

and Transp  
duced at each point of frac sand mining process and how far  
?

Are you speaking:

- for yourself
- on behalf of an organization

*De Forest Area Progressives*

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

ong trackage when sand train passing and when other trains  
issued)  
road?  
nd not leaking)?

out back?  
ghway?  
nd not leaking)?

out back?  
n county road?  
nd not leaking)?

out back?  
n state highway?  
nd not leaking)?

out back?  
e-closed top) – any road?  
respirable crystalline silica (<2.5 microns), diesel exhaust, all  
D frac sand activity)

ter or drier in "sand country"?  
other words, do facilities need to plan for bigger events more  
*in and larger waste water ponds?*  
ferred when any Hi-Cap well permit is being reviewed  
n of the "waters of the State"?  
to DOJ? Right now, they do not  
be released into the waters of the state and make these  
r containing such chemicals be lined with impervious

559  
5

Date:

Date:

3-4-15



Are you speaking:

- for yourself
- on behalf of an organization

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

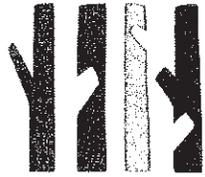
Why the state will not take any type of "royalty" for the sand harvested & removed from this state. A fund could be created for environmental/natural resource use;

PM 2.5 monitoring required

The huge impact of the destruction of very large tracts of land - it's long term affect on the environment of that area.

Monitoring potential impacts on water quality, streams, rivers before the damage is done

Light pollution is incredible - distracting to humans + ~~and~~ wildlife.



Midwest  
Environmental  
Advocates

## Speaker Event Report Form

Speaker Name: Stacy Harbaugh

Date of event: 3/4/15

Location of the event: Black River Falls, Ho-Chunk  
Bingo Hall

Number of contacts/people in attendance: 80

Short summary of event purpose or topic: DNR Strategic Analysis  
public event on scoping

Other details?

*Please return to Stacy on the next business day after your event.*

Date:

3/4/15

Yes

10341



ing the sand mine ①  
 corporations that  
 to extract oil  
 from the Earth.  
 for being in business  
 such money as  
 Earth and from  
~~the sand mine~~  
~~the sand mine~~  
 esent hate the  
 ral Resources.

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

king your nose ②  
 siness telling  
 and cannot do.  
 atic governmental  
 tions that steal  
 call you radical  
 emist tree huggers.  
 ntempt for you.  
 rees and hills  
 ons of sand  
 or banks.

123  
21

Date: 3-4-2015



Are you speaking:

YCS

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date: 3/5/2015

Na

Sig

Ad



Are you speaking:

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- 1) ~~Effect~~ on residential property values at various distances from mining sites, and highways upon which heavy mining-related trucks are operated.
- 2) Effect on residential wells of high-capacity wells used in frac sand processing
- 3) Staffing needs of the Department required to conduct on-site visits not less than monthly to each licensed mine or mining-related facility, to ensure compliance with all regulations within the Dept's purview.

OVER →

- 4) Standards for determining compliance with reclamation plan.
- 5) Reliability of science surrounding airborne particulates generated by frac sand mining, transportation and processing.
- 6) Financial, organizational and historical indicators of a mining concern that will be capable of conducting mining and ultimate reclamation successfully.
- 7) Why are there more Conservation Game Wardens than Environmental Inspectors?

Date: 3-~~5~~<sup>4</sup>-15

Date: 03/04/2015 752  
25



Are you speaking: NO  
 for yourself  
 on behalf of an organization

Are you speaking:  
 for yourself  
 on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- is there a thru environmental study done on the impact of Sand Mining?
- at what cost to the local community ~~at~~
- who pays for wear on the roads leading to and from area?

Date: 3-4-15

Date: 3/4/15

CC



Are you speaking:

- for yourself
- on behalf of an organization

Just Listen

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

I am very concerned about the change in our quality of life if a mine comes to Alma. We have lived here for many years for the peaceful country, beautiful hills, and abundant wildlife. All of those things will be in jeopardy - we do not know yet how much jeopardy at this time.

Ph  
553  
3

Date: 3/4/15

Date: 3/4/15



Address



Are you speaking:

NO

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

The DNR should have Adequate staff to properly monitor air and water quality.

Appropriate funding to finance these positions should be available. The funding could come from the mining companies by paying a fee per ton of sand extracted from the state.

If they are willing to take our resources, they should be willing to responsibly compensate the citizens of Wisconsin for those resources.

Date: 3-4-15

Date: 3-4-15



NO

NO

Are you speaking:

- for yourself
- on behalf of an organization

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date: 3/4/15

Date: 3-4-2015



Are you speaking:

- for yourself
- on behalf of an organization

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

I support the study called for as outlined by the Midwest Environment Advocates' study 'Petition for a Strategic Analysis of Frac Sand mining'

Thank you.

- Effects on HoChunk Spiritual life
- Destruction of wildlife
- Effects on surface and ground water
- Health effects of 2.5 pm or smaller silica dust
- Damage to roads
- Dust coming from loading sites and trucks
- No requirement to make close & mines into habitable site
- Destruction of Sacred Sites
- Cost to communities

Date: 3/4/15



Address

Are you speaking:

for yourself

on behalf of an organization

No

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Judt

Date:

4 March 2015 20



Are you speaking:

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

to protect the most vulnerable people—the very  
low income people confronting health issues, and those

resisting environmental and land use policies and

protecting another vulnerable people—those who

live near metallic silica sand mines. Residents of the Town

of the accumulative effect of silica in the air that

exists in a 10 mile radius of a friend's former home

(name, Mary Anne, Mary D)

because it makes no difference anymore because no

area will be contaminated with silica sand.

DNR Hearing—Black River Falls  
4 March 2015

We as Christian people, take it upon ourselves to protect the most vulnerable people—the very young in developmental stages, our elderly wisdom people confronting health issues, and those who have handicaps.

Those individuals who are writing and implementing environmental and land use policies and those who do not enforce the regulations are creating another vulnerable people—those who live and breathe the air contaminated by non-metallic silica sand mines. Residents of the Town of Preston are surrounded by sand mines.

Who is responsible for studying and monitoring the accumulative effect of silica in the air that we and our animals breathe?

This map shows the establishment of sand mines in a 10 mile radius of a friend's former home in the Town of Preston. (City of Blair, my home, Mary Anne, Mary D)

Prevalent winds in this area are from the NW. But it makes no difference anymore because no matter from which direction the winds come, all will be contaminated with silica sand.

We want and we need your help!  
Thank you.

Date: 3-4-15



Are you speaking:

NO

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date: 3/4/2015



Are you speaking:

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- please define what "reasonable use" is of groundwater - frac sand mining uses high capacity wells. These wells have the capability to draw surface water levels down of lake and streams from a very long distance away. ~~The DNR allows~~ hydrological studies already conducted by DNR indicate that not only can high capacity well operation draw down surface waters, but actually change drainage characteristics of watersheds. This doesn't seem like a "reasonable" use to me.

- why does the DNR not have specific regulations to address these water withdrawals and their effects on surface waters. (+ aquatic species)  
Michigan does - why doesn't WI? (species)

- Why does a WI Judge have to tell  
DNR to consider cumulative impacts  
of high capacity wells?

- What are the real effects on property values -  
Not those that get rich quick from  
directly selling their land, but those  
that choose not to sell.

- DNR needs to come clean about how  
wash water from sand plants is  
regulated. There are rumors that  
Sand wash water is regulated similar to  
water used to wash gravel. To my  
knowledge, gravel washing does  
not use chemicals (especially  
carcinogenic chemicals). Sand  
wash water, I've heard, does.

- ~~Trempealeau County~~ Trempealeau  
County has put together a comprehensive  
study of effects of Frac Mining. It  
didn't reflect kindly on Frac mining. <sup>use it as an  
additional</sup>

- Air quality - need real factory <sup>some</sup>  
data concerning contributions of <sup>this</sup>  
Silica sand particles to the air <sup>effect</sup>  
from Frac mining and how far  
the dust shadow of these mines  
can realistically extend

~~The state of WI~~  
~~The state of WI~~ The state of WI has  
seriously curtailed the spread of Frac  
Sand mining. Evidently they believe  
more study is needed before more  
mines can open. Why, if both states  
equally value their natural resources, is  
WI allowing almost unlimited expansion  
of these mines.

Date: 3/4/2015



no

Are you speaking:

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

\* Air quality. Specifically  
How far particulates travel  
in the air so people can  
determine a "safe distance" to  
live away from sand mines.

\* Water quality of surface  
+ groundwater

\* Hydrology

\* Property value changes

~~\* ~~Water~~~~

\* Cumulative impacts of  
groundwater use, specifically  
the VOLUME of water →

Withdrawn. Cumulative  
impacts should combine  
w/ agricultural hi-cap  
wells to get a real  
picture of water volume  
used

\*

757  
26

Date: 3/4/15

Date: 3-4-2015



- for yourself
- on behalf of an organization

- Are you speaking:
- for yourself
  - on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

The DNR cannot keep up with inspections of current operating mines (<20%<sup>070</sup>). So how are more mines being approved?

