Report to the Eau Claire County Board of Supervisors per the Eau Claire County Moratorium on Nonmetallic Mining

Recommendations from:

Eau Claire City-County Board of Health
and
Eau Claire County Groundwater Advisory Committee

Date: March 23, 2012
Prepared By: Courtenay Johnson, Director of Environmental Health
Ken Jain, Environmental Health Supervisor
Introduction and Background:

The Eau Claire County Board of Supervisors passed a moratorium on the expansion and creation of new non-metallic mining operations within Eau Claire County on November 16, 2011. The moratorium directed the Department of Planning and Development, the Highway Department, the Groundwater Advisory Committee, and the Eau Claire City-County Health Department to study and analyze the impact of silica sand mining and make final recommendations to their respective governing committees, the land conservation commission and the county board of supervisors.

Per this directive, Health Department staff attended internal and external meetings on this topic, participated in and coordinated meetings with other regulators, county staff and industry, as well as independently researching, studying, and analyzing health issues related to non-metallic mining. Findings, recommendations and actions presented to the Eau Claire County Groundwater Advisory Committee (GWAC) and the Eau Claire City-County Board of Health (BOH) are included in this report.

The GWAC and the BOH were presented with fact-finding documents outlining possible health and safety issues relating to the issue of silica sand mining. These issues were presented at their January 18 and January 25, 2012 meetings respectively. The content of those fact-finding documents were not intended to be all-inclusive or final, but rather discovery to-date, including possible recommendations for further review. These documents were used to aid the GWAC and BOH in discussion and providing staff directives.

Using the discussion and directives provided by the above-noted committees, Health Department staff researched the issues further and provided recommendations for action at the February 16, 2012 Groundwater Advisory meeting and the February 22, 2012 Board of Health meeting. Staff attempted to use and/or strengthen existing codes and regulations, wherever possible to address potential health and safety issues that may arise from Silica Sand Mining, but not exclusively limited to this industry. Staff also prepared several recommendations for other County departments to consider.

NOTE: Please be advised that this report contains recommendations which are still pending in either or both the Groundwater Advisory Committee and the Board of Health. The pending recommendations/items, narrative, and status are described in Section 3 of this report.
Table of Contents

Section 1 – Ordinance Recommendations ................................................................. 4

Section 2 – Policy Recommendations ................................................................. 5

Section 3 – Pending Items .................................................................................. 10

Section 4 – Discussion Items without Recommendation/Action ......................... 17

Section 5 – Public Comment .............................................................................. 19

Section 6 – Meetings Attended ........................................................................... 22

Section 7 – Attachments ................................................................................... 23

Date: March 23, 2012
Prepared By: Courtenay Johnson, Director of Environmental Health
Ken Jain, Environmental Health Supervisor
Section 1 - Ordinance Recommendations

Ordinance recommendations have been submitted to the County Board for a first reading at the County Board meeting on March 20, 2012, with a second reading scheduled for April 4, 2012. The County Board fact sheet and ordinance language change documents, 11-12/140, are included in Section 7 of this report “Attachments”.

These code amendments are not proposed to specifically address only the Silica Sand Mining Industry. In summary, the ordinance changes by topical areas are as follows:

- Countywide reinspection fee ordinance
- Amendment to the “Schedule of Deposits” for citation values
- Definition and Regulation of site-clearing open burning
- Statute Reference amendments
- Create regulation for Environmental Monitoring
- Wisconsin Administrative Code amendments and adoption of new rules
- Create regulation for Public Health Nuisances
- Amend groundwater contamination regulation to include broad uses
- Countywide noise ordinance
Section 2 - Policy Recommendations

The Health Department has prepared several recommendations for other County Departments. These recommendations are intended to be used in any way the designated Department deems appropriate, such as inclusion in application requirements, guidance documents, policies, or ordinance.

Recommendation 1 - Reclamation Plan Considerations for Guidance and/or Policy and other recommendations to ECC Planning & Development/Land Conservation

Reclamation Plans are key for protecting groundwater. Locally, the Eau Claire Planning Department has the authority to administer Wisconsin Administrative Code NR 135 and the local Reclamation Ordinance Chapter 18.92. Additionally, the Wisconsin Groundwater Law provides local jurisdictions with the authority to enact zoning rules which are protective of groundwater. When considering land use operations and activities and the impacts to groundwater, reclamation site plans and designs must include features that are protective. Further, these land use operations may have other impacts on environmental factors such as air quality. The Planning Department also has the capacity through land use regulation and land conservation to regulate some aspects of operations that may have an environmental impact.

The following recommendations would be submitted to Eau Claire County Planning and Development and/or Land Conservation for inclusion in guidance documents, policy, or ordinance:

- A filtering layer should be considered using criteria established in NR 151.002(14r), 151.125(4)(b) Table 3, and SPS 383 Table 383.44-3.

- Recommend that non-metallic mines not be exempted from erosion control plans:
  
  GWAC Action (2/16/12) - M: Fantle  S: Paddock  Carried 6-0
  OH Action (2/22/12) - M: Price  S: Wachs  Carried 5-0

- Prior to final County approval and issuance of permits, mining operations (regardless of zoning), should be required to submit a copy of all required DNR permits or variance documents, as applicable.

  BOH Action (2/22/12) - M: Wachs  S: Price  Carried 5-0
• Reclamation and/or storm water and/or erosion control plans should include a requirement that overburden stockpiles or berms be vegetated as soon as practical.

• Conditional use permits should include a requirement regarding compliance with the approved Fugitive Dust Plan submitted to the Wisconsin DNR.

BOH Action (2/22/12) - M: Spencer  S: Wachs  Carried 5-0

**Recommendation 2 - - Municipal Wellhead Protection**

*Background:* The GWAC was formed by Eau Claire County as an advisory committee to the Department on Planning and Development for administrative purposes. Serving this role, the committee completed the Eau Claire County Groundwater Management Plan in December 1994. The committee was charged to study and address potential and existing groundwater quality problems in Eau Claire County. This plan outlines the committee’s study of the use and need for Wellhead Protection Zones. Additionally, the plan provides recommendations to Eau Claire County for the creation and management of Wellhead Protection Plans. Eau Claire County and four municipalities adopted local ordinances and created Wellhead Protection Plans beginning in 2002. This was seen as a significant accomplishment in the protection of municipal drinking water supplies and Eau Claire County groundwater.

In response to the moratorium directive and further review of existing ordinances the City-County Health Department found that Municipal Wellhead Protection was not fully implemented for municipalities within Eau Claire County. The GWAC issued a letter to the municipalities regarding this issue on December 21, 2012, recommending they formally request the County create an overlay district, consistent with County Ordinance 18.55.

GWAC Action (12/21/2011) – M: Fantle  Carried 8-0

As of January 10, 2012, the Fall Creek Village Board passed a resolution to request the County to develop the wellhead protection districts/zones (map). The County Planning Department presented this item for action by the GWAC at their February 16, 2012 meeting.

GWAC Action (2/16/2012) – M: Merritt  S: Blodgett  Carried 6-0

The Board of Health also acted unanimously to write a letter in support of the GWAC recommendation letter at their January 25, 2012 meeting. The letter was signed by the President, John Paddock and further supported by the Land Conservation Chair, Dan Walters. This letter was sent out to the City of Augusta and the Village of Fairchild on February 3, 2012.

As of March 23, 2012, the City of Augusta and Village of Fairchild have not submitted a request to the County.
**Recommendation 3 - Drillhole Abandonment**

*Background:* At the January 18, 2012 meeting, drillholes (i.e. soil borings, exploratory borings) were identified as a potential "direct conduit" to groundwater if not properly abandoned. Currently, the Health Department already has the authority to require the abandonment of these drillholes, as well as the ability to define them as a human health hazard, both enforceable under current County Code. The key to this issue is how to enforce abandonment if it is unknown when and where these drillholes are being drilled.

In the fact sheet, staff presented a recommendation that staff create and disseminate information regarding drillhole abandonment requirements. At the February 22, 2012 meeting, the committee took action in support of this recommendation. Using the drafted recommendation and comments received by GWAC members, the following recommendation will be carried out by staff:

> Recommend the creation and distribution of information about local and state DNR abandonment requirements to drilling contractors, realtors, property and business owners, engineering companies, and any others involved in exploratory borehole sampling.

These materials will be created and distributed after the moratorium period has expired.

