

Sue Michaelson  
R. R. 1 Box 13  
Black River Falls, WI 54615  
December 5, 1996

Mining Impact Committee  
c/o John Kariger, Chairperson  
N12425 Hixton Rd  
Fairchild, WI 54741

Gentlemen:

In the November 27, 1996 issue of the Banner Journal there was an appeal for comments from citizens regarding the gold mine issue.

1. Kennecott Mine damaged a river in Canada. There was a bad clean-up.
2. Kennecott is only a subsidiary. They are owned by RTZ Company. Rio Tinto Zinc is a United Kingdom company founded in 1962.

They dropped 2 million in Ladysmith, but that was only for Jackson County's benefit. They wanted to show us how good they've been to their neighbors. However, 2 million doesn't come close to what they send out of county. Could we explore the possibility of profit/splitting the way Saudi Arabia splits with U.S. companies?

Why not bid this to a U. S. company?

3. Why not tell the truth. Why cover up? The cover up is they are not after copper or zinc. They already have copper mines they don't mine because the price of copper isn't worth it. They are after the gold!
4. Very few people employed from community.  
--Special talents are required for these jobs. The employees follow the mine companies from job to job and know they stay for a short period of time. Impact study here?
5. They say they stay "x" number of years; however, they soon cut that time in half by mining 24 hours a day. So, those local people who might get a job, won't have it for very long.

Page 2  
December 5, 1996

- P175
6. Cyanide wash smelter -- Do we need that? -- Doesn't that scare anybody? Have we forgotten Love Canal? What about our ground water?
  7. Are they really going to the change the course of the Flambeau River to get the gold from under the river bed?
  8. Why not call a moritorium on mining until we see what happens in Ladysmith. After each site is mined, wait 30 years before the next site is started. The gold will still be there. They can mine it then.  
  
The gestation period for cancer is about twenty years. Shouldn't we protect our kids by not exposing them to the pollution this is sure to cause? We should find out about the lead poisoning in the children in Utah.
  9. The Wazee mine was seen as a success because it was non-sulfide. The gold mine will be a metallic sulfide mine. There is a good possibility of ground water and surface contamination. There will probably also be leaching of waste material.

Those are my thoughts and questions on the subject. Thanks.

Sincerely,

*Sue Michaelson*  
Sue Michaelson

Tom Wilson  
N13109/N13145 Wildwood Lane  
Fairchild, WI 54741

December 10, 1996

John Kariger  
Chair Mining Impact Committee  
N12425 Hixton Rd.  
Fairchild, WI 54741

Dear John:

I would like to take this opportunity before the next town board meeting to make a few observations regarding the issues raised at recent meetings on the need for zoning regulations in the town. As you know, I am not a lawyer, but I have been trying to educate myself on issues relating to our circumstances in relationship to the mining issue and have carefully read the three letters to the Town Board from Mr. William Thiel (dated November 1, November 8, and November 11).

Personally at this point, I do not have real strong feelings as to whether the town should accept zoning or not. I can sympathize with people who see a future filled with complex regulations, paperwork, restrictions, bureaucracy, and fines for fairly insignificant personal choices as to what they want to do on their land. I do believe, at this point, that zoning is probably not a very popular political issue in our community--though I may certainly be wrong on this. In the long run, certainly zoning will be in our future. No matter how much we may like to think otherwise, population pressures from both the Eau Claire and Black River Falls expansions are already beginning to effect our community.

I understand-- from sources that are far more connected than I--that there is a major move afoot in Madison to impose statewide mandated zoning in the fairly near future. This means that any efforts and expenditures that we should now put into this effort might be moot--that is to say a waste of time and resources. Fiscally, we would do much better to wait until Madison mandates us to accept a state or county zoning or to put into place our own system for which a certain amount of State reimbursement would be likely.

I must say, in reading Mr. Thiel's opinions on the issues of zoning, I do not come to the same conclusions as he does from the case histories provided. For instance, on Page 2 of The November 1 letter, he quotes §25.53 *McQuillan* "...that the primary intent of a zoning ordinance 'is to regulate uses of lands and buildings according to districts, areas or locations.'" Or on page 3 of the same letter in *State ex rel Sprros v Payne* "Zoning may be defined as a general plan to control and direct the use and development of property in

the municipality or a large part of it by dividing it into districts..." I think it is clear that that was neither the intent nor the result of our mining permitting regulations. We are not trying to say *where* mining can or cannot be undertaken in the township, but rather *if* mining were to be undertaken *anywhere* within our community, it must be done with the following safeguards and limitations, just as we might pass an ordinance that it is illegal for anybody to dump waste oil down an abandoned well hole. This is not zoning but simply a police regulation designed to protect to land and resources within our community. I think the case has been clearly made in one of our informational meetings that you really *can't* honestly limit mining to any particular arbitrary locality of a community like you could, say a factory or a residence, because a mine *has* to be located *where the minerals are*. Thus to try to regulate mining on the basis of districts, areas or locations immediately opens the regulating authority to accusations of arbitrary and capricious restrictions on the mining operations.

I suppose I would have a more favorable appreciation of Mr. Thiel's opinions if he had further demonstrated exactly how zoning regulations would provide the township with the authority to regulate mining activities according to the will and the mandate of the people living in this community and our elected leaders. Since he has not done so for us as of yet (and likely will not do so until after a fairly lengthy and expensive regulation-drafting process), I have taken the opportunity to sit in on part of a zoning committee meeting in Trempealeau County. Here too, Mr. Thiel is that board's lawyer, and he is in the process of drafting a zoning ordinance relating to mining for that county. Unfortunately, I was unable to stay for the entire meeting because I had also committed to attend a meeting that same morning regarding the Coon Fork flowage (referenced in my earlier letter to Fred Vance). From what I did hear, however, and from what I read into the draft of the ordinance presented at that meeting, I do not believe that this document is providing the local officials any significant control over any proposed mining activities within their county. I am presently drafting a letter to the Trempealeau Zoning Board outlining the particulars of my concerns, and I will hopefully have a draft of that letter by the town board meeting on Thursday (the next Trempealeau Zoning meeting is December 17). I will here briefly note several of my concerns:

1. Many issues are totally ignored including a regulation or permitting process for mining exploration. There is good indication that extensive exploration drilling is not without potential environmental impacts. The one drilling that has taken place in Trempealeau County (before the present moratorium was put in place) caused a fair amount of concern for some board members because it was done very close to both a public highway and a stream). Similarly in Mr. Thiel's November 11 letter to our board, he speaks only of regulating prospecting and mining permitting and seems to ignore exploration as an issues of concern.

2. When the issue of vested interests and potential takings liability was raised (as I discussed in an earlier letter to you), Mr. Thiel's response was that the community could be protected against that threat with further legislation, but essentially admitting that the zoning ordinance in and of itself did not provide that protection.

3. Potential setbacks from rivers lakes and boundary lines discussed were 1,000

182.075 establishes a "compliance boundary" of 1,200 feet from the edge of mining operations within which no groundwater standards apply and no testing is required means that these resources would be totally unprotected under a mere 1,000 foot setback.

4. Potential hazards to both personal property as well as cemeteries and "natural habitat required for survival of vegetation or wildlife designated and endangered species." can be "...mitigated by purchase or by obtaining consent of the owner". How can you buy the rights to destruction of habitat for endangered species?

5. Mining can be "...denied a permit if the mining operation is projected to result in a net substantial adverse economic impact to the County *over the life of the proposed operation*," but the ordinance says nothing about the economic depression that will result when the mine pulls out.

6. Diversion and control of surface water is held to a standard to meet "a 24 hour 25 year storm" situation. In fact, Trempealeau county has seen *three 100-year storm events* in the last three years.

7. And finally, the draft Trempealeau County Zoning ordinance is almost totally dependent on the DNR §144, and other Wisconsin Statutes for most of the specifics for environmental protections and permitting. The examples of how these statutes have been administered in the case of both the Ladysmith and Crandon mines as outlined in *A Question of Bias* which all of you, I believe, have received copies, clearly provides evidence that the state government is providing insufficient protection to our resources and our community.

But let me return to Mr. Thiel's letter to our Town Board.

Pages 7 and 8 of the November 1 letter seem to constantly equate "regulating" with restricting or forbidding. I don't see how this is related to our ordinance as we are not attempting to do neither restricting nor forbidding.

The letter of November 8 deals with four issues;

1. Should the town hold a referendum. State law allows only a non-binding advisory referendum. My question would be, could not a town board with village powers legislate (as part of a permitting ordinance for instance) that a permit will not be issued or a local agreement signed without a majority approval of the voting electorate? It seems to me that a governing body could always give up some of its powers to the will of the people if it should so choose. This would, in turn, free the town board from a certain level of liability from potential lawsuits from the mining companies as actions were made based on the will of the people.

2. Here the initial question of what is wrong with our present ordinance has been sidestepped again. I think there has been solid opinion from other legal authorities that what we have already is a legally defensible land use and regulatory ordinance. I think we are asking for some further advice as to how this

ordinance can be strengthened against assaults on its intent through any loopholes that may exist within it. To date, Mr. Thiel has yet to make comment on the insufficiencies in the mining company's permit application which was, I thought, the primary issued for which we was retained.

3. Ignoring the issues in # 2 above and suggesting that we should begin the long and arduous process of adopting a zoning ordinance does not address the questions for which we hired a lawyer. We are spending a lot of taxpayer money and are not getting answers to our primary question but are rather being led down a very different path than we had intended. The commentary here spends far more time telling us why we should do nothing than what positive actions are possible. Is this the advice we need?

4. There is no distinction being made between a zoning and other types of land use ordinances—both of which allow a municipality to be eligible for entering a local agreement with the mining company. On page 5 of this letter, the quote of §144.839(2) conveniently edits out: "(f) the applicability or non applicability of counties, town...ordinances, approvals and resolutions."

In the letter of November 11, Mr. Thiel discusses at length the issue of vested interest. He seems to be addressing only issues of direct hard economic investment in the property: i.e. how much money they would have spent building facilities or doing exploratory drilling. To my mind, two very important vested interest issues not discussed are:

a) Agreements made with both landowners and holders of mineral rights (who may be very different from the former and for which the mining company may have invested great deals of money which they are not required to disclose).

b) The actual value of the ores discovered beneath the land once exploratory drilling has taken place.

The overall message I get from Mr. Thiel's comments and suggestions is that he feels that zoning is the only way we can legally regulate mining as a land use activity in our community. I am personally convinced from the other legal opinions offered that our present ordinance—with possible modifications—can legally provide us with a strong case for the environmental protections we desire. As such I would encourage the board to look to other legal opinions as to how we can strengthen this document. Although I personally would not approve of the expenditure of tax revenues for the purpose, if the board is still not convinced that a permitting process will adequately protect the community, we should indeed additionally pursue the legal options of drafting a zoning ordinance that will meet our requirements.

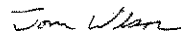
As Mr. Thiel makes quite clear in his letter of November 11, to try to impose zoning or other land use restrictions on a firm after they have expended significant resources into the project, opens the board and the community to the potentially disastrous liability of negating vested interests and subject to suit over takings issues. In addition, he informs us that the process of enacting zoning legislation is a complicated and lengthy one. In

response to this combination of factors, I strongly encourage the Board to extend its present three-month moratorium on exploration and any other mining activity into an open-ended moratorium to be sustained until we can legislate either a zoning or other land-use regulation which is agreed by all to be enforceable.

The town, through its present land use permitting regulations has made it quite clear the intent with which the community wishes to deal with the mining question. Exactly how this will of the people is expressed in legally defensible ordinance is one that we must all struggle with in the months to come. There is no reason for us to be in a hurry. The mining company understands how we feel (and expressed no problems with our present ordinance at the time of its introduction and passage). The ore is not going anywhere, and the mining company has 20-year leases with most of the participating landowners. Let us take our time, get the best legal advice we can afford. But let us not get into a position where we can be accused of changing the rules after the game has begun. Once we have our regulations in place, we can enforce them and negotiate with the mining company in good faith to achieve our desired ends—the protection of our environment and our community.

Thank you for your time and effort in considering these issues.

Sincerely,



Tom Wilson

Copies to all Town Board members, Mining Impact Committee members, Steve Dickensen and William G. Thiel.

To the Cleveland Town Board

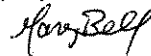
I urge the board to deny a permit for the exploration of sulfide mining. I could not attend the public meeting but would like to take this opportunity to express my point of view. I will try to be as brief and as organized as possible.

We have all heard the statement "Just let the mining company drill a few test holes, than we will all know what is down there and we can put this all behind us." This seems simple enough, but you and I both know that a mining company cannot afford to drill test borings just to satisfy someone's curiosity. That is precisely why the mining co. secures a binding lease with property owners involved, and reserves the right to pursue the exploitation of minerals found during testing. Therefore our township does not have a vested interest in exploration unless we intend to have mines.

Our township needs to evaluate carefully any and all businesses that operate at such a fiscal magnitude as to require a joint union of our labor and resources. A large mine could require additional roads, road maintenance, monitoring and all kinds of legal and time consuming activities, as well as increased liabilities. With this in mind we have to ask ourselves some serious questions about who we want to be yoked with. First of all we need to look at some examples of communities with one business so large it dominates the community and before long the partnership is in word only and the company dictates political policy, an example would be Ashley in Arcadia and we all know now that the best thing that ever happened to Eau Claire was when Uniroyal left. Secondly and most importantly we must look at the character an integrity of those we chose to become entangled with. Kennecott-Flambeau mining co. met with local residents and sought to obtain leases quietly and behind everyone's back. My deepest gratitude goes to Jerry Bowman; you were the only one who brought this to the community's attention and made an attempt to consider anything but personnel gain. You are a friend in the truest sense! Your character is opposite to that of the mining co. People were further deceived when our situation was compared to the Flambeau Mine. At the state level our legislators are questioning the mining record and their commitment to safe environmental practices. In fact the mine industry as a whole cannot give one example of a mine that meets Wisconsin's moratorium criteria. Kennecott claims "our regulations will protect us". In fact our regulations will have to protect us because Kennecott will only do what they absolutely have to. This is born out in their record. They have no record of successfully closed mines because basically they just don't care what happens to you and me and that is not a company with integrity.

Please deny their request to drill.

Thank you for all your time and dedication to your neighbors  
Sincerely Gary Bell



Cleveland Town Board

27 February 1997

Dear Sirs:

After viewing a tape from Flambeau Mining and seeing some of our neighbors giving their reasons for signing lease agreements for exploration, we're still not convinced.

We also attended the meeting at the Rod & Gun Club on Feb. 20th and noted that Flambeau had brought out more of their "big guns" to tip the scales in their favor. It brings to mind the story of David and Goliath.

We came to Jackson County 45 years ago, milked cows for 30 of those years and would like to spend the rest of our retirement here. We don't need this intrusion by big conglomerates who think they're doing us a favor with their presence.

Please look into the future when you cast your vote.

Sincerely,

*Ed J. Kerkvliet*  
Ed. J. Kerkvliet  
*Blanche M. Kerkvliet*  
Blanche M. Kerkvliet

ATTN: Cleveland Town Board

RE: Exploratory Drilling by Flambeau Mining Company in the Town of Cleveland

As property owners in the Town of Cleveland, we are deeply concerned as the date draws near for voting on allowing permits to be issued to the Flambeau Mining Company for the purpose of exploratory drilling on the land presently leased from several residents in the Town of Cleveland.

After reading a recent article in one of the local papers, on this subject, as it pertains to the number of bore holes that can be drilled, we learned that there could be at least one bore hole per 10 acres of land, as in the case of a particular county whose zoning ordinance would allow this. We are aware that our town ordinance does not contain a specific designation of the number of bore holes that could be drilled per acre, and in view of the 800 acres involved in our area, we feel we could end up with a part of our township riddled with holes that could cause problems down the line, such as the contamination of ground water caused by the run-off of surface water created by the excessive drilling, something that should be a matter of considerable concern.

Therefore, we urge that you seriously consider our plea to vote to ban any exploratory drilling in our township as we feel that once a permit has been issued, and drilling commences and especially if minerals are to be found, the Flambeau Mining Co. will have their "foot in the door" and then there can be no turning back!

Sincerely,

*Rose Bertram*  
*Ird C. Bertram*

December 19, 1996

Mary Boullion  
W12651 E. Bramer Road  
Fairchild, WI 54741  
November 20, 1996

Mr. John Kariger, Chairperson  
Mining Impact Committee  
N12425 Hixton Road  
Fairchild, WI 54741

Dear John:

RE: Mining in Cleveland

Cleveland has been my home for a great many years and I expect it will remain so for many more. I do have concerns about the mining issue and the changes mining would create to the quality of our life. Basically, after listening to both sides, I fear for the quality of our air and water. It appeals to me that Cleveland has been basically recreational, agricultural and residential. A nice little community.

I would appreciate it if your committee would consider these items.

Thank you for your service.

Sincerely yours,

*Mary Boullion*  
Mary Boullion

John Kariger  
Mining Impact Committee  
N12425 Hixton Road  
Fairchild, WI 54741

Dear John:

I'm the third generation of my family to own land and live in Cleveland. We like what Cleveland represents. Recreational, residential and agricultural. That's why we stay.

While I know that being a member of the Impact Committee is a thankless task, it is a great service to your community. We do appreciate the committee members being willing to undertake this responsibility.

**I urge you and your committee to oppose sulfide mining in Cleveland.** The risks to our environment are too great as well as the loss of a way of life most of us cherish. We need to consider the quality of our air, both for noise and dust pollution. We need to consider the water quality. There's absolutely no guarantee that the water in Cleveland will be potable down the road. We need to preserve our way of life.

There's one more issue that needs to be addressed. We need to consider the property values for those of us who will **not profit** from mining. We must consider all the residents and not those who **just might** make a tidy profit.

Thank you!

*Jack Boullion*

Jerald A. Walker  
W12651 East Bramer Road  
Fairchild, WI 54741

December 19, 1996

Mr. John Kariger  
Mining Impact Committee  
N12425 Hixton Road  
Fairchild, WI 54741

Dear John:

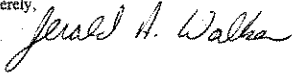
I am writing to you about the mining issue which is causing such diversity in our small community.

