

PLANNING COMMISSION

AGENDA ITEM: 4. Sand Processing & Transportation Facilities CUP Amendment

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Summary

At the last Planning Commission meeting, there were numerous questions and requests related to the CUP proposal for sand processing and transportation facilities. This agenda item is intended to answer those questions, and provide an updated CUP ordinance proposal for review. This agenda item refers to the “original” and “revised” CUP proposals. The original proposal was presented at the last Planning Commission meeting. The revised proposal includes the following:

1. An additional requirement clarifying adherence to state regulations for dust generation.
2. An additional requirement for a fugitive dust control plan.
3. An additional requirement clarifying that a CUP applicant must “obtain” and provide all applicable state permits to the City.
4. An additional CUP provision requiring truck washing equipment and/or tracking pads to reduce the potential for sand and debris to be tracked onto city roads.
5. A requirement for full cut-off style lighting or shielding to help prevent glare and light pollution.

When reviewing the revised CUP proposal, it’s important to keep in mind the different regulatory roles of the state and City governments related to sand processing and transportation project review. Basically, the state sets regulations for air, water, and environmental review while cities typically set regulations for zoning, nuisances, and site plan review. Thus, in terms of air, water, and environmental review, the expertise and regulatory framework for such topics lies mainly with state agencies such as the MPCA and DNR. Staff’s intent with the proposed amendments is to utilize existing state regulations where appropriate so that oversight is not duplicated at the local level.

A summary of the state environmental regulations that typically apply to sand mining and processing operations is included in Attachment B: *Environmental Management at Aggregate Operations*. In addition to this summary, the MPCA has recently created a new page on their website with information on state regulations related to frac sand mining.¹

¹ <http://www.pca.state.mn.us/index.php/air/air-quality-and-pollutants/air-pollutants/frac-sand-mining.html>

Questions and Answers

What about dust/air quality?

Regulations

As presented in staff's report to Council, the best approach to addressing dust/air quality may be to ensure compliance with existing state regulations as summarized in Attachment B. This is because processing in Winona takes place while the sand is wet, and any fully dry sand is required to be covered per industry requirements (thus greatly reducing potential dust/Particulate Matter risks to the public).

The state (Minnesota Pollution Control Agency) typically requires permits for facilities that have the potential for releasing particulates from stacks/equipment in excess of 25 tons per year (see Attachment C). This would include any sand drying operations that are proposed (e.g. Mikrut's proposal at 25 McConnon Drive). If a permit is issued, the dust requirements generally apply to other activities as well (See Attachment D pg. 3). Air permits are not typically required for sand washing, transportation, and storage of sand. However, under Minnesota Rule 7011.0150:

No person shall cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne. All persons shall take reasonable precautions to prevent the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate. The Commissioner may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne including, but not limited to, paving or frequent clearing of roads, driveways, and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover.

Also, Minnesota Rule 7009.0020 states that:

No person shall emit any pollutant in such an amount or in such a manner as to cause or contribute to a violation of any ambient air quality standard beyond such person's property line, provided however, that in the event the general public has access to the person's property or portion thereof, the ambient air quality standards shall apply in those locations. The general public shall not include employees, trespassers, or other categories of people who have been directly authorized by the property owner to enter or remain on the property for a limited period of time and for a specific purpose.

These rules apply to all facilities, all businesses, and all people throughout the state – including existing operations (see Attachment E). In accordance, the original CUP proposal added the following sentence to the general performance standards for air pollution:

“All activities shall comply with applicable state law, rules and local ordinances for Particulate Matter generation, and any stockpiles (including sand and dirt) which produce windblown dust shall be covered.”

The revised CUP proposal adds “dust” to the sentence above and stipulates that “A fugitive dust control plan may be required detailing dust control measures both on-site and off-site.” Also, the revised CUP proposal adds to the specific conditions that “Any applicable state or federal permits shall be obtained.” As a result, the City will require applicants for a sand processing or transportation CUP to demonstrate compliance with particulate matter and dust rules (i.e. show how dust will be controlled on-site and not escape onto adjacent property) through a fugitive dust control plan, and provide the City with any air permits required by the state. If the Board of Adjustment is not satisfied with the response, they may request that the applicant hire a specialist to provide additional detail about dust mitigation and compliance with existing state regulations.

Regulating the potential for dust generation through a site by site CUP process is optimal because unique on-site and off-site characteristics of each operation can be considered. This allows a dust suppression plan to be “customized” for each application and entered into public record.

Monitoring

Monitoring for general violations of visible dust is completed by staff. Basically, if an operation is producing visible dust that settles onto adjacent properties, staff contacts the violator and works to eliminate the issue. For example, staff is currently working with the 370 West Second Street sand operation to reduce the dust and debris that is being tracked onto Second Street.

Monitoring for sites that have air permits is completed by the MPCA. The monitoring entails monthly reports submitted by the operator to the MPCA. Noncompliance with permit requirements may result in enforcement action from the MPCA.

Regular monitoring of existing facilities without air permits (e.g. sand processing and transportation) does not occur. However, if a facility is violating the state rules discussed above, a complaint may be filed with the MPCA. When a complaint is filed, the MPCA contacts the operator to inquire about the operation and what dust control measures are being employed. Next, depending on the characteristics of the operation, additional enforcement steps are taken as appropriate.

Air monitoring for proposed sites without air permits may be required as part of the Conditional Use Permit process. As such, Particulate Matter monitoring would be

conducted by the operator per MPCA standards. The results would be sent to the city and submitted to the MPCA for review. A violation of the state limits may result in enforcement action by the MPCA.

What about noise?

Regulations

The original CUP proposal added “missing” zoning districts to the noise ordinance. This means noise from sand operations would be regulated just like every other land use or industry in Winona. Accordingly, more noise may be made in industrial and agricultural districts, but as soon as a boundary is crossed into a residential zoning district, the permitted noise level drops – especially after 10 p.m.

As proposed in the original CUP proposal, adding “noise” to the CUP review process will require the applicant to demonstrate how they will comply with these standards depending on the unique situation of each proposal.

Monitoring

City staff monitors for noise violations in accordance with MPCA protocol. If an operation is exceeding the requirements for a zoning district, staff will contact the violator and work to reduce the noise that is being created. One important consideration is that the measurements for noise have difficulty picking up brief intermittent noises such as back up alarms on industrial equipment. That is why staff proposes specifically addressing back up alarms in proposed limits on hours of operation.

What about water quality?

Regulations

Water quality concerns center on groundwater, surfacewater, and water runoff. When it comes to water used in the processing of frac sand, the MPCA has stated, “Based on our current understanding of frac sand mining operations, we do not anticipate specific or unique environmental or health risks that are not already addressed through the current water permitting processes.” This means that permits may be required for construction storm water, industrial stormwater and other water discharges, and/or water withdrawals (see Attachment B).

As stated previously, the revised CUP proposal adds to the specific conditions that “*Any applicable state or federal permits shall be obtained.*” As a result, applicants for a CUP would have to demonstrate how they will comply with water permitting requirements.

Monitoring

Upon receipt of an application, the City will communicate with the MPCA to ensure the agency is aware of the pending project and all applicable permits are obtained.

What about frac sand mining?

The proposed CUP does not address mining in Winona because there is already a CUP review requirement for these uses. Questions about the operation of the existing Biesanz Quarry are beyond the scope of this agenda item and should be addressed separately.

Can the definition of expansion include increases in capacity/intensity?

The definition of expansion may address intensity increases. However, the issue with determining intensity increases is enforcement and monitoring. For example, how is an "increase" measured – daily, monthly, yearly? And does a taller pile of sand necessarily mean that intensity has increased? To the extent that expansion of nonconformities is an issue, it would be more straightforward for staff to monitor and enforce the three expansion criteria stated at the previous meeting: 1) Addition of new equipment, 2) Increase in land area of use, and 3) Expansion onto a new site. In this manner, intensity increases could be addressed through the addition of new equipment provision. If an existing nonconforming use adds new equipment that increases its capacity to move sand - that would qualify as an expansion and require the operation to apply for a CUP.

Can the Board of Adjustment be allowed 3-6 months to respond to CUP requests?

The Board cannot automatically be permitted to spend 3-6 months responding to CUP requests because of the "60 day rule" in Minnesota. In accordance with the rule, a City may extend the review period to 120 days upon good reason and documented notice to the applicant. After 120 days the applicant must agree to a continued extension.