GWAC Action (2/16/12) - M: Dunning  S: Fantle  Carried 6-0
BOH Action (2/22/12) - M: Price  S: Wachs  Carried 6-0

**Recommendation 4 - Blasting**

*Background:* At the January 18, 2012 meeting, blasting was identified as a potential source of groundwater contamination, particularly if the charges were not properly placed or if the bedrock fractured down to the groundwater. The GWAC discussed the state rules, Town of Howard ordinance, and blasting best management practices. It was agreed at this meeting, and action was taken at the February 16, 2012 meeting that blasting be accomplished in accordance with state regulations, SPS 307 and that best management practices be employed. The two recommendations made in response to this are:

- Recommend that planning and Development should include in conditional use permits that blasting is accomplished in accordance with SPS 307.
- Recommend Towns adopt a blasting ordinance referencing SPS 307.

GWAC Action (2/16/12) - M: Fantle  S: Paddock  Carried 6-0
BOH Action (2/22/12) - M: Spencer  S: Murray  Carried 6-0
**Recommendation 5 -- Request to U.S. Environmental Protection Agency to Regulate Respirable Crystalline Silica**

*Background:* The Board of Health discussed the issue of crystalline silica and concerns regarding the risk for the general public to have negative health effects associated with the silica sand mining industry at their January 25, 2012 meeting. Highlights of discussion:

- Current regulations are designed around occupational exposure (exposure in the workplace). Silica sand mining operations within Western Wisconsin have shown through occupational testing that on-site levels of crystalline silica are below the health standards.
  
  "Crystalline silica inhaled in the form of quartz or cristobalite from **occupational sources [i.e., workplace exposures]** is carcinogenic to humans," and is classified as a **Group 1 carcinogen** (IARC 1997). **Group 1 carcinogens** are "known human carcinogens". (WI DNR Silica Study)

- The science is not sufficiently developed to the point where monitoring of ambient air and relating the fraction of silica found can be directly linked to known human health effects in the general population.
  
  "**Fill dirt and topsoil-contain sand. Because the crystalline silica content of common soil is so high, agricultural workers represent the occupational group most at risk for exposure to respirable crystalline silica.**" ("Crystalline Silica Primer", 1992, U.S. Department of the Interior and U.S. Bureau of Mines)

- The Board of Health noted that there is a lack of technology to adequately monitor and predict for crystalline silica levels. There is no standard reference method that is federally approved for monitoring crystalline silica (PM$_4$) in ambient air. (WI DNR Silica Study) When using federally approved methods, monitoring is legally enforceable as the data and results are reproducible.

It was also discussed that fugitive dust, which includes crystalline silica, is controlled using best management practices, and if followed, nuisance and respirable dust would be adequately controlled. Examples of best management practices include watering piles, covering trucks and conveyors, paving areas within a mine site, etc. Each mine site is required to submit a fugitive dust control plan to the DNR specific to their site and activities. These controls are considered part of the DNR permit and are enforceable under DNR rules. Each site and business model will affect the extent/need for fugitive dust controls. Board of Health direction is to not implement a crystalline silica monitoring program at this time but to control fugitive dust using best management practices.

**BOH Action(1/25/12) - M: Bodeau; S: Murray; Carried 6-0**
Further discussion at the January meeting resulted from the presentation of a petition requesting the Board of Health adopt a resolution in support of the Citizen’s Petition to the Wisconsin DNR requesting the establishment of a respirable crystalline silica standard (see attachment). The Board directed staff to develop a resolution in support of the Citizen’s Petition for Board consideration at the February 22, 2012 meeting. Prior to the February 22 meeting the Wisconsin DNR issued a decision denying the citizen’s petition request.

In light of the DNR’s decision to deny the citizen’s petition, the Health Officer requested guidance and direction from the Board of Health concerning continued preparation of the stated resolution. Following this consultation, direction was given to consider preparing a letter that could go to the Centers for Disease Control and Prevention concerning RCS, and perhaps look at more monitoring of particulate material (PM$_{10}$) as a recommendation before pursuing regulation of RCS. If a federal agency established a standard, it would greatly facilitate the state DNR adoption of the same standard for Wisconsin.

The CDC collects, monitors, and reports health statistics and outcomes with partner federal institutes or agencies such as the National Institute for Occupational Safety and Health, but does not set regulatory requirements for air pollutants harmful to public health and the environment. The letter was therefore written to the EPA Office of Air and Radiation.

BOH Action (2/22/12) - M: Murray; S: Wachs; Carried 6-0 - See Attachment
Section 3 – Pending Items

The Health Department has items tagged as “Pending” because they are yet to be discussed and acted upon by either or both the GWAC and Board of Health. They are being presented in this report with background information and status updates as of the date of this report.

Pending Action - Recommendation 1 - Lining of Process Water Ponds

Background: At the January 18, 2012 meeting, the GWAC reviewed recommendations and information regarding the lining of process water ponds. At that time, lining was not recommended as data regarding polyacrylamide did not substantiate the need for liners. However, at the February 16, 2012 meeting, the GWAC reviewed new information provided by the Health Department regarding fluctuations in pH and the mobilization of metals into groundwater, indicating that lining of these ponds should be a requirement. The GWAC indicated support for this recommendation, asking staff to research further standards for liners and include such standards in a regulation.

GWAC Action (2/16/12) - M: Fantle S: Paddock Carried 6-0

Staff found liner requirements from DNR to be suitable for this purpose, the revised recommendation is as follows:

Proposed Recommendation:
The Eau Claire County Reclamation Plan shall include a requirement that:

Process water ponds shall be lined to limit the infiltration and leaching of chemicals used in processing or otherwise used on-site (e.g. erosion control) and their byproducts, as well as the release of metals due to fluctuations in pH. Liners shall be designed by a Professional Engineer and constructed under their supervision to meet the standards and specifications outlined in Wisconsin Administrative Code NR 213.

Status: This revised recommendation was presented at the March 15, 2012 groundwater advisory committee meeting, however, a quorum was not present for action. This item will still be presented to the BOH for review, discussion and action at their March 28, 2012 meeting. This is being done to ensure that the Planning Department has adequate time to include these recommendations in any reports or documents moving forward. The GWAC is tentatively set to meet again on April 12, 2012. Should the GWAC make further changes to these recommendations, they will again be presented to the Board of Health for action.
**Pending Action** - Recommendation 2 - Sampling and Analysis of Sediments from ponds

**Background:** At the January 18, 2012 meeting, the GWAC reviewed information from staff regarding the condition and potential need for testing sediments from ponds prior to reclaiming them, as well as the use of best management practices during reclamation of pond sediments. At the February 16 meeting, the GWAC reviewed the information and recommendations provided by staff and further directed staff to adjust the language of these recommendations to include representative sampling methods. The GWAC also discussed the abandonment of these ponds.

GWAC Action (2/16/12) - M: Fantl  S: Paddock  Carried 6-0

**Proposed Recommendations:**
The Eau Claire County Reclamation Plan shall include a requirement that:

2.1-
The operator will test the sediment accumulating in process and storm water ponds, prior to reclamation, for chemicals used in processing or otherwise used on-site (e.g. erosion control) and their byproducts, as well as testing for metals and pH. Representative sampling and analysis will be conducted by an independent, credentialed, third party using EPA approved methods as outlined in EPA document EPA/600/R-92/128, July 1992 – “Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies”. Analysis shall be completed by a certified testing laboratory. All testing and analysis shall be at the expense of the operator.

2.2-
The operator shall abandon process and storm water ponds in accordance with any applicable local, state or federal regulations, including Wisconsin Administrative Code NR 213.07.

2.3-
In addition to sampling and analysis, the operator shall apply best management practices when removing and managing materials from process and storm water ponds. These best management practices shall take into consideration the results of the laboratory analysis of pond materials.

**Status:** This revised recommendation was presented at the March 15, 2012 groundwater advisory committee meeting, however, a quorum was not present for action. This item will still be presented to the Board of Health for review, discussion and action at their March 28, 2012 meeting. This is being done to ensure that the Planning Department has adequate time to include these recommendations in any reports or documents moving forward. The GWAC is tentatively set to meet again on April 12, 2012. Should the GWAC make further changes to these recommendations, they will again be presented to the Board of Health for action.

Date: March 23, 2012
Prepared By: Courtenay Johnson, Director of Environmental Health
Ken Jain, Environmental Health Supervisor
Pending Action - Recommendation 3 - Monitoring Wells

Background: At the January 18, 2012 meeting, the GWAC reviewed information provided by staff regarding the issue of how and when to require monitoring wells at silica sand mining sites to assess groundwater depth and quality. The committee reviewed existing regulations, as well as business models noting that each site likely would have different requirements. Further, the committee discussed the need based on the fact that current groundwater maps are not accurate enough to determine exactly what groundwater depth and flow direction is at each site. The committee directed staff to continue to research this issue and provide a recommendation. At the February 16 meeting, the GWAC recommended a change to the recommendation to include third party involvement.