I've lived in Cleveland most of my life and plan to raise my daughter here. We live here by choice. The small town atmosphere is something we treasure. My concern is that if mining should begin in Cleveland we would no longer have what we do now.

Recreation is a large part of the Town of Cleveland, as evidenced by the large number of absentee landowners. A great many of our newer residents have moved to Cleveland to get away from industry with its pollution and noise.

Please consider my letter when making any decisions for the residents of our Town.

Sincerely,



December 9, 1996

John Kariger, Chairperson  
Town of Cleveland Mining Impact Committee  
N12425 Hixton Road  
Fairchild, WI 54741

Dear Town of Cleveland Mining Impact Committee:

I would like to thank you for all your hard work in arranging the informational meetings on the different mining issues. It was especially refreshing to have presentations from both sides of the issue, and the presenters have given us all much to consider.

Based upon the facts presented at the informational meetings, my personal experience, and some additional research on my own, I feel compelled to express my apprehension and concern over the proposed mining activities in our township.

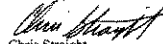
Since I am originally from West Virginia, the impacts of mining are not new to myself and my family. In fact, my grandfather, two great-grandfathers, and numerous other relatives were all miners. Some of these relatives have died from black lung disease; many others, including my grandfather, felt the effects for many years. When we periodically return home to visit relatives, the other impacts of mining in the Appalachian region are apparent. Entire mountainsides are barren and devoid of plant growth, a result of the practice of strip mining. Small communities on numerous backroads and hollows have nearly become ghost towns as the unskilled labor force relocates after a mine has closed. Mom can recall stories of company towns where only scrip was accepted, or the labor disputes and strikes which always seemed to happen around the Christmas holidays.

Many would contend that these effects are limited to coal mining, but the facts provide us with parallels. Studies of copper smelter workers in Tacoma, Washington; Magna, Utah; and Anaconda, Montana, have all found an association between occupational arsenic exposure and lung cancer mortality. (The Magna mine is operated by Kennecott.) Strip mines and open-pit mines, such as Kennecott's Copper mine in Utah, drastically change the landscape. In fact, "[w]hen astronaut Buzz Aldrin looked back at the earth from his vantage point above the moon, the only man-made geological feature he could see was the Kennecott Copper mine in Utah" (Lappe, Chemical Deception, p246). As Tim Tynan explained during his informational presentation on 11/21/96, mining economies follow a boom and bust cycle. A visit to Cabin Creek, West Virginia, will demonstrate this fact.

These facts aside, what concerns me most is the future. The mining companies are currently lobbying to change state environmental and federal Superfund regulations. Many mining companies are attempting to reduce or eliminate their liability for the clean-up of contaminated sites that they own. What will happen forty years after the mine has closed and the company is no longer legally obligated to continue with monitoring? The toxic waste will still remain for many future generations of Cleveland Township residents.

In November of 1995, I decided to make this area my home due to its natural beauty and rural character. I had lived in the city for far too long and needed to find some peace of mind. I found it here. But a mine in the Town of Cleveland would definitely change our standard of living. And I fear it already has.

Sincerely,



Chris Straight  
N13577 North Alma Center Road

Patricia Jo Cairn  
5623-39th Avenue  
Kenosha, WI 53144

October 30, 1996

Town of Cleveland  
c/o George Remkus, clerk  
W13915 McGower Road  
Fairchild, WI 54741

George Remkus:

I am writing you in regards to the mining issues that have been brought up in the Fairchild area.

My husband and myself purchased a cabin and 20 acres of land five years ago, N12489 Fairchild, WI. We purchased this land with the intentions of expanding our cabin into a full size house and retiring there. We purchased the land in this area because of the remote beauty and clean environment. This was going to be a place we could retire and have our family's family come back to. A peaceful gathering place. Now we may be reconsidering our plans in light of the possible mining development.

If the mining company comes into the land, what will it leave us. It will leave us with dirty air, water will be poisoned, the land will be demolished, and the beauty destroyed. The mining company said this will not happen, but I am not willing to even take the chance. I do not feel that this is the way to have an area developed. I am strongly against the mining company coming in the Fairchild area. Let them go somewhere else. Leave our peaceful community alone. We didn't ask them to come, but we will ask them to leave.

Sincerely,

Patricia Jo Cairn

November 18, 1996

Mr. John Koenig  
N12425 Hixton Road  
Fairchild, WI 54741

Dear Mr. Koenig,

I am writing because you are Chairman of the Mining Impact Committee for the Town of Cleveland, and because this committee is preparing a report advising the Town Board on how to deal with the issue of metallic mining. In preparing this report, I hope you take into account the wishes of people such as myself, who live in Crawford Township, but would be affected by what happens in Cleveland.

I am very much opposed to any form of mining in this area for the following reasons:

- I don't want millions of gallons of groundwater being pumped out of the ground, when I depend on that groundwater for my well.
- I don't want tons of toxic chemicals brought into the area to process the ore. Again, an accident could happen and they could spill into my drinking water... yours too!



- I don't want a smelter with a large chimney dumping filth into the air we all breathe.
- I don't want mine tailings stored in the area. There isn't an abandoned sulfide mine anywhere on this planet that hasn't had groundwater pollution problems resulting from tailings contamination.

Mr. Karger, I've lived in Detroit and Chicago before moving up here, and I've seen the effect of heavy industry in these towns first-hand. They are filthy, ugly, stinking places and nobody who is in their right mind lives anywhere there. I've been to see the mines in Sudbury, Ontario and the U.S.; the landscape around them is so barren and scarred as the moon. I don't want to see this beautiful spot of earth I call home turned into hell-holes such as those. I hope you will urge the Town Board of Cleveland to reject any mining or iron exploration in the basin, because we all will suffer from it.

Thank you for your time. If you'd like to expand, I'd enjoy hearing from you.

Sincerely,  
 Renee Katalunas  
 113466 Co. Rd. T  
 Fairchild, Wis. 54741 (715) 577-2728

Dear John Karger,

I am writing to you to strongly encourage you to advise the Cleveland Town Board to vote against mining and mining exploration in this area.

My husband and I moved to this area from Chicago to escape the traffic and pollution that goes along with living in an industrial area. We chose to live in this area to enjoy the wonderful quality of life that rural living provides. We feel that allowing mining into this rural, residential area would greatly alter everyone's quality of life in a very negative way.

I am very concerned about pollution of the water table, which would affect not only our well water, but would have a devastating effect on all the small farms in this area. I feel the farmers in this area struggle enough, without having to deal with the destructive effects that mining would have on the water table. One farmer who grows cranberries in this area was already told by Ocean Spray that they would not purchase his cranberries if a mine went in here.

I am requesting that the Cleveland Town Board act in a responsible way to protect it's residents. Please vote against mining and mining exploration. Thank you.  
 Sincerely, Teri Melcher

Rebecca Clark  
N13001 Wildwood Lane  
Fairchild, WI 54741

December 29, 1996

Honorable Jerry Bowman  
Chairman, Cleveland Town Board  
N13298 Hill Road  
Fairchild, WI 54741

Dear Jerry:

As of today's date, I wish to formally tender my resignation from the Cleveland Township Mining Impact Committee (CMIC) for the following reasons:

First, because of health problems, I find that I cannot devote the time and attention demanded by this position.

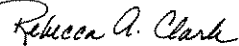
Secondly, the CMIC is not an information-gathering mining impact committee. It is rather an anti-mining coalition with only one member that was in favor of responsible mining. All of the other members, including the chairman, have been very outspoken in opposition to mining and have demonstrated their position in regard to mining with "Say NO to Sulfide Mining" signs on their properties. They have commented publicly, verbally and in writing, their opposition to mining and have taken it upon themselves, without the permission of the town board, to publicly release unreviewed documentation. The chairman, with the three anti-mining members, has hosted meetings with anti-mining groups and invited politicians from surrounding counties to influence them to oppose mining. Although all the members have the right of Freedom of Speech and Expression, as CMIC members they also have a certain responsibility to attempt to maintain a degree of objectivity.

The intent of this committee was to gather information from both sides and present it in a compiled form without attempting to create policy or recommendations. I have serious doubts about the objectivity and credibility of any mining impact report this committee may submit to the town board. It is unlikely that any material that I gathered and presented will be treated in an open-minded or objective manner.

From the beginning, I have experienced open hostility and animosity from other committee members for my contrary views and my family's position as a lessee. When I have tried to present factual information during open committee meetings that refuted comments made by other committee members, I was effectively "muzzled" by the chairman.

For these reasons, I do not wish to be associated with the group that comprises the Cleveland Mining Impact Committee. I intend to continue to be involved with the issue of responsible mining, but not as an ostracized member of the CMIC.

Sincerely,



Rebecca A. Clark

cc: John Kariger, Chairman, CMIC

Dear Rebecca,

I am sorry that you are having health problems and feel unable to continue to work with us. I understand that the role of being in the minority on an issue, either on a committee or in a community, is a difficult one.

Your resignation came as no surprise to me. It has been clear to me for the last several months that the best strategy you could employ in an attempt to discredit the committee would be to leave it without a voice for the pro-mining minority. Most of the area of the report that was assigned to you has already been completed using references provided by various mining companies.

I would appreciate the return of any documents that you have that were given to you by myself or others on the committee. Specifically, there were documents printed on colored stock that were passed out at the meeting with Tom Evans that did not come back to me with the rest of the material that was supposed to be copied. There was also a booklet on trout fishing that had a number of maps in it that showed the classification of trout streams in our area.

There are a few points in your resignation letter that I must respond to.

Your voluntary absence from many of the more recent committee meetings and the two public informational meetings that addressed the environmental and socioeconomic aspects of metallic sulfide mining clearly shows your bias and contempt for opposing viewpoints.

As private citizens, we all have a right to express our opinion. We have all exercised the opportunity to speak freely and shared openly the documentation collected in the process. Both you and Flambeau Mining Company have taken the opportunity to promote mining in the newspapers of the area. To suggest it is improper for other committee members to express their opinion seems a bit one-sided. I don't recall being given an opportunity to review your letters to the editors or Flambeau's half page ads in the papers.

The intent of the committee was to gather facts, submit a report and make a recommendation to the board based on those facts. I was fully aware of the purpose of a Local Impact Committee long before I was appointed as chairman. In fact, State Statute 144.838 Local Impact Committee, states our purposes, in part, in sections (b) as: "Analyzing implications of mining" and (e) which states quite plainly: "Recommending priorities for local action".

I do not believe you were ever told, or suggested to, that any information you might contribute to the report would not be included. To suggest that this is the case is simply not true. In fact, I stated in several meetings and in the original outline for the report, that information would be included, on both sides of the issue. Please refer to page 1 paragraph 1. Mining Impact Report Outline:

"The key to the success of the Mining Impact Report is objectivity. All statements should be based on fact and the sources of these facts must be cited. The pro's and con's of every issue should be discussed including the economic issues regarding mining".

I do believe it is premature to judge the objectivity of a report that has yet to reach its final draft stage. Objectivity does not mean neutral, it means based on fact. If the facts presented in the final

draft cannot be supported, then you or anyone else will have an opportunity to refute them in the review process.

It is unfortunate that you feel hostility from other committee members. I have made it clear both publicly and privately that our disagreement over the issue of mining in our community should not become personal.

I am sorry you still think you were "muzzled", you probably don't recall that another member of the committee was also "muzzled" at the same meeting. Had you attended the meeting from the beginning you would have known that we were attempting to follow an agenda that included progress reports from the committee members. What you were talking about was irrelevant to the question of your progress on the filing system that you volunteered to take charge of. As I have stated in the past, it became apparent from the beginning that to argue individual points about mining in the context of the committee is non-productive and would only end up wasting time, defeating our purpose, and creating more conflict. As chairman of the committee it is my responsibility to maintain order and foster an atmosphere that will allow all sides of the issue to be included in our report.

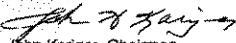
After attending all the informational meetings and spending uncounted hours studying all the material that has been gathered on the subject of metallic sulfide mining, including material submitted by yourself on behalf of the mining company, I have seen nothing to change my opinion that this activity will have a devastating effect on the quality of life in this community from a socioeconomic point of view and poses a serious risk to our water, should any of the systems, designed to protect the environment, fail due to human error or because designs do not fully anticipate the extremes of nature. There have been many examples of just these kinds of failures in the past and not just the distant past. Newspapers have reported failures of designs as recently as this year, that have probably caused irreparable damage to adjacent waterways.

We all came into this process with a certain degree of interest and opinion on the issues (being a lease-holder certainly reflects your own self-interest in the process). I can honestly say that I have nothing to gain from my opposition to the development of mining in this community. Certainly, it is clear to me that, as a carpenter, any kind of development that would require construction would be good for my business.

My involvement in this issue is based solely on my concern for the right of the majority of my neighbors to live in the kind of community that they have chosen by virtue of its existing qualities, i.e., undeveloped, remote, clean air and water, and peaceful neighbors. To allow a foreign owned mining company, in collusion with a minority of financially motivated individuals, a few of whom are out of town landowners and recent land purchasers, to force the kind of social upheaval, economic ups and downs and environmental risks that mining development brings, onto the rest of the community, is simply not right.

I hope your health problems are not serious and that you have a quick recovery.

Sincerely,



John Kariger, Chairman  
Cleveland Township Mining Impact Committee

cc: Jerry Bowman, Chairman Cleveland Town Board  
Fred Vance and David Duerkop, Supervisors



KENNECOTT EXPLORATION COMPANY

Black River Falls, Wisconsin Office  
P.O. Box 547  
437 N. Water Street  
Black River Falls, WI 54615  
Telephone: (715) 284-0600  
Facsimile: (715) 284-0800

February 28, 1997

VIA TELECOPIER  
AND U.S. MAIL

Town of Cleveland Mining Impact Committee  
c/o John H. Kariger  
N12425 Hixton Road  
Fairchild, WI 54741-8712

RE: Initial Comments on Draft Metallic Sulfite Mining Impact Report

Dear Committee Members:

This letter is an initial response to the draft Metallic Sulfite Mining Impact Report prepared by the Town of Cleveland Mining Impact Committee dated February 20, 1997. While we appreciate the opportunity to comment on this Report, these comments are not comprehensive given the limited time which is provided for comment.

It is clear from the scope of the Report and the process employed by the Committee that considerable effort went into preparation of this Report. We agree that promoting a better understanding of metallic exploration and mining is a laudable goal. Certain aspects of the Report, particularly those describing the basic mining process help further that goal. However, much of the Report and its recommendations frustrate the very goal that the Report is designed to serve.

The Committee recommends that metallic mineral exploration and mining "should not be allowed" primarily because some mines in other jurisdictions have created adverse socio-economic or environmental impacts. Such an approach, however, prevents citizens from evaluating specific proposals based on the merits or lack of merits of those proposals.

Citizens are entitled to know whether there are mineral deposits within their community and be able to make decisions about them based upon specific proposals. It may be, that if a deposit is discovered, and if there is a proposal to mine that deposit, that the community will decide that it does not want to grant a permit for that proposal. On the other hand, once all the facts are in, the community may decide as

it did in Ladysmith that the proposal makes sense for the community and the environment. In either case, however, the citizens should have a right to make that choice based on an understanding of all of the facts — particularly the specific facts as they may apply to the Town of Cleveland.

We believe that precluding additional information, discussion and review by the citizens is particularly inappropriate given three fundamental and recurring flaws with respect to the Report in its current form: (1) the Report focuses on mining rather than exploration, which is the only issue currently before the community; (2) the Report is incomplete in its presentation of the mining industry and ignores the many examples of modern mining which have been successful without adverse environmental or social impacts; and (3) the Report contains numerous specific inaccuracies in describing the regulatory process and the alleged impacts from exploration and mining.

**1. THE REPORT IMPROPERLY FOCUSES ON POTENTIAL MINING IMPACTS WHEN THE ONLY ISSUE BEFORE THE COMMUNITY IS MINERAL EXPLORATION.**

The bulk of the Report is directed at potential impacts that could result from a metallic mining operation.<sup>1</sup> As a result, the analysis of impacts is completely speculative. For example, the Report addresses potential socio-economic impacts that could result if a deposit like the Crandon deposit were mined in the Town of Cleveland. However, such an analysis presumes that all of the following events have occurred:

- Exploration has resulted in a potential discovery. Although we are optimistic here, generally only one in 1,000 exploration sites yields a deposit.
- The deposit is sufficiently valuable so as to warrant undertaking the mine permitting process. This is not a casual decision. The permitting process for the Flambeau Mine cost tens of millions of dollars.
- The Company has successfully navigated through the state, federal and local permitting process, a process which can take anywhere from four

<sup>1</sup> The few comments that are actually directed at exploration are inaccurate for the reasons discussed below.

to six years or more and must take into account the very socio-economic and environmental impacts which are a concern in the Report.

The mine as permitted would be of a size to generate the level of employment anticipated by the Crandon Project.

Of course, it is possible, however improbable, that all of these contingencies would occur and that the Town would determine the socio-economic impacts to be unacceptable. It is far more likely, however, that there will be no impacts because the project will never progress to the mine permitting stage, or that the impacts will be manageable and acceptable to the Community as in the case of the Flambeau Mine.

The statement in the Report that exploration should be banned because any discovery will lead to mining not only ignores the economic and regulatory decision points noted above, it is not borne out by experience in Wisconsin. There are many metallic mineral deposits that have been discovered through exploration activities that are not being mined. This is because the mining companies have determined that the deposits are not sufficiently valuable to warrant undertaking the rigorous permitting process. Similarly there have been deposits which have not successfully completed the permitting process.

In this regard, the history of the Flambeau Mine is instructive. In 1976, Kennecott proposed to mine the deposit in the Ladysmith area under a project design which, among other things, would have included the construction of tailings ponds and would have reclaimed the pit by allowing it to fill with water. That proposal was rejected in the permitting process and withdrawn. In 1987, Kennecott, through Flambeau Mining, proposed a substantially different project with respect to the same ore deposit. This project was substantially scaled back in scope, it had no tailings and the site was to be reclaimed by backfilling the pit. That proposal was approved. When confronted with the specific facts in one case the option was found acceptable. In the other case, it was not.

The citizens of the Town of Cleveland should have the right to make informed decisions based upon specific proposals if and when they are presented. Allowing exploration does nothing more than provide information to the mining company and to the community to allow them both to make informed decisions.

