



CITY HALL

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February 10, 2012

Planning Commissioners
Winona, Minnesota 55987

Dear Commissioner:

The next meeting of the Planning Commission will be held on **Monday, February 13, 2012, at 4:30 p.m. in the Wenonah Room** of the Winona City Hall.

1. Call to Order
2. Minutes – January 23, 2012
3. Public Hearing – Sand Processing and Transportation Facilities CUP Agreement
4. Public Hearing – Amendments to Sensitive Land Development/Other Code Sections
5. Other Business
6. Adjournment

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Moeller".

Mark Moeller
City Planner

PLANNING COMMISSION MINUTES

DATE: January 23, 2012

TIME: 4:30 p.m.

PRESENT: Chairman Porter; Commissioners Eyden, Boettcher, Gromek, Buelow and Ballard

ABSENT: Commissioner Prosen, Olson and Briggs

STAFF PRESENT: City Planner, Mark Moeller

The meeting was called to order at 4:30 p.m. by Chairman Porter.

Approval of Minutes – December 12, 2011

The minutes from the Commission's meeting of December 12, 2011 were reviewed, and upon motion by Commissioner Boettcher, and second by Commissioner Ballard, were unanimously approved as submitted.

Bicycle Ordinance

Chairman Porter introduced this item and called on Carlos Espinosa, Assistant City Planner, to provide an overview of it. Mr. Espinosa noted that he had, in the Commission's agenda package, included a draft ordinance related to bicycles and bicycle use within the City. He explained that Winona's City Code currently does not specifically address bicycling rules in the City. Although bicycling rules are primarily established through state statute, cities may adopt regulations consistent with state statutes, and make additions according to local conditions. As part of the effort to define local bicycle rules, and promote bicycling in Winona, the Planning Division has created the draft ordinance in cooperation with representatives from the Park and Recreation Department and the Police Department.

In summary, the draft ordinance includes the following provisions in accordance with state statute:

- Bicyclists are afforded the same rights and duties of motor vehicle drivers.
- Bicyclists must ride as close as practicable to the right-hand curb or edge of the roadway (except when passing another vehicle, turning left or avoiding safety hazards).
- Bicyclists are treated as pedestrians when inside a crosswalk (even when riding a bike).
- Bicyclists may ride a maximum of two abreast as long as traffic is not impeded.

Mr. Espinosa further noted that in addressing local conditions and priorities, the draft ordinance:

- Removes the existing requirement for bicycle registration.
- Prohibits bicycling on the sidewalk in the central business district as defined by City Code Section 62.25. This provision would not apply when parking a bicycle or accessing a place of business.
- Allows bicycling on sidewalks outside the central business district.
- Encourages using a helmet – especially for those under age 16.
- Encourages walking bicycles within crosswalks.

Mr. Espinosa concluded by stating that the proposed ordinance would be located within City Code provisions of Chapter 61. As such, a formal hearing by the Planning Commission is not required. However, should the Commission determine that the draft ordinance is desirable; he would appreciate a motion supporting it.

Commissioner Eyden asked if there would be consequences for breaking any of the laws noted within the draft ordinance. Mr. Espinosa responded that in discussing this with the Police Department, options for violations included anything from warnings to misdemeanor offences.

Commissioner Eyden asked if the Police Department would be enforcing the ordinance. Mr. Espinosa responded that he has been working with Kevin Kearney in developing the ordinance and that the Police Department would enforce violations when noted.

Commissioner Eyden noted that the Central Business District definition referenced in the ordinance included all of LeVee Park. She recommended that LeVee Park be excluded. Following further discussion of this provision, the consensus of those present was that the Central Business District definition should stop at the railroad tracks. As such, LeVee Park would not be subject to the ordinance.

Following additional discussion, the general consensus of the Commission was that the Ordinance appeared to be appropriate. Given this, it was moved, and seconded, to recommend that Council consider adoption of it.

Draft Amendment – Sensitive Land Development Ordinance

Chairman Porter called on Mark Moeller, City Planner, to review a summary of this item. Mr. Moeller noted that this particular issue had been kicked around by the Commission for well over a year now. Given that, he was hoping that this afternoon's meeting would serve as a final review to Sensitive Land Development Ordinance Code Amendments. Again, the general focus of the amendment effort was designed to reshape the Sensitive Land Development Ordinance in order to bring it in line with Bluff Protection, Shoreland, Stormwater Management, and other land protection ordinances of the City.

In doing so, adoption of the proposal would serve to reduce redundancy and current conflicting requirements that exist.

Mr. Moeller noted that since the Commission's last review of the proposal, it had been reviewed by the City Attorney, and additional modifications had been made. As noted, some of these will require amendments to other City code provisions.

At this point, Mr. Moeller conducted a page by page analysis of proposed amendments. In summary, these included:

- Page 1. Under current provision, the purpose and intent section of the ordinance includes a number of specific goals and objectives to be met by the Sensitive Lands Development Ordinance. These principles would be replaced by a simple paragraph that defines purpose and intent as relating to general goals and objectives of the Comprehensive Plan as well as the intent and purpose of the Zoning Ordinance.

Mr. Moeller noted that this change had been made following discussion with the City Attorney's Office. In part, the City Attorney had determined that with a reference to Comprehensive Plan goals, a lengthy list of goals, to be achieved is redundant.

- Page 2. As reformatted, those environments to be classified as Natural State Areas on preliminary and final plats will precede the land disturbance activity definition. Mr. Moeller noted that under the ordinance, delineated wetlands, bluff impact overlay districts, and all lands located within 100 feet from the normal high water mark of any special water (trout stream) river or stream would need to be classified as a Natural State Area on a plat. Generally all of these environments are presently protected under State or Local laws. However, if part of a plat, they would need to be classified as NSA. He further noted that the NSA protection had also been recommended as a mitigation strategy within the 2008 Alternative Urban Areawide Review or Orderly Annexation Areas. Given the current proposal then, language of the Sensitive Land Development Ordinance would be consistent with other code provisions.

Mr. Moeller noted that the protected environment listing also includes a generic category. This category would apply to a situation where a specific development required something like an AUAR or Environmental Impact Statement. In those cases, the end result may be approval of the environmental document with recognition to protect certain environments that may be discovered on a site. Additionally, it may also serve to recognize protection mandates of state/federal law.

Mr. Moeller further stated that the definition for Land Disturbance Activity generally reflected that found under the Bluff Protection Ordinance. The single

change that had been made to this definition since the Commission's last review was that the removal of dead vegetation from a defined Natural State Area would no longer be permitted.

Mr. Moeller further explained that the definition for Land Disturbance Activity would not include a Natural State Area site condition that represented an immediate safety hazard to persons or property, nor to the removal of noxious weeds by hand means.

- Page 3. Mr. Moeller explained that the most significant activity related to this page was that current Tables A and B of the present ordinance would be removed entirely. Currently, Table A defines environments that would totally be set aside as NSA. These are being replaced by language which would generally require that wetlands, bluffs and buffers within 100 feet of a trout stream be set aside as Natural State Areas.

Table B currently presents a sliding scale to slope ratio that needs to be applied on a lot by lot basis within new subdivisions. This table would simply be replaced by requiring that Bluff Impact Overlay Districts be set aside as Natural State Areas. This action should greatly simplify the identification of Natural State Areas pertaining to slopes within a subdivision.

Part 3, Determination of Maximum Density, would generally remain the same. For the most part, this language would permit NSAs to be used in meeting lot area and yard requirements provided that they are not disturbed.

Subpart 4, Disturbance of Natural State Areas, would be modified to prohibit Land Disturbance Activities unless they are otherwise permitted under Sections 43.83 (c) and 43.83 (f) of the Bluff Protection Ordinance. He explained that although special exception uses of the bluff protection ordinance would require approval by the Planning Commission, any person who felt that the application of new requirements would cause practical difficulties could appeal to the Board of Adjustment. In cases where the management of a specific environment (i.e.: wetlands) falls under the jurisdiction of a State, Federal or other agency, the Board of Adjustment would need to seek an opinion from the agency prior to acting on the variance. Given this language, if land disturbance activities are specifically discouraged, a person who feels that that provision would cause practical difficulties in some way could appeal to the Board of Adjustment. In these cases, staff would have to make every effort possible to ensure that the Board fully understood what the purpose and intent of the restriction was.

Mr. Moeller explained that the present Subpart 5, transfer of Natural State Areas would be deleted entirely while language pertaining to the modification and preservation of a Natural State Area would be retained. Additionally, the present Subpart 8, review criteria, would be deleted in its entirety. Generally, these

criteria are essentially already covered under protected environmental "philosophies" of Section 2.

- Page 6. Since adoption of "additional plat requirements" of the present ordinance, the City has created a formal storm water management ordinance reflecting these same requirements. Given this, Mr. Moeller was suggesting that current language pertaining to this section be deleted in its entirety and that preliminary plat provisions of Section 42.04 be modified to include a Subpart E which reads as follows:

"A preliminary storm water management or erosion and sediment control plan meeting applicable standards of Chapter 68."

- Page 7. Mr. Moeller noted that the present Subpart 10 of the Sensitive Land Ordinance again requires additional information to be included with the Final Plat submittal. Given this philosophy, Chapter 42.06 would be modified to include a Subpart C which reads as follows:

"A final Stormwater Management or Erosion and Sediment Control Plan meeting applicable standards of Chapter 68."

Present language pertaining to Part 8, Natural State Areas field identification would be retained as written. However, in reviewing this section he remembered that there had been an interest in upgrading standards to include signs, or other marker, that would clearly and permanently define Natural State Areas. He noted that this was probably more applicable to the fact that NSAs can be used to achieve lot area and yard requirements of a lot. Unless clearly marked at all times, lot NSAs could diminish over time.

Following Commission discussion of this item, the consensus was that some form of a permanent marker should be considered. However, even with this process, a mechanism may be needed to ensure that once created on a plat, NSAs are not compromised. Questions also surfaced as to how many markers may be required to identify NSAs, who would pay for signs, and who would put them up. If necessary, Mr. Moeller suggested that the Commission could come back to this item after adoption of present amendments to the Sensitive Land Ordinance.

Finally, Mr. Moeller explained that the revised ordinance would include language stating that NSAs, adopted prior to adoption of this amendment, would continue to be managed in accordance with terms and conditions of original plat approvals.

Along with the previous, Mr. Moeller stated that proposed changes would be made to Stormwater and Shoreland Management Ordinances. The more significant of these being that language pertaining to 100 foot undisturbed buffers (although presently found

in the Stormwater Management Ordinance) would be "repeated" within the Shoreland Management Ordinance. Since the ordinance presently does not include this language, the transfer should serve to highlight the requirement with the intent of making sure that it doesn't "get lost" somewhere. As a side note, Mr. Moeller hoped that, at some point in the future, the Shoreland Ordinance would become part of the Zoning Ordinance, as are the Bluff Protection Ordinance and Flood Plain Management Ordinance.

The final amendment proposed will include one to subsection J of the Bluff Protection Ordinance. Under this change, variances would be referred to the Board of Adjustment rather than the Planning Commission. Mr. Moeller explained that this change had been recommended by the City Attorney.

