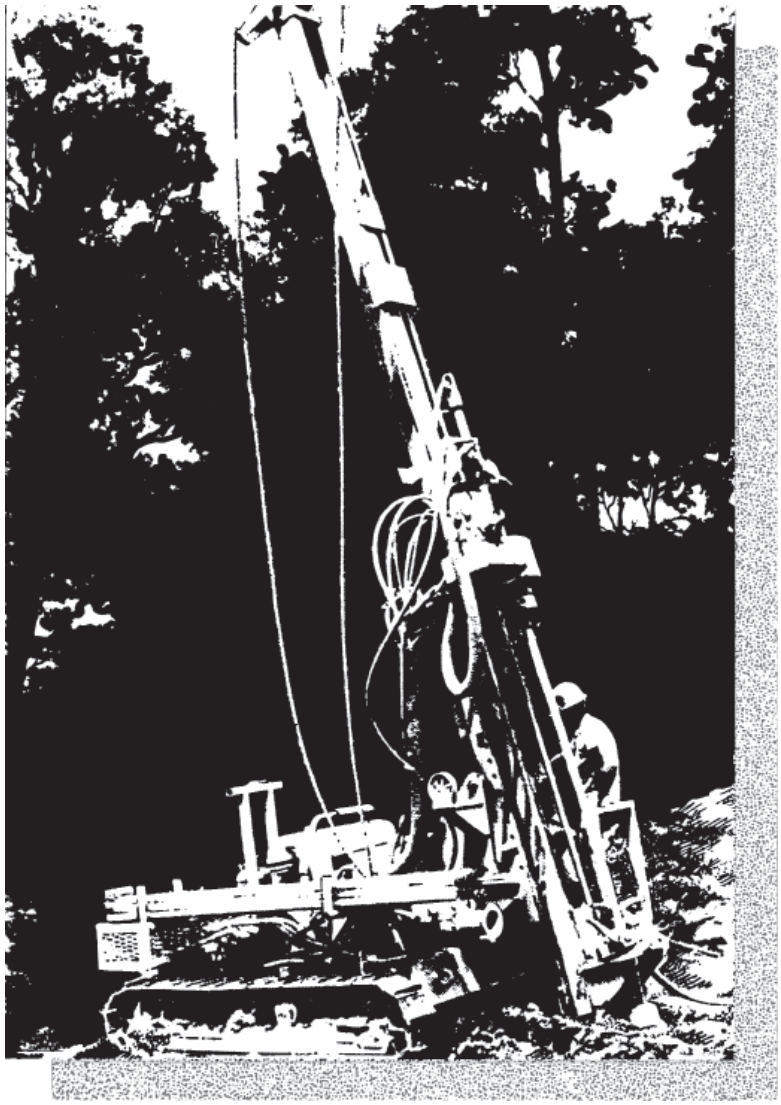
An Overview of Metallic Mineral Regulation in Wisconsin

THIRD EDITION

Thomas J. Evans



Wisconsin Geological
and Natural History Survey

Special Report 13 • 2004

Wisconsin Geological and Natural History Survey

James M. Robertson, *Director and State Geologist*

John W. Attig, *geologist*
William G. Batten, *geologist*
Kenneth R. Bradbury, *hydrogeologist*
Bill C. Bristoll, *information manager*
Bruce A. Brown, *geologist*
Lee Clayton, *geologist*
Michael L. Czechanski, *cartographer*
Donna M. Duffey, *Map Sales associate*
Timothy T. Eaton, *hydrogeologist*
Thomas J. Evans, *geologist*
Madeline B. Gotkowitz, *hydrogeologist*
David J. Hart, *hydrogeologist*
Ronald G. Hennings, *hydrogeologist (emeritus)*
Rilla M. Hinkes, *office manager*
Thomas S. Hooyer, *geologist*
Susan L. Hunt, *graphic artist*
Mindy C. James, *publications manager*
Marcia J. Jesperson, *Map Sales associate*
Kathy A. Kane, *computer specialist*
David L. LePain, *geologist*
Irene D. Lippelt, *water resources specialist*
Frederick W. Madison, *soil scientist*
M.G. Mudrey, Jr., *geologist*
Stanley A. Nichols, *biologist (emeritus)*
Deborah L. Patterson, *cartographer*
Roger M. Peters, *subsurface geologist*
Kathy Campbell Roushar, *cartographer*
Apichart Santipiromkul, *information processing consultant*
Peter R. Schoephoester, *GIS specialist*
Curtis L. Thomas, *geotechnician*
Alexander Zaporozec, *hydrogeologist (emeritus)*

Kathie M. Zwettler, *administrative manager*
plus approximately 10 graduate and undergraduate student workers.

Research Associates

Gregory J. Allord, *USGS*
Mary P. Anderson, *UW–Madison*
Robert W. Baker, *UW–River Falls*
Michael F. Bohn, *Wis. Dept. of Nat. Res.*
Stephen M. Born, *UW–Madison*
Philip E. Brown, *UW–Madison*
Charles W. Byers, *UW–Madison*
William F. Cannon, *USGS*
Douglas S. Cherkauer, *UW–Milwaukee*
John A. Cherry, *University of Waterloo*
Kevin Connors, *Dane Co. Land Conserv. Dept.*
Robert H. Dott, Jr., *UW–Madison (emeritus)*
Daniel T. Feinstein, *USGS*
Robert F. Gurda, *Wis. State Cartographer's Office*
Nelson R. Ham, *St. Norbert Coll.*
Mark T. Harris, *UW–Milwaukee*
Karen G. Havholm, *UW–Eau Claire*
Randy J. Hunt, *USGS*
Mark D. Johnson, *Göteborg University*
Joanne Kluessendorf, *Weis Earth Science Museum*
James C. Knox, *UW–Madison*
George J. Kraft, *Central Wis. Groundwater Center*
Michael D. Lemcke, *Wis. Dept. of Nat. Res.*
J. Brian Mahoney, *UW–Eau Claire*
Kevin McSweeney, *UW–Madison*
David M. Mickelson, *UW–Madison*
Donald G. Mikulic, *Ill. State Geol. Survey*
William N. Mode, *UW–Oshkosh*
Maureen A. Muldoon, *UW–Oshkosh*
Beth L. Parker, *University of Waterloo*
Robert E. Pearson, *Wisc. 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.*
Daniel D. Reid, *Wis. Dept. of Transportation*
Allan F. Schneider, *UW–Parkside (emeritus)*
J. Antonio Simo, *UW–Madison*
Kent M. Syverson, *UW–Eau Claire*
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

THIRD EDITION

Thomas J. Evans

Wisconsin Geological
and Natural History Survey

Special Report 13 • 2004

UW Extension

Published by and available from

Wisconsin Geological and Natural History Survey
3817 Mineral Point Road • Madison, Wisconsin 53705-5100
☎608/263.7389 FAX608/262.8086 www.uwex.edu/wgnhs/
James M. Robertson, *Director and State Geologist*

ISSN: 0512-0659

Mission of the Wisconsin Geological and Natural History Survey

The Survey conducts earth-science surveys, field studies, and research. We provide objective scientific information about the geology, mineral resources, water resources, soil, and biology of Wisconsin. We collect, interpret, disseminate, and archive natural resource information. We communicate the results of our activities through publications, technical talks, and responses to inquiries from the public. These activities support informed decision making by government, industry, business, and individual citizens of Wisconsin.

Contents

Preface to the third edition

The Wisconsin Geological and Natural History Survey, an administrative unit in the University of Wisconsin–Extension, is committed to maintaining Special Report 13 as a document that conveys accurate and objective information about the regulation of metallic mining in Wisconsin. This edition, with some sections added, other sections modified and expanded, and new illustrations highlighting more recent metallic mining activity, reflects the Survey's continuing commitment to Wisconsin's citizens.

The third edition of Special Report 13 describes changes in the regulation of metallic mining and related activities that have occurred since the revised edition was printed in 1996. One major change has been the renumbering of the state statutes, which makes previous references to the specific laws, or statutes, obsolete. In 1996, former chapters 144, 147, 159, 162, and part of chapter 146 were reorganized and renumbered, and ch. 293, Wis. Stats.—the principal statute related to the regulation of metallic mining in Wisconsin—was created. Several other nonsubstantive changes were made. In this version of Special Report 13, references to the appropriate statutes have been corrected and clarified. Also, new laws and changes in administrative rules adopted since publication of the previous edition in early 1996 are covered.

I prepared this edition while the state of Wisconsin considered the application of Nicolet Minerals Company to construct and operate an underground metal mine in Forest County. (The proposed Nicolet Mine is sometimes referred to as the Crandon Project.) On October 28, 2003, however, the Nicolet Minerals Company formally withdrew its mine-permit application, which was pending before the Wisconsin Department of Natural Resources. At the same time, Nicolet requested that its application for a dredge and fill permit pending before the U.S. Army Corps of Engineers be withdrawn. These withdrawals and the accompanying request to the Wisconsin Department of Natural Resources to "discontinue all work on the permit application" effectively ended the proposed Nicolet Mine as a metallic mining project for the foreseeable future.

The societal context of metallic mining regulation in Wisconsin has changed with the withdrawal of the Nicolet Minerals Company permit applications. However, the regulatory framework described in this third edition of Special Report 13 still serves as a summary of the state's metallic mining laws, rules, and regulatory policies. Illustrations in this edition have been updated to reflect new experience with metallic mining, including the approval (1991), construction (1991–93), operation (1993–97), and reclamation (1997–2001) of the Flambeau Mine, a small, open-pit copper–gold operation, near Ladysmith, Wisconsin.

The format of this report is designed to allow readers an opportunity to read about the complex regulatory framework for metallic mineral development in short, logically arranged sections at varying levels of detail, which together

provide the reader with an overview of the regulations. In this way readers can learn about the mining regulations at whatever level of detail is most helpful. The most current versions of the Wisconsin Statutes and administrative rules as of this printing are included as an appendix. Interested readers are also encouraged to use the resources of the Internet, such as <www.wisconsin.gov/state/home>, which is the state of Wisconsin's portal to the latest versions of statutes and administrative rules. The latest information on metallic mining projects can also be accessed through a Wisconsin Department of Natural Resources Web site: <www.dnr.state.wi.us/org/aw/wm/mining/metallic/index.htm>.

I am grateful for the contributions of individuals at the Wisconsin Department of Natural Resources who assisted in the development of this updated version and thoughtfully reviewed the manuscript. I also gratefully acknowledge the design skills of Susan Hunt and the members of the Survey staff who provided helpful comments in reviewing the final manuscript.

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 Wisconsin 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 administrative 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

An overview of mining regulation

This publication provides an overview of the process that regulates the exploration for and development of metallic mineral deposits in Wisconsin.

Wisconsin statutes (laws) and administrative rules provide the regulatory environment within which metallic mineral development may occur. The Wisconsin Legislature proposes, considers, and adopts laws that form the framework for mining regulation; the Wisconsin Department of Natural Resources enforces these laws and adopts administrative rules (which have the same effect or force as laws) that prescribe in greater detail how this enforcement is to be carried out. Compliance with local zoning and land-use ordinances is mandatory.

The Legislature, acting on behalf of the citizens of the state, has adopted a set of laws that define the regulatory framework for metallic mineral development in Wisconsin. Through years of discussion, proposals, debate, and formal action, the Legislature has expressed, and continues to express, the state's policy in regard to metallic mining. The statutes (laws) also authorize the adoption of administrative rules by state agencies, such as the Wisconsin Department of Natural Resources (DNR), to more specifically and in greater detail delineate the regulatory intent of the Legislature. Administrative rules, ultimately approved by the Legislature, carry the full weight of law. The adoption of statutes and administrative rules is a public process open to discussion and debate.

The state of Wisconsin regulates metallic mineral development by dividing it into its component parts: 1) exploration—the search for metallic deposits using subsurface drilling; 2) prospecting—the collection of bulk samples of metallic deposits for detailed testing; and 3) mining—the extraction of metallic minerals and their physical and chemical separation from the rock in which they are found. In addition, Wisconsin has established special rules regulating the handling and disposal of mining wastes—the management of the rock material left over from the mining and processing of ore to recover the valuable metals—and the treatment of mine-related wastewater and the protection of groundwater. Metallic mining is subject to special liability requirements, specific financial guarantees and requirements, and an additional tax based on the company's net proceeds.

The laws and rules by which metallic mining is regulated are subject to change. Over the past 30 years or so, this body of primarily environmental regulation has evolved to reflect new state environmental policy initiatives, to clarify specific approaches to regulation of mining, and to incorporate public concerns. This evolution in mining regulatory policy in Wisconsin is represented by the pas-

sage of new laws, modification of existing laws, and similar changes for administrative rules. The bulk of today's framework of mining regulation was adopted in the 1970s; however, several new concepts have been incorporated into this regulatory framework: "Bad actor" restrictions, demonstration of successful performance at other mining sites as a condition to mining, allowance for the development of local agreements, and environmental impact statement requirements are some of the substantive changes. Some new concepts, such as the irrevocable trust account, have been included only within the administrative rules.

The regulation of metallic mineral development in Wisconsin is predicated on a process of information gathering and disclosure—information that is collected, evaluated, and even formally cross-examined. In effect, the regulation of metallic mineral operations in Wisconsin is grounded in a process designed to identify relevant technical information and to provide for discussion about whether proposed exploration, prospecting, or mining operations should be permitted. Decisions about metallic mining operations are made by an independent authority acting within the laws and regulations of the state and are subject to judicial review, but regardless of state approval, the acceptance of such operations by local government, within the range of their zoning and land-use authority, is ultimately required.

In this report I describe the aspects of metallic mineral operations that are regulated, the means by which the regulation is accomplished, and the critical role played by local government authority.

The roles of government

Government, at different levels, plays a variety of specific roles in the regulation of metallic mineral development.

The federal government creates the general, overarching environmental protection regulations governing the operation of metallic mines in the United States. The Wisconsin Legislature establishes the regulatory philosophy and legal framework for mining in Wisconsin by adopting laws and approving administrative rules. Local governments are explicitly involved in mining regulation through their police powers and zoning activities, which are defined by the Legislature. Metallic mining projects must be consistent with all applicable authority, regardless of the level of government in which that specific authority exists.

The federal government passes laws and promulgates administrative rules through its various agencies; these laws and rules determine, in broad outline, how metallic mining is regulated in the United States. In many cases, the responsibility and authority for enforcing federal environmental regulatory programs have been transferred to the state of Wisconsin; however, the U.S. Army Corps of Engineers and the Environmental Protection Agency maintain separate authority and responsibility for certain regulatory programs. In these situations, applicants for metallic mining projects must obtain all the necessary approvals and permits from the federal regulatory agencies as well as from other units of state and local government.

The framework of mine regulation in the state is primarily based upon the laws passed by the Wisconsin Legislature and signed by the Governor. These statutes form the state's policy for metallic mining and the basis for the development of administrative rules by each agency identified in the laws as being responsible for enforcing the policy. In the case of metallic minerals, the laws contained in ch. 293, Wis. Stats., provide the statutory authority for the DNR to adopt administrative rules NR 130 (exploration), NR 131 (prospecting), and NR 132 (mining), Wis. Admin. Code. Section 289.05, Wis. Stats., is the statutory authority for ch. NR 182 (regulation of metallic mining wastes), Wis. Admin. Code.

Other Wisconsin 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; 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.

Local governments exercise regulatory oversight for mining projects in Wisconsin in a manner consistent with the authority delegated to them by the state of Wisconsin, specifically through local zoning and land-use management powers. For metallic prospecting and mining

operations, such local authority may, in fact, *supersede* state regulatory authority because state laws require that an applicant for a permit to develop metallic minerals demonstrate compliance with local zoning and land-use ordinances *before* any permits can be issued by the state. Section 293.37(2)(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. 293.49(1)(a)6, the issuance of the mining permit cannot occur unless it is shown that the proposed "…mining operation conforms with all applicable zoning ordinances."

Tribal governments also may have certain regulatory authority affecting metallic mineral development in Wisconsin. For example, the Mole Lake Sokaogon Chippewa are treated as a state under rules administered by the U.S. Environmental Protection Agency and therefore have authority to set their own water-quality standards for waters on their lands.

WHAT ASPECTS OF METALLIC MINERAL DEVELOPMENT ARE REGULATED?

Exploration

Exploration is defined as drilling into the subsurface for the purpose of searching for metal-bearing minerals.

Under Wisconsin law, exploration is synonymous with drilling. All aspects of drilling activity are subject to regulation by the DNR: 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 any water-bearing strata encountered; and the reclamation and closure (abandonment) of the drillhole.

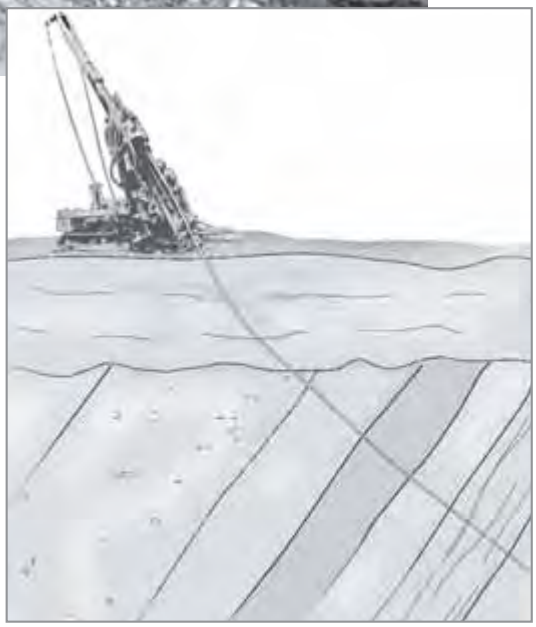
Exploration is defined as

> 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.
>
> —ss. 293.01(5), Wis. Stats., and NR 130.03(8), in part, Wis. Admin. Code

Through ch. NR 130, Wis. Admin. Code, as administered by the DNR, the state of Wisconsin requires that all companies engaged in metallic mineral exploration be licensed. Each license is in effect from July 1 of a calendar year through June 30 of the following calendar year. An exploration company (the licensee) must pay $300 for the initial license year or part of a 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 is required to 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 drilling 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 also require additional insurance coverage.

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

The licensee is required to provide at least a 24-hour notice of intent to abandon a drillhole. Following abandonment, the licensee files a report describing the abandonment activity. Drillholes may be aban-



Exploration (drilling) for metallic mineral occurrences in northern Wisconsin is shown in photograph above. About 0.25 acre of land is affected by each drillhole constructed. The drilling mast is placed at an angle to intersect the typically inclined rock strata as nearly perpendicular as feasible (see drawing, right).

doned temporarily (hole left open with a welded or threaded cap fixed to the casing to prevent any potential groundwater contaminants from entering the hole). Permanent abandonment requires the filling of the drillhole from bottom to top with cement grout or other approved material. All drillholes must be permanently abandoned and the drilling site reclaimed before any part of the bond can be released and the exploration licensee's responsibility for the drillhole construction can be terminated.

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 extensive testing and evaluation, usually to determine the amount of metal recovery in a mineral-processing facility.

Prospecting is defined as

> 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.
>
> —ss. 293.01(18), 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 by the state of Wisconsin as a "mini-mine"; however, the holder of a prospecting permit is not allowed to engage in commercial exploitation of the orebody, and the granting of a prospecting permit 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. 26); 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.

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 followed by 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

A bulk sample of potential ore material (above) may be collected for testing and evaluation in special laboratories that simulate mineral-processing facilities or mills, such as the laboratory (right) of the Lakefield Research Center in Ontario, Canada.

are consistent with the purposes of this chapter and will not violate any applicable federal or state environmental law or rule" (ch. NR 131, Wis. Admin. Code).

The cost of environmental analysis and review, including that of an *Environmental Impact Statement*, if required, is the responsibility of the prospecting company. The initial application fee is $1,000. The DNR bills the prospecting applicant throughout the permitting process to reflect the actual cost of the environmental assessment and all necessary permit evaluations and reviews.

Mining

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

The regulation of metallic mining operations is based on the application for and issuance of a permit and 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, the production and disposal of any waste materials, and the construction and operation of any mineral-processing facilities are covered by mining regulations. A major aspect of metallic mining regulation is the provision for reclamation of the mining site.

The mining of metallic minerals is regulated by the state of Wisconsin through a permitting process that covers all aspects of the commercial production of metals. On the basis of ch. 293, Wis. Stats., the DNR is responsible for the administration and enforcement of ch. NR 132, Wis. Admin. Code, which specifically establishes the regulatory requirements.

Criteria designed to protect certain environmentally sensitive areas restrict the location of metallic mining operations; 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 and for surface activities related to an underground mine, reflecting the state's policy to protect certain land because of the presence of unique features. Land protected from mining activities includes wilderness areas, wild and scenic rivers, national and state parks, wildlife refuges and areas, historical landmarks, and natural areas. Disturbance of wetland areas must be minimized to the satisfaction of the DNR, and other environmental standards for the protection of surface water, groundwater, air quality, and endangered and threatened species must also be met.

To acquire a mining permit, an applicant (the company that is interested in mining) must submit a *Mining Plan* and a *Reclamation Plan* for DNR approval. The *Mining Plan* details all aspects of the mining operation, from how the ore would be extracted to the disposal 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 would be reclaimed and how the reclaimed site would 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 for the state of Wisconsin to reclaim the site in the event that an operator failed to complete its obligation to do so.

A *Monitoring Plan* must be prepared by the applicant and approved by the DNR; the plan must identify the nature and extent of all environmental monitoring programs—air, surface water, groundwater, and wildlife—that would verify a mining operation's acceptable performance before, during, and after mining. Environmental baseline monitoring is required prior to mining development for comparison with later monitoring results. A *Contingency Plan* that outlines the remedial actions necessary to mitigate any unforeseen environmental problems must also be accepted by the DNR prior to approval of a mine permit.

The cost of all environmental analysis and permit-review work, including the preparation of an *Environmental Impact Statement*, is the responsibility of the applicant. The initial application fee is $10,000. The mining-permit applicant is billed for the ongoing costs of the permit evaluations and reviews by the DNR.

Mining metallic minerals in northern Wisconsin may involve open-pit mines, such as the Flambeau Mine near Ladysmith (photograph circa 1995; site now reclaimed; see p. 19 for a photograph of the reclaimed site) or underground mines, such as the formerly proposed Nicolet Mine in Forest County. Photograph courtesy of Wisconsin Department of Natural Resources.

Mine-waste disposal

The disposal of mine wastes—including waste rock and tailings—is regulated under a separate set of administrative rules, which provide for site-specific evaluation of each mine-waste disposal facility.

The disposal of waste rock (rock without sufficient metal content to be of economic interest) produced by a metallic mining operation and the disposal of tailings (finely ground rock particles with little or no valuable metal content left over from the washing, concentration, or treatment of crushed ore) are regulated under ch. NR 182, Wis. Admin. Code. This regulation requires a series of waste-characterization studies and separate criteria for the siting and design of waste-disposal facilities. The long-term environmental implications of the facility's construction and operation are also assessed, including protecting groundwater quality, minimizing wetlands disturbance, and establishing financial guarantees for proper closure and maintenance of waste-disposal facilities.

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

The *Feasibility Report* includes the applicant's site-specific 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 facility site (in terms of its general location and site-specific data), and the proposed facility design plan, which contains such information as earth-movement calculations, specifications for liner and cover systems, 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 locations considered by the applicant.

The *Plan of Operation* is a detailed description of the proposed mine-waste disposal facility, from construction to operation. It is essentially an engineering document that addresses such issues as the protection of groundwater quality, details of waste and tailings dam and berm construction, design of the monitoring system, and an economic analysis of the costs of site closure and the long-term care requirements. In addition, approval of the 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 submit-

ted as part of the mine-permit application, not as separate documents.

Chapter NR 182, Wis. Admin. Code, further requires construction and completion reports as a means to document that construction of the mine-waste disposal facility is in accordance with the approved *Plan of Operation*, including minimum design and operation requirements, inspection requirements, monitoring requirements, record keeping, and data compilation. 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, Wis. Admin. Code, the owner is responsible for conducting such activities as groundwater monitoring, routine surface maintenance, and the collection and treatment of leachate.

Under the requirements of ch. 289, Wis. Stats., the owner of a mine-waste disposal site must provide proof of financial capability for the long-term care of the site for a minimum of 40 years. After the 40-year period, the owner may or may not be required to prove financial capability, but the owner is still responsible for the site's long-term care.

In some cases, the landowner and the mining-permit applicant are not the same. Current law places responsibility for long-term care and monitoring of a waste facility on the landowner; the owner of the mine-waste disposal facility is forever responsible for the environmental integrity of the reclaimed facility.

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 ch. NR 182, Wis. Admin. Code, include those for waste rock, tailings, and all other refuse produced in a mining operation.

Temporary stockpiles of waste rock or other mine waste to be used to backfill an underground mine are not technically defined as "waste," and therefore are not subject to the licensing requirements of ch. NR 182, Wis. Admin. Code. However, the construction and operation of stockpiles are regulated under the *Mining Plan*, s. NR 132.07, Wis. Admin. Code. Stockpiles of waste rock or other mine waste that is to be used to backfill a surface mine, such as has been done at the Flambeau Mine, are regulated first under the *Mining Plan* (while the stockpiles are in place above ground) and then are regulated under the licensing requirements of ch. NR 182, Wis. Admin. Code, after they are removed and used as backfill.

Groundwater monitoring and wastewater treatment

The protection of the groundwater resource and the proper treatment and disposal of wastewater related to a prospecting or mining operation are addressed in mining-specific regulations and other related administrative rules.

The protection of groundwater and surface water from possible adverse environmental impacts as a result of metallic mineral development is the focus of an extensive body of laws and rules. Groundwater protection is achieved through appropriate facility design and the development, approval, and operation of a groundwater-monitoring program for the mining site, including the mine-waste disposal facility/facilities and the mine itself. Monitoring provides an early warning of potential groundwater-quality impacts, thus enabling timely response to mitigate potential problems. Metallic mining is subject to the same wastewater-treatment requirements as other regulated activities in the state. Water must be treated to ensure that, upon its release into the environment, the most sensitive organisms in that environment are not harmed.

One major purpose of Wisconsin's environmental regulations is the protection of the water resources of the state. These resources—the surface water (lakes, streams, and wetlands) and the groundwater (water present within the materials beneath the land surface)—belong to the people of Wisconsin, and the protection of these resources is, therefore, important to the entire state. Metallic mining is subject to the same wastewater-treatment requirements as other regulated activities.

Chapter NR 140, Wis. Admin. Code, outlines the state's general approach to the protection of groundwater quality. This approach is a combination of site assessment, facility design and operation, monitoring, and a series of prescribed actions to follow depending on the quality of groundwater observed. Chapter NR 140, Wis. Admin. Code, establishes the water-quality standards, the outline of necessary actions to take, and the overall regulatory concept. Section NR 182.075, Wis. Admin. Code, describes the application of the state's approach to protecting groundwater resources potentially affected by metallic mineral development. A design-management zone (DMZ) up to 1,200 feet is delineated around metal mines and mine-waste disposal facilities. Within this zone, monitoring is designed to permit appropriate, timely response to any changes in groundwater quality related to the mining or disposal activity.

The DMZ and the range of appropriate actions are defined in ch. NR 140, Wis. Admin. Code; s. NR 182.075, Wis. Admin. Code, identifies additional requirements that are specific to metallic mining. They include extensive evaluation of potential groundwater quantity and quality impacts through the use of predictive modeling (not required of other regulated waste-disposal activities) and the development and approval of a mitigation plan when groundwater monitoring indicates that groundwater quality has changed.

Groundwater-monitoring wells provide data about groundwater quality before, during, and after mining (upper left, typical monitoring well; upper right, DNR personnel collecting groundwater samples for analysis). The wastewater-treatment plant at Flambeau Mine (lower left and right) processed about 10 million gallons of treated water per month before discharging into the Flambeau River. Photographs courtesy of Wisconsin Department of Natural Resources.

Wisconsin's regulatory program is designed to protect the most sensitive organisms present in waters into which treated wastewater may be discharged. Receiving waters are classified according to their existing water quality; effluent limits protect the receiving waters from pollution and are the basis for the regulation of wastewater discharge.

Treatment of excess surface water and groundwater collected on the mining site and needing to be discharged elsewhere is regulated under chs. 293, Wis. Stats., and NR 132, Wis. Admin. Code, and the array of laws and rules that outline the state's regulation for all other regulated activities involving point-source discharge of wastewater. These regulations include ch. 283, Wis. Stats., and administrative rules that describe in detail how surface water is to be protected from discharges of waste water: chapters NR 102, NR 104, NR 105, NR 106, NR 207, and NR 270, Wis. Admin. Code.

Reclamation

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

Chapter 293, Wis. Stats., is also known as the "Metallic Mining Reclamation Act." The name of this law emphasizes one 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 for 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 prospecting or mining site. State law [ss. 293.01(23) and 293.13(2)(c) 1-8, Wis. Stats.] specifies the standards for reclamation for mining sites; 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 establish a variety of plants and animals indigenous to the area on the former mine site and to minimize the disturbance of wetlands. If land contours, after reclamation, differ from original contours, the landforms must be stable, revegetated, and consistent with surrounding topography.

An estimate of what it would cost the state to complete the *Reclamation Plan* must be developed (and have DNR approval) and a bond in that amount is required to be in force to ensure that the *Reclamation Plan* can be completed at any time during the course of the mining operation.

The final use of a reclaimed mine site is specified in the mining permit and approved in the Master Hearing before mining is allowed to begin. Changes in the final *Reclamation Plan* can only be made when such changes do not adversely affect the goal of mined land reclamation, which is to provide environmentally stable, productive post-mining land use. Alternative uses of the reclaimed mine site are permitted 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, which closed in 1983, to provide an area suitable for a county park with swimming, camping,

At left is an aerial view of the Flambeau Mine during active mining (see p. 13 for another view); below is the site in August 2003 following reclamation (view looking southeast). Photographs courtesy of Wisconsin Department of Natural Resources.

hiking, interpretation of the site's mining history, and the observation of wildlife and wetlands on the site. For the Flambeau Mine, the initial approved *Reclamation Plan* included establishing a low-intensity wildlife management area and a several-acre wetland on the reclaimed site. These requirements were later modified at the request of local governmental officials, with the approval of the DNR, to allow the retention of certain buildings and the construction of hiking trails.

How does the permitting process work?

Notice of Intent

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

Once a potential mine-permit applicant has determined that metallic minerals are present in a location that may be available for mining and the deposit of minerals can be mined in a manner consistent with environmental regulations and at an acceptable cost, the 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 and gives formal public notice of the project to the DNR and to Wisconsin's citizens. The* Notice of Intent *requires formal 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 environmentally and economically feasible. Following this discovery, the company may begin 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 with the DNR a *Notice of Intent* to collect data to support a mining or prospecting permit application.

The *Notice of Intent* serves two fundamental purposes: 1) It gives formal notice to area residents and the DNR that an activity of economic and environmental significance is being proposed. 2) It gives a preliminary description of the proposed activity. The *Notice of Intent* provides the public and the DNR with a mechanism to identify the technical data that might be collected and how the company-collected data will be gathered, submitted, and independently verified.

The filing of a *Notice of Intent* must be followed by a public information hearing in no less than 45 and no more than 90 days. The purpose of the hearing is to gather public comment, identify issues of local concern, and develop guidelines for the collection of technical information that will follow. The *Notice of Intent* hearing also clarifies opportunities for public involvement in the environmental analysis and the permit-review decisions to come.

Typically, the *Notice of Intent* is tied to the development of a *Scope of Study*, prepared by the applicant and submitted to the DNR for approval. 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 and revised prior to approval by the DNR. Like the *Notice of Intent*, the *Scope of Study* is a public document, and although a hearing is not required, the public is provided

with the opportunity to give information on its content. (A mine-permit applicant is not required to prepare a *Scope of Study*, but given the complex nature of metallic mineral operations, the DNR is likely to require the preparation of this document.)

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

- the name, address, and telephone number of the applicant;
- a map showing approximate location of the project site;
- the expected date of submission of the 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
- a quality-assurance program to be followed during the collection of data.

The DNR advises applicant of

- specific information and quality-assurance requirements necessary for the permits and *Environmental Impact Report* (see next section of this document);
- 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
- the 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 the 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 the applicant's documentation of the condition of the existing physical, biological, and socioeconomic environment and the potential impacts of proposed prospecting and mining activity.

The Environmental Impact Report *is typically a multi-volume compilation of information about the regional and local setting of a proposed prospecting or mining site; this report is prepared by the applicant and verified by the DNR. It includes a description of the project, alternatives to the project as proposed, and analyses of potential environmental impacts. The report contains the applicant's technical data submitted to support the permit applications. The proposed prospecting or mining project, as described by the applicant and reviewed and verified by the DNR, is evaluated within the context of this documentation and the associated permit applications. It contains a detailed 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, workforce analysis, housing, schools, road systems, and fire and police department infrastructure).*

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 typically will hire consultants to assist in completing the *Environmental Impact Report.*

The DNR verifies data by conducting random field checks during data collection, splits water-quality samples, independently reviews laboratory procedures, collects its own data, and uses its own consultants to evaluate data analysis and conclusions.

The *Environmental Impact Report* is required under ch. NR 150, Wis. Admin. Code. 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. In addition, ch. 293, Wis. Stats., and chs. NR 131 and 132, Wis. Admin. Code, also require the submission of extensive environmental information to determine the anticipated environmental effects of granting the necessary permits and approvals.

Information about baseline environmental conditions is collected by the applicant for a mining permit as part of the development of the Environmental Impact Report. *Photographs courtesy of Wisconsin Department of Natural Resources.*

Environmental Impact Statement

The environmental analysis and review process leads to the development by the DNR of an *Environmental Impact Statement,* which discloses information to the public about the proposed project and its potential environmental and socioeconomic impacts.

Wisconsin law (ss. 1.11 and 293.39, Wis. Stats.) and DNR's ch. NR 150, Wis. Admin. Code, mandate full public disclosure of potential environmental impacts related to metallic mineral prospecting or mining operations. The Environmental Impact Statement (EIS) *identifies and evaluates the project's potential effects upon the environment, means of mitigating adverse impacts, alternatives to the proposed action, and any loss of environmental resources that would occur if the permits were granted. Public disclosure of information related to proposed prospecting and mining activities includes 1) preparation by the DNR of a* Draft EIS; *2) a mandatory public meeting about the* Draft EIS; *and 3) preparation of a* Final EIS, *in which the DNR responds to all oral and written comments received to that point. Ultimately, the* Final EIS *is evaluated in terms of its adequacy in disclosing all relevant aspects of the potential environmental impact of the proposed action.*

The environmental analysis and review process for metallic mineral operations is the primary (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, in addition to information about the environmental impacts of the proposed operation, must include information about the long- and short-term socioeconomic effects of the proposed operation. The statutes specify this must include effects on tourism, employment, schools, medical care facilities, private and public social services, the area's tax base, the local economy, and other significant factors.

First, the DNR prepares a *Draft EIS* that 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. Following the publication of the *Draft EIS,* a mandatory public informational meeting 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. The *Draft EIS* meeting identifies public concerns about the environmental assessment and also serves as a means to provide the public with additional information about the proposed project. Oral and written comments are

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:

(c) 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 the human environment and the maintenance and enhancement of long−term productivity;

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

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.

(d) 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 statewide significance, notice shall be published in the official state newspaper;

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

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

(j) Annually, no later than September 15, submit a report to the chief clerk of each house of the legislature for distribution to the legislature under s. 13.172 (2), including the number of proposed actions for which the agency conducted an assessment of whether an impact statement was required under par. (c) and the number of impact statements prepared under par. (c).

(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.

History: 1971 c. 274; 1973 c. 204; 1979 c. 89, 262; 1985 a. 29, 332; 1991 a. 273; 1993 a. 184, 213; 2001 a. 103.

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

accepted. The public meeting is held 30 to 60 days after the release of the *Draft EIS*. State and federal agency comments and other written comments from individuals are accepted for a specified period of time 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 EIS*. The *Final EIS* represents the DNR's conclusions about the potential environmental impacts of the applicant's proposed project.

The *Final EIS* is a full disclosure document, not a decision-making document. However, a formal, legal decision must be reached following the Master Hearing (see p. 30) as to whether the *Final EIS* is an adequate description of the proposed project.

Permits, plans, and approvals

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

In addition to the mining or prospecting permit, other permits, plans, and requests for approval are required. Typically, several state and federal permits must be obtained before mining can begin. The DNR must also approve a number of plans and reports, such as the Feasibility Report *and the* Plan of Operation *for a mine-waste disposal facility. Final decisions about all permits are based on legislatively mandated standards or criteria; typically, plans or other types of approvals are based on the DNR's expertise and discretionary authority. All such decisions are the subject of a formal hearing (the Master Hearing) and determined by the designated decision maker. In turn, these decisions are subject to administrative and judicial review.*

Many types of permits must be obtained for any metallic mineral prospecting or mining operation. Typically, an applicant must obtain a mining permit (ch. 293, Wis. Stats.), an air-emission permit (ss. 285.60-285.61, Wis. Stats.), permits for construction activity in or near navigable waters (ch. 30, Wis. Stats.), and a state wastewater-discharge permit (ch. 283, Wis. Stats.), including a construction stormwater-discharge permit (s. 283.33, 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).

Plans must also be formally approved, such as plans for mine dewatering (based on ch. NR 112, Wis. Admin. Code, and s. 281.17(1), Wis. Stats.), wastewater-treatment systems (s. 281.41, Wis. Stats.), and the mine-waste disposal facility *Feasibility Report* and *Plan of Operation* (ch. NR 182, Wis. Admin. Code, and ch. 289, Wis. Stats.). Other approvals may vary from project to project, such as for a potable water supply or the one-time disposal of project demolition materials, an on-site sewage-treatment facility, or approval of withdrawal of county forest lands (s. 28.11, Wis. Stats.). 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 approval of a *Mining Plan* and a *Reclamation Plan,* the DNR must approve 1) a *Contingency Plan* to cover accidents or emergency discharges from waste-disposal facilities; and 2) a *Monitoring Plan* for 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 pro-

Principal permits and approvals required for typical metallic mining operations in Wisconsin
(from Wisconsin Department of Natural Resources)

Statutory authority	Administering agency	Activity	Action
Federal			
33 USC 1344	U.S. Army Corps of Engineers	Drainage or fill permits for activities in or affecting navigable streams and wetlands	Permit issuance
33 USC 1321	U.S. Environmental Protection Agency	Spill prevention control and countermeasures plan	Plan must be on file before operations begin
State			
Ch. 30 (many sections)	Wisconsin DNR	Stream crossings and placement of structures	Permit issuances
Ch. 281.17(1)	Wisconsin DNR	High capacity wells	Plan approval
Ch. 281.41	Wisconsin DNR	Wastewater-treatment system	Plan approval
Ch. 283 (many sections)	Wisconsin DNR	Wastewater discharge	Permit issuance
Ch. 285.60–285.66	Wisconsin DNR	Air emissions	Permit issuance
Ch. 289 (many sections)	Wisconsin DNR	Waste facility *Feasibility Report* and *Plan of Operation*	Plan approvals
Ch. 293	Wisconsin DNR	Mining	Permit issuance, Mining authorization
Local			
Chs. 59, 60	County and town zoning authorities and supervising boards	Compliance with zoning and land use ordinances	Permit issuance, in most cases

posed operation, but also include the limiting and modifying conditions that are part of the final permits. Such documents are available for public review.

Decisions about these permits and approvals, together with the findings of fact and conclusions of law and decisions about the adequacy of the *Environmental Impact Statement* and requests for variances, if any, are the substance of the decision made after the Master Hearing (see p. 30).

The actual number of permits, licenses, and approvals needed for any particular mining project depends on the location of the operation and the nature of the proposal; for example, for the formerly proposed Nicolet Mine in Forest County as many as 6 federal, 22 state, and 5 local permits, licenses, and approvals would have been necessary, on the basis of the mine design as of late 2003.

Master Hearing

The Master Hearing is the legal forum for the formal evaluation of any proposed metallic mineral prospecting or mining operation.

The Master Hearing is a legal proceeding at which the evidence and testimony about the Environmental Impact Statement *process and all permits, plans, licenses, and requests for approval are entered into the formal record. It is a formal hearing, similar to 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. Decisions reached in the Master Hearing are subject to administrative and/or judicial review.*

Section 293.43, Wis. Stats., outlines the components of the Master Hearing—a formal process for considering 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 be the decision maker (in the case of mining, the Secretary of the DNR), but allows this responsibility to be delegated to the Hearing Examiner. For recent mining decisions, the Secretary of the DNR has exercised this discretionary authority and has designated the Hearing Examiner as the decision maker.

As provided for in s. 293.43, Wis. Stats., the Master Hearing has two parts: an open (informal) period of public comment and a contested-case (formal) hearing. The presentation 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 is permitted. Formal briefs and motions are used to further delineate the factual and legal issues. 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, Native American tribes, environmental groups, and citizen interest groups. Parties to the Master Hearing are generally represented by

Comments by members of the public as well as sworn testimony by representatives of the official parties to the proceedings are considered in the Master Hearing process. Photograph courtesy of Wisconsin Department of Natural Resources.

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 of witnesses by means of depositions 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 comments is placed in the file of the Master Hearing proceedings.

The formal testimony, evidence, exhibits, and the legal briefs filed by the parties compose hearing record. Using this formal record, the decision maker renders judgment on the findings of fact, conclusions of law, and issuance of permits with necessary conditions, and issues rulings about the adequacy of the *Environmental Impact Statement* process. Decisions reached as a result of the Master Hearing are subject to appeal, which can be either an administrative appeal by one or more aggrieved parties directly to the Secretary of the DNR and/or a judicial appeal to appropriate courts of law.

Length of permitting process

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

The regulatory process for metallic mining operations has built-in environmental monitoring periods, review times, minimum scheduling requirements, and opportunities for judicial review 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 or more years to complete the regulatory process is likely because of the complexity of the environmental analysis and review process and the time and data needed for the development of the numerous permit applications. The Flambeau Mine in Rusk County required three and one-half years to complete the regulatory process for a metal-mine operation that was relatively uncomplicated (it did not include mineral processing or tailings disposal on the mining site).*

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 meeting on the *Draft Environmental Impact Statement (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 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.*

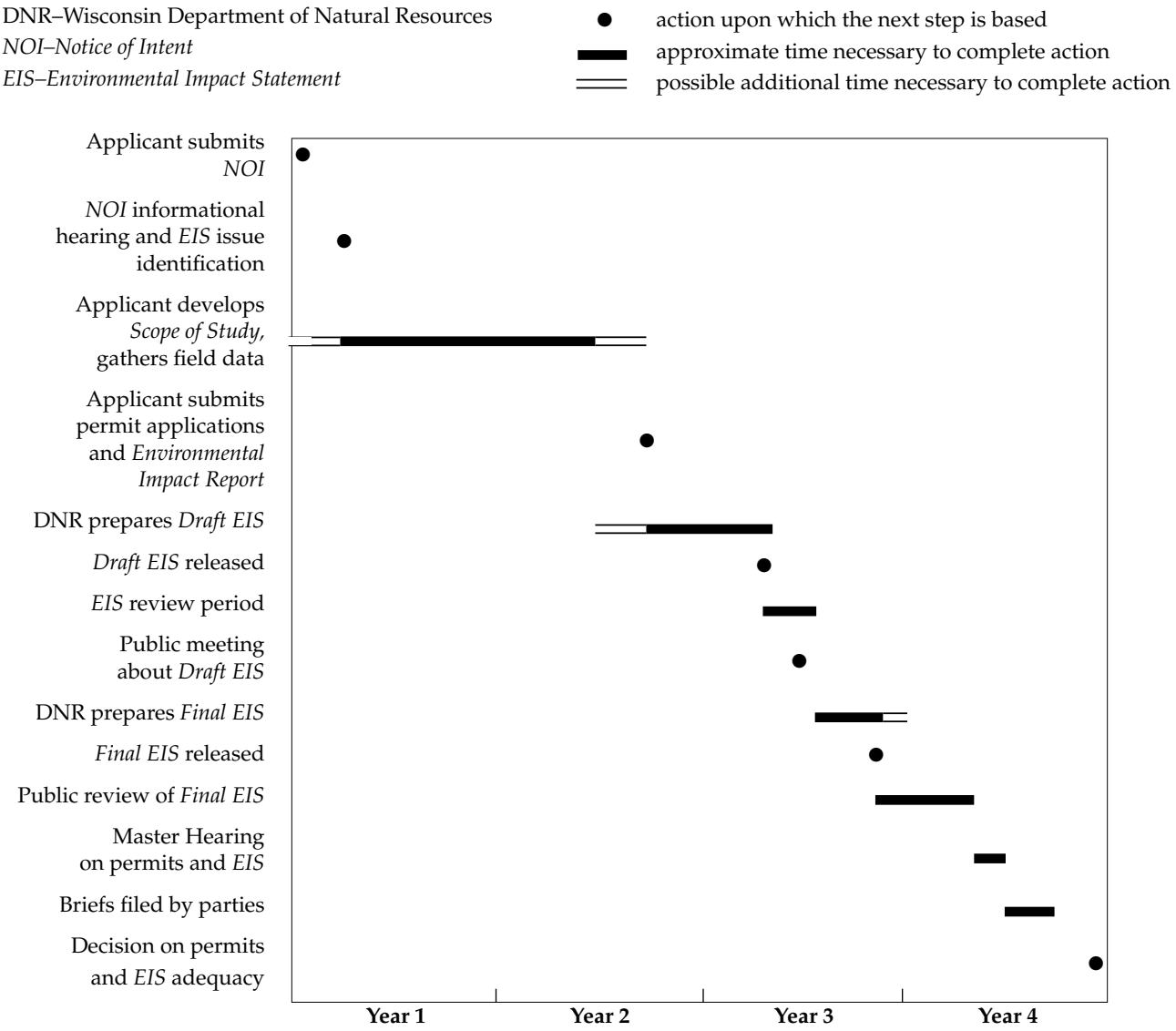
Some time periods are open-ended or unspecified, such as the time necessary to review the *Notice of Intent* and incorporate comments received at the informational hearing. The collection of baseline environmental data, following approval of the *Notice of Intent*, requires a minimum of 12 months; it may take up to 18 months or more to obtain seasonally variable data for certain environmental systems. The time period for preparation of the *Draft EIS* depends on receiving an acceptable *Environmental Impact Report*, all required permit applications, and a final project proposal. Significant interaction between the agency, the applicant, and other reviewers as well as significant revision may be required for these critical documents to be considered complete.

The experience with the Flambeau Mine, a project limited in scope and environmental impact, provides some measure of the possible length of the permitting process. The *Notice of Intent* was filed in July 1987 by Kennecott Minerals Company and was followed by a public hearing in September of that same year. The *Environmental Impact Report* and all permit applications were determined to be complete in April 1989. The *Draft EIS* was released to the public for comment

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



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

in September 1989 and the *Final EIS* was released in March 1990.

The Master Hearing for the Flambeau Mine convened in July 1990 and required three days of public comment in the open part of the hearing and 12 days of contested-case proceedings, with approximately 50 witnesses submitting testimony that was subject to cross-examination. In January 1991, on behalf of the DNR, the Hearing Examiner issued seven permits and approvals for the Flambeau Mine and found that the requirements of s. 1.11, Wis. Stats. (environmental review and analysis), had been met.

Criteria for permit decisions

Wisconsin law specifies certain general criteria for decisions about permits for metallic mineral operations.

The state laws for metallic mining identify six major criteria for the issuance of a mining permit: 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 of the mine must not be legally unsuitable (if a surface mine); 4) the mine must not endanger public health, safety, or welfare; 5) the mine must have a net positive effect on the economy of the area; and 6) the mine must conform to all applicable zoning ordinances.*

A mining permit is granted in Wisconsin only if the activity is judged as complying with six major, 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 all six 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 required reclamation of the mining site. The testimony and evidence presented at the Master Hearing form the basis for answering this question.

2. *Will the proposed operation comply 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 and contingency plans for any possible environmental emergencies).

3. *Is the land proposed for prospecting or surface mining legally suitable?*
Unsuitability is defined under ss. 293.01(28), Wis. Stats., and NR 131.03(23) and 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 allowed to be disturbed by a prospecting or surface-mining operation because their unique value will be lost or diminished. Similarly, the habitat of endangered species must not be destroyed or so irreparably damaged that the existence of the species is fundamentally jeopardized by the proposed operation.

4. *Will the mine endanger public health, safety, or welfare?*
This is an accepted legal concept that allows the application of formal judgment about what activities are fundamentally harmful and beyond mitigation. Metallic mining operations that, in the judgment of the decision maker on the basis of the evidence of the Master Hearing, are so fundamentally harmful as to fail this legal test of protection of health, safety, or welfare, are not permissible.

5. *Will the mine positively affect the economy of the area?*
Under this criterion, the socioeconomic impact of a mining operation is evaluated. Minerals are valuable and so are the jobs created to obtain the minerals, but there are also potentially significant 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."

6. *Does the proposed mine operation conform to applicable zoning ordinances?*
A metallic mining permit may not be issued until all necessary local zoning approvals have been issued.

Permits and approvals issued to a metal-mine operator are typically "conditioned," meaning that certain additional requirements (conditions) may be deemed necessary by the decision maker and are incorporated into the permit or approval itself. Permit conditions are fully enforceable requirements for the lawful operation of any metallic mine. Such conditions may vary from mine to mine, reflecting the site-specific character of the approval of any metallic mining operation and the need to identify specific requirements that are tailored to a particular mining operation and the particular location and other aspects of the site.

Additional criteria for permit decisions

Wisconsin law identifies certain criteria that require the denial of a permit for metallic mineral operations.

The state laws for metallic mining identify two additional sets of criteria that, if they are not met, require the denial of a mining permit. These criteria include information about the applicant's recent environmental track record of mining in the United States and information that the decision maker determines to be adequate to meet the Legislature-created moratorium on issuance of permits for the mining of sulfide orebodies.

The requirements of the state's environmental track-record law (the so-called "bad actor" law) are outlined in ss. 293.49(2)(c)-(f), Wis. Stats. The applicant for a mining permit, principal shareholder(s), or "related persons" cannot have been party to a forfeiture of a mine-reclamation bond at a mining operation in the United States during the past 10 years. Also, no related person, officer, or director of the applicant can 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 or 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. The decision maker must then decide whether such plans are acceptable on the basis of the testimony obtained in part of the Master Hearing.

A second set of criteria that, if not met by the applicant, requires the decision maker to deny the issuance of any mining permit for certain metallic mineral deposits was created by the passage in 1998 of a moratorium on the issuance of permits for the mining of sulfide orebodies. These criteria are contained in s. 293.50(2), Wis. Stats.

This law states that an applicant for a sulfide-ore mining permit must identify a mining operation in the United States or Canada that has operated in a sulfide orebody for at least 10 years. That orebody, together with the rock within which the metallic mineral deposit is contained, must have a net acid-generating potential. The identified mining operation must not have caused the pollution of groundwater or surface water because of acid drainage at the tailings site or the mine site or the release of heavy metals. Further, the applicant for a mining permit must identify a mining operation (not necessarily the same one identified previously) that has been closed for at least 10 years in the United States or Canada, has a net acid-generating potential, and for which there has not been any pollution of groundwater or surface water from acid

drainage at the tailings site or at the mine site or from the release of heavy metals.

The definition of pollution for the purposes of the moratorium is broad: It is "degradation that results in any violation of any environmental law as determined by an administrative proceeding, civil action, criminal action or other legal proceeding" and includes any stipulated settlements of actions. Moreover, the sites eligible for consideration for purposes of the moratorium requirement are limited because "the DNR must base its determination on relevant data from groundwater or surface water monitoring"; therefore, any proposed examples must also have adequate information to support the DNR's judgments.

AN ACT *to amend* 293.49 (1) (a) (intro.); and *to create* 293.50 of the statutes; **relating to:** issuance of metallic mining permits for the mining of sulfide ore bodies.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. 293.49 (1) (a) (intro.) of the statutes is amended to read:

293.49 **(1)** (a) (intro.) Except as provided in sub. (2) and s. 293.50 and except with respect to property specified in s. 41.41 (11), within 90 days of the completion of the public hearing record, the department shall issue the mining permit if it finds:

SECTION 2. 293.50 of the statutes is created to read:

293.50 Moratorium on issuance of permits for mining of sulfide ore bodies. (1) In this section:

(a) "Pollution" means degradation that results in any violation of any environmental law as determined by an administrative proceeding, civil action, criminal action or other legal proceeding. For the purpose of this paragraph, issuance of an order or acceptance of an agreement requiring corrective action or a stipulated fine, forfeiture or other penalty is considered a determination of a violation, regardless of whether there is a finding or admission of liability.

(b) "Sulfide ore body" means a mineral deposit in which metals are mixed with sulfide minerals.

(2) Beginning on the effective date of this subsection .... [revisor inserts date], the department may not issue a permit under s. 293.49 for the mining of a sulfide ore body until all of the following conditions are satisfied:

(a) The department determines, based on information provided by an applicant for a permit under s. 293.49 and verified by the department, that a mining operation has operated in a sulfide ore body which, together with the host rock, has a net acid generating potential in the United States or Canada for at least 10 years without the pollution of groundwater or surface water from acid drainage at the tailings site or at the mine site or from the release of heavy metals.

(b) The department determines, based on information provided by an applicant for a permit under s. 293.49 and verified by the department, that a mining operation that operated in a sulfide ore body which, together with the host rock, has a net acid generating potential in the United States or Canada has been closed for at least 10 years without the pollution of groundwater or surface water from acid drainage at the tailings site or at the mine site or from the release of heavy metals.

(2m) (a) The department may not base its determination under sub. (2) (a) or (b) on any mining operation that has been listed on the national priorities list under 42 USC 9605 (a) (8) (B) or any mining operation for which the operator is no longer in business and has no successor that may be liable for any contamination from the mining operation and for which there are no other persons that

may be liable for any contamination from the mining operation.