Water impact + certian species affected

Date: 3-11-14

Date: 3-9-15



Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Are you speaking:

No

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

051  
141

Date: 3/5/15

Date: March 4, 15



Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Hx = Renovation cost

- Regulate =
- 1) Water
- 2) Air-
- 3) Land <sup>silicosis cancer</sup>
- 4) Health Study / outcome
- 5) Chemicals / (as in tobacco)
- 6) Contamination of wells (they should pay)
- 7) Wildlife
- 8) taxed - pay for land

Are you speaking:

- for yourself
- on behalf of an organization **No Chunk Nation**

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

I don't want Sand Mining here Jackson, Co

~~They want to mine here~~  
~~Stop it~~

Stop it all together!

7  
(Fund the DNR) - employees  
Township: presentation -  
Mgmt Agreement / ordinance

Do what they are required to do. It is their job

Note: Fixing -

te: 3/4/15



re you speaking:  
 for yourself  
 on behalf of an organization

NO

would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

SOLAR POWER PANELS USE THE SAME SAND EXPORTED TO NDAK. FOR FOSSIL FUELS FOR ELECTRICITY, OIL & GAS. TO CONTRIBUTE TOWARDS THE ELIMINATION OF CLIMATE CHANGE A SECURING A FUTURE FOR GENERATIONS TO COME & CREATION OF A WISCONSIN-BASED SOLAR ENERGY PANEL INDUSTRY IN THE STATE OF WISCONSIN.

- 5) Health Study / ...
- 6) Chemicals / (as in tobacco)
- 7) ~~the~~ Contamination of wells (they should pay)
- 8) Wildlife
- 9) Taxed - pay for land

7 (Fund the DNR) - employees Township: presentation - mgmt Agreement / ordinance Do what they are required to do. It is their job

2 (Note Income = tourism)

ph 7460  
24  
[scribbles]

Date: 3-7-15



Are you speaking:

- for yourself
- on behalf of an organization

*Environ*

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

*[Handwritten signature]*

Date: 3/4/15



Name

Signature

Address

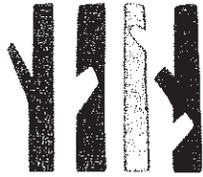
Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- Air blown particulates under 2.5 m
- Hydro effects
- Toxic chemicals





Midwest  
Environmental  
Advocates

## Speaker Event Report Form

Speaker Name: Stacy Harbaugh

Date of event: 3/4/15

Location of the event: Black River Falls, Ho-Chunk  
Bingo Hall

Number of contacts/people in attendance: 80

Short summary of event purpose or topic: DNR Strategic Analysis  
public event on scoping

Other details?

*Please return to Stacy on the next business day after your event.*

Date: 3-4-15



Date: 3-4-15



Are you speaking: *no*

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date: 3/4/15

Date: 3/4/15



Are you speaking:

- for yourself
- on behalf of an organization

Not Speaking

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Impact on water table, water quality, and environment generally.  
Concerned about the impact on animals too.

Are you speaking:

- for yourself
- on behalf of an organization

NO

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date: 3/4/15

Date:

8



Are you speaking: No

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Are you speaking:

- for yourself Yes
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date:

pk  
628  
12

Date: 3-4-15



Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

*air quality*  
*water quality*

Are you speaking: *NO*

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:



Are you speaking: *NO*

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:



Are you speaking: *NO*

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date: 3/4/2015



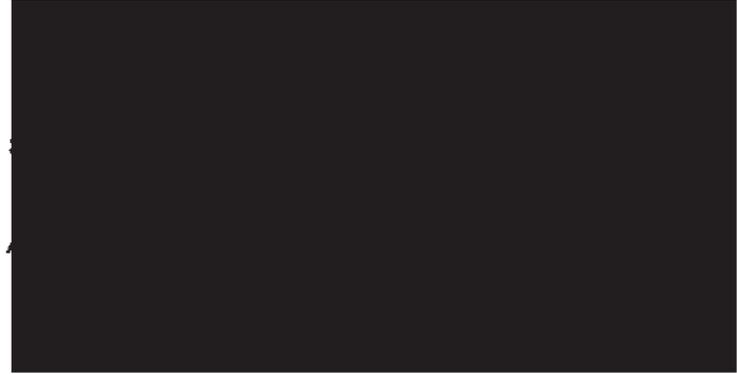
*PN*

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date: 3-4-15



*PN*

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

~~28~~     12  
 28     12  
 65     39

Date: MARCH 4, 2015



Are you speaking:

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

① THE DNR MUST ADDRESS THE FACT THAT THE HOCHUNK NATION ON THE BASIS OF INTERNATIONAL LAW WILL INVARIABLY PROCEED WITH DECLARING AN EXTRATERRITORIALITY BOUNDARY AROUND ITS TRUST LANDS.

② FURTHERMORE, LAST YEAR THE FEDERAL GOVERNMENT DISSOLVED FOR 16 DAYS AND TRIBES BECAME TOTALLY SOVEREIGN AGAIN. CONGRESS HAS YET TO ADDRESS THIS INTERREGNUM.

(OVER)

③ THE DNR IS LIABLE FOR ANY DAMAGES PERPETRATED UPON THE STATE OF WISCONSIN PRIOR TO HAVING CONDUCTED A FEASIBILITY STUDY AND GRANTING APPROVAL, WITHOUT STUDY AND APPROVAL, SAND MINING'S WIDESPREAD ENVIRONMENTAL IMPACT SHOULD CEASE IMMEDIATELY

④ THE SAND MINING PRODUCT USED IN NORTH DAKOTA HAS CAUSED COUNTLESS OIL SPILLS. IN THE FALL OF 2013 A FREAK BLIZZARD SWEEP THROUGH NORTH DAKOTA, A NUMBER OF CATTLE HUDDLED TOGETHER ON THE SIDE OF A BLUFF FOR WARMTH & FROZE TO DEATH. WHEN THE SNOW MELTED IT WAS DISCOVERED THAT THEY DROWNED IN OIL. A VIETNAM VETERAN MARINE FROM 2/1/1 CONFIRMED THAT MORE THAN 300 SUCH INCIDENTS HAD OCCURRED BUT NOT REPORTED.

⑤ HOCHUNK ABORIGINAL RESOURCES SHOULD NOT BE USED TO PERPETRATE HARM ON MEMBERS OF THE 3 AFFILIATED TRIBES IN NORTH DAKOTA WHERE THE BAKKEN SHALE MINING OPERATION IS LOCATED, THIS COULD BE CONSTRUED AS VIOLATION OF OUR TRIBAL TREATY/TREATIES CONDITIONS, ETC., ETC., ETC.

PH  
812  
28

Date: 4 MAR 2015

Date: 3/4/15



N  
S  
A

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- AIR & WATER QUALITY (IMPACT ON LOCAL & RURAL AREAS.)
- ANALYSIS OF IMPACT OF SAND MINING AND ITS FACILITIES ON PROTECTED WILDLIFE, AND PROTECTED AREAS. IS THE LOCATION OF SAND MINING FACILITIES WITHIN MERE MILES OF WILDLIFE REFUGES, AND WITHIN THE NATURAL HABITATS OF ENDANGERED SPECIES LEGAL, OR RESPONSIBLE?
- FURTHER STUDY OF SAFETY STANDARDS AND THEIR ADEQUACY.
- LACK OF REGULATION RELATED SPECIFICALLY TO SAND MINES, AND LACK OF ENFORCEMENT OF CURRENT REGULATION AS WELL AS MEANINGFUL PENALTIES FOR NON-COMPLIANT SAND MINES.

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- Air Quality Act
- Water Quality Act
- Trucks hauling sand - what is in the trail of dust they leave behind.
- Trains - Regulate the number of trains travelling through small rural towns.
- Proper DNR - Have staff to conduct the Analysis.

Analysis of how silica dust affects animals - endangered species. As well as the water they consume

Date: 3-4-15

Date: 3-5-15

742  
23



2)

Are you speaking: NO

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Are you speaking:

for yourself

on behalf of an organization  
Women's Int'l League for Peace & Freedom

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- Psychological & Stress related effects of conflict, dust, light, vibration
- Social & spiritual disruption of rural communities.
- Long term effects on Nature from
  - loss of diversity
  - drawdown water tables
  - chemical contamination
- Long term effects on people, our children & grandchildren
- Rights of Nature & Future generations have ~~status~~ Standing in International Law

803  
27

Date: 3/4/15

Date: 3/4/15



Name (please print)

Signature

Address

*Full Farm  
in  
Pike*

Are you speaking:

*NO*

- for yourself
- on behalf of an organization

Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

*Air Quality  
Water Quality  
Water table levels  
Environmental on  
Wild Life  
Impact on Tourism*

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date:

Date: 3-5-15



Are you speaking:

NO

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Are you speaking:

No

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- Concerns for proposed mine along Hwy 12 south of BRF - I live 1 block from there & have a 30ft well. Our ground water is 6ft & how will I be protected??

Date: 3/4/15



Are you speaking:

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Air quality - include in the homes

Water quality

How far down they dig & what are the affects.