Following brief discussion, the consensus of the Commission was that the amendment, as a whole, appeared to be acceptable. With this, it was suggested that staff move forward in establishing a public hearing date to formally review and consider it. Mr. Moeller stated that he was working on a February 13th hearing date.

Other Business

Commissioner Boettcher stated that he had not heard much regarding the Bridge Reconstruction Project other than the fact that some thought was being given to rehabilitation of the current structure. He noted that he would not favor such an action.

Mr. Moeller replied that, at this point, the issue is still with the Minnesota Department of Transportation, and no formal determination by that agency had been made relative to a preferred option.

Commissioner Gromek had asked if trees had been removed from the Eiken property. Mr. Moeller noted that he had not received any further communication from the forester, or his consultant, of this project. He did stress that as a condition of approval, staff was to be advised of the starting point for tree removal. To his knowledge, the project has not yet been implemented. However, staff will advise the Commission as to how it goes.

At this point, Mr. Moeller explained that the City's law firm, involved in the 30% Rule Lawsuit, were recommending that present rental housing limitations be moved from the Zoning Ordinance to the Rental Housing Code. With this proposal, staff would be establishing a Commission hearing on February 13th to consider this action. In part, the rationale for the change is that the present rule is perceived to exceed Minnesota Statutes pertaining to City Zoning enabling laws, and that the City's Charter is broader than those laws. Additionally, current regulations, since they relate to rental housing, would better function under Chapter 33A, than in Chapter 43. Further detail relative to the issue will be presented during the hearing.

Mr. Espinosa stated that, given recent sand processing issues in the City, staff was looking at developing a conditional use process for such operations. As part of this process; the first step would be to modify current language of the M-2 District by specifically requiring that sand processing operations be permitted only as a Conditional Use. As the issue continues to evolve, and as the City continues to identify potential problem areas with the industry, additional conditions could be added.

Commissioner Boettcher noted problems concerning the deposit of sand on streets within the area of storage and shipping operations. Mr. Espinosa explained that the City was well aware of these issues, and was doing everything possible to mitigate them.

Adjournment

There being no further business to come before the Commission, the meeting was adjourned.

Mark Moeller
City Planner

PLANNING COMMISSION

**AGENDA ITEM: 3. Public Hearing - Sand Processing and Transportation Facilities
CUP Amendment**

PREPARED BY: Carlos Espinosa

DATE: February 13, 2012

Background

The topic of frac sand operations in southeastern Minnesota has recently become very prominent. Much of the discussion in the Winona area has focused on mining proposals in Winona County. However, as the Planning Commission is aware, there are several frac sand operations currently functioning in the City. Staff has presented to the City Council on the topic and also provided a report to Council on how the operations have been handled up to this point. The report given to Council is attached to this agenda item (Attachment F).

The "Next Steps" section of the report references that one option "is for Council to draft specific language pertaining to sand washing and processing for inclusion in the M-2 zoning district." The report also states that sand processing and transportation could be regulated as a permitted use in the M-2 General Manufacturing district subject to specific provisions. However, a Conditional Use Permit (CUP) is a more appropriate tool to use with these land uses for four main reasons:

- 1) The expanding scope of sand operations in the region
- 2) The potential off-site impacts of operations in the City (e.g. noise from truck traffic, dust, etc.)
- 3) The ability to address specific concerns before a project is approved
- 4) The ability to include additional conditions in accordance with City Code to promote the City's health, safety, and general welfare

The attached draft ordinance (Attachment A) outlines proposed code amendments that would make sand processing and transportation facilities subject to a CUP in M-2 zoning districts. The sections of the ordinance are described in the next section. The M-2 zone would be the only zoning district where new sand operations are permitted as primary uses (they may be accessory uses to a mining operation in the A-G Agricultural district with a CUP). Staff's intent with the proposed amendments is to better address specific concerns about frac sand processing and transportation operations before a project begins rather than retroactively.

If the CUP approach is approved by Council, existing frac sand operations could continue (without a CUP), but would become nonconforming uses. As a result, any expansion of operations would require a Conditional Use Permit. The definition of expansion includes:

- 1) Addition of new equipment
- 2) Increase in land area of use
- 3) Expansion onto a new site

Ordinance Description

Currently, there are 38 listed conditional uses in the M-2 zoning district (Attachment B). A CUP review by the Board of Adjustment is required for each. The process for M-2 district CUP review is outlined in Section 43.30 of the City Code (Attachment C). The process examines proposed conditional uses in accordance with the performance standards listed in Section 43.33 (Attachment D). Basically, if a proposed use meets the performance standards, a CUP can be granted. If the proposed use may cause emission of "dangerous or objectionable" elements, a report by a specialist may be required from the applicant.

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 D for more detail):

- 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.*

It's important to note that 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 Particulate Matter generation, and any stockpiles (including sand and dirt) which produce windblown dust shall be covered.*

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. 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 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.

- 3) 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.

- 4) 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).

- 5) 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 or Attachment E). 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 may want to 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.

- 6) Landscaping and Screening – Sufficient landscaping and screening, 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.

- 7) Contact Information – Facility operators shall provide current contact information to the City of Winona to facilitate prompt response to concerns.
- 8) Permits and Reports on File – Any applicable state or federal permits shall be placed on file at the City of Winona. Any reports generated to fulfill permit requirements shall be submitted to the City of Winona.

Conditions 7) and 8) are included to facilitate prompt response to complaints or concerns.

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:

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

Performance Standards:

1. Dust – 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.
2. Noise – In accordance with and measured at locations stated in Chapter 39.

These proposed amendments address potential air quality and noise issues associated with frac sand operations.

Next Steps

Staff requests the Planning Commission review the proposed amendments as part of a public hearing. 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) M-2 Zoning District
- C) Performance Standards Review Procedure
- D) Performance Standards
- E) Noise Ordinance
- F) Staff Frac Sand Report to Council – not that the document does not contain the air quality report. The full report (21 pages) is posted on the City's website: www.cityofwinona-mn.com under "Blasting and Frac Sand Information" in the News and Announcements section.

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

The City of Winona does ordain:

Section 1. That paragraph (b) of Section 43.63 of the City Code of Winona, Minnesota, 1979, 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 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.
 - c. Stockpile Covering. Stockpiles undisturbed for more than one week shall be covered.
 - d. Stockpile Watering. Uncovered stockpiles shall be watered regularly to prevent surface areas from drying out and becoming susceptible to wind erosion.
 - e. Hours of Operation. Hours of operation shall be limited to 7 a.m. – 10 p.m.
 - f. Landscaping and Screening. Sufficient landscaping and screening, as approved by the City of Winona, shall be provided to mitigate visual impacts of operation on adjacent properties.
 - g. Contact Information. Facility operators shall provide current contact information to the City of Winona to facilitate response to concerns.
 - h. Permits and Reports on File. Any applicable state or federal permits shall be 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 2. That Section 39.03 of said Code, 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, A-G	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 3. 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 Particulate Matter generation, and any stockpiles (including sand and dirt) which produce windblown dust shall be covered.

- (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 4. That this ordinance shall take effect upon its publication.

Dated this _____ day of _____, 2012.

Mayor

Attested By:

City Clerk

43.63 M-2 GENERAL MANUFACTURING DISTRICT. (a) Permitted Uses. Any use permitted and as regulated in the M-1 district shall be permitted in the M-2 district, except as hereinafter modified.

Any manufacturing use which is not prohibited altogether by this division or is not listed in subsection (d) of this section as subject to review in conformance with the performance standards procedure set forth in Section 43.30 may be permitted without such review; provided, however, that any such permitted use shall be subject to the requirement of initial and continued compliance with the performance standards in Section 43.33; and provided further, that any proposed use may be required to be reviewed in conformance with the performance standards in Section 43.30 at any time before or after issuance of a zoning certificate or building permit if, in the opinion of the zoning or building inspector or the board, it is considered possible that such use may violate or may already be in violation of the performance standards prescribed in Section 43.33.

The following uses shall also be permitted without board review or performance standards procedure, but shall be subject to the certain specifications prescribed below in each instance.

- (1) Junk/Scrap Yards. If located not less than 200 feet from any R district; provided, that the use shall not involve the handling or storage of putrescible solid waste materials, and any outside storage areas are enclosed on all sides with a solid wall or uniform tight board fence, not less than 8 feet high and that such operation shall not be visible from the nearest street or highway.
 - (2) Transfer Stations as defined in Section 35.01. Provided that, any part of such use shall be located not less than 300 feet from any R or B district; that any outside storage areas are enclosed on all sides with a solid wall or uniform tight board fence, not less than 8 feet high, and that such operation shall not be visible from the nearest street or highway.
 - (3) Crematory. If located not less than 200 feet from any R district.
 - (4) Railroad yard and freight station. If located not less than 200 feet from any R district.
 - (5) Large Breweries, provided that no portion of any structure which is used for the production of malt liquors (excluding warehousing and storage) shall be located closer than 200 feet from any R District.
 - (6) Other uses. Any other use that is determined by the board to be of the same general character as the above permitted uses; provided, that it can comply with the performance standards in Section 43.33.
- (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.

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.

- (c) Location of Certain Uses. Any of the following uses, in addition to the performance standards in Section 43.33 and performance standards procedure in Section 43.30, shall be located not less than 600 feet from any R district and not less than 200 feet from any M-1 or B district.
 - (1) Manufacturing uses involving primary production of the following products from raw materials:
 - a. Asphalt, cement, charcoal and fuel briquettes.
 - b. Aniline dyes, ammonia, carbide, caustic soda, cellulose, chlorine, carbon black and bone black, creosote, hydrogen and oxygen, industrial alcohol, nitrates of an explosive nature, potash, plastic materials and synthetic resins, pyroxylin, rayon yarn, and hydrochloric, nitric, phosphoric, picric and sulfuric acids.

- c. Coal, coke, and tar products, including gas manufacturing; explosives, fertilizers, gelatin, animal glue and size.
 - d. Turpentine.
 - e. Rubber and soaps, including fat rendering.
- (2) The following processes: nitrating of cotton or other materials; magnesium foundry; reduction, refining, smelting and alloying of metal or metal ores; refining petroleum products, such as gasoline, kerosene, naphtha, lubricating oil; distillation of wood or bones; storage, curing or tanning of raw, green or salted hides or skins.
 - (3) Stockyards, etc. Stockyards and slaughterhouses, except for poultry.
 - (4) Explosives. Storage of explosives or fireworks, except where incidental and accessory to a use which is not subject to a distance requirement.
 - (5) Other uses. Any other use which is determined by the board to be of the same general character as the uses in this subsection (c).
- (d) Accessory Uses. Accessory uses and structures permitted and as regulated in the M-1 district, except as hereinafter modified, and such other uses and structures customarily accessory and incidental to any M-2 use shall be permitted in the M-2 district.

In addition, exterior signs which pertain to a permitted use on the premises and billboards and outdoor advertising signs and structures shall be permitted in the M-2 district, subject to the provisions in Section 43.43.