(b) The department may not base its determination under sub. (2) (a) or (b) on a mining operation unless the department determines, based on relevant data from groundwater or surface water monitoring, that the mining operation has not caused significant environmental pollution, as defined in s. 293.01 (4), from acid drainage at the tailings site or at the mine site or from the release of heavy metals.

(3) This section applies without regard to the date of submission of the permit application.

The final text of 1997 Senate Bill 3, which became Wisconsin Act 171 on April 22, 1998, is often referred to as the Wisconsin Mining Moratorium Law.

Modifications, exemptions, and variances

Exemptions from Wisconsin's metallic mining and prospecting rules can be requested by applicants for permits or other parties to the Master Hearing, but such requests can be granted only if no other state or federal law or rule is violated and the interests of the public or the environment are not compromised.

The Wisconsin Legislature recognized that in some places the extraction of metallic minerals in the most environmentally sound manner requires taking a flexible approach with respect to certain permit requirements. The Legislature gave the decision maker (generally the Hearing Examiner) the authority, subject to judicial review, to specifically allow activities that are otherwise not permissible under state rules. Thus, exemptions, modifications, and variances from the state's administrative rules (but not from its laws) may be permitted, but only if such exemptions, modifications, or variances do not result in the violation of any federal or state environmental law or endanger public health, safety, or welfare or the environment. Modifications of or exemptions from requirements can be sought to relieve a prospective permit holder from some obligation as well as to establish more restrictive requirements and/or additional restrictions in permits and approvals.

In passing laws and adopting administrative rules to regulate metallic mineral development in Wisconsin, the Wisconsin Legislature recognized that metallic mineral deposits may be located in areas where their extraction poses special environmental difficulties or where their extraction in the most environmentally sensitive manner causes insubstantial violations of general laws or rules. Therefore, the Legislature developed a policy of regulatory flexibility that is tempered by a specific standard or criterion of "no other violation"—one cannot be exempt of one rule if that exemption puts one in violation of another rule.

Section 293.15(9), 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. This authorization to grant exemptions or variances extends only to DNR administrative rules; no authority is given to allow exemptions or variances to the basic mining law itself (ch. 293, Wis. Stats.).

However, the flexibility intended by the Legislature and enacted through the administrative rules is limited; no other federal or state 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 exemptions, modifications, or variances are based upon testimony provided

under oath, subject to cross-examination, and supported by evidence admitted during the contested-case part of the Master Hearing.

Other parties to the Master Hearing can seek modifications to existing regulatory requirements. Such modifications may be sought to increase restrictions on a potential prospecting- or mining-permit holder as well as to relieve the permit holder from certain regulatory obligations, as noted in the preceding paragraphs. In all cases, the party or parties seeking the modification, exemption, or variance bear the burden of proof that such a change is necessary to protect the health, welfare, and safety of Wisconsin's citizens and environment.

Exemptions granted to Flambeau Mining Company for the Flambeau Mine

Specific rule	*Environmental requirement*	*Specific examples*	*Reason*
NR 132.18(1)(c)	Location of certain project facilities within 300 feet of a navigable river or stream	Open pit, flood-control berm, vegetative screening, slurry wall, wastewater-discharge structures	Location of mineral deposit
NR 132.18(d)	Location of certain project facilities within a floodplain	Slurry wall, flood-control dike, vegetative screening, wastewater-discharge structures	Location of mineral deposit
NR 132.28(e)	Location of certain project facilities within 1,000 feet of a state trunk highway	Topsoil and waste stockpiles, access road, rail spur, test wetland plot, open pit, surge pond, various buildings and appurtenances, potable water-supply well	Location of mineral deposit
NR 182.075(1)(d)5	Baseline monitoring of certain water-quality parameters	Radioactivity, turbidity, certain organic pollutants	Not applicable due to minerals involved

Exemptions likely to have been requested for the formerly proposed Nicolet Mine

Specific rule	*Environmental requirement*	*Specific examples*	*Reason*
NR 132.06(4)(h)3	Use of more than 5 acres of wetland	Overall project design minimizes wetland disturbance, but total exceeds 5 acres (approximately 27 acres)	Location of mineral deposit
NR 132.18(1)(b)	Location of certain project facilities within 300 feet of a navigable river or stream	Railroad spur, parts of soil absorption system pipeline, surface-water mitigation pipeline and structure	Location of mineral deposit
NR 132.18(d)	Location of certain project facilities within a floodplain	Railroad spur, access road, part of soil absorption system facility, surface-water mitigation pipeline and structure	Location of mineral deposit
NR 132.28(e)	Location of certain project facilities within 1,000 feet of a state trunk highway	Part of main access road leading from State Highway 55 to mine facilities	Location of mineral deposit
NR 182.075(1u)(e)	Tailings management area baseline monitoring program	Delete selected parameters from tailings management area baseline monitoring program	Not applicable due to minerals involved

Formal opportunities for public involvement

The public is guaranteed full access to environmental analysis and permit reviews through mandatory formal hearings and information meetings.

The Wisconsin Environmental Policy Act and the Metallic Mining Reclamation Act provide specific 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 reviews of necessary permits and approvals. Formal public hearings are mandated. 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., known as the Wisconsin Environmental Policy Act (WEPA) and ch. 293, Wis. Stats., known as the Metallic Mining Reclamation Act (MMRA), mandate specific opportunities for public involvement in the regulatory process.

The 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, that opportunity for public comment be provided, and that full public disclosure of environmental impacts be made prior to final project approval. Section 293.39, Wis. Stats., requires the development of an *Environmental Impact Statement (EIS)* for every metallic mining project. The *EIS* process is described in ch. NR 150, Wis. Admin. Code.

The MMRA provides other opportunities for public involvement by requiring mandatory informational hearings following the release of a *Notice of Intent* and as part of the Master Hearing. Although the scope and purpose of these two informational hearings differ slightly, the hearings provide the public and local, state, and federal officials an opportunity to provide comments on the proposed mining project. In addition, the MMRA, under s. 293.33, Wis. Stats., authorizes the creation of local mining-impact committees. The statutes specify a broad range of possible activities for local mining-impact committees to pursue, including 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 growth problems related to mining development; 5) recommend priorities for local action in regard to metallic mining; 6) develop recommendations regarding distribution of certain metallic mining-tax revenues; and/or 7) negotiate a local agreement. The local mining-impact committees may also provide local education, information, and input regarding metallic mining. These activities can be funded by state and/or local funding sources.

Local mining-impact committees
(s. 293.33, 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 the 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.

Informal opportunities for public involvement

The public has additional opportunities for access to the environmental analysis and permit reviews through informal information meetings.

The general open meeting laws of the state guarantee citizens access to discussions between a mining-permit applicant and the DNR throughout the process leading to the development of an Environmental Impact Report *and the various permits and plan approvals necessary for a mining project. In addition to the required public hearings and meetings and the various activities of local mining-impact committees, 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 developing public support for a project can foster interaction between the company and the DNR, state and local officials, and other interested citizens.*

Each mining project is unique in its location, proposed operation, and impact on the environment and socioeconomic condition of a local area. The degree of controversy raised may vary depending on these or other factors, as may the public's interest in learning more about a proposed project and wanting greater opportunity to convey their own perspectives on the issues. The applicant for a prospecting or mining permit may desire to provide more information and explanation of the project, recognizing the central role that local acceptance of the project can play in its ultimate approval.

For the formerly proposed Nicolet Mine—a large, underground zinc–copper mine to be located a few miles south of Crandon, Wisconsin—early plans included a pipeline to carry treated wastewater from the mine site to the Wisconsin River, 38 miles to the west. The proposed transfer of more than 600 gallons of water every minute from one river basin to another, the potential impact of the disposal of this amount of treated wastewater on the Wisconsin River, and concern that groundwater removed from the mine site would have an adverse effect on nearby rivers and lakes were among the reasons that the DNR held eight informational meetings. At these meetings, individuals' questions and concerns were heard, information about the specific issues and the regulatory process in general was provided, and question-and-answer documents were distributed. Although such meetings are not specifically required, the complexity and level of public interest in the proposed project led to the development of this series of meetings. In this case, public concern led the permit applicant to reconsider the diversion plan: The proposed *Mining Plan* was modified to use groundwater-seepage cells as a method of treated wastewater disposal.

Metallic mining projects involve numerous complex technical issues, such as computer modeling to assess groundwater–surface-water relationships, waste

characterization, and waste-disposal facility design. Although numerous meetings between the DNR and the applicant are typically necessary to explore the technical solutions to these and other issues, the individual citizens of Wisconsin also can attend and participate in such technical meetings. The meetings are not confidential and the state's open meeting laws (ss. 19.81–19.98, Wis. Stats.) guarantee the public full access to these and similar agency–applicant discussions.

Opportunities to comment on proposed mining operations can occur in several different ways or formats; the frequency and style are generally governed by the level of public interest. Photographs courtesy of Wisconsin Department of Natural Resources.

WHAT ARE ADDITIONAL FEATURES OF THE REGULATORY FRAMEWORK?

Role of advisory councils

The DNR uses special advisory councils, such as the Metallic Mining Council and the Wisconsin Science Advisory Council, to assist in analyzing changes to administrative rules related to metallic mining and prospecting and in independently assessing the utility of the technology proposed for metallic mining projects.

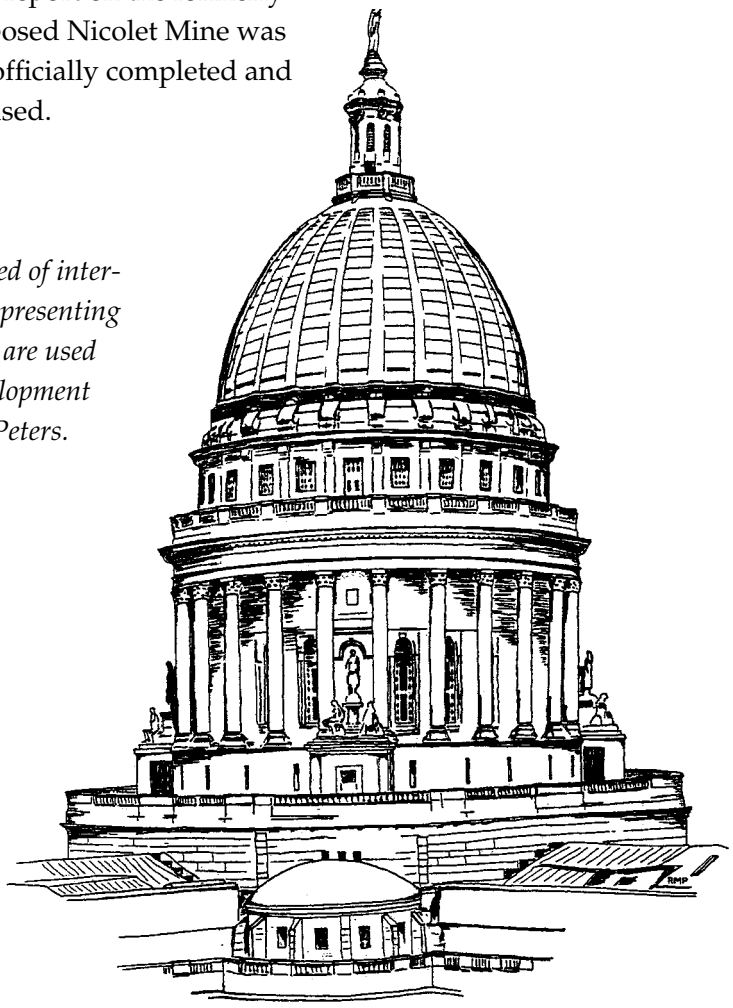
The Metallic Mining Council was created by the Wisconsin Legislature to advise the DNR on the development of new and/or changes to existing administrative rules affecting metallic mineral development. The Council is intended to reflect a range of viewpoints—mining companies, state technical expertise, environmental groups, Native American communities, and informed public citizens. The Wisconsin Science Advisory Council was created by an executive order of the Governor to provide an independent assessment of the environmental protection technology proposed for a specific metallic mining project.

The Metallic Mining Council (MMC) includes nine members who represent a range of perspectives related to metallic mining in the state. Originally created in the late 1970s, the MMC was active until the mid-1980s. After a period of inactivity, it was reactivated by the DNR in the mid-1990s. The MMC provides advice to the DNR as it considers adopting or revising administrative rules specific to metallic mineral development. The range of various perspectives—economic, scientific, environmental—represented on the MMC is specified in s. 15.345(12), Wis. Stats.; these viewpoints aid the DNR as it formulates administrative rules. Most recently, the MMC advised the DNR on changes to chs. NR 132 and NR 182, Wis. Admin. Code.

The changes in ch. NR 132, Wis. Admin. Code, involved the creation of a long-term, irrevocable trust account to provide additional financial guarantees related to unforeseen environmental impacts. Changes in ch. NR 182, Wis. Admin. Code, related to how the DNR approached the monitoring, evaluation, and remediation response to changes in groundwater quality in the vicinity of a mine-waste disposal facility and other facilities on a mining site.

The Wisconsin Science Advisory Council, a five-member group of independent university experts on mining-related technology, was created by Executive Order 309 in 1997 by then-Governor Thompson. The council was charged with identifying technologies that are effective in preventing or eliminating environmental degradation from metallic ore mining operations; reviewing on a site-specific basis proposed metallic ore mining operations in Wisconsin and determining "the effectiveness and feasibility of

implementing technologies to reduce or eliminate environmental impacts..."; and making recommendations to the DNR regarding "the existence of technology that will ensure compliance with state groundwater and surface water statutes or rules ... and confirm that any proposed metallic ore mining operation would utilize these technologies." This council was terminated by Governor Doyle in 2003; its final report on the formerly proposed Nicolet Mine was not officially completed and released.



Advisory councils, usually composed of interested and knowledgeable citizens representing various points of view or expertise, are used to assist in the evaluation and development of public policy. Drawing by R.M Peters.

Local agreements

Local agreements are optional "contracts" between local governmental bodies and applicants for metallic mining permits; these agreements are designed to address issues of mutual interest that could be affected by potential mining.

Under Wisconsin's mining regulations, local units of government for an area that includes a proposed mining site are permitted to negotiate and sign a local agreement, which is essentially a contract, with an applicant for a metallic mining permit. State government is not involved in the substance or mechanics of how local agreements are developed; such activity lies wholly within the authority of local units of government. The statutes identify what information must be included, the possible topics that may be included, and the process that must be followed before the local agreement can be placed into effect.

Local permission to mine metals in Wisconsin is a requirement of the state's regulatory framework for metallic mining. Metallic mining in Wisconsin can proceed only if it is done in compliance with local zoning and land-use ordinances that are applicable to the mining activity itself. Therefore, the state's regulatory review of a mining-permit application is, ultimately, subject to the approval of local governments affected by the proposed mining activity.

Reflecting the crucial role played by local governments, the Wisconsin Legislature adopted statutory language (s. 293.41, Wis. Stats.) authorizing the optional negotiation, development, and adoption of contractual agreements between mining-permit applicants and local governmental bodies in the vicinity of the proposed mine. The statutes spell out the information that must be included in a local agreement; see the example on the next page.

The local agreement statute creates a means by which issues of local concern—for example, economic impacts such as local employment, maintenance of property values, special payments for local infrastructure development, guaranteed tax payments—may be addressed prior to completing the permitting process. The local agreement process also provides mining-permit applicants with an opportunity to gauge the level of support for potential mine development and to address concerns of local government early in the permitting process.

The manner involved in *negotiating* the agreement is not included in the authorizing statute; however, negotiating a local agreement is included among the possible activities of local mining-impact committees, under s. 293.33, Wis Stats.

The process involved in *enacting* a local agreement is specifically identified in the statute: There must be a public hearing on the proposed agreement, the hearing must be properly "noticed" so that citizens can participate in the hearing, and adoption of the local agreement by a local governing body can occur only after the public hearing and only in a

public meeting of the governing body. Local agreements are optional and are not a requirement of the state's regulation of metallic mining, but state agencies are required to assist local governments in enforcing local agreements that have been lawfully placed into effect.

In recent years, a local agreement was negotiated and signed by Rusk County, City of Ladysmith, Town of Grant, and Kennecott Explorations (Australia) Ltd. This agreement (see outline) covered activities and issues related to the Flambeau Mine, operated by Flambeau Mining Company as successor-in-interest to Kennecott Explorations (Australia). Several local agreements had also been signed relating to the formerly proposed Nicolet Mine near Crandon in Forest County.

Outline of Local Agreement Related to the Flambeau Mine

	Title page
	Purpose/Resolutions
	Definitions
Section 1	DNR Permits/Performance Bond
Section 2	Mining Permit
Section 3	Project Overview
Section 4	Setbacks
Section 5	Gates and Visitors Observation Tower
Section 6	Security Fencing
Section 7	Construction Supervision/ Inspection
Section 8	Hours of Operation
Section 9	Acceptable Waste Types
Section 10	Off-Site Access Roads
Section 11	Trucking Restrictions
Section 12	Hiring of Employees
Section 13	Groundwater Monitoring Wells
Section 14	Testing/Guarantee of Private Off-Site Wells
Section 15	Compensation from Loss in Property Value Due to Proximity of Mine
Section 16	Local Mining Impact Committee
Section 17	Leachate Storage and Treatment
Section 18	Emergency Equipment and Plan
Section 19	Succession of Agreement
Section 20	Closing Plan
Section 21	Municipal Negotiation and Related Professional Expenses
Section 22	Municipal Liability
Section 23	Operator Responsibility During Operation and After Closure of the Mine
Section 24	Renegotiation
Section 25	Grievances
Section 26	Additional Information
Section 27	Conditional Use Permit
Section 28	Limitations on Other Contracts
Section 29	Enforceability of this Agreement in the Event that the Mine Is Not Licensed
Section 30	Rusk County Mining Impact Fund
Section 31	Local Governments Will Not Oppose the Mine
Section 32	Inapplicability of Rusk County Mineral Mining Code
Section 33	Defaults
Section 34	Ability of Participating Local Governments to Participate in NR 132 Hearing Process
Section 35	Disputes
Section 36	Invalidation
Section 37	Law
Section 38	Notices
Section 39	Modifications
Section 40	Titles are Illustrative of Content Only
Section 41	Legal Authority
Section 42	Date
	Exhibits

Environmental monitoring

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

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 or noncompliance 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 disclosure of potential environmental impacts of the proposed metal prospecting or mining 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 prospecting and mining permits 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. Section NR 132.11, Wis. Admin. Code, specifically requires environmental monitoring based on an approved *Monitoring Plan*, which is made an integral part of the mining permit. These monitoring requirements can be expanded if the DNR determines that modifications are necessary for satisfactory evaluation of the 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 for early detection of groundwater impact; harmful effects on the groundwater resource require activating an intervention or contingency plan to prevent groundwater contamination beyond the limit of the facility's design-management zone.

Section NR 182.08, Wis. Admin. Code, outlines a program of waste characterization as part of the *Feasibility Report* 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, is within acceptable limits.

Long-term care encompasses routine care, maintenance, and monitoring to evaluate the impact of the mine-waste disposal facility following the closure of the facility. The focus of long-term care is the monitoring of 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.

Ongoing monitoring of environmental resources, such as air quality (upper left) and groundwater quality (upper right and below left), is an integral part of mining regulation and enforcement. Photographs courtesy of Wisconsin Department of Natural Resources.

Options for enforcement

Enforcement of metallic mining regulations includes 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 and citizens. For metallic mining operations, ss. 293.83, 293.85, 293.87, and 293.89, Wis. Stats., describe the options for 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 notice of violations, compliance orders, emergency stop orders, individual citizen suits (against an operator or the DNR), and six-citizen suits. Enforcement actions taken by the DNR to protect the environment are typically done in a "stepped" or phased approach; the urgency and formality of the intervention by the DNR are dependent upon the severity of the problem and the ultimate cooperation of the person or company violating a permit, approval, or license. Penalties can range from fines or forfeitures to temporary cessation orders to outright revocation of the permit. The DNR uses its own Office 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 the jurisdiction to enforce these regulations.

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

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 ten days or, if a hearing is required, immediately following the conclusion of the hearing. Failure to comply with an order results in *permit revocation*.

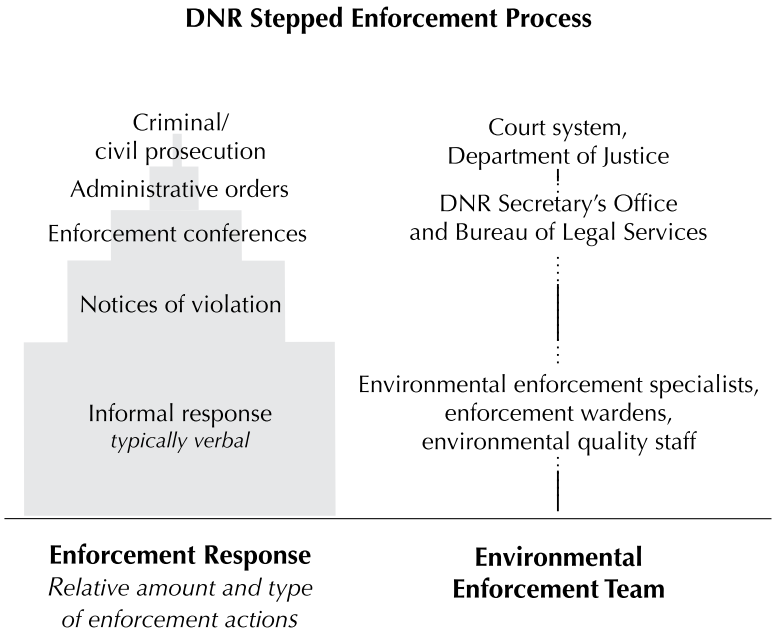
For activities that are not in compliance with existing permits and that pose an immediate and substantial threat to public health and safety or the environment, *emergency stop orders* may be issued by the DNR. A stop order requires the immediate cessation of mining, in whole or in part. Under most circumstances, 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. In addition, 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 themselves 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 permit conditions are subject to fines (if the violation is of a criminal nature) and forfeitures (if the violation arises out of a civil action). The fines can range from $1,000 to $5,000 and forfeitures 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 includes a range of options available to the DNR, the Department of Justice, and citizens of the state, depending on the specific circumstances involved. These enforcement options are in addition to any rights that individuals or groups of individuals may have under other state laws or federal law. Guarantees of due process apply to all parties involved.



The DNR's stepped enforcement process for environmental enforcement activities engages the resources of the state at various levels appropriate to the seriousness of the specific environmental concern. From Dewitt Ross & Stevens, S.C., January 1998, Wisconsin Environmental Compliance Update.

Cost of environmental analysis and permit review

Applicants for prospecting and mining permits must bear the state's full cost of environmental analysis and review as well as the costs incurred by the state in evaluating permits, plans, and approvals.

Evaluating permit applications, responding to requests for plan approvals, and so forth necessitate the expenditure of significant public resources in terms of people, time, technology, and outside expertise. To the extent possible, these costs are required to be reimbursed by applicants and are divided into two parts: the cost of preparing environmental impact statements and related environmental investigations and the cost of permit reviews by state agencies.

Metallic mineral prospecting and mining operations are inherently complex activities involving potential physical and socioeconomic disruption of the environment. The evaluation of proposals for such activities requires that the state be able to devote the necessary resources to complete a thorough evaluation of proposed projects. Although state resources, in terms of personnel, technology, and special expertise may be limited, the full costs of permit evaluations and environmental analysis and review are charged back to the applicant, who agrees to pay those costs as they are billed. If an applicant does not reimburse the state in a timely manner, the DNR may terminate its review.

Environmental Impact Statement. An *Environmental Impact Statement (EIS)* is designed to fully disclose the impacts of a proposed action so that the people of Wisconsin can understand and evaluate the nature of the proposed activity. Included in *EIS* fees are the costs to the DNR for hiring environmental consultants. For the review of the formerly proposed Nicolet Mine, more than 25 consultants were hired for their special expertise.

The cost of *EIS* development for the Flambeau Mine project was $189,000, and the cost of *EIS* development for the formerly proposed Nicolet Mine was $4.4 million, as of August 2003.

Permit fees. The complexity of metallic mining and prospecting projects is reflected in the number of permits, plans, and approvals necessary to proceed with development. Similarly, the nature of the projects makes the evaluation of these documents costly. These costs are borne by the applicant on a "charge back" basis that permits the DNR to engage outside expertise and devote whatever time is deemed necessary to accomplish full and effective evaluation of submitted information supporting the permits, plans, and approvals that will be required.

For the Flambeau Mine, permit fees paid to the DNR totaled slightly in excess of $182,000; the cost of such reviews related to the formerly proposed Nicolet Mine exceeded $2.1 million.

Comparison of *Environmental Impact Statement* and permit fees paid to DNR

Mining project	Duration	Completion status	*EIS* fees paid to DNR	Permit fees paid to DNR	Total fees
Crandon Mine Project (Exxon)	Late 1970s–Dec. 1986	Applicant withdrew after *Final EIS* printed, several months before Master Hearing	Approximately $1.625 million	$222,380	$1.85 million
Flambeau Mine[1]	1987 *NOI*[2]–1991 decision	Project opened, operated, and reclaimed	$189,000	$182,287[3]	$371,287
Noranda Mine Project	1992 *NOI*–through Oct. 1993	Only initial DNR review before applicant withdrawal	$24,500	$303,458 billed[4]	$328,000
Nicolet Mine (Nicolet Minerals Company)	1994 *NOI* through August 2003	Estimated 2.5 years before final decision	$4.4 million through August 2003	$2.1 million through August 2003	$6.3 million through August 2003
Jackson County Iron Mine	Opened 1968, permitted in 1981, closed in 1982	Closed and reclaimed; used as county park	$0	$6,500[5]	$6,500
Bend	*NOI* never issued	Occasional exploratory drilling possible	$0	$0	$0

Source: Wisconsin Department of Natural Resources, September 2001; updated August 2003.

[1] The Flambeau project was a small, open pit mine from which less than 2 million tons of ore was removed. Milling and tailings disposal were conducted off site and out of state.

[2] *NOI* is the *Notice of Intent* to collect data submitted by a mining company to announce the project to the general public and officially begin the DNR's environmental and permit review processes.

[3] These amounts include the fees submitted with permit applications and approvals required for a mine and associated facilities.

[4] At this time, the DNR was specifically authorized to bill for permit-related work until a permit application was submitted. This amount was disputed and not collected. The law was changed in 1997 to allow for annual billing of regulatory review costs beginning with the submittal of the *NOI.* The DNR sends monthly invoices at Noranda's request.

[5] Permit fees were assessed at $5 per acre on this and four earlier projects in southwestern Wisconsin.

Long-term financial guarantees—Bonds and fees

Applicants for mining and prospecting permits must financially ensure the reclamation and long-term care of these sites by providing funds that protect future generations from unforeseen environmental costs.

Financial assurance related to metallic mineral development reflects the long-term nature of such operations. Potential future costs of mining are covered in the form of a reclamation bond, financial surety for long-term care activities, mandatory contributions to the environmental and groundwater funds, and other special fees.

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 is in excess of $11 million. For the formerly proposed Nicolet Mine, the revised Mine Permit Application (1998) estimated the cost of reclamation to be more than $28 million. The difference in these amounts reflects the significantly greater volume of waste and the greater land-surface impact of mining facilities and mill development for the Nicolet Mine compared to Flambeau.

Long-term care. Operators of metallic mining operations are required to show financial capability for long-term care of the reclaimed mining-waste site. Under current law, the owner of a mine-waste disposal facility is perpetually responsible for the environmental integrity of the site. Proof of financial responsibility for long-term care is also required in perpetuity for mining operations. After 40 years, however, the owner of a mine-waste disposal facility may apply to be relieved of the obligation to maintain proof of financial responsibility (although legal responsibility and liability for the environmental integrity of the site continues forever).

For the former Nicolet Mine proposal, long-term care costs were estimated to be more than $454,000 for each of the first six years following cessation of mining operations; projected annual costs for years 7 through 40 were estimated at more than $108,000. For Flambeau Mine, where the open pit has been filled with waste rock from stockpiles that were temporary and where no processing of the ore occurred beyond simple crushing for rail shipment, the long-term care costs were estimated at $11,000 per year.

Environmental Fund. Operators of mine-waste disposal facilities also are required

to contribute to the Environmental Fund (EF) 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 EF 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 EF are not sufficient to handle a specific mine-waste problem.

For the Flambeau Mine, required payments to the EF are estimated to be more than $60,000; for the formerly proposed Nicolet Mine, the EF payment was likely to have been more than five times larger. The difference reflects the significantly larger volume of mine waste projected for the Nicolet operation.

Groundwater fee. Under s. 289.63, Wis. Stats., 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. This fund is used for groundwater-management activities by the DNR.

For the Flambeau Mine, payments were in excess of $60,000; for the formerly proposed Nicolet Mine, the payments would have been significantly larger and would have been established at the Master Hearing along with other required payments and fees.

Other fees. In addition to the fees mentioned, the permit holder must pay a siting board fee of $0.017 per ton and a recycling fee of $3.00 per ton of mining waste. The total payment of fees over the life of the formerly proposed Nicolet Mine would have exceeded $62 million.

Long-term financial guarantees—Irrevocable trust agreement

The establishment of a special trust agreement provides assurance to the people of Wisconsin that adequate funds are perpetually available for preventive and remedial activities related to a specific metallic mineral operation.

Administrative rules developed by the DNR require that a mining-permit holder establish an irrevocable trust agreement in which a fund is created and maintained by payments from the permit holder. The earnings of this trust fund would be available under s. NR 132.085, Wis. Admin. Code, for preventive and remedial activities related to unforeseeable environmental damages not adequately addressed under other applicable financial requirements already imposed on the permit holder. The total amount of the fund and the timing and amount of payments into the fund are set during the Master Hearing and are designed to handle reasonable worst-case scenarios identified at the Master Hearing as applicable to the proposed operation at the particular mining site.

Section NR 132.085, Wis. Admin. Code, details the requirements for a relatively new type of financial guarantee under Wisconsin's metallic mining rules—an irrevocable trust agreement. The agreement creates a trust fund that is maintained in perpetuity; that is, it cannot be revoked or rescinded. The purpose of the irrevocable trust agreement is to ensure that sufficient money is available to pay for conditions that may arise out of any of five potentialities: 1) remedial action necessitated by a spill of hazardous materials, 2) remedial action necessary to mitigate the release of hazardous material from mine workings; 3) remedial action resulting from failure of a mining-waste facility; 4) replacement of a water supply that has been contaminated as a result of mining activity; and 5) preventive measures taken to avoid environmental damage, such as the replacement of part of a mine-waste facility to protect against likely failure.

Questions related to the size of such a perpetual fund, the size of payments into the fund by the permit holder, and the timing of payments are resolved during the Master Hearing. The potential permit holder must identify the trustee of the fund, which must be a public entity, bank, or other financial institution within the state of Wisconsin that is authorized to act in such a capacity.

The required level of funding in the trust at any particular time must reflect the stage of a particular mining project and the scope of identified measures necessary to prevent or remediate environmental damage. For situations shown to be reasonably possible, the permit holder must use costs for worst-case preventive or remedial measures to establish the funding level, which in turn is reflected in the size and timing of payments. For those time periods during which scheduled payments are being made into the

fund, the permit holder must have a performance bond or insurance sufficient to cover the risks and associated remedial or preventive measures determined during the course of testimony in the Master Hearing. Reevaluation of the funding of the trust is required at least every five years, thus providing an opportunity to revisit the assumptions used to establish the original funding level of the trust.

Additional opportunity for review of the trust fund is provided to the permit holder, local communities, and/or any five or more interested parties through a process of petitioning the DNR in which they show that more frequent review is necessary. In addition, the DNR may determine on its own that significant events or changed circumstances exist, necessitating more frequent review.

Special taxes applied to metallic mining

Companies engaged in mining metallic minerals must pay additional taxes, based on their annual 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 causing adverse environmental impacts, stimulating a variety of socioeconomic effects on local communities, and tending to be a short-lived economic activity. Thus, a net proceeds occupation tax on the extraction of metallic minerals is applied to metallic mining operations to generate additional revenue to address these potentially higher costs. This tax is designed to reflect the profitability of the mining operation. The net proceeds tax payments are managed by the Mining Investment and Local Impact Fund Board.

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, that

> The tax is established in order that the state may derive a benefit from the extraction of irreplaceable metalliferous 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 that are outlined in s. 70.375, Wis. Stats. The tax rate is graduated (higher rates for larger net proceeds) from 3 percent of net proceeds from $250,000 to $5 million and up to 15 percent for amounts exceeding $25 million. Tax brackets are automatically adjusted for inflation. The graduated net proceeds tax (s. 70.37 (1)(h), Wis. Stats.) encourages important state goals, such as

- gradual, continuous, and complete extraction of metallic minerals;
- continued stable employment;
- taxation according to ability to pay; and
- taxation based on the privileges enjoyed by persons mining metalliferous metallic minerals.

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 cycles of economic development. The distribution of these revenues is complicated, but in general is as follows: Sixty percent is placed in the Mining Investment and Local Impact Fund (see next section of this report) and, in recent years, the bal-

ance has been used to provide property tax relief for all Wisconsin citizens. For damages to persons or property related to metallic mining, a sum-sufficient mining-damages appropriation of up to 4 percent of the net proceeds tax revenues obtained from metallic mining has been identified in the biennial budget bills adopted by the Legislature. This appropriation supports the damage claim fund created in s. 107.31, Wis. Stats.

Other taxes. The net proceeds tax on metallic mining is levied *in addition to* all other applicable taxes required of corporations doing business in Wisconsin. For example, the Wisconsin 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 formerly proposed Nicolet Mine, estimated federal taxes ranged from $62.2 million to $117 million over the life of the project; estimated state corporate income taxes ranged from $48.2 million to $155 million over the life of the project.

Other state and local taxes are also applicable to metallic mineral operations.

Net proceeds tax payments:
Flambeau Mine (actual) and Nicolet Mine (projected)

	Taxes paid by		
Taxes paid to	**Flambeau Mining Co. (CY 1993-1997)**	**Nicolet Minerals Co. (Estimated using prices predicted by Nicolet Minerals Co. for CY 2000–2027)**	**Nicolet Minerals Co. (Estimated using prices predicted by Wisconsin Department of Revenue for CY 2000–2027)**
State of Wisconsin	$14.049 million	$117.335 million	$62.193 million
Additional payments to local governments (Local Agreement)	$ 2.652 million	[Not included]	[Not included]

Mining Investment and Local Impact Fund

The net proceeds tax paid each year by operators of metallic mines is distributed to local communities affected by the mining activity, either as mandatory direct payments or as discretionary grants.

The majority of the tax revenues paid to the state of Wisconsin each year because of the net proceeds tax obligation of metallic mining companies is distributed to local communities affected by metallic mining activity, with priority consideration to places where mining is currently active. Net proceeds tax revenue is placed in the Mining Investment and Local Impact Fund, which is managed and distributed by a board of 11 persons, appointed by the Governor.

The Mining Investment and Local Impact Fund is overseen by a board that is appointed by the Governor and administratively attached to the Wisconsin Department of Revenue (s. 15.435(1), Wis. Stats.). The 11-member board represents the general public in areas where mining has occurred or is occurring, Native American communities, towns, school boards, counties, municipalities, and the Wisconsin Departments of Commerce and Revenue. The board makes monetary disbursements to local communities and local mining-impact committees to address mining-related impacts and provide information to local citizens about metallic mineral operations.

The net proceeds tax revenue placed into the Impact Fund (ss. 70.37 and 70.375, Wis. Stats.) is distributed in accordance with s. 70.395, Wis. Stats., and administrative rule TAX 13. The statutes provide that a minimum guarantee of funds be provided to communities currently experiencing mineral development, then to places where mining is being considered, and then to places where mining has not recently been active. Money is disbursed to local municipalities—towns, cities, counties, or tribal governments—as guaranteed construction-period payments, first-dollar (up-front) payments, and discretionary payments available upon request using an application process. Local mining-impact committees and school districts are also eligible to receive funds for specified purposes, and counties can receive additional tax payments. Ten percent of the net proceeds revenue is designated for distribution to the Project Reserve Account—these funds are designed to assist local communities dealing with the closure of mining operations and the related economic adjustments. Financial support for local governments involved in local agreement development is also available through the Impact Fund.

The Impact Fund and its board were created in 1978 to carry out the Legislature's mandate to use the special tax applied to metallic mining—the net

proceeds tax on metallic mineral operations—to address the additional societal (environmental and socioeconomic) costs related to mining. Since that time the Board has distributed several million dollars for infrastructure enhancement, economic development grants and related job creation, remediation of old mining sites and financial assistance for addressing water-well impacts related to mining, legal fees associated with mining ordinance development, operational funding of local mining-impact committees, financial support of special technical studies, and other mining-related programs developed by local units of government.

Grants from the Mining Impact Fund were used to support land acquisition and building costs for several community (public) and industrial (private) projects in the City of Ladysmith and Rusk County. Photographs courtesy of City of Ladysmith, Wisconsin.

Special 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 any demonstration of negligence (known as strict liability), extends to any subsequent company successor or owners, and is in effect irrespective of any corporate structure specifically created for the particular prospecting or mining operation. The Wisconsin Department of Commerce administers an appropriation that compensates individuals for mining-related injuries. Damage to water-supply wells is subject to compensation under statutes administered by the DNR.

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:

- 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. This concept is known as strict liability and is defined in s. 107.31(3), Wis. Stats.
- 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.
- The limit for claims and actions for mining-related injuries is three years from 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 person or property caused by environmental contamination from emissions, seepages, leakages, or other discharges from mining operations; such damages include injury resulting from substantial subsidence of the land surface. Mining operations include not only prospecting and mining sites, but also any refineries, smelters, and related waste products and facilities 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 Commerce. This department is directed to hold a formal (trial-like) hearing about any claim that cannot be settled otherwise.

In addition, s. 293.65, Wis. Stats., outlines a process for providing relief to

persons whose water supply is adversely affected by a metallic mining operation. Such individuals may receive relief in the form of an alternative water supply and limited financial compensation, depending on the outcome of the review of their complaint by the DNR.

These special liability requirements for metallic mineral prospecting and mining operations are in addition to the general liability requirements under Wisconsin law for environmental damages that apply to all persons, organizations, and companies.

Other state and federal environmental regulations

Metal prospecting and mining regulations supplement and do not replace other Wisconsin and federal environmental regulations.

Metallic mineral operations are regulated by a specific set of laws and administrative rules, but these regulations require that any proposed operation also 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 most metallic mineral prospecting and mining projects. Any exceptions to this general situation relate to the location-specific nature of mineral deposits and the special aspects of mineral extraction that are part of the mining activity itself. Wisconsin's environmental protection programs complement federal environmental programs; in the case of water, air, and solid waste, the state is responsible for carrying out those programs in place of the federal enforcement agencies. 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.

Chapter 293, Wis. Stats., outlines the regulatory framework for the development of metallic mineral deposits in Wisconsin. Chapters NR 130, 131, 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 federal and state environmental protection programs. Wisconsin has adopted and enforces comprehensive federal 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 programs to protect the environment. The enforcement of these programs has been left to the state with some exceptions (see below). This is consistent with the concept of "state primacy" for certain environmental regulatory programs.

Surface water. Chapters NR 102–106, Wis. Admin. Code, when considered together, outline an extensive program of surface-water classification and water-quality protection and regulate discharges that could affect the most sensitive organisms within these waters. These rules apply to metallic mining. Under Chapter 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. In addition, the U.S. Environmental Protection Agency is responsible for approval of spill-prevention control and countermeasure plans prior to the beginning of mine operations.

Wastewater discharge. Chapter 283 and s. 281.41, Wis. Stats., give the DNR 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. 281.41, Wis. Stats.). The DNR also requires a permit for discharge from these plants. Metal prospecting and mining operations must comply with these requirements.

Air quality. Under ch. 285, Wis. Stats., the DNR has authority to regulate activities that could have an impact upon air quality. An air-pollution-control permit, under s. 285.60, Wis. Stats., 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. NR 400–499, Wis. Admin. Code, are applicable to metallic mineral operations.

Wetlands. Chapters NR 131 and 132, Wis. Admin. Code, cover metallic mineral prospecting and mining, respectively, and outline the requirements for detailed evaluation of wetlands that may be affected by proposed operations. Because metallic mineral deposits may be found 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 other DNR requirements related to wetlands (ch. NR 103, Wis. Admin. Code, the more general rule related to wetland protection, does not apply to prospecting or mining operations), the regulatory concern for protection of wetlands is a major aspect of metallic mineral operation approval. Also, local shoreland and wetland zoning requirements prohibit metal 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 for the public.

Because of the location of potential metallic mineral deposits in northern Wisconsin—an area of numerous streams, lakes, and wetlands—the U.S. Army Corps of Engineers is also likely to have a significant role in any mine proposal. The Corps of Engineers requires a permit for dredging or filling activities in or near navigable streams or wetlands. For the formerly proposed Nicolet Mine, for example, such a permit would have been necessary and, therefore, a separate environmental analysis and permit-review process were to be completed by federal authorities. In addition, although not specifically a permitting or plan approval requirement, federal regulatory agencies are asked to submit written comments regarding *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, Bureau of Mines, Bureau of Indian Affairs, and Council on Environmental Quality.

Groundwater. The impact of metallic mining operations on groundwater quantity and quality is regulated under chs. NR 132, 140, and 182, Wis. Admin. Code. Groundwater-quantity issues are typically addressed through a permit-review process under s. 293.65, 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 chs. NR 140 and NR 182, 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 limits to the adverse impact in terms of the distance from the prospecting or mining facilities and 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 limit or 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 to affect groundwater quality.

Federal land in Wisconsin. Metallic mining operations on federal land are regulated by the federal government; however, federal authority recognizes the mining regulations of Wisconsin wherever Wisconsin regulations are more restrictive. Environmental analysis and review programs at the federal level are likely to be completed in cooperation with the state requirements and within a context of mutual environmental and regulatory analysis and review.

SUMMARY

Summary

Metallic mineral development in Wisconsin is regulated under laws and rules using a specific process of environmental analysis and technical evaluation done within a procedural framework that is open to the public.

Wisconsin's laws and rules governing the development of metallic minerals address issues of environmental impact, the phases of mineral development, the operation of mines and mine-waste disposal facilities, and several other regulatory issues, such as socioeconomic impacts, special taxes, special liability considerations, and provision for additional financial guarantees. These regulations also create a mechanism leading to decisions about permit applications. In addition, 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. The current policy is reflected in the following statement of purpose of ch. 421, Laws of 1977, 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; 2) that reclamation should be the 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 full scope of metallic mineral development is regulated under Wisconsin's laws and rules. The mining regulations are in addition to all other regulations adopted by the Legislature and state agencies for the protec-

tion of the environment. The regulations recognize some mining 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 of metallic mineral prospecting and mining operations cannot be left to future generations to accomplish.

Environmental impacts of mining must be limited. State metallic mineral exploration, prospecting, and mining 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) the achievable limits of environmental protection and the means by which the public can express support or concern with these limits.

Responsible mining is acceptable. Wisconsin's regulatory framework assumes 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 resources before allowing mineral development to proceed.

Local governments and citizens can be instrumental in decision making. Wisconsin's metallic mineral regulations affirm the importance of the role of local government 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 in supporting the creation of local impact committees and the Mining Investment and Local Impact Fund.

APPENDIX: WISCONSIN STATUTES AND ADMINISTRATIVE RULES

Disclaimer

Wisconsin Statutes and Administrative Rules

The statutes and administrative rules included here were reproduced with permission from the Wisconsin Revisor of Statutes Bureau Web sites: *The Updated Wisconsin Statutes & Annotations* <http://www.legis.state.wi.us/rsb/stats.html> and *The Wisconsin Administrative Code & Register* <http://www.legis.state.wi.us/rsb/code/>. ***Always consult the printed rules for official text.***

Appendix contents

CHAPTER 293

METALLIC MINING

Note: 1995 Wis. Act 227 renumbered the provisions of chs. 144, 147, 159 and 162, Stats. 1993–94, to be chs. 280–299, Stats. 1995–96. For a table tracing former section numbers see the Addenda & Errata at the end of Volume 5.

Cross Reference: See also ch. NR 130, Wis. adm. code.

SUBCHAPTER I

DEFINITIONS

293.01 Definitions. In this chapter, unless the context requires otherwise:

(1m) "Air pollution" means the presence in the atmosphere of one or more air contaminants in such quantities and of such duration as is or tends to be injurious to human health or welfare, animal or plant life, or property, or would unreasonably interfere with the enjoyment of life or property.

(2) "Applicant" means a person who has applied for a prospecting permit or a mining permit.

(3) "Department" means the department of natural resources.

(4) "Environmental pollution" means the contaminating or rendering unclean or impure the air, land or waters of the state, or making the same injurious to public health, harmful for commercial or recreational use, or deleterious to fish, bird, animal or plant life.

(5) "Mineral exploration" or "exploration", unless the context requires otherwise, means the on–site 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.

(6) "Exploration license" means the license required under s. 293.21 (2) as a condition of engaging in exploration.

(7) "Merchantable by–product" means all waste soil, rock, mineral, liquid, vegetation and other material directly resulting from or displaced by the mining, cleaning or preparation of minerals during mining operations which are determined by the department to be marketable upon a showing of marketability made by the operator, accompanied by a verified statement by the operator of his or her intent to sell such material within 3 years from the time it results from or is displaced by mining. If after 3 years from the time merchantable by–product results from or is displaced by mining such material has not been transported off the mining site, it shall be considered and regulated as refuse unless removal is continuing at a rate of more than 12,000 cubic yards per year.

(8) "Minerals" mean unbeneficiated metallic ore but does not include mineral aggregates such as stone, sand and gravel.

(9) "Mining" or "mining operation" means all or part of the process involved in the mining of metallic minerals, other than for exploration or prospecting, including commercial extraction, agglomeration, beneficiation, construction of roads, removal of overburden and the production of refuse.

(10) "Mining plan" means the proposal for the mining of the mining site.

(11) "Mining permit" means the permit which is required of all operators as a condition precedent to commencing mining at a mining site.

(12) "Mining site" means the surface area disturbed by a mining operation, including the surface area from which the minerals or refuse or both have been removed, the surface area covered by refuse, all lands disturbed by the construction or improvement of haulageways, and any surface areas in which structures, equipment, materials and any other things used in the mining operation are situated.

(13) "Operator" means any person who is engaged in, or who has applied for or holds a permit to engage in, prospecting or mining, whether individually, jointly or through subsidiaries, agents, employees or contractors.

(16) "Person" means an individual, owner, operator, corporation, limited liability company, partnership, association, municipality, interstate agency, state agency or federal agency.

(17) "Principal shareholder" means any person who owns at least 10% of the beneficial ownership of an operator.

(18) "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 and tunnels and other means, other than for exploration, which the department, by rule, identifies, and the production of prospecting refuse and other associated activities. "Prospecting" shall not include such activities when the activities are, by themselves, intended for and capable of commercial exploitation of the underlying ore body. However, the fact

that prospecting activities and construction may have use ultimately in mining, if approved, shall not mean that prospecting activities and construction constitute mining within the meaning of sub. (9), provided such activities and construction are reasonably related to prospecting requirements.

(19) "Prospecting permit" means the permit which is required of all persons as a condition precedent to commencing prospecting at a location.

(20) "Prospecting plan" means the proposal for prospecting of the prospecting site.

(21) "Prospecting site" means the lands on which prospecting is actually conducted as well as those lands on which physical disturbance will occur as a result of such activity.

(22) "Prospector" means any person engaged in prospecting.

(23) "Reclamation" means the process by which an area physically or environmentally affected by prospecting or mining is rehabilitated to either its original state or, if this is shown to be physically or economically impracticable or environmentally or socially undesirable, to a state that provides long–term environmental stability. Reclamation shall provide the greatest feasible protection to the environment and shall include, but is not limited to, the criteria for reclamation set forth in s. 293.13 (2) (c).

(24) "Reclamation plan" means the proposal for the reclamation of the prospecting or mining site which must be approved by the department under s. 293.45 or 293.49 prior to the issuance of the prospecting or mining permit.

(25) "Refuse" means all waste soil, rock, mineral, liquid, vegetation and other material, except merchantable by–products, directly resulting from or displaced by the prospecting or mining and from the cleaning or preparation of minerals during prospecting or mining operations, and shall include all waste materials deposited on or in the prospecting or mining site from other sources.

(26) "Related person" means any person that owns or operates a mining site in the United States and that is one of the following when an application for a mining permit is submitted to the department:

(a) The parent corporation of the applicant.

(b) A person that holds more than a 30% ownership interest in the applicant.

(c) A subsidiary or affiliate of the applicant in which the applicant holds more than a 30% ownership interest.

(27) "Solid waste" has the meaning given under s. 281.01 (15).

(28) "Unsuitability" means that the land proposed for prospecting or surface mining is not suitable for such activity because the prospecting or surface mining activity itself may reasonably be expected to destroy or irreparably damage either of the following:

(a) Habitat required for survival of species of vegetation or wildlife designated as endangered through prior inclusion in rules adopted by the department, if such endangered species cannot be firmly reestablished elsewhere.

(b) Unique features of the land, as determined by state or federal designation and incorporated in rules adopted by the department, as any of the following, which cannot have their unique characteristic preserved by relocation or replacement elsewhere:

1. Wilderness areas.
2. Wild and scenic rivers.
3. National or state parks.
4. Wildlife refuges and areas.
5. Archaeological areas.

5m. Listed properties, as defined in s. 44.31 (4).

6. Other lands of a type designated as unique or unsuitable for prospecting or surface mining.

(29) "Waters of the state" includes those portions of Lake Michigan and Lake Superior within the boundaries of this state, and all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private, within this state or its jurisdiction.

(30) "Water supply" means the sources and their surroundings from which water is supplied for drinking or domestic purposes.

History: 1973 c. 318; 1977 c. 377 s. 29m; 1977 c. 421, 447; 1983 a. 27, 517; 1987 a. 395; 1991 a. 260; 1995 a. 227 ss. 721 to 742, 994; Stats. 1995 s. 293.01.

SUBCHAPTER II

ADMINISTRATION

293.11 Mine effect responsibility. The department shall serve as the central unit of state government to ensure that the air, lands, waters, plants, fish and wildlife affected by prospecting or mining in this state will receive the greatest practicable degree of protection and reclamation. The administration of occupational health and safety laws and rules that apply to mining shall remain exclusively the responsibility of the department of commerce. The powers and duties of the geological and natural history survey under s. 36.25 (6) shall remain exclusively the responsibility of the geological and natural history survey. Nothing in this section prevents the department of commerce and the geological and natural history survey from cooperating with the department in the exercise of their respective powers and duties.

History: 1973 c. 318; 1975 c. 41 s. 52; 1995 a. 27, ss. 4332 and 9116 (5); 1995 a. 227 s. 744; Stats. 1995 s. 293.11.

This section is a statement of purpose and does not grant authority to issue a ban on mining activity. Rusk County Citizen Action Group, Inc. v. DNR, 203 Wis. 2d 1, 552 N.W.2d 110 (Ct. App. 1996).

293.13 Department duties. (1) The department shall:

(a) Adopt rules, including rules for prehearing discovery, implementing and consistent with this chapter.

(b) Establish by rule after consulting with the metallic mining council minimum qualifications for applicants for prospecting and mining permits. Such minimum qualifications shall ensure that each operator in the state is competent to conduct mining and reclamation and each prospector in the state is competent to conduct prospecting in a fashion consistent with the purposes of this chapter. The department shall also consider such other relevant factors bearing upon minimum qualifications, including but not limited to, any past forfeitures of bonds posted pursuant to mining activities in any state.

(2) (a) The department by rule after consulting with the metallic mining council shall adopt minimum standards for exploration, prospecting, mining and reclamation to ensure that such activities in this state will be conducted in a manner consistent with the purposes and intent of this chapter. The minimum standards may classify exploration, prospecting and mining activities according to type of minerals involved and stage of progression in the operation.

(b) Minimum standards for exploration, prospecting and mining shall include the following:

1. Grading and stabilization of excavation, sides and benches.
2. Grading and stabilization of deposits of refuse.
3. Stabilization of merchantable by–products.
4. Adequate diversion and drainage of water from the exploration, prospecting or mining site.
5. Backfilling.
6. Adequate covering of all pollutant–bearing minerals or materials.
7. Removal and stockpiling, or other measures to protect topsoils prior to exploration, prospecting, or mining.
8. Adequate vegetative cover.
9. Water impoundment.
10. Adequate screening of the prospecting or mining site.

11. Identification and prevention of pollution as defined in s. 281.01 (10) resulting from leaching of waste materials.

12. Identification and prevention of significant environmental pollution.

(c) Minimum standards for reclamation of exploration sites, where appropriate, and for prospecting and mining sites shall conform to s. 293.01 (23) and include provision for the following:

1. Disposal of all toxic and hazardous wastes, refuse, tailings and other solid waste in solid or hazardous waste disposal facilities licensed under ch. 289 or 291 or otherwise in an environmentally sound manner.

2. Sealing off tunnels, shafts or other underground openings, and prevention of seepage in amounts which may be expected to create a safety, health or environmental hazard, unless the applicant can demonstrate alternative uses of tunnels, shafts or other openings which do not endanger public health and safety and which conform to applicable environmental protection laws and rules.

3. Management, impoundment or treatment of all underground or surface runoff waters from open pits or underground prospecting or mining sites so as to prevent soil erosion, flooding, damage to agricultural lands or livestock, wild animals, pollution of surface or subsurface waters or damage to public health or safety.

4. Removal of all surface structures, unless they are converted to an alternate use.

5. Prevention or reclamation of substantial surface subsidence.

6. Preservation of topsoil for purposes of future use in reclamation.

7. Revegetation to stabilize disturbed soils and prevent air and water pollution, with the objective of reestablishing a variety of populations of plants and animals indigenous to the area immediately prior to exploration, prospecting or mining.