Short-term

Long-term

Date: 3/4/2015

22



### Frac Sand Mining Study Update

prior or current work for mining companies.  
ence and research.  
cts, but cumulative as well.  
e level, but as they may impact neighbors,

in the following areas:

ogen. It's a fact and it can't be disputed  
ing, current standards don't test for most  
ire a relationship between PM10 and PM  
toring off site, down wind, etc.  
e exposure may require special clothing and  
and suggest limits based on time exposed.  
rs potentially exposed 24 hours a day, 7 days  
ose with auto-immune and respiratory  
ly member who suffers from one, and twice  
ioned to open a sand mine just over 100  
oom... directly upwind.  
PM 2.5 on livestock? Wildlife?  
EC has been working to answer some of these  
esource for this update.

on topsoil quality.  
essful reclamation. Can it be returned to  
e or forestry? Can it be suitable and stable  
il construction and use?  
ity to utilize chemical fertilizer application?  
th wind and water.

ility and the effects of the mining process

ge by the facility and it's effects on:  
water volume, quality, flows  
process itself by removing/altering hills/slopes:  
groundwater volume, quality, flows  
undwater recharge areas

Are you speaking:

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural  
Resources strategic analysis of frac sand mining  
activity to include the following issues in the scope  
of its study:

See  
ATTACHED

## **Comments Regarding DNR Frac Sand Mining Study Update**

- Use independent researchers with no prior or current work for mining companies.
- Provide and utilize peer reviewed science and research.
- Evaluated not just as individual impacts, but cumulative as well.
- Cumulative impacts not just at the site level, but as they may impact neighbors, community, county and region.
- Should include research/evaluations in the following areas:
  - Air Quality:
    - This is a human carcinogen. It's a fact and it can't be disputed
    - On and off site monitoring, current standards don't test for most dangerous size. Is there a relationship between PM10 and PM 2.5? Testing and monitoring off site, down wind, etc.
    - Standards for employee exposure may require special clothing and respiratory protection, and suggest limits based on time exposed. Standards for neighbors potentially exposed 24 hours a day, 7 days a week? Effects on those with auto-immune and respiratory illness? I have a family member who suffers from one, and twice my neighbor has petitioned to open a sand mine just over 100 yards from my living room... directly upwind.
    - Effects of PM 10 and PM 2.5 on livestock? Wildlife?
    - Crispin Pierce of UWEC has been working to answer some of these issues, should be a resource for this update.
  - Soil:
    - Effects of stockpiling on topsoil quality.
    - Appropriate and successful reclamation. Can it be returned to successful agriculture or forestry? Can it be suitable and stable enough for residential construction and use?
    - Filtering and use ability to utilize chemical fertilizer application?
    - Erosion concerns, both wind and water.
  - Water
    - Both usage by the facility and the effects of the mining process itself.
    - Hi capacity well usage by the facility and it's effects on:
      - surface and groundwater volume, quality, flows
    - Effects of the mining process itself by removing/altering hills/slopes:
      - surface and groundwater volume, quality, flows
      - effects on groundwater recharge areas

Citizen Resolution # 270214

(For Hearing Officer completion)

**Silica Sand Mining in Wisconsin Study Update**



270214

Each year the Conservation Congress accepts written resolutions from the public, in each county throughout the state regarding natural resource issues of statewide concern. These resolutions are introduced by the public in attendance during the Conservation Congress county meeting that is held annually in conjunction with the DNR Spring Fish and Wildlife Hearings in April.

In order for a resolution to be accepted for further consideration by the Conservation Congress and for public vote at the annual Conservation Congress county meeting, all resolutions introduced must meet the following requirements:

1. The concern must be of statewide impact.
2. The concern must be practical, achievable and reasonable.
3. The resolution must have a clear title.
4. The resolution must clearly define the concern.
5. Current state statutes and laws must be considered, with reasonable cause for change being presented.
6. The resolution must clearly suggest a solution to the concern and a description of further action desired.

WHEREAS, silica sand mining in Wisconsin continues to grow and will impact thousands of acres of Wisconsin's landscape; and,

WHEREAS, the WDNR report on Silica Sand Mining in Wisconsin was completed in January 2012 and should be updated and expanded to include the most current information available; and,

WHEREAS, silica sand mining is particularly concentrated in West Central Wisconsin and the WDNR report does not include a technical analysis of the potential cumulative impacts of the loss of open space, wooded hills as water filters, air quality, or wildlife habitat, nor does the report specify a process by which WDNR will consider such cumulative impacts; and,

WHEREAS, the WDNR report provides no technical evaluation of the long-term impacts that silica sand mining and related activities have on the character, productivity, and future use of soils.

**BE IT RESOLVED**, that the WDNR partner with other State and Federal agencies to conduct an independent evaluation of silica sand mining in Wisconsin, which includes: opportunities for local official and public participation; lessons learned from recent mine violations in Wisconsin; monitoring and regulatory approaches from Iowa and Minnesota; a technical analysis of the cumulative and long-term environmental and soil impacts; and an expanded discussion of non-environmental impacts (e.g., archeological, tourism economy, nearby property values). The report shall also include recommended best practices for the planning, regulating, and monitoring of silica sand operations, including the cumulative impacts of such operations, for use by State, county, local, and tribal governments.

Dianne Richardson  
112855 Poplar Rd  
Fairechild, WI 54741  
715-597-6717  
Jackson County

Signature: Dianne Richardson

Please print your resolution on 8 1/2 X 11 white paper (one-sided) and provide the WCC County Chair with TWO COPIES at the spring hearing. Only the individual author or designated representative may present the resolution. The

- effects on filtering ability
- Cumulative effect of high capacity well and altered environment on surface and groundwater volume, quality, and flows.
- Effects and encroachments on ASNRI areas... Area of Special Natural Resources Interest. Some areas are so sensitive, that going public with the information is too much of a risk. The general public has to submit formal requests to find out what is there, and still may not find out.
- Habitat
  - Deforestation, how it affects habitat and short and long term animal movements and migrations. Can they be brought back?
  - Loss of large acreages in small areas
  - Effects on endangered resources such as Karner Blue Butterfly, Eagles, etc
  - Effects on sustainably managed resources that provide social, economic, and cultural benefits. Deer, upland and wetland game birds, fish.
- In closing, I am also a Jackson Co delegate to the Conservation Congress. Here is a copy of a resolution that is on the state ballot for the spring hearings. It seeks a study update suggesting some specific methods and sources. I'm hoping that the goals and visions in this resolution could also be included in this study.

Date: 3/4/2015



Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

- air quality studies
- water quality
- distance of silica travel
- effect of silica on children
- effects of silica on livestock, and other wildlife

612  
9

Date: 3/4/15



Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Date:

3-4-15

008  
270

Date:

MARCH 4, 2015

Name



Signature

Address

Name



Signature

Address

Are you speaking:

for yourself

on behalf of an organization

Are you speaking:

for yourself

on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

*silicosis*

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

*The Dept. of Natural Resources appears to be relatively useless when it comes to tracing, by that meaning their hands are tied and yet people are getting sick, developing diseases and our natural resources contaminated. What can communities do to stop these companies? Since some residents want the money offered for their land.*

Date: 3/4/15



Are you speaking:

- for yourself
- on behalf of an organization

NO

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

concerns regarding frac sand mining in our with the various impacts this industry

require a considerable amount of work, including loading / transload / processing facilities. Most operations required to monitor air quality, including monitoring particulates that are most prevalent exist, not just at the sites, but along railroads.

Health illnesses associated with particulate matter. Keep in mind, the asbestos industry and the open air window. 30 years of cumulative data differences? The asbestos industry has been known for health damages the industry has facilities being set up for sand mining and processing. When they close the briefcase and are financially responsible for long term liabilities herefore the taxpayers holding the bag.

Water rights and water use in a given area, but issues high water. Land owners losing their wells to water, rendering their homes and farms unusable. Chemicals are being used that will leach into the water and be useless. In most instances, it is incumbent on the attorney, find another home, sue, and if not successful, be trucked in "until a permanent solution is found. Use the financial resources to do all of those things. Otherwise, here's some money, get out. Many of these have been in families for generations. Money is being used to buy homes and land that we have bought and are taxed to trust and support the land, to not allow it to be jeopardized another's property, and not to allow the arrogance of the out of state

PL 1657  
15

Date:

3/4/2015

xcs



Date:

3/4/15



NO

Are you speaking:

- for yourself
- on behalf of an organization

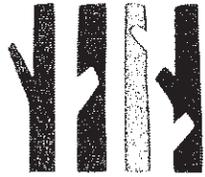
Are you speaking:

- for yourself
- on behalf of an organization

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:

Silicosis —  
Community disruption —

I would like the Wisconsin Department of Natural Resources strategic analysis of frac sand mining activity to include the following issues in the scope of its study:



Midwest  
Environmental  
Advocates

## Speaker Event Report Form

Speaker Name: Stacy Harbaugh

Date of event: 3/4/15

Location of the event: Black River Falls, Ho-Chunk  
Bingo Hall

Number of contacts/people in attendance: 80

Short summary of event purpose or topic: DNR Strategic Analysis  
public event on scoping

Other details?