- (e) Required Conditions.
- (1) Enclosure not required. Any use may be conducted in the M-2 district within or without a building or enclosure, subject only to performance standard distance requirements where applicable, except as otherwise provided.
 - (2) Enclosure of junk yards. All junk yards shall be enclosed by a solid board fence or wall not less than 8 feet high.
- (f) Prohibited Uses. The following uses are prohibited in the M-2 district:
- (1) Dwellings, etc. Dwellings and residences of any kind, including motels, trailers, parks, also schools, hospitals, clinics and other institutions for human care, except where incidental to a permitted principal use; provided, however, that any such uses legally existing in the M-2 district at the time of adoption of this chapter or any amendment thereto, shall not be classified as a nonconforming use and subject to the provisions of Section 43.32.
 - (2) Business and services. Business uses and service establishments including restaurants, except when incidental and accessory to a permitted principal use and except service stations and such business, commercial and other uses as are first permitted in the B-3 district.
- (g) Height Regulations. Height regulations in the M-2 district shall be the same as in the M-1 district.

(h) Lot Area, Frontage and Yard Requirements. The following minimum requirements shall be observed in the M-2 district, except as modified by the provisions of Section 43.53(a) through (e):

<u>Lot Areas</u>	<u>Frontage Depth</u>	<u>Front Yard</u>	<u>Side Story</u>	<u>Yard One</u>	<u>Width Both</u>	<u>Rear Yard Depth</u>
Nonresidential Structures	None	25 ft.	None except when adjoining R district - then not less than 50 ft. each side yard.			1-story 40 ft. 2-story 50 ft. 3-story 60 ft. Five feet more each additional story.
Dwellings or residential parts of nonresidential buildings			Not permitted in M-2 district (Existing dwellings: Same as R-3)			

(08-15-59)

Ord. No. 2767 07/01/85
Ord. No. 3759 01/07/08

DIVISION 2. BOARD OF ADJUSTMENT

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)

Ord. No. 2327 03/1/76

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

NOISE POLLUTION

39.01 **DECLARATION OF POLICY.** It is the public policy of the city to eliminate existing noise pollution; to limit, as much as is economically, socially, and technically feasible, further increases of sound levels; to protect human health and welfare, animal life and property, and the enjoyment of life and property in all residential, recreational, business, public and industrial areas in the city. It is necessary for the city to provide means for the control, prevention, prohibition and abatement of noise and noise pollution.

39.02 **DEFINITIONS.** The following definitions shall apply in the interpretation and enforcement of this chapter:

Air Circulation Device: A mechanism designed and used for the controlled flow of air used in ventilation, cooling, or conditioning, including, but not limited to, central and window air conditioning units.

Ambient Sound: The all-encompassing sound associated with a given environment, being usually a composite of sounds from many sources near and far.

City Official: Any representative of the city designated by the city manager.

Cut-Out or By-Pass or similar device: A mechanism which varies the exhaust system gas flow so as to discharge the exhaust gas and acoustic energy to the atmosphere without passing through the entire length of the exhaust system including all exhaust system sound attenuation components.

dBA: A unit of sound level. dBA is the weighted sound pressure level by the use of the "A" metering characteristic and weighting as specified in the American National Standards Institute (A.N.S.I.) Specification for Sound Level Meters, S1. 4-1971. For the purpose of this chapter dBA is used as a measure of human response to sound.

Decibel: A unit of sound pressure level, abbreviated dB.

Exhaust System: A combination of components which provides for enclosed flow of exhaust gas from engine parts to the atmosphere.

Highway: Any street, road, alley or public way in the city.

Holiday: Any day fixed by the United States or by Minnesota State law for suspension of business in whole or in part.

Lake Park: See definition in Section 55.11 of this Code.

L₁₀: The sound level, expressed in dBA, which is exceeded 10 percent of the time for a one hour survey, as measured by test procedures approved by the director of the Minnesota Pollution Control Agency.

L₅₀: The sound level, expressed in dBA, which is exceeded 50 percent of the time for a one hour survey, as measured by test procedures approved by the director of the Minnesota Pollution Control Agency.

Motor Vehicle: Any self-propelled vehicle not operated exclusively upon railroad tracks and any vehicle propelled or drawn by a self-propelled vehicle.

Noise: Any sound not occurring in the natural environment, including, but not limited to, sounds emanating from aircraft and highways, and industrial, commercial, and residential sources.

Noise Pollution is: (a) Noise which unreasonably annoys, injures or endangers the safety, health, morals, comfort or repose of any considerable number of members of the public, or

(b) The presence of a noise or combination of noises exceeding the source sound levels hereinafter set forth, or

(c) An act enumerated herein as a public nuisance.

Person: Any individual, firm, partnership, corporation, trustee, association, the state and its agencies and subdivisions, or any body of persons, whether incorporated or not and with respect to acts prohibited or required herein shall include employees and licensees, owners, tenants, and occupants.

Sound: An oscillation in pressure, stress, particle displacement, particle velocity, etc., in an elastic or partially elastic medium, or the superposition of such prorogated alterations.

Sound Amplification Equipment: A radio, phonograph, or any device or apparatus for the reproduction or amplification of the human voice or other sounds.

Sound Level: A weighted sound pressure level obtained by the use of a sound level meter having characteristics, including the "A" weighting, as specified in A.N.S.I. Specifications for Sound Level Meters, S1. 4-1971. The reference pressure is 20 micronewtons per square meter.

Sound Pressure Level: Expressed in dB, is 20 times the logarithm to the base 10 of the ratio of the pressure of a sound to the reference pressure (20 micronewtons per square meter).

Sound Receiving Unit: A unit of property or a building containing a person, business, activity, animal life, or property which is affected by noise or noise pollution.

Vibration: Refers to the oscillation of a solid body or material, including, but not limited to, earth, concrete, machinery, building structures, or other similar materials. Within this chapter the term vibration shall refer to those oscillations which are disturbing, injurious, damaging, or dangerous.

Ord. No. 2589 09/08/81.

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
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	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

MEMORANDUM

DEPARTMENT OF COMMUNITY DEVELOPMENT/PLANNING DIVISION

TO: City Council

FROM: Judy Bodway, Acting City Manager; Carlos Espinosa, Assistant City Planner

DATE: January 6, 2012

SUBJECT: Frac Sand Report

Introduction

This memo is meant to provide information on frac sand activities in Winona – specifically in preparation for the January 9, 2012 special Council meeting. The following report represents staff's most up to date information on frac sand mining and processing in the City of Winona. This report was created in response to Council concerns and questions regarding frac sand mining and processing in the City.

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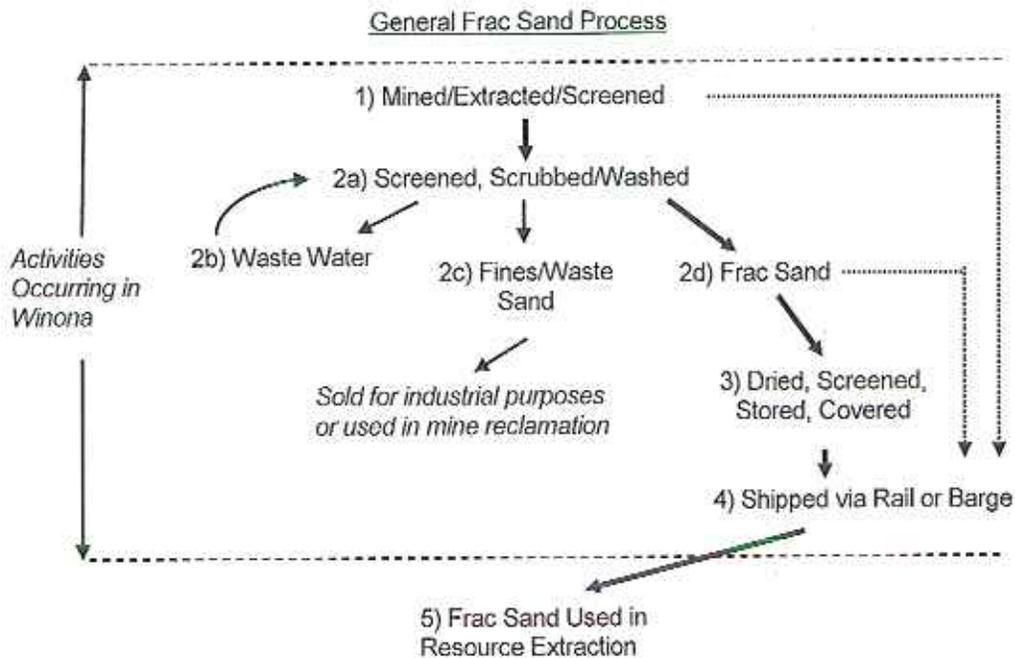
Attachments:

- 1) Map: Existing and Proposed Frac Sand Operations in Winona
- 2) Air Quality Report

Existing and Proposed Operations

The attached map shows the existing and proposed frac and operations in the City of Winona. It is important to note that all activities have been treated as permitted or grandfathered uses in the zoning districts where they are located (see zoning discussion below). As a result, the existing activities have not required formal public hearings or approval by Council. This is in contrast to the current frac sand mining Conditional Use Permit applications in Winona County requiring public hearings and approval by the County Board.

Currently, frac sand activities in Winona generally fall into three categories: 1) Mining/extraction, 2) Processing/washing, and 3) Drying/shipping (see attachment one). These activities are shown as part of the general frac sand process below:



Two main parties are involved in Winona's existing frac sand operations. The first is Steve Kohner of Winona Aggregate in coordination with the owners of Biesanz Stone Company and Sierra Frac Sand – a company from Texas. In Winona, this party receives sand from the Biesanz quarry and from Wisconsin. The sand is mined and processed in Winona then shipped out of state. Some of the sand is washed before shipping and some is not.

The second party consists of Bob Hemker of BRANNT Valley Excavating and Rich Mikrut of Mikrut Properties LLLP in coordination with Arepet Sand Ventures – a company from Texas. This party receives sand from Wisconsin and other sources, washes it in Winona, and then ships the sand out of state.

Mining/Extraction

Active:

- 4600 Goodview Road – Biesanz Quarry

The frac sand mining/extraction activities in the City of Winona are occurring at the Biesanz quarry. The mined sand comes from the Jordan sandstone formation. In order to reach the frac sand, blasting through 40 feet of fractured limestone has occurred. Once the Jordan formation is reached, minor blasts are often utilized to break up the sandstone. When the sand is mined, it has a 5-15% moisture content.¹ At the mine site, the sand is passed through an initial screener before being sent to the washing site at 6930 West 5th Street in Minnesota City.

At this time, it is staff's understanding that any future expansion of the Biesanz mine will not encroach on Knopp Valley residential properties (measured from top of bluff to property lines). Any future expansion of the mine onto adjacent properties will require Agricultural (A-G) zoning and a Conditional Use Permit (CUP). The existing mine property does not have a CUP. Staff is currently working with the City Attorney on how the property (without a CUP) should be handled.