8. Minimization of disturbance to wetlands.

(d) The minimum standards adopted under this subsection shall also provide that if any of the following situations may reasonably be expected to occur during or subsequent to prospecting or mining, the prospecting or mining permit shall be denied:

1. Landslides or substantial deposition from the proposed operation in stream or lake beds which cannot be feasibly prevented.

2. Significant surface subsidence which cannot be reclaimed because of the geologic characteristics present at the proposed site.

3. Hazards resulting in irreparable damage to any of the following, which cannot be prevented under the requirements of this chapter, avoided to the extent applicable by removal from the area of hazard or mitigated by purchase or by obtaining the consent of the owner:

a. Dwelling houses.

b. Public buildings.

c. Schools.

d. Churches.

e. Cemeteries.

f. Commercial or institutional buildings.

g. Public roads.

h. Other public property designated by the department by rule.

4. Irreparable environmental damage to lake or stream bodies despite adherence to the requirements of this chapter. This subdivision does not apply to an activity which the department has authorized pursuant to statute, except that the destruction or filling in of a lake bed shall not be authorized notwithstanding any other provision of law.

History: 1995 a. 227 s. 746, 747, 994; 1997 a. 35.
Cross Reference: See also ch. NR 182, Wis. adm. code.

The DNR is not authorized by this section to issue a rule banning all sulfide mining. The requirement to adopt standards for a mining permit application process is inconsistent with a ban. Rusk County Citizen Action Group, Inc. v. DNR, 203 Wis. 2d 1, 552 N.W.2d 110 (Ct. App. 1996).

293.15 Department powers. The department may:

(1) Hold hearings relating to any aspect of the administration of this chapter and, in connection therewith, compel the attendance of witnesses and production of evidence.

(2) Cooperate or contract with the geological and natural history survey to secure necessary scientific, technical, administrative and operations services, including research, projects and laboratory facilities.

(3) Issue orders directing particular prospectors or operators to comply with the provisions and purposes of this chapter.

(4) Supervise and provide for such educational programs as appear necessary to carry out the purposes of this chapter.

(5) At its own expense, with the staff, equipment and material under its control, or by contract with others, take such actions as are necessary for the reclamation of abandoned project sites.

(6) Issue prospecting and mining permits.

(7) Issue exploration licenses.

(8) Promulgate rules regulating the production, storage and disposal of radioactive waste from exploration, prospecting or mining after seeking comments from the department of health and family services. At a minimum, rules promulgated under this subsection shall achieve the margin of safety provided in applicable federal statutes and regulations. If the department promulgates rules under this subsection, the department shall investigate the need for standards more restrictive than the applicable federal statutes and regulations.

(9) Promulgate rules by which the department may grant an exemption, modification or variance, either making a requirement more or less restrictive, from any rule promulgated under chs. 289 to 292 and this chapter, if the 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.

(10) Promulgate rules with respect to minimizing, segregating, backfilling and marketing of mining waste.

(11) Notwithstanding chs. 289 and 291, promulgate rules establishing groundwater quality standards or groundwater quantity standards, or both, for any prospecting or mining activity, including standards for any mining waste site.

(12) Require all persons under its jurisdiction to submit such informational reports as the department deems necessary for performing its duties under this chapter.

(13) Monitor environmental changes concurrently with the permit holder under s. 293.45 (3) or 293.49 (7), and for such additional period of time after the full bond is released under s. 293.63 (3) as is necessary for the site to return to a state of environmental stability. The department may conduct independent studies to monitor environmental changes.

History: 1995 a. 227 s. 748, 749, 754, 994.

SUBCHAPTER III

EXPLORATION

293.21 Exploration. (1) DEFINITIONS. In this section:

(a) "Driller" means a person who performs core, rotary, percussion or other drilling involved in exploration for metallic minerals.

(b) "Parcel" means an identified section, fractional section or government lot.

(c) "Termination" means filling of drillholes and reclamation and revegetation of drilling sites.

(2) LICENSE. All persons intending to engage in exploration, or who contract for the services of drillers for purposes of exploration, shall be licensed by the department. Exploration licenses shall be issued annually by the department, and shall be applied for on forms provided by the department. The department shall provide copies of the application form for an exploration license to the state geologist upon issuance of the license. The department shall, by rule, establish an annual license fee plus a schedule of additional fees based on the number of holes drilled. The level of fees shall reflect the department's actual cost in administering this section. The fees set under this subsection may be adjusted for persons to reflect the payment of fees for the same services to meet other requirements.

(3) BOND. (a) Applications for licenses shall be accompanied by a bond in the amount of $5,000 conditioned on faithful performance of the requirements of the department relating to termination.

(b) The department may require that the amount of the bond be increased at any time, if the department determines that a licensee's current level of activity makes it likely that the bond would be inadequate to fund the termination of all holes drilled for which the licensee is responsible.

(c) The department shall, by rule, establish a procedure for release of exploration sites from bond coverage.

(4) NOTICE PROCEDURE. (a) Commencement of drilling on a parcel shall be preceded by notice from the licensee to the department of intent to drill, given at least 10 days in advance of the commencement of drilling, and identifying the particular parcel. The department shall transmit a copy of the notice of intent to drill to the state geologist.

(b) The department shall, by rule, establish notification and inspection procedures applicable to the various stages of drilling and termination and procedures for the proper termination of drillholes.

(5) LICENSE REVOCATION. The department may revoke or suspend an exploration license issued under this section if it determines, after hearing, that:

(a) Statutes or rules of the department have not been complied with; or

(b) There has been a failure to increase bond amounts to adequate levels as specified by the department.

(6) EXEMPTION. This section does not apply to operators engaged in exploration activities on lands included in a mining and reclamation plan, if the plan contains provisions relating to termination of the exploration activities.

History: 1977 c. 421; 1995 a. 227 s. 755; Stats. 1995 s. 293.21.
Cross Reference: See also ch. NR 130, Wis. adm. code.

293.25 Radioactive waste site exploration. (1) DEFINITIONS. In this section and for the purposes of determining the applicability of ss. 293.13, 293.15 (1) to (12), 293.21, 293.81, 293.87, 293.89, 293.93 and 293.95:

(a) "Person" includes any person operating under a contract or under the direction of a federal agency.

(b) "Radioactive waste" means any of the following:

1. Fuel that is withdrawn from a nuclear reactor after irradiation and which is packaged and prepared for disposal.

2. Highly radioactive waste resulting from reprocessing irradiated nuclear fuel including both the liquid waste which is produced directly in reprocessing and any solid material into which the liquid waste is transformed.

3. Waste material containing alpha–emitting radioactive elements having an atomic number greater than 92 in concentrations greater than 10 nanocuries per gram.

(c) "Radioactive waste site exploration" means the on–site geologic examination from the surface of an area by core, rotary, percussion or other drilling for the purpose of determining the subsurface and geologic characteristics of an area in order to establish whether the area is suitable for a radioactive waste disposal site and includes associated activities such as clearing and preparing sites or constructing roads for drilling.

(d) "Radioactive waste disposal site" means any site or facility for the long–term storage or disposal of radioactive waste including any underground storage area and related facilities.

(2) EXPLORATION LICENSE AND RELATED PROVISIONS. (a) *Applicability.* Except as provided under par. (b), ss. 293.21 and 293.81 and rules promulgated under those sections apply to radioactive waste site exploration, to activities related to radioactive waste site exploration and to persons engaging in or intending to engage in radioactive waste site exploration or related activities in the same manner as those sections and rules are applicable to mineral exploration, to activities related to mineral exploration and to persons engaging in or intending to engage in mineral exploration or related activities.

(b) *Exception.* Notwithstanding par. (a) and s. 293.21 (3), the department may waive the bond requirement for a person who is authorized to engage in radioactive waste site exploration by a federal agency if the federal agency provides sufficient guarantees that the person or the federal agency will comply with the requirements of the department relating to termination. Notwithstanding par. (a) and s. 293.21 (3), the department may require a bond in an amount in excess of the amount specified under s. 293.21 (3) (a) to ensure that sufficient funds are available to comply with termination requirements or to abate or remedy any environmental pollution or danger to public health, safety or welfare resulting from radioactive waste site exploration.

(c) *Hearing.* The department shall conduct a public hearing in the county where radioactive waste site exploration is to occur prior to exploration.

(3) APPROVAL REQUIRED PRIOR TO DRILLING. No person may engage in radioactive waste site exploration by drilling on a parcel unless notice is provided as required under sub. (2) and s. 293.21 (4) (a) and unless the department issues a written approval authorizing drilling on that parcel. If the person seeking this approval is the federal department of energy or an agent or employee of the federal department of energy, the department may not issue the approval unless the public service commission certifies that the federal department of energy and its agents or employees have complied with any requirement imposed by the public service commission under s. 196.497 or any agreement entered into under that section.

(4) REGULATION OF EXPLORATION AND RELATED PROVISIONS. Sections 293.13, 293.15 (1) to (12), 293.85, 293.87 and 293.89 and rules promulgated under those sections apply to radioactive waste site exploration, to activities related to radioactive waste site exploration and to persons engaging in or intending to engage in radioactive waste site exploration or related activities in the same manner as those sections and rules are applicable to mineral exploration, to activities related to mineral exploration and to persons engaging in or intending to engage in mineral exploration or related activities..

(5) GROUNDWATER REGULATIONS. A person engaging in radioactive waste site exploration shall comply with any restrictions or prohibitions concerning the pollution or contamination of groundwater under this chapter, subch. II of ch. 281 or ch. 283 or any rule or order promulgated under those chapters or that subchapter.

(6) ENVIRONMENTAL IMPACT. Radioactive waste site exploration may constitute a major action significantly affecting the quality of the human environment. No person may engage in radioactive waste site exploration unless the person complies with the requirements under s. 1.11. Notwithstanding s. 23.40, the state may charge actual and reasonable costs associated with field investigation, verification, monitoring, preapplication services and preparation of an environmental impact statement.

(7) IMPACT ON PUBLIC SERVICE COMMISSION. Nothing in this section limits the power or authority of the public service commission to impose more stringent requirements for the negotiation and approval of agreements under s. 196.497.

(8) IMPACT ON OTHER REQUIREMENTS. In addition to the requirements under this section, a person engaged in radioactive waste site exploration shall comply with all other applicable statutory requirements, rules and municipal ordinances and regulations. If a conflict exists between this section and another statute, rule, ordinance or requirement, the stricter provision controls.

History: 1983 a. 27; 1989 a. 31; 1991 a. 25; 1995 a. 27; 1995 a. 227 s. 756; Stats. 1995 s. 293.25.

Cross Reference: See also ch. NR 133, Wis. adm. code.

SUBCHAPTER IV

PROSPECTING; MINING; RECLAMATION

Cross Reference: See also chs. NR 130, 132, and 182, Wis. adm. code.

293.31 Data collection. (1) Any person intending to submit an application for a prospecting or mining permit shall notify the department prior to the collection of data or information intended to be used to support the permit application. Specific environmental data which would be pertinent to a specific prospecting or mining application, but which was obtained or collected or generated prior to the notice of intent to apply for a prospecting or mining permit, shall be submitted in writing to the department together with any substantiating background information which would assist the department in establishing the validity of the data. The department shall review the data and, if it concludes that the benefits of permitting the admission of the data outweigh the policy reasons for excluding it, and if the data is otherwise admissible, inform the person giving the notice of intent to prospect or mine that the data will be accepted by the department. Such exclusion shall not relate to general environmental information such as soil characteristics, hydrologic conditions and air and water data contained in publications, maps, documents, studies, reports and similar sources, whether public or private, not prepared by or for the applicant. Such exclusion shall likewise not relate to data which is otherwise admissible that is collected prior to notification under this subsection for purposes of evaluating another site or sites and which is not collected with intent to evade the provisions of this section.

(2) Upon receipt of notification under sub. (1), the department shall give public notice of the notification in the same manner as provided under s. 293.43 (3) (b).

(3) The department shall also receive and consider any comments from interested persons received within 45 days after public notice is given under sub. (2) as to the information which they believe should be requested from the person giving notice of intent to apply for a prospecting or mining permit and the information which they believe the department should seek through independent studies.

(4) After the receipt and consideration of comments from interested persons, the department shall inform the person giving notice of intent to apply for a prospecting or mining permit of the type and quantity of information that it then believes to be needed to support an application, and where applicable, the methodology to be used in gathering information. The department shall specifically inform the person giving notice of intent to apply for a prospecting or mining permit of the type and quantity of information on the characteristics of groundwater resources in the area in which prospecting or mining is anticipated to occur which the department believes is needed to support an application. The department shall also begin informing the person giving notice of intent to apply for a prospecting or mining permit as to the timely application date for approvals, licenses and permits, so as to facilitate the consideration of all other matters at the hearing on the prospecting or mining permit.

(5) The department may conduct studies necessary to verify information which may be submitted at the time of a permit application.

(6) All information gathered by a person giving notice under sub. (1) shall be submitted to the department as soon as it is in final form. The department may at any time after consultation with the person giving notice of intent to apply for a prospecting or mining permit revise or modify its requirements regarding information which must be gathered and submitted.

History: 1977 c. 421; 1995 a. 227 s. 751, 752.

293.32 Prospecting and mining fees. (1) When a person gives notice under s. 293.31 (1), the person shall pay a fee established by the department by rule designed to cover the costs incurred by the department in connection with the proposed prospecting or mining during the year following receipt of the notice, other than any costs related to the environmental impact statement for the proposed prospecting or mining.

(2) The department shall annually compare the fees paid under this section and under chs. 30, 280 to 292 and 295 to 299 in connection with proposed prospecting or mining for which notice has been given under s. 293.31 (1) with the costs incurred by the department in connection with that proposed prospecting or mining, including the costs incurred under chs. 30, 280 to 292 and 295 to 299 but excluding costs related to the environmental impact statement. If the costs incurred exceed the fees paid, the person who notified the department shall pay a fee equal to the amount by which the costs exceed the fees previously paid.

(3) When the department issues or denies a prospecting or mining permit or when a person who gave notice under s. 293.31 (1) ceases to seek approval of the proposed prospecting or mining project, the department shall compare the fees paid under this section and under chs. 30, 280 to 292 and 295 to 299 in connection with the proposed prospecting or mining with the costs incurred by the department in connection with the proposed prospecting or mining, including the costs incurred under chs. 30, 280 to 292 and 295 to 299 but excluding costs related to the environmental impact statement. If the costs incurred are less than the fees paid, the department shall pay the person who gave notice the amount by which the fees exceed the costs. If the costs incurred exceed the fees paid, the person who notified the department shall pay a final fee equal to the amount by which the costs exceed the fees previously paid.

History: 1997 a. 169.

293.33 Local impact committee. (1) A county, town, village, city or tribal government likely to be substantially affected by potential or proposed mining may designate an existing committee, or establish a committee, for purposes of:

(a) Facilitating communications between operators and itself.

(b) Analyzing implications of mining.

(c) Reviewing and commenting on reclamation plans.

(d) Developing solutions to mining–induced growth problems.

(e) Recommending priorities for local action.

(f) Formulating recommendations to the investment and local impact fund board regarding distribution of funds under s. 70.395 (2) (g).

(g) Negotiating a local agreement under s. 293.41 (3).

(2) A county, town, village, city or tribal government affected in common with another county, town, village, city or tribal government by a proposed or existing mine may cooperatively designate or establish a joint committee, but may also maintain a separate committee under sub. (1). Committees under this section may include representatives of affected units of government, business and industry, manpower, health, protective or service agencies, school districts, or environmental and other interest groups or other interested parties.

(3) Persons giving notice under s. 293.31 (1) shall thereafter appoint a liaison person to any committee established under sub. (1) or (2), and shall provide such reasonable information as is requested by the committee. Operators and persons giving notice under s. 293.31 shall thereafter make reasonable efforts to design

and operate mining operations in harmony with community development objectives.

(4) Committees established under sub. (1) or (2) may be funded by their appointing authority, and may, through their appointing authority, submit a request for operating funds to the investment and local impact fund board under s. 70.395. Committees established under sub. (1) shall be eligible for funds only if the county, town, village or city is also a participant in a joint committee, if any, established under sub. (2). The investment and local impact fund board may not grant funds for the use of more than one committee established under sub. (1) in relation to a particular mining proposal unless a joint committee has been established under sub. (2). The investment and local impact fund board shall grant operating funds to any committee that submits a request and is eligible under this subsection and s. 70.395 (2) (fm). Committees may hire staff, enter into contracts with private firms or consultants or contract with a regional planning commission or other agency for staff services for mining–related purposes or the purposes under s. 70.395 (2) (fm).

History: 1995 a. 227 s. 761.
Cross Reference: See also ch. NR 134, Wis. adm. code.

293.35 Application for prospecting permit. (1) No person may engage in prospecting without securing a prospecting permit issued under s. 293.45. Application for prospecting permits shall be made in writing to the department upon forms prepared and furnished by the department. An application must be made, and a prospecting permit obtained for each separate prospecting site. Applications shall be submitted in reproducible form in such multiples as required by rules of the department. As a part of each application for a prospecting permit, the applicant shall furnish a description of the proposed prospecting site, the number of acres in the proposed prospecting site, a prospecting plan, a reclamation plan meeting the requirements of subs. (2) and (3) and a timetable for reclamation, information relating to whether the area may be unsuitable for prospecting or surface mining, unless the applicant conclusively certifies that he or she will not subsequently make application for a permit to conduct surface mining at the site and such other relevant information as the department may require, including information as to whether the applicant, its parent corporation, any of its principal shareholders or members, or any of the applicant's subsidiaries or affiliates in which the applicant owns more than a 40% interest, has forfeited any mining bonds in other states within the last 20 years, and the dates and locations, if any.

(2) A reclamation plan shall accompany all applications for prospecting permits. If it is physically or economically impracticable or environmentally or socially undesirable for the reclamation process to return the affected area to its original state, the plan shall set forth the reasons therefor and shall discuss alternative conditions and uses to which the affected area can be put.

(3) The reclamation plan shall specify how the applicant intends to accomplish, to the fullest extent possible, compliance with the minimum standards under s. 293.13 (2) (c).

(5) If the department determines that a statement under s. 1.11 is required for consideration of an application for a prospecting permit, the statement need not consider impacts unrelated to the proposed prospecting activity, other than the issue of unsuitability for surface mining, absent a certification under sub. (1).

History: 1977 c. 421; 1995 a. 227 ss. 758, 765, 768, 994; 1997 a. 169.
Cross Reference: See also ch. NR 134, Wis. adm. code.

293.37 Application for mining permit. (1) (a) No operator may engage in mining or reclamation at any mining site that is not covered by a mining permit and by written authorization to mine under s. 293.51 (3). Applications for mining permits shall be made in writing and in reproducible form to the department upon forms prepared and furnished by it and in such multiples as required by rule of the department. An application shall be made, and a mining permit obtained for each separate mining site. No application for surface mining at a site may be entertained by the department if within the previous 5 years the applicant, or a different person who had received a prospecting permit for the site had certified under s. 293.35 (1) that he or she would not subsequently make application for a permit to conduct surface mining at the site.

(b) If a person commences mining at a mining site which includes an abandoned site, plans for reclamation of the abandoned site, or the portion of the abandoned site which is included in the mining site, shall be included in its mining plan and reclamation plan.

(2) As a part of each application for a mining permit, the applicant shall furnish:

(a) A mining plan, including a description and a detailed map of the proposed mining site drawn to a scale approved by the department. Aerial photographs may be accepted if the photographs show the details to the satisfaction of the department. The map, plan or photograph shall be prepared and certified by a competent engineer, surveyor or other person approved by the department, and shall show the boundaries of the area of land which will be affected, the drainage area above and below the area, the location and names of all streams, roads, railroads, pipelines and utility lines on or within 1,000 feet of the site, the name of the owner or owners of the site, the name of the city, village or town in which the site is located and the name of any other city, village or town if within 3 miles of the site. The map or photograph shall be accompanied by descriptive data as required by the department, including but not limited to the soil conservation service soil capabilities classifications of the affected area, the anticipated geometry of the excavation, the estimated total production of tailings produced, the nature and depth of the overburden, the elevation of the water table and such other information about the geology of the deposit as the department, after consultation with the geological and natural history survey, finds is necessary to evaluate the applicant's mining plan and reclamation plan.

(b) In addition to the information and maps otherwise required by this subsection, a detailed reclamation plan showing the manner, location and time for reclamation, including ongoing reclamation during mining, of the proposed mining site. The reclamation plan shall be accompanied by a map subject to the requirements in par. (a) which shall show the specific reclamation proposal for each area of the site. The reclamation plan shall conform to any applicable comprehensive plan created under sub. (4) (b), and to any applicable minimum standard created under ss. 293.13 (2) and 293.35 (2) and (3).

(c) The name and address of each owner of land within the mining site and each person known by the applicant to hold any option or lease on land within the mining site and all prospecting and mining permits in this state held by the applicant.

(d) Evidence satisfactory to the department that the applicant has applied for necessary approvals and permits under all applicable zoning ordinances and that the operator has applied for the necessary approval, licenses or permits required by the department including, but not limited to, those under chs. 30, 31, 107, 280 to 285, 289 to 292, 295 and 299 and this chapter.

(e) 1. The information specified in subd. 2. concerning the occurrence of any of the following within 10 years before the application is submitted:

a. A forfeiture by the applicant, principal shareholder of the applicant or a related person of a mining reclamation bond that was sufficient to cover all costs of reclamation and was posted in accordance with a permit or other approval for a mining operation in the United States, unless the forfeiture was by agreement with the entity for whose benefit the bond was posted.

b. A felony conviction of the applicant, a related person or an officer or director of the applicant for a violation of a law for the protection of the natural environment arising out of the operation of a mining site in the United States.

c. The bankruptcy or dissolution of the applicant or a related person that resulted in the failure to reclaim a mining site in the United States in violation of a state or federal law.

d. The permanent revocation of a mining permit or other mining approval issued to the applicant or a related person if the permit or other mining approval was revoked because of a failure to reclaim a mining site in the United States in violation of state or federal law.

2. The applicant shall specify the name and address of the person involved in and the date and location of each occurrence described in subd. 1.

(f) Information relating to whether unsuitability may exist for surface mining to the extent not fully considered under s. 293.45.

(g) A description of any land contiguous to the proposed mining site which he or she owns, leases or has an option to purchase or lease.

(h) Such other pertinent information as the department requires.

(3) (a) A reclamation plan shall accompany all applications for mining permits. If it is physically or economically impracticable or environmentally or socially undesirable for the reclamation process to return the affected area to its original state, the plan shall set forth the reasons therefor and shall discuss alternative conditions and uses to which the affected area can be put.

(b) The reclamation plan shall specify how the applicant intends to accomplish, to the fullest extent possible, compliance with the minimum standards under s. 293.13 (2) (c).

(4) (a) The department shall require an applicant for a mining permit, amended mining permit or change in either the mining or reclamation plan to furnish, as part of the mining permit application, an itemized statement showing the applicant's estimation of the cost to the state of reclamation. The department may, at the applicant's expense, contract with an independent person to estimate the cost to the state of reclamation if it has reason to believe that the applicant's estimated cost of reclamation may not be accurate.

(b) If the department finds that the anticipated life and total area of a mineral deposit are of sufficient magnitude that reclamation of the mining site consistent with this chapter requires a comprehensive plan for the entire affected area, it shall require an operator to submit with the application for a mining permit, amended mining site or change in mining or reclamation plan, a comprehensive long–term plan showing, in detail satisfactory to the department, the manner, location and time for reclamation of the entire area of contiguous land which will be affected by mining and which is owned, leased or under option for purchase or lease by the operator at the time of application. Where a mineral deposit lies on or under the lands of more than one operator, the department shall require the operators to submit mutually consistent comprehensive plans.

History: 1995 a. 227 s. 770, 772, 774, 775, 776, 994; 1997 a. 169.

Cross Reference: See also s. NR 182.17, Wis. adm. code.

All staff work necessary to determine whether mining permit should be granted, including evaluation of other environmental requirements, must be included in fee under s. 144.85 (2) (a) [now s. 293.37 (5)]. 76 Atty. Gen. 150.

293.39 Environmental impact statement. (1) The department shall prepare an environmental impact statement for every mining permit under s. 293.49. In preparing the environmental impact statement, the department shall comply with sub. (2) and s. 1.11 (2).

(2) A statement prepared under sub. (1) shall include a description of the significant long–term and short–term impacts, including impacts after the mining has ended, on all of the following:

(a) Tourism.

(b) Employment.

(c) Schools and medical care facilities.

(d) Private and public social services.

(e) The tax base.

(f) The local economy.

(g) Other significant factors.

(3) To the extent that an environmental impact statement on a prospecting permit application under s. 293.35, if prepared, fully considered unsuitability of the prospecting site for surface mining by virtue of unique features of the land as enumerated in s. 293.01 (28), that portion of the previous impact statement may be adopted in the impact statement on the mining permit application.

History: 1991 a. 259; 1995 a. 227 s. 780, 782; Stats. 1995 s. 293.39.

293.41 Local agreements. (1) A county, town, village, city or tribal government that requires an operator to obtain an approval or permit under a zoning or land use ordinance and a county, town, village or city in which any portion of a proposed mining site is located may, individually or in conjunction with other counties, towns, villages, cities, or tribal governments, enter into one or more agreements with an operator for the development of a mining operation.

(2) An agreement under sub. (1) shall include all of the following:

(a) A legal description of the land subject to the agreement and the names of its legal and equitable owners.

(b) The duration of the agreement.

(c) The uses permitted on the land.

(d) A description of any conditions, terms, restrictions or other requirements determined to be necessary by the county, town, village, city or tribal government for the public health, safety or welfare of its residents.

(e) A description of any obligation undertaken by the county, town, village, city or tribal government to enable the development to proceed.

(f) The applicability or nonapplicability of county, town, village, city or tribal ordinances, approvals or resolutions.

(g) A provision for the amendment of the agreement.

(h) Other provisions deemed reasonable and necessary by the parties to the agreement.

(3) A county, town, village, city or tribal government may authorize the local impact committee appointed under s. 293.33 to negotiate an agreement under this section, but the agreement may not take effect until approved by the county, town, village, city or tribal government in accordance with sub. (4).

(4) The county, town, village, city or tribal government shall hold a public hearing on an agreement under sub. (1) before its adoption. Notice of the hearing shall be provided as a class 2 notice, under ch. 985. After the public hearing, the governing body of each county, town, village, city or tribal government which is to be a party to the agreement must approve the agreement in a public meeting of the governing body.

(5) A state agency shall assist a county, town, village, city or tribal government in enforcing those provisions of a local agreement that are within the expertise of the state agency.

History: 1987 a. 399; 1991 a. 259; 1995 a. 227 s. 763; Stats. 1995 s. 293.41.

This section is an express delegation to towns of the power to enter into local agreements with mining companies, creating an exemption to general zoning statutes. When a town negotiates under this section, it has only local zoning permits and approvals to give the mining company in exchange for the mining company addressing its land–use concerns. Nicolet Minerals Company v. Town of Nashville, 2002 WI App 50, 250 Wis. 2d 831, 641 N.W.2d 497.

293.43 Hearings on permit applications. (1) APPLICABILITY. This section, and ch. 227 where it is not inconsistent, shall govern all hearings on applications for prospecting or mining permits.

(1m) SCOPE. (a) The hearing on the prospecting or mining permit shall cover the application and any statements prepared under s. 1.11 and, to the fullest extent possible, all other applications for approvals, licenses and permits issued by the department. The department shall inform the applicant as to the timely application date for all approvals, licenses and permits issued by the department, so as to facilitate the consideration of all other matters at the hearing on the prospecting or mining permits.

(b) Except as provided in this paragraph, for all department issued approvals, licenses and permits relating to prospecting or

mining including solid waste feasibility report approvals and permits related to air and water, to be issued after April 30, 1980, the notice, hearing and comment provisions, if any, and the time for issuance of decisions, shall be controlled by this section and ss. 293.45 and 293.49. If an applicant fails to make application for an approval, license or permit for an activity incidental to prospecting or mining in time for notice under this section to be provided, the notice and comment requirements, if any, shall be controlled by the specific statutory provisions with respect to that application. If notice under those specific statutory notice requirements can be given for consideration of the approval, license or permit at the hearing under this section, the application shall be considered at that hearing; otherwise, the specific statutory hearing provisions, if any, with respect to that application shall control. The substantive requirements for the issuance of any approval, permit or license incidental to prospecting or mining are not affected by the fact that a hearing on the approval, permit or license is conducted as part of a hearing under this section.

(2) LOCATION. The hearing shall be held in the county where the prospecting or mining site, or the largest portion of the prospecting or mining site, is located, but may subsequently be adjourned to other locations.

(3) TIMING OF NOTICE AND OF HEARING; GIVING OF NOTICE. (a) If it is determined that a statement under s. 1.11 is not required, the hearing shall be scheduled for a date not less than 60 days nor more than 90 days after the announcement of that determination, and the scheduling and providing of notice shall be completed not later than 10 days following the announcement. Notice of the hearing shall be given by mailing a copy of the notice to any known state agency required to issue a permit for the proposed operation, to the regional planning commission for the affected area, to the county, city, village and town within which any part of the affected area lies, to all persons who have requested this notification and, if applicable, to all persons specified under par. (b) 3. and s. 281.35 (5) (b) and (6) (f). Written comments may be submitted to the department within 30 days of the date of notice.

(b) If it is determined that a statement under s. 1.11 is required, or if an environmental impact statement is required under s. 293.39, the department shall hold at least one informational meeting regarding the preliminary environmental report within 60 days of its issuance. The meeting shall be held not sooner than 30 days nor later than 60 days after the issuance of the report. The scheduling and providing of notice of the meeting shall be completed not later than 10 days following the issuance of the preliminary environmental report. A hearing referred to under sub. (1m) shall be scheduled for a date not less than 120 days nor more than 180 days after the issuance of the environmental impact statement. The scheduling and providing of notice of the hearing shall be completed within 30 days from the date of issuance of the environmental impact statement. The providing of notice shall be accomplished by:

1. Mailing a copy of the notice to all known departments and agencies required to grant any permit necessary for the proposed operation, to any regional planning commission within which the affected area lies, to the governing bodies of all towns, villages, cities and counties within which any part of the proposed prospecting or mining site lies, to the governing bodies of any towns, villages or cities contiguous to any town, village or city within which any part of the proposed prospecting or mining site lies and to any interested persons who have requested such notification.

2. Publication of a class 2 notice, under ch. 985, utilizing a display advertising format, in the weekly newspaper published in the closest geographic proximity to the proposed prospecting or mining site, in the newspaper having the largest circulation in the county within which the proposed site lies and in those newspapers published in counties contiguous to the county within which the proposed site lies which have a substantial circulation in the area of, or adjacent to, the proposed prospecting or mining site.

3. Mailing a copy of the notice to the U.S. environmental protection agency, U.S. army corps of engineers and other states potentially affected by the proposed discharge if a water discharge permit under ch. 283 is to be considered at the hearing under this section and to the U.S. environmental protection agency and appropriate agencies in other states which may be affected if an air pollution control permit under ch. 285 is to be considered at the hearing under this section.

(c) Written comments may be submitted by any governmental agency within 80 days of the date of issuance of the statement under par. (b). Individual persons may submit written comments within 120 days of the date of issuance of the statement. The last day for receipt of comments shall be specified by the department in all notices.

(4) PARTICIPATION BY LOCAL GOVERNMENTS. Any county, town, village or city receiving notice of the filing of an application in the manner provided under sub. (3) (a) or (b) shall refer the application and reclamation plan to a committee established under s. 293.33 (1) or (2), if any, for review and comment. Such counties, towns, villages or cities may participate as a party in the hearing on the application and may make recommendations on the reclamation plan and future use of the project site.

(5) HEARING PROCEDURE. (a) At the opening of the hearing, the hearing examiner shall advise all persons present of their right to express their views either orally or in writing, under oath or otherwise, and of the legal effect of each form of testimony. All interested persons, at the hearing or at a time set prior to the hearing, shall be given an opportunity, subject to reasonable limitations on the presentation of repetitious or irrelevant material, to express their views on any aspect of the matters under consideration. The presentation of these views need not be under oath nor subject to cross–examination. A written record of unsworn testimony shall be made.

(b) Persons who wish to participate as parties shall file a written notice with the hearing examiner setting forth their interest at least 30 days prior to the scheduled time of the hearing or prior to the scheduled time of any prehearing conference, whichever is earlier, unless good cause is shown.

(c) The record shall consist of the contested case portion of the proceeding. Views given under par. (a) and all written comments submitted from any source shall be placed in the file of the proceeding and shall be given appropriate probative value by the hearing examiner or decisionmaker.

(d) Hearings conducted under this section may be continued for just cause.

(e) If evidence of conformance with applicable zoning ordinances as required by s. 293.49 (1) (a) 6. is not presented by the time testimony is completed, the department shall close the record and continue the hearing. The duration of the continuance of the hearing shall be specified by the department at the time the continuance begins, after first requesting the applicant to state the anticipated time at which the evidence will be provided. The continuance may be extended by the department prior to its expiration upon notice to all parties if good cause is shown.

(f) Each approval or denial of a license or permit considered at the hearing under this section shall be made in findings of fact, conclusions of law and an order setting forth reasons with clarity and in detail.

History: 1977 c. 421; 1979 c. 221, 355; 1985 a. 60; 1991 a. 259; 1995 a. 227 ss. 759, 760, 762, 994; Stats. 1995 s. 293.43.

Cross Reference: See also ch. NR 182, Wis. adm. code.

293.45 Prospecting; department grant or denial of permit. (1) The department shall issue a prospecting permit under this section to an applicant within 60 days following the date of the completion of the hearing record if, on the basis of the application, the department's investigation and hearing and any written comments, it finds that the site is not unsuitable for prospecting or, absent a certification under s. 293.35 (1), surface mining, the department has approved the prospecting plan and the reclamation plan complies with ss. 293.13 (2) and 293.35 (2) and (3) and rules promulgated under ss. 293.13 (2) and 293.35 (2) and (3).

The department may modify any part of the application or reclamation plan and approve it as modified. Except as otherwise provided in this chapter, prospecting permits shall be valid for the life of the project, unless canceled under s. 293.83 (1) or (3) or 293.85 or revoked under s. 293.87 (2) or (3).

(2) The department shall deny a prospecting permit within 60 days following the date of the completion of the hearing record if it finds that the site is unsuitable for prospecting or, absent certification under s. 293.35 (1), surface mining, or the reclamation plan, including the bond, does not comply with ss. 293.13 (2) and 293.35 (2) and (3) and rules promulgated under ss. 293.13 (2) and 293.35 (2) and (3) or that the applicant is in violation of this chapter or any rules adopted under this chapter. If the applicant has previously failed and continues to fail to comply with this chapter, or if the applicant has within the previous 20 years forfeited any bond posted in accordance with prospecting or mining activities in this state, unless by mutual agreement with the state, the department may not issue a prospecting permit. The department may not issue a prospecting permit if it finds that any officer, director or manager of the applicant has, while employed by the applicant, the applicant's parent corporation, any of the applicant's principal shareholders or members, or any of the applicant's subsidiaries or affiliates, in which the applicant owns more than a 40% interest, within the previous 20 years forfeited any bond posted in accordance with prospecting or mining activities in this state unless by mutual agreement with the state. In this subsection, "forfeited any bond" means the forfeiture of any performance security occasioned by noncompliance with any prospecting or mining laws or implementing rules. If an application for a prospecting permit is denied, the department, within 30 days from the date of application denial, shall furnish to the applicant in writing the reasons for the denial.

(3) The department, in granting a permit under this section, shall require the permit holder to perform adequate monitoring of environmental changes during the course of the permitted activity and for such additional period of time as is necessary to satisfactorily complete reclamation and completely release the permit holder from any bonds required.

History: 1977 c. 421; 1981 c. 87; 1995 a. 227 ss. 753, 766, 994; 1999 a. 186.
Cross Reference: See also ch. NR 182, Wis. adm. code.

293.47 Prospecting data. (1) DEFINITIONS. In this section:

(a) "Economic information" means financial and economic projections for any potential mining of an ore body including estimates of capital costs, predicted expenses, price forecasts and metallurgical recovery estimates.

(b) "Geologic information" means information concerning descriptions of an ore body, descriptions of reserves, tonnages and grades of ore, descriptions of a drill core or bulk sample including analysis, descriptions of drill hole depths, distances and similar information related to the ore body.

(c) "Prospecting data" means data, records and other information furnished to or obtained by the department in connection with the application for a prospecting permit.

(2) PROSPECTING DATA IN GENERAL. Except as provided under sub. (3), prospecting data are public records subject to subch. II of ch. 19.

(3) CONFIDENTIAL PROSPECTING DATA. (a) *Request for confidential status.* An applicant for a prospecting permit may request confidential status for any prospecting data.

(b) *Confidential status.* The department shall grant confidential status to prospecting data if the applicant makes a request and if the prospecting data relates to economic information or geologic information or is entitled to confidential status under rules promulgated by the department.

History: 1973 c. 318; 1979 c. 221; 1981 c. 86; 1981 c. 335 s. 26; 1995 a. 227 s. 795; Stats. 1995 s. 293.47.

293.49 Mining; department grant or denial of permit. (1) (a) Except as provided in sub. (2) and s. 293.50 and except with respect to property specified in s. 41.41 (11), within 90 days of the completion of the public hearing record, the department shall issue the mining permit if it finds:

1. The mining plan and reclamation plan are reasonably certain to result in reclamation of the mining site consistent with this chapter and any rules adopted under this chapter and the department has approved the mining plan.

2. The proposed operation will comply with all applicable air, groundwater, surface water and solid and hazardous waste management laws and rules of the department.

3. In the case of a surface mine, the site is not unsuitable for mining. The preliminary determination that a site was not unsuitable for mining under s. 293.45 may not be conclusive in the determination of the site's suitability for mining under this section. However, at the hearing held under this section and s. 293.43, testimony and evidence submitted at the prospecting permit proceeding relevant to the issue of suitability of the proposed mining site for surface mining may be adopted, subject to the opportunity for cross–examination and rebuttal, if not unduly repetitious.

4. The proposed mine will not endanger public health, safety or welfare.

5. The proposed mine will result in a net positive economic impact in the area reasonably expected to be most impacted by the activity.

6. The proposed mining operation conforms with all applicable zoning ordinances.

(b) Each approval or denial shall be made in findings of fact, conclusions of law and an order setting forth reasons with clarity and in detail. The department may modify the operator's proposed mining or reclamation plans in order to meet the requirements of this chapter, and, as modified, grant its approval.

(2) Within 90 days of the completion of the public hearing record, the department shall deny the mining permit if it finds any of the following:

(a) That the site is unsuitable for surface mining, if the application is for a proposed surface mine.

(b) That the applicant has violated and continues to fail to comply with this chapter or any rule adopted under this chapter.

(c) That the applicant, principal shareholder of the applicant or a related person has within 10 years before the application is submitted forfeited a mining reclamation bond that was posted in accordance with a permit or other approval for a mining operation in the United States, unless the forfeiture was by agreement with the entity for whose benefit the bond was posted and the amount of the bond was sufficient to cover all costs of reclamation.

(d) That the applicant, a related person or an officer or director of the applicant has, within 10 years before the application is submitted, been convicted of more than one felony for violations of laws for the protection of the natural environment arising out of the operation of a mining site in the United States, unless one of the following applies:

1. The person convicted has been pardoned for all of the felonies.

2. The person convicted is a related person or an officer or director of the applicant with whom the applicant terminates its relationship.

3. The applicant included in its permit application under s. 293.37 (1) a plan to prevent the occurrence in this state of events similar to the events that directly resulted in the convictions.

(e) That the applicant or a related person has, within 10 years before the application is submitted, declared bankruptcy or undergone dissolution that resulted in the failure to reclaim a mining site in the United States in violation of a state or federal law and that failure has not been remedied and is not being remedied.

(f) That, within 10 years before the application is submitted, a mining permit or other mining approval issued to the applicant or a related person was permanently revoked because of a failure to reclaim a mining site in the United States in violation of state

or federal law and that failure has not been and is not being remedied.

(3) The department may not deny a mining permit under sub. (2) (c) to (f) if the person subject to the convictions, forfeiture, permanent revocation, bankruptcy or dissolution is a related person but the applicant shows that the person was not the parent corporation of the applicant, a person that holds more than a 30% ownership in the applicant, or a subsidiary or affiliate of the applicant in which the applicant holds more than a 30% interest at the time of the convictions, forfeiture, permanent revocation, bankruptcy or dissolution.

(4) The prior issuance of a prospecting permit under s. 293.45 for all or part of a site shall, in and of itself, be given no weight in the decision to grant or deny a mining permit under this section, and the department must find, in any order granting, or granting with conditions, a mining permit that no weight was given in the decision to the prior issuance of a prospecting permit. However, to the extent that testimony and evidence submitted at the prospecting permit proceedings is relevant to the issue of whether to grant or deny a mining permit, the testimony and evidence may be adopted in the mining permit proceedings, subject to the opportunity for cross–examination and rebuttal to the extent that the testimony and evidence are not unduly repetitious.

(5) The department shall send its statement, together with a copy of its rules and finding as to whether the applicant has otherwise satisfied the requirements of this chapter, to the applicant and to the other parties.

(6) Except as otherwise provided in ss. 293.53 (2), 293.55 to 293.59, 293.63, 293.81 and 293.83, mining permits shall be valid for the life of the project unless canceled under s. 293.83 (1) or (3) or 293.85 or revoked under s. 293.87 (2) or (3).

(7) The department, in granting a permit under this section, shall require the permit holder to perform adequate monitoring of environmental changes during the course of the permitted activity and for such additional period of time as is necessary to satisfactorily complete reclamation and completely release the permit holder from any bonds required.

(8) No operator may engage a general contractor or affiliate to operate a mining site if the general contractor or affiliate has been convicted of more than one felony for violation of a law for the protection of the natural environment arising out of the operation of a mining site in the United States within 10 years before the issuance of the operator's permit, unless the general contractor or affiliate receives the department's approval of a plan to prevent the occurrence in this state of events similar to the events that directly resulted in the convictions.

History: 1995 a. 227 s. 771, 773, 777, 778, 779, 994; 1997 a. 171.
Cross Reference: See also ch. NR 182, Wis. adm. code.

293.50 Moratorium on issuance of permits for mining of sulfide ore bodies. (1) In this section:

(a) "Pollution" means degradation that results in any violation of any environmental law as determined by an administrative proceeding, civil action, criminal action or other legal proceeding. For the purpose of this paragraph, issuance of an order or acceptance of an agreement requiring corrective action or a stipulated fine, forfeiture or other penalty is considered a determination of a violation, regardless of whether there is a finding or admission of liability.

(b) "Sulfide ore body" means a mineral deposit in which metals are mixed with sulfide minerals.

(2) Beginning on May 7, 1998, the department may not issue a permit under s. 293.49 for the mining of a sulfide ore body until all of the following conditions are satisfied:

(a) The department determines, based on information provided by an applicant for a permit under s. 293.49 and verified by the department, that a mining operation has operated in a sulfide ore body which, together with the host rock, has a net acid generating potential in the United States or Canada for at least 10 years without the pollution of groundwater or surface water from acid drainage at the tailings site or at the mine site or from the release of heavy metals.

(b) The department determines, based on information provided by an applicant for a permit under s. 293.49 and verified by the department, that a mining operation that operated in a sulfide ore body which, together with the host rock, has a net acid generating potential in the United States or Canada has been closed for at least 10 years without the pollution of groundwater or surface water from acid drainage at the tailings site or at the mine site or from the release of heavy metals.

(2m) (a) The department may not base its determination under sub. (2) (a) or (b) on any mining operation that has been listed on the national priorities list under 42 USC 9605 (a) (8) (B) or any mining operation for which the operator is no longer in business and has no successor that may be liable for any contamination from the mining operation and for which there are no other persons that may be liable for any contamination from the mining operation.

(b) The department may not base its determination under sub. (2) (a) or (b) on a mining operation unless the department determines, based on relevant data from groundwater or surface water monitoring, that the mining operation has not caused significant environmental pollution, as defined in s. 293.01 (4), from acid drainage at the tailings site or at the mine site or from the release of heavy metals.

(3) This section applies without regard to the date of submission of the permit application.

History: 1997 a. 171.

293.51 Bonds. (1) Upon notification that an application for a prospecting or mining permit has been approved by the department but prior to commencing prospecting or mining, the operator shall file with the department a bond conditioned on faithful performance of all of the requirements of this chapter and all rules adopted by the department under this chapter. The bond shall be furnished by a surety company licensed to do business in this state. In lieu of a bond, the operator may deposit cash, certificates of deposit or government securities with the department. Interest received on certificates of deposit and government securities shall be paid to the operator. The amount of the bond or other security required shall be equal to the estimated cost to the state of fulfilling the reclamation plan, in relation to that portion of the site that will be disturbed by the end of the following year. The estimated cost of reclamation of each prospecting or mining site shall be determined by the department on the basis of relevant factors including, but not limited to, expected changes in the price index, topography of the site, methods being employed, depth and composition of overburden and depth of mineral deposit being mined.

(2) The applicant shall submit a certificate of insurance certifying that the applicant has in force a liability insurance policy issued by an insurer authorized to do business in this state, or in lieu of a certificate of insurance evidence that the applicant has satisfied state or federal self–insurance requirements, covering all mining operations of the applicant in this state and affording personal injury and property damage protection in a total amount deemed adequate by the department but not less than $50,000.

(3) Upon approval of the operator's bond, mining application and certificate of insurance, the department shall issue written authorization to commence mining at the permitted mining site in accordance with the approved mining and reclamation plans.

(4) Any operator who obtains mining permits from the department for 2 or more mining sites may elect, at the time the 2nd or any subsequent site is approved, to post a single bond in lieu of separate bonds on each site. Any single bond so posted shall be in an amount equal to the estimated cost to the state determined under sub. (1) of reclaiming all sites the operator has under mining permits. When an operator elects to post a single bond in lieu of separate bonds previously posted on individual sites, the separate bonds may not be released until the new bond has been accepted by the department.

(6) Any person who is engaged in mining on July 3, 1974 need not file a bond or deposit cash, certificates of deposits or government securities with the department under this section to obtain the written authorization to commence mining under sub. (3).

History: 1973 c. 318; 1977 c. 421; 1979 c. 102 s. 236 (3); 1979 c. 176; 1995 a. 227 ss. 784, 994; Stats. 1995 s. 293.51.

293.53 Review of permits; periodic reports. (1) (a) Eighteen months after the issuance of a prospecting permit, and annually thereafter until prospecting ceases, the department shall review the permit, reclamation plan and bond to ascertain adequacy, compliance with state or federal laws enacted after the issuance of the permit and technological currency. If the department after review determines that the plan should be modified or the bond amount changed, it shall notify the permit holder of the necessary modifications or changes. If the permit holder does not request a hearing within 30 days, the modifications or changes shall be deemed accepted.

(b) If the permit holder desires to modify the permit, an amended application shall be submitted to the department, which shall process the amendment as if it were an original application if the proposed modification substantially broadens or changes the scope of the original prospecting proposal.

(c) To the extent that testimony and evidence submitted at the original prospecting permit proceedings or from previous modification hearings is relevant to the issues of modification or granting or denial of the amendment, it may be adopted in the subsequent proceedings, subject to the opportunity for cross–examination and rebuttal, if not unduly repetitious.

(2) (a) The operator shall furnish the department with a report for each mining site every 12 months after issuance of the permit, within 30 days after completion of all mining at the mining site and within 30 days after completion of the mining plan and of the reclamation plan. The reports shall include, in addition to such other information as the department requires, such information and maps as the department deems necessary to evaluate the extent of mining and the reclamation accomplished during the previous calendar year.

(b) Annually, the department shall review the mining and reclamation plans and bonds, using the procedure specified under sub. (1).

(c) The department shall cancel the mining permit held by any operator who fails and refuses to submit reports required under this subsection.

History: 1995 a. 227 s. 767; 1995 a. 227 ss. 791, 994.

293.55 Modifications. (1) (a) *Application.* An operator at any time may apply for amendment or cancellation of a mining permit or for a change in the mining or reclamation plans for any mining operation which the operator owns or leases. The operator shall submit any application for the amendment, cancellation or change on a form provided by the department and shall identify the tract of land to be added to or removed from the permitted mining site or to be affected by a change in the mining or reclamation plans.

(b) *Procedure.* The department shall process the application for an increase or decrease in the area of a mining site or for a substantial change in the mining or reclamation plans in the same manner as an original application for a mining permit except as provided under par. (d).

(c) *Substantial changes.* The department shall determine if any change in the mining or reclamation plans is substantial and provide notice of its determination in the same manner as specified under s. 293.43 (3) (b) 1. to 3.

(d) *Notice.* The department shall provide notice of any modification which involves an increase or decrease in the area of a mining site or a substantial change in the mining or reclamation plan in the same manner as an original application for a mining permit under s. 293.43 (3). If 5 or more interested persons do not request a hearing in writing within 30 days of notice, no hearing is required on the modification. The notice shall include a statement to this effect.

(e) *Hearing.* If a hearing is held, testimony and exhibits from the hearing on either the original applications for a mining permit or from previous modification hearings which are relevant to the instant modification may be adopted, subject to cross–examination and rebuttal if not unduly repetitious.

(f) *Removal.* If the application is to cancel any or all of the unmined part of a mining site, the department shall ascertain, by inspection, if mining has occurred on the land. If the department finds that no mining has occurred, the department shall order release of the bond or the security posted on the land being removed from the permitted mining site and cancel or amend the operator's written authorization to conduct mining on the mining site. No land where mining has occurred may be removed from a permitted mining site or released from bond or security under this subsection, unless reclamation has been completed to the satisfaction of the department.

(2) If the department finds that because of changing conditions, including but not limited to changes in reclamation costs, reclamation technology, minimum standards under ss. 293.13 and 293.15 (1) to (12) or governmental land use plans, the reclamation plan for a mining site is no longer sufficient to reasonably provide for reclamation of the project site consistent with this chapter and any rules adopted under this chapter, it shall require the applicant to submit amended mining and reclamation plans which shall be processed in the same manner as an application for an original mining permit. The applicant shall be deemed to hold a temporary mining permit which shall be effective until the amended mining permit is issued or denied. The department shall review the mining and reclamation plans annually after the date of the mining permit issuance or previous review under this section.

History: 1995 a. 227 ss. 785, 787.

293.57 Successors. When one operator succeeds to the interest of another in an uncompleted mining operation by sale, assignment, lease or otherwise, the department shall release the first operator from the duties imposed upon the first operator by this chapter as to such operation if:

(1) Both operators have complied with the requirements of this chapter; and

(2) The successor operator discloses whether it has forfeited any performance security because of noncompliance with any prospecting or mining laws within the previous 20 years, posts any bond required under s. 293.51 and assumes all responsibilities of all applicable permits, licenses and approvals granted to the predecessor operator.

History: 1995 a. 227 s. 786.

293.59 Cessation of mining or reclamation. If there is a cessation of mining or reclamation which is not set forth in either the mining plan or the reclamation plan, the operator shall so notify the department within 48 hours and shall commence stabilization of the mining site according to rules established by the department. If the department determines after hearing that stabilization of the mining site is inadequate to protect the environment, the department shall order the operator to commence additional measures to protect the environment, including, if the cessation is reasonably anticipated to extend for a protracted period of time, reclamation according to the reclamation plan or part of the reclamation plan. Usual and regular shutdown of operations on weekends, for maintenance or repair of equipment or facilities or for other customary reasons shall not constitute a cessation of mining.

History: 1977 c. 421; 1995 a. 227 s. 788; Stats. 1995 s. 293.59.

293.61 Determination of abandonment of mining. (1) Except as provided under sub. (2), abandonment of mining occurs if there is a cessation of mining, not set forth in an operator's mining or reclamation plans or by any other sufficient written

or constructive notice, extending for more than 6 consecutive months.

(2) Abandonment of mining does not occur:

(a) If the cessation of mining is due either to labor strikes or to such unforeseen developments as adverse market conditions, as determined by the department;

(b) If the cessation of mining does not continue beyond the time period specified by the department. The time limit specified by the department may not exceed 5 years for a mining operation for which a permit is issued under s. 293.49 on or after May 19, 1984. The time limit specified by the department may not exceed 10 years for a mining operation for which a permit is issued under s. 293.49 before May 19, 1984;

(c) If the site is maintained in an environmentally stable manner, as determined by the department, during the cessation of mining; and

(d) If the reclamation of the site continues according to the reclamation plan during the cessation of mining to the extent possible.

History: 1983 a. 517 s. 1, 2; 1995 a. 227 s. 743; Stats. 1995 s. 293.61.

293.63 Certificate of completion, partial completion and bond release. (1) Upon the petition of the operator, but not less than 4 years after notification to the department by the operator of the completion of the reclamation plan, if the department finds after conducting a hearing that the operator has completed reclamation for any portion of the mining site in accordance with the reclamation plan and this chapter, the department shall issue a certificate of completion setting forth a description of the area reclaimed and a statement that the operator has fulfilled its duties under the reclamation plan as to that area.

(2) Upon the issuance of any certificate of completion under sub. (1) for any portion of the mining site, but not for the entire mining site, the department shall allow the operator to reduce the amount of the bond to an amount which shall equal the estimated cost of reclamation of the portion of the mining site which is disturbed or for which reclamation has been completed but no certificate of completion has been issued.

(3) Upon issuance of a certificate or certificates of completion of reclamation for the entire mining site, the department shall require that the operator maintain a bond equal to at least 10% of the cost to the state of reclamation of the entire mining site if mining of the site was wholly underground, and at least 20% of the cost to the state of reclamation of the entire mining site if any surface mining was conducted. Where the mining site in the mining plan is less than 10 acres, the department may release the bond after issuance of the certificate under sub. (1).

(4) After 20 years after the issuance of a certificate or certificates of completion for the entire mining site, the department shall release the bond if the department finds that the reclamation plan has been complied with.