GWAC Action (2/16/12) - M: Fantle  S: Paddock  Carried 5-0-1

Proposed Recommendations:

3.1-
The Eau Claire County Reclamation Plan shall include mining site groundwater monitoring well placement and monitoring requirements. The groundwater monitoring plan shall be designed and implemented by an independent, credentialed, third party employing the skills of a professional with expertise in the area of hydrogeology and groundwater. Analysis of the monitoring well samples shall be conducted by a certified laboratory. Groundwater monitoring activities shall be at the expense of the operator.

3.2-
The Eau Claire County Stormwater Plan/Permit shall include processing plant site groundwater monitoring well placement and monitoring requirements based on identified processes which may be a source of groundwater contamination. The groundwater monitoring plan shall be designed and implemented by an independent, credentialed, third party employing the skills of a professional with expertise in the area of hydrogeology and groundwater. Analysis of the monitoring well samples shall be conducted by a certified laboratory. Groundwater monitoring activities shall be at the expense of the operator.

Status: This revised recommendation was presented at the March 15, 2012 groundwater advisory committee meeting, however, a quorum was not present for action. This item will still be presented to the Board of Health for review, discussion and action at their March 28, 2012 meeting. This is being done to ensure that the Planning Department has adequate time to include these recommendations in any reports or documents moving forward. The GWAC is tentatively set to meet again on April 12, 2012. Should the GWAC make further changes to these recommendations, they will again be presented to the Board of Health for action.
**Pending Action** - Recommendation 4 - Inspection and Testing of Private Wells

*Background:* At the January 18, 2012 meeting, the GWAC discussed the testing of private wells surrounding these mining sites. The committee agreed that there should be some criteria for requiring operators to offer testing and inspections of private wells to well owners surrounding the property, using a fixed distance. The committee reviewed current health standards and advisories regarding drinking and groundwater quality. At the February 16 meeting, the GWAC recommended changes regarding the language and requirements for the sampling and analysis of private wells.

GWAC Action (2/16/12) - M: Fantle  S: Paddock  Carried 6-0

**Proposed Recommendations:**
The Eau Claire County Reclamation Plan shall include a requirement that:

4.1-
The operator shall offer property owners with private wells within ½ mile of the disturbed mining site* an initial inspection and testing of these private wells, by an independent, credentialed, third party, at the expense of the operator to determine baseline data prior to any construction or disruption of the site. These samples must be analyzed by a certified laboratory.

4.2-
The operator shall offer property owners with private wells within ½ mile of the disturbed mining site* annual testing of these private wells, by an independent, credentialed, third party, at the expense of the operator to determine changes from baseline data prior to any construction or disruption of the site. These samples must be analyzed by a certified laboratory. Changes in baseline data shall be reviewed against the following impact parameters:

- Preventive Action Limit or Enforcement Standard is exceeded
- EPA or State Advisory Limit Exceeded
- Effect on quantity (includes interrupted and reduced flows)
- Changes in aesthetic qualities such as taste, color, and odor

Changes in quantity or aesthetic qualities may prompt more frequent testing of a private well.

*not limited exclusively to active mining activities
Status: This revised recommendation was presented at the March 15, 2012 groundwater advisory committee meeting, however, a quorum was not present for action. This item will still be presented to the Board of Health for review, discussion and action at their March 28, 2012 meeting. This is being done to ensure that the Planning Department has adequate time to include these recommendations in any reports or documents moving forward. At such time the groundwater advisory committee meets to discuss and take action on this item, it will be presented to the Board of Health as another action item, if changes are made by the groundwater committee.

Pending Action - Recommendation 5 - Drillhole Regulation

Background: At the January 18, 2012 meeting, drillholes (i.e. soil borings, exploratory borings) were identified as a potential “direct conduit” to groundwater if not properly abandoned. The key to this issue is how to enforce abandonment if it is unknown when and where these drillholes are being drilled. In the fact sheet, staff presented the recommendation that these drillholes may be locally regulated (e.g. permitting/licensing). This would provide a mechanism to know when and where these drillholes are being drilled, therefore helping to ensure they are properly abandoned. The committee directed staff to review and study the feasibility of amending County Code Chapter 8.12 to create an ordinance section permitting and/or licensing drillhole activities and abandonment.

The Health Department researched this issue and drafted an ordinance for review. At the February 16, 2012 meeting, the committee tabled this item for further review and discussion.

GWAC Action (2/16/12) - M to Table: Dunning  S: Fantle Carried 6-0

Status Update: The Health Department further researched the regulation of these drillholes in Minnesota and presented this information at the March 15, 2012 GWAC meeting. There wasn’t a quorum at the March 15 meeting and therefore this issue remains pending review, discussion, and decision by the groundwater advisory committee at their next meeting.

Pending Action - Groundwater Protection Ordinance 18.28

Background: Additionally, the Wisconsin Groundwater Law provides local jurisdictions with the authority to enact zoning rules which are protective of groundwater. When considering land use operations and activities and the impacts to groundwater, operators should be required to consider a site design that is protective of groundwater. The Eau Claire Planning Department has drafted groundwater protection language for inclusion in Chapter 18.28 (Mining) under General Operating Requirements (18.28.020 E. 11.).
Status: The Eau Claire County Planning Department requests that the Board of Health consider action to support this recommendation to further strengthen their position when questioned as to the need for a groundwater standard in the zoning code. This language will be reviewed as an action item by the Board of Health at the March 28, 2012 meeting.

**Pending Action** -- Blasting Letter to Towns

**Background:** At the January 18, 2012 GWAC meeting, blasting information was presented and discussed. Committee members felt that blasting best management practices and compliance with Wisconsin Administrative Code SPS 307 should ensure protection for residents from blasting activities. The Board supported and directed staff to review the recommendation that the County (or Towns) consider the adoption of a blasting ordinance. At the February 22, 2012 meeting, the committee took action in support the following recommendation:

**Recommendation**
Recommendation that towns adopt a local ordinance referencing Wisconsin Administrative Code SPS 307.

GWAC Action (2/16/12) - M: Fantle  S: Paddock  Carried 6-0

Status: A draft letter was presented at the March 15, 2012 GWAC meeting, however, no quorum was present to discuss and approve the letter.

**Pending Action** -- “Exploratory Boring” requirements with the submission of plans and information (application process)

**Background:** At the January 18, 2012 meeting, drillholes (i.e. soil borings, exploratory borings) were identified as a potential “direct conduit” to groundwater if not properly abandoned. Using discussion with the Health Department on the permitting issue, the Planning Department is proposing to include a requirement to submit this data with an application. This is an attempt to capture some of the borings taking place, although it won't address those that do not yield successful mines. The Planning Department felt that Board of Health action on these recommendations would strengthen their position for inclusion in any application materials, reports, permits, or other documentation as deemed appropriate.

**Proposed Recommendations:**

- Include in sec. 18.28.020:

  A map showing the location of the exploratory borings, including the GPS location of the borings, diameter of the borings, depth to groundwater observed, the geologic composition and depth and width of the nonmetallic mineral deposit.
• Include the following definition to sec. 18.02.020:
  “Exploratory Boring” means an excavation or opening deeper than it is wide that
  extends more than 10 feet below the ground surface for the purpose of obtaining
  information on the physical, chemical, radiological or biological characteristics of
  geological formations or depth to groundwater. This definition does not include
  drillholes regulated by NR 132 and 141.25.

Pending Discussion - - Mining into Groundwater

Background: At the January 18, 2012 meeting, the GWAC reviewed information regarding the
issue of mining into groundwater. At that meeting, the committee did not indicate staff to
further review this issue, as Eau Claire County has mines currently operating in the
groundwater table. At the February 16 meeting, the committee requested that staff further
explore and consider the issue of mining in the groundwater. Other County departments are
exploring this issue as well, however, the Health Department found the following:

• In Eau Claire, the majority of the desired material (i.e. “frac” sand) is located above the
  regional groundwater table. Mining in groundwater would not likely be an issue.

• If a decision is made to regulate, there would likely need to be a grandfather rule or
  recommendation for “exempted” sites to allow for work in groundwater at some of the
  existing locations.

• There are no reported incidents or records of contamination of groundwater due to
  mining operations within the groundwater table at the state level.