The Biesanz quarry is subject to numerous regulations from a number of regulatory agencies. The regulations include:

- Overall workplace/operational activities regulated by the Mine Safety and Health Administration (MSHA) and the Occupational Safety and Health Administration (OSHA). Compliance visits are unannounced.
- Air Quality – Ambient (outdoor) air quality is monitored by the Minnesota Pollution Control Agency. MPCA renewed Biesanz's permits approximately 1 year ago.

¹ Moisture content is important because it determines the potential for particulate emissions (dust) from sand processing. See page 14 for detail on moisture content throughout sand processing activities in Winona. Sand is considered wet at greater than 3% moisture content. Basically, sand with a moisture content lower than .5% has the greatest potential to create dust.

- Water – MPCA regulates storm water/water runoff from the mining site. The MPCA also regulates the stone fabrication water treatment process in Biesanz's manufacturing operations.
- Vibration control – Regulated by the Office of Surface Mining with the assistance of the State Fire Marshall. Explosives use is regulated by Bureau of Alcohol Tobacco and Firearms.
- Quarry Noise – Regulated by Mining Safety and Health Administration (MSHA).
- City Blasting Permit - Application contains the operator's contact information, trained personnel, emergency response plan and evidence of liability insurance not less than \$5,000,000, schedule of estimated blasting, location of the blast area and communication plan.

Processing/Washing

Active:

- 6930 West 5th Street in Minnesota City
- 2100/2121 Goodview Road

Proposed:

- 1280-1330 Frontenac Drive

When frac sand is processed, screens and water are used to remove waste from raw mined sand. The waste includes large rocks and aggregate as well as small sand fines, leaving only frac sand at the end of the process. The washing process removes 15 - 20% of the material in raw sand. After the frac sand is washed, it has a 15 - 25% moisture content (i.e. "sopping" wet). The wet sand is then sent to shipping facilities.

There is typically a small amount of large waste material (due to initial screening at mine sites). The majority of the waste material is sand fines and clay which are pumped into closed-loop ponds to naturally settle. After the waste sand/material is separated, it is either sold for industrial purposes or used in mine reclamation.

Drying and Shipping

Active Shipping:

- Property East of 70 Gould Street
- Port Authority Dock
- 370 West Second Street

Proposed Drying and Shipping:

- 25 McConnon Drive

Frac sand can be shipped unprocessed, processed/washed, or when dry. At this time no dry frac sand is being shipped from Winona. The sand that is shipped is either unprocessed or washed. This means that the sand is still relatively wet when it leaves Winona. Most of the sand shipped from Winona goes south to the Texas/Oklahoma area.

The proposed drying and shipping facility at 25 McConnon drive has site plan approval. The owner, Rich Mikrut, is in the process of prepping the facility. At 25 McConnon Drive, wet frac sand will be delivered and stockpiled, then brought indoors via conveyor belt. Once inside, the wet sand will run through drying and sorting machinery before being stockpiled in an enclosed building. Finally, the dry sand will be loaded onto sealed railcars via conveyor belt. The MPCA has issued an air quality permit for the sand drying machinery at the facility.

City Regulations

The City regulations that apply to frac sand mining and processing include zoning, noise thresholds, truck routes, and site plans.

Zoning

Frac Sand operations are permitted in the specific zoning districts listed below:

Mining and Extracting:

- A-G (Agricultural) District with Conditional Use Permit (CUP)

Processing (Washing/Scrubbing, and Drying, Screening, Storing):

- A-G (Agricultural) District with Conditional Use Permit (CUP)
- M-2 (General Manufacturing) District in accordance with performance standards (noise, dust, etc.)
- M-1 (Light Manufacturing) District provided all processing activities are enclosed and in accordance with performance standards

The general characteristics of frac sand mining and processing (i.e. heavy industrial use, outdoor equipment, outdoor operations) basically relegate the uses to Agricultural (A-G) and M-2 General Manufacturing zones.

The mining activity at Biesanz Stone and the sand processing activity at 2100/2121 Goodview Road are located in the A-G district, but do not have Conditional Use Permits (CUPs). Since Biesanz Stone's property was already being used for mining when Winona Township was annexed into the City (1996) and 2100/2121 Goodview Road was used for aggregate processing prior to frac sand, staff has treated the sand mining and processing operations as conforming uses grandfathered in at their current locations. However, staff is working with the City Attorney to define exactly how these uses (without CUPs) should be handled.

All other existing and proposed frac sand processing and shipping uses are in the M-2 zoning district. The M-2 zoning district permits heavy industrial uses and requires Conditional Use Permits for uses that are "dangerous or offensive" (e.g. bleaching, cleaning and dyeing plants, foundries, sawmilling, paper manufacturing, etc.). Such dangerous or offensive uses are required to undergo a performance standard review process through the Board of Adjustment. In the review, a report by specialists may be required, and results of the process are transmitted to Council. Because staff has not classified frac sand processing as "dangerous or offensive," existing frac sand operations have not been required to go through this process. However, if at any time such uses are in violation of performance standards (related to dust, fire and explosion hazard, vibration, smoke, etc.) formal review may be required.

Performance Standards

Performance standards are meant to help control dangerous or offensive emissions from all land uses in the City. If a performance standard is alleged to be violated, staff investigates and typically resolves the issue with the property owner without formal review of the purported violation. However, formal review (through the performance standards procedure mentioned above) may be required if the violation is not solved.

Miscellaneous Zoning Regulations

Other parts of the zoning code also apply to sand mining and processing. In particular, regulations for parking areas and driveways require that surfaces are reasonably maintained. This means that gravel driveways (or maneuvering areas) may not create excessive dust (which travels to neighboring properties) or mud/debris that is tracked out onto adjacent roads. Staff has referenced this regulation along with state statutes pertaining to material spillage in working with frac sand operations at 2100/2121 Goodview Road and 370 West Second Street to clean up debris on adjacent roads. Staff is currently working with the operators of 370

West Second Street to hard surface driveways on the property. This will help reduce dust created onsite and debris tracked out of the operation.

Noise Thresholds

City Code Chapter 39 regulates noise pollution by zoning district. At this point, the A-G zone is not listed in the chapter, but staff would suggest listing it along with other omitted zones (R-S, R-R, R-1.5 – see Next Steps Section). All other zones are included – meaning all frac sand operations in the M-2 zone are subject to the noise regulations. The noise regulations require such uses adjacent to residential districts to be relatively quiet between the hours of 10 p.m. and 7 a.m. The regulations are in decibels measured over the course of an hour. In general, an increase of 10 decibels is perceived to be twice as loud. See below for the decibel requirements:

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

<u>Zoning District</u>	<u>Day (7 a.m. - 10 p.m.)</u>		<u>Night (10 p.m. - 7 a.m.)</u>	
	<u>L₅₀</u>	<u>L₁₀</u>	<u>L₅₀</u>	<u>L₁₀</u>
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	75	80	75	80

Truck Routes

Truck routes are established in Chapter 61 Table G of the City Code. Truck routes run on and connect to arterial roads (see attachment one). Deviations off truck routes are permitted to reach individual businesses. Truck routes are rated for up to 80,000 pounds gross weight with a maximum of 10 tons per axle. Staff is currently working with the City Attorney on how to establish designated truck routes for the frac sand operations in Winona (see Next Steps Section).

Site Plans

Site plans are required for any new development in accordance with City Code Chapter 44.06. There is no definition of development, but staff generally requires site plans for land use changes and construction of buildings. In the site plan approval process, staff ensures that site planning, zoning, public works, fire, and police requirements are met for developments. Site plan approval is required before the issuance of a building permit. In accordance, the typical trigger for a site plan review is the construction of a new building. The existing frac sand operations did not undergo site plan review for three reasons:

1. Each involves relatively similar uses to those previously existing.
2. No buildings have been erected.

3. There have been no new connections to public utilities.

The proposed frac sand operations at 25 McConnon Drive and 1280-1330 Frontenac Drive require site plan review. The site plan for 25 McConnon Drive was approved in May of 2011. A site plan for 1280-1330 Frontenac Drive has yet to be submitted.

State Regulations

The health concerns surrounding frac sand center on air pollution and water pollution. Both areas are typically regulated by the state Department of Natural Resources and/or the Minnesota Pollution Control Agency (MPCA). The air pollution concerns are mainly with the generation of crystalline silica. The water concerns center on the potential pollution of groundwater, surface water, and water runoff.

Air Pollution Discussion

When sand is mined or processed dust is created. The dust comes from disturbance and creation of small particles which become airborne. Although dust may range from 1 micron to 1 millimetre diameter,² the primary health concerns are with dust particles less than 10 microns (1/7th the diameter of a human hair). Particles of this size are small enough to be inhaled into the deepest part of the lungs. This size of dust is referred to as PM10 (particulate matter smaller than 10 microns). Sources of PM10 emissions include:

1. Motor vehicles
2. Wood burning stoves and fireplaces
3. Dust from construction, landfills, and agriculture
4. Wildfires and brush/waste burning
5. Industrial sources
6. Windblown dust from open lands³

When PM10 is created through frac sand mining and processing, a certain portion of the particulates may be crystalline silica dust. For many years, excessive exposure to crystalline silica dust in the workplace has been linked to adverse health effects such as silicosis and regulated accordingly.⁴ However, the health risks of silica in the ambient (outdoor) air are not proven. According to the American Chemistry

² Dust: particles of solid material in the broad size range of 1 micron to 1 millimetre diameter. Anything of a larger particle size is too heavy to remain airborne. See: page 13 for a table of dust and sand sizes.

³ See: <http://www.arb.ca.gov/html/brochure/pm10.htm>

⁴ According to the Wisconsin DNR, "Silicosis is a chronic, progressive inflammatory and fibrotic (i.e. causes lung scarring) disease of the lung." See page 15 for a discussion of different types of silicosis resulting from different exposure levels.

Council, "there is no evidence indicating that concentrations of crystalline silica in the ambient air have caused silicosis or any other silica-related disease in the general population."⁵ Nevertheless, various governmental organizations have set benchmark levels for exposure to crystalline silica to help prevent potential health effects.⁶

The benchmark levels of safe silica exposure vary widely, but perhaps the most widely circulated standard is the 3ug/m³ (3 micrograms per cubic meter) exposure level adopted by California's Office of Environment Health Hazard Assessment. This "three micrograms per cubic meter" standard is a weight/mass measurement based on an annual average (exposure may be more or less on a daily basis, but should average out to less than the 3ug/m³ standard at the end of the year). This standard is for PM 4 size particles (particles less than 4 microns in diameter). Two main issues with this standard are that "there are no generally accepted methods for monitoring PM 4 in ambient air", and "there is no standard method for monitoring crystalline silica in the ambient air."⁷ However, there are federal and state methods and standards for monitoring PM10 (which would include PM 4 crystalline silica size particles).⁸

A 1996 report by the Environment Protection Agency stated that it's reasonable to assume 10% of PM10 in the United States is crystalline silica.⁹ Based on this percentage, a corresponding "safe" exposure level would be 30ug/m³ annual average PM10 (10% of 30ug = 3ug – the California standard mentioned above).¹⁰ The existing state air quality standard of 50ug/m³ enforced by the MPCA comes very close to this standard. In fact, the EPA has estimated that risk of silicosis to healthy populations continuously exposed to the existing state standard for seventy (70) years is less than one percent (1%).¹¹ In Winona, the fact that most frac sand is processed and transported wet (greater than 3% moisture) greatly mitigates the potential for PM10 (and crystalline silica) emissions from frac sand operations.