Can the hours of operation be more stringent than 7 a.m. to 10 p.m.?

The hours of operation may be more stringent. The hours in the original CUP proposal are based on decibel thresholds for residential areas in the noise ordinance. However, if the Commission would like to recommend more stringent hours, it should consider applying the stricter hours only to truck traffic and machinery with backup alarms (thus addressing off-site impacts and common noises that don't register in noise measurements). This would allow sand operations, like other industries in Winona, to operate during nighttime hours as long as noise thresholds are maintained.

What would be required for screening?

Screening may consist of landscaping (e.g. berms, trees) and solid board fencing as needed to mitigate visual impacts of operations on adjacent properties. What will be required is highly dependent on the site and situation of each sand operation. Thus it is hard to stipulate exact requirements that would apply to all projects.

What would be required for lighting?

Lighting is typically addressed through the site plan review process. According to city ordinance, lighting in M-2 zoning district may not produce glare (shine directly) on adjacent residentially zoned properties. Requiring full cut-off style lighting/fixtures where possible would help reduce the potential for glare on adjacent properties. This is a lighting characteristic that would be beneficial to all projects in the city. Thus the following is proposed to be added to the site plan ordinance:

(7) General Site Lighting. Lights should be directed towards structures or areas to be illuminated. Site lighting shall employ full cut-off style lights, lighting shields or fixtures as appropriate to keep glare on-site and minimize glare onto adjacent properties. The design and placement of lighting fixtures shall not have an adverse effect upon abutting properties.

Are the proposed CUP conditions part of existing City Code?

The proposed CUP conditions for sand operations are not part of the existing city code. Staff may address the conditions through the site plan process before a project begins or retroactively if there is a violation of the City ordinance. Requiring the proposed CUP conditions as part of the review process by the Board of Adjustment means the applicant will have to address the regulations up front, and the regulations are part of a permit to operate. Violation of the conditions is grounds for revocation of the CUP. Without the CUP, a facility may not operate – this gives the City significantly more leverage in enforcing compliance.

How is a conditional use permit enforced?

Compliance with a Conditional Use Permit is monitored and enforced by city staff. Violation of the conditions will cause staff to contact the operator and work to ensure compliance. If there is not substantial compliance with conditions, a CUP may be revoked so long as the revocation is based on factual evidence and proceeded by appropriate notice and hearing.

What about chemicals in settling ponds?

If a project proposes to use chemicals (e.g. flocculants) in settling ponds, they must be approved by the MPCA. Current sand washing operations in the Winona area do not

use flocculants. Staff will work with future project applicants to ensure they obtain the correct water permits as discussed previously.

What about environmental review?

Environmental review through an EAW (Environmental Assessment Worksheet) or EIS (Environmental Impact Statement) is not required for sand washing or transportation facilities. Environmental review can only be ordered for new projects (ones that aren't already in operation) or for projects that propose an expansion. An EAW may be prepared at the discretion of the City if it is determined that a project will have significant environmental effects. An EAW for a specific project may also be initiated through citizen petition. The petition must provide the following:

- A description of the proposed project.
- Identification of the project proposer. (*Note: petitioners must also notify the proposer in writing that they have filed a petition with the EQB*)
- Identification of a representative for petitioners, including mailing address and telephone number.
- A brief description of the project's potential environmental effects, including an explanation of how unusual or unique characteristics of the project or its location create a need for an EAW even though no mandatory threshold is exceeded.
- Material evidence of potential for significant environmental effects because of the project's nature or location.
- Signatures of at least 25 individuals, with no restriction on location of residence, age or any other factor. *Signers must provide a complete mailing address.*

The petition must then be filed with the Environmental Quality Board and it is up to the City of Winona to determine the need for an EAW. If environment review were required for new sand processing and transportation facilities, it would occur in addition to the CUP review process.

What about watering frequency for stockpiles?

It would be difficult to stipulate a watering frequency for stockpiles because of changes in weather and season and the differences among operations (e.g. sites with "raw" sand stockpiles versus sites with wet washed sand stockpiles). Simply requiring that stockpiles must be watered regularly to prevent wind erosion makes it very easy for staff to enforce this provision – if dust or sand can be seen blowing off the stockpiles – the operation is in violation of the condition.

What about the bridge? Will it deteriorate in two years?

The Winona County Engineer's recent report analyzed impacts to a low-traffic, rural county road built for 110,529 ESALs (Equivalent Single Axle Loads) and an ADT (Average Daily Traffic) count of 500. Winona's interstate bridge is designed according to different parameters (structural capacity versus road wear). Therefore, the County

Engineer's report cannot be used to estimate the life span of the bridge. The appropriate agency for questions related to the interstate bridge is Mn/DOT. The agency is fully aware of the increased truck traffic over the bridge.

What about the potential for “additional requirements?” What would the additional requirements be?

The additional requirements section would allow the Board of Adjustment to impose additional conditions related to the City's health, safety, and welfare. Additional conditions must be reasonable, related to the impacts of the proposed use, and be roughly proportional to the impacts of the proposed use. Although this provision may raise questions, additional requirements may be part of any Conditional Use Permit. According to the League of Minnesota Cities:

Reasonable conditions relating to the ordinance standards may be attached to a CUP based upon factual evidence contained in public record. For example, if a zoning ordinance provides that a conditional use should not have adverse visual or noise impacts on any adjacent property, a city might require specific screening and landscaping conditions to address any potential impacts established in the record.

Thus, additional conditions may include requirements for traffic impact analysis, additional air monitoring, additional noise restrictions, etc. Basically, this provision serves as a catchall which allows the City to appropriately address the unique characteristics of a proposed project.

Updated Ordinance Description

As a result of the previous meeting, the following highlighted changes/updates are proposed for the draft ordinance.

General Conditions

The proposed amendments require the following uses to obtain a CUP in an M-2 zoning district:

- 39) *Sand processing facilities, including sand washing and drying facilities.*
- 40) *Transportation facilities used to ship sand, except for dredged material (e.g. river sand) from the Mississippi River.*

These uses would be reviewed in accordance with the following performance standards listed in City Code Section 43.33 (see Attachment F):

- 1) Fire and explosion hazard
- 2) Radioactivity or electric disturbance

- 3) Noise (*In accordance with and measured at locations stated in Chapter 39 (see Attachment E)*)
- 4) Vibration
- 5) Smoke
- 6) Odors
- 7) Fly Ash, dust, fumes, vapors, gases, and other forms of air pollution
- 8) Glare
- 9) Liquid or solid waste
- 10) *Additional requirements – The City of Winona reserves the right to impose additional conditions to, within and upon issuance of a Conditional Use Permit as it deems necessary or appropriate to protect the health, safety, morals, and general welfare of the public.*

The amendments add number 10) above to the performance standards – it does not currently exist. Also, the proposed amendments add the following sentence to existing wording in number 7) above: *All activities shall comply with applicable state law, rules and local ordinances for dust and Particulate Matter generation, and any stockpiles (including sand and dirt) which produce windblown dust shall be covered. A fugitive dust control plan may be required detailing dust control measures both on-site and off-site.* Finally, the proposed amendments also add noise (number three) to the general performance standard review.

The procedure for review of these performance standards is detailed in City Code Section 43.30 (Attachment G). Basically, the applicant for a CUP must demonstrate to the Board how the project as proposed will comply with each applicable performance standard. As mentioned previously, the Board may request that a specialist be hired (at the cost of the applicant) to provide additional information.

Specific CUP Conditions

In addition to compliance with the general conditions, sand processing and transportation facilities would be required to comply with the following specific conditions. Staff has highlighted proposed additions to the original CUP proposal below. If an applicant cannot fully comply with a condition, a variance may be requested:

- 1) *Hard Surfacing – Asphalt or concrete surfacing shall be required in any truck or equipment maneuvering area.*

This condition is included because the amount of on-site truck traffic has the potential to create dust that travels to adjacent properties. This issue has been observed at some existing frac sand operations.

- 2) *Truck Washing Equipment and/or Tracking Pads – Truck washing equipment or tracking pads, or a combination of both, shall be required at each facility.*

The condition is added to help reduce the amount of sand and debris that is tracked out of sand operation by trucks.

- 3) Truck Route Designation – All trucks entering and leaving such facilities shall enter and exit Winona on designated truck routes. Such routes shall avoid residentially zoned property to the greatest extent possible.

This condition is included so that trucks avoid residential areas and for the City of Winona to have designated routes on record.