• Typically these mines are operating with flow into the excavation. Large water events
  (e.g. flooding) may cause changes in head pressure, causing temporary flow back into
  the groundwater table.

• Chemical or fuel spills – products that float on the surface may enter the groundwater
  through changes in head pressure as described above or through surface dispersal.

• Active dewatering (i.e. pumping) may affect groundwater flow patterns and elevation.
  Lowering of groundwater elevation may result in the potential to lower pH and mobilize
  metals (i.e. anaerobic conditions shift to aerobic conditions).

• The act of mining in the groundwater table may alter groundwater flow patterns, as it
  disrupts the normal groundwater flow patterns.

• County staff have discussed this issue internally and mines operating in the groundwater
  currently have groundwater flow to the river. There may be some criteria that could be
  developed based on groundwater flowing towards private wells.
Section 4 – Discussion Items without Recommendation/Action

Air Quality - -

Diesel Exhaust:

Diesel exhaust was presented as a health concern associated with the Silica Sand Mining industry, as many of the business models use diesel-powered equipment and trucks for operational and transportation purposes. It has been noted that trucking associated with transportation of mined material could be at a rate of one truck every 2 minutes. Diesel exhaust contains significant levels of small particles, known as fine particulate matter. Fine particles are so small that several thousand of them could fit on the period at the end of this sentence. Diesel engines are the third largest human-made source of fine particles.

Fine particles in the air are a serious public health problem. They pose a significant health risk because they can pass through the nose and throat and lodge themselves in the lungs. These fine particles can cause lung damage and premature death. They can also aggravate respiratory conditions such as asthma and bronchitis.

Diesel exhaust has been well-documented as a human health concern. Especially, people with existing heart or lung disease, asthma or other respiratory problems are most sensitive to the health effects of fine particles. The elderly and children are also at risk. Children are more sensitive to air pollution because they breathe at a faster rate than adults.

With respect to how diesel exhaust is regulated, diesel emissions from mobile sources (truck traffic) are accounted for in state-level air quality impact analysis through inclusion as background; mobile source emissions are already present in the ambient air. Background concentrations are then added to the total impact from the stationary source (facility) emission impacts to demonstrate attainment of the ambient air quality standards. Federal EPA regulations apply to diesel engine manufacturers for the minimization of diesel particulate or other types of emissions, and consequently those emissions are not regulated by WDNR.

Unfortunately, this process doesn’t account for future impacts to background levels associated with diesel emissions, it only accounts for current background levels. Diesel emissions remain a health concern, but due to the mobile nature of these sources, they are very difficult to regulate. The diesel engine design manufacturers and regulators of diesel exhaust designs must be relied upon to continue to improve engine design to limit human health impact.

Date: March 23, 2012
Prepared By: Courtenay Johnson, Director of Environmental Health
Ken Jain, Environmental Health Supervisor
High Capacity Wells:
The Wisconsin DNR presented on this topic to County staff and the GWAC on December 21, 2011. This issue was discussed at length and the DNR has sole authority over the application and approval process for High Capacity Wells. High Capacity Wells are those wells used along or in combination to produce greater than or equal to 70 gallons per minute (gpm) or 100,000 gallons per day (gpd).

The Board of Health did express concerns regarding at what point do these wells affect the groundwater and should we become concerned and whether or not a few mines versus several mines would have a greater impact. It was discussed that many of these sites, if internally drained, return most water used back into the aquifer (onsite infiltration). This minimizes the impact on water quantity in the aquifer. This system is different from how municipal or agricultural high capacity well water use impacts an aquifer. Municipal water systems pump water from the aquifer, run it through their distribution system, collect it in their sewer system, and discharge it to surface water.

Local regulations cannot be applied to High Capacity Wells. Though concerns were raised about their impact to private wells surrounding them, the WDNR and local jurisdictions have no authority to regulate high capacity wells separation distances from private wells.

Polyacrylamide:
The Groundwater Advisory Committee reviewed the issue of polyacrylamide use as a flocculant at their January 18, 2012 meeting. The Health Department prepared information regarding the use, testing methods, health standards, and degradation rates. The primary goal was to determine how the use of this chemical may impact groundwater quality.

These flocculants are being used by local municipal drinking water systems and they are regulated based on a minimum acrylamide ingredient value. When acrylamide is used in drinking water systems, the combination (or product) of dose and monomer level shall not exceed that equivalent to a polyacrylamide polymer containing 0.05% monomer dosed at 1 mg/L. This is the level required by the Wisconsin DOT for erosion control as well.

The Health Department’s research appears to demonstrate that polyacrylamide would degrade quickly enough such that it should not create a groundwater contamination issue. Should it make it to groundwater, the EPA has a “Health Advisory” for acrylamide. According to County Ordinance 8.12.080, if acrylamide was found in exceedence of the health advisory, the County could have enforcement authority under sec. 8.12.080 of County Ordinance, especially if the ordinance amendment to this section is approved and published into County Code.
Section 5 – Public Comments

Public Comment highlights from the 1/16/2012 Listening Session in Fall Creek where about 25 people spoke publicly on their viewpoints and concerns regarding the Eau Claire County sand mining issue:

- Land Use
  - Concern for future generations: Health & Safety and Natural Play Areas
  - Need for agriculture and increased food production
  - Zoning and Land Use Planning should mean something
  - What is the “ideal” landscape? Was it 150 years ago when there were only trees? Is it now when trees and landscape have been changed to allow farming? Will it be in 100 years, after the landscape has been changed more?

- Health and Environment
  - Air and Water concerns
    - WI has the highest % of silica in our soil
    - Uniroyal Employees treated for lung disease, let’s not repeat this
    - Create a Silica Standard in NR rules
    - Establish baseline data
  - The DNR has the expertise, the equipment and the experience to recognize the problems
  - Sand is the most innocuous of mined materials
  - Toxic Substances: Atrazine and DDT were OK at one time too; Dangerous substances are only dangerous when out-of-balance

- Moratorium
  - The County needs to stick with the moratorium
  - The County should consider extending the moratorium
  - The County is only trying to “delay” business with the moratorium

- Noise, Trucks and Traffic
  - Truck Noise (e.g. breaking)
  - Rail Noise (attaching cars)
  - Frequency of Traffic
  - Dangerous Traffic (e.g. recreational users, Amish, Farmers)
  - Impact on roads

- Costs and Taxes
  - Shouldn’t cause an effect to tax payers
  - Shift costs to companies
  - Create a wheel tax
  - Can we tax the sand leaving the state?
  - Has there been a cost-benefit analysis done on this topic?

- “Gray Snow” around the Chippewa Mining Sites (e.g. Cooks Valley)
- Nuisance dust (e.g. washing decks)
- Jobs: Our area needs these jobs; Are they really local jobs?
- Hours of Operation
- Regulations
  - What about smaller gravel pits, how are these regulations going to affect them?
  - Personal Property Rights with less regulation and restriction
  - Local towns should regulate and design the proper penalties for these operations and it can be done right
  - Local Developer’s Agreements need to be used for each sand mine
- Have we considered the “Big Picture”? What is the end use of this product and what role do we want to play in it?

Public Comment highlights from the 2/27/2012 Public Meeting in Augusta. Staff presented on their progress with respect to the moratorium and the public participated in a question and answer session:

- Land Valuation – who is protecting the value of affected properties?
- The County Board should Extend the Moratorium
  - The County needs to take the time to get it right
  - Silica Sand Mining may persist for 20-30 years, how is 3-4 months of dedicated research enough?
  - 3 months of research is essentially “immoral”
- LaCrosse Tribune, Dec. 13, 2011 quoting Ron Koshoshek (Town of Howard): property value declines as follows: ¼ mile (30%); ½ mile (20%); 1 mile (15%); and 5 miles (9%)
- Amish have limited access to computers/websites. How can we provide them with the public information? We should mail all of our information to the Amish.
- How do we stop this if we don’t want it?
- Public Notice:
  - Notice period should be 2 weeks with written notices being sent to all property owners within a ¼ mile.
  - 700 feet currently being used by the County is not sufficient
- Government transparency and accessibility needs work
- “Gasland” presentation on March 15, 2012 at UWEC Davies
- Lincoln County Land Use Plan – Silica Sand Mining is not Ag.
- Sand mining will bring jobs and money into this community. We need to also focus and study the benefits of sand mining.
Property owners have rights too. What is the county doing to ensure that property owners have the right to do what they chose with their land? Put it in writing that we will protect property owner rights.