**2. THE REPORT FAILS TO PROVIDE A BALANCED PICTURE OF MINING IMPACTS.**

The Report cites several specific examples which could fairly be characterized as mining horror stories from which the Report then concludes that all mining operations create unacceptable adverse impacts. This is simply not true. The most glaring problem with this analysis is that it excludes the many modern metallic mines that have been operating with exemplary environmental records and providing positive socio-economic impacts to communities. At the February 20, 1997 hearing, we submitted to you a summary of environmentally responsible mining currently being undertaken throughout the country. We would like to incorporate those materials by reference as part of our comments being submitted for this Report.

While there are many examples given from the survey that has been undertaken, we would like to focus particularly on the track record that is being established in Wisconsin. It is important to emphasize that not only are many of the horror stories from mines that began operation many years if not decades ago, all are from states other than Wisconsin. Notwithstanding the assertions made elsewhere in the Report (which will be addressed below), Wisconsin has the toughest mining laws in the country which are designed to ensure environmental protection and positive socio-economic inputs to the community.

The fact is that the only metallic mineral mine permitted under Wisconsin's new mining laws, the Flambeau Mine, has had an exemplary track record both in environmental protection and in positive socio-economic impact for the community. Again, we believe that the citizens and property owners in the Town of Cleveland should at least have the opportunity to make choices based on an evaluation of specific proposals.

### 3. THE REPORT CONTAINS NUMEROUS INACCURACIES.

Many of the potential concerns and adverse impacts described in the Report contain serious inaccuracies. In many cases, these inaccuracies stem from a reliance on sources whose avowed purpose is to ban mining. While this set of comments is not exhaustive, we would like to address several of these inaccuracies by way of example.

#### A. ALLEGED PROBLEMS WITH EXPLORATION DRILL HOLES.

The report cites to sources from Wyoming and South Dakota which state that problems arose when drill holes were not properly abandoned, particularly where such holes were left unplugged. In Wisconsin, exploration drilling is regulated to prevent just such problems.

Here, all bore holes are cased (lined with steel pipe) through the aquifer to prevent infiltration and cross contamination of aquifers. In addition, all holes must be plugged and properly reclaimed. This is accomplished by injecting concrete into the holes so each hole is completely sealed and then by revegetating the site. The DNR is notified so that it can supervise both drilling and abandonment procedures. Historical problems may have arisen in other states where proper procedures were not followed, but that does not justify banning exploration where proper procedures are required and supervised.

#### B. ALLEGATIONS OF "THREATS" AGAINST LOCAL COMMUNITIES.

The Report claims that the threat of lawsuits against communities that oppose mining intimidate residents. It cites to a claim made by Al Gedicks, a longstanding anti-mining advocate with regard to the Flambeau mine. There were, in fact, several lawsuits involved in the Flambeau Mine permitting process, but none of them were commenced by the mining company; all were initiated by anti-mining forces. Two lawsuits were filed by the Rusk County Citizens Action Group and two were filed by the Sierra Club and the Lac Courte Oreilles Band of Chippewa Indians.

From the outset, Kennecott had rejected the option of filing a lawsuit and instead resolved to work with the local communities to address their concerns in the context of developing a local agreement. It should also be emphasized that this local agreement, allowed the community to do far more than it would have been able to do through zoning regulations alone.

The local agreement provided for guaranteed local payments, requirements for local hiring, guarantees on well replacement, municipal option rights to company land and a host of other conditions that are not and could not be part of a local zoning ordinance. Moreover, it was a process that required public input, public hearings and approval by the governing bodies of the local governments. Lawsuits are, at best, a course of last resort and never a preferred option.

#### C. ALLEGED WEAKENING OF ENVIRONMENTAL LAWS.

The Report claims that mining companies have rewritten Wisconsin's mining laws in their favor and particularly weakened groundwater standards. This is simply not true. There have been very few changes made in the mining laws since 1982 and those changes have strengthened rather than weakened the law.

Prior to 1982, the Department of Natural Resources did not have an enforceable groundwater standard for any industry. With the passage of the mining law in 1981 and the subsequent adoption of mining rules in 1982, the first groundwater standards were created. These rules were among the first in the country and became the pattern for the groundwater law that the Wisconsin Legislature enacted in 1983 for facilities other than mining facilities. Those provisions, now contained in Wis. Stat. ch. 160 and Wis. Admin. Code ch. NR 140, are recognized as a national model. While NR 182 refers to the federal maximum contaminant levels as minimum standards, the groundwater standards applied to the Flambeau Mine were set based upon the NR 140 groundwater standards applicable to any other regulated facility in the State.

Moreover, this argument also ignores that mining is regulated more comprehensively than any other industry in the State. In addition to complying with all of the other permit requirements applicable to other sources — air, water and solid waste — mining facilities must also comply with the permit requirements in the mining permit. The mine permit requirements are in addition to not in lieu of the permit requirements applicable to other industries in the State.

As a result, in many cases, Flambeau Mining was subjected to more comprehensive air, water and solid waste requirements than any other industry. For example, most industrial and municipal dischargers have to monitor the effluent that is discharged into a receiving water. Flambeau Mining not only has to monitor its discharge, it must also take surface water samples, stream sediment samples, and conduct macro-invertebrate and vertebrate surveys on the fish and aquatic life in the receiving water. No other regulated industry is required to do so.

#### D. ALLEGATIONS OF DNR'S BIAS.

One of the frequently repeated stories told by anti-mining forces in an attempt to discredit the DNR, is the endangered species analysis undertaken for the Flambeau Mine. Unfortunately, the story gets less accurate every time it is retold. The basic facts are that endangered species (two mussels) were discovered upstream from the Flambeau Mine site after the permits for the project were issued. Two basic issues arose as a result of this discovery: how did this happen and what impact would the permitted mine have upon these species?

Contrary to the assertions of anti-mining forces, this late discovery was not attributable to some conspiracy or cover up. When Flambeau Mining was undertaking its macro-invertebrate studies in 1988, the species did not show up on the

survey. Indeed, one of the mussels was not even listed on Wisconsin's endangered species list at the time. Nevertheless, the DNR acknowledged in the final environmental impact report that while no threatened or endangered species were found, the site "provides habitats which could be used by other threatened or endangered species."

In August 1989, the DNR added a number of species including the mussel subsequently found upstream. As part of its standard notification language, the DNR indicated the Flambeau was a habitat in which these species could occur because the mussels "occur in the Chippewa River near Ladysmith, close, but not on, the project area." (Emphasis in original) Neither the Department nor Flambeau had any specific knowledge that in fact newly listed species were at the mine site. And, the fact that the habitat at the site could be used by threatened or endangered species was already disclosed in the FEIS.

More importantly, whether endangered species were found or not, Flambeau was still required to ensure that its discharges to the Flambeau River were safe for the most sensitive aquatic species including any endangered species. Thus, Flambeau Mining was able to proceed confidentially knowing that even if an endangered species were to be found in the Flambeau River, its effluent would not have any negative impact on the survival of that species.

When the endangered species was discovered, the DNR undertook additional studies and issued a supplemental environmental impact report. That report, issued in April 1992, stated at page 53:

This review supports the conclusion that the water quality based effluent limitations currently contained in the WPDES permit for the Flambeau Mine adequately protected mussels and dragonflies in the river.

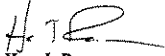
There is nothing in the history of this matter which shows an agency "that deliberately subverted the law" and then "[r]ied] to cover up its mistakes by failing to do a scientifically valid study."

#### 4. CONCLUSION.

The citizens of the Town of Cleveland and its individual property owners should have the right to know whether there are potential mineral deposits within the township. If those deposits prove to be economically viable, they should have the right to decide

whether a specific mining project is acceptable or unacceptable for the Town. A more balanced Report would highlight the fact that mineral exploration and mining can and have been done successfully in Wisconsin and elsewhere without adverse environmental and socio-economic impacts. Adopting the recommendations in this Report impedes rather than furthers any understanding of the impacts of metallic exploration and mining for the Community.

Sincerely,



Hans J. Rasmussen  
Project Manager

Hans Rasmussen  
P.O. Box 547  
437 N Water St.  
Black River Falls, WI. 54615

March 1, 1997

Dear Hans:

It is a naive assumption to isolate the simple process of exploration from the obvious possible result, that being mining. As a committee, we determined very early in the process that exploration is the first step along the road to mining. Your letter indicates that it is inappropriate to even look at mining at this point in time. We believe the community should know the likely impacts of mining as a result of successful exploration, to decide if exploration should continue.

You talk about citizens being prevented from evaluating specific proposals but in reality your industry continues to push for local agreements before the final environmental impact statements are produced. It would seem your criticism is a bit one sided. It was the intent of our report to show what has happened and continues to happen in other communities where mining occurs and to question the wisdom of taking the risks associated with mining. We believe the risks to our community far out weigh the benefits.

The activity of mining inevitably changes the community. Mining poses serious environmental risks that can not be fully predicted by the permitting process. The examples of mining disasters in our report illustrate what happens even to engineered "environmentally safe" modern mines, when the extremes of nature are not fully anticipated or liners fail to do their intended job. I'm sure all those communities were told not to worry like the residents of Summitville Colorado.

Personally, I view this area and its lifestyle as priceless and I know many share that belief. No amount of compensation will repay the loss of those who live here because of the unique character and quality of this community, but would be forced to leave if it changed to a busy, noisy mining district with a constant threat of an environmental catastrophe. Contrary to popular belief, not every community is interested in development.

The 1976 proposal to mine in Ladysmith was not rejected specifically because of its project design but because local residents questioned the economic benefits to the community and were concerned that their environment would be negatively impacted. In response, the county board unanimously passed a resolution to stop the issuance of county mining permits until adequate laws were in place to protect the environment and sufficient tax revenues were available to pay for all the costs of mining to local communities.

In 1987, after several years of constant public relations campaigns including numerous "donations" to community organizations, political intrigue- resulting in several changes in the various governmental bodies, threats of annexation of the mine site by Ladysmith and of litigation challenging the existing local law (Kennebecott's position papers- 1988), local governments were

unable to resist the juggernaut. Ladysmith Mayor Martin Reynolds acknowledged the intimidating effect of such a threat: "Any time you've got a small city and an economically poor county, the threat of a big-time lawsuit is always scary."

To criticize our report for not being complete in its presentation of the mining industry seems a bit ingenuous. Your recent letter seems to follow the usual pattern of ignoring all of the obvious problems your industry has created and still creates. The examples cited in our report are not ancient mines but rather very recent and the problems that are occurring are ongoing within your industry. I am not impressed that you were able, after reviewing hundreds of mines, to find a half dozen that appear to be operating satisfactorily. Your information comes from the very industry in question- with considerable vested interest. One would hope your sources are unbiased but from the sounds of it, one could easily draw the opposite conclusion. Unfortunately, we did not have the time or resources available to us to review hundreds of mines to find the few that appear safe.

As far as the Ladysmith mine is concerned, it was cited as an example of an open pit mine. I do not believe it is in any way representative of mining in general. I would assume Kennecott would go the extra mile to produce an environmentally safe mine, to serve as an example, in order to be allowed to pursue future mining activities in Wisconsin. This mine is probably the most unique mine in the world. It is extremely small, extremely profitable, and situated neatly within the bend of a river with no private land down slope and no private wells between it and the river. Any pollution problems that might occur would be quickly diluted by the large volume of water flowing down the Flambeau River, only 140 feet away. The Final Environmental Impact Statement (FEIS) indicated that the ground water flow was moving from the uplands to the east through the site and on to the river directly west of the mine.

It is also apparent in looking at the situation in Ladysmith, the site is bordered on two sides by the river and there is considerable land holdings by the company on the other two sides. The FEIS indicated the company owned 2500 acres. It would appear that there are no private homes or wells anywhere near the mine site. It looks more like a perfect opportunity for public relations.

On the subject of legal threats: We have already experienced veiled threats of lawsuits in our area by leaseholders who think property rights allow them to do what ever they want with their land regardless how it impacts their neighbors. The example of how mining industries intimidate local communities from Al Gedicks is fully referenced and we have also spoken to individuals from the area who corroborate the story.

There is also the case from the Town of Nashville where BHP brought suit against the individual members of the local zoning committee for denying their application for a permit to explore in their town. This suit put individual committee members' homes and property at risk. Maybe you don't know about that one, but we do. That case was not included in our draft report because the information came to us too late. Perhaps we should include it in our final report.

To say that the non-degradation of our waters is unenforceable only means that no one, including the DNR, is willing to do any long term baseline studies to determine what the existing quality is. This not only shows the inadequacy of existing law but also indicates the budgetary restraints imposed on the DNR by the State. Perhaps the residents of the Town of Cleveland would rather have pure water, as opposed to water contaminated to maximum safe levels. In addition, these levels may not be safe for fish and other aquatic organisms.

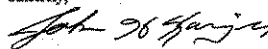
Many have been led to believe the, now closed, taconite mine near Black River Falls was safely reclaimed under the supervision of the DNR, but I have personally seen photos of lead-based grease barrels strewn around the site and an 80 foot deep sink hole to an old, flooded, material handling shaft, that reportedly also contained a full 250 gallon barrel of hydraulic oil. The site also contains an unreclaimed 10,000 gallon fuel oil spill. Inland Steel attempted to pawn this site off on the unsuspecting county for a park until witnesses, with signed affidavits, testified at a county hearing. It is my understanding the county is still trying to make Inland Steel accountable for the cleanup but has met with a great deal of resistance. All of this, supposedly monitored by the DNR, under the so called, "toughest mining laws in the country".

We do not assume the DNR is going to be any more responsible in our community.

It is most interesting to see the resolve you have at this stage of the game to influence the decision of this community regarding exploration. We assume, if you were allowed to explore and were successful, your resolve would increase and you would be unwilling to take no for an answer, once you had spent tens of millions on a state permit. There are laws that protect a woman from unwanted advances, but when a community says no, your industry has historically shown its tendency to force the issue through various legal means.

As you know, I am a candidate for town chairman. Your organization has attempted to influence the existing chairman by offering a lease and doing ground based surveys on his property without a signed lease. This puts him in a conflict of interest and shows to many of us, the unethical lengths to which you will go to influence local decisions. In the Town of Mentor it is even worse. Both the Town Chairman and a Supervisor were offered leases, and within the last week or so, even the candidate for Mentor Town Chairman has been offered a lease, apparently in an attempt to derail his opposition to mining. As a result, it has become necessary for me to involve myself to protect the interests of my friends and neighbors. I think you will find I am neither for sale or intimidated. If elected, I will defend the interests of this community and I will not be influenced by the possibility of personal financial gain or threats of lawsuits.

Sincerely,

  
John H. Kainger, chairman  
Town of Cleveland  
Mining Impact Committee





Dedicated to Preserve and Protect the Unique  
Character and Environmental Quality of Cleveland  
Township and Surrounding Areas

Town of Cleveland  
Board of Supervisors  
c/o George Remkus, Clerk  
W13915 McGower Rd.  
Fairchild, WI. 54741

March 1, 1997

Members of the Board:

Four Rivers Headwaters, Inc. was formed in response to the possibility of a mining development in our community. Citizens from Cleveland Township and neighboring townships have come together in support of preserving the character and quality of life they enjoy here. We pledge our continued support for the preservation of the rural lifestyle many of our neighbors prefer. Many people live here because this is one of the few beautiful places left that has pure water, clean air, low population density, low property taxes and low crime rates. We believe all of these qualities of our community are put at high risk if a large-scale mining operation were to take place in our midst.

Many have responded with generous donations in support of our willingness to defend the unique character of our community and to preserve the quality of our environment. With these contributions, we have provided, free of charge, signs and bumper stickers to area residents who wish to declare their opposition to metallic sulfide mining. We have also contracted the services of an attorney, an environmental specialist and a hydrologist. With these experts we have attempted to contribute to the community's understanding of the situation that is before us.

Four Rivers Headwaters, Inc. is in the process of defining the upper geologic formations of our township. With this information we can identify the types of soil and subsurface formations that play a role in containing our sole source of drinking water. We already know that our entire township is a primary recharge zone for the aquifer and is underlain with porous sand and loosely cemented sandstone. This indicates that water flows easily through it as well as many contaminants. It is also our understanding, because of these characteristics, our water supply is highly vulnerable to most forms of industrial development. To assess the current quality of our waters we are having a baseline study conducted on both groundwater and surface water. A full

**FOUR RIVERS HEADWATERS, INC.**  
P.O. Box 41 Fairchild, WI. 54741



Dedicated to Preserve and Protect the Unique  
Character and Environmental Quality of Cleveland  
Township and Surrounding Areas

report is forthcoming, which details these issues as well as other ecological studies on a section of the south branch of the Buffalo River, as it exits Cleveland Township.

Through the actions of the Town of Cleveland Board of Supervisors and the vigilance of our citizens, our community has taken charge of this situation in unprecedented ways. To our knowledge, we are the first community to have, in place, the means by which we can be in the decision making process in the early development stages of exploration in our township. Many communities have found out too late how difficult it is to have a say in the process once an exploration company has been successful in identifying an orebody.

We are proud to endorse and will contribute the printing and distribution of the final version of The Town of Cleveland Mining Impact Committee's Metallic Sulfide Mining Impact Report.

In order to fulfill our goal of preservation, we pledge continued legal support to the Township. We will underwrite, if necessary, the legal activities of the township to defend these interests.

Sincerely,

Four Rivers Headwaters, Inc. - Board of Directors:

Robert Bourke, President

John Kariger, Vice President

Louise Bourke, Secretary-Treasurer

**FOUR RIVERS HEADWATERS, INC.**  
P.O. Box 41 Fairchild, WI. 54741

N13191 Wildwood Lane  
Fairchild, WI 54741  
715-334-5135  
May 2, 1997

Rep. Marc Duff  
P.O. Box 8952  
Madison, WI 53708

Dear Assemblyman,

First let me introduce myself, I am a member of the Cleveland Township Mining Impact Committee. I was appointed by the last town chairman, a man defeated in our last election for his pro-mining stand. Cleveland Township has approximately 300 residents and is located in Jackson County in west central Wisconsin. All my life I was **NOT** an activist. I am a retired electrical engineer. I would rather be tending my spring yard work now than writing this, but the more anyone of intelligence, without a direct financial interest, looks at sulfide mining and the laws surrounding it the **worse** it looks.

