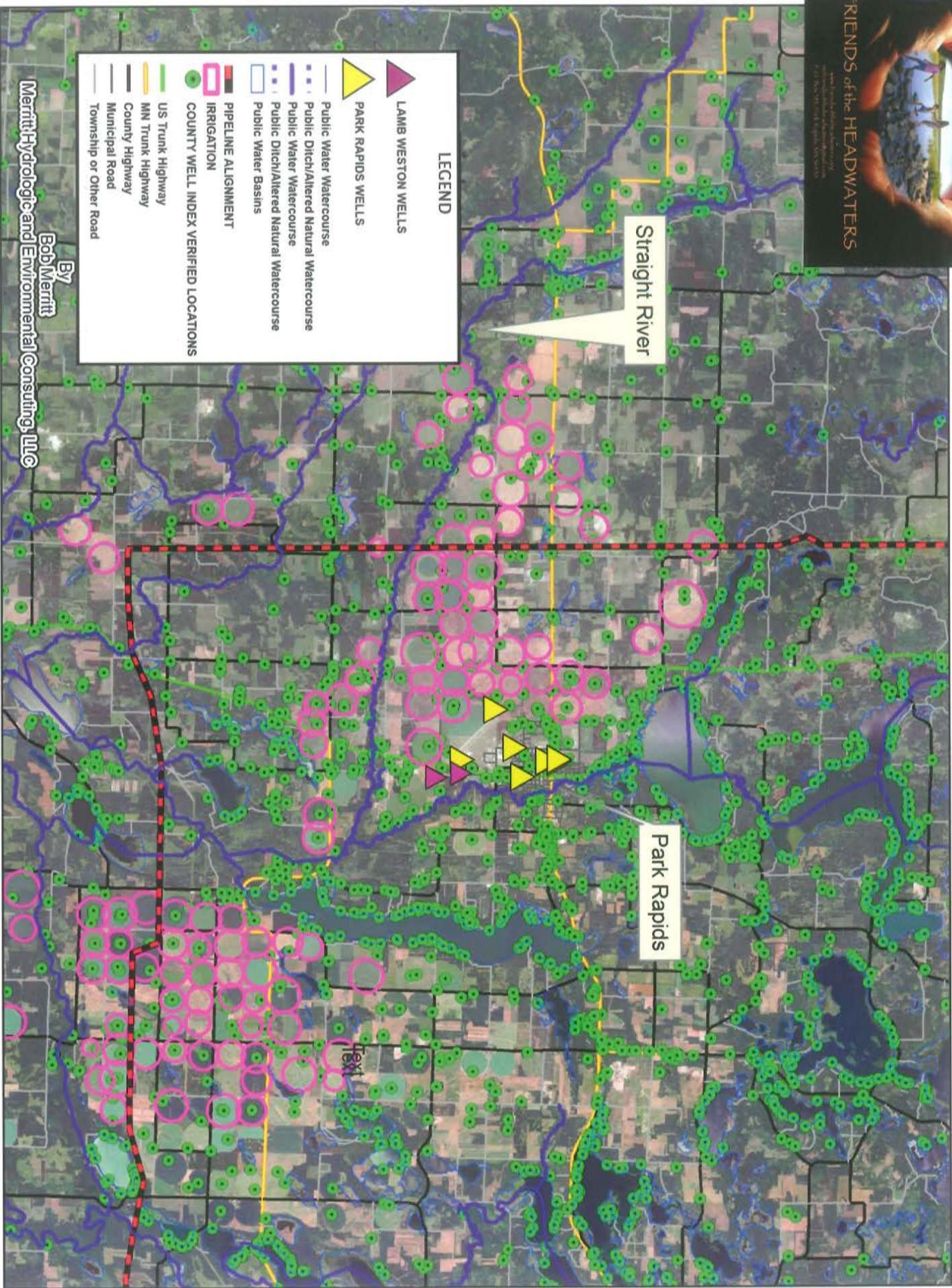
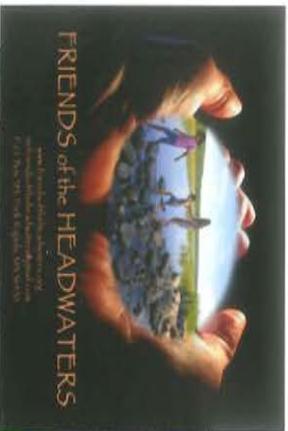
0 20 40 60 80 Miles



Prepared by Friends of the Headwaters  
[www.friendsoftheheadwaters.org](http://www.friendsoftheheadwaters.org)

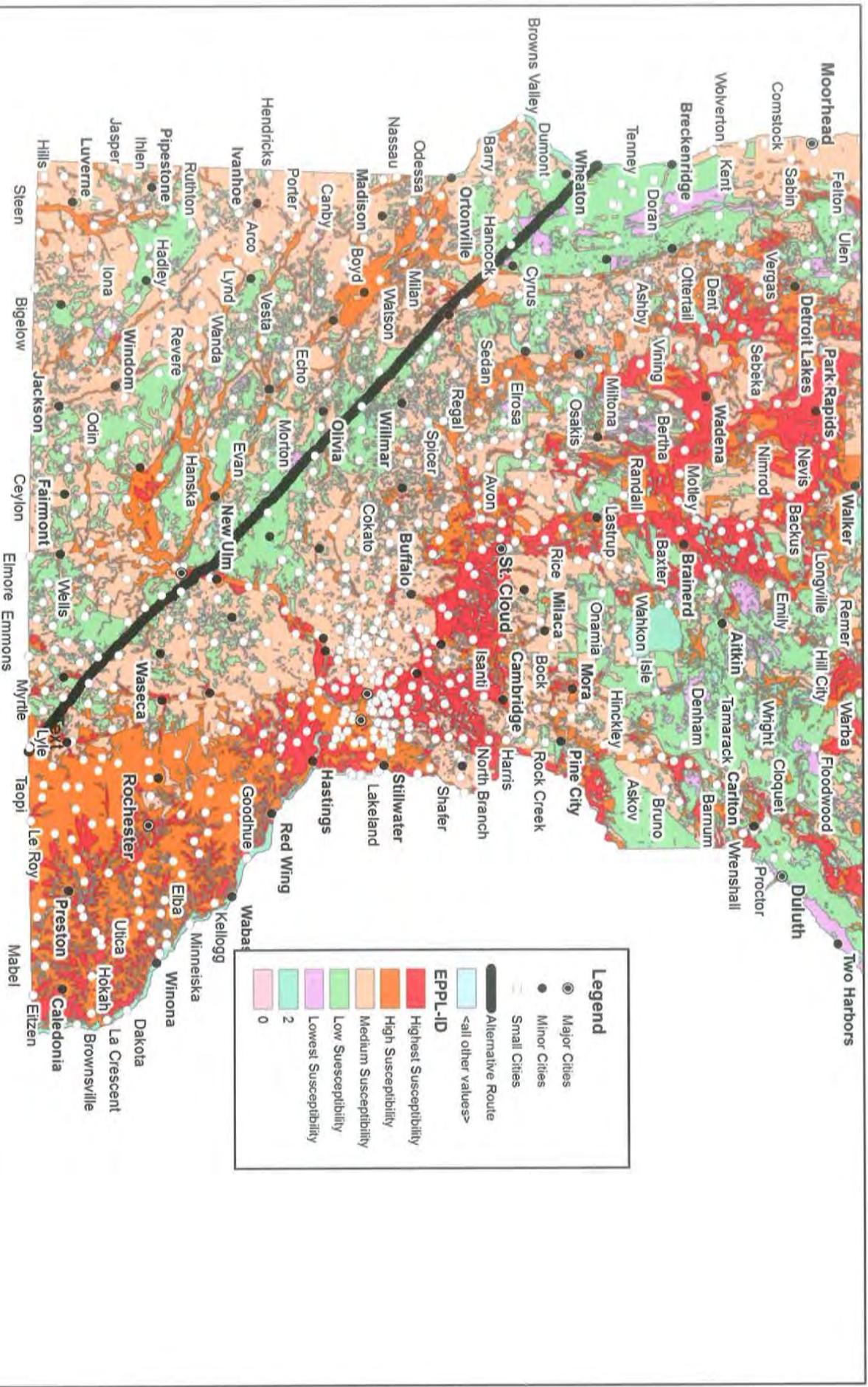
Mblmap from MPCA

# Sandpiper Pipeline Park Rapids Area 2010 Aerial Photo

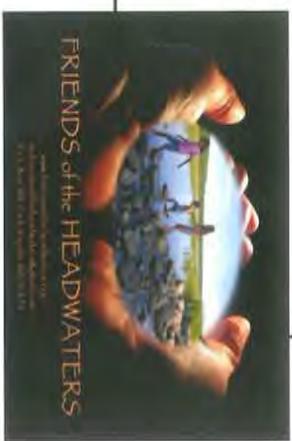


BY  
**Bob Merritt**  
MerriHydrologic and Environmental Consulting, LLC

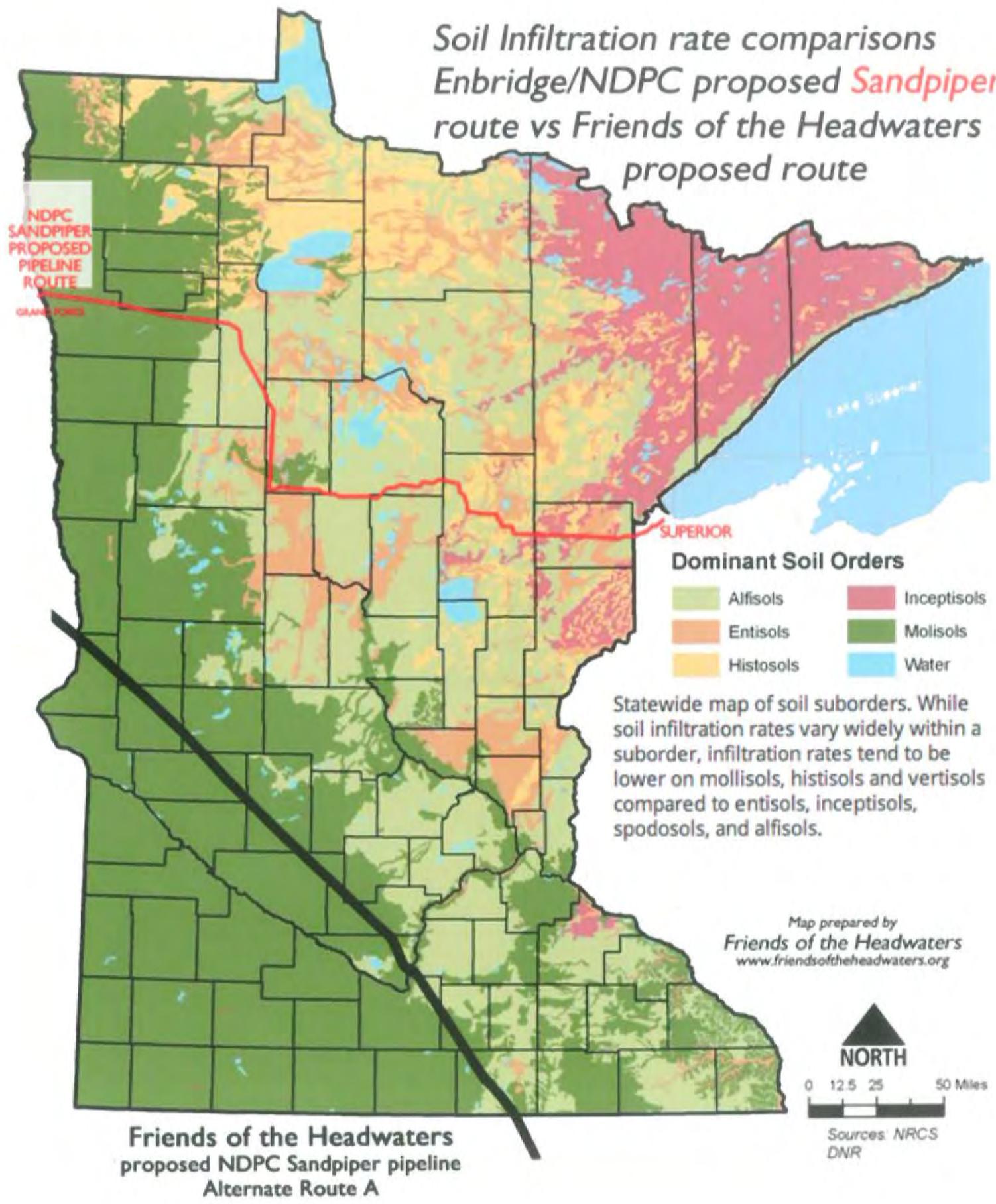
# Sandpiper Alternate A With Groundwater Sensitivity



Map by Bob Merritt  
Merritt Hydrologic and Environmental Consulting LLC



*Soil Infiltration rate comparisons  
Enbridge/NDPC proposed Sandpiper  
route vs Friends of the Headwaters  
proposed route*



# Class V Sensitivity

■ Sensitive  
■ Not Sensitive

Friends of the Headwaters  
proposed NDPC Sandpiper pipeline

**Alternate Route A**  
*TO AVOID SENSITIVE SOILS*

NDPC  
SANDPIPER  
PROPOSED  
PIPELINE  
ROUTE

IRANDY FORKS

This Class 5 Sensitivity map shows areas where Class 5 automotive waste disposal wells are likely to present a threat to underground sources of drinking water based on geological conditions. The term "Class 5" refers to a broad category of disposal wells defined under federal regulations. Structures such as the drain fields for septic systems, dry wells, and underground gravel pockets that dispose of fluids used by internal combustion engines are identified as automotive waste disposal wells. Fluids include hydraulic fluid, antifreeze, grease, oil, gasoline, diesel fuel, brake fluid, and transmission fluid.

If those soils are sensitive to automotive waste fluids, **IMAGINE** their sensitivity to oil from pipeline leak or rupture.