Health and Environment
  o Are we going to require Environmental Impact Statements? Ladysmith copper mine for example.
  o Air Quality is a gaping hole. Why is ECC not regulating Crystalline Silica. The General Environmental Monitoring requirement is not good enough – it waits for the problem to happen instead of preventing it.
  o What can we do to get a standard for Crystalline Silica?
  o Dust
  o “Should Not” is not a guarantee or an assurance of Health
  o High Capacity wells and rivers running dry
    - Perrier Bottling Company example – driven out of the community due to negative impacts on the groundwater table, natural scenery, roads, and impact on living.
  o What is the county doing to protect private drinking wells?
  o Blasting and the impact to groundwater and private wells?
  o Blasting and fire dangers – will this burn down my tree farm?
Section 6 – Meetings Attended

- November 9, 2011 - County staff meeting with representatives of one industry proposing silica sand mining operations in Eau Claire County.
- November 14, 2011 - Health Department staff attended the Wisconsin Counties Association’s educational seminar entitled “Mining in Wisconsin: Issues Facing County Government” held in Stevens Point, WI.
- November 18, 2011 - Corporation Counsel pulled together a preliminary meeting to discuss next steps regarding the moratorium passed on November 16, 2011.
- December 1, 2011 - County staff attended the Wisconsin Towns association meeting titled “Frac Sand Mining in WI Towns – A One Day Conference”.
- December 8, 2011 - County staff reported on the status of research and fact-finding.
- December 8, 2011 - County staff attended the Bridge Creek Town meeting to present on regulatory status and answer any questions of the board members.
- December 14, 2011 - Board of Health meeting. Presentation by the Wisconsin DNR and County Planning Departments regarding land use and non-metallic mining operations.
- December 21, 2011 - The Health Department scheduled a joint meeting with DNR representatives and the Eau Claire County Groundwater Advisory Committee to discuss specific details regarding Frac Sand operations, permitting, enforcement, and best management practices.
- December 22, 2011 - County staff participated in a joint meeting with frac sand mining industry representatives and consultants from firms designing the mines and processing plants.
- January 6, 2012 - County staff meeting discuss the moratorium progress and updates, including ideas on potential code changes.
- January 9, 2012 - County staff met with another frac sand mining industry to discuss their proposal in Eau Claire County, their intended designs/processes, and any other questions from industry and staff regarding their proposal/site.
- January 10, 2012 - Health Department staff attended the joint meeting between the Committee on Administration and Planning & Development where the committees discussed the moratorium and proposed amendment to the moratorium.
- January 16, 2012 - Public Listening Session. Health Department staff attended and sat on the panel the Village of Fall Creek Hall to hear citizen comments about silica sand mining.
- January 18, 2012 - Groundwater Advisory meeting. Health Department staff presented their first fact-finding document regarding groundwater concerns possibly associated with silica sand mining. As well as items specifically requested by committee members at the December 21, 2010 meeting.
- January 25, 2012 - Board of Health meeting. Health Department staff presented their first fact-finding document regarding health issues (including the groundwater fact-finding report).
- January 30, 2012 - Health Department staff attended the Towns Association meeting, by request, at the Fairchild Town Hall to report on health-related directives and progress.
- February 27, 2012 - Public Meeting. Health Department staff presented on the Board of Health and Groundwater Advisory Committee progress and next steps regarding the moratorium.
- March 6, 2012 - County staff met to discuss mining into groundwater. This was a request for more information by the Groundwater Advisory Committee at their February 16, 2012 meeting.
- March 12, 2012 - County staff attended the Town of Lincoln town meeting to answer any questions they may have regarding ordinance recommendations made, to date, by the Board of Health and Groundwater Advisory Committee.
- March 15, 2012 - Groundwater Advisory meeting. Health Department staff presented updates on revisions to recommendations and additional directives as requested at the February 16 meeting. There was no quorum for action items.
Section 7 - Attachments

- Eau Claire County Board of Supervisors Fact Sheet 11/12.140

- Eau Claire County Groundwater Advisory Committee – Wellhead Protection Recommendation Letter

- Eau Claire City-County Board of Health – Wellhead Protection Letter in support of the Groundwater Advisory Committee’s recommendation

- Memo from Elizabeth Walton regarding: Passing a Resolution to write to the Wisconsin Natural Resources Board in support of the Citizen’s Rules Petition FOR THE PROMULGATION OF RULES TO GOVERN RESPIRABLE CRYSSTALLINE SILICA EMISSIONS

- Eau Claire City-County Board of Health – Letter to the U.S. E.P.A. regarding the Promulgation of Rules to Govern Exposure to Respirable Crystalline Silica

Date: March 23, 2012
Prepared By: Courtenay Johnson, Director of Environmental Health
Ken Jain, Environmental Health Supervisor
FACT SHEET

TO FILE NO. 11-12/140

The code language amendments and changes to the county sanitary code are being proposed in response to Health Department staff researching the issue of Silica Sand Mining in Eau Claire County in response to the Eau Claire County Non-Metallic Mining Moratorium.

Health Department staff attempted to use and/or strengthen existing codes and regulations, wherever possible to address potential health and safety issues that may arise from Silica Sand Mining, but not exclusively limited to this industry. All of the amendments were approved by the Groundwater Advisory Committee on February 16, 2012 (wherever appropriate) and the Board of Health on February 22, 2012. The votes from each board are indicated.

SECTION 1.
Ordinance 1.16.040. The Health Department and the Planning and Development Department support creation of a countywide ordinance for the assessment of re-inspection fees for ordinance violation re-inspections.

February 22, 2012 – Board of Health Vote
M: Spencer; S: Wachs; Carried 5-0

SECTION 2.
Ordinance 1.50.020. The Board of Health recommends that 1.50.020 - Schedule of Deposits, be revised to reflect the proposed ordinance changes and penalty values associated with them.

February 22, 2012 – Board of Health Vote
M: Wachs; S: Price; Carried 5-0

SECTIONS 3 AND 6.
1. Deforestation/Burning of vegetation for site clearing is locally enforced through adoption of the DNR codes. Enforcement using this method is possible, however it does create some issues. A local ordinance addressing this issue is a much more efficient mechanism for the enforcement of site-clearing open-burning violations.
2. The Board included a prohibition of stump burning, as stumps create a significant amount of air pollution due to their size and surface area. There are other methods available aside from burning, which include chipping and grinding.

February 22, 2012 – Board of Health Vote
M: Price; S: Wachs; Carried 5-0

SECTION 4.
Ordinance 8.04.025 B. The Board of Health is recommending an update to this section to reflect statute changes.

February 22, 2012 – Board of Health Vote
M: Wachs; S: Murray; Carried 6-0
SECTION 5.
Ordinance 8.04.025 C.
1. The Board of Health supports the recommendations to create an ordinance section to allow for environmental monitoring or sampling as determined by the professional discretion and expertise of the health department.
2. This offers another opportunity to gather data regarding a potential health and safety issue, which offers a benefit to both the community and an operator, as it is an avenue to help prove or disprove contamination or pollution events and sources.

February 22, 2012 – Board of Health Vote
M: Wachs; S: Murray; Carried 6-0

SECTION 7.
Ordinance 8.12.020 B. The Board of Health is recommending an update to this section to reflect statute changes.

February 22, 2012 – Board of Health Vote
M: Wachs; S: Murray; Carried 6-0

SECTION 8.
Ordinance 8.12.020 C.
1. The Groundwater Advisory Committee and Board of Health support the recommendation to create an ordinance section to allow for environmental monitoring or sampling as determined by the professional discretion and expertise of the Health Department.
2. This offers another opportunity to gather data regarding a potential health and safety issue, which offers a benefit to both the community and an operator, as it is an avenue to help prove or disprove contamination or pollution events and sources.

February 16, 2012 – Groundwater Advisory Committee Vote
M: Fantle; S: Dunning; Carried 5-1
February 22, 2012 – Board of Health Vote
M: Wachs; S: Murray; Carried 6-0

SECTION 9.
Ordinance 8.12.030.
1. The Groundwater Advisory Committee was supportive of amending 8.12.030 to adopt rules, regulations, and state statutes pertaining to hazardous wastes and hazardous materials.
2. This section is also being amended to reflect code reference changes from the former Department of Commerce to the Department of Safety and Professional Services.