- 4) Stockpile Covering – Stockpiles undisturbed for more than one week shall be covered.

This condition is included to help prevent the potential for windblown dust from undisturbed stockpiles.

- 5) Stockpile Watering – Uncovered stockpiles shall be watered regularly to prevent surface areas from drying out and becoming susceptible to wind erosion.

This condition is included to help prevent the potential for windblown dust from uncovered stockpiles and the potential for particulate matter generation (see report to Council for a discussion on particulate matter).

- 6) Hours of Operation – Hours of operation shall be limited to 7 a.m. – 10 p.m.

This condition is included to limit the impact of sand operations on residential areas. The hours are based on decibel limits for “day” and “night” in residential zones according to the noise ordinance (see below). Staff’s intent with this condition is to eliminate the potential for noise issues from truck traffic and vehicles/machinery (especially those with back-up alarms) after 10 p.m. As such, the Commission should discuss allowing equipment (e.g. dryers, screeners, etc.) and machinery without back up alarms to operate after 10 p.m. provided noise ordinance requirements are met.

- 7) Landscaping and Screening – Sufficient landscaping and screening, including but not limited to fences, walls and/or vegetative screens, as approved by the City of Winona, shall be provided to mitigate visual impacts of operations on adjacent properties.

This condition is included to help improve the aesthetics of projects as appropriate.

- 8) Contact Information – Facility operators shall provide current contact information to the City of Winona to facilitate prompt response to concerns.

- 9) *Permits and Reports **Obtained and Placed** on File* – Any applicable state or federal permits shall **be obtained and** placed on file at the City of Winona. Any reports generated to fulfill permit requirements shall be submitted to the City of Winona.

Conditions 8) and 9) are included to facilitate prompt response to complaints or concerns and ensure required state permits are obtained.

Noise Pollution Ordinance (Chapter 39):

Additional zones - The A-G, RMHP, R-S, R-R, and R-1.5 zoning districts shall be added to the noise ordinance.

These zones have been unintentionally left out of the noise ordinance. The proposed amendments add these zones as follows:

<u>Zoning District</u>	<u>Day (7 a.m. - 10 p.m.)</u>		<u>Night (10 p.m. - 7 a.m.)</u>	
	L ₅₀	L ₁₀	L ₅₀	L ₁₀
RMHP, R-S, R-R, R-1.5	60	65	50	55
R-1, R-2, R-3, C-1	60	65	50	55
B-1, B-2, B-3	65	70	65	70
B-2.5, M-1, M-2, <u>A-G</u>	75	80	75	80

Site Plan Ordinance (Section 44.06 c):

(7) General Site Lighting. Lights should be directed towards structures or areas to be illuminated. Site lighting shall employ full cut-off style lights, lighting shields or fixtures as appropriate to keep glare on-site and minimize glare onto adjacent properties. The design and placement of lighting fixtures shall not have an adverse effect upon abutting properties.

Next Steps

Staff requests the Planning Commission review the proposed amendments and the additions to them. At the end of discussion, a formal recommendation may be made. Staff will bring such recommendation to the City Council as part of a public hearing.

Attachments:

- A) Draft Ordinance
- B) MPCA: Environmental Management at Aggregate Operations
- C) MPCA: Facts About Air Quality Permit Rules
- D) MPCA: Facts About Odors, Noise, and Dust for Local Governments
- E) MPCA: Facts about General Air Quality Rules
- F) Performance Standards
- G) Performance Standards Review Procedure

AN ORDINANCE
TO AMEND THE CITY CODE
OF THE CITY OF WINONA, MINNESOTA
1979

The City of Winona does ordain:

Section 1. That Section 39.03 of the City Code of Winona, Minnesota, 1979, which section is entitled "Source Requirements" and pertains to Noise Pollution, be amended as follows:

"39.03 SOURCE REQUIREMENTS. (a) The source sound level requirements of this section shall apply at the property or zoning lines of the sound receiving unit. Measurements may be made at any location in zoning districts for evaluation purposes and to aid in the enforcement of other sections of this chapter.

(b) The source sound levels as stated below in subsection (c) shall be the highest source levels permitted in each zoning district.

(c) Source requirements: Ord. No. 3788 4/6/09

Zoning District	Day (7 a.m. - 10 p.m.)		Night (10 p.m. - 7 a.m.)	
	L ₅₀	L ₁₀	L ₅₀	L ₁₀
RMHP, R-S, R-R, R-1.5	60	65	50	55
R-1, R-2, R-3, C-1	60	65	50	55
B-1, B-2, B-3	65	70	65	70
B-2.5, M-1, M-2, <u>A-G</u>	75	80	75	80

(d) Sound levels resulting from travel of motor vehicles on state and county highways are exempt from these noise source requirements but not other sections of this chapter relating to motor vehicles operated in other areas. It is the intent of the city to reduce highway noise in the various land areas surrounding highways to or below the source requirements of this section when and wherever possible.

(e) All sound levels originating in any development or property which contains one or more buildings and which is without property lines for each building shall not exceed the source requirements for the applicable zoning district measured at the area of human activity, or if this is ill-defined, at any point on a line, all of whose points are equidistant from any two buildings."

Section 2. That paragraph (e) of Section 43.33 of said Code, which section sets forth Performance Standards for land and building use in the City, be amended as follows:

“(e) Performance Standards, Regulations. The following provisions, standards and specifications shall apply:

- (1) Fire and explosion hazard. All activities involving and all storage of inflammable and explosive materials shall be provided at any point with adequate safety devices against the hazard of fire and explosion and adequate firefighting and fire suppression equipment and devices standards in the industry. Burning of waste materials in open fire shall be prohibited at any point. The relevant provisions of state and local laws and regulations shall also apply.
- (2) Radioactivity or electric disturbance. No activities shall be permitted which emit dangerous radioactivity at any point or electrical disturbance adversely affecting the operation at any point of any equipment other than that of the creator of such disturbance.
- (3) Noise. In accordance with and measured at locations stated in Chapter 39.
- (4) Vibration. No vibration shall be permitted which is discernible without instruments at the points of measurement specified in subsection (d) above.
- (5) Smoke. No emission shall be permitted at any point, from any chimney or otherwise, of visible gray smoke of a shade equal to or darker than No. 2 of the Power's Micro-Ringlemann Chart, published by McGraw-Hill Publishing Company, Inc., and copyright 1954 (being a direct facsimile reduction of the standard Ringlemann Chart as issued by the United States Bureau of Mines), except that visible gray smoke of a shade equal to No. 2 on said Chart may be emitted for 4 minutes in any 30 minutes. These provisions applicable to visible gray smoke shall also apply to visible smoke of different color but with an apparently equivalent capacity.
- (6) Odors. No emission shall be permitted of odorous gases or

other odorous matter in such quantities as to be offensive at the points of measurement specified in subsection (d) above. Any process which may involve the creation or emission of any odors shall be provided with a secondary safeguard system, so that control will be maintained if the primary safeguard system should fail. There is hereby established as a guide in determining such quantities of offensive odors Table III, "Odor Thresholds," in Chapter 5 "Air Pollution Abatement Manual," copyright 1951 by Manufacturing Chemists' Assn., Inc., Washington, D.C.

- (7) Fly ash, dust, fumes, vapors, gases, and other forms of air pollution. No emission shall be permitted which can cause any damage to health, to animals, vegetation or other forms of property, or which can cause any excessive soiling, at any point; and in no event any emission, from any chimney or otherwise, of any solid or liquid particles in concentrations exceeding 3/10 grains per cubic foot of the conveying gas at any point. For measurement of the amount of particles in gases resulting from combustion, standard corrections shall be applied to a stack temperature of 500 degrees Fahrenheit and 50 percent excess air. All activities shall comply with applicable state law, rules and local ordinances for dust and Particulate Matter generation, and any stockpiles (including sand and dirt) which produce windblown dust shall be covered. A fugitive dust control plan may be required detailing dust control measures both on-site and off-site.
- (8) Glare. No direct or sky-reflected glare, whether from floodlights or from high-temperature processes, such as combustion, welding or otherwise, so as to be visible at the points of measurement specified in subsection (d) above. This restriction shall not apply to signs otherwise permitted by the provisions of this chapter.
- (9) Liquid or solid wastes. No discharge at any point into any public sewer, private sewage disposal system or stream or into the ground, except in accord with standards approved by the department of health of the state or standards equivalent to those approved by such department for similar uses of any materials of such nature or temperature as can contaminate any water supply or otherwise cause the emission of dangerous or offensive elements.