*Please return to Stacy on the next business day after your event.*

3-4-15

speaking - self

-RN -  
PHOTOS  
Blasts  
Hi-Crush  
August

Clouds of orange hang over the blast site, silica dust and chemicals. Please refer to the pictures provided of the initial blast and the plumes of sand and chemicals that SLOWLY dissipate through the air. What is in this cloud? Large amounts of silica sand that have been proven to cause health problems. In photographing these blasts, I have been close enough to have this cloud engulf me, causing coughing and irritation. The plume takes up to several minutes to move based on wind flow and wind direction. The strong smell resembles that of gunpowder. What is the source of this odor? Refer to photos from 6-20-14, 10-2-14, 10-7-14, 10-28-14, 10-30-14

Testing of wells is being done by a water testing company selected by the mining company. Water test results are mailed to homeowners with no explanation or follow-up even though the results were abnormal and increasing over time in a negative direction. Wells located directly across from the mine have water that is brown and tastes like dirt. Copies of the water testing were provided to the county health department who deemed the water not a health risk. However, when asked he would not want his family drinking it.

Air monitoring results not made available to the public or the DNR. Why is not required that these results be reported to the local town board on a regular basis? Why is there only one air monitor at this site? Why is this air monitor placed in a location that is protected by a berm and is located furthest from the blasting and actual mining operation? Refer to photo from 5-29-14

Lights not covered- yet when they presented their information at a public hearing and during the permit process, the lights were going to be shielded to prevent light contamination of the entire area.

Piles of sand allowed to blow from the stockpiles at both mining operations in our area. Please see photos provided with this. Formal, written complaints have been submitted on 3 occasions due to the blowing sand. The last complaint resulted in a decision that unless it could be proved that the sand was blowing off the actual mine site, nothing could be done. Both operations were to have watering operations in place to prevent blowing sand. We are unaware of such operation at either site. Refer to photos from 6-12-14, 10-7-14, and 11-18-13.

There needs to coordination between the DNR departments when the permits for a mining operation are being considered. At this time, each department seeks public input but there is no interdepartmental consideration of the permits. The air permit staff informed us that they issue their permit independent of the other departments. There is no collaboration between departments to consider the effects of the mine in its entirety.

Hi Crush was not going to have truck traffic on the roads but this last fall, hundreds of trips were made hauling "storm water" from the dry plant to the wet plant because they were short of water at the wet plant. The highway was covered with water sloshing from the uncovered loads. Refer to photos from 10-2-14 and 10-28-14. Given that this last fall was very dry, where did all of this storm water come from? Where did the water actually come from and what was in it? The DNR needs to know the contents of this water?

Code of federal regulations

Section 816.64 Use of explosives, blasting schedule

(b) Blasting schedule publication and distribution. (1) the operator shall publish the blasting schedule in a newspaper of general circulation in the locality of the blasting site at least 10 days, but not more than 30 days, before beginning a blasting program.

(2) The operator shall distribute copies of the schedule to local governments and public utilities and each local residence within ½ mile of the proposed blasting site

(c) Blasting schedule contents: dates and time periods when explosives are to be detonated

At Hi Crush, there is no schedule published. A red flag is posted in 5 locations to notify residents of the blast scheduled for some time that day. Refer to photos of 7-31-14 and 10-7-14.

An email is sent to the town clerk notifying her that there will be a blast the next day. It gives a time range of when this will occur. Initially it was a specific time and in the last 6 months it became a time range.

Other than the town clerk no one received notice of this email, until a town board supervisor asked to be notified when she was. He in turn would then notify residents who had asked to be notified.

Hi Crush in their initial public hearing and permitting process were not going to blast at this site. Within a year they approached the township for a blasting permit. At this meeting they assured those present that the blasting would not be noticed and there would no ill effects from it. Blasting causes trembling up to 1.5 miles from the blast site with animals and children being frightened by the noise and tremors felt in their homes and schools. Staff from the DNR should witness a room full of school children in tears because they were shaken by these tremors.

As blasting proceeded last summer and fall the blasting was being done close to a county highway, County Road RR. In observing these blasts I was asked to move from the road as it was in the blast zone. How can a public highway be considered part of a blast zone with no signs noting this potential danger. This is a road that is traveled on by car, by horseback, by foot. See photo of horseback rider just prior to a blast occurring.

Water consumption must be part of the DNR study. There must be a study of what the cumulative impact of multiple mining operations in one region are. What do multiple operations have on the air quality, water quality, and general health of the residents? In many of the mining communities, there has been a noted increase in the number of residences for sale. What does mining provide for the communities within which they operate?

A study of the effect on school funding is mandatory. The assessed value of our township has increased to the extent that the state funding for our school district has been decreased to the extent that we are at risk of losing 6 teachers. Yet, our township is one of the poorest in the state. This increased valuation is from the tax base that results from the mining operation. However, the residents have not seen an increase in their usable income.

I would estimate that train traffic has increased 10 fold. What impact does this increased traffic have on air quality resulting from the diesel emissions? What is the impact of all of the frac sand that now lays along the train tracks?