February 16, 2012 – Groundwater Advisory Committee Vote
M: Merritt; S: Paddock; Carried 6-0
February 22, 2012 – Board of Health Vote
M: Price; S: Wachs; Carried 6-0

SECTION 10.
Ordinance 8.12.070 A. and B.
1. The Groundwater Advisory Committee was supportive of amending 8.12.070 A. to include a reference to 8.12.080 (Groundwater Contamination Prevention). This will strengthen the
enforcement link between use of hazardous substances and groundwater contamination.

2. 8.12.070 B. is being amended to fix typographical/grammatical errors.

February 16, 2012 – Groundwater Advisory Committee Vote
M: Merritt; S: Paddock; Carried 6-0
February 22, 2012 – Board of Health Vote
M: Price; S: Wachs; Carried 6-0

SECTIONS 11 – 13.
Ordinance 8.12.075 A, and E. The Board of Health supports the recommendations to rename and create language to address “nuisances” that do not rise to the level of a human health hazard using ordinance language that focuses on health and safety nuisance issues.

SECTION 14.
Ordinance 8.12.080.

1. The Groundwater Advisory Committee and the Board of Health are recommending this be amended to reflect NR 809 as the new state code number for NR 109.
2. The Groundwater Advisory Committee and Board of Health are recommending changes to this ordinance to address activities which are unlawful or negligent and result in groundwater becoming unfit for consumption, contaminated, or unpalatable.

February 16, 2012 – Groundwater Advisory Committee Vote
M: Fantle; S: Dunning; Carried 6-0
February 22, 2012 – Board of Health Vote
M: Price; S: Wachs; Carried 5-0

SECTION 15.
Ordinance 9.44.040.

1. The Board of Health supports the drafting of a noise ordinance that offers protection against excessive noises that are unreasonably generated on a property.
2. Decibel levels are left out of the ordinance, as there are normal business practices that may exceed a decibel level. Setting a decibel level may conflict with operator constitutional rights to operate a business legally and lawfully.
3. The draft noise ordinance language offers protection for both the community and business operators. This language has been tested in a Dane County Court and was upheld.

February 22, 2012 – Board of Health Vote
M: Wachs; S: Spencer; Carried 5-0

Respectfully Submitted,

Courtenay E. Johnson, MS, RS
Director of Environmental Health

CJ/jb

ORDINANCE/11-12.140.Fact
- TO CREATE SECTION 1.16.040 OF THE CODE; TO AMEND SECTION 1.50.020
OF THE CODE; TO CREATE SECTION 8.04.020 F. OF THE CODE; TO AMEND SECTION
8.04.025 B. OF THE CODE; TO CREATE SECTION 8.04.025 C. OF THE CODE; TO AMEND SECTION
8.04.035 B. OF THE CODE; TO AMEND SECTION 8.12.020 B. OF THE
CODE; TO CREATE SECTION 8.12.020 C. OF THE CODE; TO AMEND SECTION 8.12.030
OF THE CODE; TO AMEND SECTION 8.12.070 A. AND B. OF THE CODE; TO AMEND
THE TITLE OF 8.12.075 OF THE CODE; TO AMEND SECTION 8.12.075 A. OF THE
CODE; TO CREATE SECTION 8.12.075 E. OF THE CODE; TO AMEND SECTION 8.12.080
OF THE CODE; TO CREATE SECTION 9.44.040 C. OF THE CODE.

The County Board of Supervisors of the County of Eau Claire does ordain as follows:

SECTION 1. That Section 1.16.040 of the code be created to read:

1.16.040 Enforcement—Orders—Inspections.
A. Enforcement order. Whenever any officer or official designated under 1.50.030
determines a violation of this code exists, that person may, in addition to any
other available enforcement options, issue a written order directing that all
violations shall be corrected within the period of time specified.

B. Failure to comply—Re-inspection fee. Any person who shall fail or neglect to
comply with any such lawful order issued pursuant to this section for any
violation of this code shall be assessed a $100 fee for each compliance re-
inspection performed in excess of two.

SECTION 2. That Section 1.50.020 of the code be amended to read:

1.50.020 Schedule of Deposits

<table>
<thead>
<tr>
<th>ORDINANCE</th>
<th>OFFENSE</th>
<th>DEPOSIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.04.030</td>
<td>Air pollution</td>
<td>200.00</td>
</tr>
<tr>
<td>8.04.035</td>
<td>Site-clearing, open burning</td>
<td>2,000.00</td>
</tr>
<tr>
<td>8.04.040</td>
<td>Department of Natural Resources rules adopted</td>
<td>1,000.00</td>
</tr>
<tr>
<td>8.12.070</td>
<td>Hazardous substance-control</td>
<td>2,000.00</td>
</tr>
<tr>
<td>8.12.075</td>
<td>Human health hazards and public nuisances</td>
<td>300.00</td>
</tr>
<tr>
<td>8.12.080</td>
<td>Groundwater contamination</td>
<td>2,000.00</td>
</tr>
</tbody>
</table>

SECTION 3. That subsection F. of Section 8.04.020 of the code be created to read:

F. "Site-clearing open burning" is the burning of uprooted or cleared vegetation,
excluding stumps, in connection with the construction of buildings; residential,
commercial, or industrial development; mining activities; or initial clearing of
vegetation to enhance property value. It does not include routine maintenance or
property cleanup activities.
SECTION 4. That subsection B. of Section 8.04.025 of the code be amended to read:

B. No person may interfere with the health department director or an authorized representative in the performance of his or her duties. Any person interfering shall be in violation of this ordinance and subject to penalty as provided by this ordinance. If consent to enter property for inspection purposes is denied, the health department director or his or her duly authorized representative may obtain a special inspection warrant under Wis. Stat. §§66.122 and 66.123.66.0119.

SECTION 5. That subsection C. of Section 8.04.025 of the code be created to read:

C. Environmental Monitoring. The health department shall have the right to set up or require installation on any property such devices as are necessary in the opinion of the health department for the purpose of evaluating the threat to public health. Environmental monitoring for contamination, containment, clean up and restoration activities may be necessary to determine compliance with this ordinance. Monitoring and/or sampling equipment shall be maintained, at all times, in a safe and proper operating condition. The health department may recover expenses associated with enforcement of this ordinance, including sampling and monitoring. Any costs incurred shall be the responsibility of the violator/property owner from which the violations originated.

SECTION 6. That Section 8.04.035 of the code be created to read:

8.04.035 Site-clearing open burning.
Site-clearing open burning shall be conducted in a safe manner and does not cause air pollution as defined in 8.04.020 B. Stumps shall not be burned, but rather disposed of in another manner such as chipping or grinding. Smoldering or the creation of dense black or noxious smoke is prohibited.

SECTION 7. That subsection B. of Section 8.12.020 of the code be amended to read:

B. No person may interfere with the health department director or an authorized representative in the performance of his or her duties. Any person interfering shall be in violation of this ordinance and subject to penalty as provided by this ordinance. If consent to enter property for inspection purposes is denied, the health department director or his or her duly authorized representative may obtain a special inspection warrant under Wis. Stat. §§66.122 and 66.123.66.0119.

SECTION 8. That subsection C. of Section 8.12.020 of the code be created to read:

C. Environmental Monitoring. The health department shall have the right to set up or require installation on any property such devices as are necessary in the opinion of the health department for the purpose of evaluating the threat to public health. Environmental monitoring for contamination, containment, clean up and restoration
activities may be necessary to determine compliance with this ordinance. Monitoring
and/or sampling equipment shall be maintained, at all times, in a safe and proper
operating condition. The health department may recover expenses associated with
enforcement of this ordinance, including sampling and monitoring. Any costs
incurred shall be the responsibility of the violator/property owner from which the
violations originated.

SECTION 9. That Section 8.12.030 of the code be amended to read:

8.12.030 Regulations, rules and laws adopted by reference
The applicable laws, rules, regulations set forth in Wis. Stat. chs. 101, 144, 145, 146, 168,
251.05, 251.06, and 254, 289, 291, 292, and 299, NR chs. 102, NR105, NR 110, NR 113, NR
140, NR 141, NR 149, NR 150, NR 157, NR 500-555, NR 600-666, NR 668, NR 670, NR 673,
NR 679, NR 809, NR 812, NR 113, NR 140, NR 845, and SPS chs. 310, 348, NR 500-555,
Comm 381, Comm 382, Comm 383, Comm 384, Comm 385, Comm 387 and Comm 391, are
incorporated in this chapter by reference and they shall be construed, read and interpreted as
though fully set forth herein. The express provisions of this chapter shall control where more
restrictive except with respect to rules promulgated under Wis. Stat. ch. 145.