- (10) Additional Requirements. The City of Winona reserves the right to impose additional conditions to, within and upon the issuance of a Conditional Use Permit as it deems necessary or appropriate to protect the health, safety, morals and general welfare of the public.”

Section 3. That paragraph (b) of Section 43.63 of said Code, which paragraph sets forth Conditional Uses in an M-2 Zoning District, be amended as follows:

“43.63 (b) Conditional Uses. The following manufacturing uses shall be permitted in the M-2 district only if specifically authorized by the board in accordance with the provisions of Section 43.30; provided, that such uses can control the generation of any dangerous or offensive elements in their operation, so as to comply with the performance standards in Section 43.33 and subject to review in accordance with the performance standards procedure in Section 43.30 in all instances.

- (1) Acetylene manufacturing in excess of 15 pounds pressure per square inch.
- (2) Acid manufacture, except as provided in this section.
- (3) Asbestos manufacture.
- (4) Automobile assembly.
- (5) Bleaching, cleaning and dyeing plant.
- (6) Boiler shops, structural steel fabricating shops, railway car or locomotive shops, including repair metal working shops employing reciprocating hammers or presses over 20 tons rated capacity.
- (7) Distilling of liquors.
- (8) Brick, pottery, tile and terra cotta manufacturing.
- (9) Bulk station.
- (10) Candle or sperm oil manufacturing.
- (11) Cooperage works.
- (12) Dextrine, starch or glucose manufacturing.
- (13) Disinfectant, insecticide or poison manufacturing.
- (14) Enameling, lacquering or Japanizing, varnishing.
- (15) Emery cloth or sandpaper manufacturing.
- (16) Felt manufacturing.
- (17) Flour or grain mill.
- (18) Forge or foundry works.
- (19) Grain drying or poultry feed manufacturing, from refuse, mash or grain.
- (20) Hair or hair products manufacturing.
- (21) Lime or lime products manufacturing.
- (22) Linoleum, oil cloth or oiled goods manufacturing.
- (23) Match manufacturing.
- (24) Meat packing, stockyards or slaughterhouses must comply with the requirements of distance from other districts, as set out in this section.

- (25) Paper and pulp manufacturing.
- (26) Perfume manufacturing.
- (27) Pickle, sauerkraut or sausage manufacturing.
- (28) Plaster manufacturing.
- (29) Poultry slaughterhouse, including packing and storage for wholesale.
- (30) Printing ink manufacturing.
- (31) Radium extraction.
- (32) Sandblasting or cutting.
- (33) Sawmill, the manufacture of excelsior, wood fiber sawdust products.
- (34) Sewage disposal plant.
- (35) Shoddy manufacturing.
- (36) Shoe blacking or polish or stove polish manufacturing.
- (37) Steam power plant, except where accessory to a permitted principal use.
- (38) Slag piles.
- (39) Sand processing facilities, including sand washing and drying facilities.

In addition to the general performance standards set forth in Section 43.33, sand processing facilities shall also comply with the following specific conditions:

- a. Hard Surfacing. Asphalt or concrete surfacing shall be required in any truck or equipment maneuvering area.
- b. Truck Washing Equipment and/or Tracking Pads. Truck washing equipment or tracking pads, or a combination of both, shall be required at each facility.
- c. Truck Route Designation. All trucks entering and leaving such facilities shall enter and exit Winona on designated truck routes. Such routes shall avoid residentially zoned property to the greatest extent possible.
- d. Stockpile Covering. Stockpiles undisturbed for more than one week shall be covered.
- e. Stockpile Watering. Uncovered stockpiles shall be watered regularly to prevent surface areas from drying out and becoming susceptible to wind erosion.
- f. Hours of Operation. Hours of operation shall be limited to 7 a.m. – 10 p.m.
- g. Landscaping and Screening. Sufficient landscaping and screening, including but not limited to fences, walls and/or vegetative screens, as approved by the City of Winona, shall be provided to mitigate visual impacts of operation on adjacent properties.
- h. Contact Information. Facility operators shall provide current contact information to the City of Winona to facilitate response to concerns.
- i. Permits and Reports Obtained and Placed on File. Any applicable state or federal permits shall be obtained and placed on file with the City of Winona. Any reports generated to fulfill permit requirements shall be submitted to the City of Winona.

(40) Transportation facilities used to ship sand, except for dredged material (e.g. river sand) from the Mississippi River. In addition to the general performance standards set forth in Section 43.33, transportation facilities used to ship sand shall also comply with the specific conditions set forth under 43.63 (b) (39) above.

The provisions of this section shall also apply to any other use which, in the opinion of the zoning inspector or board, is of a similar character with respect to the emission of dangerous or offensive elements to the uses listed above.”

Section 4. That paragraph (c) of Section 44.06 of said Code, which section sets forth Principles of Design for Site Plans, be amended by adding thereto the following:

“(7) General Site Lighting. Lights should be directed towards the structures or areas to be illuminated. Site lighting shall employ full cut-off style lights, lighting shields or fixtures as appropriate to keep glare on-site and minimize glare onto adjacent properties. The design and placement of lighting fixtures shall not have an adverse effect upon abutting properties.”

Section 5. That this ordinance shall take effect upon its publication.

Dated this _____ day of _____, 2012.

Mayor

Attested By:

City Clerk



Environmental Management at Aggregate Operations

Waste water permits #3.01, 9/04

- Aggregate production is an important Minnesota industry, producing sand, gravel and crushed stone for construction projects and other uses throughout the state.
- The Minnesota aggregate industry recognizes the economic and public relations benefits of progressive environmental management.

This fact sheet summarizes pollution prevention opportunities and Minnesota Pollution Control Agency (MPCA) permitting requirements for aggregate operations. Some general information about permit programs administered by other agencies is also provided.

Environmental Review

If a new pit or quarry is started, or an existing one is expanded by 40 acres or more, and the pit will have a mean depth of at least 10 feet during its existence, the project needs to have an Environmental Assessment Worksheet prepared. If the new pit or expansion will cover at least 160 acres, mined to a mean depth of 10 feet or more, an Environmental Impact Statement is needed. For more information on this process, contact the Environmental Quality Board at (651) 296-8253, or visit their Web site at:

<http://www.eqb.state.mn.us/review.html>

Construction Storm Water

Construction storm water runoff at a new pit or quarry may require a construction storm water permit for the initial construction phases of operation. Construction activities, such as building roads, berms, containment devices, and grading at a new pit or quarry that involves one or more acres, may trigger the requirement to obtain a construction storm water permit, and to stabilize these initial disruptions before terminating the permit.

For more information on Construction Storm Water requirements and the publications available to help you comply, contact the MPCA Customer Assistance Center (CAC) or Small Business Assistance

Program (SBAP), or visit our Web site at: <http://www.pca.state.mn.us/water/stormwater/stormwater-c.html>

Industrial Storm Water and other Water Discharges

The aggregate industry deals with water throughout the construction season. To excavate gravel or rock, the water table may need to be lowered. Washing of sand, gravel or crushed stone may be needed to ensure it meets product specifications.

The following activities at aggregate operations require a water quality permit from the MPCA:

- Sand and gravel washing discharges that leave the mine or quarry pit, whether by gravity flow or pumping.

Often, operators can recycle their wash water and/or allow it to infiltrate the pit floor, and avoid the need for wash water overflows and other discharges. This may change their requirement to have a permit.

- Pumping or siphoning out a mine or quarry pit to create a dewatering discharge.

Good sump management to prevent accumulation of dirty water is important, particularly in quarry pits. Sometimes pit water can be reused in the plant, or for road dust control.

- The generation of wastewater by air emission control systems, particularly from the wet scrubbers used at some hot mix asphalt plants.

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- The discharge of any other water from the site.
- Storm water runoff from mine and quarry stockpiles and pit walls, as well as from equipment like rock crushers, hot mix asphalt, and concrete production plants.

A site with runoff needs to have a Pollution Prevention Plan implemented for the operations at that particular site. Good management practices such as vegetative buffers, detention ponds, covered bulk containers and hazardous material storage areas, as well as the skillful placement of stockpiles and equipment, can greatly improve storm water management and erosion control at aggregate sites.