www.dnr.wisconsin.gov  
INDUSTRIAL SAND MINING PUBLIC SCOPING COMMENTS - 2015

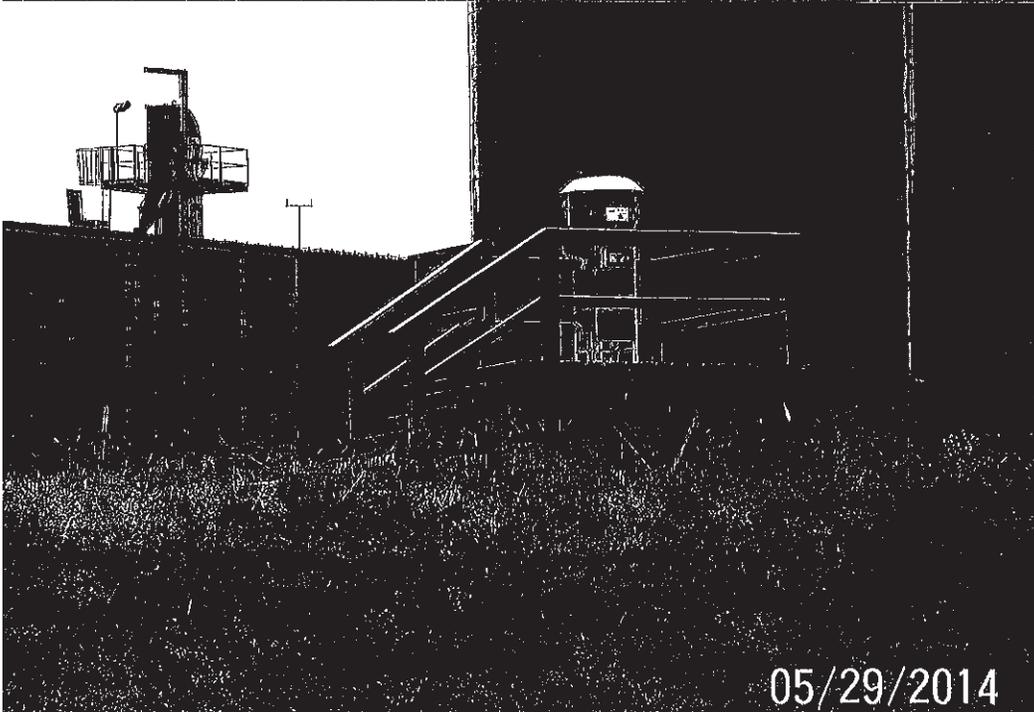


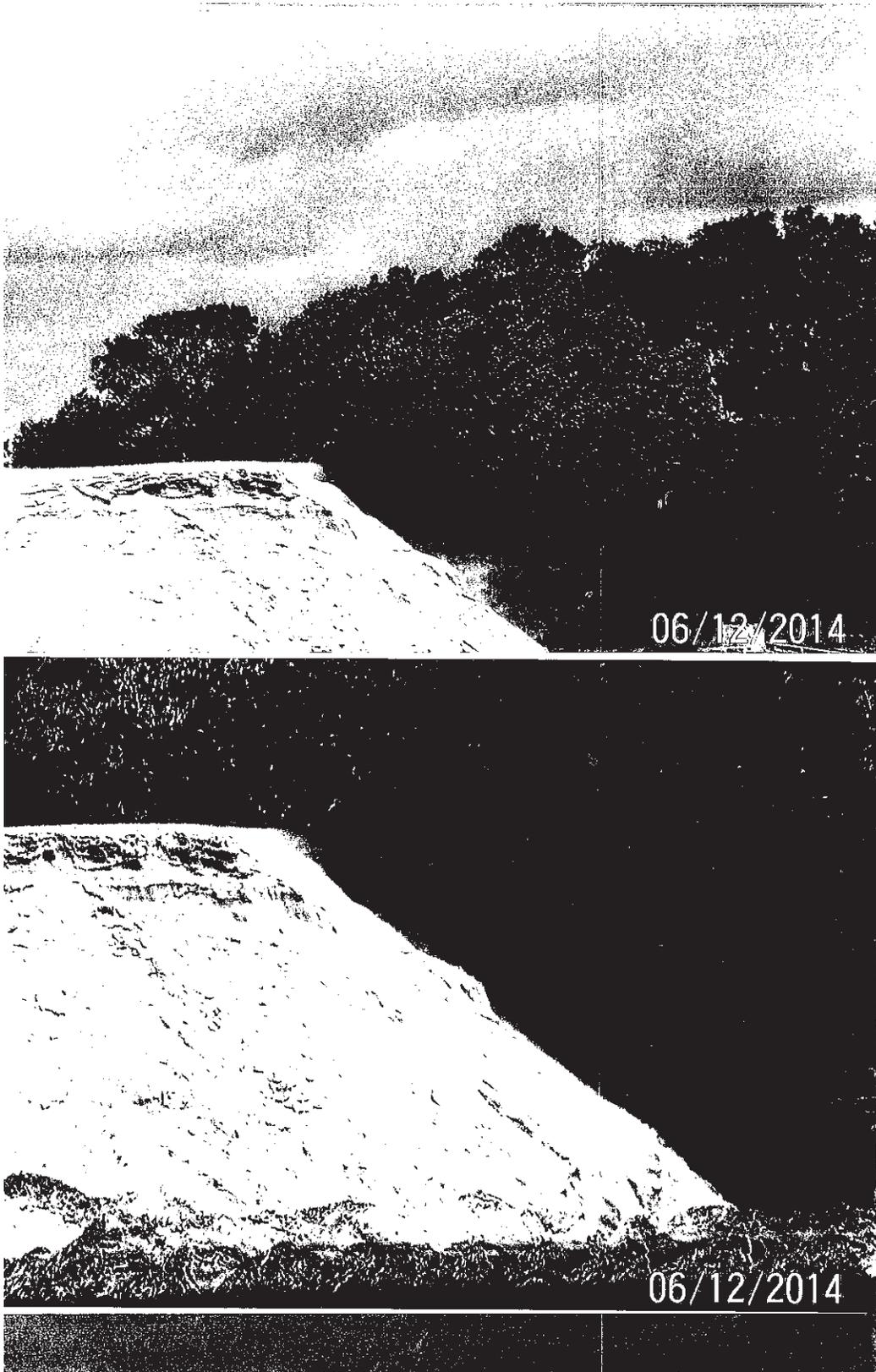




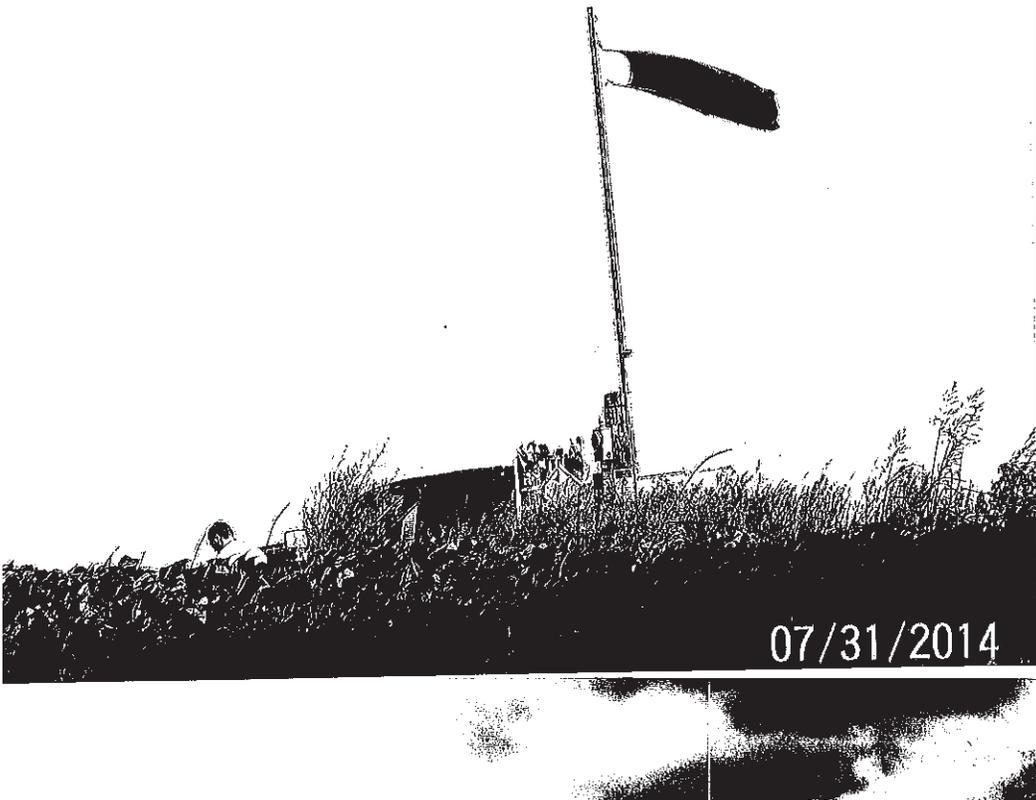


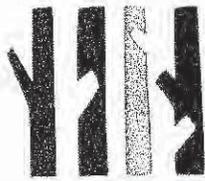












Midwest  
Environmental  
Advocates

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Short summary of event purpose or topic: DNR Strategic Analysis  
public event on scoping

Other details?

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## Research to date:

WDNR published report January 2012, *Silica Sand Mining in Wisconsin*,

### Does not include:

- A technical analysis of the potential cumulative impacts on groundwater.
- Data on anionic acryl amides in Ground water (the chemical used as flocculants in the water recycling steps for sand processing).
- Baseline: Static Water Quality Levels (lead, turbidity, suspended solids, chlorides)

### Does suggest:

#### Ground Water (5.2.1 page 21 DNR)

#### Dewatering of Private wells

- If mine is below ground level(5.2.1.3)
- High capacity wells may result in 10- 95% water loss (Page 22 DNR)
  - Cone of depression
  - Water quality subject to change

#### Discharge to surface and ground water (DNR 5.2.2)

- Change in ground water levels,
- Reduce spring volume that could have thermal impact on streams. 5.3( page 29) and could cause coldwater tolerant species of fish and invertebrates to disappear. 5.3( page 29)
- Warm ground water
- Physically altering local hydrology drain patterns,
  - Holding ponds 10-25 year rain can wash silt sand gravel to surface water
  - Discharge of small particulates not included in TSS analysis can cause significant tributary issues
  - Storm water run off (5.2.4)

Though wetlands will be avoided **"If Possible"**, but can be permitted if demonstrate they cannot be avoided.

#### Loss of Wetlands (5.2.3)

- altering local hydrology drain patterns
- change ground water levels

## Research needed:

- **Expert Steering committee, representing all sides of the issue, that will develop a comprehensive and independent evaluation of silica sand mining on large tracts of land and it's cumulative impacts for Wisconsin.**
- **Report based on empirical, hard data supported by evidence.**
  - Characterize geologic and hydrologic conditions
  - Evaluate impacts on water resources
  - Access Groundwater experts to document, monitor and track water quality.
  - Access Surface water experts to document, monitor and track water quality.
  - Establish stream gauges base flow and discharge
  - Predict changes in
    - Topography
    - Soils
    - land cover
  - Monitor well
    - Elevation
    - Fluctuation
    - Flow gradients
  - Include: 5 year Groundwater Study Western Chippewa County

**“All water is local. We need to take stock of our local water sources and manage them wisely.”**

## **“Are We Running Out of Water?”**

(National Geographic, March 14, 2012,)

Please send me a copy of the outline and dates for the process WDNR will use to develop this Strategic Analysis. I am anxiously anticipating a Public Hearing on your draft Document.

Sincerely,



MEA copy

## Comments for DNR Strategic Analysis of Frac Sand Mining

March 4, 2015

The Department of Natural Resources is charged with the task of managing Wisconsin's natural resources for the benefit of Wisconsin citizens today and into the future. There are two distinct yet clearly interrelated components to that goal:

1. The state's natural resources themselves (water, air, wildlife, woodlands, wetlands, plant communities, geological features, etc.). How can they be best managed to protect and maintain them for the future?
2. The state's people---Wisconsin citizens and residents. The goal of Natural resource protection is to assure that the state's resources will be sustained not only for their own sake, but also for the benefit of Wisconsin's current and future residents and visitors. So the question must be asked, how do the policies and goals of resource management--or the lack there of---impact people? What are the socio-economic impacts of the resource itself and of management policies?

Any complete and credible 'Strategic Analysis of the Frac Sand Industry' must include both of these elements or perspectives. It must include solid data on all the affected natural resources as well as solid data on all the affected people.

Obviously, sand mining cannot be considered separately from the woodlands, farmland, streams, wetlands, groundwater, field-woods-edge ecosystems, terrain, drainage patterns, flora and fauna and everything that is part and parcel of the landscape above the sand deposits. They are all connected and must be considered as pieces of the whole. I would expect that a thorough analysis of frac sand mining would most certainly have to include much more data on the impacts that sand mines have on these individual components of the natural systems than is currently being considered.