SECTION 10. That subsections A. and B. of Section 8.12.070 of the code be amended
to read:

8.12.070 Hazardous Substance – control
A. It is unlawful for any person to store, use, transport, or dispose of any hazardous
substance in such quantity or manner that it is, or has, the potential to create a
human health hazard or causes groundwater contamination per 8.12.080.
B. It is unlawful to use or dispose of a hazardous substance or product other than as
the label or labeling directs or as required by applicable federal, state, and local
rules and regulations.

SECTION 11. That the title of Section 8.12.075 of the code be amended to read:

8.12.075 Human health hazards and public nuisances.

SECTION 12. That subsection A. of Section 8.12.075 of the code be amended to read:

A. No person shall erect, construct, cause, continue, maintain, or permit any human
health hazard within the county. Any person who shall cause, create or maintain a
human health hazard or who shall in any way aid or contribute to the causing,
creating or maintenance thereof shall be liable for all costs and expenses for
removal and correction of such a human health hazard and to the penalty provided
in 8.12.270.

A. Human health hazard is defined in 8.12.005. More specifically but not limited by
enumeration the following are considered human health hazards.
SECTION 13. That subsection E. of Section 8.12.075 be created to read:

E. Public nuisances. No person shall erect, contrive, cause, continue, maintain or permit to exist any public health nuisance in the county. A public nuisance shall be defined as any thing, act, use or condition or a building or land that interferes substantially with the comfortable enjoyment of life, health or safety of another person or the public. Public nuisance shall include, but not be limited to:
   1. Any use that causes the air to become noxious or offensive as defined in Chapter 8.04.
   2. Any use that unduly promotes the breeding of flies, mosquitoes, or other insects or creates a harborage or breeding place for rodents or other animals.
   3. Noises disturbing the public peace as specified in 9.44.040.
   4. Infestation of ‘pests of public health significance’ such as, but not limited to, bed bugs and bird mites.
   5. Continuous violations of Title 8.

SECTION 14. That Section 8.12.080 of the code be amended to read:

It is unlawful for any person to utilize in any manner, including but not limited to disposal, processing, application, and storage, of any material which contains hazardous substances and/or biological substance(s) that would cause groundwater to be unpalatable or unfit for human consumption. These substances include but are not limited to the chemical or biological substances listed in NR 4809 and NR 140, as well as other compounds for which state or federal health advisory limits have been issued.

SECTION 15. That Section 9.44.040 of the code be created to read:

9.44.040 Prohibition of excessive noise disturbing the public peace.
A. Excessive noise shall mean any sound or level of sound of sufficient loudness that it tends unreasonably to disturb the peace, comfort, quiet or repose of persons in the vicinity of the noise including, but not limited to, any such noise produced in the operation or use of any radio, phonograph, tape or disc player, television or other mechanical or electrical device, machine or motor vehicle.
B. No person shall cause or participate in the production of any excessive noise, and no owner, user, occupier or other person having charge of any property within Eau Claire County may cause, suffer, permit or participate in the production of excessive noise.
C. This section shall apply in all areas of Eau Claire County except in those municipalities, which have an ordinance on the same subject matter.
D. This section shall not be deemed to prohibit any noise or sound which is:
1 (1) necessary for the preservation of property or of the health, safety, life or limb
2 of any person; or
3 (2) otherwise required or permitted by law; or
4 (3) produced as a necessary result of the reasonable operation of any activity
5 otherwise regulated by law; or
6 (4) produced as a result of any agricultural activity.
7
8 ENACTED:
9
10
11
12
13
14
15
16
17
18 Committee on Groundwater Advisory
19 KRZ/jb
20
21 Dated this _____ day of ________________, 2012.
22
23 ORDINANCE/11-12.140
COUNTY OF EAU CLAIRE
EAU CLAIRE, WISCONSIN

GROUNDWATER ADVISORY COMMITTEE

December 21, 2011

To Whom It May Concern:

The Eau Claire County Board of Supervisors passed a moratorium on the expansion and creation of new non-metallic mining operations within Eau Claire County on November 16, 2011. The moratorium directed the department of planning and development, the highway department, and the Eau Claire City-County Health Department to study and analyze the impact of silica sand mining and shall make final recommendations to their respective governing committees, the land conservation commission and the county board of supervisors.

The Eau Claire County Groundwater Advisory Committee (GWAC) was formed by Eau Claire County as an advisory committee to the department on planning and development for administrative purposes. Serving this role, the GWAC completed the Eau Claire County Groundwater Management Plan in December 1994. The committee was charged to study and address potential and existing groundwater quality problems in Eau Claire County. This plan outlines the GWAC's study of the use and need for Well Protection Zones. Additionally, the plan provides recommendations to Eau Claire County for the creation and management of Wellhead protection plans.

Eau Claire County and municipalities adopted local ordinances and created wellhead protection plans beginning in 2002. This was seen as a significant accomplishment in the protection of municipal drinking water supplies and Eau Claire County groundwater.

In response to the moratorium directive, upon further review of existing ordinances the Health and Planning Departments have brought to our attention Chapter 18.55 of Eau Claire County Code, specifically addressing Wellhead Protection. It is our understanding that each municipality served by a municipal water supply has adopted a wellhead protection plan and ordinance. These plans and ordinances clearly identify and lay out the recharge areas for each municipal well. County Ordinance Sec. 18.55.050 references “Zones” and prohibited uses by zone. These zones and prohibited uses within recharge areas are specifically and scientifically outlined to protect a municipal water supply from any type of contamination.
The issue identified by the Health and Planning Departments indicate that municipal ordinances adopt the County’s ordinance (Chapter 18.55) by reference, but have not specifically requested the County to create “Groundwater Protection Overlay Districts”, per Sec. 18.55.040. These districts would give the County the authority to oversee and enforce Chapter 18.55 in the unincorporated areas of Eau Claire County that lie within the recharge area of a municipal water supply (Sec. 18.55.020). To date, County Planning does not appear to have any municipal requests to create these districts.

Without the creation of these districts, your municipal water supply may be in jeopardy from the operation of prohibited land use practices within your recharge zones. Please be advised that the moratorium is set to expire May 31, 2012, however, Eau Claire County is aggressively reviewing and studying this manner in an attempt to minimize the length of the moratorium, rather than taking it out to the fullest extent possible.

It is advised for the protection of Eau Claire County groundwater and municipal drinking water supplies that your municipality’s governing body adopt a resolution requesting that Eau Claire County form an overlay district for your municipal recharge area. This resolution should include reference to and a copy of your municipal recharge areas. Should such resolution already exist, contact the Eau Claire County Planning & Development Department to discuss this matter and proceed with the request. You may contact Rod Eslinger at 715-839-4741 for more information.

Sincerely,

Pete Marsnik, Chair
Eau Claire County Groundwater Advisory Committee

cc: Rod Eslinger, Eau Claire County Planning & Development Department
    Courtenay Johnson, Eau Claire City-County Health Department
    Kelly Jacobs, Eau Claire County Land Conservation Department
Eau Claire City-County Board of Health

Eau Claire City-County Health Department
Eau Claire, WI

January 30, 2012

To Whom It May Concern:

The Eau Claire City-County Board of Health is charged with several powers and duties, not only those established by the City and County of Eau Claire, but also by the State of Wisconsin. Some of those key powers and duties are:

- "Assess public health needs and advocate for the provision of reasonable and necessary public health services"
- "Assure that measures are taken to provide an environment in which individuals can be healthy"

In response to the Eau Claire County Non-Metallic Mining Moratorium, the Health Department was charged with the review and assessment of health-related issues. As a result of research into this issue, the municipal water supplies were reviewed for potential impacts. Your municipality received a letter from the Eau Claire County Groundwater Advisory Committee dated December 20, 2011. The purpose of that letter was to advise your municipality of the need to formally request via your governing body, the creation of "Zones" and "Overlay Districts" to protect the recharge area of your municipal water supply, per County Ordinance Sec. 18.55.040

The Board of Health fully supports the letter issued by the Groundwater Advisory Committee and strongly urges your municipality to request the development of protection zones and overlay districts to protect your municipal, public drinking water supply.

Please be advised that the moratorium is set to expire May 31, 2012, and Eau Claire County is aggressively reviewing and studying this matter in an attempt to minimize the length of the moratorium, rather than taking it out to the fullest extent possible.
Be advised that to help protect your municipal drinking water supply, the Board of Health recommends that your municipality’s governing body adopt a resolution, which includes the municipal recharge maps, and request that Eau Claire County form an overlay district for your municipal recharge area.