(5) The department shall, by rule, establish a procedure for release of reclamation bonds for prospecting sites similar to subs. (1) to (4), but with shorter time periods.

History: 1973 c. 318; 1977 c. 421; 1995 a. 227 s. 792; Stats. 1995 s. 293.63.

293.65 Diversion of surface waters; withdrawal of groundwater; damage claims. (1) SCOPE. This section governs the withdrawal or diversion of groundwaters or surface waters by persons engaged in prospecting or mining. Discharges of waters are subject to ch. 283, construction of necessary dams or other structures is subject to chs. 30 and 31 and construction of wells is subject to ch. 280, to the extent applicable.

(2) DIVERSION OF SURFACE WATER; PERMIT REQUIRED. (a) Any person intending to divert surface waters for prospecting or mining shall apply to the department for a permit. The forms and procedures used under s. 30.18 apply to the extent practicable.

(b) The department, upon receipt of an application for a permit, shall determine the minimum stream flow or lake level necessary to protect public rights, the minimum flow or level necessary to protect the rights of affected riparians, the point downstream beyond which riparian rights are not likely to be injured by the proposed diversion and the amount of surplus water, as defined in s. 30.01 (6d), if any, at the point of the proposed diversion.

(c) At the hearing on the permit application, the department shall take testimony on:

1. The public rights in the lake or stream and the related environment which may be injured by the proposed diversion;

2. The public benefits provided by increased employment, economic activity and tax revenues from the mining operation;

3. The direct and indirect social and economic costs and benefits of the proposed mining operation;

4. Whether the proposed withdrawal will consume nonsurplus water;

5. The rights of competing users of such water resources; and

6. Any other issues identified by the department as relevant to the decision of whether to issue or deny a permit.

(d) Within 30 days after hearing, the department shall issue or deny a permit. The following standards shall govern the decision of the department:

1. If injury to public rights exceeds the public benefits generated by the mining, the permit shall be denied.

2. If the proposed diversion will consume nonsurplus waters, and will unreasonably injure rights of riparians identified by par. (b) who are beneficially using such waters, the permit shall be denied unless a permit is granted under par. (e) or all such riparians consent to the proposed diversion.

3. In all other cases the permit shall be granted.

(e) The department may require modification of a proposed diversion so as to avoid injury to public or riparian rights, and as modified, may grant the permit.

(f) Water diverted in accordance with a permit issued under this subsection may be used on nonriparian property.

(g) The department shall maintain continuing jurisdiction over water withdrawal made according to permits issued under this subsection and may modify such permits to prevent undue injury to riparians who gave consent under par. (d) 2. at the time of issuance of the permit.

(h) Hearings on applications for diversion permits under this subsection shall be preceded by mailed notice to all parties or affected persons and by publication in the affected area of a class 2 notice, under ch. 985. Hearings may be conducted as part of a hearing on an application for a mining permit under s. 293.37.

(i) If a hearing on the application for a permit is conducted as a part of a hearing under s. 293.43, the notice and hearing provisions in that section supersede the notice and hearing provisions of this subsection.

(3) WITHDRAWAL OF GROUNDWATER; DEWATERING; PERMIT REQUIREMENTS. (a) An approval under s. 281.17 (1) is required to withdraw groundwater or to dewater mines if the capacity and rate of withdrawal of all wells involved in the withdrawal of groundwater or the dewatering of mines exceeds 100,000 gallons each day. A permit under s. 283.31 is required to discharge pollutants resulting from the dewatering of mines.

(b) The department may not issue an approval under s. 281.17 (1) if the withdrawal of groundwater for prospecting or mining purposes or the dewatering of mines will result in the unreasonable detriment of public or private water supplies or the unreasonable detriment of public rights in the waters of the state. No withdrawal of groundwater or dewatering of mines may be made to the unreasonable detriment of public or private water supplies or the unreasonable detriment of public rights in the waters of the state.

(4) DAMAGE CLAIMS. (a) As used in this subsection, "person" does not include a town, village or city.

(b) A person claiming damage to the quantity or quality of his or her private water supply caused by prospecting or mining may file a complaint with the department and, if there is a need for an immediate alternative source of water, with the town, village or

city where the private water supply is located. The department shall conduct an investigation and if the department concludes that there is reason to believe that the prospecting or mining is interrelated to the condition giving rise to the complaint, it shall schedule a hearing.

(c) The town, village or city within which is located the private water supply which is the subject of the complaint shall, upon request, supply necessary amounts of water to replace that water formerly obtained from the damaged private supply. Responsibility to supply water shall commence at the time the complaint is filed and shall end at the time the decision of the department made at the conclusion of the hearing is implemented.

(d) If the department concludes after the hearing that prospecting or mining is the principal cause of the damage to the private water supply, it shall issue an order to the operator requiring the provision of water to the person found to be damaged in a like quantity and quality to that previously obtained by the person and for a period of time that the water supply, if undamaged, would be expected to provide a beneficial use, requiring reimbursement to the town, village or city for the cost of supplying water under par. (c), if any, and requiring the payment of compensation for any damages unreasonably inflicted on the person as a result of damage to his or her water supply. The department shall order the payment of full compensatory damages up to $75,000 per claimant. The department shall issue its written findings and order within 60 days after the close of the hearing. Any judgment awarded in a subsequent action for damages to a private water supply caused by prospecting or mining shall be reduced by any award of compensatory damages previously made under this subsection for the same injury and paid by the operator. The dollar amount under this paragraph shall be changed annually according to the method under s. 70.375 (6). Pending the final decision on any appeal from an order issued under this paragraph, the operator shall provide water as ordered by the department. The existence of the relief under this section is not a bar to any other statutory or common law remedy for damages.

(e) If the department concludes after the hearing that prospecting or mining is not the cause of any damage, reimbursement to the town, village or city for the costs of supplying water under par. (c), if any, is the responsibility of the person who filed the complaint.

(f) Failure of an operator to comply with an order under par. (d) is grounds for suspension or revocation of a prospecting or mining permit.

(g) This subsection applies to any claim for damages to a private water supply occurring after June 3, 1978.

(5) COSTS REIMBURSED. (a) Costs incurred by a town, village or city in monitoring the effects of prospecting or mining on surface water and groundwater resources, in providing water to persons claiming damage to private water supplies under sub. (4) (c), or in retaining legal counsel or technical consultants to represent and assist the town, village or city appearing at the hearing under sub. (4) (b) are reimbursable through the investment and local impact fund under s. 15.435.

(b) Any costs paid to a town, village or city through the investment and local impact fund under par. (a) shall be reimbursed to the fund by the town, village or city if the town, village or city receives funds from any other source for the costs incurred under par. (a).

(c) If an order under sub. (4) (d) requiring the operator to provide water or to reimburse the town, village or city for the cost of supplying water is appealed and is not upheld, the court shall order the cost incurred by the operator in providing water or in reimbursing the town, village or city pending the final decision to be reimbursed from the investment and local impact fund under s. 15.435.

History: 1977 c. 420; 1979 c. 221; 1981 c. 86 ss. 38 to 54, 64; Stats. 1981 s. 144.855; 1985 a. 60 s. 24; 1987 a. 374; 1993 a. 16; 1995 a. 227 s. 783; Stats. 1995 s. 293.65.

SUBCHAPTER V

GENERAL PROVISIONS; ENFORCEMENT

293.81 Exploring, prospecting and mining without authorization. Any person who engages in exploration without a license shall forfeit not less than $100 nor more than $1,000 for each parcel as defined under s. 293.21 (1) (b) on which unlicensed exploration took place. Any person who authorizes or engages in prospecting without a prospecting permit or any operator who authorizes or engages in mining without a mining permit and written authorization to mine under s. 293.51 (3) shall forfeit all profits obtained from such illegal activities and not more than $10,000 for each day during which the mine was in operation. The operator shall be liable to the department for the full cost of reclaiming the affected area of land and any damages caused by the mining operation. Each day's violation of this section shall be deemed a separate offense. If the violator is a corporation, limited liability company, partnership or association, any officer, director, member, manager or partner who knowingly authorizes, supervises or contracts for exploration, prospecting or mining shall also be subject to the penalties of this section.

History: 1973 c. 318; 1977 c. 421; 1993 a. 112; 1995 a. 227 s. 789; Stats. 1995 s. 293.81.

293.83 Mining and reclamation; orders. (1) (a) *Violations; order or other action required.* If the department finds a violation of law or any unapproved deviation from the mining or reclamation plan at a mining site under a mining permit:

1. The department shall issue an order requiring the operator to comply with the statute, rule or plan within a specified time;

2. The department shall require the alleged violator to appear before the department for a hearing and answer the charges complained of; or

3. The department shall request the department of justice to initiate action under s. 293.87.

(b) *Effective dates of orders.* Any order issued under par. (a) 1. following a hearing takes effect immediately. Any other order takes effect 10 days after the date the order is served unless the person named in the order requests in writing a hearing before the department within the 10–day period.

(c) *Hearing on orders.* If no hearing on an order issued under par. (a) 1. was held and if the department receives a request for a hearing within 10 days after the date the order is served, the department shall provide due notice and hold a hearing.

(d) *Enforcement of orders.* The department shall cancel the mining permit for a mining site held by an operator who fails to comply with an order issued under par. (a) 1. The department shall inform the department of justice of the cancellation within 14 days. After receiving notice of the cancellation, the department of justice shall commence an action under s. 293.87.

(2) If reclamation of a mining site is not proceeding in accordance with the reclamation plan and the operator has not commenced to rectify deficiencies within the time specified in the order, or if the reclamation is not properly completed in conformance with the reclamation plan within one year after completion or abandonment of mining on any segment of the mining site, or if the exploration license or prospecting or mining permit is revoked under s. 293.87 (2) and (3), excepting acts of God, such as adverse weather affecting grading, planting and growing conditions, the department, with the staff, equipment and material under its control, or by contract with others, shall take such actions as are necessary for the reclamation of mined areas. The operator shall be liable for the cost to the state of reclamation conducted under this section. Any operator who is exempted from filing a bond or depositing cash, certificates of deposits or government securities by s. 293.51 (6) shall not be liable for an amount greater than an amount specified by the department. The specified amount shall

be equal to and determined in the same manner as the amount of the bond or other security otherwise required under s. 293.51 (1), assuming the operator had not been exempt from such filing or depositing.

(3) All other prospecting and mining permits held by an operator who refuses to reclaim a mining site in compliance with the reclamation plan after the completion of mining or after the cancellation of a mining permit shall be canceled. The department may not issue any prospecting or mining permits for that site or any other site in this state to an operator who refused to reclaim a mining site in compliance with the reclamation plan.

(4) (a) The department may issue a stop order to an operator, requiring an immediate cessation of mining, in whole or in part, at any time that the department determines that the continuance of mining constitutes an immediate and substantial threat to public health and safety or the environment.

(b) If no hearing on the stop order was held, the department shall schedule a hearing on the stop order, to be held within 5 days after issuance of the order and shall incorporate notice of the hearing in the copy of the order served upon the operator. The department also shall give notice to any other persons who previously requested notice of such proceedings.

(c) Within 72 hours after commencement of any hearing under par. (b), unless waived by agreement of the parties, the department shall issue a decision affirming, modifying or setting aside the stop order. The department may apply to the circuit court for an order extending the time, for not more than 10 days, within which the stop order shall be affirmed, modified or set aside.

(d) The department shall set aside the stop order at any time, with adequate notice to the parties, upon a showing by the operator that the conditions upon which the order was based no longer exist.

History: 1973 c. 318; 1977 c. 421; 1981 c. 86; 1995 a. 227 s. 793; Stats. 1995 s. 293.83; 1997 a. 193, 252.

293.85 Cancellation of permit. The department may, after hearing, cancel:

(1) The prospecting permit for a prospecting site that is the site of a violation of this chapter.

(2) The mining permit for a mining site that is the site of a violation of this chapter.

(3) A mining or prospecting permit, if the permit holder intentionally made a false statement in the permit application or intentionally omitted information from the permit application which was material to permit issuance.

History: 1995 a. 227 s. 750, 994.

293.86 Visitorial powers of department. Any duly authorized officer, employee or representative of the department may enter and inspect any property, premises or place on or at which any prospecting or metallic mining operation or facility is located or is being constructed or installed at any reasonable time for the purpose of ascertaining the state of compliance with this chapter and chs. 281, 285, 289 to 292, 295 and 299 and rules adopted pursuant thereto. No person may refuse entry or access to any such authorized representative of the department who requests entry for purposes of inspection, and who presents appropriate credentials, nor may any person obstruct, hamper or interfere with any such inspection. The department shall furnish to the prospector or operator, as indicated in the prospecting or mining permit, a written report setting forth all observations, relevant information and data which relate to compliance status.

History: 1995 a. 227 s. 404.

293.87 Enforcement; penalties. (1) All orders issued, fines incurred, bond liabilities incurred or other violations committed under this chapter shall be enforced by the department of justice. The circuit court of Dane County or any other county where the violation occurred shall have jurisdiction to enforce this chapter or any orders issued or rules adopted thereunder, by injunctional or other appropriate relief.

(2) Any person who makes or causes to be made in an application or report required by this chapter a statement known to the person to be false or misleading in any material respect or who refuses to file an annual report under s. 293.53 (2) (a) or who refuses to submit information required by the prospecting or mining permit may be fined not less than $1,000 nor more than $5,000. If the false or misleading statement is material to the issuance of the permit, the permit may be revoked. If any violation under this subsection is repeated the permit may be revoked.

(3) Any person holding a prospecting or mining permit who violates this chapter or any order issued or rule adopted under this chapter shall forfeit not less than $10 nor more than $10,000 for each violation. Each day of violation is a separate offense. If the violations continue after an order to cease has been issued, the permit shall be revoked.

(4) (a) Except for the violations enumerated in subs. (2) and (3), any person who violates this chapter or any rule promulgated or any plan approval, license or special order issued under this chapter shall forfeit not less than $10 nor more than $5,000 for each violation. Each day of continued violation is a separate offense. While an order is suspended, stayed or enjoined, this penalty does not accrue.

(b) In addition to the penalties provided under par. (a), the court may award the department of justice the reasonable and necessary expenses of the investigation and prosecution of the violation, including attorney fees. The department of justice shall deposit in the state treasury for deposit into the general fund all moneys that the court awards to the department or the state under this paragraph.

History: 1973 c. 318; 1977 c. 421; 1995 a. 227 s. 796, 994; Stats. 1995 s. 293.87; 2001 a. 109.

293.89 Citizen suits. (1) Except as provided in sub. (2), any citizen may commence a civil action on his or her own behalf:

(a) Against any person who is alleged to be in violation of this chapter.

(b) Against the department where there is alleged to be a failure of the department to perform any act or duty under this chapter which is not discretionary with the department.

(2) No action may be commenced:

(a) Under sub. (1) (a):

1. Prior to 30 days after the plaintiff has given notice of the alleged violation to the department and to the alleged violator; or

2. If the department has commenced and is diligently prosecuting a civil or criminal action, but in any such action any citizen may intervene as a matter of right.

(b) Under sub. (1) (b) prior to 30 days after the plaintiff has given notice of such action to the department.

(3) The court, in issuing any final order in any action brought under this section, shall award costs of litigation including reasonable attorney and expert witness fees to the plaintiff if he or she prevails, and the court may do so if it determines that the outcome of the controversy is consistent with the relief sought by the plaintiff irrespective of the formal disposition of the civil action. In addition, the court shall award treble damages to any plaintiff proving damages caused by a person mining without a permit or willfully violating this chapter or any permits or orders issued under this chapter.

(4) Nothing in this section restricts any right which any person or class of persons may have under any other statute or common law.

History: 1977 c. 421; 1995 a. 227 s. 797; Stats. 1995 s. 293.89.

293.91 Nonconforming sites. (1) All prospectors and operators conducting mining operations in this state on July 3, 1974 shall submit to the department, within 90 days after that date, applications for prospecting permits or mining permits as provided in ss. 293.35 and 293.37. Sections 293.13 (1) (b) and 293.49 (2) shall not apply to such operators.

(2) Modification of existing prospecting and mining sites and of operating procedures to conform with this chapter and rules adopted under this chapter shall be accomplished as promptly as possible, but the department shall give special consideration to a site where it finds that the degree of necessary improvement is of such extent and expense that compliance cannot be accomplished.

History: 1973 c. 318; 1977 c. 421; 1995 a. 227 s. 794; Stats. 1995 s. 293.91.

293.93 Effect of other statutes. If there is a standard under other state or federal statutes or rules which specifically regulates in whole an activity also regulated under this chapter the other state or federal statutes or rules shall be the controlling standard. If the other state or federal statute or rule only specifically regulates the activity in part, it shall only be controlling as to that part.

History: 1977 c. 421; 1995 a. 227 s. 798; Stats. 1995 s. 293.93.

293.95 Review. Any person aggrieved by any decision of the department under this chapter may obtain its review under ch. 227.

History: 1973 c. 318; 1977 c. 421; 1995 a. 227 s. 799; Stats. 1995 s. 293.95.

Chapter NR 130

METALLIC MINERAL EXPLORATION

Note: See ss. 23.09, 23.11, chs. 107, 227, 280 and 293, Stats.

Note: Emerg. r. and recr. eff. 6–3–78. Chapter NR 130 as it existed on January 31, 1979 was repealed and a new chapter NR 130 created effective February 1, 1979.

NR 130.01 Purpose. The purpose of this chapter is to establish a licensing procedure and minimum standards for metallic mineral exploration in this state.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79.

NR 130.02 Applicability. The provisions of this chapter are applicable to all metallic mineral exploration as defined in s. NR 130.03. This chapter does not apply to operators engaged in exploration on lands included in a mining and reclamation plan, if the plan contains provisions relating to termination of the exploration activities.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79.

NR 130.03 Definitions. The following definitions are applicable to the terms used in this chapter:

(1) "Abandonment" means filling or sealing a drillhole in accordance with the procedures specified in s. NR 130.06.

(2) "Clay slurry" means a fluid mixture of native clay formation or commercial clay or clay mineral products and water prepared with only the amount of water necessary to produce fluidity.

(3) "Concrete grout" means a mixture consisting of 94 pounds of type A portland cement and an equal or lesser volume of dry sand combined with approximately 6 gallons of water.

(4) "Department" means department of natural resources.

(5) "Driller" means a person who performs core, rotary, percussion or other drilling involved in exploration for metallic minerals.

(6) "Drilling site" means the area disturbed by exploration including the drillhole.

(7) "Explorer" means any person who engages in exploration or who contracts for the services of drillers for the purpose of exploration.

(8) "Exploration" means 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. For the purposes of the definition of exploration, geologic examination does not include drillholes constructed for the purpose of collecting soil samples or for determining radioactivity by means of placement of radiation–sensitive devices.

(9) "Exploration license" means the license required by s. 293.21 (2), Stats., as a condition of engaging in exploration.

(10) "License year" means the period of time commencing on July 1 of any year and ending on the following June 30.

(11) "Metallic mineral" means a naturally occurring, inorganic, metal–containing substance which is mined or proposed to be mined for the purpose of extracting a metal or metals which form all or a part of the chemical composition of the mineral. Such metals include but are not limited to iron, copper, zinc, lead, gold, silver, titanium, vanadium, nickel, cadmium, molybdenum, chromium, manganese, cobalt, zirconium, beryllium, thorium, and uranium.

(12) "Neat cement grout" means a mixture consisting of 94 pounds of type A portland cement and approximately 6 gallons of water.

(13) "Parcel" means an identified section, fractional section or government lot.

(14) "Termination" means filling of drillholes and reclamation and revegetation of drilling sites.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; renum. (2) to (10) to be (4) to (9), (11), (13) and (14) and am. (7), cr. (intro.), (2), (3), (10) and (12), Register, March, 1985, No. 351, eff. 4–1–85; **correction in (9) made under s. 13.93 (2m) (b) 7., Stats.**

NR 130.05 Application for an exploration license. **(1)** No explorer may engage in exploration without securing an exploration license.

(2) Any explorer wishing to engage in exploration shall file an application for an exploration license with the department upon forms prepared and furnished by the department. The application shall be accompanied by the following:

(a) A fee of $300 for the exploration license.

(b) A bond payable to the department in the amount of $5,000 conditioned on faithful performance of the provisions of this code.

1. The bond shall be issued by a surety company licensed to do business in Wisconsin. If the surety company's license to do business is revoked or suspended, the explorer, within 30 days after receiving written notice thereof from the department, shall substitute surety underwritten by a surety company licensed to do business in Wisconsin. Upon failure of the explorer to make a substitution of surety, the department shall suspend the explorer's exploration license until substitution has been made.

2. Each bond shall provide that the bond shall not be canceled by the surety, except after not less than 90 days notice to the department in writing by registered or certified mail. Not less than 30 days prior to the expiration of the 90 day notice of cancellation, the explorer shall deliver to the department a replacement bond in the absence of which all exploration shall cease.

3. The department may require that the amount of the bond be increased at any time, if the department determines that the explorer's current level of activity makes it likely that the bond would be inadequate to fund the termination of all holes drilled for which the explorer is responsible.

4. One year after the issuance of the last certificate of completion, and provided that the explorer is not holding an exploration license, the department shall release the bond if the department determines that the explorer has complied with provisions of this chapter.

(c) A certificate of insurance certifying that the explorer has in force a liability insurance policy issued by an insurance company authorized to do business in this state covering all exploration of the explorer in this state and affording personal injury and property damage protection in a total amount deemed adequate by the department but not less than $50,000.

(d) A copy of the applicant's most recent annual report and Form 10K as filed with the securities and exchange commission. If these are not available, the applicant shall submit a report of the

applicant's current assets and liabilities or other necessary data to establish that the applicant is competent to conduct exploration in this state.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; am. (2) (b) 4. and (c), cr. (2) (d), Register, March, 1985, No. 351, eff. 4–1–85.

NR 130.06 Issuance. Upon satisfactory completion of all conditions contained in this chapter, the department shall issue an exploration license to the explorer. Licenses shall be issued within 10 business days after the department receives a complete application unless the application is for an upcoming license year. If the application is for an upcoming license year, the license shall be issued either within 10 business days after the department receives a complete application or on the following July 1, whichever is later. The issuance of an exploration license is subject to the following conditions:

(1) Metallic mineral exploration drillholes shall be abandoned as follows:

(a) *Permanent abandonment.* 1. All drillholes 4 inches in diameter and smaller shall be filled from the bottom of the hole upward to the ground surface with concrete or neat cement grout.

2. Drillholes larger than 4 inches in diameter preferably should be filled in a manner similar to that described in sub. (1). However, the following alternative methods of filling such holes are acceptable:

a. Drillholes constructed in limestone, dolomite, shale, or pre–Cambrian formations (granite, gabbro, gneiss, schist, slate, greenstone, quartzite, etc.) may be filled with gravel or crushed rock from the bottom upward to a point 20 feet below the top of the first rock formation encountered below the surface or to a depth 40 feet below the ground surface, whichever is the greater depth, and the remainder of the drillhole from the top of the gravel or crushed stone to the ground surface shall then be filled with concrete or neat cement grout. If it is physically impractical to use gravel or crushed rock, the explorer may use clay slurry as a filling material after receiving approval from the department.

b. Drillholes constructed in sandstone formation may be filled with disinfected sand or pea gravel from the bottom upward to a point 20 feet below the top of the first rock formation encountered below the surface or to a depth 40 feet below the ground surface, whichever is the greater depth, and the remainder of the drillhole from the top of the sand or pea gravel to the ground shall then be filled with concrete or neat cement grout. If it is physically impractical to use sand or pea gravel, the explorer may use clay slurry as a filling material after receiving approval from the department.

c. Drillholes constructed in glacial drift or other unconsolidated formation may be filled with clean clay slurry from the bottom upward to a point 20 feet below the ground surface, and the remainder of the drillhole must then be filled from the top of the clay slurry to the ground surface with concrete or neat cement grout.

d. Drillholes constructed in mixed rock types may be filled in accordance with subd. 2. a., b. and c. Where the alternative methods to filling the drillhole completely with concrete or neat cement grout are selected, concrete or neat cement grout plugs at least 40 feet in depth, extending at least 20 feet above and below the point of surface contact between every recognized geologic rock type shall be provided.

3. 'Filling procedure restrictions.' a. Filling material shall be applied through a conductor pipe, except that when practical a dump bailer may be used. When concrete is placed under water by a conductor pipe, the bottom end of the conductor pipe shall be submerged in the concrete at all times.

b. When it is desired to remove all or part of the casing from an unconsolidated formation that will not stand open (such as sand or gravel) upon abandonment of a drillhole, the casing must be removed concurrently with the filling of the drillhole, and the bottom end of the casing shall be kept below the surface of the fill material throughout the operation.

4. 'Flowing drillhole.' If a drillhole penetrates an aquifer under artesian pressure such that groundwater flows at the ground surface, approval of the method of containment of such flow and the method of eventual abandonment of the drillhole must be obtained from the department.

(b) *Temporary abandonment.* If it is desired to temporarily retain a drillhole for further exploration, the casing shall be left in place, and the upper terminal of the casing shall be sealed with a watertight threaded or welded cap.

(2) Minimum standards for exploration activities and reclamation of drilling sites as contained in s. 293.13 (2) (b) 1. to 12. and (c) 1. to 8., Stats., where applicable.

(3) The fee for drilling the first 20 drillholes or less in any license year shall be $100 per drillhole and the fee for drilling each subsequent drillhole in that same license year shall be $50 per drillhole. All fees shall be paid to the department upon submission of the temporary abandonment report, if temporary abandonment occurs, or the permanent abandonment report, if temporary abandonment does not occur. For the purpose of determining the appropriate fee, drillholes will be assigned to the license year in which drilling on that particular hole ceases and the drillhole is initially abandoned either temporarily or permanently.

(4) Other conditions which the department deems necessary to safeguard the natural resources of this state during and after exploration.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; am. (intro.), (1) (a) 2. a. and b., (3), Register, March, 1985, No. 351, eff. 4–1–85; **correction in (2) made under s. 13.93 (2m) (b) 7., Stats.**

NR 130.07 Renewals. (1) An explorer wishing to renew an exploration license shall file an annual renewal application with the department upon forms prepared and furnished by the department. The renewal application shall be accompanied by the following.

(a) A fee of $150.00.

(b) A bond in accordance with s. NR 130.05 (2) (b).

(c) A certificate of insurance in accordance with s. NR 130.05 (2) (c).

(d) A copy of the applicant's most recent annual report and Form 10K as filed with the securities and exchange commission. If these are not available, the applicant shall submit a report of the applicant's current assets and liabilities and other necessary data to establish that the applicant is competent to conduct exploration in this state.

(2) Renewal license shall be for a period commencing on the date of issuance and terminating on the following June 30th. Renewal applications shall be reviewed and licenses issued under the same time limitations specified in s. NR 130.06.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; cr. (1) (d) and am. (2), Register, March, 1985, No. 351, eff. 4–1–85.

NR 130.08 License revocation or suspension. After a due process hearing, the department may revoke or suspend an exploration license if it is determined that:

(1) Statutes, or rules of the department or any condition in the exploration license have not been complied with; or

(2) The explorer has failed to increase bond amounts to adequate levels as provided in s. NR 130.05 (2) (b) 3.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; am. (1), Register, March, 1985, No. 351, eff. 4–1–85.

NR 130.09 Denials. (1) The department shall deny an exploration license if the department finds:

(a) The exploration activity will not comply with the minimum standards in s. 293.13 (2) (b) 1. to 12. and (c) 1. to 8., Stats., where applicable.

(b) The explorer is in violation of ch. 293, Stats., or any provision of this chapter.

(2) Within 10 business days from the date of application, the department shall furnish the explorer in writing the reasons for the denial.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; am. (2), Register, March, 1985, No. 351, eff. 4–1–85; **corrections in (1) (a) and (b) made under s. 13.93 (2m) (b) 7., Stats.**

NR 130.10 Notice procedure. (1) (a) The explorer shall notify the department of the explorer's intent to drill on a parcel by registered mail at least 10 days in advance of the commencement of drilling. Notice shall be considered as given upon the date of receipt by the department of the notice. The notice of intent to drill shall state the number of expected drillholes to be drilled and the legal description of the affected parcel. The 10 day notice of intent to drill on a parcel shall be sent to the Mine Reclamation Section, Department of Natural Resources, P. O. Box 7921, Madison, WI 53707.

(b) A notice of intent to drill shall remain in effect for one year commencing on the date of receipt by the department of the notice. One year after the receipt of the notice, the explorer shall resubmit a notice of intent to drill on that parcel if the explorer wishes to continue exploration on the parcel.

(2) The explorer shall notify the department prior to the actual commencement of drilling each drillhole on the parcel. This notice may be oral or written to the department's district office in Rhinelander.

(3) The explorer shall give the department at least 24 hours advance notice of the explorer's intent to fill a drillhole. The 24–hour requirement may be reduced by the department. This notice may be oral or written and to the department's district office in Rhinelander.

Note: The address and telephone number of the department's district office in Rhinelander are: Department of Natural Resources

North Central District Headquarters
107 Sutliff
P.O. Box 818
Rhinelander, WI 54501
Telephone: (715) 362–7616

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; renum. (1) to be (1) (a), cr. (1) (b), am. (2) and (3), Register, March, 1985, No. 351, eff. 4–1–85.

NR 130.11 Reports. (1) Within 10 days after completion of temporary or permanent abandonment of a drillhole the explorer shall file exploration abandonment reports with the department on forms supplied by the department. All abandonment reports shall be signed by an authorized representative of the explorer attesting to the accuracy of the information contained therein.

(2) All abandonment reports shall be submitted to the department's district office in Rhinelander.

(3) Following permanent abandonment of the drillhole, and revegetation and regrading of the drilling site, the explorer shall notify the department of completion of termination of each drilling site. This notification shall be made in writing and sent to the department's district office in Rhinelander.

(4) The department shall notify the explorer in writing of the satisfactory or unsatisfactory completion of termination. If termination is unsatisfactory, the department shall inform the explorer of all necessary corrective measures. Following implementation of corrective measures, the explorer shall file written notice with the department's district office in Rhinelander specifying what measures were taken and stating that termination is complete. Failure of the explorer to comply with the department's corrective measures may result in license revocation or suspension in accordance with s. NR 130.08. Upon satisfactory completion of termination of a drilling site, the department shall issue a certificate of completion. No temporarily abandoned drilling site may receive a certificate of completion until permanently abandoned in accordance with the provisions of this chapter.

Note: The address and telephone number of the department's district office in Rhinelander are: Department of Natural Resources

North Central District Headquarters
107 Sutliff
P.O. Box 818
Rhinelander, WI 54501
Telephone: (715) 362–7616

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; am. (1) and (4), renum. (2) and (3) to be (3) and (2) and am., Register, March, 1985, No. 351, eff. 4–1–85.

NR 130.12 Inspections. (1) Any duly authorized officer, employee or representative of the department may enter and inspect any property, premises or place on or at which any exploration is being performed at any reasonable time for the purpose of ascertaining the state of compliance with this chapter and ch. 293, Stats.

(2) No explorer may refuse entry or access to any authorized representative of the department who requests entry for purposes of inspection and who presents appropriate credentials.

(3) No person may obstruct, hamper or interfere with any such inspection.

History: Cr. Register, January, 1979, No. 277, eff. 2–1–79; **correction in (1) made under s. 13.93 (2m) (b) 7., Stats.**

Chapter NR 131

METALLIC MINERAL PROSPECTING

Note: Chapter NR 131 as it existed on August 31, 1982, was repealed and a new chapter NR 131 was created effective September 1, 1982.

NR 131.01 Purpose. The purpose of this chapter is to establish procedures and standards for the comprehensive regulation of metallic mineral prospecting in this state and to coordinate and reconcile applicable state and federal statutes and regulations so as to facilitate the procedures by which department permits, licenses and approvals may be applied for, hearings may be held, and determinations may be made by the department in a coordinated and integrated manner.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 131.02 Applicability. The provisions of this chapter are applicable to all metallic mineral prospecting as defined in s. 293.01 (18), Stats., including the storage, handling, processing, transportation and disposal of all materials resulting from a prospecting operation except to the extent that prospecting wastes are regulated by ch. NR 182. The provisions of this chapter are not applicable to those activities which are intended for and capable of commercial exploitation of the underlying ore body. However, the fact that prospecting activities and construction may have use ultimately in mining, if approved, shall not mean that prospecting activities and construction constitute mining pursuant to the definition of mining contained in s. 293.01 (9), Stats., provided such activities and construction are reasonably related to prospecting requirements.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections made under s. 13.93 (2m) (b), Stats.**

NR 131.03 Definitions. The following special definitions are applicable to the terms used in this chapter:

(1) "Applicant" means a person who has applied for a prospecting permit.

(2) "Baseline data" means the data collected by the applicant or the department which the department has accepted through the regulatory process of ss. NR 131.05 and 131.11 and s. 293.43, Stats., as representing the existing environmental conditions prior to the commencement of prospecting.

(3) "Department" means department of natural resources.

(4) "Economic information" means financial and economic projections for any potential mining of an ore body including estimates of capital costs, predicted expenses, price forecasts and metallurgical recovery estimates.

(5) "Forfeited any bond" means the forfeiture of any performance security occasioned by noncompliance with any prospecting laws or provisions of this chapter.

(6) "Geologic information" means information concerning descriptions of an ore body, descriptions of reserves, tonnages and grades of ore, descriptions of a drill core or bulk sample including analysis and descriptions of drill hole depths.

(7) "Materials" means all substances handled, transported, processed, stored or disposed of on the prospecting site during the prospecting and reclamation operation, including merchantable by–product and other materials generated by the operation as well as those brought onto the prospecting site.

(8) "Merchantable by–product" means all waste soil, rock, mineral, liquid, vegetation and other material directly resulting from or displaced by the prospecting, cleaning or preparation of minerals during prospecting operations which are determined by the department to be marketable upon a showing of marketability made by the operator, accompanied by a verified statement by the operator of his or her intent to sell such material within 3 years from the time it results from or is displaced by prospecting. If after 3 years from the time merchantable by–product results from or is displaced by prospecting such material has not been transported off the prospecting site, it shall be considered and regulated as refuse unless removal is continuing at a rate of more than 12,000 cubic yards per year. Regardless of whether the material constitutes merchantable by–product, it shall be subject to the requirements of this chapter.

(9) "Metallic mineral" means a naturally occurring, inorganic, metal–containing substance which is mined or proposed to be mined for the purpose of extracting a metal or metals which form all or a part of the chemical composition of the mineral. Such metals include but are not limited to iron, copper, zinc, lead, gold, silver, titanium, vanadium, nickel, cadmium, molybdenum, chromium, manganese, cobalt, zirconium, beryllium, thorium and uranium.

(10) "Monitoring data" means the data collected by the operator or the department after the commencement of prospecting.

(11) "Operator" means any person who is engaged in, or who has applied for or holds a permit to engage in, prospecting, whether individually, jointly or through subsidiaries, agents, employees or contractors.

(12) "Overburden" means any unconsolidated material that overlies bedrock.

(13) "Person" means any individual, corporation, cooperative–owner, lessee, syndicate, partnership, firm, association, trust, estate, public or private institution, political subdivision of the state of Wisconsin, any state agency or any legal successor, representative, agent or agency of the foregoing.

(14) "Principal shareholder" means any person who owns at least 10% of the beneficial ownership of an operator.

(15) "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 the production of refuse and other associated activities.

(16) "Prospecting data" means data, records and other information furnished to or obtained by the department or held by the applicant or operator in connection with the application for a prospecting permit.

(17) "Prospecting permit" means the permit which is required of all operators as a condition precedent to commencing prospecting at a prospecting site.

(18) "Prospecting plan" means the proposal for prospecting of the prospecting site, which shall be approved by the department

under s. 293.45 (1), Stats., prior to the issuance of the prospecting permit.

(19) "Prospecting site" means the lands on which prospecting is actually conducted as well as those lands on which physical disturbance will occur as a result of such activity.

(20) "Reclamation" means the process by which an area physically or environmentally affected by prospecting is rehabilitated to either its original state or if this is shown to be physically or economically impracticable or environmentally or socially undesirable, to a state that provides long–term environmental stability. Reclamation shall provide the greatest feasible protection to the environment and shall include, but not be limited to, the criteria for reclamation set forth in s. 293.13 (2) (c), Stats., and the closure and long–term care requirements of ch. NR 182 for facilities licensed pursuant to that chapter.

(21) "Reclamation plan" means the proposal for the reclamation of the prospecting site which must be approved by the department under s. 293.45 (1), Stats., prior to the issuance of the prospecting permit, and includes closure and long–term care requirements of ch. NR 182 for facilities licensed pursuant to that chapter.

(22) "Refuse" means all waste soil, rock, mineral, liquid, vegetation and other material, except merchantable by–products, directly resulting from or displaced by the prospecting, and from the cleaning or preparation of minerals during prospecting operations, and shall include all waste materials deposited on or in the prospecting site from other sources and solid waste as defined in s. NR 182.04.

(23) "Unsuitability" means that the land proposed for prospecting or surface mining is not suitable for such activity because the prospecting or surface mining activity itself may reasonably be expected to destroy or irreparably damage either of the following:

(a) Habitat required for survival of species of vegetation or wildlife as designated in ch. NR 27 if such endangered species cannot be firmly established elsewhere.

(b) Unique features of land, as determined by state or federal designation as any of the following, which cannot have their unique characteristic preserved by relocation or replacement elsewhere.

1. Wilderness areas designated by statute or administrative rule.

2. Wild and scenic rivers designated by statute or administrative rule.

3. National or state parks designated by statute or administrative rule.

4. Wildlife refuges and areas as designated by statute or administrative rule.

5. Historical landmarks, sites and archeological areas designated by the state historical society.

6. Scientific areas as follows:

a. Abelman's Gorge
ab. Abraham's Woods
ac. Apple River Canyon
ad. Audubon Goose Pond
ae. Aurora Lake
af. Avoca Prairie–Savanna
ag. Avon Bottoms
b. Bark Bay Slough
ba. Baxter's Hollow
bb. Bean Lake
bc. Bear Creek Cave
bd. Belmont Mound Woods
be. Beulah Bog
bf. Big Bay Sand Spit and Bog
bg. Bittersweet Lakes
bh. Blackhawk Island
bi. Black Tern Bog
c. Blue Hills Felsenmeer
ca. Blue River Sand Barrens
cb. Bois Brule Conifer Bog
cc. Bose Lake Hemlock–Hardwoods
cd. Brady's Bluff Prairie
ce. Brant Book Pines and Hardwoods
cf. Browntown Oak Forest
cg. Buena Vista Prairie Chicken Meadow
ch. Buena Vista Quarry Prairie
d. Castle Mound Pine Forest
da. Cedarburg Beech Woods
db. Cedarburg Bog
dc. Cedar Grove Hawk Research Station
dd. Charles Pond
de. Cherokee Marsh
df. Cherry Lake Sedge Meadow
e. Chiwaukee Prairie
ea. Comstock Bog – Meadow
eb. Council Grounds Pine Forest
ec. Crex Sand Prairie
ed. Dalles of the St. Croix River
ee. Dells of the Eau Claire River
ef. Devil's Lake Oak Forest
eg. Dewey Heights Prairie
f. Dory's Bog
fa. Dunbar Barrens
fb. Durst Rockshelter
fc. Eagle Oak Opening
fd. East Branch Milwaukee River
fe. Ekdall Brook Conifer Swamp
ff. Ennis Lake – Muir Park
fg. Escanaba Lake Hemlocks
g. Fairy Chasm
ga. Faville Prairie
gb. Finerud Pine Forest
gc. Five–Mile Bluff Prairie
gd. Flambeau River Hardwood Forest
ge. Flora Spring Pond
gf. Fountain Creek Wet Prairie
gg. Fourmile Island Rookery
h. Genesee Oak Opening and Fen
ha. Giant White Pine Grove
hb. Gibraltar Rock
hc. Gobler Lake
hd. Gullickson's Glen
i. Haskell Noyes Memorial Woods
ia. High Lake Spruce–Balsam Forest
ib. Holmboe Conifer Forest
ic. Honey Creek
id. Hub City Bog
ie. Interstate Lowland Forest
if. Jackson Harbor Ridges
j. Johnson Lake Barrens
ja. Jung Hemlock–Beech Forest
jb. Karcher Springs
jc. Keller Whitcomb Creek Woods
jd. Kettle Moraine Low Prairie
je. Kewaskum Maple–Oak Woods

jf. Kinnickinnic River Gorge and Delta
jg. Kohler Park Dunes
k. Kohler Park Pines
ka. Kohler–Peat Swamp Hardwoods
kb. Koshawago Springs
kc. Kurtz Woods
kd. Lake of the Pines Conifer–Hardwoods
ke. Lampson Moraine Pines
kf. Lawrence Creek
kg. Lodde's Mill Bluff
kh. Lulu Lake Fen
ki. Maribel Caves
kj. Marinette County Beech Forest
L. Mayville Ledge Beech – Maple Woods
La. Mazomanie Bottoms
Lb. Midway Railroad Prairie
Lc. Milwaukee River
Ld. Miscauno Cedar Swamp
Le. Moose Lake Hemlocks
m. Moquah Barrens
ma. Mt. Pisgah Hemlock–Hardwoods
mb. Mud Lake
mc. Mud Lake–Bog
md. Mukwa Bottomland Forest
me. Muralt Bluff Prairie
mf. Muskego Park Hardwoods
mg. Natural Bridge and Rockshelter
n. Necedah Oak–Pine Forest
na. Necedah Oak–Pine Savanna
nb. Neda Mine
nc. Nelson–Trevino Bottoms
nd. Newark Road Prairie
ne. New Munster Bog Island
nf. New Observatory Woods
o. Newport Conifer–Hardwoods
oa. Oliver Prairie
ob. Olson Oak Woods
oc. Oshkosh–Larsen Trail Prairies
od. Ottawa Lake Fen
oe. Oxbow Rapids
of. Parfrey's Glen
og. Peat Lake
oh. Peninsula Park Beech Forest
p. Peninsula Park White Cedar Forest
pa. Pine Cliff
pb. Pine Glen
pc. Pine Hollow
pd. Plagge Woods
pe. Plum Lake Hemlock Forest
q. Point Beach Ridges
qa. Poppy's Rock
qb. Port Wing Boreal Forest
qc. Powers Bluff Maple Woods
qd. Puchyan Prairie
qe. Putnam Park
qf. Renak–Polak Maple–Beech Woods
qg. Rice Lake–Thunder Lake Marsh
qh. Ridges Sanctuary
r. Ripon Prairie
ra. Rush Creek
rb. St. Croix River Barrens and Cedar Swamp
rc. St. Croix River Swamp Hardwoods
rd. Sajdak Springs
re. Sander's Park Hardwoods
rf. Schmidt Maple Woods
rg. Scott Lake–Shelp Lake Natural Area
rh. Scuppernong Prairie
ri. Seagull Bar
s. Silver Lake Bog
sa. Sister Islands
sb. Snapper Prairie
sc. Sohlberg Silver Lake
sd. Solon Springs Sharptail Barrens
se. South Waubesa Wetlands
sf. Spring Green Reserve
sg. Spring Lake
sh. Spruce Lake Bog
si. Sterling Barrens
sj. Summerton Bog
sk. Swenson Wet Prairie
t. Tamarack Creek Bog
ta. Tellock's Hill Woods
tb. Tiffany Bottoms
tc. Toft Point
td. Totogatic Highland Hemlocks
te. Tower Hill Bottoms
tf. Trenton Bluff Prairie
u. Trout Lake Conifer Swamp
ua. Two Creeks Buried Forest
ub. Upper Brule River
uc. VanderBloemen Bog
ud. Waterloo Fen and Springs
v. Waupun Park Maple Forest
va. Westport Drumlin Prairie
vb. Wilderness Ridge
vc. Wyalusing Hardwood Forest
vd. Wyalusing Walnut Forest
ve. Young Prairie

7. Other areas of a type designated as unique or unsuitable for prospecting or surface mining.

(24) "Waste rock" means consolidated material which has been excavated during the prospecting process but is not of sufficient value to constitute ore.

(25) "Wetlands" means an area where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (2), (18), (20) and (21) made under s. 13.93 (2m) (b), Stats.**

NR 131.05 Notification of intent to collect data. **(1)** Any person intending to submit an application for a prospecting permit shall notify the department by registered mail, prior to the collection of data or information intended to be used to support the permit application.

(2) The notice shall contain the following information:

(a) The name, address and telephone number of the person submitting the notice of intent.

(b) A map showing the approximate location of the proposed prospecting site.

(c) The expected date when a prospecting permit application may be submitted pursuant to s. NR 131.06.

(d) Specific environmental data which were obtained, collected or generated prior to the notice of intent to collect data

together with any substantiating background information which would assist the department in establishing the validity of the data. This substantiating background information shall include but not be limited to the following:

1. Date obtained and method employed.

2. Persons obtaining, collecting and generating the data and their qualifications.

3. Permits, licenses and approvals that were in effect when the data and information were obtained, collected and generated prior to the notice of intent to collect data.

(e) A preliminary project description addressing the following:

1. A topographic map showing the location of the ore body.

2. A description of the ore body including available details on size, shape, and mineralogic composition.

3. To the extent possible, a description of the anticipated prospecting methods and wastes expected to be generated.

4. An estimate of the project schedule.

5. If applicant so desires, a proposed scope of study including such information as required under sub. (7) (a), if such information is available to the applicant.

6. Other pertinent information as requested by the department.

(f) Quality assurance program employed in obtaining, collecting, generating and evaluating all baseline data.

(3) Within 10 days of receipt of the notification under this section, the department shall give notice of a public informational hearing to be held not less than 45 nor more than 90 days after the notice is given. This notice shall be given by mail to the applicant, to any known state agency required to issue a permit for the proposed operation, to the regional planning commission for the affected areas, to the county, city, village, town and tribal government within which any part of the affected area lies and to all persons who have requested such notice. The hearing shall be a public informational hearing to solicit public comments on the following:

(a) Anticipated environmental impacts and desired baseline studies to be conducted by the applicant or the department in order to evaluate the anticipated environmental impacts;

(b) Information and data needed for a prospecting permit application and an environmental impact report, if required;

(c) Information the department may seek through independent studies and verification;

(d) A list of persons desiring to receive notification of any departmental actions with regard to the proposed prospecting project;

(e) Verification procedures to be employed by the department;

(f) Quality assurance procedures to be employed by the applicant; and

(g) Anticipated permits, approvals, certifications and licenses for the proposed prospecting project required by federal, state and local agencies.

(4) After review of the notice of intent and the oral and written testimony given during and after the public hearing, the department shall, within 90 days of the close of the public hearing, advise the person giving the notice of the following:

(a) Specific informational and quality assurance requirements that the person must provide for a prospecting permit application and an environmental impact report, if such a report is required, the methodology and quality assurance procedures to be used in gathering information, and specifically the type and quantity of information on the characteristics of natural resources including groundwater in the proposed prospecting site and a timely application date for all necessary approvals, licenses and permits.

(b) The department shall accept general environmental data or information such as soil characteristics, hydrologic conditions and air and water data contained in publications, maps, documents, studies, reports and similar sources, whether public or private, not prepared by or for the person. The department shall accept the data which is otherwise admissible that is collected prior to notification for purposes of evaluating another site or sites and which is not collected with intent to evade the provisions of this chapter. The department shall inform the person giving notice if the data will or will not be accepted by the department. The department shall state in writing the reasons for not accepting all the data or portions thereof. The acceptance of the data by the department shall not attest to the validity of the data.

(c) Preliminary verification procedures to be conducted by the department.

(5) All information gathered by a person giving notice shall be submitted to the department as soon as it is in final form. The department may revise or modify the requirements regarding information which must be gathered and submitted. The department shall notify the person by registered mail of the revisions or modifications of its requirements and the reasons therefor, and if a scope of study pursuant to sub. (7) will be required.

(6) A county, town, village, city or tribal government in which a proposed prospecting site is to be located or which is likely to be substantially affected by the proposed prospecting operation shall be provided copies by the department of its response pursuant to sub. (4) and of any scope of study and department comments provided to the same resulting from sub. (7). The department shall, upon the establishment of a local impact committee by any of the above groups, pursuant to s. 293.33, Stats., send copies of such documents to the local impact committee rather than directly to the county, town, village, city or tribal government.

(7) (a) If requested by the department, the applicant shall develop a scope of study designed to comply with the department's informational requirements for departmental approval. The scope of study shall include the following:

1. Identification of data requirements specified by the department;

2. Specific methodologies to be utilized in data collection, data processing, laboratory work and analysis;

3. Description of the format in which the data will be presented in the environmental impact report, if such report is required;

4. Tentative schedule for collection of field data;

5. Names, addresses and qualifications of persons who will be responsible for data collection, laboratory work and impact analysis; and

6. An updated quality assurance program as previously submitted pursuant to sub. (2) (f).

(b) The scope of study shall be submitted to the department within 120 days after the date of the department's request for the study.

(c) The department shall review the proposed scope of study and shall accept, reject or make modifications in the scope of study within 60 days of its receipt. In reviewing the proposed scope of study, the department shall reconsider all comments made at the informational hearing held pursuant to sub. (3).

(d) The department may require the person to submit any or all raw field data collected either by or for it by a consultant.

(e) The department shall develop studies and quality assurance and verification programs in a manner consistent with future monitoring requirements.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **correction in (6) made under s. 13.93 (2m) (b), Stats.**

NR 131.06 Application to prospect. (1) No person may engage in prospecting without first securing a prospecting permit issued by the department and a written authorization to prospect as provided in s. NR 131.09 (3).

(2) Any operator wishing to engage in prospecting shall file an application in reproducible form and 25 copies thereof with the department upon forms prepared and furnished by the department. A prospecting permit application shall be submitted for each prospecting site. Copies of the application shall be distributed to the clerk of any county, city, village or town with zoning jurisdiction over the proposed site, to the clerk of any county, city, village or town within whose boundaries any portion of the proposed site will be located, and to the main public library of each county or municipality with zoning jurisdiction over the proposed site, with whose boundaries any portion of the proposed site will be located.

(3) The application shall be accompanied by the following:

(a) A fee of $1,000 to cover the estimated costs of evaluating the operator's prospecting permit application. Upon completion of its evaluation, the department shall adjust this fee to reflect the actual cost of evaluation less any fees paid for the same services to satisfy other requirements. Evaluation of a prospecting permit application shall be complete upon the issuance of an order to grant or deny a prospecting permit.

(b) A prospecting plan in accordance with s. NR 131.07.

(c) A reclamation plan in accordance with s. NR 131.08.

(d) A proposed monitoring and quality assurance plan consistent with the requirements of chs. NR 132 and 182 and s. 1.11, Stats. The proposed monitoring plan shall be considered at the s. 293.43, Stats., hearing.

(e) A list of names and addresses of each owner of land within the prospecting site and each person known by the applicant to hold any option or lease on land within the prospecting site and all prospecting and mining permits in this state held by the applicant.

(f) Evidence satisfactory to the department that the applicant has applied for necessary approvals and permits under all applicable zoning ordinances and that the applicant has applied for all necessary approvals, licenses or permits required by the department.

(g) Information as to whether the applicant, its parent, principal shareholders, subsidiaries or affiliates in which it owns more than a 40% interest, has forfeited any prospecting or mining bonds in other states with the past 20 years, and the dates and locations, if any.

(h) Information relating to whether the area may be unsuitable for prospecting, and either information relating to whether the area may be unsuitable for surface mining or a certification that the operator will not subsequently make application for a permit to conduct surface mining at the site.

(i) A report containing all studies made in compliance with s. NR 131.05, including the data obtained, description of methods employed, verification procedures and reproducibility, the names of the persons collecting or generating the data together with their qualifications and proposals to investigate alternative solutions to specific problems identified by the studies.

(j) An itemized statement showing the estimation of the cost to the state of reclamation.

(k) Descriptions of land contiguous to the proposed prospecting site which the applicant owns, leases or has an option to purchase or lease.

(L) Other information or documentation that the department may require.

(4) The department has been directed, pursuant to ch. 421, laws of 1977, to assure that prospecting activities conducted in this state result in a minimization of disturbance to wetlands. The legislature has also directed, in ch. 377, laws of 1977, that department rules relating to metallic mineral prospecting wastes take into consideration the special requirements of metallic mineral prospecting operations in the location, design, construction, operation and maintenance of sites and facilities for the disposal of such wastes as well as any special environmental concerns that will arise as a result of the disposal of the same. The department has established, in s. NR 1.95, an overall framework for its decisions affecting wetlands. It is, therefore, the intent of this subsection to implement these directives recognizing that, depending on the location and site conditions involved in a particular case, it may be relatively easy to avoid entirely the use of wetlands in some cases while being virtually impossible to avoid their limited and carefully contemplated use in others and that the goal of the siting process shall be the selection of sites that are most favorable taking into account all pertinent factors. For purposes, therefore, of administering these directives and rules and acting on permits, licenses and approvals, the following standards shall be applied:

(a) The objective of the applicant's site selection process for prospecting facilities, and for the disposal or storage of wastes or materials produced by such activities, shall be the selection of a viable site that would result in the least overall adverse environmental impact.

(b) The applicant's site selection process shall include the identification and analysis of various alternatives so that a legitimate comparison between the most viable sites can be made by the department, realizing that a comparison will be made between several sites, all of which may have some imperfections with regard to environmental acceptability and none of which, in some cases, may be found to be environmentally acceptable as a result of compliance with s. 1.11, Stats., and other applicable Wisconsin laws.

(c) To ensure compliance with the requirement to minimize the disturbance of wetlands, the applicant shall identify and the department shall analyze viable sites which would result in the least overall adverse environmental impact and which would also avoid the use of any wetlands. If such sites avoiding the use of wetlands cannot be identified pursuant to the standards in this subsection, then the applicant shall identify and the department shall analyze those viable sites which would result in the least overall adverse environmental impact and which would also utilize, consistent with minimizing total environmental impacts, the least acreage and the least valuable wetlands directly and which would cause the least adverse impact on the wetlands and waters of the state outside the proposed area of use.