Map prepared by  
**Friends of the Headwaters**  
[www.friendsoftheheadwaters.org](http://www.friendsoftheheadwaters.org)



FOLLOWS ROUTE OF ENBRIDGE-ALLIANCE  
NATURAL GAS PIPELINE CORRIDOR FROM SHERWOOD, ND  
ACROSS MINNESOTA, IOWA, ILLINOIS  
TO CHICAGO AREA

ALTERNATE ROUTE FOR ENBRIDGE/NDPC  
SANDPIPER PIPELINE ROUTE  
TO AVOID WILD RICE LAKES

ENBRIDGE  
SANDPIPER  
PROPOSED  
PIPELINE  
ROUTE

GRAND FORKS

SUPERIOR

Alternate  
Route  
A

LOOK  
WHERE THE  
WILD RICE LAKES  
ARE

★ Lakes with Wild Rice

Prepared by  
FRIENDS of the HEADWATERS  
[friendsoftheheadwaters.org](http://friendsoftheheadwaters.org)

FOLLOW ROUTE OF  
ENBRIDGE-ALLIANCE  
NATURAL GAS PIPELINE  
CORRIDOR FROM  
SHERWOOD, ND ACROSS  
MINNESOTA, IOWA, ILLINOIS  
TO CHICAGO AREA



# Friends of the Headwaters proposed NDPC Sandpiper pipeline Alternate Route A

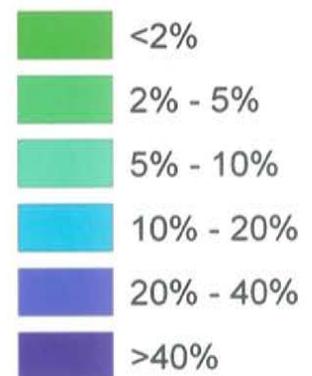
ENBRIDGE/NDPC SANDPIPER PROPOSED PIPELINE IN RED

FRIENDS OF THE HEADWATERS  
PROPOSED ALTERNATE ROUTE TO AVOID  
MINNESOTA'S WETLANDS  
IN BLACK

NDPC  
SANDPIPER  
PROPOSED  
PIPELINE  
ROUTE

GRAND FORKS

## Wetland

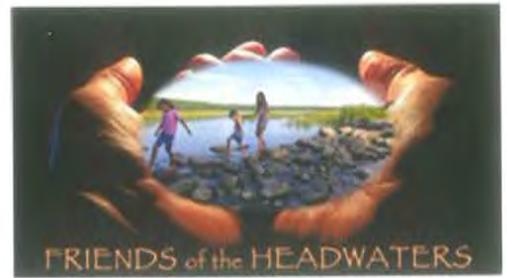


Map MN DNR

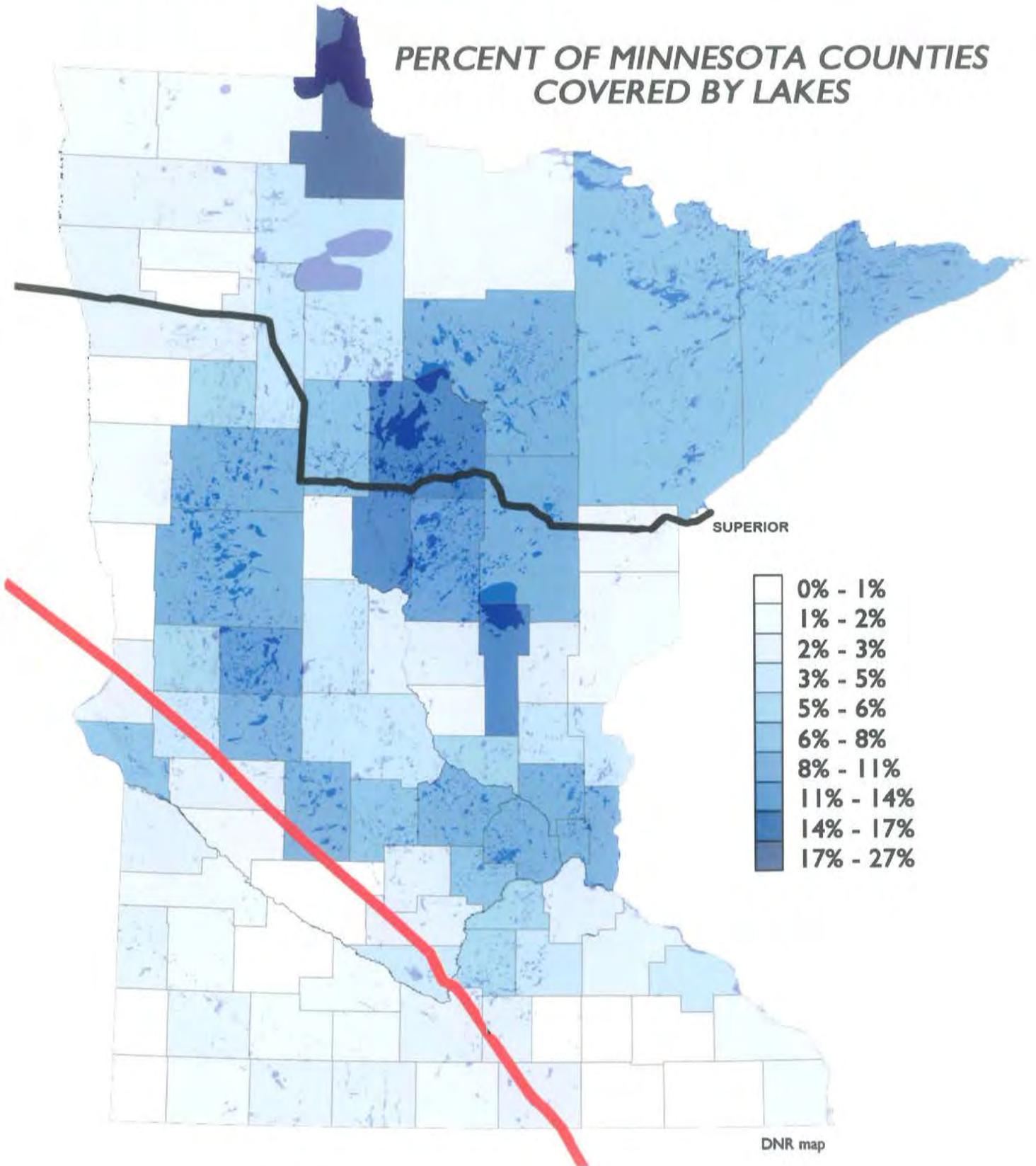
FOLLOWS ROUTE OF ENBRIDGE-ALLIANCE  
NATURAL GAS PIPELINE CORRIDOR FROM SHERWOOD, ND  
ACROSS MINNESOTA, IOWA, ILLINOIS  
TO CHICAGO AREA

# Friends of the Headwaters

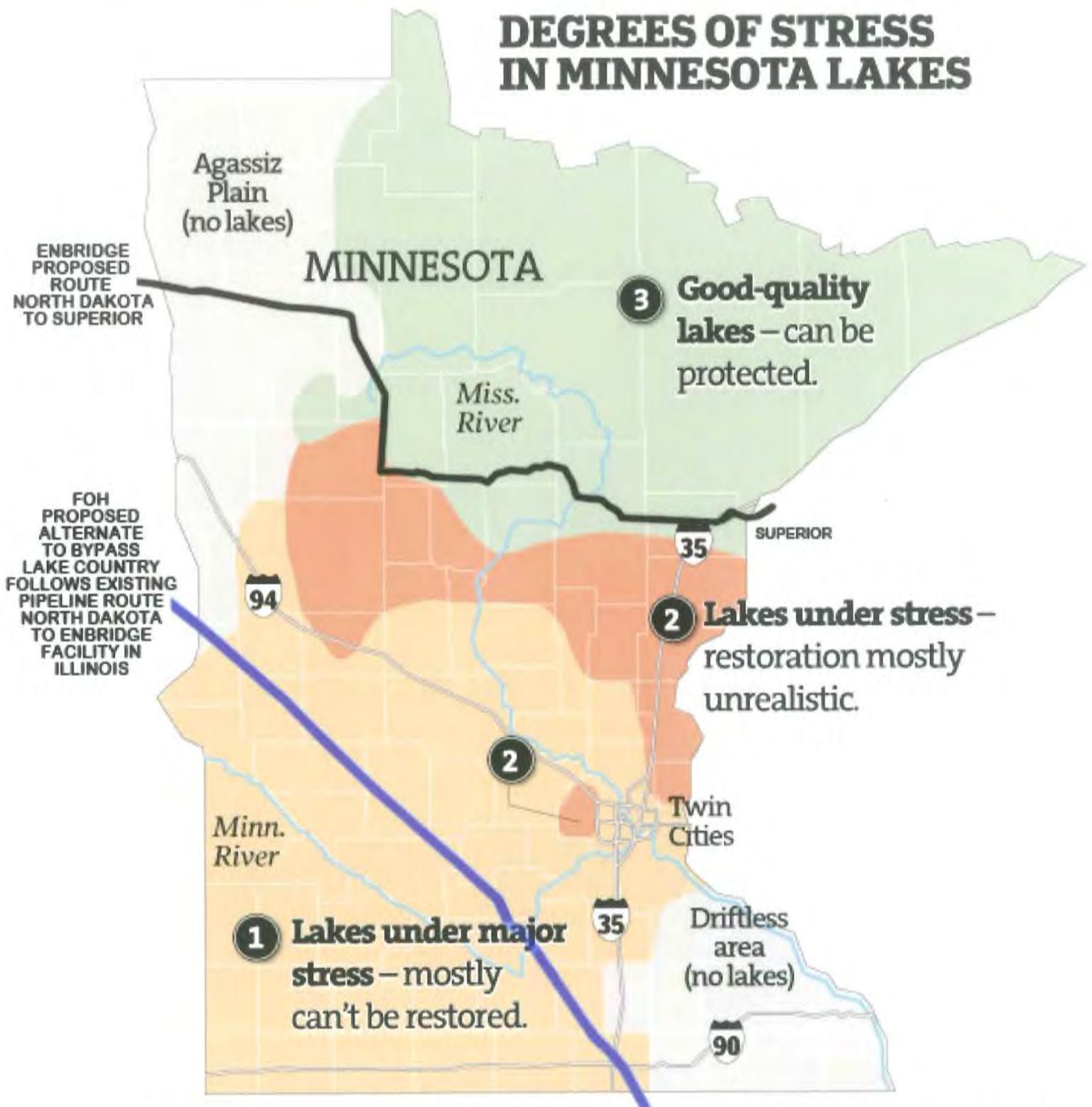
Enbridge Sandpiper pipeline route  
**FOH Alternate Route (SA-04)**



**PERCENT OF MINNESOTA COUNTIES COVERED BY LAKES**



## DEGREES OF STRESS IN MINNESOTA LAKES



Source: Provided by Ron Way using information from the Minnesota Department of Natural Resources and the U.S. Environmental Protection Agency

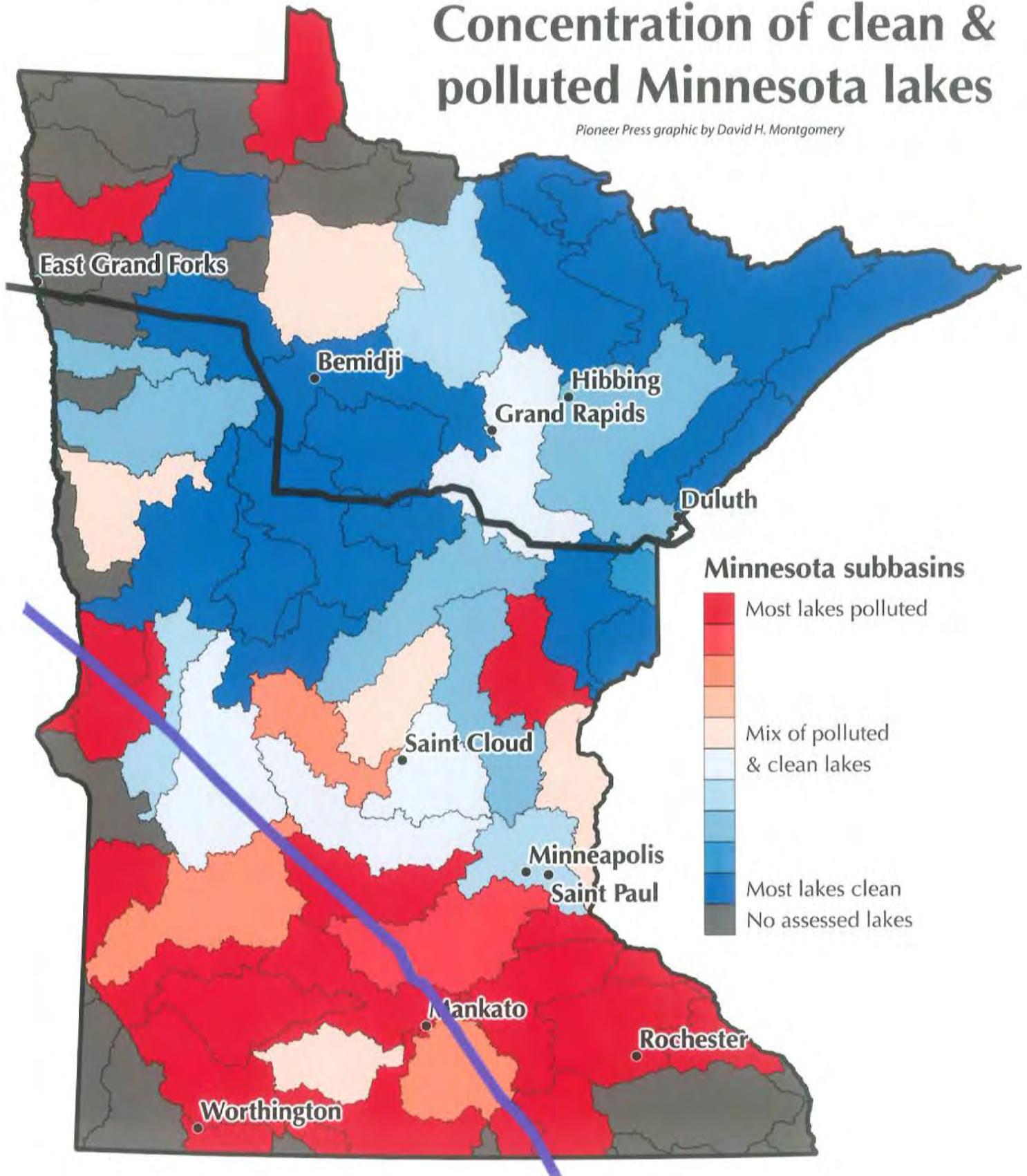
# Friends of the Headwaters

Enbridge Sandpiper & Line 3 portion  
proposed pipelines

FOH Alternate Route (SA-04)

## Concentration of clean & polluted Minnesota lakes

*Pioneer Press graphic by David H. Montgomery*





*Really?*

*Oil pipelines  
thru the heart of our  
headwaters?*

*Friends of the Headwaters*

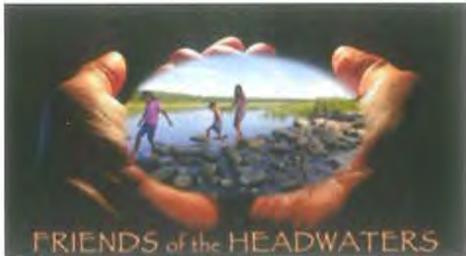
To keep our water blue, donate at [www.friendsoftheheadwaters.org](http://www.friendsoftheheadwaters.org)  
To learn more, visit [www.facebook.com/savemississippiheadwaters](http://www.facebook.com/savemississippiheadwaters)