Sincerely,

John Paddock, President
Eau Claire City-County Board of Health
Eau Claire County

Further support by:

Dan Walters, Chair
Land Conservation Commission

cc: Rod Eslinger, Eau Claire County Planning & Development Department
Courtenay Johnson, Eau Claire City-County Health Department
Kelly Jacobs, Eau Claire County Land Conservation Division
Eau Claire City-County Board of Health Members (all)
FROM: Elizabeth Walton  
2621 Keith St.  
Eau Claire, WI 54701  
PH: 715-830-1183

TO: The Eau Claire City-County Board of Health

RE: Passing a Resolution to write to the Wisconsin Natural Resources Board in support of the Citizen’s Rules Petition: FOR THE PROMULGATION OF RULES TO GOVERN RESPIRABLE CRYSTALLINE SILICA EMISSIONS

DATE: January 25, 2012

Dear Members of the Eau Claire City-County Board of Health

I would like to urge the Board of Health to write to the Wisconsin Natural Resources Board in support of the recently filed citizen’s petition for rule making to govern respirable crystalline silica emissions. The Chippewa County Board of Health recently resolved to do this in the interest of protecting the health of their citizens.

I encourage the Board of Health to carefully study this Rules Petition, which you received from Chippewa County. * This Petition answers the uncertainties the Eau Claire Board of Health expressed in their statement to Chippewa County's Board of Health.

I have inserted my comments, and page references for data from the Rules Petition IN BOLD that will clarify some of the uncertainties expressed in your statement to Chippewa County copied below. I hope this will persuade you to support the Rules Petition that is before the Natural Resources Board.

From the statement sent by the Eau Claire City-County Board of Health to the Chippewa County Board of Health;

"We had considerable discussion this week in our regular Board of Health meeting on all things sand mine related. WDNR and county land development staff visited us. Our Board of Health is not currently considering passing a resolution to request the state list crystalline silica as a carcinogen and to establish monitoring or a standard."

Rules Petition, page 11: Crystalline Silica is ALREADY listed as a carcinogen by the International Agency for Research on Cancer (IARC) and by the National Toxicology Program. The confirmation from these agencies that a substance IS carcinogenic is a requirement for any substance to be defined and subsequently listed as a Hazardous Air Pollutant by the DNR. The Rules Petition is asking that respirable crystalline silica (RCS) be listed as a Hazardous Air Pollutant (HAP). Listing as a HAP is a necessary step before regulations for it can be established.

"It is too early in our current county moratorium timeline to say whether the county board will consider doing so. Our review to date of multiple silica study documents, including the most recent silica study completed by the DNR, demonstrates the significant difficulty that any community will have with attempting to establish a monitoring program and a standard."

Yes, I agree that communities will have difficulty establishing their own standard or monitoring requirements if there is NOT a state DNR standard with monitoring requirement for emissions of this toxic substance.

* The RULES PETITION may be found at many websites by simply entering the search term, “Crystalline Silica Rules Petition.”
"There are many methods that can be used for testing for silica in monitoring samples, but there is no generally accepted approved standard method for testing."

Rules Petition, page 20: "...silica monitoring has been done for decades in mining operations using private labs as well as the Wisconsin Occupational Health Laboratory. The lack of a standard reference method for monitoring has not prevented DNR from regulating asbestos, cyanide, and dioxin, among many other typically occupational substances."

"Most studies indicate that successful control of silica can be achieved through PM monitoring programs, fugitive dust control plans, and air permits.

Rules Petition, pages 23 and 24: These pages establish how and why current Particulate Matter standards, PM monitoring, fugitive dust control plans and air permits are inadequate to protect the public from exposure to the more highly toxic respirable crystalline silica and that there are currently no standards or alternative strategies protecting the public from silica exposure in Wisconsin.

"But control through monitoring will be difficult to achieve just via Ambient Air Monitoring approaches because they may not be representative of an operating plant or mine due to distance, geography, and other factors. Baseline monitoring would seem to need to be done ahead of any planned mine/plant before construction even began so that normally occurring background levels were understood. Neither the Board of Health or county board here have reached the point of establishing a monitoring program or considering a resolution in support of establishing one or asking that silica be listed as a carcinogen.

- Eau Claire County"

Rules Petition, page 21: "...... the Silica Study provides background levels of RCS that could be used as a baseline for determining the contribution of mining sources:

"Wisconsin has some data for elemental silicon from PM2.5 sampling associated with the National Air Toxics Trends Sites (NATTS). Monitoring is conducted at three sites, none of which is near a known silica source. The data from these sites reflect general ambient air concentrations at: 1) a rural background site (Mayville); 2) an urban site (Milwaukee); and 3) a suburban site (Waukesha). The elemental silicon concentration was converted to an equivalent concentration of silicon dioxide (SiO2) with the assumption that 100% of the SiO2 was quartz. This is a conservative estimate of crystalline silica from the monitoring data. The average estimated crystalline silica concentrations were: Milwaukee 0.14 ug/m3; Waukesha 0.32 ug/m3; and Mayville 0.10 ug/m3."

Using the Mayville data as representative of background levels of RCS in rural communities combined with upwind and downwind monitors would allow a method of determining RCS contributions from mining sources."

I hope that upon your thorough study of the Rules Petition you will also consider protecting the health, safety and welfare of Eau Claire County residents through support of the petition. Any letter of support should be sent to the NATURAL RESOURCES BOARD, not to the DNR directly, since it is the Natural Resources Board that must first consider this petition:

Thank you for your consideration of my request and for the time you are devoting to protecting the health of Eau Claire county residents.

Sincerely,

Elizabeth Walton
February 22, 2012

Ms. Gina McCarthy
Assistant Administrator
Office of Air and Radiation
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 6101A
Washington, DC 20460

RE: Promulgation of Rules to Govern Exposure to Respirable Crystalline Silica

Dear Ms. McCarthy,

The Eau Claire City-County Board of Health requests that your office conduct a review of the hazards to public health and the environment represented by respirable crystalline silica, a known human carcinogen, that is generated through industrial sand mining activity in much of Western Wisconsin. We ask you to consider adding the respirable crystalline silica fraction of PM$_{10}$ to the national ambient air quality standards.

Recently, the Wisconsin Department of Natural Resources (DNR) denied a citizen’s petition to establish RCS as a hazardous air pollutant and to develop monitoring rules and an emission standard, citing time, resources, and statutory obstacles as the basis for the denial. The DNR has also stated that the absence of a federal regulatory requirement to monitor and enforce a specific RCS emission standard makes it highly unlikely that Wisconsin would unilaterally establish such a requirement. Establishing an emission standard at the federal level would greatly facilitate state DNR adoption of the same standard for Wisconsin.

The Clean Air Act requires EPA to set national ambient air quality standards (NAAQS) for particulate matter and five other pollutants considered harmful to public health and the environment (the other pollutants are ozone, nitrogen oxides, carbon monoxide, sulfur dioxide and lead). The law also requires EPA to periodically review the standards to ensure that they provide adequate health and environmental protection, and to update those standards as necessary.

Although crystalline silica is widely used in industry and has long been recognized as a major occupational hazard, capable of causing disability and deaths among workers in several industries, it has now become become a huge public concern in our state and community with respect to nonoccupational or ambient silica exposure.
RE: Promulgation of Rules to Govern Exposure to Respirable Crystalline Silica

We are aware of EPA’s previous health issue assessment on crystalline and amorphous silica\(^1\), and we understand that ambient emissions of silica rarely are estimated or measured in air pollution studies of particulate matter. However, it is important that the science be sufficiently developed to the point where monitoring of ambient air and relating the fraction of silica exposure can be directly linked to known human health effects in the general population.

Thank you for protecting public health and the environment. We will appreciate a response from your office to our request.

Sincerely,

\[ \text{John Paddock, President} \\
\text{Eau Claire City-County Board of Health} \]

\[ \text{cc:} \\
\text{Mr. Gregg Moore, Chair, Eau Claire County Board of Supervisors} \\
\text{Secretary Cathy Stepp, Wisconsin DNR} \\
\text{U.S. Senator Ron Johnson} \\
\text{U.S. Senator Herb Kohl} \\
\text{U.S. Representative Ron Kind} \\
\text{Wisconsin Western Region Health Officers} \]

---

\(^1\) United States Office of Research and EPA/600/R-95/115, Environmental Protection Development November 1996
Agency Washington, DC 20460, EPA Ambient Levels and Noncancer Health Effects of Inhaled Crystalline and Amorphous Silica: Health Issue Assessment [http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=12999#Download](http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=12999#Download)