When sand is mined and processed there is the potential for PM10 emissions from blasting (initial breaking apart of sand), conveying, screening, transportation, and storing the product. However, if the sand is continually wet during these processes,

⁵ Wisconsin Department of Natural Resources. *Report to the Natural Resources Board: Silica Study*. 9/30/2011. Pg. 54. Available at: <http://dnr.wi.gov/air/pdf/finalsilicareport.pdf>

⁶ See above pg. 11.

⁷ See above pg. 1 and 14 respectively.

⁸ See pages 15-16 for a listing of state and federal PM ambient air regulations.

⁹ US EPA. *Ambient Levels and Noncancer Health Effects [i.e. silicosis] of Inhaled Crystalline and Amorphous Silica*. 1996. Pg. 3-30. Available at <http://www.epa.gov/NCEA/pdfs/0604.pdf>

¹⁰ Pierce, Crispin. *Health Risks of Frac Sand Mining and Processing*. Presentation at the 2011 National Environmental Health Association meeting. Available at: <http://people.uwec.edu/piercech/presentations.htm>

¹¹ Regis, Linda. *From the Sandbox to Sandblasting: Regulation of Crystalline Silica*. 17 Pace Envtl. L. rev. 207 (1999). Pg. 24. Available at: <http://digitalcommons.pace.edu/pelr/vol17/iss17/>

"process emissions are often negligible."¹² These facts are supported by air testing results from existing frac sand operations in Winona.

Air quality monitoring for particulate emissions was completed December 2, 2011 for three frac sand operations in the Winona area: the Biesanz quarry, Winona Aggregate, and the Modern Transport Rail Loading Terminal. The monitoring was conducted by a certified industrial hygienist and analyzed by a laboratory from East Syracuse, New York. The results of the air testing show *no crystalline silica was detected*, and all *PM10 results were within EPA guidelines for 24-hour exposure* (see attachment two).

Dry sand with a moisture content .5% or lower has the greatest potential to create dust and particulate emissions. Sand processed in Winona will generally only reach this level of moisture in large quantities after being dried. After going through the drying process, the sand is stored indoors or transported in closed containers and not exposed to the outdoors – thus greatly reducing any potential PM risks to the public.

Staff has submitted questions regarding the measurement of particulate matter and enforcement procedures to the MPCA. The questions submitted were in regard to the air permit already granted to 25 McConnon Drive and MPCA air permits in general. At this time the MPCA is delaying response to these questions because of the number of questions the agency has received regarding frac sand regulation. The agency is currently working on how best to respond to all such inquiries. Answers to these questions are expected by late January at the earliest.

In summary, given the lack of evidence that silica in the ambient air is a public health concern, existing PM regulations, the PM mitigating characteristics of sand processing in Winona, and the air quality test results from existing frac sand operations, it may be premature to set local standards specifically for crystalline silica in Winona ambient air. A more fitting option could be to emphasize conformance with existing state regulations (see Next Steps Section).

Water Pollution Discussion

Concerns about water pollution center on groundwater, surfacewater, and water runoff.

Concerns about groundwater contamination are generally attached to mining operations. The Biesanz quarry is the only mining operation active in the City of Winona. The DNR is only involved with mining applications over 100,000,000 gallons and none are active or have been proposed in Winona County. In regard to

¹² US EPA. Emission Factor Documentation for AP-42 Section 11.19.1 Sand and Gravel Processing. Final report. 1995. Pg. 2-11. Available at: <http://www.epa.gov/ttn/chieff/ap42/ch11/bgdocs/b11s19-1.pdf>

frac sand mining, Bruce A. Brown of the Wisconsin Geological Historical Survey stated the following at an August 2011 Barron County, Wisconsin Board meeting: "Sand mining has the same potential for groundwater impact as a limestone quarry or gravel pit. They're not using any noxious chemicals in the mining process. They're basically just digging the stuff out and usually hauling it away."¹³ Details related to groundwater and the Biesanz quarry will be researched and provided as part of the newly formed Blasting Committee's review of operations at the mine site.

Concerns about surface water are generally attached to sand processing/washing. However, both of the existing sand processing/washing operations in Winona are closed-loop systems with no discharge into surrounding surface waters (e.g. the Mississippi). In these systems, the sand fines are washed out of the frac sand and then released along with the wash water into the closed-loop settling ponds. Here, the fines naturally settle without the use of flocculants (i.e. chemicals). The water from the settling ponds is then reused in the washing process with no discharge into adjacent surface waters. If any sand washing operations are using flocculants, MPCA approval is required. City staff will work with future washing operations to ensure all applicable permits are obtained and surface water is not impacted.

Basically any commercial project which disturbs land requires some type of stormwater management (water runoff) plan. If the proposed project disturbs one acre or more, a permit is required by the MPCA – in other cases, the City's engineering department issues a permit.

Transportation

The mining and processing of frac sand involves a significant amount of transportation by truck. In Winona truck traffic is relegated to truck routes. Deviation from a truck route is only permitted to reach a specific place of business outside of the nearest route. City staff is currently working with the City Attorney to explore the option of requiring frac sand traffic to stay on specific routes.

Another consideration regarding transportation is how to account for the wear and tear on City roads from the trucks traveling to and from Winona. This complex subject is most likely part of a region-wide discussion due to the origins of trucks/locations of mines and the routes used to enter Winona. Staff will be taking part in a January meeting with region-wide planning and zoning officials to begin discussing this topic.

One concern about frac sand related truck traffic entering Winona from Wisconsin has been the ability of the interstate bridge to handle the increased traffic and

¹³ "Geologist Talks Sand to County Board." Retrieved 11/14/2011 from: <http://www.ricelakeonline.com/main.asp?SubSectionID=208&ArticleID=22316&SectionID=6>

corresponding weight loads. The weight limit for the bridge is 40 tons (80,000 lbs.) per truck. Mn/DOT is responsible for monitoring this limit. According to data from August 15-21, 2011, a total of 80,200 vehicles crossed the bridge during this time period. A total of 425 of these vehicles were over 80,000 lbs. in gross vehicle weight. Of the 425 overweight vehicles, 29 vehicles were over 90,000 lbs. Staff continues to work with the state to ensure Mn/DOT is aware of the traffic levels on the bridge.

Another concern about the transportation of frac sand is the covering of semi-trailers loaded with sand. According to Minnesota Statute 169.81, trucks carrying sand must be covered if:

- (1) the vertical distance from the top of an exterior wall of the cargo compartment to the load, when measured downward along the inside surface of the wall, is less than six inches; or
- (2) the horizontal distance from the top of an exterior wall of the cargo compartment to the load is less than two feet.

These provisions mean that not all trucks carrying frac sand are required to be covered. Nonetheless, staff has observed that a great majority of the trucks carrying frac sand are covered.

Direct Jobs Created

The number of new jobs includes approximately 36 new positions in frac sand operations and 17+ new jobs in trucking. The jobs in frac sand operations have an approximate yearly wage of \$50,000+.

Miscellaneous Questions and Answers

What is frac sand?

Frac sand is 99% quartz. This is different than "normal" sand which is 50 – 70% quartz. Quartz is very hard mineral composed of silica, SiO₂, found worldwide in many different types of rocks. Quartz is the most common mineral in earth's crust.

Frac sand has a round shape. When used in hydraulic fracking, the roundness allows natural gas or oil to escape through "fractures" made in shale formations. The roundness of frac sand also helps it to withstand the high amounts of pressure used in fracking.

What is the size of frac sand in comparison to visible dust and particulate matter?

Note: 1 micron is equal to .001 millimeters (mm)

Description	Size	Misc. Info
<i>Dust</i>	<i>1 micron to 1 millimeter (mm)</i>	<i>Anything larger than 1 millimeter is too large to become airborne. Particles are visible at .04 millimeters.</i>
PM 2.5 (Fine Particulates)	Less than 2.5 microns 2.5 microns = .0025 (mm)	Finest particulates of most danger. Includes clay and very small silt particles.
PM 10 (Respirable dust)	Less than 10 microns. 10 microns = .01 (mm)	1/7 th the diameter of human hair. Includes clay and small silt particles. Particles not visible to naked eye.
Very Fine Sand	.05 - .1 (mm)	Floats in air when wind blows at 12 mph. Particles visible to naked eye.
Fine Sand	.10 - .25 (mm)	Moves in hopping motion when wind blows at 12 mph
Medium Sand	.25 - .5 (mm)	Includes common frac sand sizes. Most widely used frac sand size is .42 - .84 (mm) ¹⁴
Coarse Sand	.5 - 1 (mm)	Includes common frac sand sizes. Most widely used frac sand size is .42 - .84 (mm)

Will Frac Sand blow off stockpiles, trucks, or railcars?

The sand grains typically used for frac sand are considered to be medium to large/coarse sized sand particles (.25 mm to 1 mm) which are less likely to become airborne dust. Fine sand grains (less than .25 mm) are more likely to become airborne simply because of their size. Based on staff's observations, the dust

¹⁴ See: http://www.victorynickel.ca/_resources/frac-sand_article.pdf

associated with frac sand is coming from disturbance of these finer grains or smaller particles from trucks traveling over dry gravel or hard-surfaced roads with excess debris on the road surface.

Additionally, regardless of the sand size, a majority of the sand traveling through Winona is in a relatively wet state (greater than 3% moisture). Above this level of moisture even very strong winds are unable to move sand grains.¹⁵ Another consideration is that it generally takes a number of days (i.e. 3+) for a stockpile of sand to begin drying out to less than 4-5% moisture. To help reduce the potential for sand blowing off such stockpiles, one option is to require covering for stockpiles that are not being disturbed (see Next Steps Section).

As discussed previously, trucks carrying frac sand are required to be covered in most instances, and truck operators are required to clean the rear gates of trucks after unloading sand.

The frac sand loaded on rail is leveled off at the top of the railcar to help prevent sand from blowing off during transport. Staff is not aware of any regulations for covering such railcars.

It should be noted (as discussed previously), that once frac sand is fully dried (less than .5% moisture content) it is always covered and kept dry until used in the hydraulic fracturing process.

What is wet frac sand?

Wet sand has a moisture content of more than 3%. At this moisture level, water can be seen running off the material and sand can be easily clumped. Frac sand moving through Winona has the following general moisture content:

- 1) Mined/Unprocessed sand = 5% - 15%
- 2) Washed sand = 15% - 25%
- 3) Stockpiled sand = 5% -15%
- 4) Stockpiled sand during winter 4% -5%

When sand is dried, the moisture content reaches approximately .5%. It is at this point when the potential for dust/PM generation is greatest. Above this moisture percentage, dust generation drops off rapidly. In a 1995 study, researchers found that the dust generation rate of glass beads (i.e. quartz/frac sand) decreased by a factor of 100 (became 100 times smaller) when the moisture content increased from

¹⁵ See: <http://www.calvin.edu/academic/geology/coastaldunes/processes/wetsand.htm>

.5% to 1%.¹⁶ As a result, because frac sand in Winona is generally transported and processed while relatively wet, the potential for PM and crystalline silica dust generation is greatly reduced.