(d) The use of wetlands for prospecting activities, including the disposal or storage of related wastes or materials, or the use of other lands for such uses which would have a significant adverse effect on wetlands, are presumed to be unnecessary unless the applicant demonstrates, taking into account economic, environmental, technical, recreational and aesthetic factors, that the site proposed for use:

1. Constitutes a viable site;

2. Is the alternative which causes the least overall adverse environmental impact; and

3. Will be used in a manner so as to minimize the loss of wetlands and the net loss of the functions which those wetlands may serve with respect to related wetlands or other waters of the state, or both, outside the proposed area of use. As used in this paragraph, a presumption shall not be construed to be a prohibition, but rather the creating of a burden of proof on the applicant to demonstrate by the preponderance of evidence that it has complied with all the siting principles and standards of this subsection. As used in this section, viable means technically and economically feasible.

(e) With respect to prospecting activities sited, in whole or in part, in wetlands and predating these rules as well as ch. 377, laws of 1977, the use of such wetlands for such activities shall be deemed necessary hereunder and the site of such use shall be deemed a viable site. The standards of minimization herein established to the extent applicable to such preexisting activities by reason of s. 293.13 (2) (c) 8., Stats., shall be so applicable only to the extent specified in ss. 289.31 (1) and 293.91, Stats. Furthermore, any additional activities undertaken in wetlands by an applicant

subsequent to the effective date of these rules, which additional activities are undertaken to bring activities of the applicant, which were sited in wetlands prior to these rules, into prompt compliance with chs. 30, 281 and 283, Stats., as well as regulations, orders and decisions thereunder, shall be deemed to be necessary so long as the applicant demonstrates that, taking into account economic, environmental, technical, recreational and aesthetic factors, the site proposed for use by such additional activities will be used in a manner so as to minimize the loss of wetlands and the net loss of functions which those wetlands may serve with respect to related wetlands or other waters of the state, or both, outside the proposed area of use.

(f) The department shall give special consideration to a site where it finds that the degree of necessary improvement is of such extent and expense that compliance cannot be accomplished without affecting wetlands.

(g) The applicant shall assist in the evaluation of environmental impacts as mandated herein. All of the applicable following wetlands functions and values shall be considered except as provided in par. (h):

1. 'Biological functions.' Wetlands are environments in which a variety of biological functions occur. In many cases, wetlands are very productive ecosystems which support a wide diversity of aquatic and terrestrial organisms. Many wetland areas are vital spawning, breeding, nursery or feeding grounds for a variety of indigenous species. Wetlands are sometimes the habitats for state or federally designated rare, threatened or endangered species. Evaluation of the biological functions should include consideration of the kinds, numbers and relative abundance and distribution of plant and animal species supported by the area, net primary productivity of plant communities, wildlife production and use, and the kinds and amount of organic material transported to other aquatic systems as a potential energy source for consumer organisms in those systems. Habitat evaluation should consider the short– and long–term importance of the wetlands to both aquatic and terrestrial species. In addition, the evaluation should include any specialized wetland functions essential for an organism to complete its life cycle requirements such as cover, spawning, feeding and the like. Each wetland under consideration should be evaluated on a site specific basis.

2. 'Watershed functions.' In addition to their biological functions, wetlands may serve important physical and chemical functions with respect to other wetlands and waters of the state. A specific wetland, or set of wetlands, may play a critical role in maintaining the stability of the entire system to which it is physically and functionally related. This functional role may include the maintenance of both the hydrologic patterns and the physical and chemical processes of related wetlands and other related waters of the state. Evaluation of wetland functions requires a thorough analysis of the manner and extent to which the wetland serves to maintain the hydrologic, physical and chemical processes of the larger ecosystem to which it belongs. Factors to be considered in the evaluation process are discussed below. The use of non–wetland areas may alter the hydrologic, chemical and physical processes of wetlands outside the proposed area of use. The possibility of such impacts from the use area into wetlands and other waters of the state outside the proposed area of use should be carefully considered.

2c. 'Hydrologic support functions.' A particular wetland may function to maintain the hydrologic characteristics, and thereby the physical and chemical integrity of an entire aquatic ecosystem. Assessment of the hydrologic support function shall consider the effects that modifications of a particular area could have on the hydrologic relations to the whole wetland or aquatic ecosystem, and on the cumulative effects of piecemeal alterations. Evaluation of wetlands hydrologic functions shall include consideration of the wetland' s location and topographic position, the areal extent of the wetland within the associated system, the degree of connection with other wetlands and waters of the state, and the hydrologic regime. Hydrologic regime refers to the hydrologic characteristics of a wetland such as the source of the water, its velocity, depth and fluctuation, renewal rate and temporal patterns on timing. The water source determines ionic composition, oxygen saturation, and potential pollutant load. Velocity affects turbulence and the ability of the water to carry suspended particulate matter. Water depth and fluctuation patterns have a critical influence on the vegetation, wildlife, and physical–chemical properties of the sediments and overlying waters. Renewal rate describes the frequency of replacement of the water which depends on water depth and volume, frequency of inundation and velocity. The temporal pattern refers to the frequency of inundation and its regularity or predictability. The hydrologic regime of a wetland influences the biological availability and transport of nutrients, detritus and other organic and inorganic constituents between the particular wetland and other water bodies. Other facets of the hydrologic regime may be considered in specific cases. The location and topographic position of any particular wetland in relation to other water systems determine in part the degree to which they are hydrologically connected. The strongest hydrologic connections are likely to occur between wetlands and other water systems which exchange water frequently and/or are nearest to each other. The areal extent of any particular wetland in relation to the total area of the surrounding watershed is an important criterion in evaluating the hydrologic support function. This includes the relative spatial relationships between specific areas under study and the total area of the adjacent wetland and any open water areas in the watershed.

2f. 'Groundwater function.' Groundwater may discharge to a wetland, recharge from a wetland to another area, evaporate from, and/or flow through a wetland. The direction and rate of groundwater flow in a given wetland may change. The criteria that should be considered for their influence on the recharge potential include the total areal extent of wetlands and other waters in the particular drainage basin, and the hydrologic characteristics of the associated aquifer or aquifers including porosity, permeability and transmissivity.

2i. 'Storm and flood water storage.' Some wetlands may be important for storing water and retarding flow during periods of flood or storm discharge. Even wetlands without surface water connections to other water bodies may serve this function. Such wetlands can reduce or at least modify the potentially damaging effects of floods by intercepting and retaining water which might otherwise be channelled through open flow systems. The importance of a given wetland for storm and flood water storage may be modified by the cumulative effects of the proposed activities and previous activities within the watershed. The flood storage capacity of a particular wetland is primarily a function of its area, basin shape, substrate texture and previous degree of saturation. In general, the greater the area of the wetland and the coarser the texture of the substrate, the greater the potential for flood water storage, given unsaturated field conditions. Similarly, wetland vegetation is an important factor in reducing the energy of flood or storm water.

2m. 'Shoreline protection.' Wetlands also function to dissipate the energy of wave motion and runoff surges from storms and snowmelt, and thus lessen the effects of shoreline erosion. Wave action shielding by wetlands is not only important in preserving shorelines and channels, but also in protecting valuable residential, commercial and industrial acreage located adjacent to the aquatic ecosystems. The capacity of a particular wetland to act as an erosional buffer for a shoreline depends on such factors as the vegetation characteristics, the shape and size of the wetland and the adjacent shoreline morphology. The protection of shorelines by wetlands depends primarily on the floristic composition, structure and density of the plant community. Shoreline morphology along with fetch, adjacent bottom topography and wetland vegetation are important considerations in evaluating a wetland for its shoreline protection functions. Wetlands along shorelines with

long fetches are likely to be associated with major waters of the state and shall not be considered for use.

2p. 'Other watershed functions.' A wetland may perform a variety of other important functions within a watershed. Wetlands may degrade, inactivate, or store materials such as heavy metals, sediments, nutrients, and organic compounds that would otherwise drain into waterways. However, wetlands may subsequently release potentially harmful materials if the wetland soil is disturbed or its oxidation–reduction conditions altered. Potential alterations of these processes must be considered in the analysis, especially with regard to impacts on wetlands outside the proposed area of use. In assessing the importance of a particular wetland to the performance of watershed functions which influence the physical, chemical and biological properties of related waters, the following shall be considered:

a. Density and distribution of plants;

b. Area, depth and basin shape;

c. Hydrologic regime;

d. Physical, chemical and biological properties of the water and soil;

e. Relationship of wetland size to watershed size;

f. The number and size of other wetlands remaining in that watershed;

g. Topography of the watershed;

h. Position of the wetland within the watershed relative to springs, lakes, rivers and other waters;

i. Land use practices and trends within the watershed, or the likelihood of nutrient, sediment or toxin loads increasing.

3. 'Recreational, cultural and economic value.' Some wetlands are particularly valuable in meeting the demand for recreational areas, directly or indirectly, by helping to maintain water quality and providing wildlife habitat. Examples of recreational uses include: hunting, canoeing, hiking, snowshoeing, and nature study. To some people and cultures certain wetlands provide an important part of their economic base and/or contribute to their cultural heritage. In assessing the recreational, cultural and economic potential of a particular wetland, the following should be considered:

a. Wetland type;

b. Size;

c. Suitability and compatibility for the different types of recreational uses;

d. Legal access.

e. Accessibility without damage to other wetland values or functions;

f. Proximity to users;

g. Position in relation to lakes, rivers and other waters;

h. Whether it provides habitat for or produces species of recreational, cultural or economic interest; and

i. Whether the products of some wetlands species (e.g., wild rice, furbearers, fish) have special cultural value and/or provide a significant portion of the economic base for the people of a region.

4. 'Scarcity of wetland type.' Certain wetland types (e.g., fens, wild rice lakes) which are statewide or regionally scarce possess special resource significance. Scarcity or rareness depends on the frequency of occurrence of the type, the area of the type in existence prior to settlement, the historical conversion of the type and its resultant degree of destruction, and the amount of similar habitat in the present landscape of the region. In assessing the scarcity of a particular wetland, a comparative measure of the commonness among all wetland types and the degree to which wetlands of all types occur in the surrounding landscape should be considered.

5. 'Aquatic study areas, sanctuaries and refuges.' Through various local, state and federal actions, large areas of the nation's wetlands have been designated and preserved by public agencies for scientific study, and the protection of aquatic and terrestrial habitats. Many public and private groups have also established sanctuaries and refuges in wetlands. Wetland areas that are legally and/or administratively controlled as such, or that are included or nominated for inclusion in the national register of natural landmarks, could be comparatively important. Wetland areas of significant social, cultural, or historic value, such as known landmarks, are considered important.

6. 'The ecosystem concept in a regional context.' The previous subsections suggest that wetlands may not only have important functions within their boundaries, but may also interact with ecosystems of the surrounding region. The potential impact of wetland modification may influence distant wetlands if they are structurally and functionally related in the region. Similarly, the functions and values of any wetland may be affected by other existing and potential water resource activities in the region. Therefore, consideration should be given to those impacts which are shown to be of regional concern.

(h) All wetlands which are to be used by the proposed activity shall be inventoried and analyzed pursuant to this chapter. The use of such wetlands shall be de minimis and, therefore, exempt from further application of this section, if the applicant demonstrates the following by a preponderance of evidence:

1. The wetlands to be used are or can be made to be sufficiently hydrologically isolated from the surface and underground waters of the state so that no violations of applicable laws and rules would result;

2. The wetlands are not special or unique utilizing the result of the analysis made pursuant to this chapter; and

3. The area of wetlands to be used shall not exceed 5 acres.

(5) The burden of proof to establish compliance with the requirements of this chapter shall be on the operator.

(6) The hearing procedure outlined in s. 293.43 (5), Stats., shall govern all hearings on the prospecting permit application.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82**;** correction in (4) (g) made under s. 13.93 (2m) (b) 1., Stats., Register, September, 1995, No. 477; **corrections in (3) (d), (4) (e), and (6) were made under s. 13.93 (2m) (b), Stats.**

NR 131.07 Prospecting plan. The prospecting plan shall include the following:

(1) A detailed map of the proposed prospecting site in accordance with s. 293.35 (1), Stats.

(2) Details of the nature, extent and final configuration of the proposed excavation and project site including location and total production of refuse, and nature and depth of overburden.

(3) Details of the proposed operating procedures which may be furnished by reference to documents submitted pursuant to ch. NR 182 including:

(a) Prospecting operating sequence.

(b) Handling of overburden materials.

(c) Prospecting waste production, loading, transportation, storage and final disposition.

(d) Bulk sample production, loading, transportation, storage and final disposition.

(e) Ground and surface water management techniques including provisions for erosion prevention and drainage control and a detailed water management plan showing source, flow paths and rates, storage volumes and release points.

(f) Plans for collection, treatment and discharge of any water resulting from the operation.

(g) Plans for air quality protection pursuant to ch. 285, Stats.

(h) The applicant shall prepare a risk assessment of possible accidental health and environmental hazards potentially associated with the prospecting operation. Contingency measures with respect to these risks and hazards, and the assumption in this assessment, shall be explicitly stated.

(i) Measures for notifying the public and responsible governmental agencies of potentially hazardous conditions including the

movement or accumulation of toxic wastes in ground and surface water, soils, and vegetation and other consequences of the operation of importance to public health, safety and welfare.

(j) Description of all surface facilities associated with the prospecting site.

(k) Description of all geological/geotechnical investigations and drilling programs.

(4) Evidence satisfactory to the department that the proposed prospecting operation will be consistent with the reclamation plan and will comply with the following minimum standards:

(a) Grading and stabilization of excavation, sides, and benches to conform with state and federal environmental and safety requirements and to prevent erosion and environmental pollution.

(b) Grading and stabilization of deposits of refuse in conformance with state and federal safety and environmental requirements and solid waste laws and regulations.

(c) Stabilization of merchantable by–products.

(d) Adequate diversion and drainage of water from the prospecting site to prevent erosion and contamination of surface and groundwaters.

(e) Backfilling of excavations where such procedure will not interfere with the prospecting operation.

(f) Handling and storage of all materials on the prospecting site in an environmentally sound manner as determined by the department. Materials not licensed pursuant to ch. NR 182 but deemed by the department to present a potential threat to the environment shall be subject to the waste characterization analysis procedure set forth in s. NR 182.08 (2) (b).

(g) Removal and stockpiling, or other measures to protect topsoils consistent with environmental considerations and reclamation, prior to prospecting, unless the department determines that such actions will be environmentally undesirable.

(h) Maintenance of adequate vegetative cover where feasible to prevent erosion.

(i) Impoundment of water where necessary in a safe and environmentally acceptable manner.

(j) Adequate planning of the site to achieve the aesthetic standards for the prospecting site described in ss. NR 131.17 and 131.18 (5).

(k) Identification and prevention of pollution as defined in s. 281.01 (10), Stats., resulting from leaching of waste materials in accordance with state and federal solid waste laws and regulations.

(L) Identification and prevention of significant environmental pollution as defined in s. 283.01 (6m), Stats.

(m) Maintenance of appropriate emergency procedures to minimize damage to public health, safety, welfare and the environment from events described under sub. (3) (h).

(5) Submission of a plan for a preblasting survey. This survey shall be completed and submitted to the department prior to any blasting.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (1), (3) (g), (4) (k) and (L) made under s. 13.93 (2m) (b), Stats.**

NR 131.08 Reclamation plan. The reclamation plan for the prospecting site shall include the following:

(1) Detailed information and maps on reclamation procedures including:

(a) Manner, location, sequence and anticipated duration of reclamation.

(b) Ongoing reclamation procedures during prospecting operation.

(c) Proposed interim and final topography and slope stabilization.

(d) Proposed final land use and relationship to surrounding land and land use.

(e) Plans for long–term maintenance of prospecting site including:

1. Monitoring of wastes and ground and surface water quality.

2. Names of persons legally and operationally responsible for long–term maintenance.

(f) Projected costs of reclamation including estimated cost to the state of fulfilling the reclamation plan.

(g) Alternative plans for reclamation of the prospecting site if all or part of the site is to become part of a mining site.

(2) Evidence satisfactory to the department that the proposed reclamation will conform with the following minimum standards:

(a) All toxic and hazardous wastes, refuse, tailings and other solid waste shall be disposed of in conformance with applicable state and federal statutes and regulations.

(b) All tunnels, shafts or other underground openings shall be sealed in a manner which will prevent seepage of water in amounts which may be expected to create a safety, health or environmental hazard, unless the applicant can demonstrate alternative uses which do not endanger public health and safety and which conform to applicable environmental protection and mine safety laws and rules.

(c) All underground and surface runoff waters from prospecting sites shall be managed, impounded or treated so as to prevent soil erosion to the extent practicable, flooding, damage to agricultural lands or livestock, damage to wild animals, pollution of ground or surface waters, damage to public health or threats to public safety.

(d) All surface structures constructed as part of the prospecting activities shall be removed, unless they are converted to an acceptable alternate use.

(e) Adequate measures shall be taken to prevent significant surface subsidence, but if such subsidence does occur, the affected area shall be reclaimed.

(f) All topsoil from surface areas disturbed by the prospecting operation shall be removed and stored in an environmentally acceptable manner for use in reclamation.

(g) All disturbed surface areas shall be revegetated as soon as practicable after the disturbance to stabilize slopes and prevent air and water pollution, with the objective of reestablishing a variety of plants and animals indigenous to the area immediately prior to prospecting, unless such reestablishment is inconsistent with the provisions of s. 293.01 (23), Stats. Plant species not indigenous to the area may be used if necessary to provide rapid stabilization of slopes and prevention of erosion, if such species are acceptable to the department, but the ultimate goal of reestablishment of indigenous species shall be maintained.

(3) If it is physically or economically impracticable or environmentally or socially undesirable for the reclamation process to return the affected area to its original state, the reasons therefor and a discussion of alternative conditions and uses to which the affected area can be put.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **correction in (2) (g) made under s. 13.93 (2m) (b).**

NR 131.09 Issuance. (1) Unless denied pursuant to s. NR 131.10 the department shall issue a prospecting permit to the applicant within 90 days following the date of completion of the public hearing record.

(2) After issuance of the permit but prior to commencing prospecting, the operator shall file with the department the following:

(a) As required by s. 293.51, Stats., a bond or other security payable to the department conditioned upon faithful performance of all requirements of ch. 293, Stats., and the provisions of this chapter.

1. The amount of the bond or other security required shall be equal to the estimated cost to the state of fulfilling the reclamation plan, in relation to that portion of the site that will be disturbed by

the end of the following year. The estimated cost of reclamation shall be determined by the department on the basis of those factors listed in s. NR 131.07. In lieu of a bond, the operator may deposit cash, certificates of deposit or government securities with the department. Interest received on certificates of deposit and government securities shall be paid to the operator. The department may increase the amount of the bond, cash, certificates of deposit or government securities in lieu of the procedures contained in s. NR 131.12 (2), in order to assure adequate financing for the reclamation plan.

2. The bond shall be issued by a surety company licensed to do business in Wisconsin. If the surety company's license to do business is revoked or suspended, the operator, within 30 days after receiving written notice thereof from the department, shall substitute surety underwritten by a surety company licensed to do business in Wisconsin. Upon failure of the operator to make a substitution, the department shall suspend the operator's prospecting permit until substitution has been made.

3. Each bond shall provide that the bond shall not be canceled by the surety, except after not less than 90 days notice to the department in writing by registered or certified mail. Not less than 30 days prior to the expiration of the 90 day notice of cancellation, the operator shall deliver to the department a replacement bond in the absence of which all prospecting shall cease.

(b) A certificate of insurance certifying that the operator has in force a liability insurance policy issued by an insurance company authorized to do business in this state or in lieu of a certificate of insurance, evidence that the operator has satisfied state or federal self–insurance requirements covering all prospecting of the operator in this state and affording personal injury and property damage protection in a total amount deemed adequate by the department but not less than $50,000.

(3) Upon receipt of satisfactory reclamation bond and the certificate of insurance, the department shall give written authorization to the operator to commence prospecting in accordance with the prospecting and reclamation plans.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (2) (a) (intro.) made under s. 13.93 (2m) (b), Stats.**

NR 131.10 Denial. (1) The department shall deny a prospecting permit if it finds any of the following:

(a) The prospecting site is unsuitable for prospecting.

(b) The prospecting site is unsuitable for surface mining absent a certification not to surface mine.

(c) The prospecting plan and the reclamation plan will not comply with the minimum standards for prospecting and reclamation as provided in ss. NR 131.07 and 131.08.

(d) The applicant is in violation of ch. 293, Stats., and the provisions of this chapter.

(e) The applicant has within the previous 20 years forfeited any bond posted in accordance with prospecting or mining activities in this state, unless by mutual agreement with the state.

(f) Any officer or director of the applicant has, while employed by the applicant, the applicant's parent corporation, any of the applicant's principal shareholders, or any of the applicant's subsidiaries or affiliates, in which the applicant owns more than a 40% interest, within the previous 20 years forfeited any bond posted in accordance with prospecting or mining activities in this state unless by mutual agreement with the state.

(g) The proposed prospecting operation may reasonably be expected to create any of the following situations:

1. Landslides or substantial deposition from the proposed operation in stream or lake beds which cannot be feasibly prevented.

2. Significant surface subsidence which cannot be reclaimed because of the geologic characteristics present at the proposed site.

3. Hazards resulting in irreparable damage to any of the following, which cannot be prevented under the requirements of ch. 293, Stats., avoided to the extent applicable by removal from the area of hazard or mitigated by purchase or by obtaining the consent of the owner:

a. Dwelling houses.

b. Public buildings.

c. Schools.

d. Churches.

e. Cemeteries.

f. Commercial or institutional buildings.

g. Public roads.

h. Other public property designated by the department.

4. Irreparable environmental damage to lake or stream bodies despite adherence to the requirements of ch. 293, Stats. This subdivision does not apply to an activity which the department has authorized pursuant to statute, except that the destruction or filling in of a lake bed shall be authorized notwithstanding any other provision of the law.

(2) If an application for a prospecting permit is denied, the department, within 30 days from date of application denial, shall furnish the operator in writing the reasons for the denial.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (1) (d), (g) 3. and 4. made under s. 13.93 (2m) (b), Stats.**

NR 131.11 Monitoring. (1) The operator shall monitor the prospecting site in accordance with the monitoring plan contained in the prospecting permit. The department may require the operator to perform additional monitoring of environmental changes during the course of the permitted activity and for such additional periods of time as is necessary to satisfactorily complete reclamation.

(2) The department may monitor environmental changes concurrently with the operator as stated in sub. (1) and for an additional period of time after the full bond is released pursuant to s. 293.63 (5), Stats.

(3) (a) Baseline data and monitoring data including the monitoring plan shall be reviewed at the time of annual permit review, or at such time as the operator requests any modification of the prospecting permit or reclamation plan.

(b) Baseline data and monitoring data shall be considered by the department in all enforcement actions including issuance of a stop order to an operator, requiring an immediate cessation of prospecting, in whole or in part, at any time that the department determines that there exists an immediate substantial threat to public health and safety or the environment.

(c) If the analyses of samples indicate that the quality of the groundwater is statistically significantly different from either baseline or background the owner shall notify the department immediately.

(4) Any request for modification of the monitoring plan contained in the prospecting permit shall comply with the procedures in s. NR 131.12.

(5) Bacteriological analyses of water samples, and all radiological analyses, shall be performed by the state laboratory of hygiene or at a laboratory certified or approved by the department of health and social services. Other laboratory test results submitted to the department under this chapter shall be performed by a laboratory certified or registered under ch. NR 149. The following tests are excluded from this requirement:

(a) Physical testing of soil,

(b) Air quality tests,

(c) pH,

(d) Chlorine residual,

(e) Temperature.

Note: The requirement in this section to submit data from a certified or registered laboratory is effective on August 28, 1986.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; cr. (5) Register, April, 1986, No. 363, eff. 8–28–86; **correction in (2) made under s. 13.93 (2m) (b), Stats.**

NR 131.12 Permit review and modification. (1) Eighteen months after the issuance of a prospecting permit and annually thereafter until prospecting ceases, the department shall review the operator's prospecting permit, reclamation plan and bond to ascertain adequacy, compliance with state or federal laws enacted after the issuance of the permit and technological currency.

(2) If the department after review determines that the plan should be modified or the bond amount changed, the department shall notify the permit holder of the necessary modifications or changes. If the permit holder does not request a hearing within 30 days, the modification or changes shall be deemed accepted.

(3) (a) If the permit holder desires to modify the permit, an amended application shall be submitted to the department on forms provided by the department. If the proposed amendment substantially changes the scope of the original prospecting proposal, the department shall process the amended application in the same manner as an original application for a prospecting permit.

(b) If the amended application is to cancel any or all of a prospecting site where no prospecting has taken place, the department shall order the release of the bond or security or portions thereof posted on the land being removed from the permitted prospecting site and cancel or amend the operator's prospecting permit.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 131.13 Certificates of completion and bond release. (1) Not less than 2 years after notification to the department of completion of the reclamation plan, the operator may petition the department to reduce the amount of the bond. After public hearing conducted pursuant to s. 293.43, Stats., the department shall issue a certificate of completion provided the operator has fulfilled its duties under the reclamation plan.

(2) Upon issuance of a certificate of completion, the department shall reduce the amount of the bond or security to an amount equal to the estimated cost of reclamation of the portion of the prospecting site for which a certificate of completion has not been issued.

(3) Upon issuance of a certificate or certificates of completion of reclamation for the entire prospecting site, the department shall require the operator to maintain a bond equal to at least 10% of the cost to the state of reclaiming the entire prospecting site.

(4) After 5 years after issuance of the latest certificate or certificates of completion for the entire prospecting site, the department shall release the bond or security if the department determines that the operator has complied with the reclamation plan.

(5) The operator shall reclaim the prospecting site, provided the operator has not submitted an application to the department for a mining permit which includes the unreclaimed prospecting site or portions thereof which are not included in the mining permit application in accordance with the reclamation plan within 5 years after the issuance of the prospecting permit. If the prospecting site is not reclaimed within the 5 year period, the operator shall forfeit the reclamation bond and the department shall reclaim the prospecting site.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **correction in (1) made under s. 13.93 (2m) (b), Stats.**

NR 131.14 Inspections. (1) Any duly authorized officer, employee or representative of the department may enter and inspect any property, premises or place on or at a prospecting site at any reasonable time for the purpose of ascertaining the state of compliance with this chapter and ch. 293, Stats.

(2) No operator may refuse entry or access to any authorized representative of the department who requests entry for purposes of inspection and who presents appropriate credentials.

(3) No person may obstruct, hamper or interfere with any such inspection.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **correction in (1) made under s. 13.93 (2m) (b), Stats.**

NR 131.15 Confidentiality. (1) Except as provided under sub. (2), prospecting data are public records subject to s. 19.21, Stats.

(2) Confidential prospecting data. (a) An applicant for a prospecting permit may request confidential status for any prospecting data.

(b) The department shall grant confidential status to prospecting data if the applicant makes a request and if the prospecting data relates to economic information or geologic information or is entitled to confidential status as determined pursuant to s. NR 2.19.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 131.16 Enforcement. (1) (a) The department shall hold a public hearing related to alleged or potential environmental pollution upon the verified complaint of 6 or more citizens filed with the department. The complaint shall state the name and address of a person within the state authorized to receive service of answer and other papers in behalf of complainants.

(b) The department may order the complainants to file security for costs in a sum deemed to be adequate but not to exceed $100 within 20 days after the service upon them of a copy of such order and all proceedings on the part of such complainants shall be stayed until security is filed.

(c) The department shall serve a copy of the complaint and notice of the hearing upon the alleged or potential polluter either personally or by registered mail directed to his or her last known post office address at least 20 days prior to the time set for the hearing which shall be held not later than 90 days from the filing of the complaint.

(d) The respondent shall file his or her verified answer to the complaint with the department and serve a copy on the person so designated by the complainants not later than 5 days prior to the date set for the hearing, unless the time for answering is extended by the department for cause shown.

(e) For purposes of any hearing under this chapter, the secretary may issue subpoenas and administer oaths.

(f) Within 90 days after the closing of the hearing, the department shall make and file its findings of fact, conclusions of law and order, which shall be subject to review under ch. 227, Stats. If the department determines that any complaint has been filed maliciously or in bad faith it shall so find, and the person complained against shall be entitled to recover his or her expenses on the hearing in civil action.

(g) Any situation, project or activity which upon continuance or implementation would cause, beyond reasonable doubt, a degree of pollution that normally would require a clean–up action if it already existed, shall be considered potential environmental pollution.

(2) (a) The department may issue a stop order to an operator, requiring an immediate cessation of prospecting, in whole or in part, at any time that the department determines that there exists an immediate and substantial threat to public health and safety or the environment.

(b) The department shall schedule a hearing on the stop order, to be held within 5 days of issuance of the order, and shall incorporate notice of the hearing in the copy of the order served upon the

operator. Notice shall also be given to any other persons who have previously requested notice of such proceedings.

(c) Within 72 hours after commencement of the hearing, unless waived by agreement of the parties, the department shall issue a decision affirming, modifying or setting aside the stop order. The department may apply to the circuit court for an order extending the time, for not more than 10 days, within which the stop order must be affirmed, modified or set aside.

(d) The department shall set aside the stop order at any time, with adequate notice to the parties, upon a showing by the operator that the conditions upon which the order was based no longer exist.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 131.17 Minimum design and operation requirements. In addition to all other requirements of this chapter, no person shall construct, establish, operate or maintain a prospecting site except in conformance with the conditions attached to approval of the prospecting permit at the s. 293.43, Stats., hearing and the following requirements:

(1) To the extent practicable, and consistent with protection of the environment and requirements of necessary department approvals:

(a) Site elements should be placed where least observable from off the premises in any season.

(b) Site elements should be placed within the area of the overall site which is most visually compatible in respect to building shape.

(c) Site elements should be painted and maintained in a manner which is visually compatible with the associated vegetational and earth conditions.

(d) Site elements which cannot be visually mitigated using the techniques in pars. (b) and (c) should be made as visually inconspicuous as is practical.

(2) Effective means shall be taken to limit access to the site so as to minimize exposure of the public to hazards.

(3) Every reasonable effort should be made to reduce and control the production of contaminated water.

(4) Contaminated water, including liquid effluents, from whatever source associated with the project should be collected, stored, recycled or treated to the maximum extent practicable.

(5) Contaminated nonpoint source runoff from disturbed areas within the prospecting site should be collected and treated in a manner which facilitates monitoring, maximum practicable recycling reuse and consumption within the prospecting operation. Nonpoint sources of water pollution should be minimized to the extent practicable. Also to the extent practicable, the frequency and need for point source discharges of waste water to surface waters of the state shall be regulated pursuant to ch. 283, Stats.

(6) Provisions for critical back–up equipment in the event of operation equipment breakdown shall be made.

(7) Design and operation specifications for prospecting site facilities should include contingencies for emergency conditions. Such contingencies may include emergency power supplies, equipment redundancies or temporary holding facilities.

(8) Any prospecting site permitted pursuant to this chapter shall be designed, constructed, maintained, operated and reclaimed in such a manner so as to protect groundwater quality and quantity in accordance with the standards of ch. NR 182.

(9) Waste containing potentially harmful concentrations of acid generating material should not be used for purposes such as the construction of parking lots or roads in prospecting sites.

(10) Prospecting site facilities should be designed to minimize surface area disturbance.

(11) Where practicable, elevation differences in water–based transport systems should be utilized for gravity flows to minimize pumping facilities and pressures.

(12) If practicable, all liquid effluents from a prospecting waste facility should be directed to a common point (for treatment if necessary) before discharge to a natural watercourse. If practicable, treated wastes should not be directed to more than one watershed.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (intro.) and (5) made under s. 13.93 (2m) (b), Stats.**

NR 131.18 Location criteria and environmental standards. (1) To the extent practicable no person shall establish, construct, operate or maintain the use of property for any prospecting related buildings, roads, ponds, or other construction within the following areas, except pursuant to an exemption granted under s. NR 131.19:

(a) Within areas identified as unsuitable, in s. NR 131.03 (22).

(b) Within 1,000 feet of any navigable lake, pond or flowage.

(c) Within 300 feet of a navigable river or stream.

(d) Within a floodplain.

(e) Within 1,000 feet of the nearest edge of the right–of–way of any of the following: any state trunk highway, interstate or federal primary highway; the boundary of a state public park; the boundary of a scenic easement purchased by the department or the department of transportation; the boundary of a designated scenic or wild river; a scenic overlook designated by the department by rule; or a bike or hiking trail designated by the United States congress or the state legislature; unless, regardless of season, the site is visually inconspicuous due to screening or being visually absorbed due to natural objects, compatible natural plantings, earth berm or other appropriate means, or unless, regardless of season, the site is screened so as to be as aesthetically pleasing and inconspicuous as is feasible.

(f) Within wetlands, except pursuant to the criteria established in s. NR 131.06 (4).

(g) Within areas so that noncompliance will result with other applicable federal and state laws and regulations.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 131.19 Exemptions. (1) The department may grant exemptions from the requirements of this chapter, if such exemptions are consistent with the purposes of this chapter and will not violate any applicable federal or state environmental law or rule.

(2) (a) All requests for exemptions by the applicant shall be made at least 90 days before the hearing under s. 293.43, Stats., unless the condition which is the basis for the requested exemption is unknown to the applicant prior to that time or for good cause shown.

(b) If an applicant applies for an exemption less than 90 days before the hearing, the portion of the hearing concerning that exemption request shall be held no earlier than 90 days after receipt of the application for the exemption.

(c) Requests for exemptions may be made by any party to the hearing other than the applicant up to 30 days before the hearing. Any request for exemption made prior to the hearing shall be determined as part of that proceeding.

(3) The burden of proof for seeking an exemption is upon the person seeking it.

(4) Any party to the hearing may request more stringent standards or requirements for any provision of this chapter.

(5) Any application for an exemption made after the hearing shall be determined by the following procedure:

(a) The application shall be in writing and shall include documentation justifying the need for the exemption, describing the alternatives and explaining why the exemption was not sought before the hearing.

(b) If the application does not involve an exemption from a requirement of this chapter, the department shall issue a decision on the application within 15 days of receipt of the application.

(c) 1. If the application involves an exemption from a requirement of this chapter, within 10 days of the application the department shall publish a class 1 notice under ch. 985, Stats., in the official newspaper designated under s. 985.04 or 985.05, Stats., or, if none exists in a newspaper likely to give notice in the area of the proposed modification. The notice shall invite the submission of written comments by any person within 10 days from the time the notice is published, and shall describe the method by which a hearing may be demanded. Notice shall also be given by mail as provided in s. 293.43 (3) (b) 1., Stats.

2. Within 30 days after the notice is published, a written demand for a hearing on the matter may be filed by any county, city, village, town, tribal government or by any 6 persons. The demand shall indicate the interest of the municipality or persons who file it and state the reasons why the hearing is demanded.

3. A hearing demanded under this paragraph shall be held within 60 days after the deadline for demanding a hearing, and shall be conducted as a class 1 proceeding under s. 227.01 (3) (a), Stats. The hearing shall be held in an appropriate place designated by the department in one of the counties, cities, villages or towns which are substantially affected by the operation of the facility.

4. Within 45 days after giving notice or within 30 days after any hearing is adjourned, whichever is later, the department shall determine whether the exemption shall be granted.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (2) (a), (5) (c) 1., and 3. were made under s. 13.93 (2m) (b), Stats.**

Chapter NR 132

METALLIC MINERAL MINING

Note: Chapter NR 132 as it existed on August 31, 1982 was repealed and a new chapter NR 132 was created effective September 1, 1982.

NR 132.01 Purpose. The purpose of this chapter is to establish procedures and standards for the comprehensive regulation of metallic mineral mining in this state and to coordinate and reconcile applicable state and federal statutes and regulations so as to facilitate the procedures by which department permits, licenses and approvals may be applied for, hearings may be held, and determinations may be made by the department in a coordinated and integrated manner.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 132.02 Applicability. (1))The provisions of this chapter are applicable to all metallic mineral mining as defined by s. 293.01 (9), Stats., including the storage, handling, processing, transportation and disposal of all materials resulting from a mining operation except to the extent that mining wastes are regulated by ch. NR 182.

(2) Nothing herein shall require the amendment or modification of an application to mine, a mining plan or reclamation plan relating to a mining operation in existence on May 21, 1978 and for which a mining permit application approved by the department was on file on the date these rules became effective except to the extent there is a change in the mining operation requiring a modification of the mining permit under these rules.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **correction in (1) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.03 Definitions. The following special definitions are applicable to the terms used in this chapter:

(1) "Abandonment of mining" means the cessation of mining, not set forth in an operator's mining or reclamation plans or by any other sufficient written or constructive notice, extending for more than 6 months. Abandonment of mining does not include the cessation of mining due either to labor strikes or the cessation of mining due to such unforeseen developments as adverse market conditions for a period not to exceed 5 years as determined by the department after consulting with the metallic mining council.

(2) "Applicant" means a person who has applied for a mining permit.

(3) "Baseline data" means the data collected by the applicant or the department which the department has accepted through the regulatory process of ss. NR 132.05 and 132.11, and s. 293.43, Stats., as representing the existing environmental conditions prior to the commencement of mining.

(4) "Concentrator" means a facility where ore is separated into values (concentrates) and rejects (tailings).

(5) "Department" means department of natural resources.

(6) "Forfeited any bond" means the forfeiture of any performance security occasioned by noncompliance with any mining laws or provisions of this chapter.

(7) "Materials" means all substances handled, processed, transported, stored or disposed of on the mining site during the mining, concentrating and reclamation operation, including merchantable by–product and other materials generated by the operation as well as those brought onto the mining site.

(8) "Merchantable by–product" means all waste soil, rock, mineral, liquid, vegetation and other material directly resulting from or displaced by the mining, cleaning or preparation of minerals during mining operations which are determined by the department to be marketable upon a showing of marketability made by the operator, accompanied by a verified statement by the operator of his or her intent to sell such material within 3 years from the time it results from or is displaced by mining. If after 3 years from the time merchantable by–product results from or is displaced by mining such material has not been transported off the mining site, it shall be considered and regulated as refuse unless removal is continuing at a rate of more than 12,000 cubic yards per year. Regardless of whether the material constitutes merchantable by–product, it shall be subject to the requirements of this chapter.

(9) "Metallic mineral" means a naturally occurring inorganic, metal–containing substance which is mined or proposed to be mined for the purpose of extracting a metal or metals which form all or a part of the chemical composition of the mineral. Such metals include but are not limited to iron, copper, zinc, lead, gold, silver, titanium, vanadium, nickel, cadmium, molybdenum, chromium, manganese, cobalt, zirconium, beryllium, thorium, and uranium.

(10) "Mill" means a concentrator.

(11) "Mining" or "mining operation" means all or part of the process in the mining of metallic minerals other than for exploration or prospecting, including commercial extraction, agglomeration, beneficiation, construction of roads, removal of overburden and the production of refuse.

(12) "Mining permit" means the permit which is required of all operators as a condition precedent to commencing mining at a mining site.

(13) "Mining plan" means the proposal for the mining of the mining site which shall be approved by the department under s. 293.49, Stats., prior to the issuance of the mining permit.

(14) "Mining site" means the surface area disturbed by a mining operation, including the surface area from which the minerals or refuse or both have been removed, the surface area covered by refuse, all lands disturbed by the construction or improvement of haulageways, pipelines and pipeline corridors, and any surface areas in which structures, equipment, materials and any other things used in the mining operation are situated.

(15) "Monitoring data" means the data collected by the operator or the department after the commencement of mining.

(16) "Operator" means any person who is engaged in, or who has applied for or holds a permit to engage in mining, whether

individually, jointly or through subsidiaries, agents, employees or contractors.

(17) "Ore" means a naturally occurring material from which metallic minerals may be recovered at a profit.

(18) "Overburden" means any unconsolidated material that overlies bedrock.

(19) "Person" means any individual, corporation, cooperative–owner, lessee, syndicate, partnership, firm, association, trust, estate, public or private institution, political subdivision of the state of Wisconsin, any state agency, or any legal successor, representative, agent or agency of the foregoing.

(20) "Principal shareholder" means any person who owns at least 10% of the beneficial ownership of an operator.

(21) "Reclamation" means the process by which an area physically or environmentally affected by mining is rehabilitated to either its original state or, if this is shown to be physically or economically impracticable or environmentally or socially undesirable, to a state that provides long–term environmental stability. Reclamation shall provide the greatest feasible protection to the environment and shall include, but is not limited to, the criteria for reclamation set forth in s. 293.13 (2) (c), Stats., and the closure and long–term care requirements of ch. NR 182 for facilities licensed pursuant to that chapter.

(22) "Reclamation plan" means the proposal for the reclamation of the mining site which must be approved by the department under s. 293.49, Stats., prior to the issuance of the mining permit, and includes the closure and long–term care requirements of ch. NR 182 for facilities licensed pursuant to that chapter.

(23) "Refuse" means all waste soil, rock, mineral, liquid, vegetation and other material, except merchantable by–products, directly resulting from or displaced by the mining, and from the cleaning or preparation of minerals during mining operations, and shall include all waste materials deposited on or in the mining site from other sources and mining waste as defined in s. NR 182.04.

(24) "Tailings" means waste material resulting from the beneficiation of crushed ore at a concentrator.

(25) "Unsuitability" means that the land proposed for surface mining is not suitable for such activity because the surface mining activity itself may reasonably be expected to destroy or irreparably damage either of the following:

(a) Habitat required for survival of species of vegetation or wildlife as designated in ch. NR 27, if such endangered species cannot be firmly reestablished elsewhere.

(b) Unique features of the land, as determined by state or federal designation as any of the following, which cannot have their unique characteristic preserved by relocation or replacement elsewhere:

1. Wilderness areas designated by statute or administrative rule.

2. Wild and scenic rivers designated by statute or administrative rule.

3. National or state parks designated by statute or administrative rule.

4. Wildlife refuges and areas designated by statute or administrative rule.

5. Historical landmarks, sites and archaeological areas designated by the state historical society.

6. Scientific areas as follows:

a. Abelman's Gorge
ab. Abraham's Woods
ac. Apple River Canyon
ad. Audubon Goose Pond
ae. Aurora Lake
af. Avoca Prairie–Savanna
ag. Avon Bottoms
b. Bark Bay Slough
ba. Baxter's Hollow
bb. Bean Lake
bc. Bear Creek Cave
bd. Belmont Mound Woods
be. Beulah Bog
bf. Big Bay Sand Spit and Bog
bg. Bittersweet Lakes
bh. Blackhawk Island
bi. Black Tern Bog
c. Blue Hills Felsenmeer
ca. Blue River Sand Barrens
cb. Bois Brule Conifer Bog
cc. Bose Lake Hemlock–Hardwoods
cd. Brady's Bluff Prairie
ce. Brant Book Pines and Hardwoods
cf. Browntown Oak Forest
cg. Buena Vista Prairie Chicken Meadow
ch. Buena Vista Quarry Prairie
d. Castle Mound Pine Forest
da. Cedarburg Beech Woods
db. Cedarburg Bog
dc. Cedar Grove Hawk Research Station
dd. Charles Pond
de. Cherokee Marsh
df. Cherry Lake Sedge Meadow
e. Chiwaukee Prairie
ea. Comstock Bog – Meadow
eb. Council Grounds Pine Forest
ec. Crex Sand Prairie
ed. Dalles of the St. Croix River
ee. Dells of the Eau Claire River
ef. Devil's Lake Oak Forest
eg. Dewey Heights Prairie
f. Dory's Bog
fa. Dunbar Barrens
fb. Durst Rockshelter
fc. Eagle Oak Opening
fd. East Branch Milwaukee River
fe. Ekdall Brook Conifer Swamp
ff. Ennis Lake – Muir Park
fg. Escanaba Lake Hemlocks
g. Fairy Chasm
ga. Faville Prairie
gb. Finerud Pine Forest
gc. Five–Mile Bluff Prairie
gd. Flambeau River Hardwoods Forest
ge. Flora Spring Pond
gf. Fountain Creek Wet Prairie
gg. Fourmile Island Rookery
h. Genesee Oak Opening and Fen
ha. Giant White Pine Grove
hb. Gibraltar Rock
hc. Gobler Lake
hd. Gullickson's Glen
i. Haskell Noyes Memorial Woods
ia. High Lake Spruce–Balsam Forest
ib. Holmboe Conifer Forest
ic. Honey Creek
id. Hub City Bog
ie. Interstate Lowland Forest
if. Jackson Harbor Ridges

j. Johnson Lake Barrens
ja. Jung Hemlock–Beech Forest
jb. Karcher Springs
jc. Keller Whitcomb Creek Woods
jd. Kettle Moraine Low Prairie
je. Kewaskum Maple–Oak Woods
jf. Kinnickinnic River Gorge and Delta
jg. Kohler Park Dunes
k. Kohler Park Pines
ka. Kohler–Peat Swamp Hardwoods
kb. Koshawago Springs
kc. Kurtz Woods
kd. Lake of the Pines Conifer–Hardwoods
ke. Lampson Moraine Pines
kf. Lawrence Creek
kg. Lodde's Mill Bluff
kh. Lulu Lake Fen
ki. Maribel Caves
kj. Marinette County Beech Forest
L. Mayville Ledge Beech – Maple Woods
La. Mazomanie Bottoms
Lb. Midway Railroad Prairie
Lc. Milwaukee River
Ld. Miscauno Cedar Swamp
Le. Moose Lake Hemlocks
m. Moquah Barrens
ma. Mt. Pisgah Hemlock–Hardwoods
mb. Mud Lake
mc. Mud Lake–Bog
md. Mukwa Bottomland Forest
me. Muralt Bluff Prairie
mf. Muskego Park Hardwoods
mg. Natural Bridge and Rockshelter
n. Necedah Oak–Pine Forest
na. Necedah Oak–Pine Savanna
nb. Neda Mine
nc. Nelson–Trevino Bottoms
nd. Newark Road Prairie
ne. New Munster Bog Island
nf. New Observatory Woods
o. Newport Conifer–Hardwoods
oa. Oliver Prairie
ob. Olson Oak Woods
oc. Oshkosh–Larsen Trail Prairies
od. Ottawa Lake Fen
oe. Oxbow Rapids
of. Parfrey's Glen
og. Peat Lake
oh. Peninsula Park Beech Forest
p. Peninsula Park White Cedar Forest
pa. Pine Cliff
pb. Pine Glen
pc. Pine Hollow
pd. Plagge Woods
pe. Plum Lake Hemlock Forest
q. Point Beach Ridges
qa. Poppy's Rock
qb. Port Wing Boreal Forest
qc. Powers Bluff Maple Woods
qd. Puchyan Prairie
qe. Putnam Park
qf. Renak–Polak Maple–Beech Woods
qg. Rice Lake–Thunder Lake Marsh
qh. Ridges Sanctuary
r. Ripon Prairie
ra. Rush Creek
rb. St. Croix River Barrens and Cedar Swamp
rc. St. Croix River Swamp Hardwoods
rd. Sajdak Springs
re. Sander's Park Hardwoods
rf. Schmidt Maple Woods
rg. Scott Lake–Shelp Lake Natural Area
rh. Scuppernong Prairie
ri. Seagull Bar
s. Silver Lake Bog
sa. Sister Islands
sb. Snapper Prairie
sc. Sohlberg Silver Lake
sd. Solon Springs Sharptail Barrens
se. South Waubesa Wetlands
sf. Spring Green Reserve
sg. Spring Lake
sh. Spruce Lake Bog
si. Sterling Barrens
sj. Summerton Bog
sk. Swenson Wet Prairie
t. Tamarack Creek Bog
ta. Tellock's Hill Woods
tb. Tiffany Bottoms
tc. Toft Point
td. Totogatic Highland Hemlocks
te. Tower Hill Bottoms
tf. Trenton Bluff Prairie
u. Trout Lake Conifer Swamp
ua. Two Creeks Buried Forest
ub. Upper Brule River
uc. VanderBloemen Bog
ud. Waterloo Fen and Springs
v. Waupun Park Maple Forest
va. Westport Drumlin Prairie
vb. Wilderness Ridge
vc. Wyalusing Hardwood Forest
vd. Wyalusing Walnut Forest
ve. Young Prairie

7. Other areas of a type designated as unique or unsuitable for surface mining.

(26) "Waste rock" means consolidated material which has been excavated during the mining process but is not of sufficient value to constitute ore.

(27) "Wetlands" means an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (3), (13), (21) and (22) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.05 Notification of intent to collect data. **(1)** Any person intending to submit an application for a mining permit shall notify the department by registered mail prior to the collection of data or information intended to be used to support the permit application.

(2) The notice shall contain the following information:

(a) The name, address and telephone number of the person submitting the notice of intent.

(b) A map showing the approximate location of the mining site.

(c) The expected date when a mining permit application may be submitted pursuant to s. NR 132.06.

(d) Specific environmental data which were obtained, collected or generated prior to the notice of intent to collect data together with any substantiating background information which would assist the department in establishing the validity of the data. The substantiating background information shall include but not be limited to the following:

1. Date obtained and methods employed.

2. Persons obtaining, collecting and generating the data and their qualifications.

3. Permits, licenses and approvals that were in effect when the data and information were obtained, collected and generated prior to the notice of intent to collect data.

(e) A preliminary project description addressing the following:

1. A topographic map showing the location of the ore body.

2. A description of the ore body including available details on size, shape, and mineralogic composition.

3. To the extent possible, a description of the anticipated mining and processing methods and wastes expected to be generated.

4. An estimate of the project schedule.

5. If applicant so desires, a proposed scope of study including such information as required under sub. (7) (a), if such information is available to the applicant.

6. Other pertinent information as requested by the department.

(f) Quality assurance program employed in obtaining, collecting, generating and evaluating all baseline data.

(3) Within 10 days of receipt of the notification under this section, the department shall give notice of a public informational hearing to be held not less than 45 nor more than 90 days after the notice is given. This notice shall be given by mail to the applicant, to any known state agency required to issue a permit for the proposed operation, to the regional planning commission for the affected areas, to the county, city, village, town and tribal government within which any part of the affected area lies and to all persons who have requested such notice. The hearing shall be a public informational hearing to solicit public comments on the following:

(a) Anticipated environmental impacts and desired baseline studies to be conducted by the applicant or the department in order to evaluate the anticipated environmental impacts;

(b) Information and data needed for a mining permit application and an environmental impact report, if required;

(c) Information the department may seek through independent studies and verification;

(d) A list of persons desiring to receive notification of any departmental actions with regard to the proposed mining project;

(e) Verification procedures to be employed by the department;

(f) Quality assurance procedures to be employed by the applicant; and

(g) Anticipated permits, approvals, certifications and licenses for the proposed mining project required by federal, state and local agencies.

(4) After review of the notice of intent and the oral and written testimony given during and after the public hearing, the department shall, within 90 days of the close of the public hearing, advise the person giving the notice of the following:

(a) Specific informational and quality assurance requirements that the person must provide for a mining permit application and an environmental impact report, if such a report is required, the methodology and quality assurance procedures to be used in gathering information, and specifically the type and quantity of information on the characteristics of natural resources including groundwater in the proposed mining site and a timely application date for all necessary approvals, licenses and permits.

(b) The department shall accept general environmental data or information such as soil characteristics, hydrologic conditions and air and water data contained in publications, maps, documents, studies, reports and similar sources, whether public or private, not prepared by or for the person. The department shall accept the data which is otherwise admissible that is collected prior to notification for purposes of evaluating another site or sites and which is not collected with intent to evade the provisions of this chapter. The department shall inform the person giving notice if the data will or will not be accepted by the department. The department shall state in writing the reasons for not accepting all the data or portions thereof. The acceptance of the data by the department shall not attest to the validity of the data.

(c) Preliminary verification procedures to be conducted by the department.

(5) All information gathered by a person giving notice shall be submitted to the department as soon as it is in final form. The department may revise or modify the requirements regarding information which must be gathered and submitted. The department shall notify the person by registered mail of the revisions or modifications of its requirements and the reasons therefor, and if a scope of study pursuant to sub. (7) will be required.

(6) A county, town, village, city or tribal government in which a proposed mining site is to be located or which is likely to be substantially affected by the proposed mining operation shall be provided copies by the department of its response pursuant to sub. (4) and of any scope of study and department comments provided to the same resulting from sub. (7). The department shall, upon the establishment of a local impact committee by any of the above groups, pursuant to s. 293.33, Stats., send copies of such documents to the local impact committee rather than directly to the county, town, village, city or tribal government.

(7) (a) If requested by the department, the applicant shall develop a scope of study designed to comply with the department's informational requirements for departmental approval. The scope of study shall include the following:

1. Identification of data requirements specified by the department;

2. Specific methodologies to be utilized in data collection, data processing, laboratory work and analysis;

3. Description of the format in which the data will be presented in the environmental impact report, if such report is required;

4. Tentative schedule for collection of field data;

5. Names, addresses and qualifications of persons who will be responsible for data collection, laboratory work and impact analysis; and

6. An updated quality assurance program as previously submitted pursuant to sub. (2) (f).

(b) The scope of study shall be submitted to the department within 120 days after the date of the department's request for the study.

(c) The department shall review the proposed scope of study and shall accept, reject or make modifications in the scope of study within 60 days of its receipt. In reviewing the proposed scope of study, the department shall reconsider all comments made at the informational hearing held pursuant to sub. (3).

(d) The department may require the person to submit any or all raw field data collected either by or for it by a consultant.

(e) The department shall develop studies and quality assurance and verification programs in a manner consistent with future monitoring requirements.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **correction in (6) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.06 Application to mine. (1) No person may engage in mining or reclamation at any mining site that is not covered by a mining permit and a written authorization to mine as provided in s. NR 132.09 (3).