For example, in the parts of Chippewa and Barron Counties and also Trempealeau County where there are many mines operating close together, what data has been or is being collected on the impact on stream flow rates and temperatures? Is data being collected on trout reproduction? It needs to be.

In southern Trempealeau County the mines are located in very hilly, formerly heavily wooded acreages---what impact does that woodland removal and fragmentation have on wildlife? In particular, I'm concerned about the impact on birds (more specifically, woodland warblers and thrushes in the woods, and bluebirds along the field-woods edges). Is there any effort to collect ornithological data on their comparative nesting success and overall population numbers before and after mining? There should be.

Is there any systematic study and data collection on the migration of fugitive polyacrylamide endproducts or coating resins into streams, wetlands or groundwater around sand washing and processing facilities? This simply must be monitored. And so, too, must any evidence of acid mine drainage be tracked and reported. These data sets are essential to gain a clear understanding of the impacts of sand mining.

Until sufficient time has allowed for such data to be collected and analyzed, further permitting of this unprecedented destruction of the hillsides of western Wisconsin----particularly of the coulee region of the driftless area----must stop. It is unwise to continue without knowing the costs, and we won't know the costs until the data has been collected. To allow it to continue apace is not compatible with the mission of the DNR to steward all these resources for the people and the future of Wisconsin.

And that brings me to the second component of the natural resources protection equation, the people. The impacts on us humans must be factored into any credible analysis of frac sand mining. The emphasis in the discussions on site suitability and conditional use and reclamation seems to focus primarily on the physical parameters of the particular site being considered for a mine, almost to the exclusion of the 'people' component, i.e., the socio-economic impact. This needs to change.

**Specifically, data needs to be collected, studied and considered, county by county, on PROPERTY VALUES and real estate sales in the areas where there are sand mines:**

- Data on impacts on home and land sales within 5 (?) miles of sand mines and plants should include:
  - Fair market value (FMV) before sand mines
  - Selling price
  - Sold under duress?
  - Amicable sale?
  - Distance from mine and/or plant
  - Any other relevant information
- Data on the number of owner-occupied residences in specific townships 5 years before sand mines arrived, and at 3 and 5 and 8 year intervals after sand mines came on the scene.
- Tracking data on where people move, in order to assess whether or not our communities are losing their people. Are our rural areas being systematically depopulated as a result of sand mining? Will western Wisconsin become a place where one can drive for miles and miles seeing fewer and fewer lived-in homes? As rural residents leave, what impact does that have on the villages and businesses and churches and schools they frequented?

Where's the data on the ripple effect? What happens to the people left behind with the sand mines? To give a better understanding of the impact on the community left behind, we need **data** on mine-induced population movements and trends to track where the people driven from their rural homes go:

- Other nearby rural property?
- Nearby town?
- Within 25 miles?
- Between 25 and 50 miles away?
- Beyond 50 miles away?

**Data is badly needed (as it is sorely missing) on the HEALTH IMPACTS of frac sand mining.**

**Statistics on the incidence of a variety of illnesses** in local populations, before and after sand mining, need to be collected over a period of several years. Silicosis is certainly a risk, but other serious adverse health impacts are much more likely to be encountered, and yet **no consideration has been given to these impacts on public health**, all of which have high personal as well as financial costs:

- **Respiratory Conditions** from exposure to ultra fine particulate matter in dust and/or silica:
  - COPD
  - Asthma
  - Silicosis
  - Emphysema
  - Bronchitis
  - Lung cancer
  
- **Stress-related Conditions** from this drastic turn of events in one's living situation and quality of life, including being driven from one's home and experiencing the destruction of community relationships and the animosity that develops between neighbors and even family members when such a contentious issue invades a community:
  - High blood pressure
  - Heart attacks
  - Anxiety and insomnia
  - Depression
  - Anger and related aggression
  - Suicide

- Systemic Auto-immune Conditions from exposure to dust:
  - Rheumatoid arthritis
  - Lupus and Sjogren's Syndrome
  - Kidney disease

Similar health impacts no-doubt affect animals as well as humans, both wildlife and domesticated animals. Data has yet to be collected on the deleterious effects on animals.

In addition to the impacts on health, the impacts on the fabric of community life need to be recognized and assessed. Strong, vital, well-functioning rural communities are themselves a 'natural resource'. Rural communities and the people who came from them built this state and this country. What has taken years (in many cases generations) of energy, attention, dedication, investment and effort to build is being destroyed. In countless townships across western Wis. the bonds of mutual trust, respect and friendship that bind communities and families together are being broken. The socio-economic impact of this disintegration is not even acknowledged, except by those of us living it. What cost, this crumbling of community?

Any credible assessment of the impacts of frac sand mining must take into account **all** these impacts, both to the natural environment and to the people who live in it. And the only credible way to take them into account is to measure the true impact in a scientifically valid manner. **Collect the data!** Meanwhile, until we know the costs, stop permitting more mines.

Sincerely,



Submitted: March 1, 2015

My 'standing' for making comment is that I am a lifelong resident of this great state of Wisconsin. And I live in northern Jackson County in a township literally surrounded by operating mines and processing plants, with proposals for more, including in this township. I personally know friends and neighbors deeply affected by this invasion of industrial activity into our rural communities. We feel like we are Wisconsin's 'sacrifice zone'. We fight every day to keep from being driven from our homes of 20, 30, 40, 50 years. Some of us live on land that has been in our family over 100 years. We want Wis.'s precious resources protected, not destroyed. We believe that's what most DNR employees want, too. We want the DNR to steward the state's resources for Wisconsinites, not acquiesce to their destruction by permitting out-of-state oil barons to excavate and haul away our hills. Please stop this cancer.

state regulations were written 2 decades ago and were meant for small <sup>sand</sup> & gravel quarries. <sup>the regs did not foresee</sup> <sup>by sand mining consuming</sup> ~~was~~ hundreds of acres, some in excess of 1000 ac that can process 1 million plus tons a yr

expanding sand mining impact largely escape environmental review.

not a single mine is required to prepare an environmental impact statement. THE DNR has not conducted any comprehensive environmental impact statements on any mine.

w/o conducting a strategic analysis it is impossible for the DNR to obtain an adequate understanding of the scope of frac sand mining impacts on communities and the environment.

Feb. 25, 2015



Stacy Harbaugh, Communications & Outreach Coordinator  
Midwest Environmental Advocates  
612 W. Main St., Suite 302  
Madison, WI 53703

Dear Ms. Harbaugh,

These are all questions that should be addressed and answered before any more frac sand mining is allowed. Please ask for a moratorium on frac sand mining until these questions and others have been satisfactorily answered by studies and scientists—not the frac sand industry or those they have paid off.

1. What is frac sand mining costing the state of Wisconsin?
2. What are we gaining as a state? There is no revenue generated by the sale of frac sand as the revenue from the sales goes to the state where the sand is delivered.
3. How many actual permanent jobs have been created for local Wisconsin people working for the sand mines? What are they? For what pay? How many are just relocation of other jobs that have been eliminated by the sand mine putting them out of business? (Has the unemployment rate actually been improved or gotten worse in mine site areas?)
4. Seventy-five (75) people working in and around these mine site and processing plant areas died between 1996 and 2005 of silicosis. How many of the mine workers have died due to silica related health issues now that there are so many more mines?
5. How many people have been put out of work? Lost their job because of sand mines causing a decrease in tourism business. People don't want to see the scenic beauty of sand mines. People don't want to fish in brown murky Trout Streams. People don't want to bike in areas where there is toxic levels of frac sand dust in the air. People don't want to eat, sleep, or shop in these areas. So how much are we gaining and how much are we losing?
6. How many people working at or around these mines are having health problems caused by the mining? How much health care will they need and how much is this health care going to cost Wisconsin?
7. How many animals living around these mines are experiencing health problems? Veterinarians in some areas are noticing increased reproductive &/or other issues in cattle around mine sites. Lower conception rates, more early embryonic deaths, higher stillborn and weak calves at birth. This is seen more with smaller farms with organic & rotationally grazed animals kept outside where frac sand dust is in the air and settling in the grass they eat and wastewater is washed into ponds where they drink.
8. Is it safe to eat produce grown close to the mines? Will lettuce, cabbage, broccoli, and other above ground crops contain crystalline silica that is difficult to rinse off and doesn't even have a half-life like some of the herbicides or pesticides? If so, how does this affect the health of those eating their own produce grown in the area of these mines? How