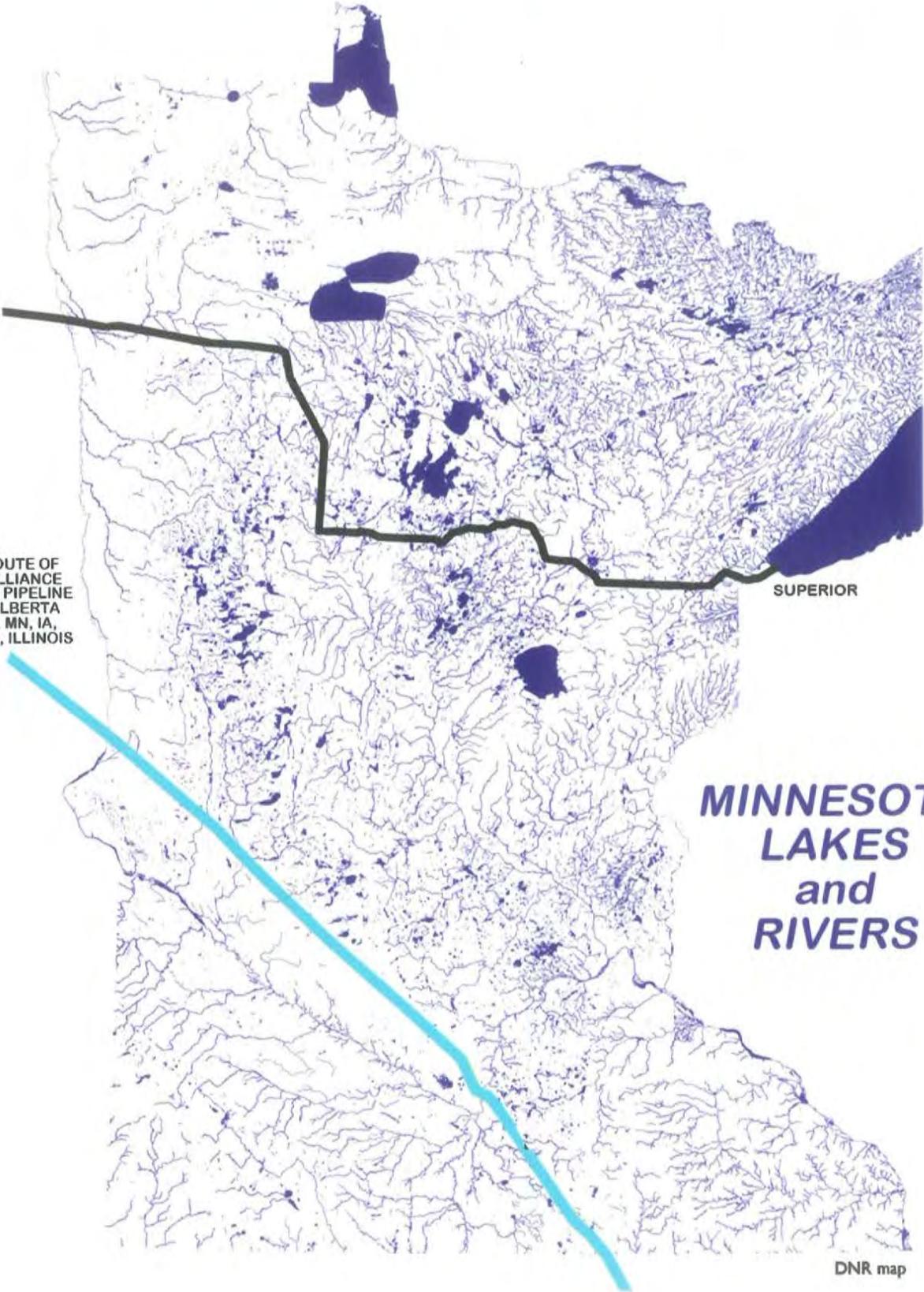
# Friends of the Headwaters

Enbridge Sandpiper pipeline route

FOH Alternate Route (SA-04)



FOLLOWS ROUTE OF  
ENBRIDGE-ALLIANCE  
NATURAL GAS PIPELINE  
CORRIDOR ALBERTA  
ACROSS ND, MN, IA,  
TO FLANAGAN, ILLINOIS



DNR map

# Minnesota Land Cover



Manitoba

This map depicts classes of vegetative land cover as derived from satellite imagery. It is a byproduct of the Federal Gap Analysis Program (GAP), a nationwide effort to prioritize and focus conservation work. The GAP vegetation project is the first to use satellite images to map Minnesota vegetation community types at the 1-acre level of detail while employing a uniform statewide analysis protocol and vegetation typology.

The detailed computer database on which the map is based contains 49 classes of vegetation in mapping units as small as 1 acre. For display at this scale, the classes have been condensed to 11, and the smallest vegetation unit shown is about 5 acres. The state's total area is about 54 million acres.

Land Cover Class	
Upland Conifer Forest 1,762,203 acres chiefly spruce-fir, some spruce-pine or balsam poplar, also northern white-pine	Developed Land 605,251 acres urban, industrial or other developed by humans; roads and other transportation corridors
Upland Deciduous Forest 8,503,784 acres trees primarily hardwood and pine	Barren Land 782,819 acres heavily eroded, nonproductive, and/or non-forested
Lowland Conifer Forest 2,552,501 acres mostly spruce, some spruce-pine or balsam poplar in regions with high water	Grassland 4,179,917 acres non-cultivated herbaceous vegetation, including prairie
Lowland Deciduous Forest 891,283 acres mostly ash, birch, cottonwood and other trees	Cropland 23,684,180 acres under cultivation
Shrub 3,208,062 acres low-growing woody vegetation	Water 3,129,350 acres open water
	Marsh 2,023,116 acres heavily saturated soil, water, often dominated by sedge or cattail



**NDPC SANDPIPER PROPOSED PIPELINE ROUTE**

GRAND FORKS

North Dakota

Ontario

Lake Superior

Wisconsin

South Dakota

**Ecological Sections of Minnesota**

Minnesota's diverse landscape is the result of a complex interplay of geology, soil, and climate. The state is divided into several major ecological sections, each with its own unique characteristics and natural resources.

- 1. The Great Lakes**  
This section is characterized by its proximity to the Great Lakes and the St. Lawrence River. It features a mix of forested and open areas, with a high density of water bodies and wetlands. The climate is humid continental, with significant seasonal temperature variations.
- 2. The Lake Superior Basin**  
This section is defined by the Lake Superior basin and the surrounding terrain. It is primarily forested, with a mix of coniferous and deciduous trees. The climate is cold and continental, with long winters and short summers.
- 3. The Lake Superior Upland**  
This section is located in the northern part of the state and is characterized by its rugged terrain and high elevation. It is primarily forested, with a mix of coniferous and deciduous trees. The climate is cold and continental, with long winters and short summers.
- 4. The Lake Superior Upland**  
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Map prepared by  
**Friends of the Headwaters**  
[www.friendsoftheheadwaters.org](http://www.friendsoftheheadwaters.org)

**Friends of the Headwaters  
proposed NDPC Sandpiper pipeline  
Alternate Route A**

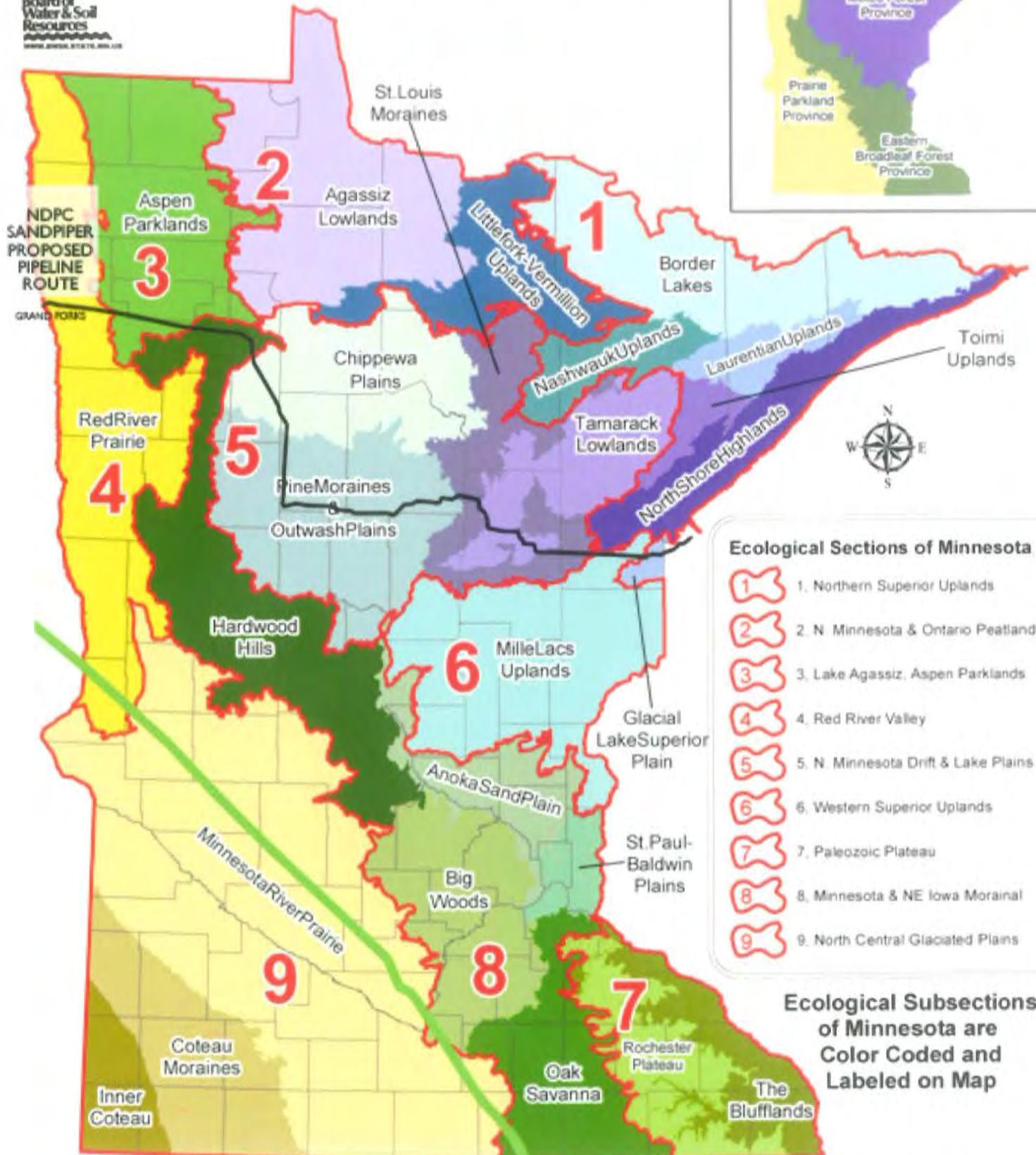
Iowa



# Minnesota Ecological Sections and Subsections



Friends of the Headwaters  
proposed NDPC Sandpiper pipeline  
**Alternate Route A**



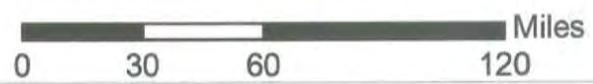
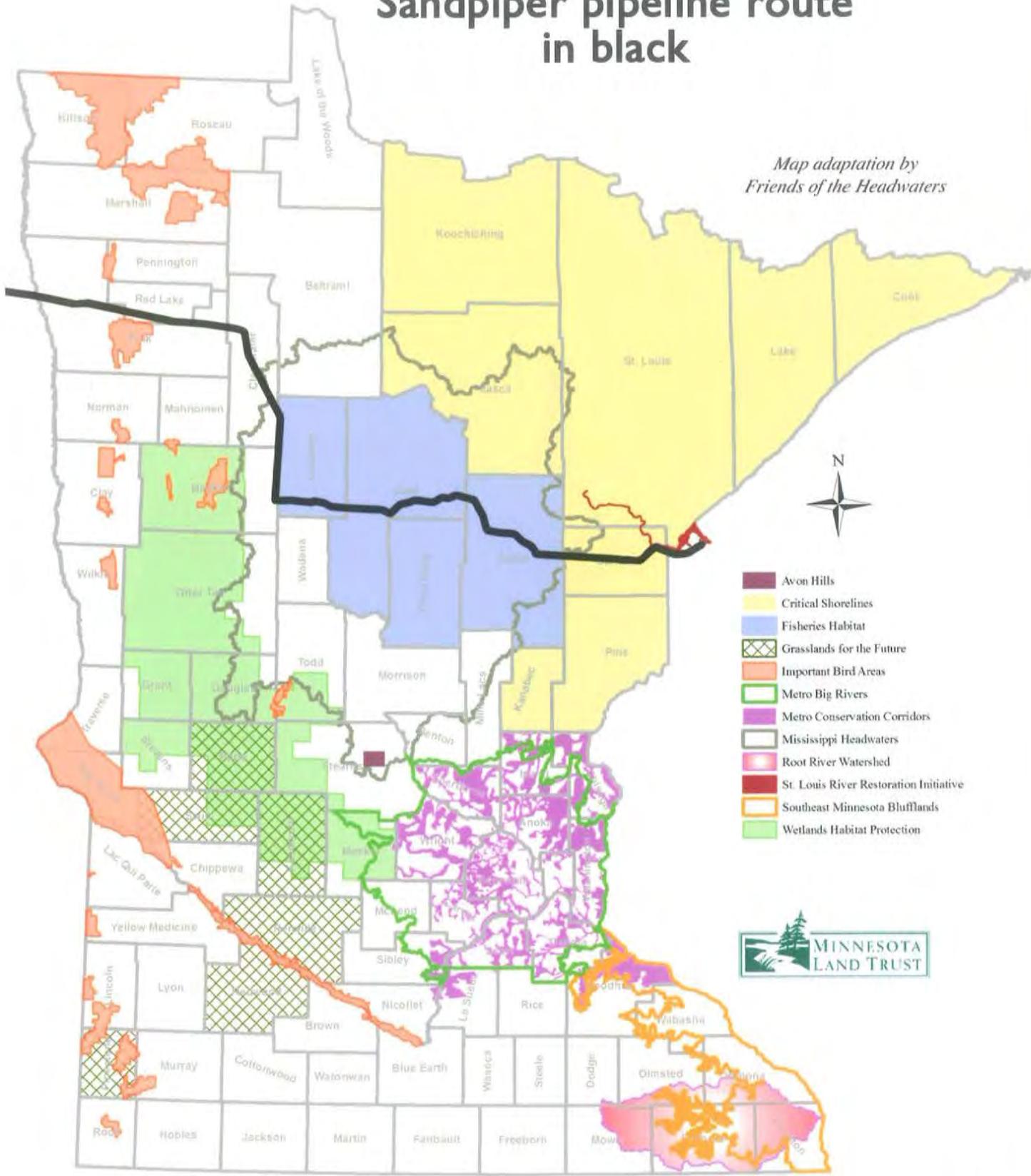
## Ecological Sections of Minnesota