To apply for Water Quality permit coverage for aggregate operations, use the “Water Quality Transmittal Form” and “Attachment for Construction Sand & Gravel, Rock Quarrying and Hot Mix Asphalt Production Facilities” attachment form. For more information on Water Quality permits and requirements, contact the CAC or SBAP, or visit our Web site at:
<http://www.pca.state.mn.us/water/permits/sandgravel.html>.

Fuel and Hazardous Materials Management

When equipment is refueled, maintained or repaired outside the shops, special care must be taken to prevent spills, and to quickly contain and collect accidental spills. The employees at each site should be trained under a spill control plan. Used oil, lubricants, antifreeze, paint, solvents, vehicle cleaning wastes, recovered freon, asbestos, PCBs and shop wastes should be properly contained, stored, and recycled or disposed of in compliance with MPCA requirements.

For more information on Hazardous Waste requirements and the publications available to help you comply, contact the CAC or SBAP, or visit our Web site at:
<http://www.pca.state.mn.us/waste/pubs/business.html>

Liquid (including fuel) storage tanks, whether aboveground or underground, need to have effective containment and may need to be approved by the MPCA.

For more information on tanks requirements and the publications available to help you comply, contact the

CAC or SBAP, or visit our Web site at:
<http://www.pca.state.mn.us/cleanup/tanks.html>

Air Quality Management

All facilities must meet minimum standards for dust and noise control. Facilities with crushing operations may have to meet additional federal standards for emissions of particulates from processing equipment. It is important to control dust throughout the facility, including at crushers, screens, conveyors and hoppers. Due to potential air quality problems, materials containing asbestos (which is generally found in old buildings, and has been used in older roads and concrete materials) must not be crushed.

The use of fuels, other volatile chemicals, and/or generators may also dictate additional air quality requirements. Depending on production capacity and processing equipment, an Air Emission Permit may be required.

For more information on Air Quality requirements and the publications available to help you comply, contact the CAC or SBAP, or visit our Web site at:
<http://www.pca.state.mn.us/air/pubs/index.html>

Solid Waste Management

Some aggregate operations store used asphalt and/or concrete, captured particulate emissions, or other demolition debris. The MPCA encourages recycling of these materials, and of scrap and trash materials, when possible. If this is not practical, used pavement must be disposed of in an approved sanitary or demolition debris landfill.

For more information on Solid Waste requirements and the publications available to help you comply, visit our Web site at:
<http://www.pca.state.mn.us/waste/pubs/solidwaste.html>, or call the MPCA at (651) 297-6300 or (800) 657-3864 to be connected to solid waste staff for your regional area.

Water Withdrawals

Surface or ground water withdrawals (such as for dewatering, washing, makeup water for scrubbers, roadbed preparation, dust control, irrigation) of more than ten thousand gallons/day or one million gallons/year require a DNR water appropriation permit. Re-use of dewatering and wash water is encouraged and may help eliminate the



need for a permit or reduce DNR water use fees. A DNR water appropriation permit is not required if the water is taken from a municipal or other source of water for which there is a valid appropriation permit.

For more information on water use permits, contact the Department of Natural Resources at (651) 297-2835, or visit their web site at: http://www.dnr.state.mn.us/waters/watermgmt_section/appropriations/index.html

Riprap and Discharge Outlets

Riprap installation for outflows to public waters does not require a DNR permit if installed according to the following requirements:

- a. The riprap consists of natural rock only.
- b. The riprap is sized according to the guidelines in practice 6.18 of the MPCA publication "Protecting water quality in urban areas". This publication is available on-line at: <http://www.pca.state.mn.us/water/pubs/sw-bmpmanual.html>
- c. The riprap conforms to the natural alignment of the shore or stream bank.
- d. No excavation occurs below the top of the stream bank or the ordinary high water level of a basin or wetland.
- e. The materials are placed less than 5 feet water ward of the ordinary high water mark.
- f. The minimum finished slope is no steeper than 3 feet horizontal to 1 foot vertical (3:1).
- g. No bank shaping or back sloping is required to achieve the 3:1 slope.
- h. The materials do not obstruct receiving water flow.
- i. The discharge is not directly to Lake Superior, DNR-designated trout waters, or a posted fish spawning area.

Trout waters are designated in Minn. R. 6264.0050, subp. 2 and 4; this list may be obtained from the DNR by calling (651) 296-3325. DNR Trout waters are also available on-line in the 'Special Waters Search' at <http://www.pca.state.mn.us/water/stormwater/stormwater-c.html> Information on DNR protected waters permits is available from the DNR at (651) 296-4800.

US Army Corps of Engineers

Activities that involve the discharge of dredged or fill material or excavation within waters and wetlands may require approval of the Corps of Engineers. Such activities

could include the construction of access roads or the creation of storage areas and building sites.

Also, activities related to the construction of pit dewatering outfall structures and the excavation of water detention/retention ponds within waters and wetlands may require Corps approval.

For more information on Corps of Engineers requirements, contact the St. Paul District Office at (651) 290-5375, or visit their web site at: <http://www.mvp.usace.army.mil/environment/>

Additional Information

If you have questions or would like more information, contact:

Environmental Quality Board

Environmental Review Process (651) 296-8253

Minnesota Pollution Control Agency

Customer Assistance Center (CAC) (651) 297-2274 or
..... (800) 646-6247

Small Business Assistance Program (SBAP)* (651) 282-6143 or
(800) 657-3938

- Construction Storm Water
- Industrial Storm Water
- Waste Water Permitting
- Storage Tanks
- Hazardous Waste Management
- Air Quality

Solid Waste Questions or Issues (651) 296-6300 or
..... (800) 657-3864

*Note that businesses with fewer than 100 employees company-wide can call our Small Business Assistance Program for free, nonregulatory, confidential environmental assistance.

Minnesota Department of Natural Resources

Water Use Permits (651) 297-2835
Protected Waters Permits (651) 296-4800
Trout Waters Information (651) 296-3325

US Army Corps of Engineers

Dredge, fill or excavation to waters/wetlands . (651) 290-5375



Minnesota
Pollution
Control
Agency

Facts About Air Quality Permit Rules

Air Quality #4.03 • July 2010

The permit rules in Minn. R. ch. 7007 affect a large number of facilities in Minnesota, and provide for several types of permits, depending upon a facility's emissions and needs. A facility may be able to receive a "registration permit" if its actual emissions of air pollutants are low. "General permits" are available for some types of facilities that have similar operations. Other facilities require individual permits tailored specifically to their facility.

- The registration permits allow facilities to submit much less detailed permit application forms. Four options are available, as follows:
 1. Option A: A facility needs a permit solely because a certain New Source Performance Stand applies.
 2. Option B: A facility purchases or uses less than 2,000 gallons of volatile organic compound containing materials in any given 12 months and has no other emissions.
 3. Option C: A facility has emissions only from boilers, internal combustion engines and volatile organic compound containing materials (or a combination of these emissions).
 4. Option D: A facility has **actual** emissions that are less than 50 percent of federal thresholds (see Table 1, next page) and is in a part of Minnesota that meets federal standards for ambient air.

- Facilities can choose to include more than one operating scenario in their permits, meaning that they can alter their operations to achieve economic advantages without having to wait for a permit. This is inherent in a general permit, and can be included in an individual permit.
- The process for amending existing individual permits for insignificant modifications and minor and moderate amendments is more streamlined. Facilities will not have to wait as long to begin construction for these types of amendments.

What triggers the need for a permit?

If your facility has the potential to release pollutants into the air in excess of the thresholds in Table 1, your facility will need either a state or a federal permit.

In addition, there are categories of sources that require permits because new or modified facilities in the categories are subject to New Source Performance Standards. "Performance Standards" define the best way to operate a process to minimize the pollutants emitted. These categories are listed on Table 2 (page 3).

What is the difference between a state permit and a federal permit?

In Minnesota, the Minnesota Pollution Control Agency (MPCA) issues both state and federal permits. Facilities whose potential annual emissions of pollutants fall below federal thresholds but above the state thresholds (where the thresholds are different) will receive state permits.

Most state permits will be non-expiring whereas federal permits will need to be reissued every five years. Registration permits are state permits.

Can you tell me whether I need a permit?

Whether or not you need a permit for your facility depends in part on your “potential to emit”. Potential to emit, or PTE, can be very different from your actual emissions.

However, this calculation is the first step to take in determining whether you need a permit, and the type of permit you may be eligible for.