What is silicosis and how is it caused?

According to the Wisconsin DNR, "Silicosis is a chronic, progressive inflammatory and fibrotic (i.e. causes lung scarring) disease of the lung."¹⁷ Silicosis has proven to be a concern to people in occupational (workplace) settings with high, long term exposures to crystalline silica dust without appropriate respiratory protection or dust suppression. There are three types of silicosis:

- 1) Acute - Occurring in workers after 2-5 years of frequent exposure to extremely high levels of silica dust.
- 2) Accelerated – Occurring in workers after 10 or more years of exposure to very high levels of silica dust.
- 3) Chronic – Occurring in workers exposed to fairly high levels of silica dust. Generally does not occur before 20 years of consistent high occupational exposure.

Cases of acute and accelerated silicosis essentially do not occur outside occupational settings.¹⁸ Accordingly, concerns about crystalline silica in the ambient air relate to the potential for chronic silicosis – which takes many years to develop. The acceptable ambient air exposure level from California (3ug/m3) referenced previously is based off data from these documented occupational hazards with a significant safety factor included.¹⁹

What are the existing regulations for particulate emissions?

National and state PM10 standards have been established through amendments to the 1970 National Clean Air Act. National (Environment Protection Agency Standards) are the following:

¹⁶ Plinke et. al. *Dust Generation from Handling Powders in Industry*. American Industrial Hygiene Association Journal (56) 1995. Pg. 255. Available at:

<http://www.unc.edu/courses/2009spring/envr754/001/Plinke.pdf>

¹⁷ Wisconsin Department of Natural Resources. *Report to the Natural Resources Board: Silica Study*. 9/30/2011. Pg. 8.

¹⁸ Hessel, Patrick. *The Potential for Silica-Related Health Effects from the Proposed Liberty Quarry*. 2007. Pg. 6.

¹⁹ See above pg. 7.

National Ambient Air Quality Standards for Particle Pollution			
Pollutant	Primary Stds.	Averaging Times	Secondary Stds.
Particulate Matter (PM ₁₀)	Revoked ⁽¹⁾	Annual ⁽¹⁾ (Arithmetic Mean)	
	150 µg/m ³	24-hour ⁽²⁾	Same as Primary
Particulate Matter (PM _{2.5})	15.0 µg/m ³	Annual ⁽³⁾ (Arithmetic Mean)	Same as Primary
	35 µg/m ³	24-hour ⁽⁴⁾	Same as Primary

Units of measure for the standards are micrograms per cubic meter of air (µg/m³).

Footnotes:

(1) - Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the agency revoked the annual PM₁₀ standard in 2006 (effective December 17, 2006).

(2) - Not to be exceeded more than once per year on average over 3 years.

(3) - To attain this standard, the 3-year average of the weighted annual mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.

(4) - To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³ (effective December 17, 2006).

Notice that the annual PM₁₀ standard has been revoked. The EPA revoked this standard because *available evidence does not suggest a link between long-term exposure to PM₁₀ and health problems.*²⁰ However, state standards do include an annual PM₁₀ standard:

Pollutant/Air Contaminant	Primary Standard	Secondary Standard	Remarks
PM-10	150 micrograms per cubic meter	same as primary standard	maximum 24-hour average concentration; the standard is attained when the expected number of days per calendar year exceeding the value of the standard is equal to or less than one
	50 micrograms per cubic meter	same as primary standard	annual arithmetic mean; the standard is attained when the expected annual arithmetic mean concentration is less than or equal to the value of the

²⁰ See: <http://www.epa.gov/air/particles/standards.html>

			standard
PM-2.5	65 micrograms per cubic meter	same as primary standard	maximum 24-hour average concentration; the standard is attained when the expected number of days per calendar year exceeding the value of the standard is equal to or less than one
	15.0 micrograms per cubic meter	same as primary standard	annual arithmetic mean; the standard is attained when the expected annual arithmetic mean concentration is less than or equal to the value of the standard

According to the MPCA, "No facility may emit any pollutant in such an amount or in such a manner as to cause or contribute to a violation of the[se] standard[s]," and "The Minnesota Pollution Control Agency (MPCA) may request that a facility provide information necessary to demonstrate compliance with ambient air quality standards."²¹

Next Steps

Given the information discussed above, one option is for Council to draft specific language pertaining to sand washing and processing for inclusion in the M-2 zoning district. Because of the non-hazardous qualities of sand processing, staff would suggest incorporating sand processing into the M-2 zone as a permitted use subject to certain provisions. In this manner, sand processing facilities would not be required to obtain a Conditional Use Permit, but would be required to comply with such provisions. The provisions would apply to new/proposed sand processing facilities. Staff is currently working with the City Attorney to determine how such provisions would be applied to existing uses, but that said, provisions 1), 3), and 4) below could essentially be applied if existing frac sand operations are in violation of existing ordinances:

1. Hard Surfacing – In order to reduce the potential for dust generation, asphalt or concrete could be required in any truck or equipment maneuvering area.
2. Stockpile Covering – To reduce the potential that stockpiled sand is blown by the wind, covering could be required for stockpiles that are not disturbed for greater than 1 week.

²¹ MPCA. Facts About General Air Quality Rules. 2003. Available at: <http://www.pca.state.mn.us/index.php/view-document.html?gid=2082>

3. Hours of Operation – To help ensure compliance with noise regulations, hours of operation may be limited to 7 a.m. - 10 p.m. Related to this, the A-G, R-S, R-R, and R-1.5 zoning districts should be added to the noise ordinance.
4. Air Monitoring – As discussed above, it may be premature to set local standards specifically for crystalline silica in Winona ambient air. However, the City could emphasize conformance with existing state ambient air regulations for PM 2.5 and PM10, and require that air quality reports submitted to the state be transmitted to the City. This would entail further discussion with the MPCA.

In addition, (as mentioned previously) staff is examining how to designate specific truck routes for each sand facility. These routes would be agreed to and placed on record at City Hall.

It's important to note that the public discourse and the coordination of regulatory approaches to frac sand activities are ongoing. As a result, the next steps discussed above represent only preliminary options for regulatory actions. As the discussion progresses, staff expects to modify such options in order to best suit the needs of the City of Winona.

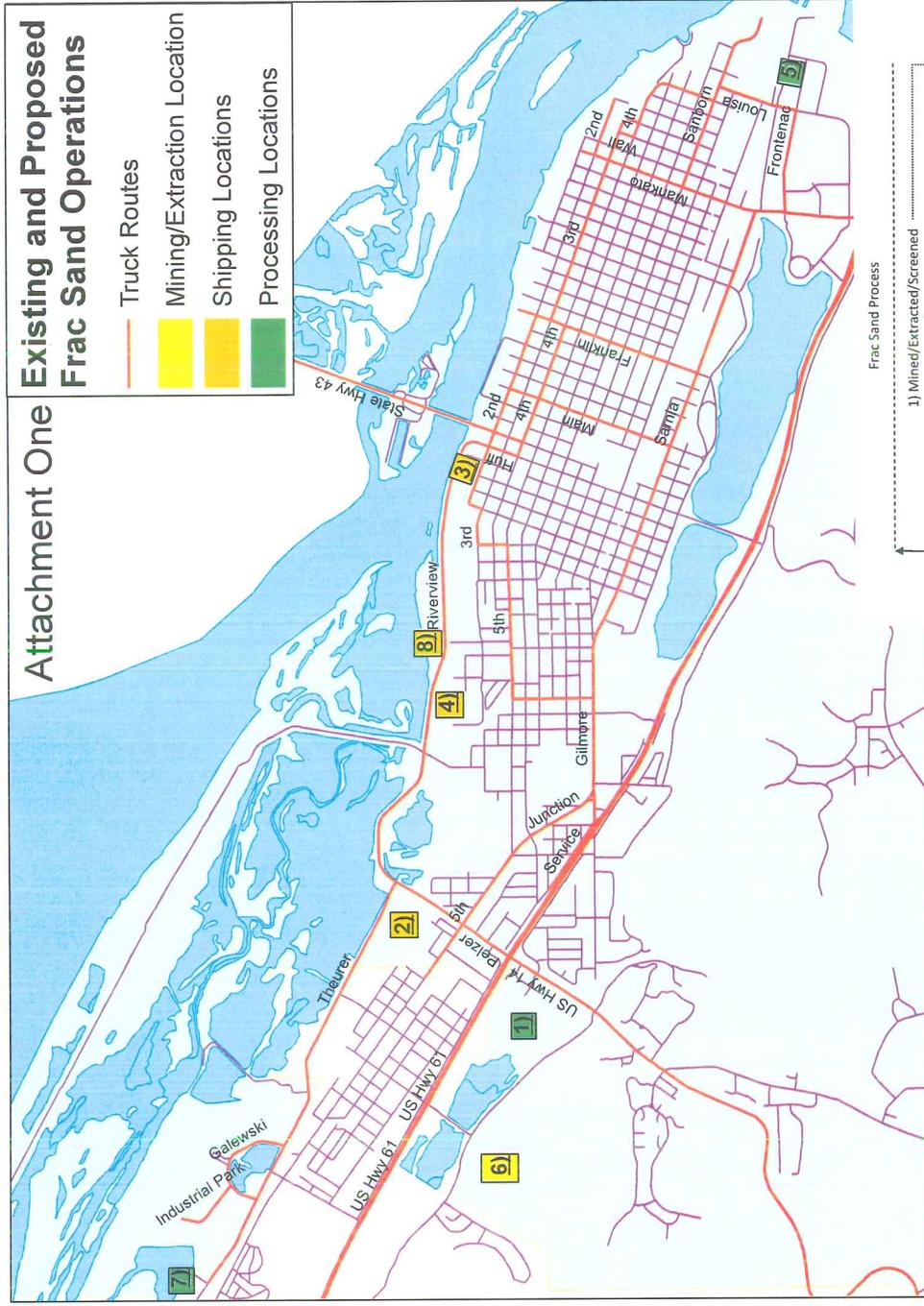
Attachments:

- 1) Map: Existing and Proposed Frac Sand Operations in Winona
- 2) Air Quality Report

Active and Proposed Frac Sand Operations in Winona January 2012

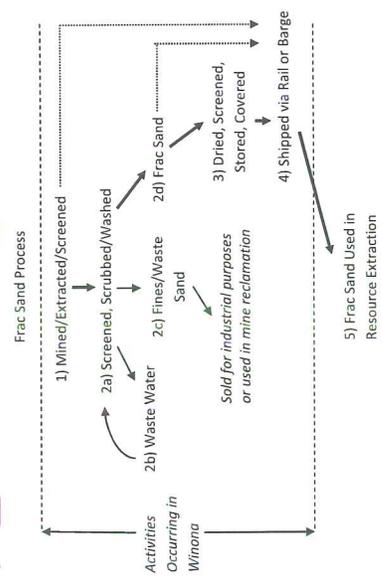
Numbers Match Locations on Map:

- 1) **Active:** 2100, 2121 Goodview Road
Company/Individual: Bob Hemker
Activities Occurring: Scrubbing/washing, then sent to number 4) for shipping
Zoning: A-G (Agricultural)
- 2) **Proposed:** 25 McConnon Drive
Company/Individual: Rich Mikrut
Activities to Occur: Drying, screening, sorting, storage, and shipping via rail
Zoning: M-2 (General Manufacturing)
- 3) **Active:** 370 West Second Street and Parcel 32-104-0050
Company/Individual: Steve Kohner
Activities Occurring: Washed and unwashed sand shipped via rail
Zoning: M-2 (General Manufacturing)
- 4) **Active:** Property East of 70 Gould Street
Company/Individual: Rick Mikrut
Activities Occurring: Washed sand shipped via rail
Zoning: M-2 (General Manufacturing)
- 5) **Proposed:** 1280-1330 Frontenac Drive
Company/Individual: Bob Hemker
Activities to Occur: Scrubbing/washing
Zoning: M-2 (General Manufacturing)
- 6) **Active:** 4600 Goodview Road/Biesanz Stone Company
Company/Individual: Biesanz Stone Company
Activities Occurring: Mining/extraction and screening, then sent to number 7) for washing
Zoning: A-G (Agricultural)
- 7) **Active:** 6930 West 5th St., MN City
Company/Individual: Steve Kohner
Activities Occurring: Scrubbing/washing, then sent to number 3) for shipping
Zoning: N/A
- 8) **Active:** Port Authority Dock
Company/Individual: Winona Port Authority
Activities Occurring: Washed or unwashed sand shipped via barge
Zoning: M-2 (General Manufacturing)



Attachment One Existing and Proposed Frac Sand Operations

- Truck Routes
- Mining/Extraction Location
- Shipping Locations
- Processing Locations



Frac Sand Routes into Winona:
1) Highway 43/Interstate Bridge
2) Highway 61
3) Highway 14

Zoning Regulations for Frac Sand Operations:

- 1) Mining and Extracting - A-G (Agricultural) District with Conditional Use Permit (CUP).
- 2) Processing (Washing/Scrubbing and Drying, Screening, Storing): - M-2 (General Manufacturing) District in accordance with performance standards (noise, dust, etc.) - M-1 (Light Manufacturing) District provided all processing activities are enclosed and in accordance with performance standards.

PLANNING COMMISSION

AGENDA ITEM: 4. Public Hearing – Amendments to Sensitive Land Development/Other Code Sections

PREPARED BY: Mark Moeller

DATE: February 13, 2012

During the past number of months, the Commission has been developing the attached proposal that would, if adopted, serve to amend various City Code Sections. Of these, the more significant will be to Section I, Appendix 1, Chapter 42 (Subdivision Ordinance), commonly referenced as the Sensitive Land Development Ordinance. Again, although this ordinance has served as the City's primary environmental protection tool during the past decades, its role has changed to a more secondary role with the recent adoption of ordinances related to Stormwater Management, Shoreland, and Bluff Protection. Environments that were previously defined and protected solely through subdivision Natural State Areas (NSA) are now "more broadly" preserved through these new ordinances. Given this shift, the Sensitive Land Ordinance is being amended to reflect standards/provisions of these new ordinances. Although these changes will reshape how environments are defined and administered, the revised Sensitive Land Development Ordinance will continue to rely on the NSA concept to protect these environments through the platting process.

For Commission reference, staff has prepared a document, following the attached code amendment proposal, which presents a section by section discussion of changes, and rationale for them.

Following its consideration of the full record of this proposal, should the Commission find that it is appropriate, a motion recommending approval should be forwarded to City Council.

Attachments

I. ENVIRONMENTALLY SENSITIVE LANDS DEVELOPMENT ORDINANCE

1. Purpose and Intent

~~The purposes of the Environmentally Sensitive Lands Development Ordinance are to identify and protect environmentally sensitive lands in the City and to promote the public health, safety, and welfare by providing appropriate and reasonable controls for the development of such lands. Regulations of this ordinance are intended to:~~

In part, the City of Winona's identity is defined by a strong natural setting that, without limitation, includes forested bluffs and valleys, rivers and streams, and a diversity of plant and animal habitats. Pursuant to goals and objectives of the City Comprehensive Plan, the preservation of these natural resources for future generations, is highly recommended. The intent of this ordinance is to promote methods of conservation that will serve to achieve these goals, as well as those purposes of City Code Section 43.03, through the land platting process.

- ~~1. — Protect people and property from hazardous conditions characteristic of environmentally sensitive lands and their development. Such hazards include rockfalls, rolling boulders, other unstable slopes, flooding, flood-related mudslides, subsidence, erosion, sedimentation, and unstable soils.~~
- ~~2. — Protect and conserve significant natural and visual resources. Such resources include major rock outcrops, major ridges and peaks, wildlife habitat, unique vegetation, significant riparian habitats, wetlands, and rare and threatened species.~~
- ~~3. — Protect the quality of resources, such as water quality, air quality, soils, and natural vegetation.~~
- ~~4. — Minimize the public costs of providing public services and facilities, such as streets, water, sewer, emergency services, sanitation services, parks, and recreation.~~
- ~~5. — Ensure that decisions regarding development in environmentally sensitive areas are based on the most complete and accurate information available.~~
- ~~6. — Minimize the negative impacts of development by controlling their location, intensity, pattern, and design.~~
- ~~7. — Retain the visual character of the natural landscape to the greatest extent feasible by regulating grading location, design, and treatment.~~
- ~~8. — Maintain significant open spaces that provide view corridors and land-use buffers, protect landmarks, and maintain the City's natural setting.~~
- ~~9. — Protect environmentally sensitive lands, while also recognizing the legitimate expectations of property owners and the City's overall economic goals.~~
- ~~10. — Encourage innovative planning, design, and construction techniques for development within environmentally sensitive areas.~~

2. Natural State Areas (NSA) Established

The following environments shall be designated as NSA on any approved preliminary or final plat:

- * Any delineated wetland that is not to be impacted, or otherwise replaced, pursuant to MN Rules Chapter 8420.
- * Land located within a defined Bluff Impact Overlay District.
- * All lands located within 100 feet from the normal high water mark of any Special Water river or stream, as defined per Section 69.04. ~~In the case of all other water bodies listed, shore impact zones shall be NSA.~~ This requirement does not apply to water crossings, or limited water access if documented pursuant to requirements of Section 68.07 (K) (8).
- * Any other environment that is, following special study, or by state/federal law, required to be maintained in an undisturbed condition.

~~Land designated as Natural State Areas (NSA) shall be set aside, and maintained, as permanent undisturbed open space.~~

Once designated ~~on either an approved preliminary or final plat~~, no person shall conduct any ~~activity that would disturb topographic soil, or vegetative conditions of the NSA from those conditions which existed at the time of plat approval. The term "disturb" includes, but is not limited to, grading, filling, excavating, the constructing buildings, fences, driveways, sidewalks, patios, retaining walls, and public/private utilities on, or the cutting, mowing or removal of dead or living vegetation from the area, unless in conformance with Section 4.~~ land disturbance activity, within an NSA, unless in accordance with this section. The term "Land Disturbance Activity" shall be defined as a change in the use of land that would result in any form of topographic modification, increase in impervious surface coverage, or vegetative alteration. Land disturbance activity shall include, but not be limited to:

- a. Any extent of grading, grubbing, filling, and excavating.
- b. The construction of any structure, building, impervious walk/path, swimming pool, deck, patio, driveway, street, retaining wall, and public/private utility.
- c. The establishment of formal lawns and gardens, or the cutting, thinning, and/or removal of existing living and dead vegetation.

~~This term shall not include the removal of diseased or dead vegetation, nor to home lawn, garden and landscaping maintenance activities established prior to NSA designations of a property.~~

This term shall not include:

- A. Any NSA site condition representing an immediate safety hazard to persons or property. ~~The City Planner, following consultation with qualified people, shall document such a hazard. Once documented~~ Following documentation of the hazard by the City Planner, or designated representative, the underlying property owner of the NSA shall be responsible for its immediate correction. This action may employ any reasonable method ~~provided that is consistent with the intent and purpose of this section, and will result in the least possible intrusion on remaining NSA lands~~ necessary to mitigate the

hazard, provided that adjacent NSA lands are not impaired. Should the property owner fail to correct the hazard, it may be abated in accordance with provisions of Chapter 32.

- B. The removal of noxious weeds, as defined by Minnesota Rules Section ~~1505.0730~~1505.0751, Subp. 8, from a designated NSA, provided that the method of removal is by hand pulling, hand cutting, and/or the hand application, excluding sprays, of appropriate herbicides. If the method of noxious weed removal involves the use of motorized or mechanical equipment, spraying, or the disturbance of vegetation which is not classified as noxious, ~~Planning Commission~~ approval shall be required pursuant to subpart 4.

~~Land designated, as NSA, shall be maintained as permanent natural open space. Once established on the approved final plat, no person shall fill, excavate, construct buildings, fences, driveways, retaining walls, public/private utilities on, remove dead or living vegetation from, or mow, the area, unless in conformance with Section 4.~~

~~For purposes of this section, Natural State Areas shall include those environments specified within either Table A or B below:~~

TABLE A

(Natural State Area Requirements – All Environments)

~~100 Percent of the following environmental conditions shall be set aside as Natural State Areas (NSA):~~

- ~~— Defined wetlands~~
 - ~~— Watercourse floodways~~
 - ~~— Rare plant and animal habitats, as defined by Minnesota County Biological Survey (1996)~~
 - ~~— Shoreland Corridors as defined in the following schedule:~~
- | | |
|--|--|
| Average Slope within 100 feet from the Outer Limits of an Adjacent Floodway | *Width of Natural State Corridor – from Outer Limits of Adjacent Floodway |
| 11-29% | 0- 10% 50 Feet |
| 30%+ | 75 Feet |
| 30%+ | 100 Feet |
- ~~— Slopes with average grades exceeding 30% – See Table B~~

~~*Excluding public access to or over the water body provided that the purpose and intent of this section is complied with to the greatest extent possible.~~

TABLE B

Natural State Requirements-B Slopes

~~In addition to the requirements of Table A, whenever a subdivision is proposed in an area in which the average slope off any lot is 10 percent and above, the following schedule shall be required for calculating Natural State Areas. Natural State requirements shall be applied to the development site as on a lot-by-lot basis:~~

~~_____ Natural State Area~~

<u>Percent Average Lot Slope</u>	<u>*Requirement Percentage</u>
10-14	30
15-19	35
20-24	45
25-29	65
30+	100

~~*The calculation of average slope shall be determined by use of the following formula:~~

$$\text{Average Slope} = \frac{.0023 \times I \times L}{A}$$

~~I = Contour interval (in feet)~~
~~L = Total length of contour lines (in feet) within subject parcel~~
~~A = Area (acres) of subject parcel~~