- 1 Northern Superior Uplands
- 2 N. Minnesota & Ontario Peatlands
- 3 Lake Agassiz, Aspen Parklands
- 4 Red River Valley
- 5 N. Minnesota Drift & Lake Plains
- 6 Western Superior Uplands
- 7 Paleozoic Plateau
- 8 Minnesota & NE Iowa Morainal
- 9 North Central Glaciated Plains

Ecological Subsections of Minnesota are Color Coded and Labeled on Map

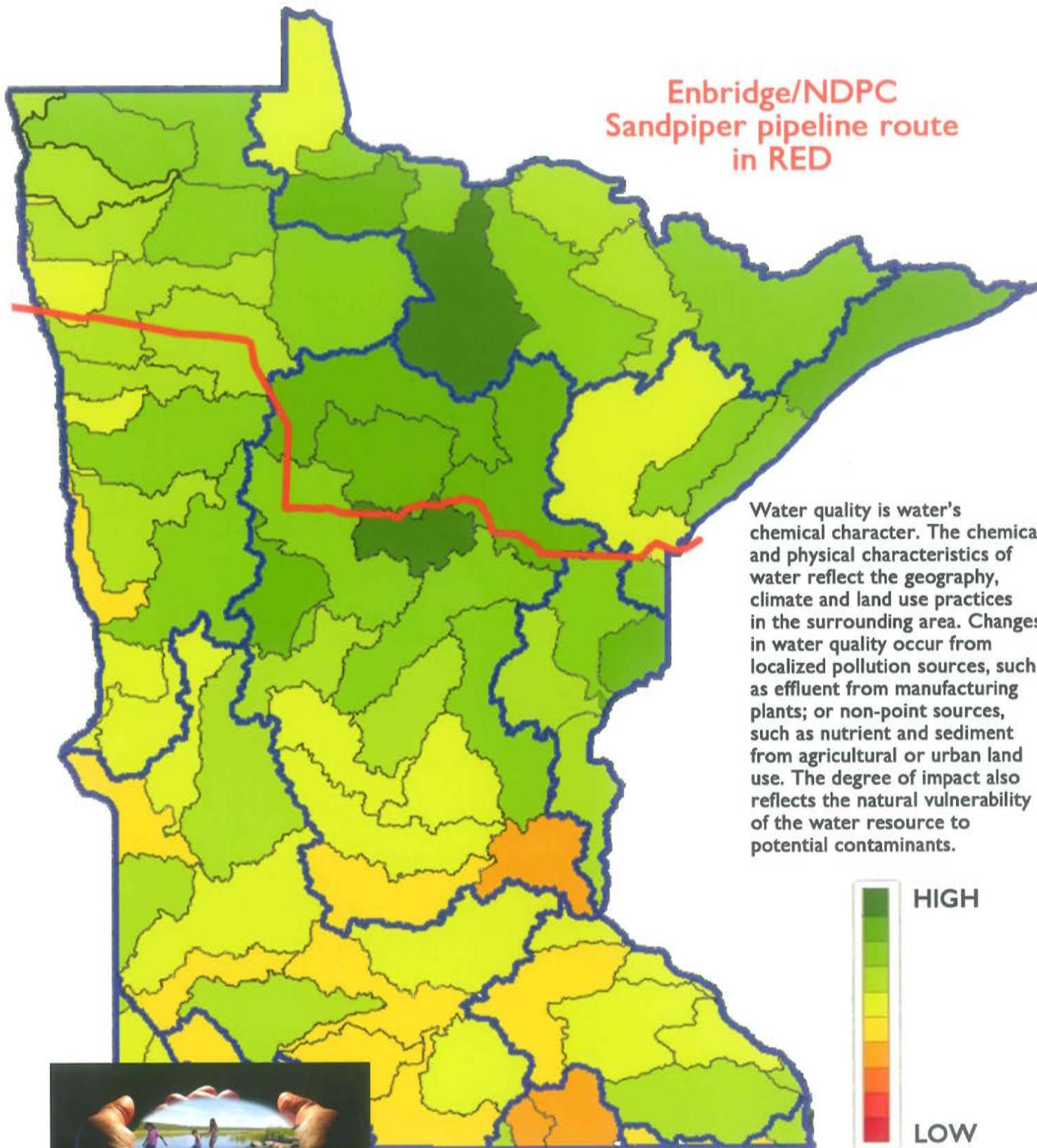
# Enbridge/NDPC Sandpiper pipeline route in black

Map adaptation by  
Friends of the Headwaters



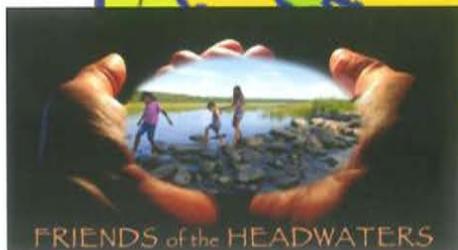
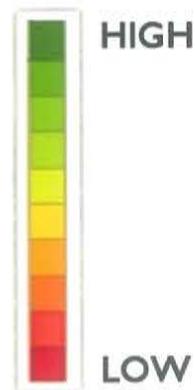
# FRIENDS of the HEADWATERS

## MINNESOTA WATER QUALITY ZONES



Enbridge/NDPC  
Sandpiper pipeline route  
in RED

Water quality is water's chemical character. The chemical and physical characteristics of water reflect the geography, climate and land use practices in the surrounding area. Changes in water quality occur from localized pollution sources, such as effluent from manufacturing plants; or non-point sources, such as nutrient and sediment from agricultural or urban land use. The degree of impact also reflects the natural vulnerability of the water resource to potential contaminants.



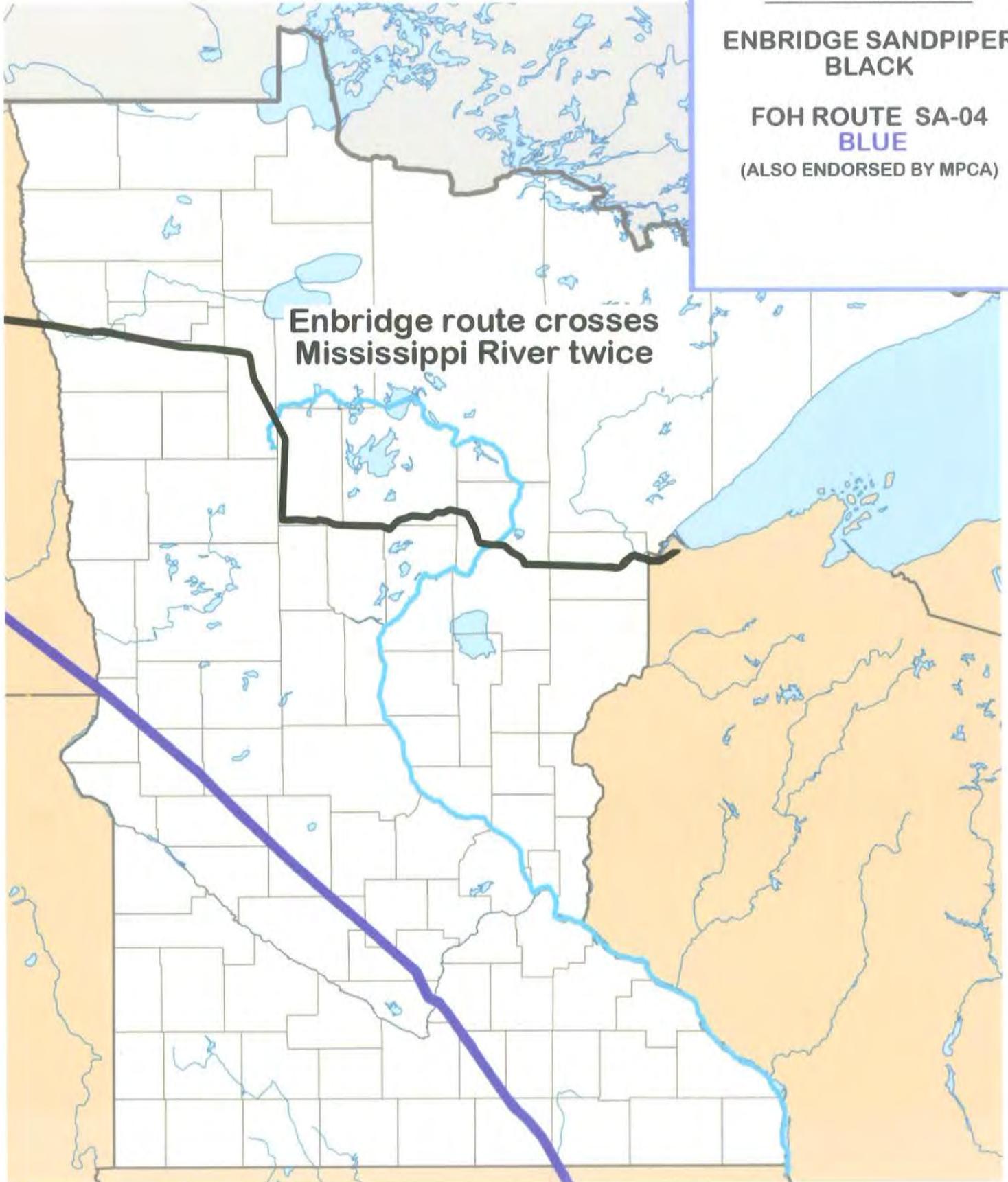
Dark blue lines outline watershed basins map source: MDNR