Inclosed is a copy of the Cleveland Township Metallic Mining Impact Report. I ask you to read it.

I and my attorney have talked extensively with my assemblyman, Terry Musser, concerning the crazy local agreement law. **How in a democracy can two people, elected to control pot holes, sign away an entire township's rights for the rest of the residents' lifetimes without open meetings, hearings or the will of the people and then stick the state for hundreds of thousands of dollars of legal fees?**

On another point, how is it that the land owned by town chairmen or candidates for town chairman seem to have so much greater probability of being worthy of mining leases than other land in the townships? Yes, our past town chairman. The neighboring town chairman and the neighboring candidate for town chairman after he was nominated were offered leases.

I ask you to support the mining moratorium bill and then think long and hard on the sulfide mining issue and the unlevelness of the playing field for small towns under siege by international mining.

Sincerely,



Robert Bourke



Memo

**TO:** Members of the Wisconsin Legislature  
**FROM:** Joan Hansen, Director Tax & Corporate Policy  
**DATE:** July 2, 1996  
**RE:** An Overview of Metallic Mining Regulation in Wisconsin

The Wisconsin Geological and Natural History Survey (Mr. Thomas J. Evans) has published a revised 1996 edition of *An Overview of Metallic Mineral Regulation in Wisconsin*. Enclosed for your review is a copy of the publication as well as a summary of its contents.

The Wisconsin Geological and Natural History Survey is part of the University of Wisconsin Extension. Additional copies of *An Overview of Metallic Mineral Regulation in Wisconsin* can be obtained from the UW-Extension at the following address:

University of Wisconsin-Extension  
Wisconsin Geological and Natural History Survey  
3817 Mineral Point Road  
Madison, WI 53705-5100

This publication explains in detail, the extensive laws and administrative rules regulating metallic mining in Wisconsin. These extensive metallic mining laws are in addition to other environmental laws and rules that have been adopted by the legislature and state agencies. Furthermore, the book also outlines the requirements that ensure the protection of human health.

If you have any questions or comments, please feel free to contact me at (608) 258-3400. Thank you.

JMH/skc

Enclosure

# An Overview of Metallic Mineral Regulation in Wisconsin

The following summary was obtained from the Wisconsin Geological and Natural History Survey, Special Report 13 • 1996, written by Thomas J. Evans.

**Metallic mineral development in Wisconsin is regulated under laws and rules using a specific process of environmental analysis, technical evaluation, and public access.**

*Wisconsin's laws and rules governing the development of metallic minerals address issues of environmental impact, the phases of mineral development and the operation of mines and mine-waste disposal facilities, and supplementary regulatory issues, such as socioeconomic impacts, special taxes, special liability considerations, and financial guarantees. These regulations create a mechanism leading to decisions about permit application; this mechanism provides for public access to a process that is predicated on the independent evaluation of evidence and demonstrable compliance with legislatively mandated criteria for decisions.*

The Wisconsin Legislature has adopted a set of laws and authorized the development of administrative rules that define the state's policy regarding metallic mineral development. This current policy is reflected in the statement of purpose of ch. 421, Laws of 1977, which is the core of the Metallic Mining Reclamation Act:

It is declared to be the purpose of this act to prevent adverse effects to society and the environment resulting from unregulated mining operations; to ensure that the rights of surface landowners and other persons with a legal interest in the land or appurtenances to the land are protected from unregulated mining operations; to ensure that mining operations are not conducted where reclamation, as required by this act, is not possible; to ensure that mining operations are conducted so as to prevent unreasonable degradation to land and water resources, and, to ensure that reclamation of all mined lands is accomplished as contemporaneously as practicable with the mining, while recognizing that the extraction of minerals by responsible mining operations is a basic activity making an important contribution to the economic well-being of this state and nation.

The key elements of this policy are:

- 1) the recognition that unregulated mining poses environmental risks; and
- 2) that reclamation should be a primary objective of mining regulation;
- 3) that degradation of the environment may occur, but only within reasonable limits; and
- 4) that responsible mining is an acceptable activity that has the potential to result in important economic contributions to the state and nation.

***Mining must be regulated.*** The entire scope of metallic mineral development is regulated under Wisconsin's laws and rules. The regulations for mining are in addition to the regulations adopted by the Legislature and state enforcement agencies for the protection of the environment. The regulations recognize some of mining's characteristics, such as the fixed location of mineral deposits, but the regulations as a whole treat metallic mineral development in a manner consistent with the regulation of other human activities.

***Reclamation is the goal.*** Mining cannot be permitted where the land cannot be restored either to its original condition or to some predetermined acceptable condition having long-term environmental stability. Reclamation cannot be left to future generations to accomplish.

***Environmental impacts of mining must be limited.*** State metallic mineral regulations place restrictions on the possible effects of mining on the environment. These limits are the substance of the laws and administrative rules that regulate activities affecting the groundwater, surface-water, land, and air resources in the state.

It is the definition of these limits that is in large measure the focus of public input into the decision-making process. The public must be aware of

- 1) potential mining activities and the means by which the activities are to be regulated; and
- 2) achievable limits of environmental protection and the means by which to express support or concern with these limits.

***Responsible mining is acceptable.***

Wisconsin's regulatory framework recognizes that mining can be a responsible activity with potentially important economic contributions. However, the definition of responsible mining is contained not only within compliance with the laws and rules protecting the environment but also within special liability requirements for mining operations, additional taxes levied on mining to generate revenue for environmental mitigation and related public activities, and mandatory guarantees of financial capability before permitting mineral development. The regulations also prohibit giving a mining permit to those who have an unacceptable environmental track record related to mining in the United States.

***Local governments and citizens can be instrumental in decision making.***

Wisconsin's metallic mineral regulations affirm the importance of the local government's role with respect to mineral operations by requiring mining operations to be in compliance with local ordinances and regulations. The central role of local government and the local community is reflected in laws providing for optional negotiations about local issues to determine

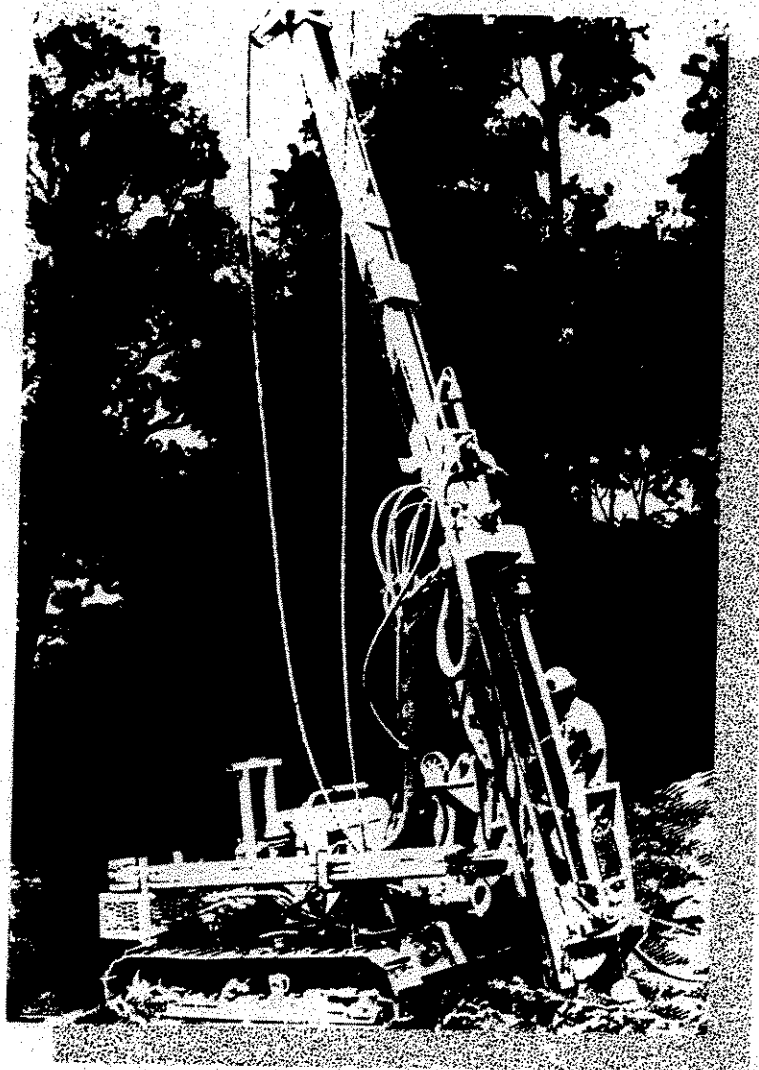
the acceptability of mining for local communities, and supporting the creation of local impact committees and the statewide investment and local impact fund. These features of Wisconsin's regulatory framework address issues of local importance, the public input process, and a further option for local involvement in the decisions that are made.

# AN OVERVIEW OF METALLIC MINERAL REGULATION IN WISCONSIN

REVISED EDITION

---

Thomas J. Evans



Wisconsin Geological  
and Natural History Survey

Special Report 13 • 1996

WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY  
James M. Robertson, Director and State Geologist  
Ronald G. Hennings, Assistant Director

Lyle J. Anderson, office manager  
John W. Attig, geologist  
Kenneth R. Bradbury, hydrogeologist  
W.A. Broughton, geologist  
Bruce A. Brown, geologist  
Kim J. Cates, soil scientist  
Lee Clayton, geologist  
Brian L. Coulter, information specialist  
Michael L. Czeschanski, cartographer  
Kim M. Dawson, Map Sales assistant  
Timothy T. Eaton, hydrogeologist  
Thomas J. Evans, geologist  
Rilla M. Hinkes, office manager  
Susan L. Hunt, graphic designer  
Mindy C. James, publications coordinator  
Marcia J. Jespersen, word processing operator  
plus approximately 25 graduate and undergraduate student workers.

Rochelle V. Juedes, Map Sales manager  
Kathy A. Kane, computer specialist  
Pamela Naber Knox, State Climatologist  
Irene D. Lippell, water resources specialist  
Kristine L. Lund, soil and water analyst  
Frederick W. Madison, soil scientist  
Kathleen M. Massie-Ferch, subsurface geologist  
Matthew Menre, GIS specialist  
M.G. Mudrey, Jr., geologist  
Maureen A. Muldoon, hydrogeologist  
Stanley A. Nichols, biologist  
Deborah L. Patterson, cartographer  
Roger M. Peters, subsurface geologist  
Kathy Campbell Roushvar, cartographer  
Alexander Zaporozec, hydrogeologist  
Kathie M. Zwettler, administrative manager

  
RESEARCH ASSOCIATES

Gregory J. Allord, USGS  
Mary P. Anderson, UW-Madison  
William G. Batten, USGS  
Larry K. Binning, UW-Madison  
Michael F. Bohm, Wis. Dept. of Nat. Res.  
Stephen M. Born, UW-Madison  
William F. Cannon, USGS  
Terrance D. Conlin, USGS  
Kevin Connors, Dane Co. Land Conserv. Dept.  
Albert B. Dickas, UW-Superior  
C. Patrick Ervin, Northern Ill. Univ.  
J.K. Greenberg, Wheaton Coll.  
Robert F. Guarda, Wis. State Cartographer's Office  
Nelson R. Ham, St. Norbert Coll.  
William J. Hinze, Purdue Univ.  
Randy J. Hunt, USGS  
Peter Jacobs, Valparaiso State Coll.  
Mark D. Johnson, Gustavus Adolphus Coll.  
John Klasner, Western Ill. Univ.  
James C. Knox, UW-Madison

George J. Kraft, Central Wis. Groundwater Center  
James T. Krohelski, USGS  
Gene L. LaBerge, UW-Oshkosh  
Lyle D. McGinnis, Argonne Natl. Lab.  
Kevin McSweeney, UW-Madison  
Christine Mechenich, Central Wis. Groundwater Center  
David M. Mickelson, UW-Madison  
Donald G. Mikulic, Ill. Geol. Survey  
Robert Patenaude, Wis. Dept. of Transportation  
James O. Peterson, UW-Madison  
Jeffrey K. Postle, Wis. Dept. Ag., Trade & Consumer Protection  
Kenneth W. Potter, UW-Madison  
Todd W. Rayne, Hamilton Coll.  
Allan F. Schneider, UW-Parkside  
Byron H. Shaw, UW-Stevens Point  
J. Antonio Sime, UW-Madison  
George L. Smith, Lawrence Univ.  
Kent M. Syverson, UW-Eau Claire  
Conrad Weiffenbach, Wis. Dept. of Health & Soc. Serv.  
Jeffrey A. Wyman, UW-Madison

The Wisconsin Geological and Natural History Survey also maintains collaborative relationships with a number of local, state, regional, and federal agencies and organizations regarding educational outreach and a broad range of natural resource issues.

# AN OVERVIEW OF METALLIC MINERAL REGULATION IN WISCONSIN

REVISED EDITION

Thomas J. Evans

Wisconsin Geological  
and Natural History Survey

Special Report 13 • 1996

## CONTENTS

---

PREFACE TO THE REVISED EDITION v

PREFACE TO THE FIRST EDITION v

INTRODUCTION 1

### WHAT ASPECTS OF METALLIC MINERAL DEVELOPMENT ARE REGULATED?

*Exploration* 4

*Prospecting* 6

*Mining* 8

*Mine-waste disposal* 10

*Reclamation* 12

### HOW DOES THE PERMITTING PROCESS WORK?

*Notice of Intent* 16

*Environmental Impact Report* 18

*Environmental impact analysis* 20

*Permits, plans, and approvals* 22

*Master Hearing* 24

*Length of permitting process* 26

*Criteria for permit decisions* 28

*Role of local government* 30

*Opportunities for public involvement* 32

*Modifications, exemptions, and variances* 34

### WHAT ARE ADDITIONAL FEATURES OF THE REGULATORY FRAMEWORK?

*Environmental monitoring* 36

*Options for enforcement* 38

*Financial guarantees* 40

*Special taxes* 42

*Liability requirements* 44

### HOW DO WISCONSIN'S MINING REGULATIONS COMPARE TO OTHER REGULATIONS?

*State environmental regulations* 46

*Federal environmental regulations* 48

Published by and available from



University of Wisconsin-Extension

Wisconsin Geological and Natural History Survey

3817 Mineral Point Road, Madison, Wisconsin 53705-5100

☎ 608/263.7389 FAX 608/262.8086

James M. Robertson, Director and State Geologist

1991/1996

ISSN: 0512-0659

*Proper use of this report is the sole responsibility of the user.*

*Published as public domain; reproducible without permission. Source credit requested.*

*University of Wisconsin-Extension provides equal opportunities in employment and programming, including Title IX requirements.*

*If you need this material in an alternative format, please contact the Wisconsin Geological and Natural History Survey (☎ 608/262.1705) or the LJWEX Affirmative Action Office.*



## PREFACE TO THE REVISED EDITION

Since Special Report 13 was published in 1991, the Wisconsin Legislature has considered further additions and modifications to the metallic mineral regulatory framework in the state. In the 1991-92 legislative session, Acts 259 and 260 were enacted into law; these acts incorporated ongoing legislative concern about the environmental track

record of a mining-permit applicant into the decision-making process and clarified the need for and the scope of environmental assessment of metallic mining projects. I have included these changes in the statutes in the explanatory text, where appropriate; the appendix contains the revised statutes and administrative rules.

## PREFACE TO THE FIRST EDITION

The Wisconsin Geological and Natural History Survey, as part of University of Wisconsin-Extension, has an educational mission to provide objective information about the state's natural resources for the benefit of Wisconsin's citizens. For mineral development issues, the Survey provides information and educational materials regarding mineral-resource potential, exploration and mining activities, mineral leasing, and mining regulation. Survey geologists involved with mineral resources have developed a broad familiarity with the issues related to mineral evaluation and development.

This description of Wisconsin's metallic mineral regulations has been prepared to address questions often raised about these regulations by Wis-

consin citizens, legislators, and local, state, and federal officials. This publication is especially timely, given the broad public interest in the opening of the Flambeau Mine at Ladysmith and the amount of metallic mineral exploration presently being conducted in several Wisconsin counties.

The narrative uses a three-part structure to answer the questions that are posed: a topic sentence that captures the central idea, a brief summary that states the major points of the response to the question, and an expanded response to the question. Thus, the narrative and accompanying figures and tables can be read at several levels, depending on the reader's time and interests. An appendix containing the state statutes and the relevant adminis-

trative rules is included for those readers interested in the actual language of the principal regulations.

Many of the illustrations used in this report are photographs of the Jackson County Iron Company taconite mine near Black River Falls, Wisconsin. This open-pit mine was started in 1967, prior to the adoption of Wisconsin's metallic mining regulations. After mining regulations took effect in 1974, the mine was operated in compliance with these requirements. The mine's reclamation, which began in 1983, has also followed state requirements.

I acknowledge the thoughtful reviews of the manuscript by staff of the Wisconsin Department of Natural

Resources and the Wisconsin Geological and Natural History Survey, and others who have contributed to this report. I especially acknowledge the contributions of Susan Hunt, designer, and Mindy James, editor.

This publication has been prepared with the assistance of a grant from Wisconsin Manufacturers and Commerce. However, the content of this report is the responsibility of the Wisconsin Geological and Natural History Survey. Questions regarding the content may be directed to the Wisconsin Geological and Natural History Survey, 3817 Mineral Point Road, Madison, Wisconsin 53705, telephone 608/262.1705.

## INTRODUCTION

### **This publication provides an overview of metallic mineral regulation in Wisconsin.**

*Wisconsin uses statutes (laws) and administrative rules, which have the force of laws, to form a regulatory structure for metallic mineral development. In this report, the author describes the aspects of metallic mineral operations that are actually regulated as well as the means by which the regulation is accomplished.*

The state of Wisconsin regulates metallic mineral development by dividing it into its component parts: 1) exploration—the search for metal deposits using subsurface drilling; 2) prospecting—the collection of bulk samples of metal deposits for detailed testing; 3) mining—the extraction of metallic minerals and their separation from the rock in which they occur; and 4) mine-waste disposal—the management of rock materials left over from the mining and processing of ore to recover the valuable metals. Metallic mining is also subject to special liability requirements and to an additional tax based on the company's net proceeds (roughly equivalent to profits).