(2) Any person wishing to engage in mining shall file an application in reproducible form and 25 copies thereof with the department upon forms prepared and furnished by the department. A mining permit application shall be submitted for each mining site. No application for surface mining will be entertained by the department if within the previous 5 years the applicant, or a different person who had received a prospecting permit for a site had certified under s. 293.35 (1), Stats., that he or she would not subsequently make application for a permit to conduct surface mining at the site. Copies of the application shall be distributed to the clerk of any county, city, village or town with zoning jurisdiction over the proposed site, to the clerk of any county, city, village or town within whose boundaries any portion of the proposed site will be located, and to the main public library of each county or municipality with zoning jurisdiction over the proposed site within whose boundaries any portion of the proposed site will be located.

(3) The application shall be accompanied by the following:

(a) A fee of $10,000 to cover the estimated cost of evaluating the operator's mining permit application. Upon completion of its evaluation, the department shall adjust this fee to reflect the actual cost of evaluation less any fees paid for the same services to satisfy other requirements. Evaluation of a mining permit application shall be complete upon the issuance of an order to grant or deny a mining permit.

(b) A mining plan in accordance with s. NR 132.07.

(c) A reclamation plan in accordance with s. NR 132.08.

(d) A proposed monitoring and quality assurance plan consistent with the requirements of this chapter, ch. NR 182 and s. 1.11, Stats. The proposed monitoring plan shall be considered at the s. 293.43, Stats., hearing.

(e) A list of names and addresses of each owner of land within the mining site and each person known by the applicant to hold any option or lease on land within the mining site and all prospecting and mining permits in this state held by the applicant.

(f) Evidence satisfactory to the department that the applicant has applied for necessary approvals and permits under all applicable zoning ordinances and that the applicant has applied for all necessary approvals, licenses or permits required by the department.

(g) Information as to whether the applicant, its parent, its principal shareholders, subsidiaries or affiliates in which it owns more than a 40% interest, has forfeited any mining bonds in other states within the past 20 years, and the dates and locations, if any.

(h) Information relating to whether unsuitability may exist for surface mining to the extent not fully considered in s. 293.45, Stats.

(i) An itemized statement showing the estimation of the cost to the state of reclamation.

(j) Descriptions of land contiguous to the proposed mining site which the applicant owns, leases or has an option to purchase or lease.

(k) Other information or documentation that the department may require.

(4) The department has been directed, pursuant to ch. 421, laws of 1977, to assure that mining activities conducted in this state result in a minimization of disturbance to wetlands. The legislature has also directed, in ch. 377, laws of 1977, that department rules relating to metallic mining wastes take into consideration the special requirements of metallic mining operations in the location, design, construction, operation and maintenance of sites and facilities for the disposal of such wastes as well as any special environmental concerns that will arise as a result of the disposal of the same. The department has established, in s. NR 1.95 an overall framework for its decisions affecting wetlands. It is, therefore, the intent of this subsection to implement these directives recognizing that, depending on the location and site conditions involved in a particular case, it may be relatively easy to avoid entirely the use of wetlands in some cases while being virtually impossible to avoid their limited and carefully contemplated use in others and that the goal of the siting process shall be the selection of sites that are most favorable taking into account all pertinent factors. For purposes, therefore, of administering these directives and rules and acting on permits, licenses and approvals, the following standards shall be applied:

(a) The objective of the applicant's site selection process for mining facilities, and for the disposal or storage of wastes or materials produced by such activities, shall be the selection of a viable site that would result in the least overall adverse environmental impact.

(b) The applicant's site selection process shall include the identification and analysis of various alternatives so that a legitimate comparison between the most viable sites can be made by the department, realizing that a comparison will be made between several sites, all of which may have some imperfections with regard to environmental acceptability and none of which, in some cases, may be found to be environmentally acceptable as a result of compliance with s. 1.11, Stats., and other applicable Wisconsin laws.

(c) To ensure compliance with the requirement to minimize the disturbance of wetlands, the applicant shall identify and the department shall analyze viable sites which would result in the least overall adverse environmental impact and which would also avoid the use of any wetlands. If such sites avoiding the use of wetlands cannot be identified pursuant to the standards in this subsection, then the applicant shall identify and the department shall analyze those viable sites which would result in the least overall adverse environmental impact and which would also utilize, consistent with minimizing total environmental impacts, the least acreage and the least valuable wetlands directly and which would cause the least adverse impact on the wetlands and waters of the state outside the proposed area of use.

(d) The use of wetlands for mining activities, including the disposal or storage of mining wastes or materials, or the use of other lands for such uses which would have a significant adverse effect on wetlands, are presumed to be unnecessary unless the applicant demonstrates, taking into account economic, environmental, technical, recreational and aesthetic factors, that the site proposed for use:

1. Constitutes a viable site;

2. Is the alternative which causes the least overall adverse environmental impact; and

3. Will be used in a manner so as to minimize the loss of wetlands functions which those wetlands may serve with respect to related wetlands or other waters of the state, or both, outside the proposed area of use. As used in this paragraph, a presumption shall not be construed to be a prohibition, but rather the creating of a burden of proof on the applicant to demonstrate by the preponderance of evidence that it has complied with all the siting principles and standards of this subsection. As used in this section, viable means technically and economically feasible.

(e) With respect to mining activities sited, in whole or in part, in wetlands and predating these rules as well as ch. 377, laws of 1977, the use of such wetlands for such activities shall be deemed necessary hereunder and the site of such use shall be deemed a viable site. The standards of minimization herein established to the extent applicable to such preexisting activities by reason of s. 293.13 (2) (c) 8., Stats., shall be so applicable only to the extent specified in s. 293.91 (2), Stats. Furthermore, any additional activities undertaken in wetlands by an applicant subsequent to the effective date of these rules, which additional activities are undertaken to bring activities of the applicant, which were sited in wetlands prior to these rules, into prompt compliance with chs. 30, 281 and 283, Stats., as well as regulations, orders and decisions thereunder, shall be deemed to be necessary so long as the applicant demonstrates that, taking into account economic, environmental, technical, recreational and aesthetic factors, the site proposed for use by such additional activities will be used in a manner so as to minimize the loss of wetlands and the net loss of functions which those wetlands may serve with respect to related wetlands or other waters of the state, or both, outside the proposed area of use.

(f) The department shall give special consideration to a site where it finds that the degree of necessary improvement is of such extent and expense that compliance cannot be accomplished without affecting wetlands.

(g) The applicant shall assist in the evaluation of environmental impacts as mandated herein. All of the applicable following wetlands functions and values shall be considered except as provided in par. (h):

1. Biological functions. Wetlands are environments in which a variety of biological functions occur. In may cases, wetlands are very productive ecosystems which support a wide diversity of aquatic and terrestrial organisms. Many wetland areas are vital spawning, breeding, nursery or feeding grounds for a variety of indigenous species. Wetlands are sometimes the habitats for state or federally designated rare, threatened or endangered species. Evaluation of the biological functions should include consideration of the kinds, numbers and relative abundance and distribution of plant and animal species supported by the area, net primary productivity of plant communities, wildlife production and use, and the kinds and amount of organic material transported to other aquatic systems as a potential energy source for consumer organisms in those systems. Habitat evaluation should consider the short– and long–term importance of the wetlands to both aquatic and terrestrial species. In addition, the evaluation should include any specialized wetland functions essential for an organism to complete its life cycle requirements such as cover, spawning, feeding and the like. Each wetland under consideration should be evaluated on a site specific basis.

2. Watershed functions. In addition to their biological functions, wetlands may serve important physical and chemical functions with respect to other wetlands and waters of the state. A specific wetland, or set of wetlands, may play a critical role in maintaining the stability of the entire system to which it is physically and functionally related. This functional role may include the maintenance of both the hydrologic patterns and the physical and chemical processes of related wetlands and other related waters of the state. Evaluation of wetland functions requires a thorough analysis of the manner and extent to which the wetland serves to maintain the hydrologic, physical and chemical processes of the larger ecosystem to which it belongs. Factors to be considered in the evaluation process are discussed below. The use of non–wetland areas may alter the hydrologic, chemical and physical processes of wetlands outside the proposed area of use. The possibility of such impacts from the use area into wetlands and other waters of the state outside the proposed area of use should be carefully considered.

2c. Hydrologic support functions. A particular wetland may function to maintain the hydrologic characteristics, and thereby the physical and chemical integrity of an entire aquatic ecosystem. Assessment of the hydrologic support function shall consider the effects that modifications of a particular area could have on the hydrologic relations to the whole wetland or aquatic ecosystem, and on the cumulative effects of piecemeal alterations. Evaluation of wetlands hydrologic functions shall include consideration of the wetland's location and topographic position, the areal extent of the wetland within the associated system, the degree of connection with other wetlands and waters of the state, and the hydrologic regime. Hydrologic regime refers to the hydrologic characteristics of a wetland such as the source of the water, its velocity, depth and fluctuation, renewal rate and temporal patterns on timing. The water source determines ionic composition, oxygen saturation, and potential pollutant load. Velocity affects turbulence and the ability of the water to carry suspended particulate matter. Water depth and fluctuation patterns have a critical influence on the vegetation, wildlife, and physical–chemical properties of the sediments and overlying waters. Renewal rate describes the frequency of replacement of the water which depends on water depth and volume, frequency of inundation and velocity. The temporal pattern refers to the frequency of inundation and its regularity or predictability. The hydrologic regime of a wetland influences the biological availability and transport of nutrients, detritus and other organic and inorganic constituents between the particular wetland and other water bodies. Other facets of the hydrologic regime may be considered in specific cases. The location and topographic position of any particular wetland in relation to other water systems determine in part the degree to which they are hydrologically connected. The strongest hydrologic connections are likely to occur between wetlands and other water systems which exchange water frequently and/or are nearest to each other. The areal extent of any particular wetland in relation to the total area of the surrounding watershed is an important criterion in evaluating the hydrologic support function. This includes the relative spatial relationships between specific areas under study and the total area of the adjacent wetland and any open water areas in the watershed.

2f. Groundwater function. Groundwater may discharge to a wetland, recharge from a wetland to another area, evaporate from, and/or flow through a wetland. The direction and rate of groundwater flow in a given wetland may change. The criteria that should be considered for their influence on the recharge potential include the total areal extent of wetlands and other waters in the particular drainage basin, and the hydrologic characteristics of the associated aquifer or aquifers including porosity, permeability and transmissivity.

2i. Storm and flood water storage. Some wetlands may be important for storing water and retarding flow during periods of flood or storm discharge. Even wetlands without surface water connections to other water bodies may serve this function. Such wetlands can reduce or at least modify the potentially damaging effects of floods by intercepting and retaining water which might otherwise be channelled through open flow systems. The importance of a given wetland for storm and flood water storage may be modified by the cumulative effects of the proposed activities and previous activities within the watershed. The flood storage capacity of a particular wetland is primarily a function of its area, basin shape, substrate texture and previous degree of saturation. In general, the greater the area of the wetland and the coarser the texture of the substrate, the greater the potential for flood water storage, given unsaturated field conditions. Similarly, wetland vegetation is an important factor in reducing the energy of flood or storm water.

2m. Shoreline protection. Wetlands also function to dissipate the energy of wave motion and runoff surges from storms and snowmelt, and thus lessen the effects of shoreline erosion. Wave action shielding by wetlands is not only important in preserving shorelines and channels, but also in protecting valuable residential, commercial and industrial acreage located adjacent to the

aquatic ecosystems. The capacity of a particular wetland to act as an erosional buffer for a shoreline depends on such factors as the vegetation characteristics, the shape and size of the wetland and the adjacent shoreline morphology. The protection of shorelines by wetlands depends primarily on the floristic composition, structure and density of the plant community. Shoreline morphology along with fetch, adjacent bottom topography and wetland vegetation are important considerations in evaluating a wetland for its shoreline protection functions. Wetlands along shorelines with long fetches are likely to be associated with major waters of the state and shall not be considered for use.

2p. Other watershed functions. A wetland may perform a variety of other important functions within a watershed. Wetlands may degrade, inactivate, or store materials such as heavy metals, sediments, nutrients, and organic compounds that would otherwise drain into waterways. However, wetlands may subsequently release potentially harmful materials if the wetland soil is disturbed or its oxidation–reduction conditions altered. Potential alterations of these processes must be considered in the analysis, especially with regard to impacts on wetlands outside the proposed area of use. In assessing the importance of a particular wetland to the performance of watershed functions which influence the physical, chemical and biological properties of related waters, the following shall be considered:

a. Density and distribution of plants;

b. Area, depth and basin shape;

c. Hydrologic regime;

d. Physical, chemical and biological properties of the water and soil;

e. Relationship of wetland size to watershed size;

f. The number and size of other wetlands remaining in that watershed;

g. Topography of the watershed;

h. Position of the wetland within the watershed relative to springs, lakes, rivers and other waters;

i. Land use practices and trends within the watershed, or the likelihood of nutrient, sediment or toxin loads increasing.

3. Recreational, cultural and economic value. Some wetlands are particularly valuable in meeting the demand for recreational areas, directly or indirectly, by helping to maintain water quality and providing wildlife habitat. Examples of recreational uses include: hunting, canoeing, hiking, snowshoeing, and nature study. To some people and cultures certain wetlands provide an important part of their economic base and/or contribute to their cultural heritage. In assessing the recreational, cultural and economic potential of a particular wetland, the following should be considered:

a. Wetland type;

b. Size;

c. Suitability and compatibility for the different types of recreational uses;

d. Legal access.

e. Accessibility without damage to other wetland values or functions;

f. Proximity to users;

g. Position in relation to lakes, rivers and other waters;

h. Whether it provides habitat for or produces species of recreational, cultural or economic interest; and

i. Whether the products of some wetlands species (e.g., wild rice, furbearers, fish) have special cultural value and/or provide a significant portion of the economic base for the people of a region.

4. Scarcity of wetland type. Certain wetland types (e.g., fens, wild rice lakes) which are statewide or regionally scarce possess special resource significance. Scarcity or rareness depends on the frequency of occurrence of the type, the area of the type in existence prior to settlement, the historical conversion of the type and its resultant degree of destruction, and the amount of similar habitat in the present landscape of the region. In assessing the scarcity of a particular wetland, a comparative measure of the commonness among all wetland types and the degree to which wetlands of all types occur in the surrounding landscape should be considered.

5. Aquatic study areas, sanctuaries and refuges. Through various local, state and federal actions, large areas of the nation's wetlands have been designated and preserved by public agencies for scientific study, and the protection of aquatic and terrestrial habitats. Many public and private groups have also established sanctuaries and refuges in wetlands. Wetland areas that are legally and/or administratively controlled as such, or that are included or nominated for inclusion in the national register of natural landmarks, could be comparatively important. Wetland areas of significant social, cultural, or historic value, such as known landmarks, are considered important.

6. The ecosystem concept in a regional context. The previous subsections suggest that wetlands may not only have important functions within their boundaries, but may also interact with ecosystems of the surrounding region. The potential impact of wetland modification may influence distant wetlands if they are structurally and functionally related in the region. Similarly, the functions and values of any wetland may be affected by other existing and potential water resource activities in the region. Therefore, consideration should be given to those impacts which are shown to be of regional concern.

(h) All wetlands which are to be used by the proposed activity shall be inventoried and analyzed pursuant to this chapter. The use of such wetlands shall be de minimis and, therefore, exempt from further application of this section, if the applicant demonstrates the following by a preponderance of evidence:

1. The wetlands to be used are or can be made to be sufficiently hydrologically isolated from the surface and underground waters of the state so that no violations of applicable laws and regulations would result;

2. The wetlands are not special or unique utilizing the result of the analysis made pursuant to this chapter; and

3. The area of wetlands to be used shall not exceed 5 acres.

(5) The burden of proof to establish compliance with the requirements of this chapter shall be on the operator.

(6) The hearing procedure outlined in s. 293.43, Stats., shall govern all hearings on the operator's mining permit application.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82**;** correction in (4) (g) made under s. 13.93 (2m) (b) 1., Stats., Register, September, 1995, No. 477; **corrections in (2), (3) (d) and (g), (4) (e) and (6) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.07 Mining plan. The mining plan shall include the following:

(1) A detailed map of the proposed mining site in accordance with s. 293.37 (2) (a), Stats.

(2) Details of the nature, extent and final configuration of the proposed excavation and mining site including location and total production of tailings and other mining refuse, and nature and depth of overburden.

(3) Details of the proposed operating procedures, which may be furnished by reference to documents submitted pursuant to ch. NR 182 including:

(a) Mining operation sequence.

(b) Handling of overburden materials.

(c) Tailings production, handling and final disposition.

(d) Ore processing including milling, concentrating, refining, etc.

(e) Storage, loading and transportation of final product.

(f) Ground and surface water management techniques including provisions for erosion prevention and drainage control and a detailed water management plan showing source, flow paths and rates, storage volumes and release points.

(g) Plans for collection, treatment and discharge of any water resulting from the operation.

(h) Plans for air quality protection pursuant to ch. 285, Stats.

(i) The applicant shall prepare a risk assessment of possible accidental health and environmental hazards potentially associated with the mine operation. Contingency measures with respect to these risks and hazards, and the assumptions in this assessment, shall be explicitly stated.

(j) Measures for notifying the public and responsible governmental agencies of potentially hazardous conditions including the movement or accumulation of toxic wastes in ground and surface water, soils and vegetation and other consequences of the operation of importance to public health, safety and welfare.

(k) Description of all surface facilities associated with the mining site.

(L) Description of all geological/geotechnical investigations and drilling programs.

(4) Evidence satisfactory to the department that the proposed mining operation will be consistent with the reclamation plan and will comply with the following minimum standards:

(a) Grading and stabilization of excavation, sides and benches to conform with state and federal environmental and safety requirements and to prevent erosion and environmental pollution.

(b) Grading and stabilization of deposits of mining refuse in conformance with state and federal environmental and safety requirements and solid waste laws and regulations.

(c) Stabilization of merchantable by–products.

(d) Adequate diversion and drainage of water from the mining site to prevent erosion and contamination of surface and groundwaters.

(e) Notwithstanding the provisions of s. NR 812.20, the backfilling of excavations where such procedure will not interfere with the mining operation and will not:

1. Cause an exceedance of any groundwater quality standard, including any drinking water standard, implemented under this chapter in accordance with the provisions of ch. NR 182, or

2. Adversely affect public health or welfare.

(f) Handling and storage of all materials on the mining site in an environmentally sound manner as determined by the department. Materials not licensed pursuant to ch. NR 182 but deemed by the department to present a potential threat to the environment shall be subject to the waste characterization analysis procedures set forth in s. NR 182.08 (2) (b).

(g) Removal and stockpiling, or other measures to protect topsoils consistent with environmental considerations and reclamation, prior to mining unless the department determines that such action will be environmentally undesirable.

(h) Maintenance of adequate vegetative cover where feasible to prevent erosion.

(i) Impoundment of water where necessary in a safe and environmentally acceptable manner.

(j) Adequate planning of the site to achieve the aesthetic standards for the entire mine site described in ss. NR 132.17 and 132.18 (5).

(k) Identification and prevention of pollution as defined in s. 281.01 (10), Stats., resulting from leaching of waste materials, in accordance with state and federal solid waste laws and regulations.

(L) Identification and prevention of significant environmental pollution as defined in s. 293.01 (4), Stats.

(m) Maintenance of appropriate emergency procedures to minimize damage to public health, safety and welfare and the environment from events described under sub. (3) (i).

(5) Submission of a plan for a preblasting survey, such survey being completed and submitted to the department prior to any blasting.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; r. and recr. (4) (e), Register, December, 1986, No. 372, eff. 1–1–87; correction in (4) (e) (intro.) made under s. 13.93 (2m) (b) 7., Stats., Register, September, 1995, No. 477; **corrections in (1), (3) (h), (4) (k) and (L) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.08 Reclamation plan. The reclamation plan for the mining site shall include the following:

(1) Detailed information and maps on reclamation procedures including:

(a) Manner, location, sequence and anticipated duration of reclamation.

(b) Ongoing reclamation procedures during mining operations.

(c) Proposed interim and final topography and slope stabilization.

(d) Proposed final land use and relationship to surrounding land and land use.

(e) Plans for long–term maintenance of mining site including:

1. Monitoring of wastes and ground and surface water quality.

2. Names of persons legally and operationally responsible for long–term maintenance.

(f) Projected costs of reclamation including estimated cost to the state of fulfilling the reclamation plan.

(2) Evidence satisfactory to the department that the proposed reclamation will conform with the following minimum standards:

(a) All toxic and hazardous wastes, refuse, tailings and other solid waste shall be disposed of in conformance with applicable state and federal statutes or regulations.

(b) All tunnels, shafts or other underground openings shall be sealed in a manner which will prevent seepage of water in amounts which may be expected to create a safety, health or environmental hazard, unless the applicant can demonstrate alternative uses which do not endanger public health and safety and which conform to applicable environmental protection and mine safety laws and rules.

(c) All underground and surface runoff waters from mining sites shall be managed, impounded or treated so as to prevent soil erosion to the extent practicable, flooding, damage to agricultural lands or livestock, damage to wild animals, pollution of ground or surface waters, damage to public health or threats to public safety.

(d) All surface structures constructed as a part of the mining activities shall be removed, unless they are converted to an acceptable alternate use.

(e) Adequate measures shall be taken to prevent significant surface subsidence, but if such subsidence does occur, the affected area shall be reclaimed.

(f) All topsoil from surface areas disturbed by the mining operation shall be removed and stored in an environmentally acceptable manner for use in reclamation.

(g) All disturbed surface areas shall be revegetated as soon as practicable after the disturbance to stabilize slopes and prevent air and water pollution, with the objective of reestablishing a variety of plants and animals indigenous to the area immediately prior to mining, unless such reestablishment is inconsistent with the provisions of s. 293.01 (23), Stats. Plant species not indigenous to the area may be used if necessary to provide rapid stabilization of slopes and prevention of erosion, if such species are acceptable to the department, but the ultimate goal of reestablishment of indigenous species shall be maintained.

(3) If it is physically or economically impracticable or environmentally or socially undesirable for the reclamation process to return the affected area to its original state, the reasons therefor

and a discussion of alternative conditions and uses to which the affected area can be put.

(4) If the anticipated life and total area of the mineral deposit are of sufficient magnitude as determined by the department, a comprehensive long–term plan showing, in detail satisfactory to the department, the manner, location and estimated sequential timetable for reclamation of the entire area of contiguous land which will be affected by mining and which is owned, leased or under option for purchase or lease by the operator at the time of application. When a mineral deposit lies on or under the lands of more than one operator, the department shall require the operators to submit mutually consistent comprehensive plans.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **correction in (2) (g) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.085 Irrevocable trust agreement. (1) This section applies to a mining permit application for which the permit has not been issued on February 1, 2000. Notwithstanding s. NR 132.19, no exemption may be granted to the provisions of this section.

(2) An applicant for a mining permit, as part of the permit application, shall propose an irrevocable trust agreement or arrangement which shall include a description of the investment strategy and detailed information concerning the level of funding and proposed payment schedule necessary to comply with this section.

(3) (a) The purpose of the trust fund shall be to assure adequate funds to undertake the preventive and remedial activities listed in sub. (4). The trust documentation shall designate the department as sole beneficiary. The trustee shall be a public entity, bank or other financial institution located within the state of Wisconsin which has the authority to act as a trustee, or in the case of a public entity has equivalent powers. The trust documentation shall specify the manner of payment into the fund and the trustee's powers to invest the trust corpus and income. The trustee shall exercise prudent investment strategies consistent with the purpose of the trust fund. All income shall accumulate in the account and be reinvested. No withdrawal may be made from the trust fund except as authorized in writing by the department.

(b) Following issuance of a certificate of completion of reclamation for the entire mining site or upon permit revocation, the trust corpus shall consist of cash, certificates of deposit, or U.S. government securities. A total of no more than $100,000 in cash and certificates of deposit may be placed in the trust account; U.S. government securities shall be used for amounts in excess of $100,000.

(4) The trust fund shall be created and maintained in perpetuity with funds adequate for the following activities:

(a) Remedial action required as the result of spills of hazardous substances, as defined in s. 292.01 (5), Stats., at the mining site.

(b) Remedial action to mitigate any hazardous substances that escape from the mine workings into the surrounding environment after the mining operation has ceased.

(c) Remedial action required as the result of failure of a mining waste facility to contain the waste.

(d) Provision of a replacement water supply as required under s. 293.65 (4) (d), Stats.

(e) Preventive measures taken to avoid adverse environmental consequences, including measures such as replacement of components of waste disposal facilities. However, if the measures relate to closure or long–term care, financial responsibility for the associated costs shall be covered in accordance with ss. NR 182.16 and 182.17, respectively.

(5) Funding of the trust fund shall be determined at the hearing conducted under s. 293.43, Stats., and shall be incorporated into the mining permit issued under s. 293.49, Stats., as follows:

(a) A schedule of payment into the trust fund, during mining operations, shall be established which takes into account a reasonable projection of exposure. Preventive or remedial measures which could be needed early in the mining operation shall be fully funded prior to the commencement of mining. Those preventive or remedial measures which could be needed only later in the operation, or after mining has ceased, may rely on income from the trust and periodic payments into the principal by the permittee.

(b) In establishing the level of funding, the department shall evaluate the likelihood of the need for preventive or remedial measures based on reasonable and conservative risk considerations. In addition to the risk considerations, the department shall evaluate the range of costs of the preventive and remedial measures that might be necessary in response to the risks. The level of funding shall be sufficient to cover the costs of all preventive and remedial measures needed to correct all reasonably possible occurrences. Costs for worst case preventive or remedial measures shall be used when the measures are shown to have a reasonable possibility of being necessary. Opportunity shall be provided at the hearing conducted under s. 293.43, Stats., for testimony that the worst case preventive or remedial measures have a reasonable possibility of being necessary.

(c) In determining costs associated with the preventive or remedial measures identified in sub. (4), consideration shall be given to the risk assessment submitted pursuant to s. NR 132.07 (3) (i), the contingency plan submitted pursuant to ch. NR 182, risks and impacts identified in the environmental impact statement and the measures reasonably anticipated necessary to address those risks and impacts.

(d) To the extent the trust fund relies on accrued income to pay for future preventive or remedial measures, the conservative projection of earnings above inflation shall be used.

(e) The funding of the trust fund for activities identified in sub. (4) shall consider the existence of other binding, guaranteed sources of funds from the permittee which address the same preventive and remedial measures and the financial ability of the permittee to comply with legal obligations for necessary remedial activities during the operation. It is the intent of this section that the trust fund not duplicate similar financial obligations under other applicable provisions of law or administrative codes.

(6) Principal and income accrued from the trust fund may be used to pay for activities identified in sub. (4), only if:

(a) The mine permittee is not obligated by law or conditions of other obligations, such as the provision of a bond under s. 293.51, Stats., to pay for the activities, or

(b) The mine permittee is financially incapable of paying for the costs of the activities regardless of legal obligations to do so.

(7) Notwithstanding sub. (6), principal and income from the trust fund may be used to pay for activities identified in sub. (4), which require immediate attention while issues of financial responsibility are resolved. Should the permittee, a successor in interest to the permittee or another party be determined to be financially responsible for the costs of the activities, the reimbursement monies obtained from those entities shall be deposited in the trust account.

(8) Activities identified under sub. (4) shall be undertaken by private entities under contract with the department and the trustee. The department shall determine when preventive or remedial activities to be funded by the trust fund need to be undertaken. It shall identify the scope of work, choose the entity to perform the work, and monitor compliance with the contract. The contract shall state that, upon satisfactory performance of work as determined by the department, the trustee shall pay to the contracting entity the amounts provided for by the contract. The contract may allow for interim payments.

(9) Periodic reevaluation of the funding the trust account shall be undertaken as follows:

(a) The department shall review the funding of the trust account, once every 5 years after issuance of the mining permit,

or when the department determines there has been a significant event or changed circumstances. The review shall include the propriety of the assumptions made in the initial determination of funding, findings from previous reviews, as well as the adequacy of the funding in the trust account. The determination may include a requirement for additional payment of principal by the permittee, or, in the case of a determination of over–funding, reimbursement to the permittee of a portion of the funds in the trust account.

(b) The permittee, any municipality within whose boundaries the mining site is located, any Native American community that has tribal lands within such municipality, or 5 or more interested parties may request a review independent from the review provided for in par. (a). The department shall grant the request upon a showing by the proponent for the review that there has been a significant event or changed circumstances since the last review, and that these changed circumstances warrant reevaluation prior to the next 5–year review.

(c) The department shall provide a notice of its determination under pars. (a) and (b) in the same manner as specified under s. 293.43 (3) (b) 1. and 2., Stats. If the determination involves any modifications to the funding of the trust fund, the notice shall include a detailed summary of the proposed changes and provide for provision of the complete proposed set of changes upon written request.

(d) If the department determines a modification to the funding of the trust is warranted, and if the permittee, any municipality within whose boundaries the mining site is located, any Native American community that has tribal lands within such municipality, or 5 or more interested parties requests a hearing with 30 days of notice, a contested case hearing shall be conducted under ch. 227, Stats.

(10) (a) During the period of scheduled payments into the trust fund, the permittee shall establish and maintain a separate performance bond or satisfactory insurance coverage in an amount adequate to cover all risks and associated remedial and preventive measures identified under sub. (5) (b).

(b) The performance bond or insurance shall remain in effect until issuance of a certificate of completion of reclamation for the entire mining site.

(c) The performance bond or insurance shall be issued by a company licensed to do business in the state of Wisconsin and shall be subject to the termination and replacement requirements specified in s. NR 132.09 (2) (a) 2. and 3.

(d) If implementation of remedial or preventive measures under sub. (4) is needed prior to issuance of a certificate of completion of reclamation for the entire mining site, the performance bond or insurance shall only be used to fund the necessary actions in the event the trust fund is not sufficient to cover the entire costs of remediation or prevention.

History: Cr. Register, January, 2000, No. 529, eff. 2–1–00.

NR 132.09 Issuance. (1) Unless denied pursuant to s. NR 132.10, the department shall issue a mining permit to the applicant within 90 days following completion of the public hearing record.

(2) After issuance of the permit but prior to commencing mining, the operator shall file with the department the following:

(a) As required by s. 293.51, Stats., a bond or other security payable to the department conditioned upon faithful performance of all requirements of ch. 293, Stats., and the provisions of this chapter.

1. The amount of the bond or other security required shall be equal to the estimated cost to the state of fulfilling the reclamation plan, in relation to that portion of the site that will be disturbed by the end of the following year. The estimated cost of reclamation shall be determined by the department on the basis of those factors listed in s. NR 132.07. In lieu of a bond, the operator may deposit cash, certificates of deposit or government securities with the department. Interest received on certificates of deposit and government securities shall be paid to the operator. The department may increase the amount of the bond, cash, certificates of deposit or government security in lieu of the procedures contained in s. NR 132.12 (2), in order to assure adequate financing for the reclamation plan.

2. The bond shall be issued by a surety company licensed to do business in Wisconsin. If the surety company's license to do business is revoked or suspended, the operator, within 30 days after receiving written notice thereof from the department, shall substitute surety underwritten by a surety company licensed to do business in Wisconsin. Upon failure of the operator to make a substitution, the department shall suspend the operator's mining permit until substitution has been made.

3. Each bond shall provide that the bond shall not be canceled by the surety, except after not less than 90 days notice to the department in writing by registered or certified mail. Not less than 30 days prior to the expiration of the 90–day notice of cancellation, the operator shall deliver to the department a replacement bond in the absence of which all mining shall cease.

(b) A certificate of insurance certifying that the operator has in force a liability insurance policy issued by an insurance company authorized to do business in this state or in lieu of a certificate of insurance, evidence that the operator has satisfied state or federal self–insurance requirements covering all mining of the operator in this state and affording personal injury and property damage protection in a total amount deemed adequate by the department but not less than $50,000.

(3) Upon receipt of a satisfactory reclamation bond, the certificate of insurance and evidence of the establishment of the necessary trust fund and associated performance bond or insurance in accordance with s. NR 132.085, the department shall give written authorization to the operator to commence mining in accordance with the mining and reclamation plans.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82**; am. (3), Register, January, 2000, No. 529, eff. 2–1–00; corrections in (2) (a) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.10 Denial. (1) The department shall deny a mining permit if it finds any of the following:

(a) The mining plan and reclamation plan will not result in reclamation of the mining site consistent with ch. 293, Stats., and the provisions of this chapter.

(b) The proposed operation will not comply with all applicable air, ground and surface water and solid and toxic waste disposal laws and rules of the department.

(c) In the case of a surface mine, the site is unsuitable for surface mining.

(d) The proposed mine will endanger public health, safety or welfare.

(e) The proposed mine will result in a net substantial adverse economic impact in the area reasonably expected to be most impacted by the mining activity.

(f) The proposed mining operation does not conform with all applicable zoning ordinances.

(g) The applicant is in violation of ch. 293, Stats., and the provisions of this chapter.

(h) The applicant has within the previous 20 years forfeited any bond posted in accordance with mining activities in this state unless by mutual agreement with the state.

(i) Any officer or director of the applicant, while employed by the applicant, the applicant's parent corporation, any of the applicant's principal shareholders or any of the applicant's subsidiaries or affiliates in which the applicant owns more than a 40% interest, has within the previous 20 years forfeited any bond posted in accordance with mining activities in this state, unless by mutual agreement with the state.

(j) The proposed mining activity may reasonably be expected to create the following situations:

1. Landslides or substantial deposition from the proposed operation in stream or lake beds which cannot be feasibly prevented.

2. Significant surface subsidence which cannot be reclaimed because of the geologic characteristics present at the proposed site.

3. Hazards resulting in irreparable damage to any of the following, which cannot be prevented under the requirements of ch. 293, Stats., avoided to the extent applicable by removal from the area of hazard or mitigated by purchase or by obtaining the consent of the owner:

a. Dwelling houses.

b. Public buildings.

c. Schools.

d. Churches.

e. Cemeteries.

f. Commercial or institutional buildings.

g. Public roads.

h. Other public property designated by the department.

4. Irreparable environmental damage to lake or stream bodies despite adherence to the requirements of ch. 293, Stats. This subdivision does not apply to an activity which the department has authorized pursuant to statute, except that the destruction or filling in of a lake bed shall not be authorized notwithstanding any other provision of law.

(2) If an application for a mining permit is denied, the department within 90 days of completion of the hearing record shall furnish the operator findings of fact, conclusions of law and order setting forth the reasons for denial.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (1) (a), (g), (j) 3. and 4. made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.11 Monitoring. (1) The operator shall monitor the mining site in accordance with the monitoring plan contained in the mining permit. The department may require the operator to perform additional monitoring of environmental changes during the course of the permitted activity and for such additional periods of time as is necessary to satisfactorily complete reclamation.

(2) The department may monitor environmental changes concurrently with the operator as stated in sub. (1) and for an additional period of time after the full bond is released pursuant to s. 293.63, Stats.

(3) (a) Baseline data and monitoring data including the monitoring plan shall be reviewed at the time of annual permit review, or at such time as the operator requests any modification of the mining permit or reclamation plan.

(b) Baseline data and monitoring data shall be considered by the department in all enforcement actions including issuance of a stop order to an operator, requiring an immediate cessation of mining, in whole or in part, at any time that the department determines that there exists an immediate substantial threat to public health and safety or the environment.

(c) If the analyses of samples indicate that the quality of the groundwater is statistically significantly different from either baseline or background, the owner shall notify the department immediately.

(4) Any request for modification of the monitoring plan contained in the mining permit shall comply with the procedures in s. NR 131.12.

(5) Bacteriological analyses of water samples, and all radiological analyses, shall be performed by the state laboratory of hygiene or at a laboratory certified or approved by the department of health and social services. Other laboratory test results submitted to the department under this chapter shall be performed by a laboratory certified or registered under ch. NR 149. The following tests are excluded from this requirement:

(a) Physical testing of soil,

(b) Air quality tests,

(c) pH,

(d) Chlorine residual,

(e) Temperature.

Note: The requirement in this section to submit data from a certified or registered laboratory is effective on August 28, 1986.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; cr. (5), Register, April, 1986, No. 364, eff. 8–28–86; **correction in (2) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.12 Permit review and modification. (1) The department shall review the mining and reclamation plans annually after the date of the mining permit issuance or a review as provided in s. NR 132.11 (2).

(2) If the department finds that because of changing conditions, including but not limited to changes in reclamation costs, reclamation technology, minimum standards in s. 293.13 (2) (c), Stats., or government land use plans, the reclamation plan for a mining site is no longer sufficient to reasonably provide for reclamation of the mining site consistent with ch. 293, Stats., and the provisions of this chapter, the department shall require the applicant to submit amended mining and reclamation plans which shall be processed in the same manner as an application for an original mining permit. The applicant shall be deemed to hold a temporary mining permit which shall be effective until the amended mining permit is issued or denied.

(3) (a) If an operator desires to amend or cancel a permit, mining plan or reclamation plan, an amended application shall be submitted to the department on forms provided by the department. An application for an increase or decrease in the area of a mining site or for a change in the mining or reclamation plans shall be processed in the same manner as an original application for a mining permit. If 5 or more interested persons do not request a hearing in writing within 30 days of notice under s. 293.43 (3), Stats., no hearing need be held on the modification.

(b) If the amended application is to cancel any or all of a mining site where no mining has taken place, the department shall order the release of the bond or security or portions thereof posted on the land being removed from the mining site and cancel or amend the operator's written authorization to conduct mining on the mining site.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (2) and (3) (a) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.13 Certificates of completion and bond release. (1) Not less that 4 years after notification to the department of completion of the reclamation plan, the operator may petition the department to reduce the amount of the bond. After public hearing conducted pursuant to s. 293.43, Stats., the department shall issue a certificate of completion provided the operator has fulfilled its duties under the reclamation plan.

(2) Upon issuance of a certificate of completion, the department shall reduce the amount of the bond or security to an amount equal to the estimated cost of reclamation of the portion of the mining site for which a certificate of completion has not been issued.

(3) Upon issuance of a certificate or certificates of completion of reclamation for the entire mining site, the department shall require the operator to maintain a bond equal to at least 10% of the cost to the state of reclaiming the entire mining site if mining of the site was wholly underground or at least 20% of the cost to the state of reclamation of the entire mining site if any surface mining was conducted.

(4) After 20 years after issuance of the latest certificate or certificates of completion for the mining site, the department shall

release the bond or security if the department determines that the operator has complied with the reclamation plan.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; correction in (1) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529**; correction in (1) made under s. 13.93 (2m) (b) 7., Stats.**

NR 132.14 Inspections. (1) Any duly authorized officer, employee or representative of the department may enter and inspect any property, premises or place on or at a mining site at any reasonable time for the purpose of ascertaining the state of compliance with this chapter and ch. 293, Stats.

(2) No operator may refuse entry or access to any authorized representative of the department who requests entry for purposes of inspection and who presents appropriate credentials.

(3) No person may obstruct, hamper or interfere with any such inspection.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **correction in (1) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.15 Confidentiality. All data submitted by an applicant for a mining permit as an operator shall be considered a public record unless confidential status is granted to such data pursuant to s. NR 2.19.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 132.16 Enforcement. (1) (a) The department shall hold a public hearing related to alleged or potential environmental pollution upon the verified complaint of 6 or more citizens filed with the department. The complaint shall state the name and address of a person within the state authorized to receive service of answer and other papers in behalf of complainants.

(b) The department may order the complainants to file security for costs in a sum deemed to be adequate but not to exceed $100 within 20 days after the service upon them of a copy of such order and all proceedings on the part of such complainants shall be stayed until security is filed.

(c) The department shall serve a copy of the complaint and notice of the hearing upon the alleged or potential polluter either personally or by registered mail directed to his or her last known post office address at least 20 days prior to the time set for the hearing which shall be held not later than 90 days from the filing of the complaint.

(d) The respondent shall file his or her verified answer to the complaint with the department and serve a copy on the person so designated by the complainants not later than 5 days prior to the date set for the hearing, unless the time for answering is extended by the department for cause shown.

(e) For purposes of any hearing under this chapter, the secretary may issue subpoenas and administer oaths.

(f) Within 90 days after the closing of the hearing, the department shall make and file its findings of fact, conclusions of law and order, which shall be subject to review under ch. 227, Stats. If the department determines that any complaint has been filed maliciously or in bad faith it shall so find, and the person complained against shall be entitled to recover his or her expenses on the hearing in civil action.

(g) Any situation, project or activity which upon continuance or implementation would cause, beyond reasonable doubt, a degree of pollution that normally would require a clean–up action if it already existed, shall be considered potential environmental pollution.

(2) (a) The department may issue a stop order to an operator, requiring an immediate cessation of mining, in whole or in part, at any time that the department determines that there exists an immediate and substantial threat to public health and safety or the environment.

(b) The department shall schedule a hearing on the stop order, to be held within 5 days of issuance of the order, and shall incorporate notice of the hearing in the copy of the order served upon the operator. Notice shall also be given to any other persons who have previously requested notice of such proceedings.

(c) Within 72 hours after commencement of the hearing, unless waived by agreement of the parties, the department shall issue a decision affirming, modifying or setting aside the stop order. The department may apply to the circuit court for an order extending the time, for not more than 10 days, within which the stop order must be affirmed, modified or set aside.

(d) The department shall set aside the stop order at any time, with adequate notice to the parties, upon a showing by the operator that the conditions upon which the order was based no longer exist.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 132.17 Minimum design and operation requirements. In addition to all other requirements of this chapter, no person shall construct, establish, operate or maintain a mine site except in conformance with the conditions attached to approval of the mining permit at the s. 293.43, Stats., hearing and the following requirements:

(1) To the extent practicable, and consistent with protection of the environment and requirements of necessary department approvals:

(a) Site elements should be placed where least observable from off the premises in any season.

(b) Site elements should be placed within the area of the overall site which is most visually compatible in respect to building shape.

(c) Site elements should be painted and maintained in a manner which is visually compatible with the associated vegetational and earth conditions.

(d) Site elements which cannot be visually mitigated using the techniques in pars. (b) and (c) should be made as visually inconspicuous as is practical.

(2) Effective means shall be taken to limit access to the site so as to minimize exposure of the public to hazards.

(3) Mine–mill chemicals and processing reagent wastes shall be governed as followed:

(a) Reagents shall not be used in a manner that will result in any substantial harm to public health and safety or to the environment.

(b) Any considerations of whether substantial harm to public health and safety or to the environment will occur shall consider the total effect of the proposed reagents on the receiving watercourse. Reagent characteristics to investigate include chemical oxygen demand, biochemical oxygen demand, biodegradability, effects on local aquatic life (plant and animal), and effects on the total dissolved solids concentration and hardness of the receiving stream.

(c) Reagents that consist of or contain water soluble salts or metals shall not be used if their use results in a discharge to the waters of the state not in compliance with chs. 281 and 283, Stats.

(d) Adequate treatment as required pursuant to chs. 281 and 283, Stats., shall be provided for reagents which are biological nutrients so as not to result in excessive eutrophication of aquatic ecosystems.

(e) Reagents shall not be used or stored on the mine site if they are not approved in the plan of operation pursuant to s. NR 182.09 or the mining plan pursuant to s. NR 132.07, except for reagents for laboratory or testing, research or experimental purposes.

(4) Every reasonable effort should be made to reduce and control the production of contaminated water.

(5) Contaminated water, including liquid effluents, from whatever source associated with the project should be collected, stored, recycled or treated to the maximum extent practicable.

(6) Contaminated nonpoint source runoff from disturbed areas within the mining site should be collected and treated in a

manner which facilitates monitoring, maximum practicable recycling reuse and consumption within the mining operation. Nonpoint sources of water pollution should be minimized to the extent practicable. Also to the extent practicable, the frequency and need for point source discharges of waste water to surface waters of the state shall be regulated pursuant to ch. 283, Stats.

(7) Provisions for critical back–up equipment in the event of operation equipment breakdown shall be made.

(8) Design and operation specifications for mine site facilities should include contingencies for emergency conditions. Such contingencies may include emergency power supplies, equipment redundancies or temporary holding facilities.

(9) Any mine site permitted pursuant to this chapter shall be designed, constructed, maintained, operated and reclaimed in such a manner so as to protect groundwater quality and quantity in accordance with the standards of ch. NR 182.

(10) Waste containing potentially harmful concentrations of acid generating material should not be used for purposes such as the construction of parking lots or roads in mine sites.

(11) Mine site facilities should be designed to minimize surface area disturbance.

(12) Where practicable, elevation differences in water–based transport systems should be utilized for gravity flows to minimize pumping facilities and pressures.

(13) Tailings transport systems, if not buried, should be designed to provide for emergency tailings conveyance or storage should a pipeline break, plug, freeze or require repairs and be made accessible for inspection, emergency repair and maintenance. Location of emergency spill areas must be consistent with the prevention of environmental pollution of surface waters and with the standards of ss. NR 182.07 (2), 132.06 (4) and 132.19. In the event of a power failure, tailing pipelines should be self draining to the tailings area or to an emergency spill area or standby pumps and pipelines or standby power should be provided. In some cases (e.g., a long pipeline over rough country), several spill areas may have to be provided.

(14) If practicable, all liquid effluents from a mine waste facility should be directed to a common point (for treatment if necessary) before discharge to a natural watercourse. If practicable, treated wastes should not be directed to more than one watershed.

(15) In general, sanitary wastes should not be directed to a mill tailings control area without appropriate treatment.

(16) With the exception of subs. (2) through (5), (10) and (15), the provisions of this section shall not apply to a mining operation in existence on May 21, 1978 and for which a mining permit application approved by the department was on file on the date these rules became effective, except to the extent there is a change in the mining operation requiring a modification of the mining permit under these rules.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (intro.), (3) (c) and (d) and (6) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

NR 132.18 Location criteria and environmental standards. (1) To the extent practicable no person shall establish, construct, operate or maintain the use of property for any mining related buildings, roads, ponds, or other construction within the following areas, except pursuant to an exemption granted under s. NR 132.19:

(a) Within areas identified as unsuitable, in s. NR 132.03 (25).

(b) Within 1,000 feet of any navigable lake, pond or flowage.

(c) Within 300 feet of a navigable river or stream.

(d) Within a floodplain.

(e) Within 1,000 feet of the nearest edge of the right–of–way of any of the following: any state trunk highway, interstate or federal primary highway; the boundary of a state public park; the boundary of a scenic easement purchased by the department or the department of transportation; the boundary of a designated scenic or wild river; a scenic overlook designated by the department by rule; or a bike or hiking trail designated by the United States congress or the state legislature; unless, regardless of season, the site is visually inconspicuous due to screening or being visually absorbed due to natural objects, compatible natural plantings, earth berm or other appropriate means, or unless, regardless of season, the site is screened so as to be aesthetically pleasing and inconspicuous as is feasible.

(f) Within wetlands, except pursuant to the criteria established in s. NR 132.06 (4).

(g) Within areas so that noncompliance will result with other applicable federal and state laws and regulations.

(2) This section shall not apply to a mining operation in existence on May 21, 1978, and for which a mining permit application approved by the department was on file on the date these rules became effective.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 132.19 Exemptions. (1) The department may grant exemptions from the requirements of this chapter, if such exemptions are consistent with the purposes of this chapter and will not violate any applicable federal or state environmental law or rule.

(2) (a) All requests for exemptions by the applicant shall be made at least 90 days before the hearing under s. 293.43, Stats., unless the condition which is the basis for the requested exemption is unknown to the applicant prior to that time or for good cause shown.

(b) If an applicant applies for an exemption less than 90 days before the hearing, the portion of the hearing concerning that exemption request shall be held no earlier than 90 days after receipt of the application for the exemption.

(c) Requests for exemptions may be made by any party to the hearing other than the applicant up to 30 days before the hearing. Any request for exemption made prior to the hearing shall be determined as part of that proceeding.

(3) The burden of proof for seeking an exemption is upon the person seeking it.

(4) Any party to the hearing may request more stringent standards or requirements for any provision of this chapter.

(5) Any application for an exemption made after the hearing shall be determined by the following procedure:

(a) The application shall be in writing and shall include documentation justifying the need for the exemption, describing the alternatives and explaining why the exemption was not sought before the hearing.

(b) If the application does not involve an exemption from a requirement of this chapter the department shall issue a decision on the application within 15 days of receipt of the application.

(c) 1. If the application involves an exemption from a requirement of this chapter, within 10 days of the application the department shall publish a class 1 notice under ch. 985, Stats., in the official newspaper designated under s. 985.04 or 985.05, Stats., or, if none exists in a newspaper likely to give notice in the area of the proposed modification. The notice shall invite the submission of written comments by any person within 10 days from the time the notice is published, and shall describe the method by which a hearing may be demanded. Notice shall also be given by mail as provided in s. 293.43 (3) (b) 1., Stats.

2. Within 30 days after the notice is published, a written demand for a hearing on the matter may be filed by any county, city, village, town, tribal government or by any 6 persons. The demand shall indicate the interest of the municipality or persons who file it and state the reasons why the hearing is demanded.

3. A hearing demanded under this paragraph shall be held within 60 days after the deadline for demanding a hearing, and shall be conducted as a class 1 proceeding under s. 227.01 (3) (a),

Stats. The hearing shall be held in an appropriate place designated by the department in one of the counties, cities, villages or towns which are substantially affected by the operation of the facility.

4. Within 45 days after giving notice or within 30 days after any hearing is adjourned, whichever is later, the department shall determine whether the exemption shall be granted.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **corrections in (2) (a), (5) (c) 1. and 3. made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2000, No. 529.**

Chapter NR 182

METALLIC MINING WASTES

Note: Corrections in this chapter made under s. 13.93 (2m) (b) 7., Stats., Register, March, 1998, No. 507.

NR 182.01 Purpose. The purpose of this chapter is to identify metallic mining and prospecting wastes and to regulate the location, design, construction, operation, maintenance, closure and long–term care of the site and facilities for the storage and disposal of metallic mining and prospecting wastes. The rules consider the special requirements of metallic mining operations in the location, design, construction, operation and maintenance of sites and facilities for the disposal of metallic mining wastes as well as any special environmental concerns that will arise as the result of the storage and disposal of metallic mining wastes.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 182.02 Applicability. (1) These rules govern all solid waste disposal sites and facilities for metallic mineral mining and prospecting operations as defined in s. 293.01 (9) and (18), Stats.

(2) To the extent that prospecting and mining wastes are identified by the department as hazardous under s. 291.05 (1), Stats., the disposal of such wastes in a waste site governed by this chapter shall be governed and licensed under this chapter, and not under chs. NR 600 to 685, subject to amendment, if necessary, to comply with applicable federal regulations adopted pursuant to the resource conservation and recovery act of 1976, PL 94–580, or otherwise to adequately protect the environment. Prior to a hearing under s. 293.43, Stats., the department shall designate those mining and prospecting wastes which are identified by the department as hazardous under s. 291.05 (1), Stats.

(3) Owners of sites utilized for the disposal of mining waste, where the mining operation was in existence on May 21, 1978 may seek approval of any feasibility study or plan of operation for such sites. Such sites shall be licensed after a determination by the department that the disposal of nonhazardous waste is being undertaken in an environmentally sound manner. Upon such determination, compliance with the licensing requirement shall be administered in a manner which does not require substantial structural modification of the existing site, expenditure which is not appropriate for the nonhazardous nature of the waste or interruption of the mining operation, provided however, that only ss. NR 182.01, 182.02 (1) to (5) and (7), 182.04 to 182.05, 182.12 to 182.15, 182.18 and 182.19 shall be applicable to such sites.

(4) Sites and facilities utilized for the storage, transportation, treatment and disposal of nonmining solid wastes, not covered by the definition of metallic mineral mining and prospecting wastes, shall comply with the provisions of chs. NR 500 to 590 and 600 to 685.

(5) The provisions of this chapter are not applicable to the design, construction or operation of industrial wastewater facilities, sewerage systems and waterworks treating liquid waste approved under s. 281.41, Stats., and/or permitted under ch. 283, Stats., nor to sites used solely for the disposal of liquid industrial wastes which have been approved under s. 281.41, Stats., and/or permitted under ch. 283, Stats., except for sites and facilities used for the ultimate disposal of metallic mining and prospecting waste.

(6) Any waste disposal site or facility licensed pursuant to this chapter shall be located, designed, constructed and operated in such a manner so as to:

(a) Comply with water quality standards issued pursuant to s. 281.15, Stats.;

(b) Comply with s. 283.21 (1), Stats., relating to toxic pollutants;

(c) Comply with all applicable regulations promulgated under ch. 283, Stats., if any such facility has a point source discharge to the waters of the state including, but not limited to, any point source discharge from a leachate or surface water runoff collection system;

(d) Comply with s. 283.31 (2), Stats., and have the approval of the municipal authority for that discharge, if any such facility discharges to a publicly owned treatment works.

(7) Any waste disposal site or facility licensed pursuant to this chapter shall be located, designed, constructed and operated in such a manner so as to prevent air emissions from such facility causing a violation of standards or regulations promulgated pursuant to ch. 285, Stats.

(8) Any waste disposal site or facility licensed pursuant to this chapter shall be located, designed, constructed and operated in such a manner consistent with the requirements of ch. 293, Stats., and the rules and regulations promulgated pursuant thereto.

(9) Pursuant to s. 293.13 (2) (a), Stats., the department may classify prospecting and mining activities according to the type of minerals involved. The department recognizes that the minimum standards contained in this chapter may be insufficient in regulating uranium prospecting and mining operations and the disposal of radioactive waste resulting from these and other metallic mining operations. Accordingly, the department shall cooperate with the department of health and social services and the radiation protection council, pursuant to ss. 254.34 (1) (a) and 254.36, to assist in defining the term "radioactive mining waste". The department shall continue its evaluation of disposal practices for such wastes and shall, if necessary, request that rules be adopted to regulate uranium prospecting and mining and radioactive wastes resulting from any metallic prospecting or mining operation.

(10) Mining wastes used in the reclamation or construction of facilities and structures on mining or prospecting sites or for backfilling an underground mine or a prospecting excavation shall be exempt from the requirements of ch. 289, Stats., and this chapter but shall comply with the review and approval requirements of ch. 293, Stats., and ch. NR 131 or 132.