# Friends of the Headwaters ROUTE COMPARISON MAP

## KEY TO ROUTES

**ENBRIDGE SANDPIPER  
BLACK**

**FOH ROUTE SA-04  
BLUE  
(ALSO ENDORSED BY MPCA)**

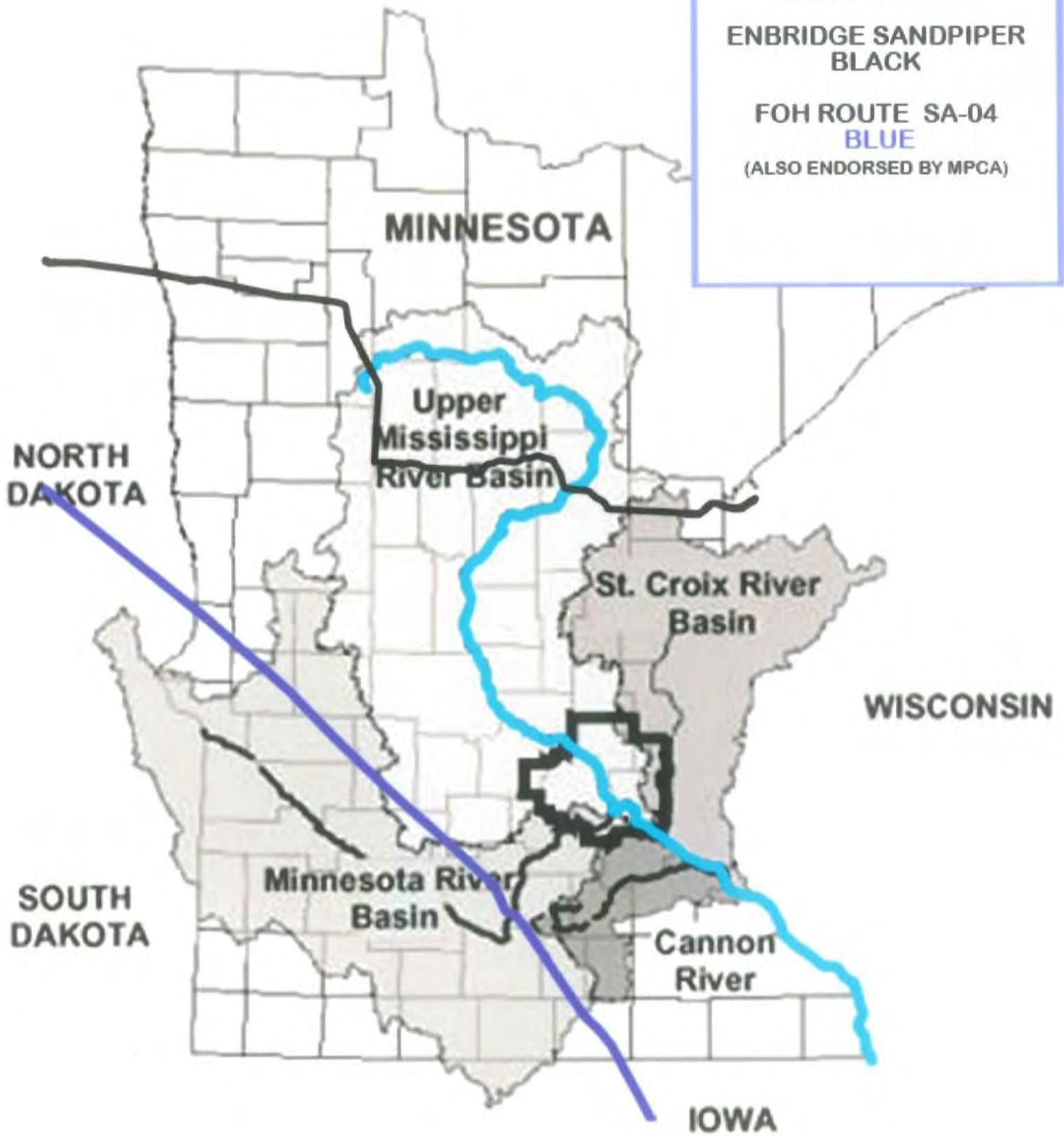


**Friends of the Headwaters  
ROUTE COMPARISON MAP**

**KEY TO ROUTES**

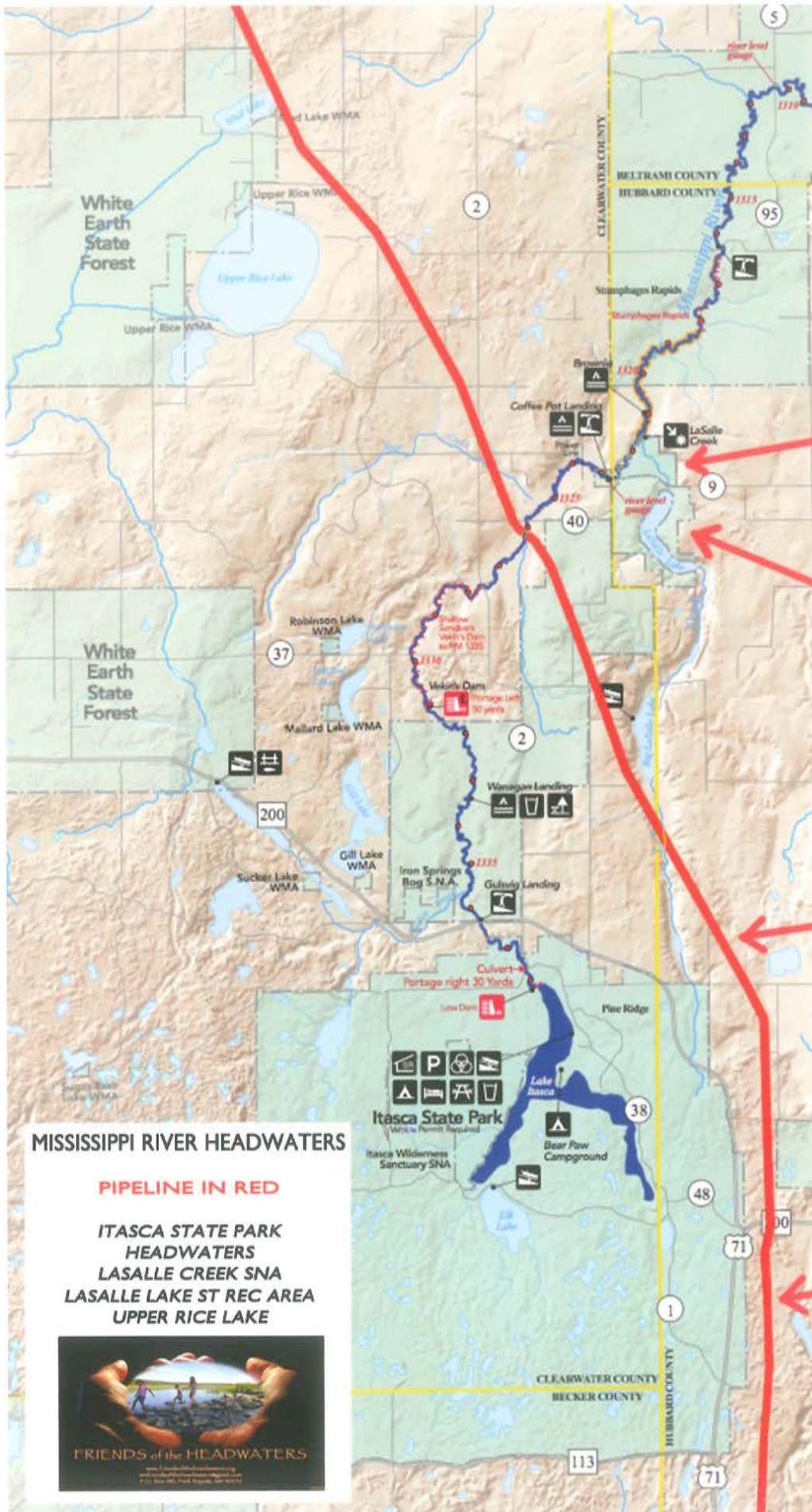
**ENBRIDGE SANDPIPER  
BLACK**

**FOH ROUTE SA-04  
BLUE  
(ALSO ENDORSED BY MPCA)**





# SANDPIPER & LINE 3 REROUTE PROXIMITY TO LA SALLE LAKE SNA & SRA



LaSalle Lake SNA

LaSalle Lake State Recreation Area

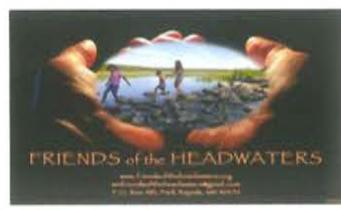
SANDPIPER LINE 3 REROUTE CORRIDOR

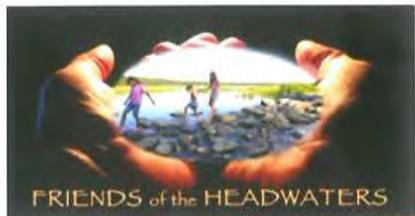
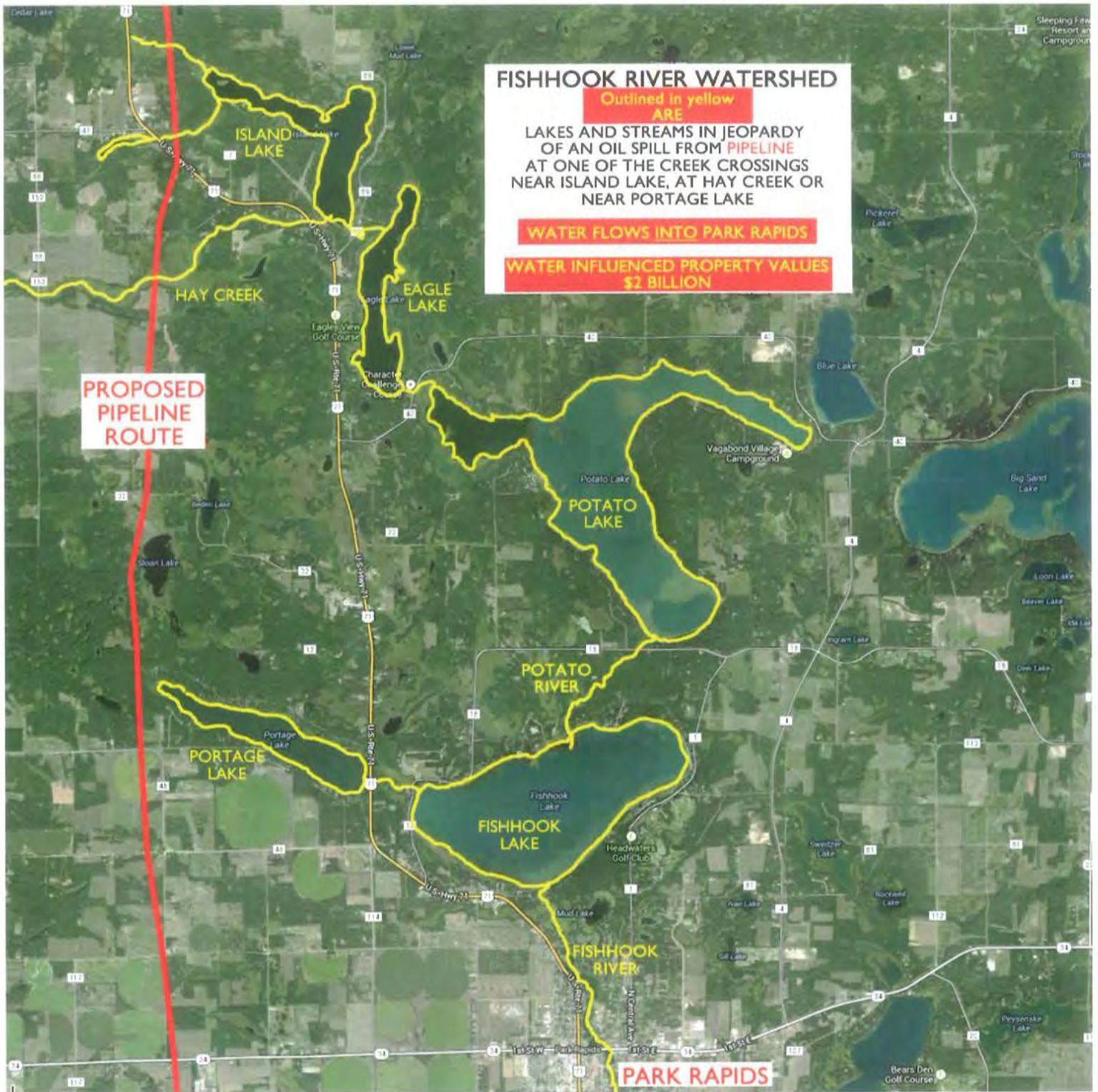
LOOK HOW CLOSE TO ITASCA STATE PARK

## MISSISSIPPI RIVER HEADWATERS

PIPELINE IN RED

- ITASCA STATE PARK HEADWATERS
- LASALLE CREEK SNA
- LASALLE LAKE ST REC AREA
- UPPER RICE LAKE





FRIENDS of the HEADWATERS

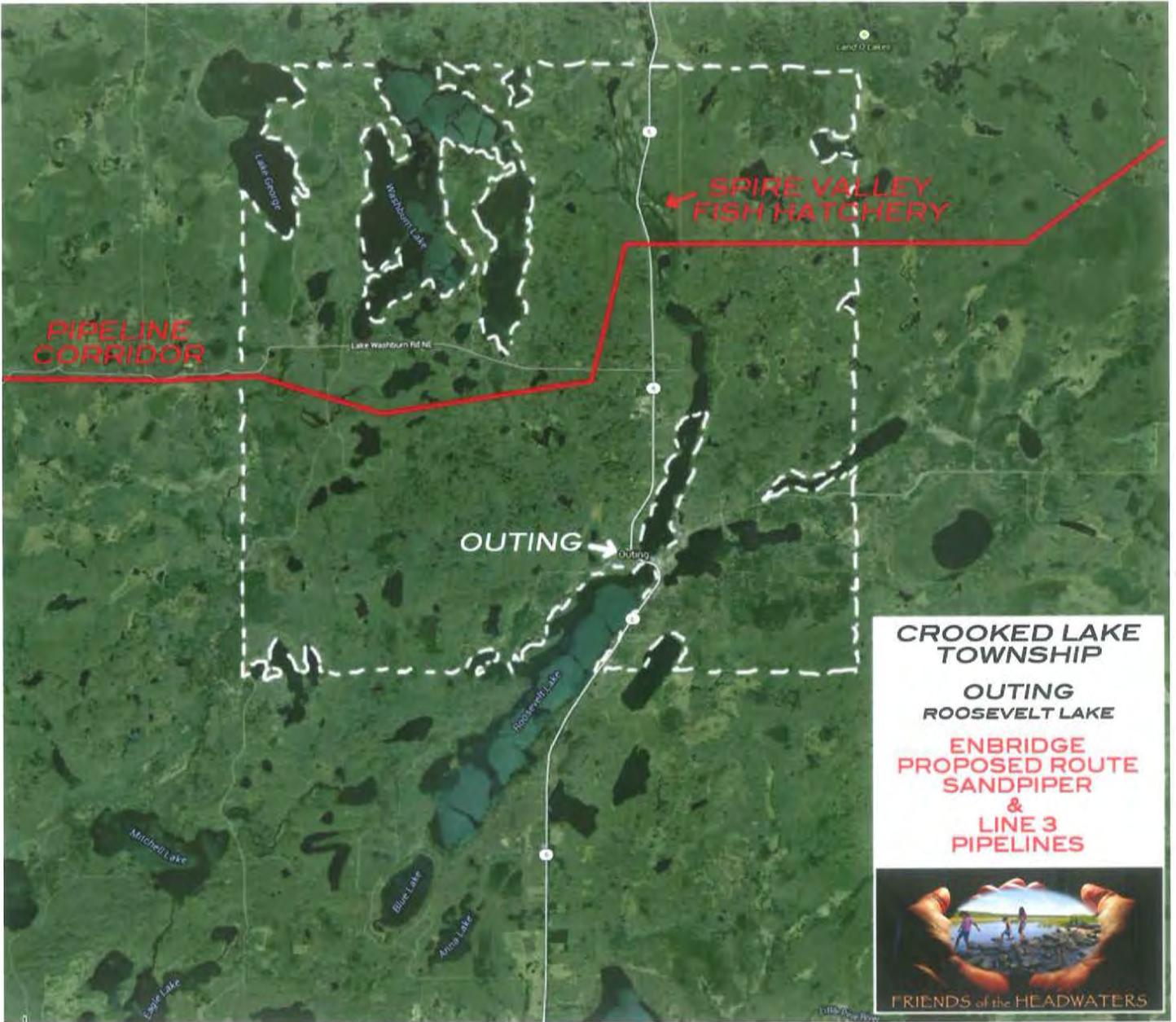
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<https://www.facebook.com/savemississippiheadwaters>

<https://www.friendsoftheheadwaters.org>



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

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

April 2, 2014

Prepared by  
Richard Smith  
Friends of the Headwaters  
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 Enbridge/NDPC's proposed "southern corridor" will NOT protect the high quality waters along this route.

*Friends of the Headwaters* also believes Enbridge intends to proliferate another multiple pipeline corridor with their southern route proposal.

Note: Enbridge presented just that in an investor conference held April 2, 2014 in New York City. See 50th page of their pdf at this link:  
<http://www.enbridgepartners.com/WorkArea/linkit.aspx?linkIdentifier=id&itemId=17004>



Given the high risks to the county, state and private lands and waters along the proposed southern route, *Friends of the Headwaters* strongly disagrees with the PUC/DOC's position that a full environmental impact study (EIS) is not necessary for the confirmation of Enbridge/NDPC's route proposal. A PUC/DOC conducted CEA (comparative environmental analysis) will fail to meet MEPA standards. *Friends of the Headwaters* 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 *Friends of the Headwaters'* position of moving the Sandpiper route to a lower risk part of the state.

Therefore, *Friends of the Headwaters* is proposing a number of alternate routes for the Enbridge/NDPC 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.

Prior to presenting the details and maps *Friends of the Headwaters* wants it known that its technical consultants' requests for the Enbridge GIS mapping software were ignored by the company and the PUC. Access to the software was ultimately granted a few days before the closing date for public comment on route alternatives, but much too late to be of effective use by *Friends of the Headwaters* consultants. Maps were constructed from satellite aerial photography, road maps, DNR & PCA maps and existing pipeline corridor maps available at various sources on the Internet including Enbridge's website.

Before preparing these alternate routes *Friends of the Headwaters* first used the document 7852.1900 "Criteria for Pipeline Route Selection" made available at the March 12, 2014 PUC/Enbridge Sandpiper Public Hearing in Park Rapids, MN to determine the fallibility of Enbridge/NDPC's proposed southern corridor route. *Friends of the Headwaters'* comparative economic and environmental analysis of the impact of Enbridge/NDPC's Sandpiper 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 mostly in Todd and Arago Townships. Taxes on the water-influenced properties in those two townships is about \$2 million annually.

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.



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 and 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. \$30 million tourism dollars a season are at risk.

### 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. The wild rice waters in Hubbard and Clearwater Counties are culturally and economically significant. The proposed Sandpiper route is dangerously close to Upper Rice Lake, the Anishinaabe's best wild ricing lake in Clearwater County. The wild rice harvested there is commercially and domestically important to the White Earth Ojibwa.



### 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 is 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/NDPC touts the tax payments it will be making annually to Hubbard County. The public has heard two figures, either \$3 million or \$5 million dollars, but relative to the value of the Bakken crude proposed to pass through the county each year, \$14.6 billion dollars, 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.

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. 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.

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

Although Enbridge/NDPC 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/NDPC easement contract.