The framework of mine regulation is built upon the statutes passed by the Wisconsin Legislature and signed by the Governor. These laws form the policy of the state with respect to metallic mining. The laws are the basis for the development of administrative rules by each state

agency identified in the laws as being responsible for enforcing the state's policy. In the case of metallic minerals, the laws contained in sections 144.80–144.94, Wis. Stats., provide the statutory authority for the Department of Natural Resources (DNR) to adopt administrative rules NR 130 (exploration), NR 131 (prospecting), and NR 132 (mining). Section 144.435, Wis. Stats., is the statutory authority for NR 182, Wis. Admin. Code (regulation of metallic mining wastes). (See appendix, p. 53.)

Other statutes affect metallic mineral development: 1) ss. 107.30–107.35, Wis. Stats., establish long-term liability of mining companies for personal and property damages (see appendix); and 2) s. 70.375, Wis. Stats., establishes a specific tax on metallic mineral mining. In addition, metallic mineral operations are regulated under all other environmental protection programs administered by the state and federal government.



**WHAT ASPECTS OF METALLIC  
MINERAL DEVELOPMENT  
ARE REGULATED?**



---

## Exploration

**Exploration is defined as subsurface drilling in the search for metal-bearing minerals.**

*Under Wisconsin law, exploration is synonymous with drilling. All aspects of drilling activity are subject to DNR regulation: the location of the drillhole and drilling pad; the entire area used by the drill rig and the supplementary drilling equipment; construction of the drillhole to protect water-bearing strata encountered; and the closure (abandonment) of the drillhole.*

Exploration is defined as:

the onsite geologic examination from the surface of an area by core, rotary, percussion or other drilling, where the diameter of the hole does not exceed 18 inches, for the purpose of searching for metallic minerals or establishing the nature of a known metallic mineral deposit, and includes associated activities such as clearing and preparing sites or constructing roads for drilling. (s. 144.81 (2), Wis. Stats. and NR 130.03 (8), in part, Wis. Admin. Code).

Through ch. NR 130, Wis. Admin. Code, the DNR requires that all companies engaged in metallic mineral exploration be licensed. Each license is in effect from July 1 of one year through June 30 of the following year. An exploration company (the licensee) must pay \$300 for the initial license year and \$150 for each year the license is renewed. Companies are charged a fee of \$100 per drillhole for the first 20 exploratory holes per year and \$50 for each additional hole in any one year. In addition, the exploration company must post a minimum bond of

\$5,000 to ensure successful reclamation. The DNR adjusts this minimum bond upward to guarantee that coverage is adequate to reclaim all drill sites constructed by the licensee. The exploration company must also show proof of liability insurance coverage (\$50,000 minimum) for personal injury and property-damage protection. The DNR may require additional insurance coverage.

The exploration company must give the DNR at least a 10-day notice before drilling any hole and must notify the DNR prior to the actual start of drilling. The DNR must approve each drill site prior to any drilling activity; the construction of the drillhole and its ultimate abandonment is also supervised by the DNR.

The licensee must provide at least a 24-hour notice of intent to fill (abandon) a drillhole. Following abandonment, the licensee must file a report describing the abandonment activity. Drillholes may be abandoned temporarily (hole left open with a welded or threaded cap fixed to the casing to prevent any potential groundwater contaminants from entering the hole). All drillholes must be perma-

nently abandoned and the drill site reclaimed before any part of the bond can be released and the exploration licensee's responsibility for the drillhole construc-

tion can be terminated. Permanent abandonment requires the filling of the drillhole from bottom to top with cement grout or other approved material.



*For this exploratory drilling in northern Wisconsin, the drilling mast is placed at an angle to permit the recovery of samples from rocks that are tilted below the ground surface. Exploration is regulated under ch. NR 130, Wis. Admin. Code.*

## Prospecting

**Prospecting is defined as taking a bulk sample for further testing and evaluation of an occurrence of metallic mineralization.**

*Prospecting is viewed under Wisconsin's regulations as being more intensive than exploration but having less potential environmental impact than mining. It is defined to include the collection of several tons of metal-bearing rock and minerals for the purpose of extensive testing and evaluation, usually to determine the amount of metal recovery in a mineral-processing facility.*

### Prospecting means:

engaging in the examination of an area for the purpose of determining the quality and quantity of minerals, other than for exploration but including the obtaining of an ore sample, by such physical means as excavating, trenching, construction of shafts, ramps, tunnels, pits and other means...and the production of refuse and other associated activities. (s. 144.81 (12), Wis. Stats. and NR 131.03 (15), in part, Wis. Admin. Code).

Prospecting is common in many places in the United States and the rest of the world; however, because the potential for environmental impact is more extensive than what might occur in mineral exploration, Wisconsin's regulation of prospecting requires extensive environmental evaluation and the acquisition of a permit to engage in prospecting. In effect, a prospecting activity is viewed as a "mini-mine"; however, commercial exploitation of the orebody is not allowed and the granting of a prospecting permit to a company (the applicant) does not mean that a mining permit will be granted. The environmental analysis and

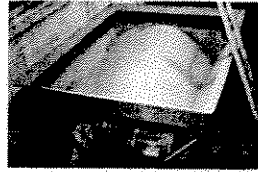
review process may involve the preparation of an *Environmental Impact Statement* (see p. 20); in addition, the granting of all necessary permits, not only the prospecting permit, is subject to a formal hearing, similar to that required for mining (see p. 24).

The regulation of prospecting parallels the regulation of mining in the following respects: 1) the inclusion of a *Notice of Intent* to collect data to support a prospecting permit application (see p. 16) with a mandatory public hearing; 2) the collection of baseline environmental data by means approved by the DNR; 3) the submission of detailed prospecting and reclamation plans that include special consideration for protection of wetlands; 4) the posting of a bond to ensure reclamation of the prospecting site; 5) extensive environmental monitoring of the prospecting site; 6) specific provision for on-site inspections at any time; 7) minimum design and operation requirements; 8) specific locational criteria and environmental standards; and 9) provisions for granting exemptions "if such exemptions are consistent with the purposes of [ch. NR 131, Wis. Admin. Code] and will not

violate any applicable federal or state environmental law or rule."

The cost of environmental analysis and review, including that of an *Environmental Impact Statement* (see p. 20), if re-

quired, is the responsibility of the prospecting company. The permit fee is \$1,000; the prospecting applicant must also pay for all necessary permit evaluations and review by the DNR.



*A bulk sample of potential ore material (above left) may be collected for testing and evaluation in special laboratories organized to simulate mineral-processing facilities or mills, such as the laboratory (right) at the Lakefield Research Center in Ontario, Canada. Collection of bulk samples is regulated under ch. NR 131, Wis. Admin. Code.*

**Metallic mineral mining is defined as the commercial extraction of metal-bearing minerals and includes all aspects of the development and reclamation of the mining site.**

*The regulation of metallic mining operations includes the development of the mine itself, whether on the surface (an open-pit mine) or beneath the surface (an underground mine), and all activities related to mining. The preparation of a mining site is included as well as the production and disposal of any waste materials and the construction and operation of any mineral processing facilities. A major aspect of metallic mining regulation is the provision for reclamation of the mining site.*

Mining metallic minerals is regulated through a permitting process that covers all aspects of the commercial production of metals. On the basis of ss. 144.80-144.94, Wis. Stats., the DNR uses ch. NR 132, Wis. Admin. Code, to specifically establish the regulatory requirements.

The location of metallic mineral operations is restricted on the basis of criteria designed to protect certain environmentally sensitive areas; exemptions from these criteria and standards are permitted only when doing so would not result in compromising any other state or federal environmental law or rule. Some designated areas in the state are defined as unsuitable for surface mining, reflecting the state's policy to protect certain land because of the presence of unique features. Land protected from metallic mining activities includes wilderness areas, wild and scenic rivers, national and state parks, wildlife refuges and areas, historical landmarks, and scientific areas. Disturbance of wetland areas must be minimized to the satisfaction of the DNR, and all environmental standards for the

protection of surface water, groundwater, air quality, and endangered and threatened species must be met.

The requirements for a metallic mine permit include a mining and a reclamation plan, prepared by the applicant (the company that is interested in mining). The mining plan contains details of all aspects of the mining operation, from how the ore is to be extracted to the disposition of all mining waste and refuse. In addition, an assessment of possible health and environmental hazards must be provided along with the proposed remedial actions that would be implemented. The reclamation plan describes how the mine site, waste piles, and related facilities will be reclaimed and how the reclaimed site will be used. In addition, a performance bond or other acceptable form of financial assurance must be posted to ensure the availability of financial resources sufficient to reclaim the site in the event of an operator's failure to complete the obligation to do so.

A monitoring plan must be prepared by the applicant and approved by

the DNR; the plan should identify the nature and extent of all monitoring programs—air, surface water, groundwater, and wildlife—that will verify a mining operation's acceptable performance before, during, and after mining. A contingency plan that outlines remedial actions necessary to mitigate any unforeseen environmental problems must be approved

prior to approval of a mine permit.

The cost of all environmental analysis and review work, including the preparation of an *Environmental Impact Statement* (see p. 20), is the responsibility of the applicant. The permit fee is \$10,000; the mining-permit applicant must also pay for all necessary permit evaluations and reviews by the DNR.



*The Jackson County Iron Company taconite mine, near Black River Falls, Wisconsin, was active from 1967 to 1983. Shown here is the mine (130-acre open pit; center), the mill complex (left center), mine-waste facilities (waste rocks in lower right and tailings in upper left), water-treatment facilities (left center), and all access roads. Mining is regulated under ch. NR 132, Wis. Admin. Code.*

### The disposal of mine wastes—including waste rock, sludge, and tailings—is specifically controlled by special regulations.

*The disposal of waste rock (rock without sufficient metal content to be of economic interest) produced in a metallic mining operation and the disposal of tailings (finely ground rock particles with little or no metal content left over from the washing, concentration, or treatment of crushed ore) are specifically regulated under ch. NR 182, Wis. Admin. Code. All waste material produced as a result of a metallic mineral prospecting or mining operation is regulated in specific detail to ensure the quality of the environment. This regulation requires a series of characterization studies; criteria for siting waste-disposal facilities, maintaining groundwater quality, and minimizing wetlands disturbance; and financial guarantees for proper operation of waste-disposal facilities.*

The *Feasibility Report* and *Plan of Operation* are the primary requirements for a license to dispose of metallic mineral prospecting or mining wastes.

The *Feasibility Report* includes the applicant's documentation of a proposed mine-waste disposal facility. This report includes data (independently verified by the DNR) about the chemical and physical nature of the waste material and its leaching potential, information about the proposed mine-waste disposal facility site (in terms of its general location and site-specific data), and the proposed mine-waste disposal facility design, which contains such information as earth-movement calculations and a proposed groundwater-monitoring program. The *Feasibility Report* also includes information about the aesthetics of the proposed mine-waste disposal facility, calculations related to issues of dam safety, financial requirements for long-term care and facility closure, and alternative site loca-

tions considered by the applicant.

The *Plan of Operation* is a detailed description of the mine-waste disposal facility, from construction to operation. It is essentially an engineering document that addresses such issues as groundwater protection, dam and berm construction, monitoring design, and an economic analysis of site closure and long-term care requirements. In addition, a detailed contingency plan is required; this plan describes measures to mitigate discharges from the mine-waste disposal facility.

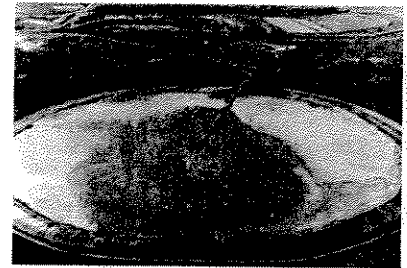
Sometimes a surface metal mine is filled with mine waste after the completion of the mining activity. In such cases the data included in the *Feasibility Report* and the *Plan of Operation* may be submitted as part of the mine-permit application, not as separate documents. If the DNR issues a mine permit, these two documents about mine-waste disposal are considered to have DNR approval.

Chapter NR 182, Wis. Admin. Code, further requires construction and completion reports to document mine-waste disposal facility construction in accordance with the *Plan of Operation*, minimum design and operation requirements, inspection requirements, monitoring requirements, record keeping, and recording of data. Once the mine-waste disposal facility is closed or certified as fully reclaimed, as provided for in the reclamation plan submitted under ch. NR 132 (see p. 12), the period of long-term care begins. During this period, the owner is responsible for conducting such activities as groundwater monitoring, routine surface maintenance, and the collection and treatment of leachate. (In some cases, the owner of the land and the mining-permit applicant are different entities. In these situations, the owner can require that the

applicant meet the long-term care obligations. Current law, however, places responsibility with the owner of the land.)

The owner must demonstrate financial capability to meet the responsibility for long-term care for up to 40 years. The owner may be required to continue the long-term care activities for any extended period of time, if it is found to be necessary by the DNR. The owner of the mine-waste disposal facility is forever liable for the environmental integrity of the reclaimed facility.

Exemptions or modifications from the requirements of ch. NR 182 may be requested but can be approved only if granting the exemption or modification is consistent with the environmental protection objectives of chs. NR 182 and 132 and will not violate any federal or state law or rule.



*The 320-acre tailings basin at Jackson County Iron Mine was used for the disposal of finely ground rock particles from the mill processing of iron-bearing ore. Mine-waste disposal facilities regulated under NR 182, Wis. Admin. Code, include those for waste rock, tailings, and all other refuse produced in a mining operation.*

## Reclamation

**Reclamation of a mining site to an environmentally stable condition is the principal objective of metallic mining regulations.**

*Sections 144.80-144.94, Wis. Stats., known as the "Metallic Mining Reclamation Act," emphasize the primary objective of Wisconsin's metallic mineral regulations: the reclamation of land disturbed by mining. Reclamation of mined land focuses on the return of that land to its original condition, or, if that is not physically or economically practical or is environmentally or socially not desirable, a return of the land to a condition that provides long-term environmental stability. A prospecting or mining permit approval must be based on a reclamation plan that has adequate financial guarantees to ensure its completion.*

The purpose of reclamation is restoration of the site. State statutes, specifically ss. 144.81(15), 144.83(2)(c) 1-8, and 144.834, Wis. Stats., give the standards for reclamation; these standards are outlined in detail in s. NR 132.08, Wis. Admin. Code. Standards include the stabilization of the entire site, control of surface-water flow across the site, protection of surface-water quality, sealing of any openings, removal of surface structures, prevention or reclamation of substantial surface subsidence, preservation of topsoil, and revegetation of the site. The main objectives are to re-establish a variety of plants and animals indigenous to the area and to minimize the disturbance of wetlands.

The administrative rules carry forward these statutory requirements in greater detail. In particular, an estimate of what it would cost the state to complete the reclamation plan must be made and a bond in that amount posted to en-

sure that the plan can be completed at any time during the course of the prospecting or mining operation.

The final use of a reclaimed mine site is specified in the mining permit and approved in the Master Hearing (see p. 24) before mining begins. Changes in the reclamation plan are only made when such changes do not adversely affect the goal of mined land reclamation, which is providing an environmentally stable, productive post-mining land use. Alternative uses of the reclaimed mine site are permitted only with the approval of the DNR and, if applicable, the owner of the disturbed land. The Jackson County Iron Company, for example, has reclaimed its open-pit taconite operation near Black River Falls, closed in 1983, to provide an area suitable for a county park with swimming, camping, hiking, interpretation of the site's mining history, and the observation of wildlife and wetlands on the site. Since 1974 other mine sites in

Wisconsin have been reclaimed to conditions supporting low-intensity wildlife management. Where land contours, after reclamation, differ from original con-

tours, these landforms must be stable, revegetated, and consistent with surrounding topography.



*Workers harvest grass seed from the reclaimed Jackson County Iron Mine tailings basin. When reclamation of the entire area is complete, this former mining site will be a county park.*



**HOW DOES  
THE PERMITTING PROCESS WORK?**



---

### The submission of a *Notice of Intent* to collect data to support a prospecting or mining permit application formally begins the permitting process.

Once it has been determined that metallic minerals are present in an apparently mineable location and at an acceptable cost, an applicant files a *Notice of Intent* to collect data to support a mining or prospecting permit application. This document provides a preliminary description of the proposed project, gives formal public notice of the project to the DNR and to Wisconsin's citizens, and requires full public review at an informational hearing in the area of proposed activity.

A mining company may be successful in its exploration program and discover a concentration of metal-bearing minerals in a location in which their extraction would appear to be economically feasible and environmentally possible. Following this discovery, the company begins informal discussions with the DNR to decide what type of data the company needs to collect for the state to determine whether mining can or should take place. The company then files a *Notice of Intent* to collect data to support a mining or prospecting permit application with the DNR.

The *Notice of Intent* serves two fundamental purposes: 1) it gives notice to area residents and the DNR that an activity of economic and environmental importance is being proposed; and 2) it gives a preliminary description of the proposed activity. The *Notice of Intent* provides the public with a mechanism to identify how the DNR will verify the technical data and clarifies opportunities for public involvement in the environmental analysis and the permit-review

decisions to come.

The submission of a *Notice of Intent* must be followed by a public hearing in no less than 45 and no more than 90 days. The purpose of the hearing is to gather public comment about issues of local concern, to help guide the data-gathering that will follow.

Typically, the *Notice of Intent* leads to the development of a *Scope of Study*, prepared by the applicant and submitted to the DNR. The *Scope of Study* identifies the specific means by which data are to be collected and analyzed. It describes the precise nature and extent of quality-assurance procedures and DNR's verification activities. The *Scope of Study* is reviewed, revised, and later approved by the DNR. Like the *Notice of Intent*, the *Scope of Study* is a document open to public comment, although a hearing is not required. An applicant is not required to prepare a *Scope of Study*, but the complexity of metallic mineral operations make the preparation of this document likely for mining projects.

### Principal aspects of the *Notice of Intent* process

Minimum information requirements for a *Notice of Intent*, based on ch. NR 132, Wis. Admin. Code include

- name, address, and telephone number of the applicant;
- map showing approximate location of the project site;
- expected date of submission of permit application;
- specific environmental data collected before the *Notice of Intent* was filed, including date, methods, and by whom collected;
- a preliminary project description that includes
  - topographic map showing location of the orebody;
  - description of orebody (size, shape, mineral composition);
  - description of proposed method of extraction, processing, and nature of wastes produced;
  - estimate of the proposed project's schedule;
  - proposed *Scope of Study* (optional);
  - other information requested by DNR; and
- quality-assurance program to be used during collection of data.