Figuring your facility’s PTE is a complex process. It requires identifying emission sources, the pollutants released by those sources, and how much pollution would be released if the emission unit were working at maximum design capacity for 24 hours per day, 365 days per year.

The MPCA has created many guidance materials to assist permit applicants, including a permit application guide and a number of fact sheets. All are available on the MPCA’s Web site at: www.pca.state.mn.us/index.php/air/air-permits-and-rules/air-permits-and-forms/air-permits-and-forms.html.

How do I apply for a new permit when my existing permit expires?

If you have a total facility permit that was issued under the existing rules, you need to reapply by the expiration date listed on your permit. Some permits issued under the existing rules are non-expiring.

If you have had a Title V permit issued under the current rule, you need to apply to have your permit reissued at least six months before it is due to expire. You need to send the MPCA an e-mail requesting the current facility-specific information from the MPCA’s permitting database. You can find instructions on how to do this on the MPCA’s Web site

at: <http://www.pca.state.mn.us/index.php/air/air-permits-and-rules/air-permits-and-forms/air-forms/air-quality-forms-permit-application-notifications-compliance-and-miscellaneous.html?menuid=&missing=0&redirect=1>. We have tried to make applying for reissuance less burdensome than the original Title V applications. The completed application is due back to the MPCA 180 days before the current permit expires.

Table 1. Permitting thresholds (based on potential to emit)

Pollutant	State permit threshold	Federal permit threshold
Volatile organic compounds (VOC)	100 tons per year	100 tons per year
Carbon monoxide (CO)	100 tons per year	100 tons per year
Nitrogen Oxides (NO _x)	100 tons per year	100 tons per year
Sulfur dioxide (SO ₂)	50 tons per year	100 tons per year
Fine particulate matter (PM ₁₀)	25 tons per year	100 tons per year
Carbon Dioxide Equivalent (CO ₂ e)	100,000 tons per year*	100,000 tons per year*
Combined HAPs**	25 tons per year	25 tons per year
Single HAPs**	10 tons per year (each)	10 tons per year (each)
Lead	0.5 tons per year	10 tons per year

* As of July 1, 2011

** HAP = Hazardous Air Pollutant, listed in Table 3



***Facts about* Odors, Noise, and Dust for Local Governments**

A citizen has called your city or town office to complain about a nauseating odor, or dust coming from a local road or business. Or perhaps the complaint is about noises that interrupt sleep or conversations. What do you do?

Sometimes you call the Minnesota Pollution Control Agency (MPCA) or you direct your resident to call the MPCA instead. This fact sheet is designed to let you know what you can expect from the MPCA in these situations and suggest steps you can take when you receive such complaints.

Odors

A high percentage of the air pollution complaints the MPCA receives involve odors. Not only can unpleasant odors spoil residents' enjoyment of the outdoors and seep into their houses to disturb their home environments, but a persistent unpleasant odor can raise concerns about health effects. Even odors that have no real physical effects on the human body can cause temporary nausea and headaches if they are strong enough or unpleasant enough. We have all had the experience of smelling something that has "made us sick."

The MPCA is concerned about odors. However, the MPCA's odor rule has been repealed, because it was difficult, if not impossible, to enforce. Odor problems are generally not constant. Odors travel, linger,

Here's what we recommend you do when you receive a citizen complaint about an odor:

1. Determine the probable source of the odor.
2. Determine whether the odors should be considered nuisances or whether they may indicate the release of toxic air pollutants. The MPCA can help you here. If the source has an MPCA permit, agency staff may be able to suggest possible cause of the odorous emissions. In any case, if the emissions may be toxic, the MPCA wants to know about it for our enforcement records, and so that it can consider the need for emission control measures in future permits.
3. Document the complaint. City and town records of citizen complaints can be of value to the MPCA for enforcement purposes and will also be useful to you if you choose to enforce against the source. Items to document include weather conditions and time, duration, and description of the odor.
4. If you receive many complaints about a local source of odors that cannot be regulated as a toxic air pollutant, decide whether or not to handle the problem under your nuisance ordinance or advise the complainant to take legal action as an affected individual.

or dissipate depending on local weather conditions and activities causing the odors.

The odor rule included procedures for odor testing, using a six-member panel of people to determine whether a particular smell was detectable at various levels of dilution. It established “odor units” and limits on the number of odor units in the air at various points (at the stack, at the property line, in adjacent industrial or residential areas). In 1969, when the rule was adopted, the testing procedure was approved by the American Society for Testing and Materials. In 1986, that organization dropped its approval of the odor-testing procedure. Because the MPCA would not be able to present a good case if an industry were to contest alleged violations in court, the MPCA dropped the odor rule.

That does not mean that the MPCA is giving up on protecting the public from odors in situations where odorous emissions are actually harmful to the environment or public health. It does mean that odors that can be considered merely “nuisance” in nature can be best handled either by the local governing authority or by legal action by the affected parties.

For those odorous emissions that are “pollution” in the sense that they harm human health or the environment, the MPCA will limit emissions in its permits for the facilities causing problems. Substances considered to be toxic air pollutants similarly will be regulated by limiting emissions through permit conditions. Testing of emissions from the stacks or in the ambient air determines how much of these substances are being released and provides reliable data for enforcing the permit terms.

Noise

Noise that disturbs resident’s rest, conversation, and peace of mind is another

Here’s what we suggest you do when your residents call with complaints about continuing problems with noise. Remember, sometimes businesses are unaware of the noise problems they create, and the solutions can be simple.

1. Contact the source of the noise to attempt an immediate, voluntary solution (or encourage your resident to do so). As with odors, we suggest that you maintain records of these complaints.
2. You may want to take action based on your local nuisance ordinance. Even if the noise violates the state rule, the MPCA’s enforcement process is relatively cumbersome, and enforcing noise violations is not as high a priority for the agency as enforcing more serious threats to public welfare and the environment.
3. You may ask the MPCA to monitor the noise. If the noise violates the state noise rule, local or MPCA enforcement is the next step.
4. If the noise does not violate the state rule, your nuisance ordinance is your best bet. The affected resident also has the option of initiating legal action against the facility causing the noise.

frequent subject of complaints to local governments and the MPCA. Obviously, barking dogs, noisy parties, and similar events are not situations in which the state should get involved.

Minnesota has a noise rule enforced by the MPCA for continuing situations in which noise may be a problem. Many municipalities have adopted the state noise rule as a local ordinance and are able to enforce it successfully. However, many noises may be unquestionably annoying to your residents and still not violate the noise rule. Those are most effectively regulated by local nuisance ordinances.

The state rule is based on one-hour statistical measurement of noise levels received by a listener. It regulates sources that emit loud noises for more than six minutes out of an hour and persistent noises that occur for more than 30 minutes out of an hour. Limits are lower for night hours and depend upon the type of land usage, requiring lower noise levels in areas that are residential or that require quiet because of health, religious, or cultural facilities, for example.

The MPCA can assist municipalities by sending staff and equipment to monitor noise levels. Local or MPCA follow-up generally has been successful in enforcing the noise rule.

MPCA staff usually work with city planning staff to resolve local noise problems. Enforcement of state motor vehicle noise limits is the responsibility of local law enforcement officials.

The state noise rule does not regulate what is termed “impulse noise.” Impulse noise is a brief but loud noise that disrupts normal activities. Because of its short duration and often unpredictable occurrence, monitoring is difficult and usually does not reveal levels above the state noise rules. Impulse noise cannot be effectively regulated by nuisance ordinances.

Dust

A third source of citizen complaints is blowing dust.

State and federal rules include standards for the amount of fine dust particles (less than 10 microns in size) allowed in the air around us. That is because the fine particles have the potential to lodge in our lungs and affect our health. The rules include limits on the emission of dust, and the MPCA includes limits on the release of particulate matter in its air emissions permits for the kinds of facilities that have a potential for releasing particulates

from stacks. The permits also require dust-control measures to control the amount of dust produced from sources other than stacks, such as loading and unloading activities. Thus, cement and asphalt operations, grain elevators, and other materials-handling facilities must meet rule and/or permit conditions to limit dust.

Under Minnesota Rules, no one is allowed to cause avoidable amounts of dust to become airborne. This applies to all facilities, regardless of their permitting status.

If these kinds of operations are routinely causing dust problems, the MPCA wants to know about it. The MPCA needs the information in order to enforce the rule and permit conditions. Other dust sources such as roads, construction sites, parking lots, and stockpiles of sand and gravel often can more readily be controlled by your local nuisance ordinances.