#### G. natural resources and features

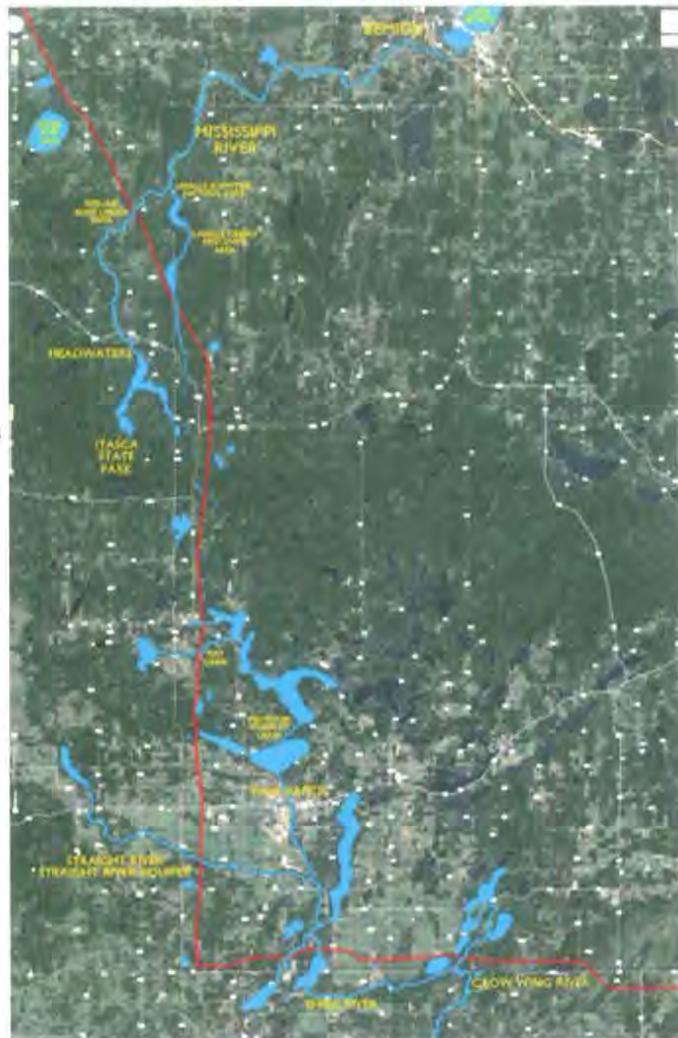
*Friends of the Headwaters* has no faith in Enbridge/NDPC's word they can safely protect the lands and waters of Minnesota's lake country.

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 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."

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, and some of the clearest lakes in the state are all at risk from this proposed Sandpiper southern corridor and Enbridge's 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, followup, and restoration efforts or lack thereof on the Certificate of Route and Need Applications for the Alberta Clipper line. *Friends of the Headwaters* has learned some landowners are losing buildings, well houses, wood lots, and in some cases homes to Enbridge/NDPC's easement demands. Eminent domain actions are especially disliked.



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

Now that Enbridge has stated the Line 3 rebuild (NYC Investor Conference 4/2/14) will occur in the Sandpiper "southern corridor", a comprehensive EIS (environmental impact study) conducted by the proper state and federal regulatory authorities is absolutely essential. As previously stated, 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. EIS studies should be required to use GIS software to optimize the potential alternative routes other than Enbridge/NDPC's 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.

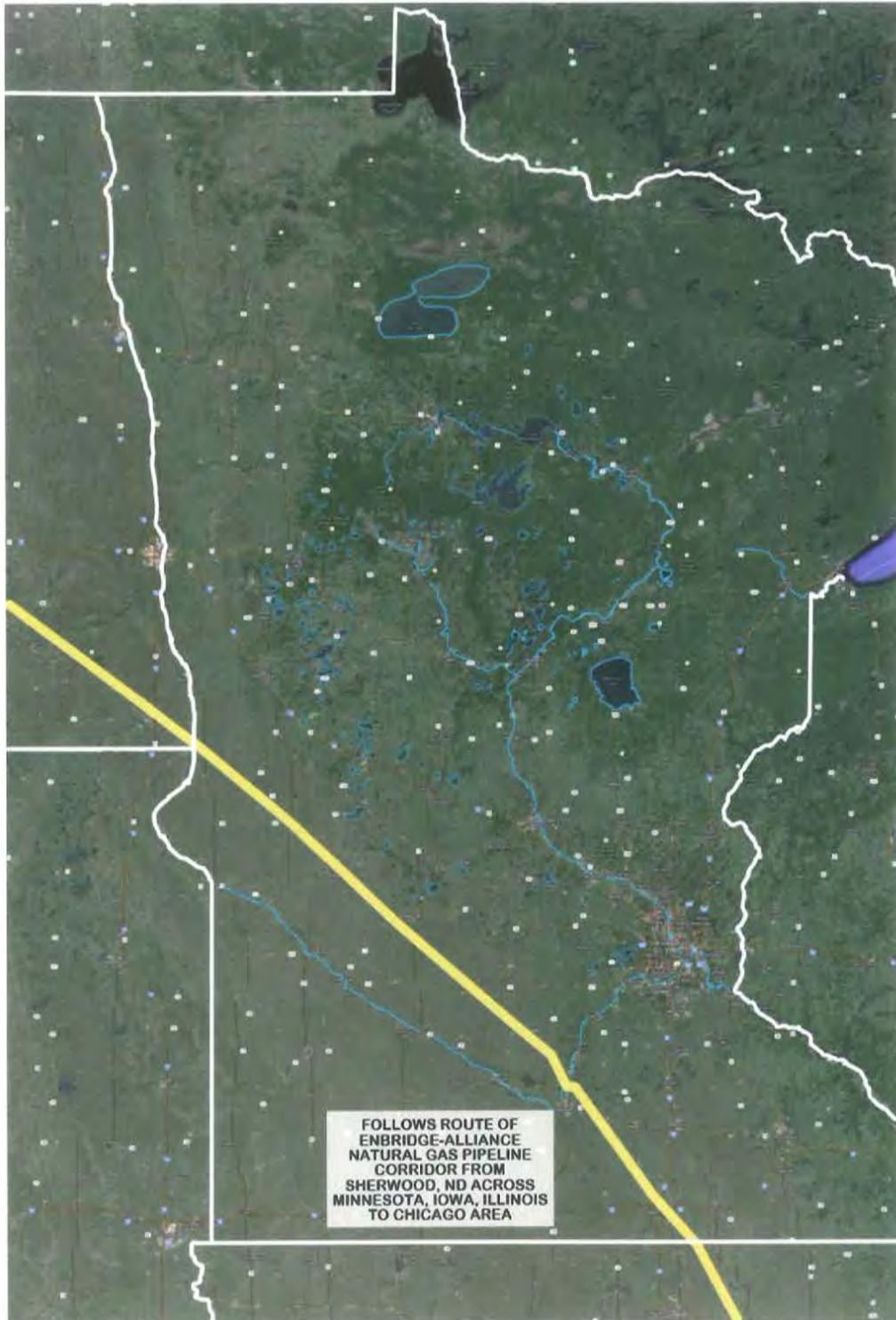
*"No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other 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 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, *Friends of the Headwaters* is proposing a "real" southern corridor for Sandpiper.



## ALTERNATE ROUTE "A"

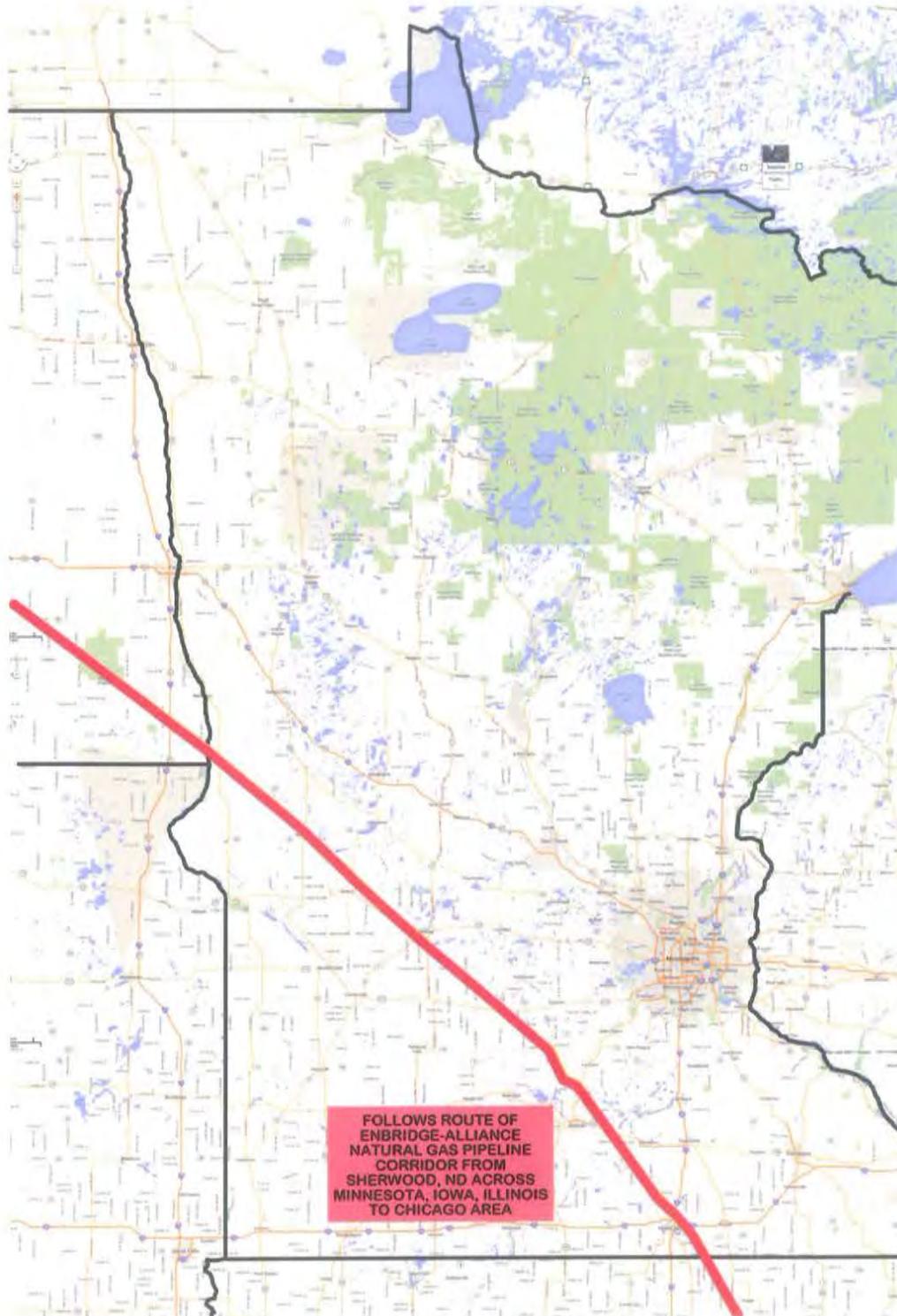
This ALTERNATE ROUTE A utilizes an existing energy corridor of which Enbridge is a 50% shareholder with Alliance Company of Canada. This corridor originates in Canada and ends west of the Chicago. The proposed Enbridge/NDPC pipeline route would intersect this corridor east of Minot, ND at which point NDPC would turn and follow the corridor to Illinois.



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.

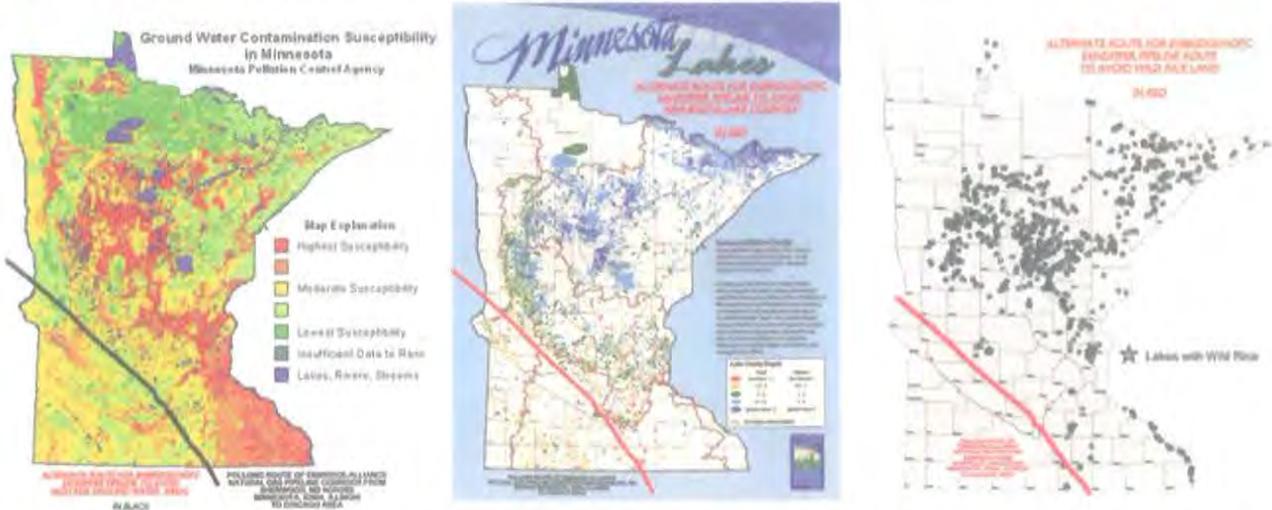
## ALTERNATE ROUTE "A"

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.



## ALTERNATE ROUTE "A"

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. 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 crude to the refineries in Rosemont and Saint Paul Park in the south Twin Cities Metro. Perhaps Minnesotans will actually get to fuel their cars and trucks with gasoline from Bakken crude.

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/NDPC's proposed Sandpiper 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*



SUPPLEMENTAL COMMENTS TO POSITION PAPER DATED 4/2/2014  
REGARDING THE ENBRIDGE/NORTH DAKOTA PIPELINE COMPANY (NDPC) LLC  
SANDPIPER PIPELINE PROJECT

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

May 29, 2014

Prepared by

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

**TO REVIEW:**

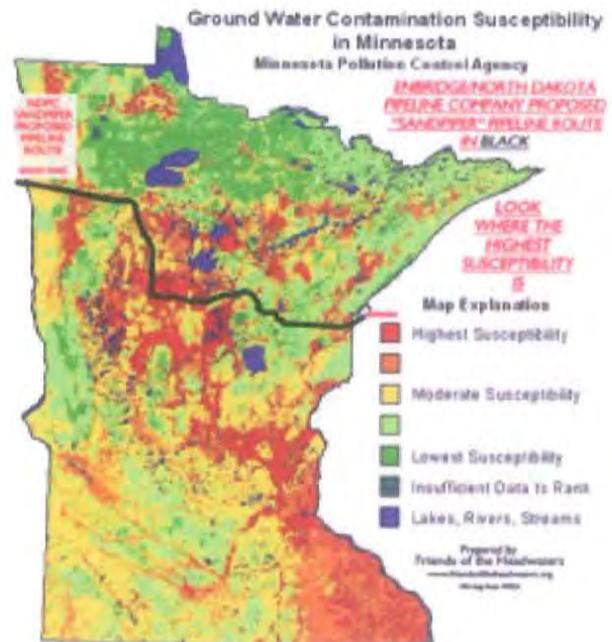
*Friends of the Headwaters* opposes the Enbridge/NDPC Sandpiper pipeline as currently projected to cross Minnesota's lake country from Grand Forks, ND to Superior, WI.

We believe Enbridge/NDPC's proposed "southern corridor" will NOT protect the high quality waters and other natural resources along this route.

*Friends of the Headwaters* also believes Enbridge intends to proliferate another multiple pipeline corridor with their southern route proposal. Enbridge presented just that in an investor conference held April 2, 2014 in New York City.