DNR advises applicant of

- specific information and quality-assurance requirements necessary for the permits and the *Environmental Impact Report* (see p. 18);
- type and quantity of information about the characteristics of the physical and biological resources involved;
- what previously collected data are acceptable;
- what preliminary data-verification procedures will be used; and
- need to prepare a *Scope of Study* detailing data collection and verification procedures.

Mandatory public hearing solicits comments from the public and relevant state and federal agencies about

- anticipated environmental impacts and desired baseline studies;
- other information and data believed necessary to be collected by applicant;
- listing of persons desiring notification of DNR actions concerning project;
- verification procedures to be used by DNR;
- quality-assurance procedures to be used by applicant; and
- listing of all anticipated federal, state, and local permits, licenses, and approvals.

## Environmental Impact Report

**The Environmental Impact Report is a detailed document that provides information about the condition of the existing physical, biological, and socioeconomic environment.**

*The Environmental Impact Report is typically a multivolume compilation of technical data pertaining to the regional and local setting of a proposed prospecting or mining site; it includes a description of the project, alternatives to the project as proposed, and analyses of potential environmental impacts. It contains technical data about the physical, biological, and socioeconomic environment; the proposed prospecting or mining project, as described by the applicant and reviewed and verified by the DNR, is evaluated within this context.*

The *Environmental Impact Report*, prepared by the applicant, is an extensive description of the existing physical environment (surface-water quality and quantity, groundwater quality and flow, soil types, geology, air quality, climatic setting, and topography); biological environment (aquatic plants and animals, terrestrial organisms, and the various plant ecosystems); and socioeconomic environment (economic base of the local and regional areas, work-force analysis, housing, schools, road systems, and fire and police infrastructure). The applicant also includes an assessment of potential environmental impacts.

The *Environmental Impact Report* contains a detailed description of the proposed project to assist in evaluating the relevance of the technical environmental data that are presented. In addition, the report includes a description and evaluation of alternatives to the proposed project (for example, different mining processes or other locations of critical

facilities). The applicant may hire consultants to complete the *Environmental Impact Report*.

The DNR verifies data by conducting random field checks during data collection, independently reviews laboratory procedures, and uses its own consultants to cross-check data analysis and conclusions.

The *Environmental Impact Report* is required under ch. NR 150, Wis. Admin. Code. However, the Metallic Mining Reclamation Act and chs. NR 131 and 132, Wis. Admin. Code, also require the submission of extensive environmental information to adequately determine the environmental effect of granting the necessary permits and approvals. The purpose of the *Environmental Impact Report* is to permit the DNR, following its own verification and data gathering activities, and the public to begin to reach conclusions about the potential impact of a proposed prospecting or mining operation.



*Environmental baseline data are collected and evaluated for the Environmental Impact Report. Data could include information collected by the sampling of aquatic organisms (above left) and by testing surface-water quality (right) at the Jackson County Iron Mine, near Black River Falls, Wisconsin.*

### The environmental analysis and review process is a major area of public involvement in decision making.

Wisconsin law (s. 1.11, Wis. Stats.) and DNR's ch. NR 150, Wis. Admin. Code, mandate full public disclosure of potential environmental impact related to proposed metallic mineral prospecting or mining operations. Public information includes 1) a Draft Environmental Impact Statement; 2) a mandatory public hearing; and 3) a Final Environmental Impact Statement, in which the DNR responds to all oral and written comments. The Environmental Impact Statement identifies and evaluates the project's potential effects upon the environment, means of mitigating adverse impacts, alternatives to the proposal action, and any loss of environmental resources that would occur.

The environmental analysis and review process for metallic mineral operations is a primary mechanism (but not the only mechanism) for public involvement in the decision about the permitting of a prospecting or mining operation. For prospecting, an *Environmental Impact Statement (EIS)* may or may not be necessary, but environmental assessment to some degree is still required. An *EIS* is required for all metallic mining projects and must include, in addition to information about the environmental impacts of the proposed operation, information on the long- and short-term socioeconomic effects of the proposed operation. The statutes specify that discussion of the socioeconomic effects of the proposed operation must include effects on tourism, employment, schools and medical care facilities, private and public social services, the area's tax base, the local economy, and other significant factors.

Following the publication of a *Draft EIS*, a mandatory public hearing is held to receive comments about the project,

about the adequacy of the *Draft EIS* document and its assessment of environmental impacts, and about alternatives to the proposed project. Prepared by the DNR, this *Draft EIS* is based on the *Environmental Impact Report*, the applications for all project-related permits, licenses, and approvals, and the department's independent analysis of these data, reports, and probable environmental impacts. The *Draft EIS* hearing identifies not only public concerns about the environmental assessment, but also serves as an information meeting to further describe the proposed project. Oral and written comments are accepted. The public hearing is held 30 to 60 days after the release of the *Draft EIS*. State and federal agency comments and other written comments are accepted for up to 80 days; comments from individuals, for up to 120 days after release of the *Draft EIS*.

The *Draft EIS* and the oral and written comments by the applicant, the public, and state and federal agencies form the basis for the DNR's preparation of the

*Final Environmental Impact Statement (Final EIS)*. The *Final EIS* represents the DNR's conclusions about the potential environmental impacts of the applicant's proposed project. Comments that were made on the *Draft EIS* are incorporated or otherwise addressed.

The *Final EIS* is a full disclosure document. It is not a decision-making

document, but a formal, legal decision must be reached, following the Master Hearing (see p. 24), as to whether the *Final EIS* is an adequate description of the existing environment, the proposed action, the potential environmental impacts, and the commitment of environmental resources associated with the proposed mining operation.

#### 1.11 Governmental consideration of environmental impact. The legislature authorizes and directs that, to the fullest extent possible:

(1) The policies and regulations shall be interpreted and administered in accordance with the policies set forth in this section and chapter 274, laws of 1971, section 1; and

(2) All agencies of the state shall:

(a) Include in every recommendation or report on proposals for legislation and other major actions significantly affecting the quality of the human environment, a detailed statement, substantially following the guidelines issued by the United States council on environmental quality under P.L. 91-190, 42 USC 4331, by the responsible official on:

1. The environmental impact of the proposed action;

2. Any adverse environmental effects which cannot be avoided should the proposal be implemented;

3. Alternatives to the proposed action;

4. The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and

5. Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented;

6. Such statement shall also contain details of the beneficial aspects of the proposed project, both short term and long term, and the economic advantages and disadvantages of the proposal.

(b) Prior to making any detailed statement, the responsible official shall consult with and obtain the comments of any agency which has jurisdiction or special expertise with respect to any environmental impact involved. Copies of such

statement and the comments and views of the appropriate agencies, which are authorized to develop and enforce environmental standards shall be made available to the governor, the department of natural resources and to the public. Every proposal other than for legislation shall receive a public hearing before a final decision is made. Holding a public hearing as required by another statute fulfills this section. If no public hearing is otherwise required, the responsible agency shall hold the hearing in the area affected. Notice of the hearing shall be given by publishing a class 1 notice, under ch. 985, at least 15 days prior to the hearing in a newspaper covering the affected area. If the proposal has state-wide significance, notice shall be published in the official state newspaper.

(c) Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(d) Initiate and utilize ecological information in the planning and development of resource-oriented projects.

(4) Nothing in this section affects the specific statutory obligations of any agency:

(a) To comply with criteria or standards of environmental quality;

(b) To coordinate or consult with any other state or federal agency; or

(c) To act, or refrain from acting contingent upon the recommendations or certification of any other state or federal agency.

(5) The policies and goals set forth in this section are supplementary to those set forth in existing authorizations of agencies.

Section 1.11, Wis. Stats., establishes the state's policy for assessing the environmental impact of governmental decisions, such as issuing metallic mineral operation permits.

## Permits, plans, and approvals

Permits, plans, and approvals form the basis for decisions about prospecting or mining proposals and describe how the projects are to be operated.

Several types of permits, plans, and approvals form the basis for the decision about whether or not to allow metallic mineral operations to proceed. Typically, several state and federal permits must be obtained before mining can begin. In addition to making decisions about permits, the DNR must approve a number of plans and reports, such as the Feasibility Report and the Plan of Operation for a mine-waste disposal facility. Decisions about all permits are based on legislatively mandated standards or criteria or on the DNR's discretionary authority to approve required plans. All such decisions are subject to a formal hearing.

Many types of permits must be obtained for any metallic mineral prospecting or mining operation. Typically, a company must acquire a mine permit (ch. NR 132, Wis. Admin. Code, and s. 144.85, Wis. Stats.), an air-emission permit (ss. 144.391-392, Wis. Stats.), permits for construction activity in or near navigable waters (ch. 30, Wis. Stats.), and a state wastewater-discharge permit (ch. 147, Wis. Stats.), plus a dredge or fill permit for activities affecting navigable streams or wetlands from the U.S. Army Corps of Engineers (33 U.S. Code §1344).

Formal approval of plans must also be obtained, for example, plans for mine dewatering (based on ch. NR 112, Wis. Admin. Code, and s. 144.025(2)(e), Wis. Stats.), wastewater-treatment systems (s. 144.04, Wis. Stats.), and mine-waste disposal facility Feasibility Report and Plan of Operation (ch. NR 182, Wis. Admin. Code, and ss. 144.44 and 144.46, Wis. Stats.). Other approvals may vary from project to project, such as for a potable

water supply or the one-time disposal of solid waste. Acceptance by the U.S. Environmental Protection Agency of spill-prevention control and countermeasures must also be in hand before operations can begin (22 U.S. Code §1321 and 40 CFR §112.7).

Other approvals at the DNR level are also necessary before it can act on the permit applications. In addition to the approval of mining and reclamation plans, the DNR must approve 1) a contingency plan to cover accidents or emergency discharges from waste-disposal facilities; and 2) a monitoring plan for the early detection of any adverse impact upon the physical and biological environment.

These permits and approvals are detailed descriptions of the operating parameters of the various phases of the prospecting or mining operation. They describe not only the nature of the proposed operation, but also include the limiting and modifying conditions that

are part of the final permits. Such documents are available for public review. They are meant to be the focus of the testimony provided in the Master Hearing by all parties to the hearing and all interested persons testifying at the hearing (see p. 24). Decisions about these per-

mits and approvals, together with the findings of fact and conclusions of law and decisions about Environmental Impact Statement adequacy and requests for variances, are the substance of the decision made after the Master Hearing.

### Typical permits and approvals required for metallic mining operations in Wisconsin (from Wisconsin Department of Natural Resources, Bureau of Environmental Analysis and Review)

Statutory authority	Administering agency	Activity	Action
<b>Federal</b>			
33 U.S.C. 1344	U.S. Army Corps of Engineers	Drainage or fill permits for activities in or affecting navigable streams and wetlands	Permit issuance
33 U.S.C. 1321	U.S. Environmental Protection Agency	Spill prevention control and countermeasure plan	Have plan on file before operations begin
<b>State</b>			
144.025(2)(e)	DNR	Mine dewatering	Plan approval
144.04	DNR	Wastewater treatment system	Plan approval
144.391 & 392	DNR	Air emission	Permit issuance
144.44 & 46	DNR	Feasibility Report, Plan of Operation	Plan approval
144.85 & 86(3)	DNR	Mining	Permit issuance, mining authorization
147	DNR	Wastewater discharge	Permit issuance
<b>Local</b>			
Zoning ordinances	County and/or town	Compliance with local requirements (variable)	Permit issuance, in most cases

### The Master Hearing is the legal forum for the formal evaluation of the proposed metallic mineral operation.

*The Master Hearing is a formal legal proceeding at which the evidence and testimony about the environmental assessment process and all permits, plans, and approvals are entered into the formal record. It is a formal hearing, in effect, a trial with rules of evidence, sworn testimony, and provisions for legal due process. The Master Hearing is also an opportunity for further public comment about the proposed metallic mineral prospecting or mining operation. On the basis of the record of the hearing, decisions are made regarding the appropriateness of the proposed operation within the context of the state's laws and rules.*

Section 144.836, Wis. Stats., outlines the components of the Master Hearing—it includes virtually all matters relevant to the environmental assessment process and the permits, plans, and approvals needed for every metallic mineral prospecting or mining operation. It is held no sooner than 120 and no later than 180 days after the release of the *Final Environmental Impact Statement*. The Master Hearing is an administrative law proceeding, as provided for under ch. 227, Wis. Stats.

It is presided over by a Hearing Examiner, a lawyer (administrative law judge) from the Wisconsin Division of Hearings and Appeals. Chapter 227, Wis. Stats., stipulates that the head of the agency involved in the matter (in the case of mining, the Secretary of the DNR) be the decision maker, but allows this responsibility to be delegated to the Hearing Examiner.

As provided for in s. 144.836, Wis. Stats., the Master Hearing has two parts: an open period of public comment and a

contested-case (formal) hearing. The period of public comment is not under oath and is not subject to cross-examination. The contested-case hearing is similar to a trial. Witnesses are sworn to tell the truth; evidence is formally submitted, identified, and accepted; cross-examination of each witness by all parties to the hearing is permitted. Formal legal briefs and motions are used to further delineate the factual and legal issues in the legal proceeding. A second period of open public comment may follow at the close of the contested-case part of the Master Hearing.

Parties to the Master Hearing include the applicant for the permits in question, the DNR, and all persons or groups formally expressing an interest. This could include representatives of local municipalities, the Office of the Public Intervenor, Native American tribes, environmental groups, and citizen-interest groups. Parties are generally represented by lawyers, have the right to

submit direct testimony, may cross-examine all other witnesses, have the right to discovery (legally permitted review of other parties' records and the review by means of depositions of witnesses before they testify at the hearing), may submit formal briefs and motions, and receive official copies of all briefs, written testimony, court documents, and evidence.

Public comments received at the Master Hearing are given "appropriate probative value" by the Hearing Examiner or decision maker (that is, a judgment is made of the appropriateness and credibility of public comment because those comments are not given under oath and are not subject to cross-examination).

A written record of all such comments is placed in the file of the Master Hearing proceedings.

The formal testimony, the evidence, and the legal briefs filed by the parties compose the hearing record. Using this formal record, the decision maker renders judgment on the findings of fact, conclusions of law, issuance of permits with necessary conditions, and issues rulings about the adequacy of the environmental impact assessment process. The decisions reached as a consequence of the Master Hearing are subject to appeal, which can be either an administrative appeal directly to the Secretary of the DNR and/or a judicial appeal to a court of law.

## Length of permitting process

**From beginning to end—from the Notice of Intent to decisions on permits—a period of two and one-half to four years is required.**

The regulatory process for metallic mining operations has built-in environmental monitoring periods, review times, and scheduling requirements that require at least two and one-half years from the filing of a Notice of Intent to the final decisions about the necessary permits and approvals following the Master Hearing. A period of four years to complete the regulatory process, however, is more likely because of the complexity of the environmental analysis and review process and the development of the numerous permit applications for the legally defensible decisions that are required.

Wisconsin's metallic mineral regulatory process specifies time frames for certain activities. For example, 1) the public hearing on the Notice of Intent cannot take place prior to 45 days or after 90 days from the published notice of its formal submission to the DNR; 2) the public hearing on the Draft Environmental Impact Statement (Draft EIS) must be held no sooner than 30 days and no later than 60 days after the document is released; and 3) the Master Hearing is scheduled no sooner than 120 days and no later than 180 days after release of the Final Environmental Impact Statement (Final EIS). Following the Master Hearing, the decision maker has up to 90 days to issue the decisions about the necessary permits, any requested variances, and the adequacy of the Final EIS.

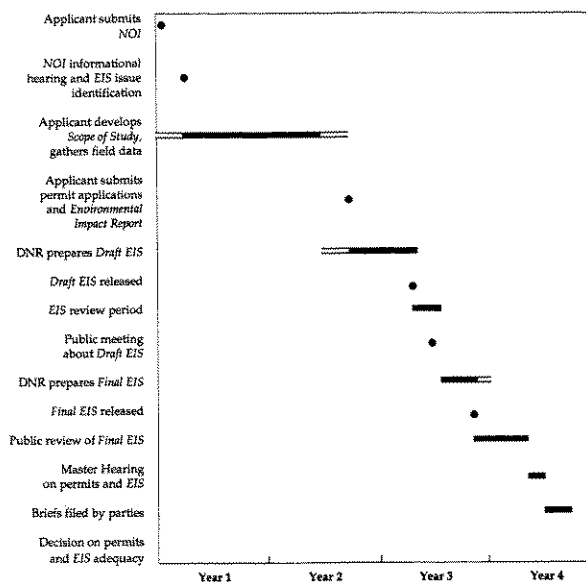
In addition, some periods of time are open-ended or unspecified, such as the time necessary to review the Notice of Intent, to incorporate comments received at the informational hearing, and prepare a Scope of Study; the time period for preparation of the Draft EIS following submission of an acceptable Environmental Impact Report and all of the required permit applications; and the time period for DNR revision of the Draft EIS and preparation of the Final EIS.

The collection of environmental baseline data, following approval of the Notice of Intent and a Scope of Study, requires a minimum of 12 months and may take up to 18 months or more to obtain seasonally variable data for certain environmental systems.

## Wisconsin Department of Natural Resources Mining Permit Review Process — Major events and approximate time line —

DNR—Wisconsin Department of Natural Resources  
NOI—Notice of Intent  
EIS—Environmental Impact Statement

● action upon which the next step is based  
▬ approximate time necessary to complete action  
▬ possible additional time necessary to complete action



The total length of time needed to complete the regulatory review and environmental impact processes is estimated to be two and one-half to four years. The length will depend on project complexity, timeliness and adequacy of the applicant's submissions, and amount of public interest. The actual duration for the events shown above might be longer or shorter, depending on the project.

Modified from Wisconsin Department of Natural Resources information sheet, March 1991

### Wisconsin law specifies the criteria for decisions about permits for metallic mineral operations.

The state laws for metallic mining identify six criteria for the issuance of a mining permit. All six must be met: 1) the mining plan and reclamation plan must be reasonably certain to result in lawful reclamation of the site; 2) all applicable air, surface-water, groundwater, and solid- and hazardous-waste regulations must be met; 3) the site must not be legally unsuitable (if a surface mine); 4) the mine must not endanger public health, safety, or welfare; 5) the mine must not adversely affect the economy of the area; and 6) the mine must conform with all applicable zoning ordinances. If all six criteria are met, then the DNR must issue the mining permit. In addition, the DNR must receive and review information about the permit applicant's mining track record and decide whether it is satisfactory according to statutory requirements.

