

# ***Iron Mining and Frac Sand***

*Compiled by Patricia Reichert, January 2012*

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Renewed interest in taconite, a lower grade iron ore, in the Gogebic Range would create Wisconsin's first open pit mine; previous iron mines were underground. New horizontal drilling technology for hydrofracturing (hydraulic fracturing) to extract previously unreachable petroleum and natural gas deposits has increased demand for "frac sand," a silica sand uniform in size and hardness found in abundance in the driftless area. This Tap the Power focuses on these two types of mining, the last major revision to Wisconsin mining regulations in the 1970s, and some documentation from Minnesota, which has a long history with iron mining.

***Annual Report to the Legislature: Minnesota Taconite Workers Health Study / University of Minnesota School of Public Health. 2009-2011.*** [www.leg.state.mn.us/edocs/edocs.asp?oclc\\_number=317403197](http://www.leg.state.mn.us/edocs/edocs.asp?oclc_number=317403197) [via the Minnesota Legislative Reference Library]

***Biennial Report / Wisconsin Mining Investment and Local Impact Fund Board. 2001/2003. (Rev/Min/r)*** The board administers the fund created to help municipalities alleviate costs associated with social, educational, environmental, and economic impacts of metalliferous mineral mining. Previous reports also available in the library. [www.dor.state.wi.us/ra/bie01-03.html](http://www.dor.state.wi.us/ra/bie01-03.html)

***The Economic Impact of Ferrous and Non-Ferrous Mining on the State of Minnesota and on the Arrowhead Region and Douglas County, WI / University of Minnesota-Duluth Labovitz School of Business and Economics. March 2009.*** <https://lsbe.d.umn.edu/departments/bber/projects/2009MNMiningImpact.pdf>

***Iron Mining in the Lake Superior Basin / Great Lakes Indian Fish & Wildlife Commission, Environmental Section. October 2011. (622.1/G79a)*** A report on a possible taconite mine in the Penokee Range in Wisconsin. Explains the process and impact of taconite mining and provides an initial analysis based on limited information. [http://glifwc.org/News/GLIFWC\\_TaconiteReport\\_2011.pdf](http://glifwc.org/News/GLIFWC_TaconiteReport_2011.pdf)

***Long-Term Liability for Companies Mining in Wisconsin / University of Wisconsin Law School, Gary Milhollin and Kathy Falk. 1977. (622.1/W7i2)*** Prepared for the Office of State Planning and Energy, Wisconsin Department of Administration and the Mining Subcommittee of the Economic Development Coordinating Committee. This report focuses on "Scope of Liability in Judicial Action" and "Alternatives to Judicial Action to Settle Small Claims."

***Long-Term Liability for Companies Mining in Wisconsin: Summary of Milhollin-Falk Paper / Wisconsin Legislative Council, Committee on Mining. 1978. Information Memorandum, 1978-13. (622.1/W7h2)*** Governor Schreiber recommended legislation relating to issues in the Milhollin-Falk paper be developed. This memorandum was prepared to summarize the findings and recommendations of the paper.

***Mineral Prospecting and Mining Transactions / Wisconsin Geological and Natural History Survey (Information Circular, no.23). 1975. (622.1/W7d8)*** "[I]ntended to provide examples and discussion of metallic and nonmetallic prospecting agreements, mining leases, and alternative transactions. ... [A] guide which can be used for reference in the preparation of such documents." - from Preface <http://wisconsinogeologicalsurvey.org/pdfs/IC23.pdf>

***Mineral Resources, Mining, and Land-Use Planning in Wisconsin / Wisconsin Geological and Natural History Survey (Information Circular, no.26). 1975. (622.1/W7d7)*** "[D]iscusses the nature, occurrence, and distribution of mineral deposits, the value of the mineral industry, how minerals are produced, the reclamation of mined land, and mining as a temporary use of the land which can be made a part of a multisequential land-use plan." -from Preface <http://wisconsinogeologicalsurvey.org/pdfs/IC26.pdf>

***The Mining Moratorium / Wisconsin Legislative Reference Bureau (Legislative Brief 98-1). 1998. (622.1/W7L)*** About 1997 Wisconsin Act 171 which established new environmental standards mining companies must meet to obtain permits for mining sulfide ore. <http://legis.wisconsin.gov/lrb/pubs/Lb/98Lb1.pdf>

***"Mining Renaissance in Wisconsin" / Wisconsin Counties, December 2011, p.22-34. (352.9/W75/2011/v.75/no.12)*** A series of articles exploring the renewed interest in mining in Wisconsin including a brief history, frac sand mining, one county's experience with silica sand mining, and proposed changes to mining law.

***"New Mining Era Comes to Wisconsin" / Wisconsin Academy of Sciences, Arts and Letters (Wisconsin Academy Review, v.28 no.1). December 1981. (622.1/W75)*** This 1981 issue covers different aspects of mining in Wisconsin and includes articles

written by the Public Intervenor and Chief of Mine Reclamation at that time.