Who to Call

Air Quality Complaints: (651) 296-7300

Noise: (651) 296-7898

Toll-free / TTY: (800) 657-3864

TTY: (651)297-5332

Names of complainants remain confidential.



Printed on paper containing at least 20 percent fibers from paper recycled from consumers.



Minnesota
Pollution
Control
Agency

Facts about General Air Quality Rules

Majors and
Remediation
Division
Air Quality
Program

Air Quality/Federal and State Regulations/#4.01/December 2003

The following is a summary of the state air quality rules to which every business in Minnesota is subject. These rules apply whether a facility needs an air emission permit or not.

Air Emission Fees (Minn. R. 7002.0005 -7002.0085)

This rule identifies who pays fees, the types of fees, the amount of the fees and how the fees are determined. New Facility Fees and Indirect Source Fees are fixed amounts and are listed in the rule.

Air Emission Fees are determined through a formula described in the rule. The fee is assessed to each facility annually as a per-ton charge on actual emissions from the facility.

A process to resolve errors provides for a refund if an error results in an over-assessment of fees. Late charges may be added if fees are not paid on time. The rules also describe the formula that determines the size of the Air Quality budget.

A fact sheet is available on this rule.

Air Emission Permits (Minn. R. 7007.0050 - 7007.3000)

These rules explain when a facility must obtain an air emission permit, the types of permits that are available, and the procedures for obtaining permits. The rules also explain the requirements a facility is subject to when the facility is modified.

There is an Air Quality Permit Rules Fact Sheet available if you would like more information regarding these rules.

Industrial Process Equipment Rule (Minn. R. 7011.0700 - 7011.0735)

Industrial process equipment can create airborne dust or particulate matter as a normal part of its operation. For many types of equipment, such as boilers, specific state rules or federal regulations limit the amount of particulate matter that may be emitted to the atmosphere. Particulate matter emissions from equipment to which no specific state rule or federal regulation applies are limited under the general "Industrial Process Equipment Rule." These limits vary depending on operating conditions. The rule includes a maximum limit that is not to be exceeded.

The owner or operator of a facility is responsible for determining the limit imposed by the rule and must meet the limit at all times.

A fact sheet providing more specific information is available.

Ambient Air Quality Standards (Minn. R. 7009.0010 - 7009.0080)

This rule establishes the maximum allowable concentrations of pollutants that may exist in the air, averaged over a specified period of time.





These maximum concentrations vary among pollutants, but all established standards protect public health and welfare, as required by the Code of Federal Regulations Title 40, part 50, National Primary and Secondary Ambient Air Quality Standards.

Emissions from stationary sources, either alone or as a group, may cause a violation of an applicable standard. No facility may emit any pollutant in such an amount or in such a manner as to cause or contribute to a violation of this standard.

The Minnesota Pollution Control Agency (MPCA) may request that a facility provide information necessary to demonstrate compliance with ambient air quality standards. In some cases, the MPCA may require performance tests and/or air dispersion modeling.

Note: Part 70 permits will require modeling during the first permit term, if potential emissions of sulfur dioxide, nitrogen oxides, or fine particulate matter exceed 100 tons per year.

Applicability of Standards of Performance (Minn. R. 7011.0010)

This rule states that an owner or operator of an existing emission facility must comply with all applicable state air pollution control rules for existing emission facilities.

The rule also states that an owner or operator who constructs, modifies, or reconstructs an emission facility shall comply with applicable federal New Source Performance Standards, and the standards of performance for a new facility as set forth in the state air pollution control rules.

Circumvention (Minn. R. 7011.0020)

This rule states that no person shall install or use a device or means that conceals or dilutes emissions that would otherwise violate a federal or state air pollution control rule without reducing the total amount of pollutant emitted.

Emission Standards for Visible Air Contaminants (Minn. R. 7011.0100 - 7011.0115)

This standard applies to any emission facility for which no other specific performance standard exists. An existing emission facility subject to this standard cannot discharge into the atmosphere any gases displaying more than 20 percent opacity, except that a maximum of 40 percent opacity is allowed for four minutes during any 60 minute period.

A new emission facility cannot discharge into the atmosphere any gases displaying more than 20 percent opacity, without exception. The MPCA may require a facility to conduct a performance test to demonstrate compliance with the standard. Any required performance test shall use the methods described in the rules for visual determination of opacity, unless the MPCA approves another method.

Preventing Particulate Matter From Becoming Airborne (Minn. R. 7011.0150)

This rule states that no person shall cause or permit the handling, use, transportation, or storage of any material in a way that may allow avoidable amounts of particulate matter to become airborne.

In addition, no person shall allow a building or its additions, a road, a driveway, or an open area to be constructed, used, repaired, or demolished without applying reasonable measures necessary to prevent particulate matter from becoming airborne.

The MPCA may require reasonable control measures including, but not limited to paving or frequent clearing of roads, driveways, and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover.



Continuous Monitoring (Minn. R. 7017.1000)

This rule gives the MPCA Commissioner the authority to require facilities to install and conduct performance evaluations of continuous emissions monitoring systems (CEMS). The rule includes requirements for frequency of data collection, calibration and adjustments, and data reduction.

Monitoring system specifications are found in 40 CFR 60, appendix B.

Performance Tests (Minn. R. 7017.2001 - 7017.2060)

The performance test rule must be followed when a facility conducts any air emission test. This rule describes notification, reporting, quality assurance, and required operating conditions for performance testing.

A company that conducts a performance test must give the MPCA written notice of testing and submit a test plan at least 30 days in advance of the planned testing. A pre-test meeting must be held at least seven working days prior to the test in order to discuss and finalize the test plan.

Within 45 days of completing the test, the facility must submit a report containing the results of the test and documenting the operating conditions of the emission unit.

More detail on this rule can be found in a separate fact sheet.

Reports (Minn. R. 7019.2000)

This rule states that an owner or operator who is required to install a CEMS shall submit a written report of excess emissions for every calendar quarter. This report is required to be postmarked by the thirtieth day following the end of each calendar quarter.

The report must identify time periods during which the monitoring system was inoperative. The rule requires that owners and operators maintain files of all measurements and maintain records of facility operation and periods during which the continuous monitoring system is inoperative.

Emission Inventory (Minn. R. 7019.3000 - 7019.3100)

The Emission Inventory rule states that any facility required to obtain a state or Part 70 permit and all facilities with the potential to emit 25 tons per year or more of any criteria pollutant must submit annual inventories to the MPCA by April 1st of the year following the year being reviewed.

Emission inventories quantify the amount of pollutants a facility releases into the environment each year. Emission factors from EPA document AP-42 and those derived by the MPCA will be used by default unless a facility quantifies its emissions with one of the following acceptable methods:

- CEMS results for the year in question;
- Stack Tests (Performance Tests) results for the year in question;
- Volatile Organic Compound material balance; or
- Sulfur Dioxide material balance.

A fact sheet on the inventory and fee rule is available.

Motor Vehicles (Minn. R. 7023.0100 - 7023.0120)

This standard regulates the emission of visible air contaminants from internal combustion engines powering motor vehicles designed for use on public highways. This rule separates vehicles powered by diesel cycle engines from other internal combustion engines.

Diesel cycle engines manufactured prior to January 1, 1973, may not emit visible air contaminants over 20 percent opacity for more than 20 consecutive seconds, while those manufactured after January 1, 1973, may not emit more than 10 percent opacity for the same time period.

Vehicles powered by any other engine may not emit visible air contaminants at any opacity level for more than 10 consecutive seconds, regardless of manufacture date. The emission restrictions mentioned above also apply to other internal combustion engines, such as those found in trains, boats, and construction equipment.



This rule also restricts tampering with the air pollution control systems on motor vehicles. With the exception of repair or replacement, no person may remove, alter, or make pollution control equipment inoperative. In addition, ownership of a motor vehicle cannot be transferred unless all air pollution control systems are in place and in operating condition.

Noise Pollution Control (Minn. R. 7030.0010 - 7030.0080)

These rules describe the maximum sound levels allowed under different scenarios. No person may violate these standards, which establish three noise area classifications with respectively increasing levels of allowable sound.

The first classification includes lodging and residential locations, along with educational, religious, and cultural entertainment activities.

The second classification applies to transportation passenger terminals (e.g. bus, rail, marine, air, and auto), most retail and recreational activities.