A mining permit is granted in Wisconsin only if the activity is judged as complying with six legislatively mandated criteria that guide the decision maker. Basically, the decision maker weighs the evidence and testimony given at the Master Hearing. If, in the judgment of the decision maker, the record of the Master Hearing shows that the criteria are met, the DNR must issue the mining permit to the applicant.

#### 1. Are the mining plan and reclamation plan reasonably certain to result in the required reclamation of the site?

The basic thrust of metallic mining regulation, in view of mining's inherent environmental impact, is to ensure reclamation. The decision maker must determine whether the plans submitted in the mining-permit application will result in the necessary reclamation. The testimony and evidence form the basis for answering this question.

#### 2. Will the proposed operation be in compliance with air, surface-water, groundwater, and solid- and hazardous-waste management laws and rules?

Metallic mining operations must comply with the regulations protecting all other aspects of the environment. The answer to this question lies partly within the other permit applications (wastewater discharge, air emissions, mine dewatering, and other required permits) and within the plan approvals (wastewater-treatment plant, mine-waste disposal Feasibility Report and Plan of Operation, and acceptance of monitoring plans and contingency plans for any possible environmental emergencies).

#### 3. Is the proposed mine, if it is a surface mine, located in an unsuitable site?

Unsuitability is defined under ss. 144.81(18), Wis. Stats., and NR 132.03(25), Wis. Admin. Code, and presumes that certain lands, because of their unique

features, critical ecological importance, or historical value, should not be mined because their unique value will be lost or diminished. Similarly, the habitat of endangered species is not permitted to be destroyed or so irreparably damaged that the existence of the species identified as endangered is fundamentally threatened by the proposed metallic mineral operation.

#### 4. Will the mine endanger public health, safety, or welfare?

This is an accepted legal concept that allows judgment about what activities are fundamentally harmful and beyond mitigation. Metallic mining operations that, in the judgment of the decision maker as based on the evidence, are so fundamentally harmful as to fail this legal test of protection of health, safety, or welfare, are not permissible.

#### 5. Will the mine adversely affect the economy of the area?

Under this criterion, the socioeconomic impact of a mining operation is examined. Minerals are valuable and so are the jobs created to obtain the minerals, but there are economic and social costs. A metallic mining operation must be shown to have a "net positive economic impact," with the term "economic" broadly interpreted to mean "socioeconomic." The decision maker makes this judgment based upon evidence submitted at the Master Hearing.

#### 6. Does the proposed mine operation conform with applicable zoning ordinances?

The answer to this question provides the basis of local control of mining operations. A metallic mining permit may not be issued until all necessary local zoning approvals have been issued.

In addition, the DNR has 90 days following the completion of the Master Hearing to make a determination regarding the permit applicant's environmental track record in the United States. The applicant, principal shareholder(s), or "related persons" may not have been in forfeiture of a mine-reclamation bond at a mining operation in the United States during the last 10 years; no related person, officer, or director of the applicant may have been convicted of more than one felony for violations of laws protecting the environment in the United States in the 10 years prior to submitting an application for a metallic mining permit in Wisconsin. The applicant or related person also must not have declared bankruptcy or undergone dissolution that resulted in a failure to reclaim a mine site, nor have been involved in an action resulting in the revocation of a mining permit due to failure to reclaim a mine site in the United States. The statutes permit the applicant to provide information that would describe how the applicant plans to avoid such situations in the future, and the decision maker then decides whether such plans would be acceptable.



### Local governmental authority over metallic mineral operations supplements state and federal regulations.

The Wisconsin Legislature has delegated various zoning authority and land-use powers for metallic mineral prospecting and mining operations to local governments. A permit to prospect or mine cannot be granted unless the company applying for the permit can show compliance with local zoning and land-use ordinances. The statutes provide for an optional process, known as the local agreement, for clarifying an applicant's compliance with local controls.

**Local authority.** Local governments—counties, towns, cities, villages and, in some cases, tribal governments—have regulatory authority over many activities as provided for in state law. For metallic mineral mining operations, such local authority supersedes state regulatory authority by requiring that an applicant for a permit to mine metallic minerals demonstrate compliance with local zoning ordinances before any permits can be issued or put into effect. Section 144.85(3)(d), Wis. Stats., requires that a mining-permit application provide “Evidence satisfactory to the [DNR] that the applicant has applied for necessary approvals and permits under all applicable zoning ordinances...” and, under s. 144.85(4)(f), the issuance of the mining permit cannot occur unless it is shown that the “...mining operation conforms with all applicable zoning ordinances.”

**Local agreements.** Section 144.839, Wis. Stats., was developed to provide an option for local governments having zoning or land-use authority over metallic mining operations to discuss the parameters of the proposed project and its rela-

tionship to local ordinances with a potential applicant for a mine permit. The local agreement may cover any approvals or permits required under zoning or land-use ordinances. In addition, the conditions deemed necessary by the local government to protect the health, safety, and welfare of its residents are described in the agreement along with any obligations undertaken by these local governments to enable a proposed project to proceed. Such agreements may be negotiated by a local mining-impact committee (s. 144.838, Wis. Stats.) or some other group designated by the local governmental bodies involved.

The local agreement can be adopted only after a public hearing and after each county, town, village, city, or tribal government that is a party to the agreement has approved the agreement in a public meeting of the appropriate governing body. A local agreement can be adopted at any point in the permitting process that all parties find mutually acceptable.

The cost of negotiating local agreements for eligible local governmental bodies is addressed partly through a requirement that the filers of a *Notice of*

*Intent* must pay \$150,000 to the Investment and Local Impact Fund to help cover the expenses of local governments interested in developing a local agree-

ment. Also, state agencies having appropriate expertise are required to assist in the enforcement of local agreements, once signed and placed into effect.

### Basic elements of Wisconsin's local agreement statute (s. 144.839, Wis. Stats.)

#### Who can participate?

- local governments (county, town, village, city, or tribal government) with zoning or land-use authority over a metallic mineral operation;
- local governments (county, town, village, or city) in which a part of the mining site is located; and
- potential operators of a mining operation.

#### What must be included?

- legal description of land involved and name of owners;
- duration of agreement;
- uses permitted on the land;
- conditions, terms, restrictions, or other requirements local government deems necessary;
- obligations assumed by local government to enable development to proceed;
- applicability or nonapplicability of local government ordinances, approvals, or resolutions;
- a process providing for amendment of the agreement; and
- other provisions mutually agreeable.

#### Who can negotiate?

- local mining-impact committee; or
- some other designated authority.

#### How must it be adopted?

- must have prior public hearing;
- notice of the hearing must be provided; and
- each local governing body involved must approve agreement in a public meeting.

## Opportunities for public involvement

### The public is mandated full access to environmental analysis and permit reviews through formal and informal hearings and meetings.

The Wisconsin Environmental Policy Act (WEPA) and the Metallic Mining Reclamation Act (MMRA) provide opportunities for citizens, locally and statewide, to learn about proposed metallic mining projects and to provide input about the nature and scope of the environmental analysis and the reviews of necessary permits and approvals. Three formal public hearings are mandated; in addition, numerous informal informational meetings can be held by civic organizations, public interest groups, and local governments. Local mining-impact committees provide an additional mechanism for public involvement in education and citizen participation in the regulatory process.

Section 1.11, Wis. Stats., is known as the Wisconsin Environmental Policy Act (WEPA); ss. 144.80-144.94, Wis. Stats., compose the Metallic Mining Reclamation Act (MMRA). Both laws provide opportunities for public involvement in the regulatory process.

WEPA provides that major public decisions affecting the environment be subject to an assessment of potential environmental impacts, that this assessment be communicated to the public for information and comment, and that there should be full public disclosure of environmental impacts prior to final project approval. Under ch. NR 150, Wis. Admin. Code, the DNR views metallic mining operations as a type of activity that requires, in most situations, the development of an *Environmental Impact Statement (EIS)*. The EIS process provides several opportunities for public involvement.

The MMRA provides specific opportunity for public involvement through 1) mandatory public hearings about the *Notice of Intent*, the *Draft EIS*, and the Master Hearing; and 2) the authorization for local mining-impact committees, un-

der s. 144.838, Wis. Stats. These committees are optional, but can be identified by local governing bodies to 1) facilitate communication between the committee and a mining-permit applicant or operator; 2) analyze the implications of metallic mining activity; 3) review and comment on reclamation plans; 4) develop solutions to mining-caused growth problems; 5) recommend priorities for local action in regard to metallic mining; 6) develop recommendations regarding distribution of certain metal mining-tax revenues; and/or 7) negotiate a local agreement. The local mining-impact committees provide local education, information, and input regarding metallic mining. These activities can be funded by state and/or local funding sources.

In addition to the required public hearings and the optional formation of local mining-impact committees, numerous informal information meetings about metallic mining projects can be organized

by civic groups, public interest groups, and local governments. The public's interest in information and the permit applicant's interest in explaining the

project can foster public interaction between the company and the DNR, state and local officials, and other interested citizens.

### Local mining-impact committees (s. 144.838, Wis. Stats.)

#### Who may participate?

- any county, town, city, village, or tribal government likely to be substantially affected by potential or proposed mining.

#### What are the committee's tasks?

- facilitate communications;
- analyze implications of mining;
- review and comment about reclamation plans;
- make recommendations about the future use of the project site;
- develop solutions to growth problems;
- recommend priorities for local action;
- recommend fund disbursements of mining-tax revenues; and
- negotiate a local agreement.

#### What authority is granted to the committee?

- may form joint committees with other local governmental bodies;
- operators and persons filing a *Notice of Intent* must appoint a liaison person to local impact committee;
- may hire staff, enter into contracts with private firms or consultants, or contracts with other agencies;
- shall be given opportunity to review and comment on applications and reclamation plans; and
- may participate in the Master Hearing.

## Modifications, exemptions, and variances

**Exemptions from metallic mineral regulations can only be granted if no other law or rule is violated and the public or the environment is not harmed.**

*The Wisconsin Legislature recognized that metallic mineral deposits are located in areas where their extraction in the most environmentally sound manner may require a flexible approach to the necessary permitting requirements. Thus, exemptions, modifications, and variances from the administrative rules applicable to metallic mineral prospecting or mining operations may be permitted only "if the proposed exemption, modification, or variance does not result in the violation of any federal or state environmental law or endanger public health, safety or welfare or the environment."*

The Wisconsin Legislature developed a comprehensive framework of laws and rules to control the development of metallic mineral deposits in Wisconsin to ensure the protection of the people of the state and the environment and to guarantee the reclamation of metallic mineral prospecting or mining sites. However, the Legislature recognized that metallic deposits may be in areas where their extraction poses environmental difficulties. Therefore, a policy of regulatory flexibility anchored by a specific standard or criterion of "no other violation" was developed.

Section 144.83(4)(j), Wis. Stats., authorizes the DNR to develop rules permitting exemptions, modifications, or variances (which could make a requirement more or less restrictive) from administrative rules developed under the solid- and hazardous-waste laws or the Metallic Mining Reclamation Act. Specifi-

cally for metallic mineral prospecting and mining, ss. NR 131.19, NR 132.19, and NR 182.19, Wis. Admin. Code, spell out the requirements for the review and decision made on such requests. As is done for all administrative rules, these rules were reviewed and approved by two committees of the Legislature.

The flexibility intended by the Legislature and enacted through the administrative rules is limited: no other state or environmental law can be violated if the requested change is allowed. In addition, there can be no endangering of public health, safety, or welfare, or endangering of the environment as a consequence of granting a requested rule exemption, modification, or variance. The decisions on requests for rule flexibility are based upon testimony under oath, subject to cross-examination, and the evidence admitted during the contested-case part of the Master Hearing.

**WHAT ARE  
ADDITIONAL FEATURES  
OF THE REGULATORY FRAMEWORK?**



## Environmental monitoring

### Monitoring a range of environmental systems is an integral part of pre-mining, mining, and post-mining regulation.

*Monitoring plays a critical role in the state's regulatory program throughout the life of any metallic mineral prospecting or mining operation. To establish baseline environmental conditions, it is necessary to monitor and evaluate data. To determine compliance with all permits and plan approvals, monitoring must be continued once the operations are underway. To ensure the environmental stability of a reclaimed mining site, monitoring of the environmental systems affected by mining and reclamation activity is required.*

The *Notice of Intent* provides the preliminary description of any proposed prospecting or mining project. This description, in turn, establishes the basic data requirements necessary for environmental assessment and the full public disclosure of potential environmental impacts of the proposed metallic mineral operation. Environmental baseline data include surface-water and groundwater quality, quantity, and movement; descriptions of aquatic and terrestrial fauna and flora, including endangered or threatened species; climatological and meteorological data and analysis; and existing environmental conditions, such as air quality and noise.

The mining permit and all other applicable permits include requirements for monitoring the performance of the proposed operation. The same environmental resources of concern in the baseline data program are evaluated as a check on predictions regarding project impacts and as an early warning of noncompliance. According to ch. NR 132, Wis. Admin. Code, a pre-blasting survey is required prior to any blasting activity and

the monitoring of wastes, groundwater, and surface-water quality is a mandatory part of the reclamation plan. Section NR 132.11, Wis. Admin. Code, specifically requires the completion of environmental monitoring based on an approved monitoring plan, which is part of the mining permit. These monitoring requirements can be expanded if the DNR determines such modifications are necessary for satisfactory evaluation of the required activities.

According to ch. NR 182, Wis. Admin. Code, monitoring groundwater quality for a period of 12 months is an integral part of data gathering prior to receiving a license to operate a mine-waste disposal facility. Groundwater monitoring during and after the operation of mine-waste disposal facilities is required to allow early detection of groundwater impact; harmful effects on the groundwater require activating an intervention or contingency plan to prevent groundwater contamination beyond the limit of the facility's compliance boundary.

Section NR 182.08, Wis. Admin. Code, outlines a comprehensive program

of waste characterization and, under s. NR 182.13, Wis. Admin. Code, a program of monitoring to ensure that the actual impact of these wastes on the environment, including the production of leachate and any leakage from the facility, are within acceptable limits.

Long-term care encompasses routine care, maintenance, and monitoring to evaluate the impact of the mine-waste

disposal facility following its closure. An owner of an approved mine-waste disposal facility is *perpetually* responsible for long-term care. The focus of long-term care is monitoring the mine-waste disposal facility to ensure that the certified reclamation of the site is maintained and the protection of groundwater and surface-water resources continues without failure.



*The photos above illustrate environmental monitoring programs for surface water (Jackson County Iron Company) and groundwater (Flambeau Mine). Other monitoring programs, such as monitoring air quality and local wildlife, may be necessary.*

### Enforcement of metallic mineral regulations encompasses several options for action by the DNR and Wisconsin citizens.

Regulations are only as strong as the enforcement capabilities of the regulator and the scope of the actions available to the enforcement agencies. For metallic mineral operations, ss. 144.91, 144.93, and 144.935, Wis. Stats., spell out the options for state enforcement of the laws and rules governing these activities. These options are also detailed in s. NR 132.16, Wis. Admin. Code. Enforcement options include notices of violations and orders, emergency stop orders, citizen suits (against an operator or the DNR), and six-citizen suits, fines, and permit revocation. The DNR uses its own Bureau of Environmental Enforcement and is backed up by the Wisconsin Department of Justice in carrying out enforcement actions. The circuit court of either Dane County or the county in which the operation exists has jurisdiction to enforce these regulations.

The Metallic Mining Reclamation Act provides several ways to enforce the regulations applicable to metallic mineral prospecting and mining.

**Notice of violations and orders** is one type of enforcement action. The DNR may provide notice to the operator about a particular violation and specify a time for return to compliance, or the DNR can require that a hearing be held. The DNR can also request enforcement action by the Wisconsin Department of Justice. Orders take effect within 10 days or, if a hearing is required, immediately following the conclusion of the hearing. Failure to comply with an order results in *permit revocation*.

For activities that are not in compliance with existing permits and that pose "an immediate and substantial threat to public health and safety or the environment," *emergency stop orders* may be issued by the DNR. A stop order requires the immediate cessation of mining, in whole or in part. Under most circum-

stances, a hearing about this type of order must be held within five days and a decision affirming, modifying, or setting aside the order is required within 72 hours after the hearing begins.

**Citizen suits** are also available as enforcement mechanisms. Any individual citizen can bring a civil action against the operator of a metallic mineral operation or against the DNR if there is belief that the DNR is not performing its duties as required by the Metallic Mining Reclamation Act. Any six or more citizens can submit a complaint that will require the DNR to hold a hearing on alleged or potential environmental contamination. If the complaint is found to be valid, the operator must comply with the order to cease the violation; the operator is subject to all applicable fines and may be subject to permit revocation. Malicious filing of citizen suits, however, may result in the citizens involved being subject to civil action for the recovery of the operator's

expenses to defend itself under s. NR 132.16(1)(f), Wis. Admin. Code.

Holders of a prospecting or mining permit who violate the permit conditions, are subject to *fines*, as are violators of any orders or rules issued under the Metallic Mining Reclamation Act. The fines can range from \$10 to \$10,000 for each violation; each day of violation is considered a separate offense.

Thus, enforcement of the regulations governing metallic mineral operations is available to the DNR, the Department of Justice, and citizens of the state. Guarantees of due process apply to all parties involved. These enforcement options are *in addition* to any rights individuals or groups of individuals may have under other state laws or the common law.

### Environmental enforcement program at the Department of Natural Resources

DNR environmental enforcement policy focuses on

- prevention of environmental pollution;
- remediation of the affected environment; and
- establishment of an aggressive enforcement program through expanded staffing, enhanced staff training, and expanded prosecution of violators.

#### Examples of environmental enforcement activity in recent years

Year	Notice of violations	Formal enforcement conferences	Orders	Referred to Dept. of Justice	Total actions
1989	270	181	27	36	514
1990	232	111	56	70	470

#### Fine and forfeiture<sup>1</sup> judgments arising from environmental enforcement actions

Year	Cases	Judgments
1987	50	\$1,327,000
1988	44	\$1,288,000
1989	42	\$2,455,000
1990	39	\$1,632,000

<sup>1</sup> Fines are financial judgments arising out of criminal prosecution; forfeitures are financial judgments arising out of civil actions. Imposing fines and forfeitures because of violations does not necessarily imply that damage to people or the environment has occurred. In situations that do result in harm, further liability would probably result.