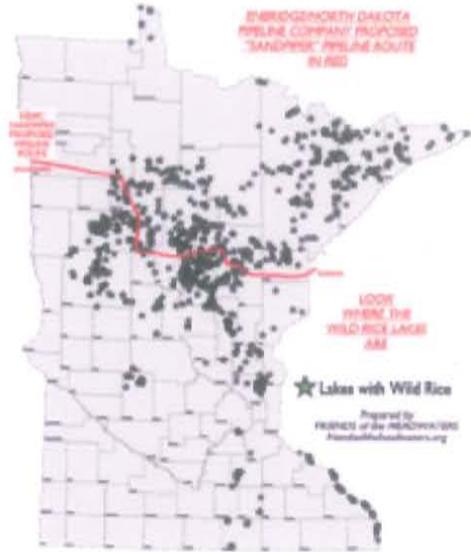
We believe Enbridge/NDPC could not have chosen a worse route as evidenced by the maps below.



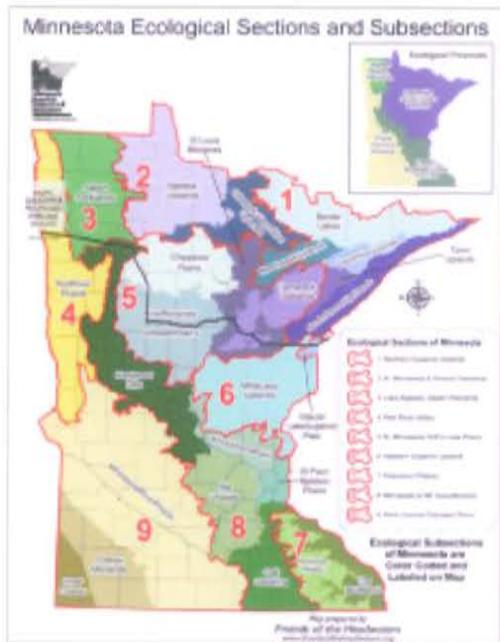
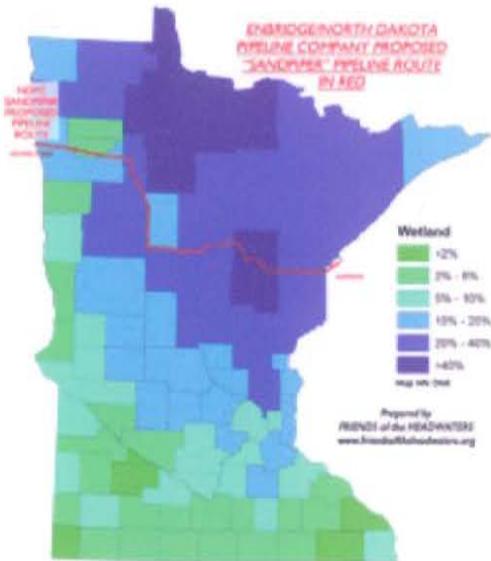
**AT RISK: MINNESOTA'S**

- 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

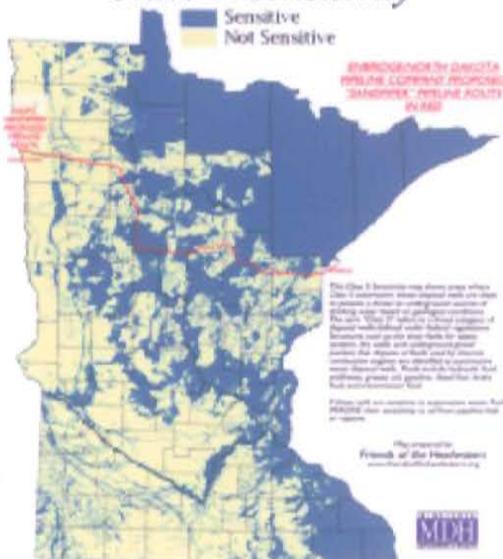
\$342 million annual revenue from fishing  
 \$4.3 billion annual retail sales hunting, fishing, wildlife watching  
 \$2 billion water-influenced properties in Hubbard County alone.



**ENBRIDGE/NDPC COULD NOT HAVE PICKED A WORSE ROUTE.**



**Class V Sensitivity**

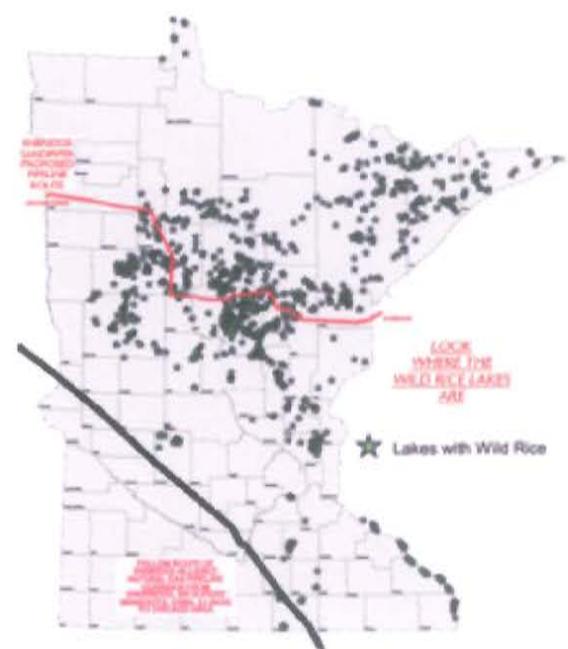
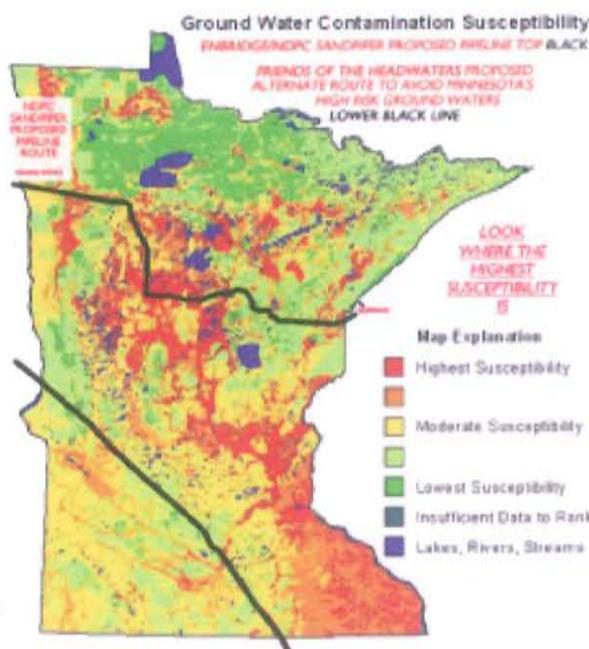
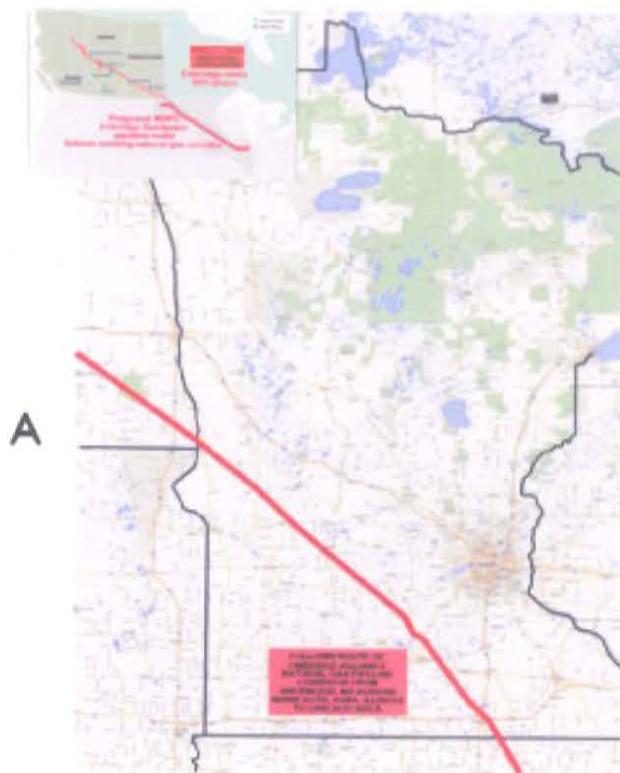


Given the high risk factors of Enbridge/NDPC's proposed Sandpiper 'southern corridor' route **FRIENDS of the HEADWATERS** has proposed a true 'southern corridor' across Minnesota which eliminates the potential for spills and damage to the state's most environmentally sensitive lands and waters.

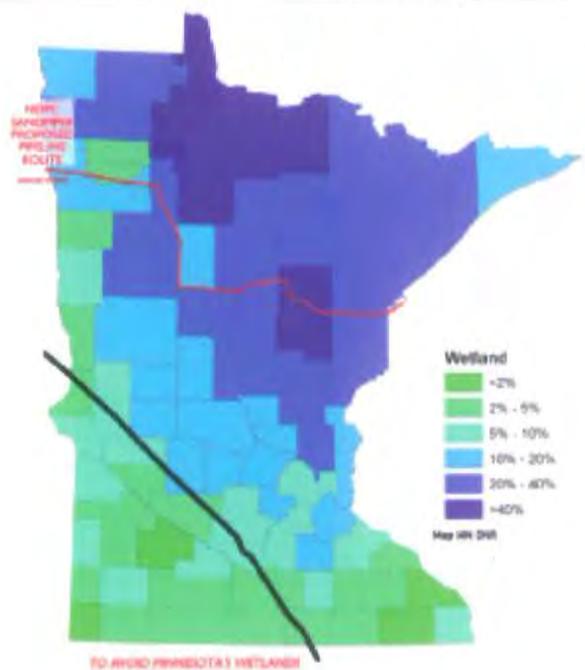
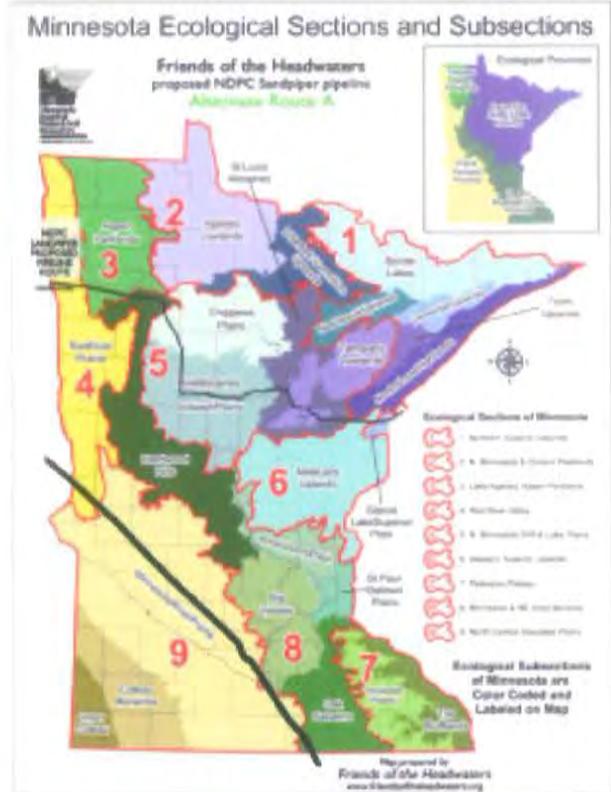
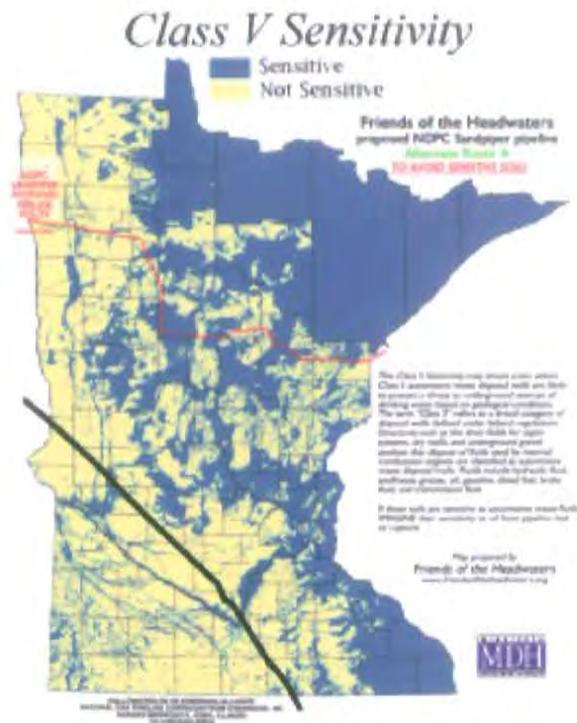
**FRIENDS of the HEADWATERS** Alternate Route A utilizes an existing energy corridor of which Enbridge is a 50% shareholder with Alliance Company of Canada. This corridor originates in Canada and ends west of Chicago. The proposed Enbridge/NDPC pipeline route would intersect this corridor east of Minot, ND at which point NDPC would turn and follow the corridor to Illinois.

Alternate Route A below.

Compare the route risk factors in following maps.



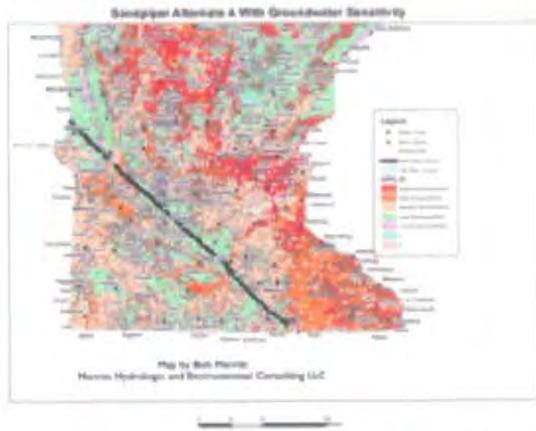
Route map comparisons continued:



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.

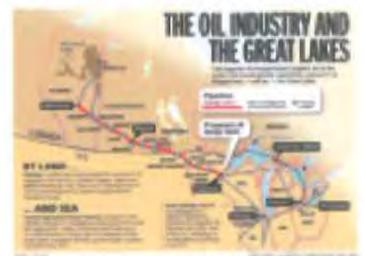
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Two additional maps by Bob Merritt, hydrologist, showing Alternate Route A in better detail.