(11) Surface mines which are backfilled with mining waste shall be subject to the requirements of this chapter except for ss. NR 182.07 and 182.11 to 182.14.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; cr. (10) and (11), Register, October, 1988, No. 394, eff. 11–1–88; correction in (2) and (4) made under s. 13.93 (2m) (b) 7., Stats., Register, September, 1995, No. 477.

NR 182.04 Definitions. The following special definitions are applicable to the terms used in this chapter:

(1) "Active dam" means a dam and associated settling area into which tailings or wastewater, or both, are being introduced for purposes of clarification or which has not been reclaimed in an approved manner.

(2) "Applicant" means a person who has applied for a solid waste license pursuant to this chapter.

(3) "Background concentration" means the concentration of a substance in groundwater or surface water as determined by monitoring at locations which are not to be affected by the mining site.

(4) "Baseline concentration" means the concentration of a substance in groundwater or surface water as determined by monitoring before mining operations.

(5) "Closure" means those actions taken by the owner or operator of a solid waste site or facility to prepare the site for long–term care and to make it suitable for other uses.

(6) "Closure plan" means a written report and supplemental engineering plans detailing those actions that will be taken by the owner or operator to effect proper closure of a solid waste disposal site or facility.

(7) "Closing" means the time at which a solid waste disposal site or facility ceases to accept wastes, and includes those actions taken by the owner or operator of the facility to prepare the site for any required long–term care and make it suitable for other uses.

(8) "Completeness" means a determination by the department that the minimum submittal requirements as established by this chapter for a plan or report have been met.

(9) "Construct" means to engage in a program of on–site construction, including but not limited to site clearing, grading, dredging or landfilling.

(10) "Construction observation report" means a written report submitted under the seal of a registered professional engineer advising that a solid waste disposal site or facility has been constructed in substantial compliance with a department approved plan of operation.

(11) "Critical habitat areas" mean any habitat determined by the department to be critical to the continued existence of any endangered species listed in ch. NR 27.

(12) "Department" means the department of natural resources.

(13) "Design capacity" means the total volume in cubic yards of solid waste which could be placed in a waste site, including the volume of cover material utilized in the facility, but not including final cover or topsoil.

(14) "Disposal" means the discharge, deposit, injection, dumping or placing of any mining or prospecting waste into or on any land or water so that such waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

(15) "Establish" means to bring a solid waste disposal site or facility into existence.

(16) "Expand an existing site or facility" means to dispose of solid waste on land not previously licensed, to dispose of solid waste not in accordance with a department issued plan approval, if one exists, or to dispose of solid waste in a manner significantly different from past operations.

(17) "Facility" or "facilities" means any land or appurtenances thereto used for the storage or disposal of mining wastes, but does not include land or appurtenances used in the production or transportation of mining wastes, such as the concentrator, haul roads, or tailings pipelines, which are permitted under ch. NR 131 or 132.

(18) "Feasibility report" means a report for a specific solid waste disposal site or facility that describes the site, surrounding area, and proposed operation in terms of land use, topography, soils, geology, groundwater, surface water, proposed waste quantities and characteristics, and preliminary site or facility design concepts.

(19) "Fill area" means the area proposed to receive or which is receiving direct application of solid waste.

(20) "Floodplain" means the land which has been or may be hereafter covered by flood water during the regional flood as defined in ch. NR 116 and includes the floodway and the flood fringe as defined in ch. NR 116.

(21) "Freeboard" means the height of the crest of the dam above the adjacent liquid surface within the impoundment. The "design freeboard" means the minimum freeboard which would occur during the design flood.

(22) "Groundwater" means water in a zone of saturation located below the surface of land.

(23) "Groundwater quality" means the chemical, physical, biological, thermal, or radiological quality of groundwater at a site or within an underground aquifer.

(24) "Inactive dam" means a dam and associated settling area that is no longer actually being used for disposal of wastewater or tailings, or both, and which has been reclaimed in an approved manner.

(25) "Landfill" means a solid waste land disposal site or facility, not classified as a landspreading facility or a surface impoundment facility, where solid waste is disposed on land without creating nuisances or hazards to public health or safety, by utilizing the principles of engineering to confine the solid waste to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of earth at such intervals as may be necessary.

(26) "Leachate" means water or other liquid that has been contaminated by dissolved or suspended materials due to contact with solid waste.

(27) "Long–term care" means the routine care, maintenance and monitoring of a solid waste land disposal facility following the closing of the facility.

(28) "Merchantable by–product" means all waste soil, rock, mineral, liquid, vegetation and other material directly resulting from or displaced by the mining, cleaning or preparation of minerals during mining operations which are determined by the department to be marketable upon a showing of marketability made by the operator, accompanied by a verified statement by the operator of his or her intent to sell such material within 3 years from the time it results from or is displaced by mining. It after 3 years from the time merchantable by–product results from or is displaced by mining such material has not been transported off the mining site, it shall be considered and regulated as refuse as defined in s. 293.01 (25), Stats., unless removal is continuing at a rate of more than 12,000 cubic yards per year.

(29) "Mining" or "mining operation" means all or part of the process involved in the mining of metallic minerals other than for exploration or prospecting, including commercial extraction, agglomeration, beneficiation, construction of roads, removal of overburden and the production of refuse.

(30) "Mining waste" means any refuse, sludge, or other discarded material, including solid, liquid, semi–solid or contained gaseous material, resulting from metallic mineral prospecting or mining, or from the cleaning or preparation of minerals during prospecting or mining operations. Typical mining wastes include, but are not limited to, tailings, waste rock, mine overburden, and waste treatment sludges. Mining waste does not include topsoil and mine overburden not disposed of in a waste site, but placed in a facility permitted under ch. NR 131 or 132, to be returned to the mine site or used in the reclamation process, and does not include merchantable by–products.

Note: For a more specific list of metallic mining wastes see s. NR 605.05 (1) (j) and (k).

(31) "Open dump" means a waste site which is not a sanitary landfill.

(32) "Operator" means any person who is engaged in, or who has applied for or holds a permit to engage in prospecting or mining, whether individually, jointly or through subsidiaries, agents, employees or contractors.

(33) "Ore" means a naturally occurring material from which metallic minerals can be recovered at a profit.

(34) "Overburden" means any unconsolidated material that overlies bedrock.

(35) "Owner" means any person who operates, is engaged in, or who has applied for or holds a permit to engage in mining or prospecting whether individually, jointly or through subsidiaries, agents, employees or contractors.

(36) "Person" means an individual, trust, firm, cooperative, institution, joint stock company, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, interstate body or federal or state department, agency, or instrumentality.

(37) "Plan of operation" means a report submitted for a solid waste disposal site or facility that describes its location, design, construction, sanitation, operation, maintenance, closing and long–term care.

(38) "Pollution" means the contaminating or rendering unclean or impure the air, land or waters of the state, or making the same injurious to public health, harmful for commercial or recreational use, or deleterious to fish, bird, animal or plant life.

(39) "Proof of financial responsibility" means a bond, deposit, proof of an established escrow account or trust account ensuring that sufficient funds will be available to comply with the closure and long–term care requirements of this chapter and the approved plan of operation.

(40) "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 the production of refuse and other associated activities. "Prospecting" shall not include such activities when the activities are, by themselves, intended for and capable of commercial exploitation of the underlying ore body. However, the fact that prospecting activities and construction may have use ultimately in mining, if approved, shall not mean that prospecting activities and construction constitute mining within the meaning of sub. (29), provided such activities and construction are reasonably related to prospecting requirements.

(41) "Reclamation plan" means the proposal for the reclamation of the prospecting or mining site, including the closure of a solid waste disposal site or facility, which must be approved by the department under s. 293.45 or 293.49, Stats., and ch. NR 131 or 132 prior to the issuance of the prospecting or mining permit.

(42) "Registered professional engineer" means a professional engineer registered as such with the Wisconsin examining board of architects, professional engineers, designers and land surveyors.

(43) "Sanitary landfill" means a waste site conforming to the applicable requirements of this chapter.

(44) "Soil" means material that has been physically and chemically derived from the bedrock by nature.

(45) "Solid waste" means mining waste as defined in this chapter.

(46) "Statistically significant change" means an amount of change determined by the use of statistical tests for measuring significance at the 95% confidence level.

(47) "Storage" means the temporary placement of waste in such a manner as to not constitute ultimate disposal, for a period not to exceed 18 months.

(48) "Tailings" means waste material resulting from the washing, concentration or treatment of crushed ore.

(49) "Termination" means the final actions taken by an owner or operator of a solid waste land disposal site or facility when formal responsibilities for long–term care cease.

(50) "Topsoil" means natural loam, sandy loam, silt loam, silt clay loam or clay loam humus–bearing soils or other material that will easily produce and sustain dense growths of vegetation capable of preventing wind and water erosion of the material itself and other materials beneath.

(51) "USGS" means United States geological survey.

(52) "Waste rock" means consolidated rock which has been removed during mining or prospecting, but is not of sufficient value at the time of removal to constitute an ore.

(53) "Waste" means mining waste as defined in this chapter.

(54) "Waste site" or "waste sites and facilities" means any land or appurtenances thereto used for the storage or disposal of mining waste, but does not include land or appurtenances used in the production or transportation of mining waste, such as the concentrator, haul roads, or tailings pipelines, which are permitted under ch. NR 131 or 132. An underground mine or a prospecting excavation which is backfilled with mining waste in accordance with a prospecting permit or a mining permit issued under ch. NR 131 or 132 is not a waste site. A surface mine which is backfilled with mining waste is subject to this chapter as set forth in s. NR 182.02, and for surface mines the mine pit and any land or appurtenances thereto used for the storage of mining waste may be considered a single waste site.

(55) "Well nest" means 2 or more wells installed within 10 feet of each other at the ground surface and constructed to varying depths.

(56) "Wetland" means an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; am. (54), Register, October, 1988, No. 394, eff. 11–1–88.

NR 182.05 License periods and fees. (1) No person shall maintain or operate a waste site unless the person has obtained an operating license from the department, except as otherwise provided in this chapter. Applications shall be submitted on forms supplied by the department and shall be accompanied by the appropriate fees as shown in Table 1. License fees are not refundable. The license shall be issued for the design capacity specified in the determination of site feasibility unless the department establishes by a clear preponderance of the credible evidence that:

(a) The site is not constructed in accordance with the approved plan;

(b) The site poses a substantial hazard to public health or welfare, or

(c) In–field conditions, not disclosed in the feasibility report or plan of operation, necessitate modifications of the plan to comply with standards in effect at the time of plan approval under s. 289.30 (6), Stats., or, if applicable, s. 291.25, Stats.

(2) Any such license may be suspended or revoked for failure to pay the fees required hereunder, or for grievous and continuous failure to comply with the approved plan of operation, or if no plan of operation exists, for grievous and continuous failure to comply with the standards of this chapter applicable to such site under s. NR 182.02 (3). The department shall review the license and plan of operation to determine compliance annually or at such other intervals as it determines necessary, but no more frequently than annually. At the time of such review, the operator shall pay review fees as shown in Table 1. Review fees are not refundable.

(3) No person shall establish or construct a waste site or facility prior to obtaining written approval from the department of plans describing site or facility feasibility and operation, or both except as otherwise provided in this chapter. The plan review fee

specified in Table 1 shall accompany all plans submitted to the department for approval. Plan review fees are not transferable, proratable or refundable.

(4) Following closure of a site or facility, the owner or any successor in interest shall be required to have a license during the period of owner responsibility indicated in s. 289.41 (1m) (g), Stats. The license shall be issued for terms of 5 years with a fee of $250 per license period.

Table 1

PLAN REVIEW FEES*

Type	Feasibility Report	Plan of Operation
Storage	1500	1500
Land Disposal	4500	4500
Other	1500	1500

LICENSE FEES

Type	Initial License	Periodic Review Fee
Storage	1500	1500
Land Disposal	1500	1500
Other	1500	1500

*The plan review fees specified in Table 1 cover the department's review from initial submittal through approval or denial of the report or plan. An applicant may revise or supplement a report or plan deemed incomplete and resubmit it without paying an additional review fee. The applicant shall pay a plan review fee as specified in Table 1 for resubmittal of a plan which has been previously denied or withdrawn after having been determined to be complete.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; r. and recr. table 1, Register, March, 1984, No. 339, eff. 4–1–84.

NR 182.06 General submittal requirements. Unless otherwise specified in this chapter, all submittals for review and approval of any feasibility report, plan of operation, construction observation report or closure plan shall include the following:

(1) The review fee specified in s. NR 182.05 in check or money order payable to the department.

(1i) A letter detailing the desired department action or response.

(1p) Five copies of the plan or report prepared pursuant to the appropriate section of this chapter. Two copies shall be submitted to the department field office responsible for the area in which the site is located and 3 copies shall be submitted to the bureau of solid waste management in Madison. Review time starts when copies are received by the bureau. The plans and reports and all methods and procedures used to prepare them shall conform to the following:

(a) *Preparation.* The submittal shall be under the seal of a registered professional engineer.

(b) *Investigation.* All technical procedures used to investigate a solid waste disposal site or facility shall be in accordance with standard engineering procedures as approved by the department. Test procedures used shall be specified. Any deviation from a standard method shall be explained in detail with reasons provided.

(c) *Format.* All submittals shall include:

1. The required technical information as specified in this chapter.

2. Maps, figures, photographs and tables where applicable to clarify information or conclusions. The visuals shall be legible. All maps, plan sheets, drawings, isometrics, cross–sections and aerial photographs shall meet the following requirements:

a. Generally be no larger than 24 inches x 36 inches and no smaller than 81/2 inches x 11 inches.

b. Be of appropriate scale to show all required details in sufficient clarity.

c. Be numbered, referenced in the narrative, titled, have a legend of all symbols used, contain horizontal and vertical scales, where applicable, and specify drafting or origination dates.

d. Use uniform scales as much as practical.

e. Contain a north arrow.

f. Use USGS datum as basis for all elevations.

g. Plan sheets showing site construction, operation or closure topography, shall also show original topography.

h. Plan sheets for land disposal sites and facilities shall indicate a survey grid based on monuments established in the field.

i. All cross–sections shall show survey grid location and be referenced to major plan sheets.

3. An appendix listing names of references, all necessary data, procedures and calculations.

(2) Unless otherwise specified in this chapter, no person shall operate or maintain a solid waste disposal site or facility without a license from the department.

(a) A submittal for licensing of any solid waste disposal site or facility shall include:

1. The license fee specified in s. NR 182.05 in check or money order payable to the department.

2. A completed copy of the appropriate application form.

3. For all land disposal sites and facilities with plans of operation approved under this chapter, proof of financial responsibility as specified in ss. NR 182.16 and 182.17.

(b) The department shall notify the owner or operator of its intent to review the license and plan of operation, including monitoring data, to determine compliance at a frequency as determined necessary by the department, but no more frequently than annually. Upon such notification, the owner shall within 30 days remit the periodic review fee as specified in s. NR 182.05 in check or money order payable to the department.

(3) In the event overlap exists between information required in reports or applications under this chapter, such as the feasibility report and plant of operation, and reports or applications required under other chapters, such as the mining permit application under ch. NR 132, and an environmental impact report under ch. NR 150, such different reports and applications, or portions thereof, may, at the applicant's discretion, be cross–referenced without the necessity of repetition, or may, to the extent practicable, be combined.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; correction made under s. 13.93 (2m) (b) 1., Stats., Register, September, 1995, No. 477.

NR 182.07 Location criteria. (1) No person shall establish, construct, operate, maintain, or permit the use of property for a waste site within the following areas, except pursuant to an exemption granted under s. NR 182.19:

(a) Within areas identified in s. 293.01 (28), Stats., and in s. NR 131.03 (22) or 132.03 (25). In addition to s. 293.01 (28) (a), Stats., the presence of endangered and threatened species as designated by the department under s. 29.604, Stats., shall be considered.

(b) Within 1,000 feet of any navigable lake, pond or flowage.

(c) Within 300 feet of a navigable river or stream.

(d) Within a floodplain.

(e) Within 1,000 feet of the nearest edge of the right–of–way of any of the following: any state trunk highway, interstate or federal primary highway; the boundary of any state or federal park; the boundary of a scenic easement purchased by the department or the department of transportation; the boundary of a designated scenic or wild river; a scenic overlook designated by the department by rule; or a bike or hiking trail designated by the United States congress or the state legislature; unless, regardless of season, the site is visually inconspicuous due to screening or being visually absorbed due to natural objects, compatible natural plantings, earth berm or other appropriate means, or unless, regardless

of season, the site is screened so as to be as aesthetically pleasing and inconspicuous as is feasible.

(f) Within 1,200 feet of any public or private water supply well.

(g) Within an area which contains known mineral resources at the time of initial application which are likely to be mined in the future and lie within 1,000 feet of the surface.

(h) Within 200 feet of the property line.

(i) Within an area where the department after investigation finds that there is a reasonable probability that disposal of solid waste within such an area will result in a violation of surface water quality criteria and standards as specified in chs. NR 102 to 104.

(j) Within an area where the department finds there is a reasonable probability that disposal of mining waste within such an area will cause groundwater quality enforcement standards to be attained or exceeded beyond the design management zone specified in s. NR 182.075.

(2) Any proposal to establish a site or facility shall comply with the standards and procedures in s. NR 132.06 (4), relating to the minimization of disturbance to wetlands.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; am. (1) (j), Register, May, 1998, No. 509, eff. 6–1–98**; correction in (1) (a) was made under s. 13.93 (2m) (b) 7., Stats.**

NR 182.075 Groundwater standards. (1) GROUNDWATER QUALITY. (a) *Applicability.* Notwithstanding the applicability provisions of s. NR 140.03, under the authority of s. 293.15 (11), Stats., mining waste facilities regulated under this chapter and other facilities situated on a prospecting site regulated under ch. NR 131 or a mining site regulated under ch. NR 132, approved after June 1, 1998, shall comply with ch. NR 140.

(b) *Design management zones.* 1. The horizontal distance to the boundary of the design management zone for mining waste facilities regulated under this chapter shall be 1,200 feet from the outer waste boundary, unless reduced pursuant to s. NR 140.22 (3), or at the boundary of property owned or leased by the applicant, whichever distance is less. The outer waste boundary shall be the outermost limit at which waste from a facility has been stored or disposed of, or permitted or approved for storage or disposal.

2. The horizontal distance to the boundary of the design management zone for a metallic mineral surface mine or surface prospecting excavation shall be 1,200 feet from the edge of the mine or prospecting excavation, unless reduced pursuant to s. NR 140.22 (3), or at the boundary of property owned or leased by the applicant, whichever distance is less.

3. The horizontal distance to the boundary of the design management zone for an underground metallic mineral mine or prospecting excavation shall be 1,200 feet from the maximum outer edge of the underground prospecting or mine workings adjacent to the ore body as projected to the land surface, unless reduced pursuant to s. NR 140.22 (3), or at the boundary of property owned or leased by the applicant, whichever distance is less.

4. The horizontal distance to the boundary of the design management zone for facilities, other than the prospecting excavation, mine and mining waste facility, situated on a prospecting site regulated under ch. NR 131 or a mining site regulated under ch. NR 132 shall be as specified in Table 4 of ch. NR 140, if listed, or 150 feet from the edge of the facility, unless expanded or reduced pursuant to s. NR 140.22 (3), or at the boundary of property owned or leased by the applicant, whichever distance is less.

(c) *Mandatory intervention boundary.* The horizontal distance to the mandatory intervention boundary for a metallic mining waste facility or a surface or underground metallic mineral mine or prospecting excavation shall be 150 feet from the outer waste boundary, the outer edge of the mine or prospecting excavation, or the outer edge of the underground workings as projected to the land surface, unless the boundary of the design management zone is within 300 feet of the outer waste boundary, mine, prospecting excavation, or underground prospecting or mine workings. In no case may the mandatory intervention boundary extend more than one half the distance from the outer waste boundary, mine, prospecting excavation or underground prospecting or mine workings to the boundary of the design management zone. The mandatory intervention boundary shall apply as specified in s. NR 182.075 (1s) and (1u).

(1p) For any substance for which there is not an enforcement standard and preventive action limit in ch. NR 140, the waste site, mine and other facilities on a mining site may not cause concentrations which have a substantial deleterious impact on a current beneficial use or a significant future beneficial use, of groundwater, such as drinking, irrigation, aquaculture, maintenance of livestock, or maintenance of aquatic and terrestrial ecosystems, as designated at a hearing held pursuant to s. 293.43, Stats.

(1s) CONTINGENCY PLAN. (a) At the hearing conducted under s. 293.43, Stats. the department shall determine the adequacy of the contingency plan submitted by the applicant which specifies the action which will be taken if an analysis of groundwater samples requires a response under ss. NR 140.24 to 140.27 and 182.13 (2) (g). The contingency plan shall provide that the response protocol include a comparison of the observed sampling results to the results of the original predictive modeling, completed as part of the mine permitting process, and updated predictive modeling performed subsequent to the start of operation. If the comparison indicates that the observed sampling results are consistent with the design and expected performance of the facility, and the sampling results indicate that an enforcement standard or a preventive action limit has not been exceeded beyond the mandatory intervention boundary, the operator may recommend a no response action in accordance with s. NR 140.24.

(b) 1. If a preventive action limit or an enforcement standard has been exceeded beyond the mandatory intervention boundary, the department shall require a response in accordance with s. NR 140.24, but may not approve a no action response under s. NR 140.24 (5).

2. If a response under s. NR 140.24 (5) has previously been taken, and if subsequent monitoring results are consistent with updated predictive modeling projections and indicate that the groundwater standards will not be attained or exceeded at the design management zone, the department may determine that no additional response is necessary.

3. Notwithstanding the provisions of s. NR 182.19, no exemption under s. NR 182.19 may be granted to subd. 1. of this subsection.

(1u) The following requirements are to be applied in conjunction with those of ss. NR 132.11 and 182.13. The department shall specify the parameters for groundwater analysis and may include those considered indicator parameters, those important parameters identified from the waste characterization studies, and others which might be appropriate under the specific conditions.

(a) The operator of a prospecting or mining site shall monitor groundwater quality at locations approved by the department along the mandatory intervention boundary and the boundary of the design management zone.

(b) The operator of a prospecting or mining site shall monitor groundwater quality at locations approved by the department within the mandatory intervention boundary and the design management zone.

(c) Intervention by the operator in accordance with the provisions of the contingency plan, developed in accordance with s. NR 182.09 (2) (d) and approved in accordance with ss. NR 182.08 (2) and 182.09 (1), shall be required, regardless of the holding of any hearing pursuant to sub. (1x), when analyses of samples from monitoring points within the design management zone or within the mandatory intervention boundary show a reasonable probability that, without intervention, there may be a violation of the established groundwater quality standards at the boundary of the design management zone. Criteria against which "reasonable

probability" shall be measured are the results of the predictive modeling submitted by the applicant as part of the feasibility report and other information available to the department.

(d) Additional monitoring locations and tests may be specified by the department so that the actual effects of the mining site on groundwater quality may be compared with the effects projected in the feasibility report, mining permit application and waste water engineering report.

(e) Groundwater shall be monitored at locations approved by the department in the vicinity of the prospecting or mining site on a monthly basis for at least 12 consecutive months during the initial site preparation and construction phase at the prospecting or mining site to determine baseline water quality. Parameters analyzed shall include those substances identified in ch. NR 140 and specified by the department for monitoring, indicator parameters as specified by the department, parameters identified as important in the waste material, and any other parameters deemed appropriate by the department for the specific conditions of the site.

(f) Monitoring shall also be performed with respect to the quality of groundwater which is not affected by the site but which is in the aquifers near the site.

(1x) (a) If the department has reason to believe that a site is not in compliance with the requirements of this section, or if the department projects with reasonable probability that a site will not achieve such compliance at the boundary of the design management zone, it shall refer the matter to the department of justice pursuant to s. 293.95, Stats., or hold a class 2 contested case hearing pursuant to s. 293.15 (1), Stats., after giving 30 days notice to the persons identified in s. 293.43, Stats. Notice to the operators shall include the specific information on which the department has based its determination. The purpose of the hearing shall be to determine the existence and extent of noncompliance or, if noncompliance does not exist, whether a site will not achieve compliance at the boundary of the design management zone. Pursuant to the hearing, the department:

1. Shall determine whether the same constitutes an immediate and substantial threat to public health and safety or the environment pursuant to s. 293.83, Stats., and, therefore, requires the issuance of a stop order;

2. Shall determine whether to cancel the mining or prospecting permit if the site is in violation of ch. 293, Stats., according to the provisions of s. 293.85, Stats.;

3. Shall determine if the noncompliance constitutes a grievous and continuous failure to comply with the approved plan of operation pursuant to s. 289.30 (7) or 289.31 (1), Stats., and, therefore, requires license revocation; and

4. Shall determine, if appropriate, if any other sanctions authorized by s. 293.15 (3) or 293.83, Stats., are necessary to assure compliance.

(b) A decision shall be issued with respect to a hearing held pursuant to par. (a) within 30 days of its conclusion, and shall be in writing accompanied by findings of fact and conclusions of law. The findings of fact shall consist of a concise and separate statement of the ultimate conclusions upon each material issue of fact with recital of evidence.

(2) GROUNDWATER QUANTITY. (a) If the department finds that the proposed waste site will adversely affect or reduce the availability of water to any public utility, as defined in s. 196.01 (5), Stats., in furnishing water to or for the public, it shall either deny the license or grant a license under which it imposes such conditions as to location, depth, construction and ultimate use so that the water supply of any public utility engaged in furnishing water to or for the public will not be impaired.

(b) If the department finds that the waste site would cause unreasonable harm to any person through lowering the water table or reducing artesian pressure, it shall deny the license or grant a license under which it imposes conditions whereby such unreasonable harm will be precluded.

(c) If the department finds that the waste site will have a direct and substantial effect upon a watercourse or lake, and that such water used by or coming from the site will:

1. Be put to an unreasonable use and will cause harm to an existing use of a watercourse or lake by a riparian proprietor or a nonriparian who holds a grant from a riparian proprietor of the grantor's right to use the water, or

2. Cause harm to a nonriparian exercising a right to use public or private waters created by government authority, permit, or license, or

3. Interfere with the exercise of a public right to use the waters; then the department shall deny the license or grant a license imposing conditions whereby such harm will be precluded.

(d) The department shall not deny the waste site license merely because operation of the site will interfere with or prevent the initiation of a new use of groundwater, or a new use of the water or a watercourse or lake by a riparian proprietor.

(e) For the purpose of par. (c), the determination of the reasonableness of the use of water depends on a consideration of the interests of the user, of any person harmed thereby, and of society. Factors which affect the determination include the following:

1. The purpose of the respective uses;

2. The suitability of the uses of the watercourse, lake or aquifer;

3. The economic value of the uses;

4. The social value of the uses;

5. The extent and amount of the harm caused;

6. The practicality of avoiding the harm by adjusting the use or method of use of one party or the other;

7. The practicality of adjusting the quantity of water used by each party;

8. The protection of existing values of water uses, land, investments and enterprises; and

9. The justice of requiring the user causing harm to bear the loss.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; corrections made under s. 13.93 (2m) (b) 1. and 7., Stats., Register, September, 1995, No. 477; r. (intro.), (1g), (1m) and (1r), r. and recr. (1), and (1s) (b), renum. and am. (1p) (c) 4., to be (1p) and am. (1s) (a), (1u) (a), (b), (c), (d), (e), and (1x) (a), Register, May, 1998, No. 509, eff. 6–1–98**; corrections in (1x) (b) and (2) (a) made under s. 13.93 (2m) (b) 7., Stats.**

NR 182.08 Feasibility report. (1) Any applicant is encouraged to contact the department during the early stages of project planning and development to determine what permits and approvals may be required and to assure that submissions are consistent with department requirements.

(2) No person may establish or construct a waste site or expand an existing waste site not in operation as of May 21, 1978, without first obtaining approval of a feasibility report and a plan of operation from the department. The purpose of the feasibility report is to determine whether the site may be approved for the purpose intended and to identify any conditions which must be included in the plan of operation and in the license issued pursuant to this chapter. The feasibility report shall be submitted in accordance with s. NR 182.06 (1) and be consistent with ch. NR 132. If the proposed waste site is a surface mine backfilled with mining waste, the feasibility report submittal provisions of this section may be satisfied by including the information required by this section in the mining permit application submitted pursuant to ch. NR 132 and issuance of the mining permit shall constitute approval of the feasibility report requirements and favorable determination of site feasibility. The amount of regional and site specific information and data required for each waste site may vary and shall be based on the waste characterization, but shall, at a minimum, contain the following, unless such information is contained in submittal of documents required under ch. NR 132 or 150 or s. 23.11 (5), Stats.:

(a) *General facility information.* The following information shall be included: project title; name, address and phone number of the person who has been designated as the primary contact for departmental correspondence; owner of the proposed facility; site location; proposed licensed acreage; proposed facility life and range of disposal capacity; and estimated waste types and quantities to be contained.

(b) *Waste characterization and analysis.* Applicants shall conduct a characterization and analysis of all mining wastes which may be disposed of or stored in the waste site.

(be) *Evaluation.* Waste characterization and analysis shall identify the characteristics of the wastes which must be known to enable the applicant to comply with the requirements of these regulations. It shall be an evaluation of the quantities, variability, and physical, radiologic and chemical properties of a waste necessary for predicting potential environmental impact of waste handling, storage and disposal, and for determining the appropriate regulatory controls and specific disposal or storage design. Evaluation may include a review of the literature and results from similar existing facilities, materials, or studies.

(bi) *Testing.* Testing shall be performed on the representative samples of material available, on individual wastes from the mining and milling process, and on composite wastes where mixed storage or disposal of individual wastes is proposed. Where either physical or chemical segregation of a waste is proposed, each individual waste shall be tested. If the information relevant to the waste characterization is not known, and the overall costs of obtaining it are unreasonable or beyond the state–of–the–art, then the characterization shall include worst case analyses and associated probabilities. The major components of waste characterization and analysis shall include:

1. Identification of all wastes which will be disposed of or stored in the waste site. Identification shall include classification of waste types, estimation of the generation rates and volumes of each type, and an explanation of the ultimate disposition of each type.

2. Chemical, radiologic and mineralogic analyses of the wastes.

3. Particle size analyses of the wastes.

4. Chemical and physical characteristics testing shall be performed unless it is documented based on the analyses in subds. 2. and 3. or past experience that there is no potential for significant environmental damage or the potential of a threat to public health, safety and welfare. This testing program shall include:

a. Determination of the acid producing characteristics of the wastes considering the acid producing content of the materials, the size, form of the acid producing material, and spatial distribution of its particles, the neutralizing effect of host materials; and the quality of leachate produced by similar wastes.

b. Determination of the leaching potential of the wastes and determination of the composition of the resulting leachate.

c. An evaluation of the physical, radiologic and chemical properties of representative samples of wastes as may be required to develop storage or disposal plans.

5. The applicant shall describe in detail the testing and chain of custody methods employed in evaluating the waste characteristics, and shall provide to the department justification for the use of such methods. If the department cannot reasonably verify the methods utilized by the applicant or the results therefrom other than by independent testing, the department may require that the applicant provide representative samples to the department for such independent testing. Use of these samples shall recognize the effect of time upon the representativeness of sample analysis results.

6. Where prospecting samples are available, the applicant shall conduct, if required by the department, a field testing program to both supplement and verify literature survey and laboratory testing programs.

7. The applicant is encouraged to develop methods of waste handling that will result in the reuse or recovery of such materials. Accordingly, the feasibility report shall include a discussion of alternative methods of disposal of waste materials, including an analysis of the practicability of the reuse, sale, recovery, or processing of such wastes for other purposes.

(bo) *Summary.* A summary of the waste characterization as it relates to the handling, storage and disposal of the same shall be provided.

(bs) *Results.* Results of the waste characterization and analysis combined with information from the evaluation of regional and site specific information, shall be used as part of the feasibility report and plan of operation phases of the project to: determine specific approaches for locating the waste site; determine and obtain appropriate site specific information, and develop appropriate design, construction, operation, monitoring and long–term care requirements for each category of waste.

(c) *Regional information.* A discussion of the regional site setting shall be included to provide a basis for comparison and interpretation of site specific information obtained through field investigations. The discussion should generally be limited to information available from state agency files and publications although some field verification and updating may be necessary. The term regional as used herein is intended to include that area which may affect or be affected by the proposed site. In most instances this will be the proposed site, and the area within a radius up to 5 miles from the site. The discussions should be supplemented by maps or cross–sections, where appropriate. The following items shall be addressed:

1. Topography.

2. Hydrology, including surface water drainage patterns and important hydrologic features such as navigable waters, springs, drainage divides and wetlands.

3. Geology, including the nature and distribution of bedrock and unconsolidated deposits.

4. Hydrogeology, including depth to groundwater, flow directions, recharge and discharge areas, groundwater divides, aquifers and the identification of the aquifers used by all public and private wells within at least 1,200 feet of each proposed site.

5. Ground and surface water quality, and precipitation chemistry.

6. Climatology.

7. Identification of adjacent landowners.

8. Zoning.

9. Present land uses with particular emphasis on known recreational, historic, archaeological, scientific, cultural or scenic significance.

10. Present or proposed access roads and weight restrictions.

11. Factors identified in s. NR 182.07, location criteria.

12. Identification of aquatic and terrestrial ecosystems such as stream orders and classifications.

(d) *Site specific information.* Site specific information shall be included and field and laboratory investigations shall be performed to further define site physical, chemical and biological characteristics as provided below.

1. Field investigations shall be performed to define the site specific topography, soil types, depth to bedrock and groundwater. An existing site conditions plan sheet shall be prepared which shall be a detailed topographic survey of the area of investigation. All elevations shall be tied to USGS mean sea level datum. The map, if practicable, shall have a scale no greater than 1:2,400 with a contour interval of 0.1 to 4 feet. The plan shall illustrate the property boundaries, proposed waste facility and site boundaries, survey grid and north arrow, buildings, water supply wells, utility

lines, man–made features, soil boring locations, observation well locations and other pertinent information.

2. The number and depth of soil borings required depends on the relative homogeneity of the soils at the site, the size of the area, character of the wastes and the geotechnical design requirements for the waste site. The borings shall be located to sample adequately major geomorphic features such as ridges and lowlands. Each major soil layer encountered during the boring investigation shall be classified according to the unified soil classification system.

3. Boring logs shall be prepared for all borings. Each log shall include soil and rock descriptions, method of drilling, method of sampling, sample depths, date of boring, and water level measurements and dates. All elevations shall be referred to USGS mean sea level datum.

4. a. Soil samples shall be collected to adequately determine the geology and ensure proper design and monitoring of the site. Soil samples shall be collected at maximum 5–foot depth intervals, unless physical conditions such as soil homogeneity indicate that greater intervals would be adequate. Where appropriate, samples shall be collected using generally accepted undisturbed soil sampling techniques. All soil samples should be classified according to the unified soil classification system.

b. Soil tests including grain–size distribution and Atterburg limits shall be performed as required for classification and correlation purposes and to develop necessary geotechnical design parameters for the waste site. Samples shall not be composited for testing purposes.

c. Soil testing shall also include other physical, chemical, and biological testing as appropriate.

5. The hydraulic conductivity of the various soil strata shall be determined. In situ hydraulic conductivity testing procedures shall be used as appropriate to confirm laboratory values.

6. a. Water table observation wells and piezometers shall be constructed and monitored to provide data necessary to determine horizontal and vertical groundwater flow patterns in and around the proposed site. Soil samples shall be collected and analyzed as described in subd. 4. a. to c. from those observation wells, or the deepest well of a well nest, used to provide the data necessary to determine groundwater flow patterns in and around the proposed site or a sampled boring within 20 feet of such a well.

b. Well construction log information shall include the elevation of the ground surface, the top of the pipe, the bottom of each boring, the well seals, the screened interval, a description of well construction, and a boring log as required in subd. 3.

c. Upon completion, each well shall be developed by pumping until the water pump is cleared. Pumping may include air lift pumps.

d. Successive water level measurements in each well shall be made until stabilized readings are obtained.

7. a. A series of geologic cross–sections illustrating the following shall be prepared: existing topography, soil borings, soil classification, soil properties, interpreted soil stratigraphy, bedrock, well and boring locations and constructions and stabilized water level readings.

b. A water table map shall be constructed based on stabilized water level readings. The existing site conditions plan shall be used as a base for this map. Where significant, seasonal changes in groundwater levels shall be mapped.

c. When more than 2 well nests have been constructed, groundwater flow nets shall be prepared to illustrate horizontal and vertical flow. Where appropriate, this information may be illustrated on the geologic sections.

8. Site specific environmental information. a. An environmental characterization shall be prepared which describes the structure and functional relationships of potentially impacted ecosystems. All relevant data shall be compiled and analyzed.

b. A baseline monitoring program shall be conducted and the data reported consistent with the requirements of ss. NR 132.05 and 132.11. The baseline program shall address physical–chemical and biological monitoring. Physical–chemical parameters shall be selected based on transport and transformation mechanisms in the environment as well as other factors affecting the mobility and toxicity of pollutants. Biological parameters shall be selected based on the environmental characterizations, the degree of impact predicted, and the potentially affected organisms' sensitivity to contaminants.

c. A land use map showing plant communities, wildlife habitat, rare and endangered species sightings, archeological or historic sites, buildings, and areas of social importance shall be provided. The existing site conditions map shall be used as a base map.

d. Groundwater shall be monitored in the vicinity of the disposal site on a monthly basis for at least 12 consecutive months prior to disposing of waste at the site, in conjunction with the gathering of baseline data as specified in subd. 8. b.

e. A table shall be provided showing existing water quality of all potentially affected surface waters. The table shall include those surface waters identified under s. NR 182.07 (1). Important aquatic habitat, such as class II trout stream or state scenic river, shall be indicated.

f. Local climatological data shall be provided for seasonal precipitation, evaporation, air temperature and wind velocity and direction. This may be satisfied by either an annual record on the site or adequate data to correlate the site conditions to an existing observation station.

(e) *Proposed facility design.* Based on the conclusions resulting from the analysis of site data and waste characterizations, a proposed facility design shall be prepared. This shall consist of preliminary type, size and location, engineering plans, a general discussion of proposed operating procedures, and a proposed monitoring program. This section of the report shall include for each waste site:

1. A map, using the existing site conditions map as a base, which shows proposed access, lateral extent of filling, and phases of facility development.

2. A series of cross–sections showing present topography, proposed base grades and final grades, using the geological sections as a base.

3. Preliminary earth work balance calculations.

4. Proposed methods for leachate control.

5. Proposed operating procedures including method of site development, phasing, control of surface water, screening, access control and other special design features.

6. Material balances prepared from best available information showing the quantities of the wastes identified in par. (a). These material balances shall include:

a. The projected conditions existing at the end of a typical year of production;

b. The projected conditions existing before and after a significant change in operating practice of the mine waste site or facility, such as the shut down of a cell of a tailings disposal area and the start up of another;

c. The projected conditions existing at the end of operations;

d. The projected conditions existing at the end of reclamation.

7. Discussion of the reasoning and logic behind the design of the major features of the site, such as traffic routing, base grade and relationships to subsurface conditions, anticipated waste types and characteristics, phases of development, liner design, facility monitoring, and similar design features.

8. A monitoring program shall be developed for the purpose of determining whether the proposed facilities meet all environmental standards. Program design and specifications should be based on potential variations in the quality and quantity of waste

materials, methods of processing, transport and disposal, and the variability of important environmental conditions.

9. The applicant shall submit information based on predictive modeling to demonstrate there is a reasonable certainty that the facility will not result in a violation of the groundwater quality standards, specified in ch. NR 140, beyond the design management zone. If any statistically significant change in baseline groundwater quality is predicted, the applicant shall prepare a specific assessment of any adverse environmental impacts reasonably expected to result. If it is expected, with reasonable certainty, that a preventive action limit will be exceeded beyond the design management zone, the applicant shall request an exemption under ss. NR 140.28 and 182.19 which shall include an assessment of why it is not technically and economically feasible to achieve the preventive action limit.

10. For expansion of existing facilities the report shall include an evaluation of the effectiveness of the existing site design and operation.

(f) *Water budget.* A preliminary water budget shall be prepared for 3 time periods: before construction, during active operation and after facility closure. Water budget calculations shall be made for 3 climatological situations depicting dry, wet and average precipitation – evaporation conditions based on climatologic records. The water budget shall describe the estimated amount and quality of seepage and discharge to surface and groundwater. Factors to be considered in preparation of the water budget are precipitation, slurry water input and return, evaporation, surface runoff, infiltration, evapotranspiration, soil and waste moisture holding capacity and groundwater flow velocities and volume.

(g) *Aesthetics.* The applicant shall analyze the impact of the waste disposal site on aesthetics and how such impact can be minimized.

(h) *Dam safety factors.* The applicant shall submit data regarding the safety factors of tailings pond embankments. On a case–by–case basis the following factors shall be considered:

1. Geology of the disposal site including type and homogeneity of the foundation.

2. Materials and methods to be used for embankment construction.

3. Engineering modifications to be included in the design.

4. Physical and chemical characteristics of the waste as deposited and predicted changes through time.

5. Endangerment to human safety.

6. Potential area to be affected in case of failure, considering land use and the surrounding environment.

7. Requirements as specified by the mine safety and health administration.

(i) *Contingency plan.* The applicant shall develop and describe a contingency plan to prevent or minimize human health or environmental damage in the event of an accidental or emergency discharge or other condition not anticipated in the feasibility report which does not comply with the license conditions or other applicable standards.

(j) *Closure and long–term care.* An economic analysis, including an engineer's cost estimate, for site closing and long–term care, which may be provided by reference to the reclamation plan submitted pursuant to s. 293.37 (2) (b), Stats., and s. NR 132.08.

(k) *Alternative design, location and operation submittals.* 1. Alternatives to the design and location of any new proposed waste site shall be identified and evaluated, including an economic analysis of each site which is both environmentally and economically feasible. Operation alternatives shall be discussed to the extent they have a significant impact on design and location alternatives.

2. In order to minimize the total adverse environmental impact, a viable site shall be chosen that would result in the least total overall adverse environmental impact. The site selection process shall include the identification and analysis of various alternatives so that a legitimate comparison between several of the most viable sites can be made, realizing that a comparison will be made between several sites, all of which may have some imperfections with regard to environmental acceptability and none of which, in some cases, may be found to be environmentally acceptable as a result of compliance with s. 1.11, Stats., and other applicable Wisconsin laws.

3. The applicant shall submit to the department the data on all proposed alternative waste sites and designs studied by the applicant.

(L) *Appendix.* The feasibility report shall have an appendix including:

1. Boring logs, soil tests, well construction data and water level measurements;

2. Methods and equations used in the analysis of the raw data;

3. References.

(3) (a) Within 60 days after a feasibility report is submitted, the department shall notify the applicant in writing whether the feasibility report is complete, or specify what information is needed if the report is incomplete. A favorable determination as to completeness does not mean that the report is adequate for the purpose of determining site feasibility under this chapter.

(b) Within 90 days after completion of the hearing under s. 293.43, Stats., the department shall issue a written determination on the adequacy of the feasibility report and of site feasibility, stating the findings of fact and conclusions of law upon which the determination is based. If a determination is made that the feasibility report is not adequate to make the determination of site feasibility, the department may defer decision until an amended feasibility report is filed and, if the department deems it necessary, a continuation of the hearing held pursuant to s. 293.43, Stats.

(c) The site may be found feasible if it meets the design, operation, location and environmental standards contained directly or by cross–reference in this chapter. Any determination made under this subsection may be conditioned upon the design, operational or other requirements deemed necessary to be included in the plan of operation. A favorable determination issued under this subsection shall specify the design capacity of the proposed site and constitute approval of the site for the purpose intended.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; am. (2) (intro.) and (3) (c), Register, October, 1988, No. 394, eff. 11–1–88; correction in (2) made under s. 13.93 (2m) (b) 1., Stats., Register, September, 1995, No. 477; **am. (2) (e) 9., Register, May, 1998, No. 509, eff. 6–1–98.**

NR 182.09 Plan of operation. (1) No person may establish or construct a waste site or expand an existing site until a plan of operation has been submitted in accordance with s. NR 182.06 and approved in writing by the department, except as otherwise provided herein. No person may establish, construct, operate, maintain, close, provide long–term care for, or terminate a site except in accordance with the approved plan of operation. No person may submit a plan of operation for a facility prior to the time the person submits a feasibility report for that facility. A person may submit a plan of operation with the feasibility report or at any time after the feasibility report is submitted. If the proposed waste site is a surface mine backfilled with mining waste, the plan of operation submittal provisions of this section may be satisfied by including the information required by this section in the mining permit application submitted pursuant to ch. NR 132 and issuance of the mining permit shall constitute approval of the plan of operation requirements.

(2) All plans of operation for waste sites shall be consistent with the findings of fact and conclusions of law issued as a result of the hearing pursuant to s. 293.43, Stats., and the feasibility determination and conditions pursuant to s. NR 182.08 (3) and shall contain complete plans and specifications necessary for the construction, operation, closure, long–term care and termination

of the project. All information shall be presented in a clear and understandable manner. The plan of operation shall contain, at a minimum, the following information:

(a) Engineering plans consisting of the following:

1. A title sheet indicating the project title, who prepared the plans, the person for whom the plans were prepared, a table of contents, and a location map showing the location of the site geographically and its relation to the mine – mill complex or associated sites and facilities.

2. An existing site conditions plan sheet indicating site conditions prior to development. The details and extent of coverage shall be the same as that required for the existing site conditions map in s. NR 182.08 (2) (d) 1.

3. A base grade plan sheet indicating site base grades or the appearance of the site if it were excavated in its entirety to the base elevation, before installation of any engineering modifications and prior to disposal of any wastes.

4. An engineering modifications plan sheet indicating the appearance of the site after installation of engineering modifications. More than one plan sheet may be required for complicated sites. This plan is required only for those facilities with engineering modifications.

5. A final site topography plan sheet indicating the appearance of the site at closing including the details necessary to prepare the site for reclamation and long–term care.

6. A series of phasing plan sheets showing the progression of site development through time. At a minimum, a separate plan shall be provided for initial site preparations for each subsequent major phase or new area where substantial site preparation and certification must be performed. Each plan shall include a list of construction items and quantities necessary to prepare the phase indicated.

7. A site monitoring plan sheet showing the location of all devices for the monitoring of leachate quality, leachate production, groundwater quality and levels in both the natural zone of saturation and that developed within the disposal site. This plan sheet shall include a table indicating the parameters to be monitored for and the frequency of monitoring before and during site development.

8. A long–term care plan sheet showing the site of the completion of closure and indicating those items anticipated to be performed during the period of long–term care for the site. The plan shall include a table listing of items and the anticipated schedule for monitoring and maintenance. In many instances this information can be presented on the final site topography sheet.

9. When applicable, the following information shall be presented on the appropriate plan sheet:

a. All information required for the existing site conditions map as described in s. NR 182.08 (2) (d) 1., unless including this information leads to confusion with the data intended for display.

b. A survey grid with baselines and monuments to be used for field control.

c. Limits of filling for each major waste type or fill area.

d. All drainage patterns and surface water drainage control structures both within the actual fill area and at the site perimeter. Such structures may include berms, ditches, sedimentation basins, pumps, sumps, culverts, pipes, inlets, velocity breaks, sodding, erosion matting, vegetation or other methods of erosion control.

e. The method of placing waste materials within each phase.

f. Ground surface contours at the time represented by the drawing. Spot elevations should be indicated for key features.

g. Areas to be cleared, grubbed and stripped of topsoil.

h. Borrow areas for liner materials, granular materials for filter beds, berms, roadway construction and cover materials.

i. All soil stockpiles including soils to be used for cover, topsoil, liner materials, filter bed materials and other excavation.

j. Access roads and traffic flow patterns to and within the active fill area.

k. All temporary and permanent fencing.

L. The methods of screening such as berms, vegetation or special fencing.

m. Leachate collection, control and treatment systems which may include pipes, manholes, trenches, berms, collection sumps or basins, pumps, risers, liners and liner splices.

n. Leachate and groundwater monitoring devices and systems.

o. Disposal areas for severe weather operations.

p. Support buildings, utilities, gates and signs.

q. Special waste handling areas.

r. Construction notes and references to details.

s. Other appropriate site features.

10. A series of site cross–sections shall be drawn perpendicular and parallel to the site baseline at a maximum distance of 500 feet between cross–sections and at points of important construction features. The location of the cross–sections shall be shown on the appropriate plan sheet and the section labeled using the site grid system. Where applicable, each cross–section shall show: existing and proposed base and final grades; soil borings and monitoring wells which the section passes through or is adjacent to; soil types, bedrock and water table; leachate control, collection and monitoring systems; quantity of waste materials and area filled by each major waste type; drainage control structures; access roads and ramps on the site perimeter and within the active fill area; the filling sequence or phases, and other appropriate site features.

11. Detailed drawings and typical sections for, as appropriate, drainage control structures, tailings distribution systems, access roads, fencing, leachate control systems and monitoring devices, buildings, signs and other construction details.

(b) An operations manual consisting of the following information:

1. The operations manual shall identify the project title; engineering consultant; site owner, licensee and operator; proposed licensed acreage; site life and capacity; waste types and quantities to be disposed; and any exemptions applied for.

2. Specifications for site construction and operation shall be presented in the operations manual, including detailed instructions to the site operator for all aspects of site construction and operation. References to specifications on the plan sheet shall be pointed out as well as additional instruction included, where appropriate. The specifications shall include, at a minimum the following information:

a. Initial site preparations including specifications for clearing and grubbing, topsoil stripping, other excavations, berm construction, drainage control structures, leachate collection system, access roads and entrance, screening, fencing, groundwater monitoring and other special design features.

b. A certification plan for initial site preparations including a discussion of the field measurements, photographs to be taken, sampling and testing procedures to be utilized to verify that the in–field conditions encountered were the same as those defined in the feasibility report, and to document that the site was constructed according to the engineering plans and specifications submitted for department approval.

c. Typical daily operations including a discussion of the timetable for development, methods for determining waste types disposed of or excluded, typical waste handling techniques, hours of operation, traffic routing, drainage and erosion control, windy, wet and cold weather operations, fire protection equipment, manpower, methods for dust control, method of placing waste materi-

als, monitoring, closure of filled areas, leachate control methods, critical backup equipment with names and telephone numbers where equipment may be obtained, and other special design features. This information may be developed as a removable section to improve accessibility for the site operator.

d. Development of subsequent phases consisting of a discussion of those items in subd. 2. a. b. and c. as they relate to the development of subsequent phases of the site.

e. Site closing information consisting of a discussion of the anticipated sequence of events for site closing and a discussion of those actions necessary to prepare the site for long–term care and final use.

f. Long–term care information including a discussion of the procedures to be utilized for the inspection and maintenance of runoff control structures, settlement, erosion damage, leachate control facilities, leachate and groundwater monitoring, and other long–term care needs.

g. An economic analysis including an engineer's cost estimate for site closing and long–term care.

(c) A design report shall be submitted which shall include supplemental discussions and design calculations to facilitate department review and provide supplemental information on financial responsibility and long–term are as required by ss. 289.30 (4) and 289.41, Stats., coordinated with s. 293.51, Stats., including the following information:

1. 'Design discussion'. A discussion of the reasoning and logic behind the design of the major features of the site, such as traffic routing, base grade and relationships to subsurface conditions, anticipated waste types and characteristics, phases of development, liner design, facility monitoring, and similar design features shall be provided. A list of the conditions of site development as stated in the department determination of site feasibility and the measures taken to meet the conditions shall be included. A discussion of all calculations such as stockpile sizing estimates, estimate of site life and runoff and leachate volume estimates shall be included. The calculations shall be summarized with the detailed equations presented in the appendix.

2. 'Financial responsibility analysis'. A detailed analysis in accordance with ss. NR 182.16 and 182.17 shall be made of the financial responsibility for closure and long–term care from the time of site closing to termination.

(d) A detailed contingency plan shall be submitted based on the contingency plan contained in the approved feasibility report.

1. The applicant shall develop a contingency plan to prevent or minimize human health or environmental damage in the event of an accidental or emergency discharge or other condition not anticipated in the feasibility report or plan of operation which does not comply with license conditions or other applicable standards. As a minimum, the contingency plan shall:

a. Follow the provisions of section 211, spill prevention, control and counter–measures plan (SPCC) of the clean water act (PL 92–500, as amended).

b. For the various monitoring programs required by this chapter, indicate the levels which if exceeded require the operator to activate the contingency plan.

c. Include a provision for more concentrated and frequent monitoring in the area of any excessive measurement.

d. Describe possible accidental or emergency discharges or other unplanned events and identify the corresponding corrective action or alternative action to be implemented should the criteria for action be exceeded.

e. Identify the time necessary for successful completion of each of the identified actions.

2. A copy of the contingency plan shall be filed with the department and the county and township where the waste disposal facility is located. The plan shall be revised in cases of changed circumstances, changed regulations, or failure of the plan to be adequate in an emergency.

(e) An appendix shall be submitted which shall include any additional data not previously presented, calculations, material specifications, a copy of the property deed or lease, operating agreements, leachate treatment agreements, documents related to long–term care funding and other appropriate information. The appendix shall also include the measured baseline values for all parameters monitored, the spatial and temporal variability of these baseline values, and the error associated with the baseline values and the natural variability. For all parameters with variability or sample frequency problems which will make comparison with subsequent analyses less secure than expected or desired, there should be implemented an improved program to satisfy the desired levels of precision. Sufficient data, documentation of statistical procedures and summary statistics shall be provided to allow independent evaluation of baseline values.

(3) Within 30 days after a plan of operation is submitted, the department shall notify the applicant in writing that the plan is either complete or not complete, specifying the information which must be submitted before the report is deemed complete. The department shall determine if the plan of operation is complete by determining whether or not the minimum requirements of this subsection have been met. Additional plan of operation information may be required of the applicant after a determination that the plan of operation is complete only if the department establishes that a detailed review of the plan of operation indicates that the plan of operation is insufficient in the absence of such additional information.