- does it affect those growers that sell their produce? Will organic farmers start losing their certification? How much will this cost the state?
9. How many acres of freshly fractured crystalline silica is safe to be exposed? Shouldn't there be an acreage limit of exposed silica? What should that acreage limit be? Shouldn't contemporaneous reclamation be mandated so people and animals are exposed to as little of this freshly fractured silica as possible? It would also give credence to the sustainability of current reclamation plans.
  10. What are the cumulative impacts multiple mines (or one large mine) on an area's air quality?
  11. How much crystalline silica is safe to breathe? What standards should ordinances have to safeguard their health? Should these standards be stricter for children than adults? For the elderly, sick? New York has studied this already. Can we use the standard they already have in place—at least as a starting point?
  12. What is a safe setback distance to nearby residents, schools, medical facilities including nursing homes? Crispin Pierce has measured toxic levels of crystalline silica 2 miles away after blasting. This stays suspended in the air for up to 15 days depending on the weather conditions. He says further testing should be done up to determine what levels exist in the air at distances further than 2 miles. The Saudis have 10 kilometer setbacks.
  13. Blasting causes respirable crystalline silica to go quite high in the air. The higher it goes, the further out it spreads. How high of berms are needed to adequately prevent this spread? Should blasting be prohibited—especially where non-percussive means can be used more safely?
  14. How much respirable dust escapes through gaps in the berms? What can be done to prevent this?
  15. What are the cumulative impacts multiple mines (or one large mine) on an area's air water quality?
  16. What are the cumulative impacts multiple mines (or one large mine) on an area's air water quantity?
  17. How long should groundwater be monitored after reclamation? Chemicals used in settling and wash ponds, as well as toxic heavy metals released from the deep rocks when blasted can leach into ground water long after the mine site has been abandoned. How long should testing and monitoring be done to make sure these don't leach down into the groundwater?
  18. What ground and surface water testing should be done to determine pollution, change of pH, temperature or other factors affecting the ability of normal aquatic life to be sustained and its safety for drinking? How can this pollution be prevented?
  19. What water mitigation plans should be required in case of pollution &/or contamination?
  20. How long should ponds and other surface waters be monitored after reclamation? Will the ponds left behind by these mines be safe to swim in, for fish and other aquatic species to live in, for wildlife to drink from?
  21. Invasive plants may be the only type of growth that can be sustained in reclaimed land that may not hold moisture any better than desert sand. How long should plant growth be monitored for sustainability (without irrigation) after reclamation?
  22. If land is going to be reclaimed as residential or industrial sites, what soil compactibility standards should be met in order to put in stable building foundations? The ground is too unstable after blasting and sand removal and exchange for overburden, etc. to support stable foundations for buildings without compaction.
  23. If land is going to be reclaimed as forestland, what tree species and sustainability standards should be required? I have had Black Walnut trees planted to replace groves

- ruined by tower construction without enough taproot or other means to sustain their growth. How can this type of thing be prevented with reclamation done by frac sand mines?
24. Noise levels affect people's health and hearing among other things. It probably affects wildlife, pets, and livestock also. What noise limitations should be set to maintain the health and safety of nearby populations?
  25. Seismic vibration affects livestock and wildlife at greater distances than it does humans. What seismic limitations should be set for any blasting or other percussive actions used by these mines?
  26. How do these mines affect the wildlife in the area? Water with much higher than the 40 mg/l TSS is regularly being discharged into our streams. 12,000 mg/l has been measured in some of the streams carrying settling pond discharge. Does the colloidal clay now covering the bottom of these streams affect the reproduction of some of the fish (like trout)? If water with crystalline silica is unsafe for us to drink & food with crystalline silica is unsafe for us to eat, what affects does it have on fish & other aquatic life?
  27. Light pollution can adversely affect the health of nearby residents. It can be an attractive nuisance for some wildlife and possibly affect the health of other wildlife. What are safe limits of light to keep habitation and recreation areas in the vicinity of these mine sites safe from unwanted light trespass, glare, and over illumination?
  28. What chemicals are safe to use as flocculents? Shouldn't chemicals be banned from use as flocculents until they have been found not to be a contaminant or testing measures and standards are developed for them?
  29. What groundwater monitoring and mitigation plans should be required?
  30. What distance above water tables should be maintained? Should soil permeability standards be incorporated into this distance?
  31. What recharge zones are safe for mining without causing a groundwater contamination hazard for an aquifer? Neil Koch (hydrologist) has indicated that recharge zones labeled excellent, very good or good soil type as verified by the exploratory boring should not be mined for groundwater safety reasons. Excellent, very good and good recharges are defined as 2 inches recharge per hour or faster.
  32. What crop productivity levels for land reclaimed to agricultural cropland, or pasture plant density levels for land to be reclaimed as agricultural pasture should be required as standards for reclamation to meet?
  33. How much toxic or respirable crystalline silica escape from both covered and uncovered trucks?
  34. How much toxic or respirable crystalline silica escape from both tanker and open rail cars?
  35. How much toxic or respirable crystalline silica is in the air around transloading stations, processing plants, and conveyer systems?
  36. Crispin Pierce has measured toxic levels in the air by railroad tracks that have frac sand transported along them as opposed to none by those tracks not transporting frac sand. How safe is it to live along these tracks?
  37. How safe is it to live along frac sand truck hauling routes?
  38. How far away from residential areas should transloading stations be?
  39. How far away from residential areas should processing plants be?
  40. How far away from residential areas should conveyer systems be?
  41. If this dust is just as toxic to livestock, pets, and wildlife, these same questions need to be addressed for them.

42. Many people hunt & fish in this area. Is it safe to eat fish, venison, and other game that have been living in and around these mining areas?

February 26, 2015

Stacy Harbaugh  
Communications and Outreach Coordinator  
Midwest Environmental Advocates

Chris Willger,  
Department of Natural Resources

Stacy and Chris:

I very much regret that I am not able to make one of the three public meetings being held in regards to frac sand mining. This issue is probably the most important environmental and health related entity to hit the state in its entire history.

I wish I had been able to attend the hearings because I could have expressed my concerns much better and more thoroughly.

Let me say that I feel the DNR has been derelict in its duty to protect the health of the people of Wisconsin. I do not understand why personnel in the Department have not been clamoring for a thorough study of water use in frac sand mining, and even more importantly, why there has not been an outright rebellion by DNR employees about permitting and licensing sand mines with no safety in regards to fugitive sand particles in the air around mines and processing facilities. I understand that you (the DNR) have a land developer for a commissioner, but that doesn't allow you to abandon your duty, as specified by statutes, to protect the health of the residents of Wisconsin. If you can't do that, then you should demand that the statutes be revised so that you are not in violation of them.

Stacy, let me thank you and your organization for heading up and organizing these hearings. It is long overdue, but now that it is happening, THANK YOU!

Chris, I hope you and your organization take these concerns, not just mine, but everyone's, very seriously, and that you begin to feel the pain and heartache many residents are feeling at the profit of a very few residents and an even much greater profit for a very few sand companies. Also, please begin to do something about the silica dust which is present everywhere around sand mines and processing facilities. I don't know how you are going to be able to do that if the governor's budget is passed with its great decrease in funding for the DNR, especially the science area.

Thank you for allowing me to comment on this issue.



Stacy Harbaugh  
Communications and Outreach Coordinator  
Midwest Environmental Advocates

Chris Willger  
Wisconsin Department of Natural Resources

It has come to my attention that you are holding hearings on frac sand mining for the purpose of actually placing some restrictions on the airborne particles that are being emitted into the air due to the mining. This has been a very serious concern of mine ever since the sand companies began mining in the state. At the present time there are no restrictions on the emissions that are occurring at operating sand mines. In addition, the DNR, even though many in the department know that fine silica dust is dangerous to human health, has ignored the problem, and some personnel have even stated there is no problem, when in truth, there is presently no standard for fine silica dust particles, and there is no initiative in the Department, to develop a standard. The Department has a standard for PM10 particles (10 microns), but these are not the size particles that are of real danger. The Department needs to develop a PM 2.5 (2.5 micron) standard, buy the monitors to sample that size particles, and get at it.

The question becomes, how can you state there is no problem, when you haven't even addressed the issue? The article I am enclosing is from the Minneapolis Star-Tribune (Wed, Feb 18, 2015), and it is about a similar problem that exists with iron mining in Northern Minnesota. Like Wisconsin is doing, the state of Minnesota refused to address the issue of fine particles in the air caused by the mining of iron. Now, many years later, the real problem is coming to light. People associated with the mining of iron are coming down with mesothelioma, a lung disease very similar to silicosis, and it is a fatal disease.

We cannot allow the mining of sand in Wisconsin to continue unabated with no restraints on the industry as far as fine sand particles are concerned. We need to measure the amount of fine sand particles in the air in the mines themselves, as well as the amount of fine sand particle affecting the residents in the surrounding areas of the mines. To deny that there are fine sand particles in the air around sand mines is ludicrous. Just park your car somewhere near an operating sand mine for one week. At the end of that time there will be a substantial layer of fine sand all over your vehicle.

There is some literature available on silicosis and cancer caused by fine sand particles (see enclosure), but much more needs to be done. And lots more needs to be done for the safety of the public. One of your most important charges ((for the Wis DNR) is to safeguard the health of the citizens of Wisconsin. Yet, here you are, denying there is a problem, when you don't have the foggiest idea about the problem itself.

★★  
B2 | The moose population in Minnesota continues to decline, says the DNR

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“I don't think there is any reason to panic at this point in time.” Health Commissioner Ed Ehlinger

“The science goes way over my head, but there is a problem here.” Dave Trach, retired miner

## More iron miners stricken with rare lung cancer

By DAVID SHAFFER  
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Minnesota health researchers say a rare, deadly cancer has struck 21 additional Iron Range miners, making a total of 101 workers afflicted in the state's iron ore industry.