The third classification includes most manufacturing facilities, modes of material transportation (e.g. bus, rail, marine, auto, air), and natural resource production and extraction activities, such as agriculture, forestry, and mining.

The MPCA can require a facility to conduct sound measurements to demonstrate compliance with the applicable noise standard.

To obtain additional information or fact sheets on any of these topics, please call the MPCA Customer Assistance Center at (651) 297-2274 or (800) 646-6247 (with Minnesota only).

Printed copies of the rules are available from the Minnesota Bookstore. To order a copy, you may contact the bookstore at (651) 297-3000.

MPCA Web site: <http://www.pca.state.mn.us>

ARTICLE IV. PERFORMANCE STANDARDS

43.33 PERFORMANCE STANDARDS.

- (a) Compliance with Regulations. No land or building in any district shall be used or occupied in any manner so as to create any dangerous, injurious, noxious, or otherwise objectionable fire, explosive or other hazard, noise or vibration, smoke, dust, odor or other form of air pollution, heat, cold, dampness, electrical or other substance, condition or element in such a manner or in such amount as to adversely affect the surrounding area or adjoining premises (referred to herein as "dangerous or objectionable elements"); provided, that any use permitted or not expressly prohibited by this chapter may be undertaken and maintained if it conforms to the regulations of this section limiting dangerous and objectionable elements at the point of the determination of their existence. (08-17-59)
- (b) Enforcement Provisions Applicable to Other Uses. Even though compliance with performance standards procedure in obtaining a zoning certificate is not required for a particular use, initial and continued compliance with performance standards is required of every use and provisions for enforcement of continued compliance with performance standards shall be invoked by the zoning administrator or board as the case may be, against any use, if there are reasonable grounds to believe that performance standards are being violated by such use. (08-17-59)
- (c) Nonconforming Uses. Certain uses established before the original effective date of the regulations of this chapter and nonconforming as to performance standards shall be given a reasonable time in which to conform therewith, as provided in Section 43.32(e). (08-17-59)
- (d) Locations where Determinations are to be Made for Enforcement of Performance Standards. The determination of the existence of any dangerous and objectionable elements shall be made at the location of the use creating the same and at any points where the existence of such elements may be more apparent (herein referred to as "at any point"); provided, however, that the measurements necessary for enforcement of performance standards set forth in this section shall be taken at different points in different districts in relation to the establishment or use creating the element being measured (herein referred to as "point of measurement") as follows:
- (1) In any R District and B-1 and B-2 Districts. Twenty-five feet from the establishment or use or at the lot line of the use, if closer to the establishment or use.
 - (2) In B-2.5, B-3 and M Districts. At the boundary of the district or at any point within an adjacent R district.
- (e) Performance Standards, Regulations. The following provisions, standards and specifications shall apply:
- (1) Fire and explosion hazard. All activities involving and all storage of inflammable and explosive materials shall be provided at any point with adequate safety devices against the hazard of fire and explosion and adequate firefighting and fire suppression equipment and devices standards in the industry. Burning of waste materials in open fire shall

be prohibited at any point. The relevant provisions of state and local laws and regulations shall also apply.

- (2) Radioactivity or electric disturbance. No activities shall be permitted which emit dangerous radioactivity at any point or electrical disturbance adversely affecting the operation at any point of any equipment other than that of the creator of such disturbance.
- (3) Noise. Repealed 04/16/79
- (4) Vibration. No vibration shall be permitted which is discernible without instruments at the points of measurement specified in subsection (d) above.
- (5) Smoke. No emission shall be permitted at any point, from any chimney or otherwise, of visible gray smoke of a shade equal to or darker than No. 2 of the Power's Micro-Ringlemann Chart, published by McGraw-Hill Publishing Company, Inc., and copyright 1954 (being a direct facsimile reduction of the standard Ringlemann Chart as issued by the United States Bureau of Mines), except that visible gray smoke of a shade equal to No. 2 on said Chart may be emitted for 4 minutes in any 30 minutes. These provisions applicable to visible gray smoke shall also apply to visible smoke of different color but with an apparently equivalent capacity.
- (6) Odors. No emission shall be permitted of odorous gases or other odorous matter in such quantities as to be offensive at the points of measurement specified in subsection (d) above. Any process which may involve the creation or emission of any odors shall be provided with a secondary safeguard system, so that control will be maintained if the primary safeguard system should fail. There is hereby established as a guide in determining such quantities of offensive odors Table III, "Odor Thresholds," in Chapter 5 "Air Pollution Abatement Manual," copyright 1951 by Manufacturing Chemists' Assn., Inc., Washington, D.C.
- (1) Fly ash, dust, fumes, vapors, gases, and other forms of air pollution. No emission shall be permitted which can cause any damage to health, to animals, vegetation or other forms of property, or which can cause any excessive soiling, at any point; and in no event any emission, from any chimney or otherwise, of any solid or liquid particles in concentrations exceeding 3/10 grains per cubic foot of the conveying gas at any point. For measurement of the amount of particles in gases resulting from combustion, standard corrections shall be applied to a stack temperature of 500 degrees Fahrenheit and 50 percent excess air.
- (2) Glare. No direct or sky-reflected glare, whether from floodlights or from high-temperature processes, such as combustion, welding or otherwise, so as to be visible at the points of measurement specified in subsection (d) above. This restriction shall not apply to signs otherwise permitted by the provisions of this chapter.
- (3) Liquid or solid wastes. No discharge at any point into any public sewer, private sewage disposal system or stream or into the ground, except in accord with standards approved by the department of health of the state

or standards equivalent to those approved by such department for similar uses of any materials of such nature or temperature as can contaminate any water supply or otherwise cause the emission of dangerous or offensive elements. (08-17-59)

Ord. No. 2327 03/01/76 Ord. No. 3788 04/06/09

43.30 PERFORMANCE STANDARDS PROCEDURE. The board of adjustment shall have the power to authorize, upon application in specific cases, filed as hereinafter provided, issuance of a zoning certificate for uses that are subject to performance standards procedure under Section 43.63 as provided in the following:

- (a) Application. An application for a zoning certificate for a use subject to performance standards shall be submitted in duplicate on a form prescribed by the board of adjustment. The applicant shall also submit in duplicate a plan of the proposed construction or development, including a description of the proposed machinery, processes, products and specifications for the mechanisms and techniques to be used in restricting the emission of dangerous and objectionable elements as set forth in Section 43.33, in accordance with rules prescribed by the board specifying the type of information required in such plans and specifications. The fee for such application shall include the cost of the special reports that may be required to process it, as set forth in Subsection (b) of this section.
- (b) Report by Specialists. If, in its opinion, the proposed use may cause the emission of dangerous or objectionable elements, the board may refer the application to one or more specialists qualified to advise as to whether a proposed use will conform to the applicable performance standards specified in Section 43.33 for investigation and report. Such consultant shall report as promptly as possible after his receipt of such application. A copy of such report shall be promptly furnished to the applicant.
- (c) Review by Board. Within 30 days after the board of adjustment has received such application or such report, if a report was required, or within such further period as agreed to by the applicant, the board shall decide whether the proposed use will conform to the applicable performance standards, and on such basis shall authorize or refuse to authorize issuance of a zoning certificate or require a modification of the proposed plan of construction or specifications, proposed equipment or operation. Any zoning certificate so authorized and issued shall be conditioned upon, among other things:
 - (1) The applicant's completed buildings and installations conforming in operation to the applicable performance standards.
 - (2) The applicant paying the fees for services of the expert consultant deemed reasonable and necessary by the board to advise the board as to whether or not the applicant's completed buildings and installation in operation will meet the applicable performance standards.
- (d) Continued Enforcement. The zoning administrator shall investigate any purported violation of performance standards and, if there is reasonable grounds for the same, shall notify the board of the occurrence or existence of a probable violation thereof. The board shall investigate the alleged violation, and for such investigation, shall employ qualified experts. If, after public hearing on due notice, the board finds that a violation occurred or exists, a copy of such findings shall be forwarded to the city council. The services of any qualified experts employed by the board to advise in establishing a violation shall be paid by the violator if such violation is established, otherwise by the city.

Only those uses specified in the M-2 district as subject to performance standards and use accessory thereto, are subject to performance standards procedure specified in this section in obtaining a zoning certificate, unless the zoning administrator has reasonable grounds to believe that another proposed use is likely to violate performance standards, in which event the applicant shall comply with performance standards procedure in obtaining a zoning certificate. (08-17-59)