**An Overview of Metallic Mineral Regulation in Wisconsin / Wisconsin Geological and Natural History Survey (Special Report 13). (3rd Edition). (UW/Ext/GNHS/s/no.13/2004)** Answers questions such as: What aspects of metallic mineral development are regulated? How does the permitting process work? What are additional features of the regulatory framework? <http://wisconsin Geological Survey.org/pdfs/miscpdf/sr13.pdf>

**An Overview of Mining Waste Management Issues in Wisconsin: A Report to the National Resources Board / Wisconsin Bureau of Solid Waste Management. July 1995 (Updated October 1997). (622.1/W7g4)** Mainly addresses the prevention of acid drainage issues but is a good background of waste management issues up to 1995. <http://dnr.wi.gov/org/aw/wm/mining/metallic/infosheets/overvu.pdf>

**Regulation of Metallic Mining in Wisconsin / Wisconsin Legislative Reference Bureau (Wisconsin Brief 00-15). November 2000. (622.1/W7L1)** A history of metallic mining, the evolution of mining law, mining regulations as of 2000, and Wisconsin income from mining. <http://legis.wisconsin.gov/lrb/pubs/wb/00wb15.pdf>

**Report to the Natural Resources Board: Silica Study / Wisconsin Department of Natural Resources. August 2011.** "The study describes what is currently known about sources, health effects, exposures, controls and the regulatory status of silica in Wisconsin as well as in other states and countries." - Executive Summary <http://dnr.wi.gov/air/pdf/finalsilicareport.pdf>\*

**Revenue Received from State Mineral Leases: FY 1890-2010 / Minnesota Department of Natural Resources, Division of Lands and Minerals, Transactions Section. December 2010.** [http://files.dnr.state.mn.us/lands\\_minerals/historic\\_minerals\\_revenue\\_report\\_fy\\_10.pdf](http://files.dnr.state.mn.us/lands_minerals/historic_minerals_revenue_report_fy_10.pdf)

**"Sand Mining Surges in Wisconsin" / Jason Smathers, WisconsinWatch.org, July 31, 2011.** Includes a link to a map of sand mines in Wisconsin and a sidebar "What's fracking?" [www.wisconsinwatch.org/2011/07/31/sand-mining-surges-in-Wisconsin](http://www.wisconsinwatch.org/2011/07/31/sand-mining-surges-in-Wisconsin)

## Related Web Sites

**CleanWisconsin:** [www.cleanwisconsin.org/index.php?module=cms&page=423](http://www.cleanwisconsin.org/index.php?module=cms&page=423) Minding the Mine.

**Gogebic Taconite LLC:** <http://gogebictaconite.com>

**Iron Mining Association (IMA) of Minnesota:** [www.taconite.org/index.php](http://www.taconite.org/index.php)

**Iron Range Resources & Rehabilitation Board:** [www.irrrb.org/mining-timber/mineland-reclamation](http://www.irrrb.org/mining-timber/mineland-reclamation) Mineland Reclamation; includes link to Minnesota's Taconite Economic Development Fund.

## Minnesota Department of Natural Resources

- **Digging into Minnesota Minerals: Taconite:** [www.dnr.state.mn.us/education/geology/digging/taconite.html](http://www.dnr.state.mn.us/education/geology/digging/taconite.html)
- **Division of Lands and Minerals:** [www.dnr.state.mn.us/lands\\_minerals/index.html](http://www.dnr.state.mn.us/lands_minerals/index.html) Manages Minnesota's mineral resources, mining development, reclaimed land, and maintains land records.

**Sierra Club, Wisconsin John Muir Chapter:** <http://wisconsin.sierraclub.org/PenokeeMine.asp> Proposed taconite mine in the Penokee Range.

## United States Environmental Protection Agency:

- [www.epa.gov/hydraulicfracturing](http://www.epa.gov/hydraulicfracturing) Natural Gas Extraction: Hydraulic Fracturing.
- [www.epa.gov/oar/particlepollution/basic.html](http://www.epa.gov/oar/particlepollution/basic.html) Particulate Matter: Basic Information.

**United States Geologic Survey:** <http://minerals.usgs.gov/minerals/pubs/state/wi.html> Wisconsin State Minerals Information: Minerals Yearbook 1994 to 2007.

**United States Mine Safety and Health Administration:** [www.msha.gov](http://www.msha.gov) A division of the United States Department of Labor.

**Wisconsin Department of Natural Resources:** <http://dnr.wi.gov/org/aw/wm/mining/> Mining in Wisconsin.

**Wisconsin Department of Safety and Professional Services - Safety and Buildings Division:** <http://dsps.wi.gov/sb/SB-MineSafetyProgram.html> S&B Mine Safety Program.

**Wisconsin Geological and Natural History Survey:** <http://wisconsingeologicalsurvey.org/iron-mining-in-wisconsin.htm>  
Iron Mining in Wisconsin.

**Wisconsin State Law Library:** <http://wilawlibrary.gov/topics/mining.php> Mining (Metallic and Nonmetallic).

\*This title or portions of this Web site are also available through the WI Digital Archives at [www.wistatedocuments.org](http://www.wistatedocuments.org).