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

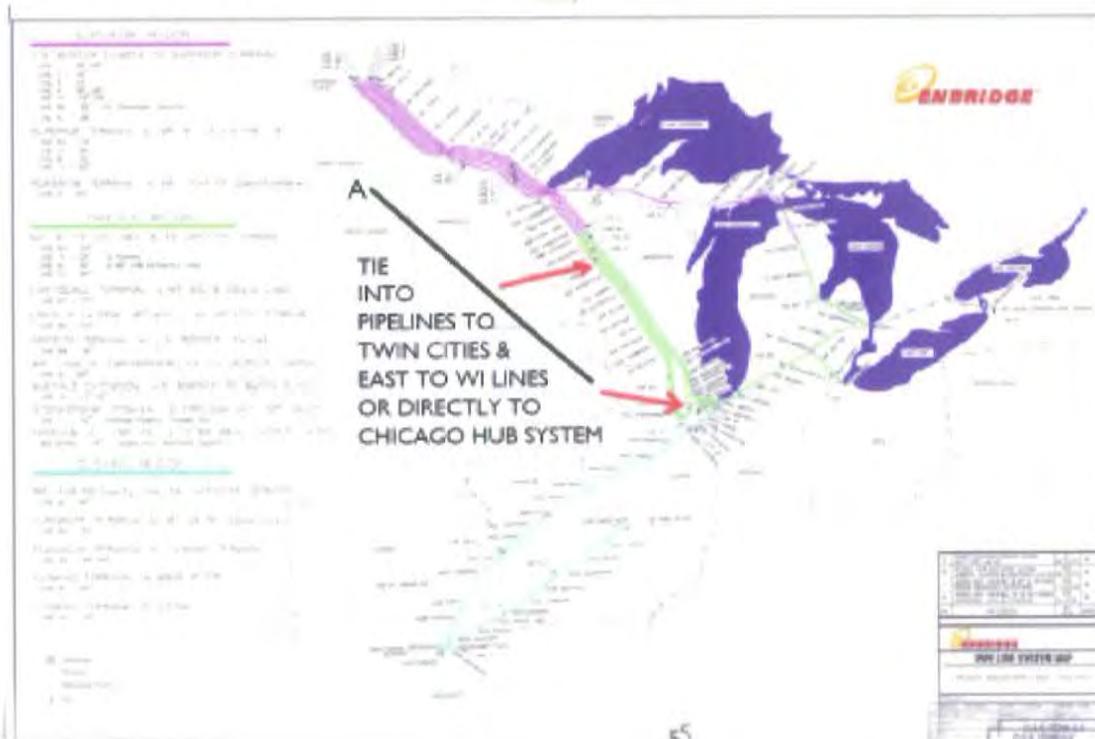
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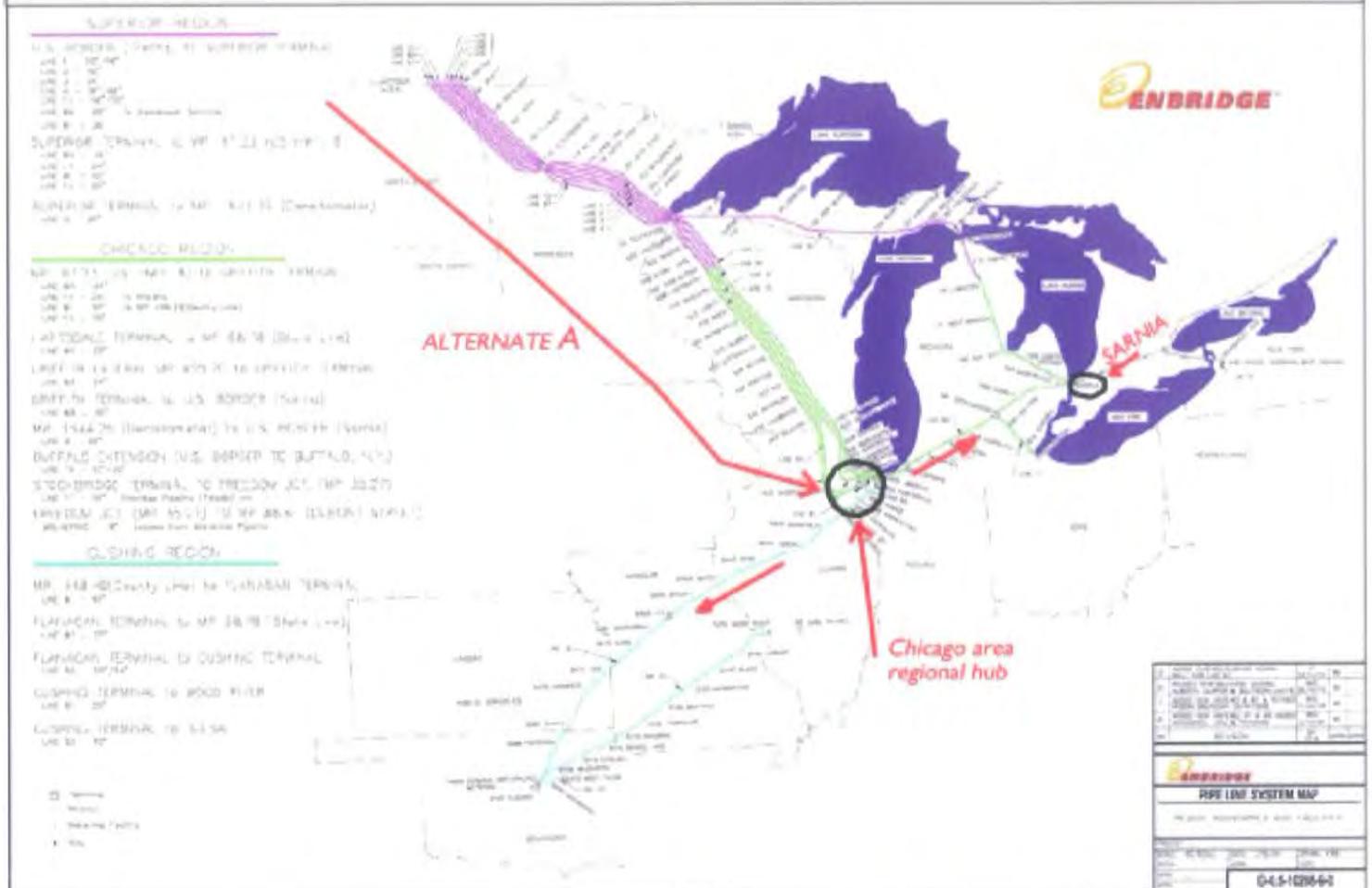
The Illinois Hub also allows Enbridge access to its pipelines to Oklahoma and points south.

### Now Serving the Bakken



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 A proposed by *FRIENDS of the HEADWATERS* also connects to their existing system 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



Alternate Route A 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.

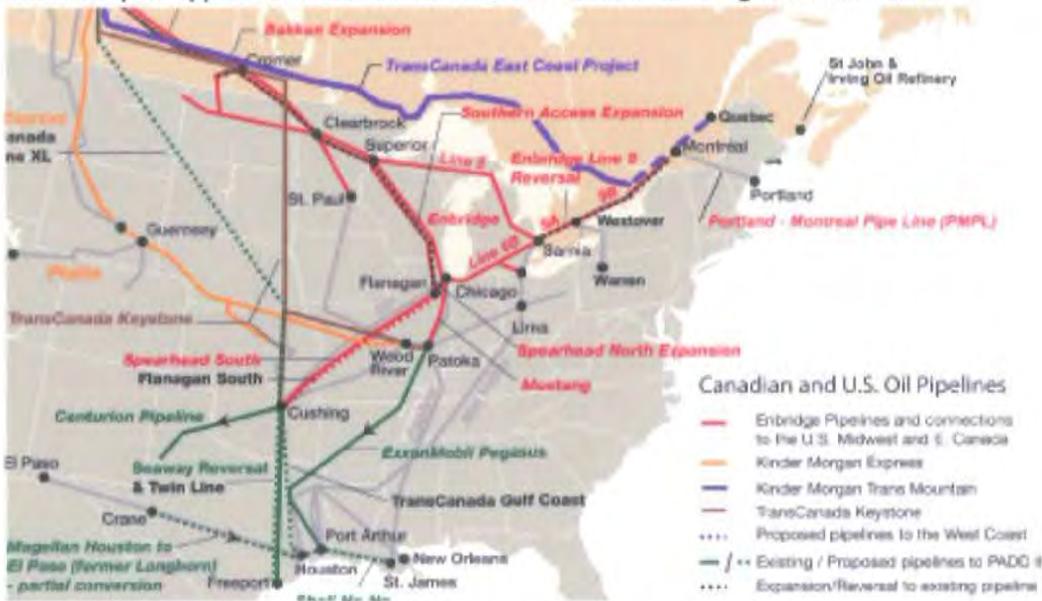
The cumulative risk of adding additional lines to this region is too high to have the routing parameters set by what Enbridge 'wants'. They should not be allowed to frame the debate on this issue. The citizens of Minnesota and this state's governing and regulatory agencies need to reject this framing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

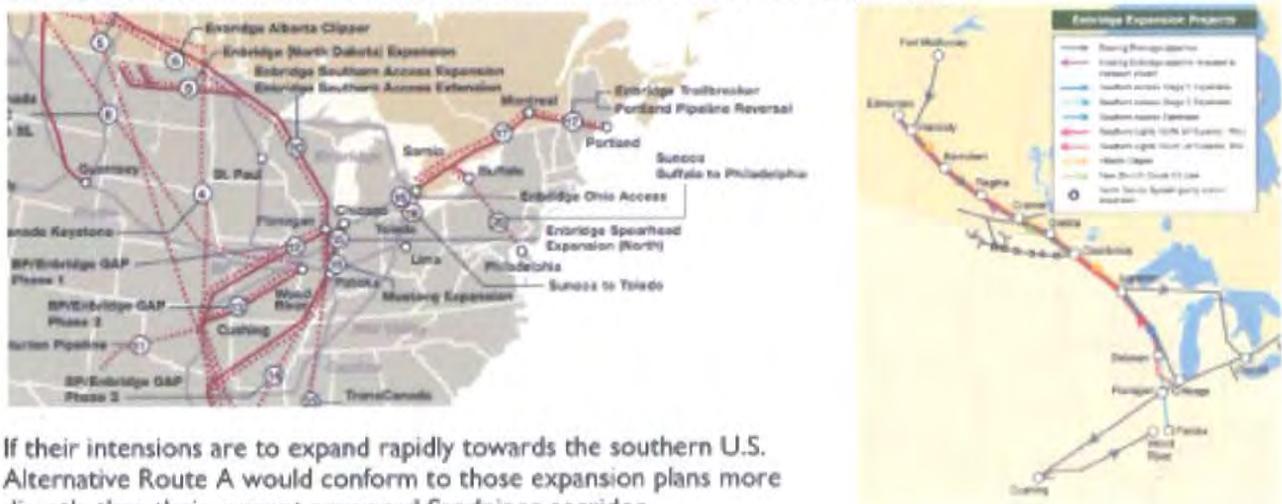
If Enbridge/NDPC were truly committed to protecting our lakes, rivers, wetlands, aquifers and lands as they publically state they are, then prove it by not just giving Minnesotans statistics about how safe their pipelines are (their history says otherwise), but by actually moving their proposed route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



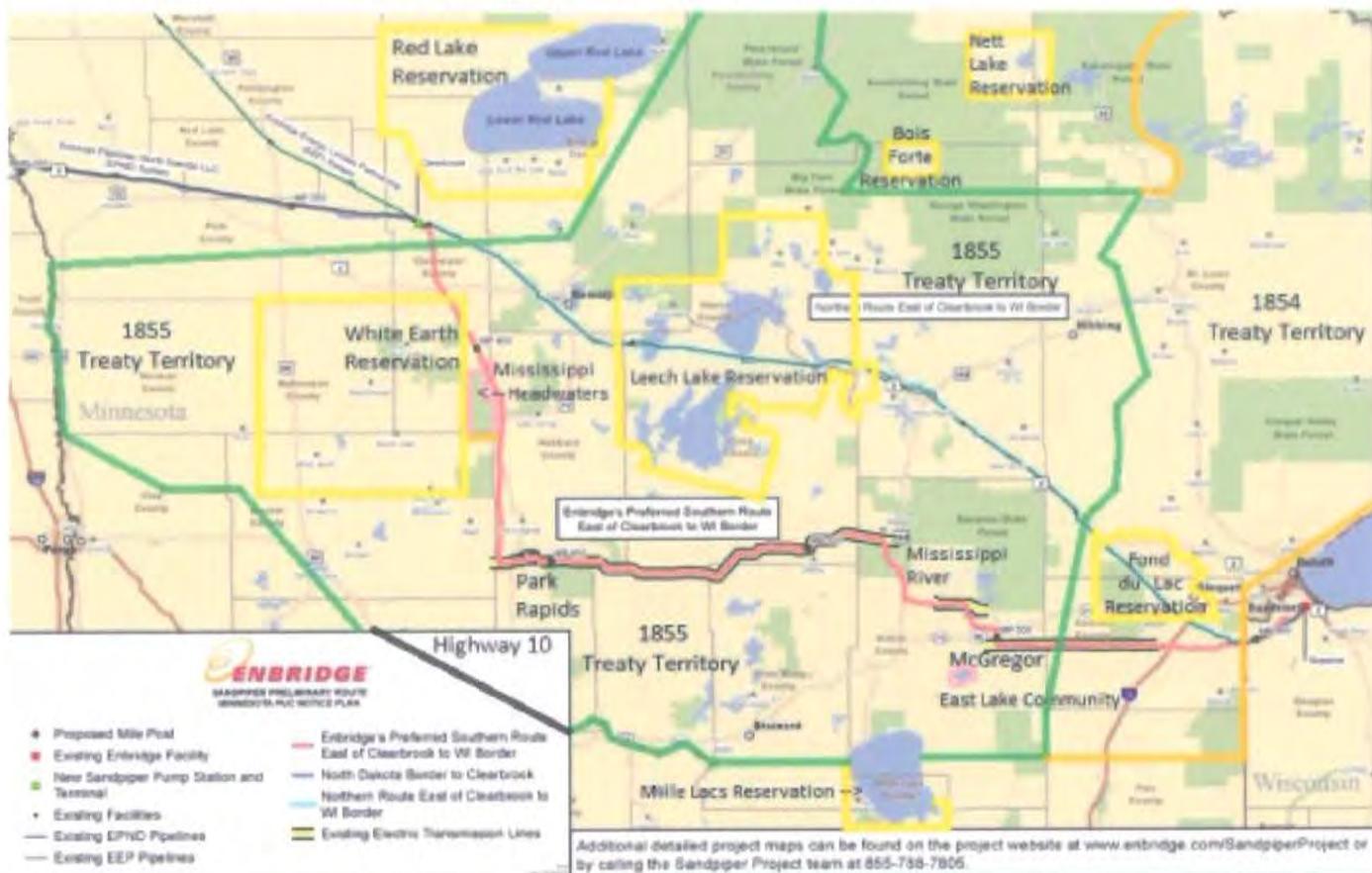
Since the company is adamant about Superior as a destination for the Bakken crude, perhaps this proposed extension in Wisconsin could be used to move the oil from the end of Alternative Route A back north to Superior.

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



If their intentions 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.

The company has yet to explain the need for Superior as the end point. This proposed pipeline route should not proceed without legitimate justification. Said reasoning should not include corporate profits.



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