**In addition to paying costs of environmental analysis and permit reviews, companies must financially ensure reclamation and long-term care.**

*The cost of the state's reviews of metallic mining projects are borne by the mining-permit applicants. This cost is divided into two parts: 1) that of the preparation of an Environmental Impact Statement; and 2) that of reviewing permits, particularly the mining permit. The future costs of mining are also covered in the form of a reclamation bond, financial surety for long-term care activities, and contributions to the environmental repair and groundwater funds.*

**Environmental Impact Statement (EIS) and permit costs.** An applicant for metallic mineral prospecting or mining permits bears the state's cost of reviewing the project. All of the costs for EIS preparation (time for review of data, writing of text, revising text, printing, and distribution, for example) are charged to the applicant. The costs for reviewing the mining permit are similarly charged to the applicant (for example, the detailed review of applications that requires considerable DNR time).

For the Flambeau Mine, a technically simple project, the cost of the preparation of environmental impact statements was about \$185,000. The cost of reviewing the mine permit and related permits was \$182,000, including the \$10,000 basic application fee. For the more complex Crandon Project, the cost of environmental assessment work was more than \$2 million (1985 dollars) and mine-permit review was \$236,000, up to the time that the Master Hearing was completed.

**Reclamation bond.** Section NR 132.09, Wis. Admin. Code, details the requirements for a "bond or other security... conditioned upon faithful performance of all requirements of [the Metallic Mining Reclamation Act]." The bond amount is determined by what it would cost the state to reclaim the site at any point in the life of the project. Cash, certificates of deposit, or government securities may also be used in place of a bond. The amount of the bond (or other security) may be increased to assure adequate coverage for the reclamation plan.

For the Flambeau Mine, the reclamation bond will be in excess of \$8 million. For the Crandon Mine Project as originally proposed in 1982, the reclamation bond was expected to be set at \$34.6 million (1985 dollars). The difference in these bond amounts reflects the significantly greater volume of waste to be handled in the Crandon Project as compared to the Flambeau Mine, and the greater land-surface impact of mining facilities and mill development for

the Crandon Project as compared to Flambeau.

**Long-term care.** Operators of metallic mining operations are also required to show financial capability for long-term care of the reclaimed site. Under current law, the owner of a mine-waste disposal facility is *perpetually liable* for the environmental integrity of the site. Proof of financial responsibility for long-term care for 40 years after closure of the site must be shown. For the Crandon Project, long-term care costs were estimated at \$108,000 per year (1985 dollars) with projected costs in the first two to three years following closure in excess of \$400,000 per year. For Flambeau Mine, where the open pit will be filled with waste rock from stockpiles that are temporary and where no processing of the ore occurs beyond simple crushing for rail shipment, the long-term care costs are estimated at \$11,000 per year.

**Environmental Repair Fund.** Operators of mineral-waste disposal facilities also are required to contribute to the Environmental Repair Fund (ERF) at a rate of one cent per ton of mine waste. Similarly, operators of all solid- and hazardous-waste facilities pay into this fund at statutorily determined rates. The ERF can be used for the investigation and carrying out of remedial actions at any solid-

or hazardous-waste site that causes or threatens to cause environmental contamination. The fund may also be used to avert environmental emergencies at waste sites, but the owner of the facility remains liable and subject to recovery of these costs in a court of law. The Investment and Local Impact Fund, created from mining-tax revenues, may be a source of additional monies if funds available in the ERF are not sufficient to handle a specific mine-waste problem. For Flambeau Mine, required payments to the ERF are estimated to be more than \$60,000; for the Crandon project, as it was proposed in the early 1990s, this payment will be more than five times larger. The difference reflects the significantly larger volume of mine waste projected for the Crandon operation, as opposed to the volume of mine waste anticipated for the Flambeau Mine project.

**Groundwater fee.** Under s. 144.441(7), another one cent per ton fee for every ton of mine waste (including waste rock, tailings, and sludge) must be paid into the groundwater fund. These funds are used for groundwater-management activities by the DNR. For Flambeau Mine, these payments are estimated to be in excess of \$60,000; for the Crandon project proposed in the early 1990s, this payment will be more than five times larger.

**Companies engaged in mining metallic minerals must pay additional taxes, based on net proceeds, reflecting the possibility of higher costs to society.**

The commercial extraction of metallic minerals is viewed by the state of Wisconsin as an important economic activity, but one that may impose higher costs on society due to its potential for incurring adverse environmental impacts, socioeconomic effects on local communities, and the often short-lived nature of the activity. Thus, a net proceeds tax on metallic mining is applied to these operations to generate additional revenues to address these potentially higher costs. This tax is designed to reflect the profitability of the mining operation. Sixty percent of the net proceeds tax is placed in the Investment and Local Impact Fund, which was created to help address issues of local economic impact.

**Net proceeds tax.** Section 70.37, Wis. Stats., specifies the intent of the Legislature in requiring that an additional tax be imposed on the mining of metallic minerals. It states, in part:

The tax is established in order that the state may derive a benefit from the extraction of irreplaceable metaliferous minerals and in order to compensate the state and municipalities for costs, past, present, and future, incurred or to be incurred as a result of the loss of valuable irreplaceable metallic mineral resources.

The tax is based on a company's net proceeds, which are determined on an annual basis from the operation's gross proceeds or sales minus the deductions outlined in s. 70.375, Wis. Stats., *Computation of the Net Proceeds Tax*. The tax rate is graduated (higher rates for larger net proceeds) from 3 percent of net proceeds from \$250,000 to \$5 million up to 15 percent for amounts exceeding \$25 million. Tax brackets are automatically adjusted for inflation.

Section 70.395, Wis. Stats., outlines the disbursement of these tax revenues and their use to address the social and economic impacts of mining, including the mitigation of so-called "boom-bust" economic development. The distribution of these revenues is complicated, but in general is as follows: 60 percent is placed in the Investment and Local Impact Fund; 40 percent, in the Badger Fund of the state of Wisconsin. (The Badger Fund, created under s. 25.28, Wis. Stats., is supported by net proceeds taxes from metallic mining operations.

This money earns interest; 50 percent of this interest may be used for capital costs for local recreational development across the state; the remaining 50 percent, for local school aid.)

**Investment and Local Impact Fund.** This mining-impact fund is administered by a citizen board, which makes disbursements to local communities and local mining-impact committees for the purpose of addressing mining-related im-

pacts and providing information to local citizens about metallic mineral operations. To local municipalities—towns, cities, counties, or tribal governments—funds are disbursed as guaranteed construction-period payments, first-dollar (up front) payments, and discretionary payments available upon request. Local mining-impact committees and school districts are also eligible to receive funds for specified purposes; counties can also receive additional tax payments. Disbursement of net proceeds tax revenues is also detailed in ch. Tax 13, Wis. Admin. Code, an administrative rule of the Department of Revenue.

**Other taxes.** The net proceeds tax on metal mining is levied in addition to all

other applicable taxes required of corporations doing business in Wisconsin. For example, the Department of Revenue estimated the Flambeau Mine's federal income tax liability to range from a low of \$400,000 to a high of \$81.4 million per year. State corporate income taxes were estimated to range from \$1.9 million to \$26.7 million per year. For the proposed Crandon Mine, estimated federal taxes ranged from \$47.9 million to \$459 million over the 32-year life of the project; estimated state corporate income taxes ranged from \$48.2 million to \$155 million over the life of the project. (Crandon taxes were estimated in 1985.) Other state and local taxes are also applicable to metallic mineral operations.

**Estimated net proceeds tax for two proposed Wisconsin mines**  
(source: Wisconsin Department of Revenue)

Proposed Crandon Mine			
Net proceeds tax (in millions of dollars; estimated in 1985)			
Year <sup>1</sup>	Low	Medium	High
1	\$ 0.000	\$ 0.000	\$ 0.000
5	0.45	1.30	6.94
10	5.40	7.18	10.51
20	3.26	6.27	9.28
30	0.18	1.20	2.05
Total (32-year project)	\$ 58.27	\$ 118.42	\$ 186.73

Flambeau Mine			
Net proceeds tax (in millions of dollars; estimated in 1989)			
Year	Low	Medium	High
1 <sup>1</sup>	\$ 0.300	\$ 0.300	\$ 0.300
2	0-0.276 <sup>2</sup>	1.155-1.986	3.330-4.296 <sup>4</sup>
3	0-0.426	1.188-1.955	3.203-4.188
4	0.091-0.433	1.147-1.922	3.108-4.125
5	0.096-0.404	1.051-1.817	2.933-3.976
6	0.067-0.346	0.909-1.680	2.705-3.785
7	0.061-0.339	0.863-1.649	2.580-3.695
Total (6-year project)	\$ 0.614-1.608	\$ 6.614-11.310	\$ 18.158-24.366

<sup>1</sup>Only selected years are shown.  
<sup>2</sup>Represents construction-period payments.  
<sup>3</sup>Range shows taxes under a high-cost (left figure) and low-cost scenario (right figure).  
<sup>4</sup>In 1994 (year 2 of operation), Flambeau Mining Company paid \$6.1 million in net proceeds taxes.

## Liability requirements

**Companies that have been granted prospecting or mining permits are held strictly liable for death or injury to persons or property in perpetuity.**

*Metallic mineral operations are subject to special liability under Wisconsin law for mining-related damages to persons or property. The liability exists without regard to demonstrations of negligence (strict liability), and extends to any subsequent company successor or owners. The Wisconsin Department of Industry, Labor and Human Relations administers a mining-damage claim fund that compensates individuals for mining-related injuries. Damage to water-supply wells is subject to compensation under statutes administered by the Department of Natural Resources.*

Sections 107.30-107.35, Wis. Stats., define the special provisions governing the liability of metallic mineral prospecting or mining operations for damages that they cause to persons or to property. Metallic mineral operations are held to the following standards of liability:

1) Damages for mining-related injury are made without regard to fault, except that damages may be reduced to reflect negligence on the part of the injured party.

2) A mining company is held liable for mining-related damages regardless of any change in the nature of ownership of the prospecting or mining site and of any reorganization, merger, consolidation, or liquidation affecting the prospecting or mining company.

3) The limit for claims and actions for mining-related injuries is three years of when the evidence of injury to person or property was, or should have been, known (s. 893.925, Wis. Stats.).

Mining-related damages are defined to be death or injury to a per-

son or property caused by environmental contamination from emissions, seepages, leakages, or other discharges from mining operations, and encompass injury as a consequence of substantial subsidence of the land surface. Mining operations include not only prospecting and mining sites but also any refineries, smelters, and related waste products from these operations.

Section 107.31, Wis. Stats., spells out the procedure for filing mining-damage claims, which are handled by the Wisconsin Department of Industry, Labor and Human Relations (DILHR). DILHR is directed to hold a formal (trial-like) hearing about any claim that cannot be settled otherwise.

In addition, s. 144.85(4), Wis. Stats., outlines a process for persons whose water supply is adversely affected by a metallic mineral operation. Such individuals may receive relief in the form of an alternative water supply and limited financial compensation, based on the review of their complaint by the DNR.

## HOW DO WISCONSIN'S MINING REGULATIONS COMPARE TO OTHER REGULATIONS?





### **Metallic mineral prospecting and mining regulations complement and supplement (but do not replace) all other state environmental regulations.**

*Metallic mineral operations are regulated by laws and administrative rules, but these regulations require that any proposed metallic mineral operation be in conformance with all other environmental regulations. The DNR's programs for the protection of air quality, surface-water and groundwater resources, wetlands, and solid- and hazardous-waste disposal are applicable to metallic mineral prospecting and mining projects in most cases. Exceptions relate to the location-specific nature of metallic mineral deposits and the special aspects of mineral extraction that are part of the mining activity itself.*

Sections 144.80-144.94, Wis. Stats., outline the regulatory framework for the development of metallic mineral deposits in Wisconsin. Chapters NR 130-132 and 182, Wis. Admin. Code, specifically describe the regulatory details based on this framework. Inherent in this regulatory framework for metallic minerals is the understanding that the development of such deposits must be accomplished in a manner consistent with other environmental protection programs administered by the DNR. Thus, a permit is not only required for metallic mining projects but all other applicable permits and approvals must also be granted before a mining project can proceed.

**Surface water.** Chapters NR 102-106, Wis. Admin. Code, outline an extensive program of surface-water classification and protection and regulate discharge that could affect these waters and the organisms within them. These rules apply to metallic mining.

Under ch. 30, Wis. Stats., permits are required for construction activity in or

near navigable waters. Permits for such activity are necessary for any metallic mineral operation near such waters.

**Wastewater discharge.** Chapter 147 and s. 144.04, Wis. Stats., give DNR the authority to regulate the discharge of contaminants into the environment. The DNR must approve plans for and operations of wastewater-treatment plants or systems (s. 144.04). The DNR also requires a permit for discharge from these plants. Metallic mineral operations must comply with these requirements.

**Air quality.** Under ss. 144.30-144.426, Wis. Stats., the DNR has authority to regulate activities that could have an impact upon air quality. An air-pollution-control permit, under s. 144.391, is generally required because metallic mining operations become sources of airborne pollutants (principally dust containing certain amounts of metallic minerals). The requirements of these statutes and chs. 400-499, Wis. Admin. Code, are applicable to metallic mineral operations.

**Wetlands.** Chapters NR 131 and 132, Wis. Admin. Code, which cover metallic mineral prospecting and mining, respectively, outline the requirements for detailed evaluation of wetlands that may be affected by proposed operations. Because metallic mineral deposits may occur in areas where prospecting or mining activities could result in disturbance of wetlands, the DNR requires a comprehensive evaluation of wetlands that is based on their functional value. The applicant is required to show that the proposed project will minimize wetland disturbance. This is consistent with the ultimate goal of siting project facilities to result in the least overall environmental impact.

Although this standard differs from certain other DNR actions (see ch. NR 103, Wis. Admin. Code, which does not apply to prospecting or mining operations), the regulatory concern for wetland protection is a major aspect of metallic mineral operation approval. Further, local shoreland/wetland zoning requirements prohibit metallic prospecting or mining, thus necessitating rezoning by local authorities before mining can proceed. Such rezoning is subject to DNR approval in its role as trustee of these waters of the state.

**Groundwater.** The impact of metallic mining operations on groundwater quantity and quality is regulated under chs. NR 132 and 182, Wis. Admin. Code. Quantity issues are typically addressed through a permit-review process under

s. 144.855, Wis. Stats., which relates to mine dewatering. Wells constructed or maintained as part of the proposed operation must comply separately with the requirements of ch. NR 112, Wis. Admin. Code.

For groundwater-quality protection, the requirements of s. NR 182.075, Wis. Admin. Code, are the controlling regulations. These requirements, applicable to all facilities on the mining site, identify to what extent groundwater quality can be changed and still protect public health, safety, or welfare. The Legislature recognized that mining activities may affect groundwater, but established in its approval of s. NR 182.075, Wis. Admin. Code, that there was an absolute limit to this adverse impact in distance from the prospecting or mining facilities and in the extent of any change in the chemical composition of the water. Under no circumstances is groundwater quality to be below that of drinking-water quality beyond this boundary. If existing water quality is already below drinking-water standards, then no change from background water quality is allowed.

The provisions of ch. NR 182, Wis. Admin. Code, relating to groundwater-quality protection for metallic mineral operations may differ in detail, but are similar in intent (protecting the quality of groundwater resources) to the requirements of ch. 160, Wis. Stats., and ch. NR 140, Wis. Admin. Code. These statutes and administrative rules apply to all regulated activities that have the potential for affecting groundwater quality.

## Federal environmental regulations

### Mining on federal land must fully comply with all state and federal regulations.

*Wisconsin's environmental protection programs complement federal environmental programs; in the case of water, air, and solid waste, the state is fully responsible for carrying out those programs in place of the federal enforcement agencies. State programs can accomplish federal environmental protection objectives and can regulate activities affecting the environment. Certain federal permits and approvals are still required for metallic mining operations in Wisconsin, however, and mining on federal land must be completed in conformance with state and federal mining regulations.*

Wisconsin has adopted and enforces comprehensive environmental protection programs in surface-water and air quality, drinking-water standards, and solid-waste disposal. These programs have been reviewed by the federal government to ensure that they meet federal program objectives to protect the environment. The enforcement of these programs has been left to the state. This is in accordance with the concept of state primacy for certain environmental regulatory programs. There is no separate federal environmental regulatory program for metallic mining operations or mine waste, although such a program does exist for coal mining. A federal program for the regulation of mining waste is under discussion.

**Federal permits/approvals.** Because of the location of potential metallic mineral deposits in northern Wisconsin—an area of numerous streams, lakes, and wetlands—two federal agencies are likely to be involved with metallic mining operations in Wisconsin: the U.S. Army Corps of Engineers and the

U.S. Environmental Protection Agency. The U.S. Army Corps of Engineers requires a permit for dredging or filling activities in or near navigable streams or wetlands. The U.S. Environmental Protection Agency requires approved spill prevention control and countermeasure plans prior to the beginning of mine operations.

Although not specifically a permitting or plan approval requirement, federal regulatory agencies are asked to submit written comments about *Environmental Impact Statements* prepared for the assessment of metallic mining operations. For example, review of the Flambeau Mine *Environmental Impact Statement* was completed by the following federal agencies: Environmental Protection Agency, Soil Conservation Service, Forest Service, Fish and Wildlife Service, Geological Survey, the Bureau of Mines, the Bureau of Indian Affairs, and the Council on Environmental Quality.

**Federal land in Wisconsin.** Metallic mining operations on federal land are

regulated directly by the federal government; however, federal authority recognizes the mining regulations of Wisconsin wherever Wisconsin regulations are more restrictive. Environmen-

tal analysis and review programs at the federal level are likely to be completed in cooperation with the state requirements and within a context of mutually satisfactory analysis and review.



*Shaded area shows generalized distribution of U.S. Forest Service land in Wisconsin. Most of this land is open to mineral development in accordance with federal and state laws and rules.*