(4) Prior to licensing the owner or operator shall submit proof that a notation of the existence of the site has been recorded in the office of the register of deeds in each county in which a portion of the site is located.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; am. (1) Register, October, 1988, No. 394, eff. 11–1–88.

NR 182.10 Construction and completion reports. (1) Construction of a waste site shall be substantially in accordance with the approved plan of operation.

(2) Sites and facilities shall be thoroughly inspected by the owner prior to their use and all associated structures shall be in substantial compliance with the plan of operation. A registered professional engineer shall document site construction and render an opinion whether the site has been constructed in substantial conformance with the plan of operation. Photographs, either aerial or ground, may be used to document this inspection, but shall not in themselves constitute compliance. A complete file describing the items inspected and their condition shall be maintained by the owner.

(3) Prior to licensing, the department will review and inspect all waste sites to ensure that they were constructed according to the approved plan of operation. A written report shall be made of such review and inspection and placed in the applicant's file.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 182.11 Minimum design and operation requirements. (1) In addition to all other requirements of this chapter, no person shall construct, establish, operate or maintain a waste site except in conformance with the conditions attached to the feasibility approval pursuant to the hearing under s. 293.43, Stats., the approved plan of operation and the following minimum requirements:

(a) In addition to the provisions of ss. NR 182.08 (2) (e) and (k), and 182.11, no waste shall be deposited in such a manner that the waste or leachings therefrom will result in a violation of any ground or surface water quality criteria or standards as specified in chs. NR 102 through 104 or in this chapter.

(b) Surface water drainage shall be diverted away from and off the active fill area.

(c) Access to the facility, particularly the active disposal area, shall be restricted through the use of fencing, natural barriers or other methods approved by the department.

(d) The entire perimeter of the active disposal site shall be made accessible for inspection and earth moving equipment required for emergency maintenance.

(e) Any area to be utilized for the disposal of solid waste or borrow areas shall first be stripped of all topsoil to insure that adequate amounts are available for closure or other measures approved by the department to protect topsoils consistent with environmental considerations and reclamation shall be taken, unless the department determines that such action will be environmentally undesirable.

(f) Effective means shall be taken to control dust resulting from the site or facility to the degree required by s. NR 415.04.

(g) All soil borings and monitoring wells shall be backfilled when abandoned using procedures approved by the department.

(h) Provisions for back–up equipment in the event of critical operating equipment breakdown shall be made.

(i) Design and operation specifications for mine waste facilities shall include contingencies for emergency conditions. Such contingencies may include emergency power supplies, equipment redundancies or temporary holding facilities.

(j) Any disposal site designed with a liner or situated in sufficiently low permeability soils to either partially or totally contain leachate shall be designed with a leachate management system which can effectively remove leachate, prevent surface seeps and promote adequate settlement to permit final reclamation.

(k) Only waste types and sources listed on the license or otherwise approved by the department in writing shall be disposed or stored.

(L) All surface water drainage ditches, culverts and other drainage control structures shall be designed for a 100–year, 24–hour rainfall event.

(m) The final slopes of a completed waste site shall be no less than 2% and no greater than 33% unless the site or facility is specifically designed for a final use compatible with other slopes.

(n) All sites shall have a final cover designed to minimize infiltration and subsequent leachate production unless an alternate cover is approved in the reclamation plan or unless it is determined as a result of a hearing pursuant to s. 293.43, Stats., that such cover is not necessary to comply with the environmental standards of this chapter.

(o) Provisions shall be made for collection and treatment of leachate for all sites designed to contain leachate.

(p) A waste site shall be located, designed, constructed, and operated so that any liner system or naturally occurring soil barrier is compatible with all disposed or stored mining waste.

(q) Sufficient freeboard measured from the inside crest shall be provided so as to contain the 100–year, 24–hour rainfall event and to prevent overtopping by waves during this design storm, or a minimum of 5 feet of freeboard shall be provided.

(r) Drainage or filter bed material shall be selected and designed to promote drainage, reduce the potential for piping, and be stable under leaching conditions.

(s) Material used in earth embankments or drainage or filter bed material shall be free of vegetation, organic soils, frozen soils, and other extraneous matter which could affect the compactibility, density, permeability or shear strength of the finished embankment.

(t) Embankment materials or drainage or filter bed materials shall be compacted to 95% of the maximum dry density as determined by the standard proctor compaction test (ASTM D–698), or to a greater density as required by the embankment height. The material shall be compacted in lifts of 6 to 8 inches in thickness. If waste rock is approved by the department for use outside an earth core, compaction and crushing of such waste rock may not be required.

Note: Copies of the reference cited above are available for inspection at the offices of the department of natural resources, the secretary of state's office and the office of the revisor of statutes and may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Penn. 19103.

(u) Emergency spill areas shall be provided near the tailings pipeline in case of power or pipeline failure. Tailings pipelines should be self draining to the tailings area or to an emergency spill area or both. In some cases such as a long pipeline over rough country, several spill areas may have to be provided.

(2) The following requirements indicate certain parameters and concepts that should be considered by the applicant when planning, constructing and operating a mill and a mine waste site. Application of these parameters and concepts shall be dependent on the specific design, the nature of the waste, the composition of any leachate associated with the waste and the hydrogeologic conditions existing at the disposal site.

(a) When practicable, on a site specific basis, a mine waste site should be located in the same watershed as the mining surface facilities.

(b) Where practicable, on a site specific basis, a mine waste facility should be located so that tailings pipelines do not cross any major watercourse or pass through any wetland where such crossing would be inconsistent with the provisions of ch. NR 132. In general, tailings pipelines should be as short as practicable.

(c) Upstream rainfall catchment areas should be minimized.

(d) The outside crest of the dam should be higher than the inside crest in order to force runoff on the crest to the inside of the dam.

(e) Where practicable, waste disposal facility design should consider staged reclamation.

(f) Those mining wastes which will not be used for reclamation purposes and which present a significant risk of environmental pollution should be marketed provided the products and by–products of such marketing will not result in a greater potential for environmental pollution, a market for a particular waste is reasonably available, and the costs for disposing of such waste exceeds the costs for its marketing. The department shall make specific findings of fact and conclusions of law on the marketability of such wastes.

(g) Mining waste disposal should minimize the discharge of environmental pollutants to the groundwaters of the state.

(3) High priority should be given to the selection of a design and operating procedure for the mine, mill and waste disposal sites which will provide for the reclamation of all disturbed sites and minimize the risk of environmental pollution. When practicable, facilities and practices should be selected which:

(a) Minimize production of mining waste through the design and operation of the mining facility.

(b) Provide for the segregation of hazardous from non–hazardous waste.

(c) Provide for eventual underground backfill of waste, in the event of underground mining, with particular emphasis on segregated hazardous materials.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; correction in (1) (f) made under s. 13.93 (2m) (b) 7., Stats., Register, September, 1995, No. 477.

NR 182.12 Inspections. (1) Personnel or agents of the department may accompany employees of the owner on any routine inspection required by these rules, or conduct inspections of their own on the mine waste facilities licensed under this chapter at any other time which is reasonable under the circumstances involved. Personnel or agents of the department may also examine any routine inspection reports and shall be furnished copies thereof upon request.

(2) A qualified representative of the owner of a mine waste facility licensed pursuant to this chapter shall, at least weekly except as hereinafter provided, visually inspect the following:

(a) The active sites or facilities including dams for possible damage or structural weakening;

(b) Waste handling and monitoring equipment and readings to ensure normal operation and measurements;

(c) Fences or barriers for possible damage;

(d) The buffer area around the facility for possible environmental damage related to its operation;

(3) The observations made in each visual inspection shall be recorded in the facility's operating log as set forth in these rules.

(4) Active dam sites shall be inspected monthly by a qualified representative of the owner. The findings on each inspection shall be recorded and filed with the department. Items to be noted on the inspections shall include, but not be limited to:

(a) Condition of vegetation on the dam and within 50 feet from the outside base;

(b) Piezometric levels within the mass of the dam;

(c) Condition of soil surfaces on top and slopes of the dam and within 50 feet from the outside base;

(d) Condition of drainage ditches near the base;

(e) Liquid surface level and amount of freeboard; and

(f) Condition of spillways, conduits and water level control structures.

(5) Inactive dams shall be inspected quarterly by a qualified representative of the owner. The findings on each inspection shall be recorded and filed with the department. Such inspection shall include:

(a) Condition of soil surfaces on the crest, slopes and within 50 feet from the outside base;

(b) Determination of piezometric levels within the mass of the dam where such instrumentation has been determined to be necessary or required in the long–term care section of the plan of operation; and

(c) Condition of spillways, conduits and water level control structures.

(6) When a potentially defective condition is found during an inspection, the owner shall ensure that it is recorded and corrected at the earliest practicable time. A report of the condition shall be made to the department immediately and the actions proposed and taken for its correction shall be made to the department at the earliest practicable time. The department shall notify the owner, in writing, of the title, address and telephone number of the person to whom any report under this section shall be given, which notification shall specifically refer to this section and shall specify to whom reports are made both inside and outside of normal working hours. The department may confirm correction of the condition and specify any necessary additional corrective action. Any of the following items shall be considered as indicating a condition which requires prompt investigation and may require corrective action:

(a) Seepage on the outer face of the dam accompanied by boils, sand cones or deltas.

(b) Silt accumulations, boils, deltas or cones in the drainage ditches at dam bases.

(c) Cracking of soil surface on crest or either face of the dam.

(d) Bulging of the outside face.

(e) Seepage, damp area, or boils in vicinity of or erosion around a conduit through the dam.

(f) Any shrinkage of the crest or faces.

(7) The following conditions indicate potential defects and shall be closely checked on subsequent inspections for an active dam and necessitate an intermediate inspection of an inactive dam:

(a) Patches of overgrowth vegetation on the outside face or close to the base.

(b) Surface erosion, gullying or wave erosion on the inside of the dam.

(c) Surface erosion, gullying or damp areas on the outside of the dam, including the berm and the area within 50 feet from the outside base.

(d) Erosion below any conduit.

(e) Wet areas or soggy soil on the outside or in natural soil below dam.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 182.13 Monitoring. (1) GENERAL. The department may require the owner or operator of any solid waste disposal site or facility or any person who permits the use of property for such purposes, to conduct monitoring of groundwater, leachate, surface water or other physical features. In the alternative, the department may conduct its own monitoring or retain an independent contractor, at the expense of the owner or operator of any solid waste disposal site or facility or any person who permits the use of property for such purposes, to monitor groundwater, leachate, surface water or other physical features.

(2) GROUNDWATER AND LEACHATE MONITORING. The department shall require the installation of groundwater monitoring wells and may require installation of leachate monitoring wells, lysimeters, moisture probes, and similar devices, and associated water quality sampling and analysis programs to detect the effects of leachate on groundwater.

(a) The number of required wells shall be approved by the department based on the site size, waste types, site design and the hydrogeologic and geologic setting of the site. The number shall be adequate to yield samples representative of the groundwater quality both up and down gradient from the disposal site or facility.

(b) All monitoring wells shall be constructed utilizing a minimum 2–inch inside diameter PVC pipe or similar inert material and in such a manner as to prevent surface water from entering the well bore and inter–aquifer water exchange.

(c) The results of all water elevation measurement and sampling shall be submitted to the department within 60 days of sampling. All data shall be submitted on forms supplied by the department.

(d) Sampling frequency shall, at a minimum, be during the months of March, June, September and December unless an alternate schedule is agreed to by the department. An alternate schedule may be based on the hydrogeologic system's characteristics such as flow velocity, stratigraphy, etc., and fluctuations in quality as defined by background or baseline sampling and waste type.

(e) Sampling parameters shall be based on the results of the waste characterization and specified in the approved plan of operation. The quarterly analysis shall include parameters listed in subd. 1. with a comprehensive analysis, described in subd. 2., completed on every fourth sampling date.

1. The owner shall determine at a minimum the following on each sampling date:

a. Water level.

b. Field specific conductivity, micro–mhos/cm at 25ºC.

c. Field and lab pH.

d. Concentration of total dissolved solids, mg/liter.

e. The concentrations of the principal contaminant constituents, or indicators thereof, found in the largest quantity in the waste disposed of or stored in the site or facility. Toxicity of contaminants should be considered when parameters are selected.

2. A comprehensive analysis shall quantify the following:

a. Those characteristics listed in subd. 1.

b. The concentrations of other contaminants which would reasonably be expected to occur in leachate from the waste disposed of or stored in the site or facility.

(f) The methods of groundwater sample collection, preservation, and analysis shall be in accordance with the most recent edition of standard methods for the examination of water and wastewater published by the American public health association, or other methods approved in writing by the department.

Note: Copies of the reference cited above are available for inspection at the offices of the department of natural resources, the secretary of state's office and the office of the revisor of statutes and may be obtained from the American Public Health Association, Inc., 1790 Broadway, New York, N.Y. 10019.

(g) If the analyses of samples collected pursuant to pars. (d) and (e) indicate that the quality of the groundwater is statistically significantly different from either baseline or background, the owner shall:

1. Notify the department immediately.

2. Determine, if possible, the cause of the difference in quality such as the result of a spill, a design failure or an improper operation procedure.

3. Determine the extent of groundwater contamination or the potential for groundwater contamination.

4. Implement the applicable portion of the contingency plan and notify the department promptly of any additional remedial steps being taken.

(h) If for any reason a monitoring well or other monitoring device is destroyed or otherwise fails to properly function, the site operator shall immediately notify the department in writing. All such devices either shall be restored or properly abandoned and replaced with a functioning device within 60 days of notification of the department unless the owner is notified otherwise in writing by the department.

(i) The department may require the operator to sample public or private wells as part of a regular monitoring program or to determine the extent of groundwater contamination.

(j) No person shall begin construction of a solid waste disposal site or facility until baseline groundwater quality in accordance with the parameters in par. (e) 2. have been determined and results of such analyses submitted to the department.

(3) SURFACE WATER. The department may require the monitoring of surface water runoff, leachate seeps, sump pumpings, sedimentation ponds and other surface water discharges resulting from site operation and of surface waters which may be affected by such discharges.

(4) MONITORING PHYSICAL FEATURES. The department may require the monitoring of air quality, landfill settlement, berm or embankment stability, vegetation growth, drainage control structures, and may require monitoring of other chemical or biological conditions, if determined to be necessary to assess the impact of the disposal site on critical aquatic and terrestrial ecosystems.

(5) OPERATIONS REPORT. The department may require the owner or operator of any land disposal site or facility, or any person who permits the use of property for such purpose, to submit an operations report to assess the effectiveness and environmental acceptability of site operations. The contents of the report may include a discussion of confinement of the active area, analysis of leachate, and other monitoring, surface water control and erosion control, revegetation, settlement, volume utilized, leachate quantity and quality, slope stability, equipment performance, volume and type of disposed waste, and other relevant mine parameters.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 182.135 Requirements for certified or registered laboratory. Microbiological and radiological samples shall be analyzed by the state laboratory of hygiene or at a laboratory approved or certified by the department of agriculture, trade and consumer protection. Other laboratory test results submitted to the department under this chapter shall be performed by a laboratory certified or registered under ch. NR 149. The following tests are excluded from this requirement:

(1) Geotechnical and biological tests of soils,

(2) Air quality tests,

(3) Field pH tests,

(4) Field conductivity,

(5) Waste material and ore testing,

(6) Precipitation chemistry tests,

(7) Leachate–liner compatibility testing.

Note: The requirement in this section to submit data from a certified or registered laboratory is effective on August 28, 1986.

History: Cr. Register, April, 1986, No. 364, eff. 8–28–86.

NR 182.14 Recordkeeping and reporting. (1) (a) An owner of a mine waste disposal site or facility shall keep an operating log. This log shall, at all reasonable times, be open for inspection by any duly designated department employee.

(b) The following information shall be recorded promptly, as it becomes available, and maintained in the operating log until closure of the facility unless otherwise provided.

1. A record of each waste disposed of or stored on a weekly basis at the waste site or facility including the following:

a. A description of the type of each mining waste.

b. The quantity in units of volume or weight of pounds, tons, gallons, or cubic yards of each disposed of or stored waste, the method of treatment, disposal or storage used for each; and the dates of treatment, disposal or storage.

c. Locations, with respect to permanently surveyed benchmarks, where each is disposed of or stored.

d. Waste characterization and analyses, as specified in this chapter.

2. Monitoring data, as required in this chapter.

3. Summary reports and records of all incidents requiring initiation of a contingency plan as specified in this chapter or resulting in human health or environmental damage.

4. Records or results of visual inspections required under this chapter.

(c) An owner of a mine waste facility shall be required to retain all records of monitoring, analytical, and verification activities and data, including all original strip chart recordings and instrumentation, calibration and maintenance records until termination of owner responsibility, except to the extent that copies of such records have previously been provided to the department.

(d) A dam owner shall maintain in a permanent file the following construction records pertaining to said dam for future reference should they be needed.

1. Aerial photo of the construction site before construction.

2. Construction drawings and modifications thereof.

3. Construction specifications and modifications thereof.

4. Results of all soil tests on foundations and fill materials.

5. Logs of borings and engineering geology reports.

6. Copies of construction progress inspections pertinent to core trench, toe drain, internal drains, and other significant phases of the structure including, at the option of the applicant, photographs of various structural items.

7. Aerial stereo photos of the entire dam taken within 90 days after all construction is completed.

8. A description of and justification for all deviations or variances from the construction plans and specifications.

(2) (a) An owner of a mine waste disposal site or facility shall comply with the requirements under these rules in reporting incidents such as fires, explosions, discharges or releases of materials into the environment. In the event that a facility has an accidental or emergency discharge, a fire, an explosion or other unplanned or unpredicted event which has the potential for damaging human health or the environment or exceeds any limit which operator

shall follow the procedures set forth in the contingency plan and shall report such incidents to the department, county, township, and tribal government officials identified in the plan immediately after the operator has discovered the event.

(b) The operator shall report to the department by telephone any condition listed under s. NR 182.12 (6) and par. (a) at the earliest practicable time. A written report of said condition shall be submitted within 5 days. The department shall notify the owner, in writing, of the title, address, and telephone number of the person to whom any report under this section shall be given, which notification shall specifically refer to this section and shall specify to whom reports are made both inside and outside of normal business hours.

(c) Duplicate copies of all records required in sub. (1) (b), (c) and (d) shall be turned over to the department upon closure of the facility, except to the extent that copies of such records have previously been provided to the department.

(d) An owner of a mine waste disposal site or facility shall forward to the department at the end of each reporting quarter 3 copies of the monitoring data developed pursuant to the requirements of this chapter during the reporting quarter.

(e) The owner shall submit an annual summary report containing statistical summaries of annual and cumulative project data. The data summaries shall be compared to waste characterization, leachate characterizations, effluent predictions, and baseline and background water quality data as contained in the feasibility report or plan of operation. The report shall also include the results of verification procedures and present the error associated with each parameter presented. Information from unimpacted control stations should include a discussion on whether the baseline values should be modified due to natural variability and what the new values would be. At a frequency determined by the department, the report shall periodically include updated results of predictive groundwater modeling by incorporating currently available data into the original predictive model, submitted as part of the feasibility report.

(f) An owner of a mine waste disposal site or facility shall notify the department prior to cessation of disposal operations or prior to final facility closure as specified in this chapter.

(3) Nothing herein shall be construed to require preparation, reconstruction, retention, or submittal of records or reports relating to mining operations or waste disposal therefrom carried on prior to the effective date of this chapter.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; **am. (2) (e), Register, May, 1998, No. 509, eff. 6–1–98.**

NR 182.15 Closure. (1) The closure requirements of this chapter shall be incorporated in and made a part of the mining reclamation plan submitted pursuant to ch. NR 132 but shall be referenced in the plan of operation.

(2) Any person who maintains or operates a solid waste disposal site or facility shall, when the facility or a portion thereof reaches final grade, or when the department determines that closure is required, close it in accordance with the reclamation plan as referenced in the plan of operation.

(3) The owner or operator shall reestablish and develop the finished surface in any closed portion in accordance with the approved facility final use.

(4) At completion of closure, all closed facilities, or closed portions thereof, shall be reasonably secured so that injurious contact with waste by humans or animal life will be minimized, and so that discharges harmful to health will not occur.

(5) At the completion of the closure, all required equipment shall be provided and arrangements shall be made to continue postclosure monitoring as required in this chapter.

(6) At the completion of closure, the owner or operator shall submit to the department certification that the same has been accomplished in accordance with this chapter.

(7) The owner or operator of a facility shall file with the department a survey plan, certified by a registered professional land surveyor, indicating the type and location of mining wastes disposed of in the closed facility or closed portions thereof.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

NR 182.16 Financial responsibility for closure. (1) The intent of this section is to coordinate the financial responsibility requirements of ch. NR 132 and this chapter as they affect closure of a mining site. Financial responsibility for closure shall be incorporated in the bond provided for reclamation and release of the same shall be processed according to reclamation procedures. A demonstration of financial responsibility by whatever means shall not be required twice for the same obligation regardless of whether the same is set forth in more than one chapter of the administrative code. No plan of operation for a waste containment facility may be approved unless the applicant submits, as hereinafter provided, a bond, deposit, proof of an established escrow account or trust account ensuring that the applicant and any successor in interest will comply with the closure requirements referenced in the plan and incorporated in and made part of the reclamation plan.

(2) The closure requirements of this chapter shall be incorporated in and made part of the reclamation plan submitted pursuant to s. 293.37 (2) (b), Stats. and s. NR 132.08 but shall be referenced in the plan of operation submitted pursuant to s. NR 182.09. The financial responsibility requirements of sub. (1) shall be fulfilled by increasing or otherwise adjusting the amount of the reclamation bond which the department requires to be submitted pursuant to s. 293.51, Stats., and s. NR 132.09 (2) (a) so as to reflect the projected costs of closure. Release of the amount bonded to ensure closure according to the reclamation plan shall be processed pursuant to the provisions of s. 293.63, Stats., and s. NR 132.12 relating to the release of reclamation bonds.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; reprinted to restore dropped copy, Register, July, 1984, No. 343.

NR 182.17 Financial responsibility for long–term care. (1) DEFINITIONS. (a) "Actual dollar inpayments" means equal annual payments made by the facility owner into a long–term care account.

(b) "Approved mining waste facility" means an approved waste facility which is part of a mining site, as defined under s. 293.01 (12), Stats., used for the disposal of waste resulting from mining as defined under s. 293.01 (9), Stats., or prospecting, as defined under s. 293.01 (18), Stats.

(c) "Certificate of deposit" means a certificate issued by a bank or financial institution acknowledging receipt of a specified sum of money in a special kind of time deposit, drawing interest and requiring written notice for withdrawal.

(d) "Closure period" means the 90–day period after the facility ceases to accept waste, unless otherwise specified in the approved plan of operation.

(e) "Equal annual outpayments" means estimated payments for long–term care which are the same amount in each year of the period of owner responsibility for the long–term care of the facility.

(f) "Interest bearing accounts" means escrow accounts, trust accounts or cash deposits with the department.

(g) "Non–interest bearing accounts" means letters of credit, performance bonds or forfeiture bonds.

(h) "Real dollar inpayments" means payments made by the facility owner, which increase each year at the rate of inflation, into a long–term care account.

(i) "Unequal annual outpayments" means estimated payments for long–term care which are higher in the early years of the period of owner responsibility for long–term care than they are later in the long–term care period after the facility has stabilized.

(j) "U.S. government securities" includes treasury bills, treasury bonds, treasury certificates, treasury notes, and treasury stocks guaranteed by the federal government.

(2) APPLICABILITY. (a) *Purpose.* The intent of this section is to coordinate the financial responsibility requirements of ch. NR 132 and this chapter as they affect the long–term care of an approved mining waste facility as defined in s. 289.01 (4), Stats. The long–term care requirements of this chapter are to be incorporated in and made part of the mine reclamation plan. Financial responsibility for long–term care and release of the same, however, shall be made according to the provisions of this section. A demonstration of financial responsibility by whatever means shall not be required twice for the same obligation regardless of whether the same is set forth in more than one chapter of the administrative code. No plan of operation for a mining waste disposal facility may be approved unless the applicant submits, as part of the initial operating license application and annually thereafter for the period of active facility life, proof of financial responsibility ensuring that the applicant and any successor in interest will comply with the long–term care requirements referenced in the plan and incorporated in and made part of the reclamation plan.

(b) An owner of an approved mining waste facility shall be responsible for the long–term care of the facility for 30 years after closure. The long–term care requirements of this chapter shall be incorporated in and made part of the reclamation plan submitted under s. 293.37 (2) (b), Stats., and s. NR 132.08 but shall be referenced in the plan of operation submitted under s. NR 182.09. The financial responsibility requirements of par. (a) for such long–term care, however, shall be fulfilled by compliance with the provisions of any of sub. (3) (a) to (h).

(c) *Successors in interest.* Any person acquiring rights of ownership, possession or operation of a licensed facility shall be subject to all requirements of the license for the facility and shall provide any required proof of financial responsibility to the department in accordance with this section. The previous owner is responsible for long–term care, and shall maintain any required proof of financial responsibility, until the person acquiring ownership, possession or operation of the facility establishes any required proof of financial responsibility.

(3) METHODS OF PROVIDING PROOF OF FINANCIAL RESPONSIBILITY. The owner shall specify, as part of the plan of operation submittal, which method of providing proof of financial responsibility will be used for long–term care. To provide proof of financial responsibility, the applicant shall use one of the following methods:

(a) *Performance or forfeiture bond.* 1. If the owner chooses to submit a bond, it shall be in the amount determined according to sub. (5) (b) conditioned upon faithful performance by the owner and any successor in interest, of all long–term care requirements of the approved plan of operation. The bond shall be delivered to the department as part of the initial operating license application. Bond forms shall be supplied by the department.

2. Bonds shall be issued by a surety company authorized to do surety business in this state. At the option of the owner a performance bond or a forfeiture bond may be filed. The department shall be the obligee of the bond. Surety companies may have the opportunity to complete the long–term care of the facility in lieu of cash payment to the department if the owner or any successor in interest fails to carry out the long–term care requirements of the approved plan of operation. The department shall mail notification of its intent to use the funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the long–term care requirements of the approved plan of operation have been carried out.

3. Each bond shall provide that, as long as any obligation of the owner for long–term care remains, the bond may not be canceled by the surety, unless a replacement bond or other proof of financial responsibility under this section is provided to the department by the owner. If the surety proposes to cancel a bond, the surety shall provide notice to the department in writing by registered or certified mail not less than 90 days prior to the proposed cancellation date. Not less than 30 days prior to the expiration of the 90–day notice period, the owner shall deliver to the department a replacement bond or other proof of financial responsibility under this section, in the absence of which all disposal operation shall immediately cease and the bond shall remain in effect as long as any obligation of the owner remains for long–term care.

4. If the surety company becomes bankrupt or insolvent or if its authorization to do business is revoked or suspended, the owner shall, within 30 days after receiving written notice, deliver to the department a replacement bond or other proof of financial responsibility under this section in the absence of which all disposal operations shall immediately cease and the bond shall remain in effect as long as any obligation of the owner remains for long–term care.

(b) *Deposit with the department.* An owner may deposit cash, certificates of deposit, or U.S. government securities with the department, the amount of the deposit shall be determined according to sub. (5) (a) and shall be submitted as part of the initial license application. Cash deposits placed with the department shall be segregated and invested in an interest bearing account. All interest payments shall be accumulated in the account. The department shall have the right to use part or all of the funds to carry out the long–term care requirements of the approved plan of operation if the owner fails to do so. The department shall mail notification of its intent to use funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the long–term care requirements of the approved plan of operation have been carried out.

(c) *Escrow account.* If the owner establishes an escrow account, it shall be with a bank or a financial institution located within the state of Wisconsin which is examined and regulated by the state or a federal agency in the amount determined according to sub. (5) (a). The assets in the escrow account shall consist of cash, certificates of deposit, or U.S. government securities. All interest payments shall be accumulated in the account. A duplicate original of the escrow agreement with original signatures shall be submitted to the department as part of the initial operating license application. Escrow account forms shall be supplied by the department. The department shall be a party to the escrow agreement, which shall provide that there shall be no withdrawals from the escrow account except as authorized in writing by the department. The escrow agreement shall further provide that the department shall have the right to withdraw and use part or all of the funds in the escrow account to carry out the long–term care requirements of the approved plan of operation if the owner fails to do so. The department shall mail notification of its intent to use funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing

for the purpose of determining whether or not the long–term care requirements of the approved plan of operation have been carried out.

(d) *Irrevocable trust.* If the owner creates an irrevocable trust, it shall be exclusively for the purpose of ensuring that the owner or any successor in interest will comply with the long–term care requirements of the approved plan of operation. The trust agreement shall designate the department as sole beneficiary. The trustee shall be a bank or other financial institution located within the state of Wisconsin which has the authority to act as a trustee and whose trust operations are regulated and examined by the state or a federal agency. The trust corpus shall consist of cash, certificates of deposit or U.S. government securities in the amount determined according to sub. (5) (a). All interest payments shall be accumulated in the account. A duplicate original of the trust agreement with original signatures shall be submitted to the department for approval as part of the initial operating license application. Trust forms shall be supplied by the department. The trust agreement shall provide that there shall be no withdrawal from the trust fund except as authorized in writing by the department. The trust agreement shall further provide that sufficient monies shall be paid from the trust fund to the beneficiary in the event that the owner or any successor in interest fails to complete the long–term care requirements of the approved plan of operation. The department shall mail notification of its intent to use funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the long–term care requirements of the approved plan of operation have been carried out.

(e) *Letter of credit.* 1. If the owner chooses to submit a letter of credit, it shall be in the amount determined according to sub. (5) (b) conditioned upon faithful performance by the owner and any successor in interest, of all long–term care requirements of the approved plan of operation. The original letter of credit shall be delivered to the department as part of the initial operating license application. Letter of credit forms shall be supplied by the department.

2. Letters of credit shall be issued by a bank or financial institution which is examined and regulated by a federal agency, or in the case of a bank or financial institution located within the state of Wisconsin, which is examined and regulated by the state or a federal agency. The department shall be the beneficiary of the letter of credit.

3. Each letter of credit shall provide that as long as any obligation of the owner for long–term care remains, the letter of credit may not be canceled by the bank or financial institution, unless a replacement letter of credit or other proof of financial responsibility under this section is provided to the department by the owner. If the bank or financial institution proposes to cancel a letter of credit, the bank or financial institution shall provide notice to the department in writing by registered or certified mail not less than 90 days prior to the proposed cancellation date. Not less than 30 days prior to the expiration date of the 90–day notice period, the owner shall deliver to the department a replacement letter of credit or other proof of financial responsibility under this section, in the absence of which all disposal operations shall immediately cease and the letter of credit shall remain in effect as long as any obligation of the owner remains for closure or long–term care.

4. If the bank or financial institution becomes bankrupt or insolvent or if its authorization to do business is revoked or suspended, the owner shall, within 30 days after receiving written notice, deliver to the department a replacement letter of credit or other proof of financial responsibility under this section, in the absence of which all disposal operations shall immediately cease and the letter of credit shall remain in effect as long as any obligation of the owner remains for closure or long–term care.

5. The letter of credit shall further provide that the department shall have the right to withdraw and use part or all of the funds to carry out the long–term care requirements of the plan of operation if the owner fails to do so. The department shall mail notification of its intent to use the funds for that purpose to the last known address of the owner. If the owner submits a written request for a hearing to the secretary of the department within 10 days after mailing of the notification, the department shall, prior to using the funds, hold a hearing for the purpose of determining whether or not the long–term care requirements of the approved plan of operation have been carried out.

(f) *Net worth test.* 1. Only a company that meets the definition in s. 289.41 (1) (b), Stats., may use the net worth method of providing proof of financial responsibility.

2. The owner shall comply with the net worth test requirements of s. 289.41 (4) and (6), Stats., and the minimum security requirements of s. 144.443 (8), 1993–94 Stats., whichever is applicable.

Note: Section 144.443 (8), Stats., specifying minimum security requirements has been repealed.

3. Companies using the net worth test to provide proof of financial responsibility for more than one facility shall use the total cost of compliance for all facilities in determining the net worth to closure and long–term care cost ratio.

4. The department determinations under the net worth test shall be done in accordance with s. 289.41 (5), Stats.

(g) *Insurance.* 1. If the owner chooses to submit an insurance policy for long–term care, it shall be issued for the maximum risk limit determined according to sub. (5) (c). A certificate of insurance shall be delivered to the department as part of the initial operating license application. Certificate of insurance forms shall be supplied by the department.

2. At a minimum, the agent or broker shall be licensed as a surplus lines insurance agent or broker. The department shall determine the acceptability of a surplus lines insurance company to provide coverage for proof of financial responsibility. The department shall base this determination on any evaluations prepared in accordance with s. 618.41 (6) (d), Stats., by the office of the commissioner of insurance. The department shall be the beneficiary of the insurance policy.

3. The insurance policy shall provide that, as long as any obligation of the owner for long–term care remains, the insurance policy may not be canceled by the insurer unless a replacement insurance policy or other proof of financial responsibility under this section is provided to the department by the owner. If the insurer proposes to cancel an insurance policy, the insurer shall provide notice to the department in writing by registered or certified mail not less than 90 days prior to the proposed cancellation date. Not less than 30 days prior to the expiration of the 90–day notice period, the owner shall deliver to the department a replacement insurance policy or other proof of financial responsibility under this section, in the absence of which all disposal operations shall immediately cease and the policy shall remain in effect as long as any obligation of the owner remains for long–term care.

4. If the insurance company becomes bankrupt or insolvent or if the company receives an unfavorable evaluation under s. 618.41 (6) (d), Stats., the owner shall, within 30 days after receiving written notice, deliver to the department a replacement insurance policy or other proof of financial responsibility under this section in the absence of which all disposal operations shall immediately cease and the policy shall remain in effect as long as any obligation of the owner remains for long–term care.

5. The insurance policy shall further provide that funds, up to an amount equal to the maximum risk limit of the policy, will be available to the department to carry out the long–term care

requirements of the approved plan of operation if the owner fails to do so. The department shall mail notification of its intent to use the funds for that purpose to the last known address of the owner. If the insurer or owner submits a written request for a hearing to the secretary of the department within 20 days after the mailing of the notification, the department shall, prior to using funds, hold a hearing for the purpose of determining whether or not the long–term care requirements of the approved plan of operation have been carried out.

6. Each insurance policy shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditioned upon the consent of the insurer, provided such consent is not unreasonably refused.

Note: These forms may be obtained from the Department of Natural Resources, Bureau of Solid Waste Management, P. O. Box 7921, Madison, Wisconsin 53707 or any District Office.

(h) *Other methods.* The department shall consider other financial commitments made payable to or established for the benefit of the department to ensure the owner or operator will comply with the long–term care requirements of the approved plan of operation. The department shall review the request of any owner or operator to establish proof of financial responsibility to determine whether the proposed method provides a degree of assurance that is comparable to that provided by the methods listed in this section. The owner shall submit the request and all supporting information as part of the plan of operation.

(4) COST ESTIMATES. (a) For the purpose of determining the amount of proof of financial responsibility that is required in sub. (3), the owner shall estimate the annual cost of long–term care of the facility for the period of owner responsibility and submit the estimated long–term care costs together with all necessary justification to the department for approval as part of the plan of operation submittal. The costs shall be based on a third party performing the work and reported on a per unit basis. The source of estimates shall be indicated.

(b) At a minimum, long–term care costs shall include land surface care, gas monitoring; leachate pumping, transportation, monitoring and treatment; and groundwater monitoring, collection and analysis.

(c) The estimated rate of inflation shall be the latest percent change in the annual gross national product implicit price deflator published in the survey of current business by the bureau of economic analysis, U.S. department of commerce.

(d) The estimated annual rate of interest shall be the rate specified by the financial institution managing the fund or deposit.

(5) FORMULAS FOR CALCULATING THE AMOUNT OF THE PROOF OF FINANCIAL RESPONSIBILITY. The owner shall, as part of the plan of operation submittal perform the calculation of the formula for the chosen method of providing proof of financial responsibility for long–term care.

(a) *Deposits in escrow, trust or department accounts.* 1. Interest bearing accounts for long–term care. a. The following information used in calculating the amounts deposited to the long–term care account shall be specified in the plan of operation submittal: the rate of outpayment during the period of long–term care, expressed in equal annual outpayments or unequal annual outpayments, and the equal annual rate of inpayment, expressed as either real dollar inpayments or actual dollar inpayments.

b. When equal annual outpayments, actual dollar inpayments and a closure period are used, the formula shall be expressed as:

$$A = \left[R(1+f)^{SL}\left(\frac{1+f}{1+i}\right)^{c}\left[\frac{1-\left(\frac{1+f}{1+i}\right)^{LTC}}{\left(\frac{1+i}{1+f}\right)-1}\right]\right] \div \left[(1+i)\left[\frac{(1+i)^{SL}-1}{i}\right]\right]$$

c. When equal annual outpayments, actual dollar inpayments and no closure period are used, the formula shall be expressed as:

$$A = \left[R(1+f)^{SL}\left[\frac{1-\left(\frac{1+f}{1+i}\right)^{LTC}}{\left(\frac{1+i}{1+f}\right)-1}\right]\right] \div \left[(1+i)\left[\frac{(1+i)^{SL}-1}{i}\right]\right]$$

d. When unequal annual outpayments, actual dollar inpayments and a closure period are used, the formula shall be expressed as:

$$A = \left[\sum\left[R_x(1+f)^{SL}\left(\frac{1+f}{1+i}\right)^{x+c}\right]\right] \div \left[(1+i)\left[\frac{(1+i)^{SL}-1}{i}\right]\right]$$

e. When unequal annual outpayments, actual dollar inpayments and no closure period are used, the formula shall be expressed as:

$$A = \left[\sum\left[R_x(1+f)^{SL}\left(\frac{1+f}{1+i}\right)^{x}\right]\right] \div \left[(1+i)\left[\frac{(1+i)^{SL}-1}{i}\right]\right]$$

f. When equal annual outpayments, real dollar inpayments and a closure period are used, the formula shall be expressed as:

$$A = \left[R(1+f)^{SL}\left(\frac{1+f}{1+i}\right)^{c}\left[\frac{1-\left(\frac{1+f}{1+i}\right)^{LTC}}{\left(\frac{1+i}{1+f}\right)-1}\right]\right] \div \left[(1+i)^{SL+1}\left[\frac{1-\left(\frac{1+f}{1+i}\right)^{SL}}{i-f}\right]\right]$$

g. When equal annual outpayments, real dollar inpayments and no closure period are used, the formula shall be expressed as:

$$A = \left[R(1+f)^{SL}\left[\frac{1-\left(\frac{1+f}{1+i}\right)^{LTC}}{\left(\frac{1+i}{1+f}\right)-1}\right]\right] \div \left[(1+i)^{SL+1}\left[\frac{1-\left(\frac{1+f}{1+i}\right)^{SL}}{i-f}\right]\right]$$

h. When unequal annual outpayments, real dollar inpayments and a closure period are used, the formula shall be expressed as:

$$A = \left[\sum\left[R_x(1+f)^{SL}\left(\frac{1+f}{1+i}\right)^{x+c}\right]\right] \div \left[(1+i))^{SL+1}\left[\frac{1-\left(\frac{1+f}{1+i}\right)^{SL}}{i-f}\right]\right]$$

i. When unequal annual outpayments, real dollar inpayments and no closure period are used, the formula shall be expressed as:

$$A = \left[\sum\left[R_x(1+f)^{SL}\left(\frac{1+f}{1+i}\right)^{x}\right]\right] \div \left[(1+i))^{SL+1}\left[\frac{1-\left(\frac{1+f}{1+i}\right)^{SL}}{i-f}\right]\right]$$

in which:

A	=	the unknown inpayment for long–term care per year of active facility life
i	=	the estimated annual rate of interest
f	=	the estimated annual rate of inflation
SL	=	the estimated active life of the facility in years
R	=	the estimated annual costs
R_x	=	the estimated unequal annual costs
x	=	the year of long–term care
LTC	=	the period of long–term care

c = the closure period as a fraction of one year

$\sum$ = the sum from year 1 through the last year of LTC

(b) *Bonds and letters of credit.* 1. Non–interest bearing accounts for long–term care. The rate of outpayment shall be as specified in sub. (5) (a), and the rate of inpayment shall be in equal actual dollar inpayments.

2. When equal annual outpayments are used, the formula shall be:

$$PB = \left[R(1 + f)^{SL + 1 + c} \left[\frac{(1 + f)^{LTC} - 1}{f} \right] \right] \div SL$$

When unequal annual outpayments are used, the formula shall be:

$$PB = \left[\Sigma \left[R_x (1 + f)^{SL + x + c} \right] \right] \div SL$$

in which:

PB = the unknown bond or letter of credit amount for long–term care to increase per year of active facility life.

f = the estimated annual rate of inflation

SL = the estimated active life of the facility in years

R = the estimated annual costs

R_x = the estimated unequal annual costs

LTC = the long–term care period

x = the year of long–term care

c = the closure period as a fraction of one year

$\sum$ = the sum from year 1 through the last year of LTC

(c) *Insurance.* 1. 'Long–term care.' a. The rate of outpayment shall be as specified in sub. (5) (a) 1.

When equal annual outpayments are used, the formula shall be:

$$INS = \left[R(1 + f)^{SL + 1 + c} \left[\frac{(1 + f)^{LTC} - 1}{f} \right] \right]$$

When unequal annual outpayments are used, the formula shall be:

$$INS = \left[\Sigma \left[R_x (1 + f)^{SL + x + c} \right] \right]$$

in which:

INS = the unknown amount of the long–term care insurance

f = the estimated annual rate of inflation

SL = the estimated active life of the facility in years

R = the estimated annual costs

R_x = the estimated unequal annual costs

LTC = the long–term care period

x = the year of long–term care

c = the closure period as a fraction of a year

$\sum$ = the sum of year 1 through the last year of LTC

(6) CHANGING METHODS OF PROOF OF FINANCIAL RESPONSIBILITY. The owner of an approved mining waste facility may change from one method of providing proof of financial responsibility under sub. (3) to another, but not more than once per year. A change may only be made on the anniversary of the submittal of the original method of providing proof of financial responsibility.

(7) ADJUSTMENT OF FINANCIAL RESPONSIBILITY. The owner of a facility for the land disposal of mining waste shall prepare a new long–term care cost estimate whenever a substantial change in the long–term care requirements in the approved plan of operation affects the cost of long–term care. Proof of the increase in the amount of all bonds, letters of credit, escrow accounts and trust accounts, or other approved methods established under this section shall be submitted annually to the department. The department may adjust the amount of the required proof of financial responsibility for long–term care based upon prevailing or projected interest and inflation rates and the latest cost estimates, and may annually require the owner to adjust the amount of proof of financial responsibility accordingly.

(8) ACCESS AND DEFAULT. Whenever on the basis of any reliable information, and after opportunity for a hearing, the department determines that an owner or operator of an approved mining waste facility is in violation of any of the requirements for long–term care specified in the approved plan of operation, the department and its designees shall have the right to enter upon the facility and carry out the long–term care requirements. The department may use part or all of the money deposited with it, or the money deposited in escrow or trust accounts, or performance or forfeiture bonds, or letters of credit, or funds accumulated under other approved methods to carry out the long–term care requirements.

(9) AUTHORIZATION TO RELEASE FUNDS. One year after closure, and annually thereafter for the period of owner responsibility, the owner, who has carried out all necessary long–term care during the preceding year, may make application to the department for reimbursement from an escrow account, trust account, or deposit with the department, or other approved methods, or for reduction of the bond, insurance or letter of credit equal to the estimated costs for long–term care for that year. The application shall be accompanied by an itemized list of costs incurred. Upon determination that the expenditures incurred are in accordance with the long–term care requirements anticipated in the approved plan of operation, the department may authorize in writing the release of funds or approve a reduction in the bond or letter of credit. Prior to authorizing a release of the funds or a reduction of the bond or letter of credit, the department shall determine that adequate funds exist to complete required long–term care work for the remaining period of owner responsibility. Determinations shall be made within 90 days of the application. Any funds remaining in an escrow account, trust account, or on deposit with the department at the termination of the period of owner responsibility shall be released to the owner.

(10) EARLY TERMINATION. (a) The owner of an approved mining waste facility may apply to the department for termination of its responsibility for long–term care at any time after the facility has been closed for at least 10 years. Within 30 days of the receipt of such application in writing, the department shall, using the procedures set forth in par. (b), provide notice to the public and to the owner and an opportunity for a hearing on the termination of its responsibility. In this proceeding the burden shall be on the applicant to prove by a preponderance of the evidence that additional long–term care is not necessary for adequate protection of public health or the environment.

(b) The department shall publish a class 1 notice under ch. 985, Stats., in the official newspaper designated under s. 985.04 or 985.05, Stats., or, if none exists, in a newspaper likely to give notice in the area of the facility. The notice shall invite the submission of written comments by any person within 30 days from the time the notice is published, and shall describe the method by which a hearing may be demanded under par. (c). Notice shall also be given under s. 293.43 (3) (b) 1. and 2., Stats.

(c) Within 30 days after the notice required under par. (b) is published, a written demand for a hearing on the matter may be filed by any county, city, village, town, tribal government or by any 6 persons. The demand shall indicate the interest of the municipality or persons who file it and state the reasons why the hearing is demanded. A hearing demanded under this paragraph shall be held within 60 days after the deadline for demanding a hearing and shall be conducted as provided in s. 227.44, Stats. The hearing shall be held in an appropriate place designated by the department in one of the counties, cities, villages or towns which are substan-

tially affected by the operation of the facility. Notice of the hearing shall be given under s. 293.43 (3) (b) 1. and 2., Stats., except the hearing may be scheduled upon 30 days notice.

(d) Within 120 days after posting notice of the pending termination or within 60 days after any hearing is adjourned, whichever is later, the department shall determine either that long–term care of the facility is no longer required, in which case the applicant shall be relieved of such responsibility; or that additional long–term care of the facility as specified in the plan of operation is still required, in which case further application under this subsection may not be permitted until at least 5 years have elapsed since the previous application.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; am. Register, May, 1984, No. 314, eff. 5–1–84**; correction in (10) (c) was made under s. 13.93 (2m) (b) 7., Stats.**

NR 182.18 Waste management fund. (1) APPLICABILITY. (a) All owners or operators of licensed mining waste disposal facilities shall pay to the department a tonnage fee, for each ton of waste received and disposed of at the facility, or a minimum waste management fund base fee of $100, whichever is greater, until the facility no longer receives waste and begins closure activities, except as otherwise provided in s. 289.62 (1) (b), Stats. The department shall deposit all tonnage and waste management base fees into the waste management fund provided for in s. 25.45, Stats.

(b) For all mining waste facilities with a plan of operation approved under s. 289.30, Stats., after May 20, 1978, the owner shall be responsible for the long–term care of the facility for 30 years after facility closure. The fees to be paid by the owner or operator into the waste management fund shall be in accordance with sub. (3) (a) or (b), whichever fee is greater.

(c) For all mining waste facilities not approved as set forth in par. (b), the fees to be paid by the owner or operator into the waste management fund shall be those indicated in sub. (3) (a) or (b), whichever fee is greater. The owner or operator of a mining waste facility in existence on May 21, 1978 may, but will not be required to, seek approval of the facility's plan of operation under s. 289.30, Stats.

(d) For those companies which have provided proof of financial responsibility by the net worth method under s. 289.41 (4) and (6), Stats., the fees to be paid by the owner or operator into the waste management fund shall be in accordance with sub. (3) (c), if applicable, or sub. (3) (b), whichever fee is greater.

(2) CERTIFICATION. The owner or operator of a licensed mining waste site facility shall certify, on a form provided by the department, the amount of waste received and disposed of during the preceding reporting period. The department shall specify the term of the reporting period on the certification form. The department shall mail the certification form to the owner or operator every January. The certification form shall be completed and returned to the department with the appropriate fee within 45 days after mailing of the form by the department to the owner or operator. An owner or operator failing to submit the waste management certification form and appropriate fees within 45 days after mailing of the form to the owner or operator shall pay a late processing fee of $50.

(3) FEES. (a) The mining waste tonnage fees established in s. 289.62 (2), Stats., are summarized in table 2.

TABLE 2
WASTE MANAGEMENT FUND TONNAGE FEES

Waste Type		Fee
1.	Hazardous tailing solids	1.5¢/ton
2.	Nonhazardous tailings solids or nonacid producing taconite tailings solids	0.2¢/ton
3.	Hazardous sludge	1.0¢/ton
4.	Nonhazardous sludge	0.5¢/ton
5.	Hazardous waste rock	0.3¢/ton
6.	Nonhazardous waste rock or nonacid producing taconite waste rock	0.1¢/ton
7.	Any prospecting or mining waste not specified in categories 1 to 6 above	0.5¢/ton

(b) As provided in s. 289.67 (3), Stats., the owner or operator shall pay to the department a waste management fund base fee of $100 for each calendar year.

(c) The facilities described in sub. (1) (d) shall increase the tonnage fees in par. (a) by 25%.

(4) USE OF FUND. Only an approved mining waste facility as defined in s. 289.01 (4), Stats., is eligible for use of the money accumulated in the waste management fund. The monies in the waste management fund shall be expended exclusively as set forth in s. 289.68 (1) to (6), Stats.

(5) DETERMINATION OF WASTE TONNAGES. (a) *Determination by owner or operator.* The owner or operator shall, subject to department approval, use one of the following methods for determining the number of tons of waste received and disposed of at the mining waste facility.

1. The owner or operator may use actual weight or volume records as recorded under s. NR 182.14 (1) (b) 1.b.

2. The owner or operator may establish by field measurement the volume of waste disposed and convert to a weight using an assumed compaction density.

(b) *Department estimates.* The department may estimate by waste category the number of tons received at a mining waste facility. The department's estimate shall appear on the certification form and shall be based on the number of tons received and reported on for the previous reporting period.

(6) WASTE MANAGEMENT FUND EXPENDITURES. (a) *Payments for long–term care after termination of owner responsibility.* The department shall determine the necessary maintenance requirements for the long–term care of an approved mining waste facility after the termination of the owner's responsibility. The department shall comply with s. 16.75, Stats., when applicable, for contracting services for the required long–term care maintenance of mining waste facilities.

(b) *Payments of related costs.* The department shall comply with s. 289.68 (4), Stats., prior to making any expenditures from the waste management fund under s. 289.41 (11) (b) 1., Stats.

(c) *Other payments.* The department may expend monies from the waste management fund in accordance with s. 289.68 (5) and (6), Stats.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82; am. Register, May, 1984, No. 341, eff. 5–1–84.

NR 182.19 Exemptions and modifications. (1) The department may grant exemptions from the requirements of this chapter and modifications to any license, plan of operation, or other authority issued under this chapter as provided in s. 289.30 (6) and 289.43, Stats., if such exemptions or modifications are consistent with the purposes of this chapter and ch. NR 132 and will not violate any applicable federal or state law or regulation.

(2) All requests for exemptions by the applicant shall be made at least 90 days before the hearing under s. 293.43, Stats., unless the condition which is the basis for the requested exemption is unknown to the applicant prior to that time or for good cause shown. If an applicant applies for an exemption less than 90 days before the hearing under s. 293.43, Stats., the portion of the hearing concerning that exemption request shall be held no earlier than 90 days after receipt of the application for the exemption. Requests for exemptions may be made by any party to the s. 293.43, Stats., hearing other than the applicant up to 30 days

before the hearing. Any request for exemption made prior to the hearing under s. 293.43, Stats., shall be determined as part of that proceeding.

(3) The burden of proof for seeking an exemption or modification is upon the person seeking it.

(4) Any party to the hearing under s. 293.43, Stats., may request modifications and exemptions to make more stringent any provision of this chapter.

(5) Any application for a modification made after the hearing under s. 293.43, Stats., shall be determined by the following procedure:

(a) The application shall be in writing and shall include documentation justifying the need for the exemption or modification describing the alternatives and explaining why the exemption or modification was not sought before the s. 293.43, Stats., hearing.

(b) If the application involves an exemption or a modification from a requirement of this chapter, within 10 days of the application, the department shall publish a class 1 notice under ch. 985, Stats., in the official newspaper designated under s. 985.04 or 985.05, Stats., or, if none exists, in a newspaper likely to give notice in the area of the proposed exemption or modification. The notice shall invite the submission of written comments by any person within 10 days from the time the notice is published, and shall describe the method by which a hearing may be demanded. Notice shall also be given by mail as provided in s. 293.43 (3) (b) 1., Stats. Within 30 days after the notice is published, a written demand for a hearing on the matter may be filed by any county, city, village, town, tribal government or by any 6 persons. The demand shall indicate the interest of the municipality or persons who file it and state the reasons why the hearing is demanded. A hearing demanded under this paragraph shall be held within 60 days after the deadline for demanding a hearing, and shall be conducted as a class 1 proceeding under s. 227.44, Stats. The hearing shall be held in an appropriate place designated by the department in one of the counties, cities, villages or towns which are substantially affected by the operation of the facility. Within 45 days after giving notice, or within 30 days after any hearing is adjourned, whichever is later, the department shall determine whether the modification or exemption as requested shall be granted.

(c) If the application does not involve an exemption or a modification from a requirement of this chapter, the department shall issue a decision on the application within 45 days of the receipt of the application.

History: Cr. Register, August, 1982, No. 320, eff. 9–1–82.

S.R. 13

AN OVERVIEW OF METALLIC MINERAL REGULATION IN WISCONSIN

2004

UW Extension

Published by and available from

Wisconsin Geological and Natural History Survey
3817 Mineral Point Road • Madison, Wisconsin 53705-5100
☎608/263.7389 FAX 608/262.8086 www.uwex.edu/wgnhs/
James M. Robertson, *Director and State Geologist*

ISSN: 0512-0659