The victims, most of whom have died, suffered from a cancer called mesothelioma that affects the lining of the lungs and other organs. It is linked

to exposure to asbestos and research has shown that Minnesota taconite workers get the disease at 2.4 times the rate expected under normal circumstances.

The Minnesota Department of Health findings released Tuesday add to the evidence that inhaled mine dust can trigger illness decades after exposure. Mesothelioma takes 30 years or more to develop, and is almost always fatal even with improved treatment.

“We know that mesothelioma is a horrible disease,” said Health Commissioner Ed Ehlinger.

But Ehlinger, on a conference call with reporters, said the uptick in cases isn't happening in northern Minnesota's general population. The stricken miners likely inhaled commercial asbestos on the job decades ago before the health threat became clear in the 1960s and early 1970s, he said.

See **CANCER** on B8 ▶

# More Iron Range miners die from rare form of cancer

► **CANCER** from B1

"I don't think there is any reason to panic at this point in time," the commissioner added.

"These are newly identified people whose disease after many years ... came to a point where it could be clinically diagnosed."

At least 18 of the newly identified victims have died. Six have all 80 of the earlier-identified miners, the department said.

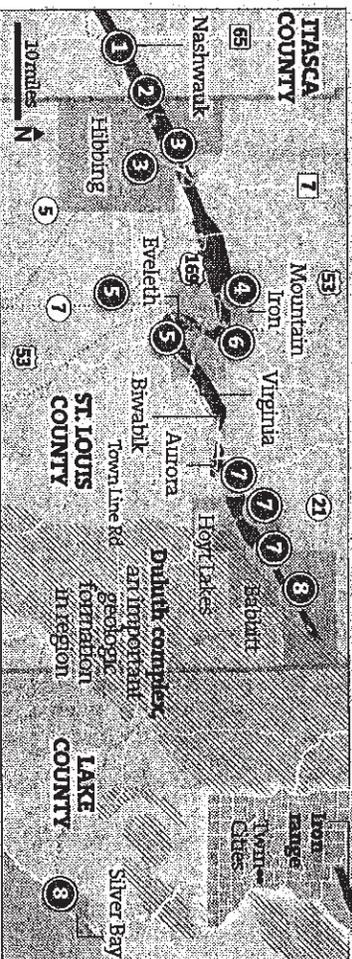
University of Minnesota researchers have linked mining dust exposure to scarring of the lungs and higher rates of mesothelioma. But commercial asbestos, which once was used in the taconite industry, remains a prime suspect. All of the victims are men, and women in the region have lower-than-expected mesothelioma rates, the department said.

Dave Trach, who retired from the LTV mine in Hoyt Lakes in 1996, said he was saddened but not surprised to hear that more miners have died of the rare cancer. He said the tally of mesothelioma cases doesn't count the many miners who got sick or died from other dust-related ailments.

"The science goes way over my head, but there is a

## MINNESOTA TACONITE OPERATIONS - PAST AND PRESENT

The state's second wave of iron mining began in the 1950s, using new technology to process an ore called taconite into pellets.



Source: Mining companies, Minnesota DNR, USGS

Map Name	City	Began	Workers**	Capacity (tons/yr.)	Current owner
1 Butler/Essar*	Nashwanak	1967	100*	7.0M*	Essar Steel
2 Keetac	Keewatin	1967	395	5.4M	US Steel
3 Hibbing Taconite	Hibbing	1976	770	8.0M	ArcelorMittal†
4 Minntac	Mountain Iron	1967	1,350	14.7M	U.S. Steel
5 United Taconite	Eveleth	1965	514	5.1M	CHS Nat. Res.
6 Minnorca	Virginia	1977	351	2.8M	ArcelorMittal
7 LTV	Hoyt Lakes	1957	-	-	Closed 2001
8 Northshore	Babbitt/Silver Bay	1955	572	5.7M	Cliffs Nat. Res.

\*Butler Pk closed 1986; Essar Steel plans to reopen operation in 2015; worker count is projected; tonnage figure is total capacity; full-time equivalent  
† part-owned and managed by Cliffs  
RAN GRUMNEY • Star Tribune

problem here," said Trach, 80, who coordinates a United Steelworkers retiree group. "When this comes out that there's 21 more, it is bound to be on everybody's mind that maybe I will have a problem

in later years." Tracking miners since 2003 The Health Department has done periodic analyses of miners with mesothelioma since 2003, using the state's cancer-

tracking system. New mesothelioma cases are checked against data on 69,000 miners going back to the 1930s. Nearly 4,000 workers now are employed in Minnesota iron mining.

## KEY FINDINGS

Mesothelioma cases in Iron Range miners from the 1930s to 1982.

21 new cases

101 total cases

69,000 Miners employed during that period

Source: Minnesota Dept. of Health

A weakness of the latest findings is that the employment database, assembled years ago by a university researcher, doesn't list miners hired after 1982. Worries about asbestos and cancer on the Iron Range emerged after 1973, when mineral fibers showed up in Lake Superior from tailings dumped by Reserve Mining Co. A scientific debate erupted over the potential risk of taconite fragments, which are shorter than needlelike fibers in commercial asbestos.

A 2003 study by the Health Department concluded that the first 17 miner mesothelioma cases were most likely caused by exposure to commercial asbestos. The Legislature in 2007 appropriated \$5 million for an in-depth study by the University of Minnesota.

Although the university research team linked dust exposure in miners to disease, the study didn't explicitly associate short taconite fibers with mesothelioma. A key problem is that researchers lack data on how much commercial asbestos floated in the air decades ago at eight current and former mining operations.

"The most difficult thing in this whole project has been that commercial asbestos is far and away the most likely culprit for these mesothelioma," Dr. Jeffrey Mandel, a U.S. epidemiologist who headed the six-year study, said in an interview Tuesday. "It is one exposure area where we don't have any measured information. We will never have that. These exposures took place in the 1950s and '60s."

Mandel said the discovery of 21 additional cases among miners doesn't change the U.S. researchers' findings released in December. He said U.S. scientists, led by Prof. Guntumby Ramachandran, already had plans to more closely analyze mineral fibers collected at mining operations to see if exposure to shorter taconite fibers is linked to disease.

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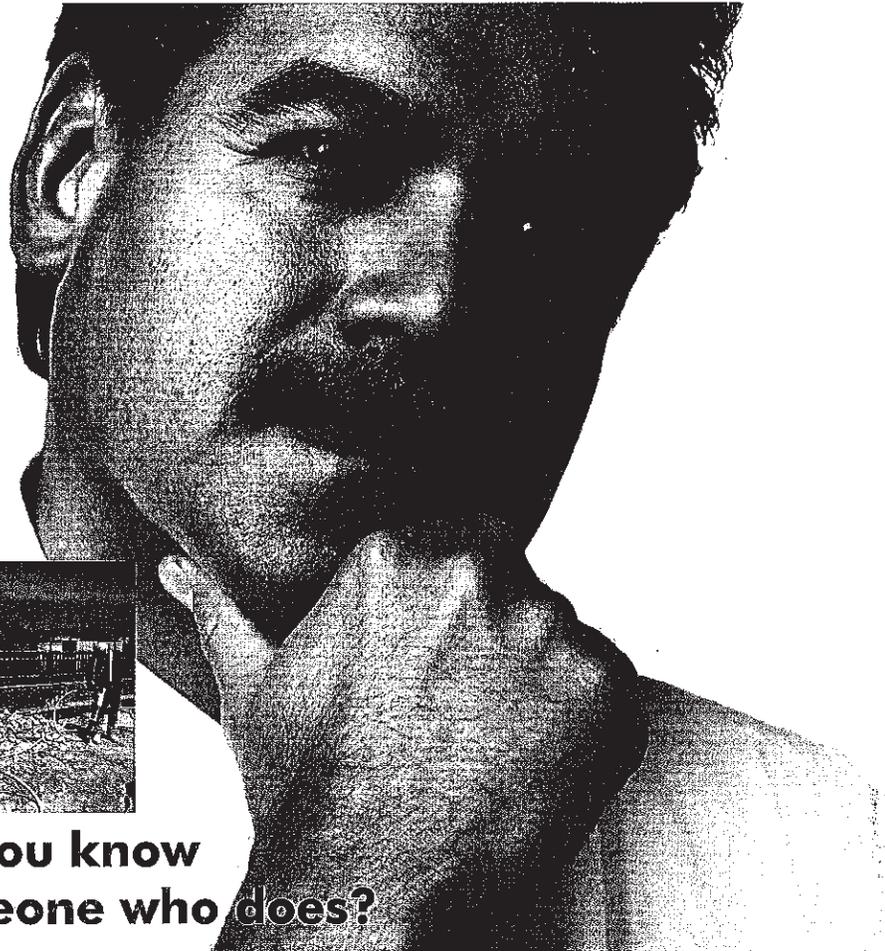
# Silicosis:

# Learn the Facts!

**Do you work in construction or do abrasive blasting?**



**Do you know someone who does?**



**U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health**