~~The intent of this section is that development should be permitted on those portions of a lot with the least slope grades and that Natural State Requirements will be applied first to those portions of the lot with the greatest slope grades. In no event shall significant portions of any lot, where those portions exceed slope grades of 25% be disturbed. For purposes of this section, the term "disturbed" shall have the same meaning described under Section 2.~~

~~Natural State Areas shall not include any easement which would result in the disturbance of native ground cover or other vegetation.~~

3. Determination of Maximum Density
~~If applicable, Natural State Areas may be used in calculating the maximum density of a lot. Natural State Areas may be used , and to fulfill lot area and yard requirements, provided that they are not disturbed , unless in conformance with subpart 4. However, no structure shall be located closer than 75 feet from any limit of a defined floodway or wetland.~~

4. Disturbance of Natural State Areas
~~Once established on the an approved preliminary, or final, plat, no natural state area shall be disturbed, as defined under Section 2, for any public or private purpose unless approved by the Planning Commission. Any request to disturb a Natural State Area shall be submitted in writing to the Department of Community Development and shall be accompanied by plans or other materials which fully explain the intended action. Following receipt of the request, it shall be forwarded to any state or federal agency having jurisdiction over the environment, for applicable comment. Following receipt of these, the Planning Commission shall hold a public hearing which shall be preceded by a minimum of 10 days written notice to all property owners located within 150' from the area to be disturbed, abutting the parcel containing the disturbance, and to the official newspaper.~~

~~Prior to approving the request, the Planning Commission should seek the recommendation of the Citizens Environmental Quality Committee and must find that undue hardship exists and that approval will not adversely impact the purpose and intent of the natural state area. The Commission may apply any condition it deems appropriate to achieve these purposes, or needed to address noted concerns of any entity offering comment. For purposes of this section, the term "undue hardship" shall be the same as defined under Minnesota Statutes, Section 462.357 (Subd. 6)(2).~~

~~Unless associated with an exemption listed under Section 43.83 (c), or use otherwise subject to a specific exemption, or associated with any use listed under~~

Section 43.83 (F), no land disturbance activity shall be permitted on any established NSA designation.

Any person who feels that the strict enforcement of this section, would cause practical difficulties, because of circumstances unique to his/her property may request a variance from the Board of Adjustment. In cases where the management of ~~an~~ a specific environment falls under the jurisdiction of a State, ~~or~~ Federal, or other agency, the Board shall seek ~~an opinion~~ required approvals, or opinion, from the agency, prior to acting on the variance.

~~Notwithstanding the foregoing, Planning Commission approvals shall not be required for the following activities:~~

~~5. Transfer of Natural State Areas~~

~~The Planning Commission may authorize a Natural State Area, as calculated from Table B, to be transferred from one lot to any other lot within the limits of a subdivision, provided that:~~

- ~~a. The Commission finds that a valid reason for the transfer exists and that the action will be consistent with the intent and purpose of this section.~~
- ~~b. The transfer of Natural State Area land may be applied to any part of the subdivision, excluding therefrom, any natural environment which is defined under Table A.~~
- ~~c. The transfer of Natural State Area land shall be permitted from any lot with an average slope which does not exceed 19%.~~
- ~~d. The transfer shall not result in a net loss of Natural State Area land to the subdivision.~~

6. Modification of Natural State Area

Following final plat approval, no boundary of a defined Natural State Area may be modified unless the modification is submitted to the Planning Commission and City Council for approval, pursuant to the requirements of Sections 42.03(e) and (f).

7. Preservation Method

The applicant for subdivision approval shall demonstrate to the satisfaction of the Planning Commission and City Council that a required Natural State Area will be permanently maintained. Methods acceptable for this purpose include: special agreements, easements, or donation or dedication to the City, or other public entity. Once the method of preservation is defined, it shall clearly be **stated** referenced on the final plat. Any agreement, easement, or other preservation document shall be recorded with the plat, and shall serve as a restriction to any the development of any parcel of the subdivision, which is subject to Natural State Requirements Area designation.

~~8. Review Criteria~~

~~During consideration of a subdivision, which is subject to Natural State Requirements, the Planning Commission shall investigate and ascertain whether the proposed subdivision complies with the following general criteria:~~

- ~~(a) That the plan is consistent with the intent and purpose of Chapters 42 and 43 of the Winona City Code.~~

- ~~(b) That properties adjacent to, or down slope/stream from, the subdivision will not be adversely affected.~~
- ~~(c) That the plan will protect and preserve natural features of the site which if disturbed, could adversely impact future residents of the development, and result in increased public maintenance costs.~~
- ~~(d) That grading of the site will complement natural land forms thereby preventing the need for excessive terracing.~~
- ~~(e) That the plan will be designed to harmonize with topographic, vegetative, and other natural characteristics of the site.~~
- ~~(f) That consideration is given to the view of hillsides as well as the view from hillsides.~~

~~Note: Although parts 9 and 10 are to be deleted from this section, it is proposed that language would be transferred to Code Sections 42.04 and 42.06 (required information for preliminary and final plats.)~~

~~9. Preliminary Plat B Additional Requirements~~

~~In addition to the requirements of City Code Section 42.04, the developer of any site, which is subject to the Natural State Requirements of Table A and Table B, shall submit the following with the preliminary plat:~~

- ~~a. Proposed Natural State Area calculations (reference to Table "A" or "B". The locations of Natural State Areas shall be clearly shown on the plat. Additionally, the developer shall submit any draft document, which will define the method of preserving Natural State Areas for their intended purpose.~~
- ~~b. A preliminary grading management plan. This plan shall be prepared by a registered civil engineer, licensed in the State of Minnesota, and shall include the following information:~~
 - ~~1. The total extent of areas to be disturbed.~~
 - ~~2. Proposed cut and fill areas along with proposed finished grade percentages.~~
 - ~~3. Proposed surface drainage patterns and runoff calculations, which are anticipated to occur as a result of development.~~
 - ~~4. Proposed ponding areas, which may be required to minimize adverse impacts on adjacent properties or public stormwater facilities.~~
 - ~~5. Proposed street grades/elevations.~~
 - ~~6. Anticipated erosion control measures, which will be required minimize the adverse effects on adjacent properties, defined Natural State Areas, and public facilities. In meeting this requirement, the developer shall clearly state the person who will be responsible for its implementation.~~
 - ~~7. Development timing.~~

- ~~8. In accordance with Section 7, the developer will permanently maintain Natural State Areas, and use methods to clearly identify and protect these areas throughout all construction phases of the development. Examples of field identification include fencing and/or construction tape/ribbon.~~
- ~~10. Final Plat – Additional Requirements
In addition to the requirements of City Code Section 42.06(b), the developer of any site, which is subject to the Natural State Requirements of Table A and Table B, shall submit the following with the final plat:~~
- ~~a. Final Natural State Area calculations. Additionally, all required Natural State Areas shall be clearly shown on the final plat.~~
- ~~b. A final grading management plan which, at a minimum, shall include those requirements of Section 9(b).~~
8. Natural State Areas B Field Identification
Upon preliminary plat approval, no portion of the development may be disturbed until such time that Natural State Areas are clearly field identified and protected pursuant to methods as outlined in the approved preliminary grading management plan. It shall be the responsibility of the developer and/or property owner to ensure that all Natural State Areas are clearly marked throughout all construction phases. Additionally, it shall be the responsibility of the developer, property owner, or, in the case of those public improvements which may be administered by the City of Winona, the City, to advise contractors of the location, purpose and intent of such areas, and to ensure that such areas are not disturbed. The corners of all required Natural State Areas shall be staked, in the field, with one-half inch diameter iron pipes prior to final plat approval. All such stakes shall remain in place and shall remain identifiable throughout any development of the site. If a stake is removed or lost, the underlying property owner of the Natural State Area shall be responsible for its replacement.
Ord. 3491 05/07/01 Ord. 3536 07-01-02.
9. Natural State Areas – Previous Approval
Any Natural State Area that was created prior to adoption of this ordinance shall continue to be managed and maintained in accordance with terms and conditions of its initial approval.

CHAPTER 69 - SHORELAND MANAGEMENT

- 69.01 Statutory Authorization and Policy
 - (a) Statutory Authorization
 - (b) Policy

- 69.02 General Provisions and Definitions
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- 69.06 Nonconformities
 - (a) Construction of Nonconforming Lots of Record
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- 69.07 Subdivision/Platting Provisions
 - (a) Land Suitability
 - (b) Consistency with Other Controls
 - (c) Information Requirements
 - (d) Dedications
 - (e) Platting
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E. Severability

If any section, clause, provision, or portion of this chapter is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this chapter shall not be affected thereby.

F. Abrogation and Greater Restrictions

It is not intended by this chapter to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter imposes greater restrictions, the provisions of this chapter shall prevail. All other ordinances inconsistent with this chapter are hereby repealed to the extent of the inconsistency only.

G. Definitions

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the same meaning as they have in common usage and so as to give this chapter its most reasonable application. For the purpose of this chapter, the words "must" and "shall" are mandatory and not permissive. All distances, unless otherwise specified, shall be measured horizontally.

Accessory structure or facility. Any building or improvement subordinate to the principal use that, because of the nature of its use, can reasonably be located at or greater than normal structure setbacks.

Bluff. A topographic feature such as a hill, cliff, or embankment having the following characteristics (an area with an average slope of less than 18 percent over a distance for 50 feet or more shall not be considered part of the bluff):

- (1) Part or all of the feature is located in a shoreland area;
- (2) The slope rises at least 25 feet above the ordinary high water level of the waterbody;
- (3) The grade of the slope from the toe of the bluff to a point 25 feet or more above the ordinary high water level ~~averages 30 percent or greater~~ exceeds 25 percent; and
- (4) The slope must drain toward the waterbody.

Bluff impact zone: A bluff and land located within 20 feet from the top of a bluff.

Building line: A line ~~parallel to a lot line or the ordinary high water level~~ at the required setback beyond which a structure may not extend.

Commercial use: The principal use of land or buildings for the sale, lease, rental, or trade of products, goods, and services.

Commissioner: The Commissioner of the Department of Natural Resources

Conditional use: A land use or development as defined by ordinance that would not be appropriate generally but may be allowed with appropriate restrictions as provided by official controls upon a finding that certain conditions as detailed in the zoning code exist, the use or development conforms to the comprehensive land use plan of the City, and the use is compatible with the existing neighborhood.

Deck: A horizontal, unenclosed platform with or without attached railings, seats, trellises, or other features, attached or functionally related to a principal use or site and at any point extending more than three feet above ground.

Duplex, triplex, and quad: A dwelling structure on a single lot, having two, three, and four units, respectively, being attached by common walls and each unit equipped with separate sleeping, cooking, eating, living, and sanitation facilities.

Shore impact zone: Land located between the ordinary high water level of a public water and a line parallel to it at a setback of 50 percent of the structure setback.

Shoreland: Land located within the following distances from public waters: 1,000 feet from the ordinary high water level of a lake, pond, or flowage; and 300 feet from the ordinary high water level of a river or stream, or the landward extent of a floodplain designated by ordinance on a river or stream, whichever is greater. The limits of shorelands may be reduced whenever the waters involved are bounded by topographic divides which extend landward from the waters for lesser distances and when approved by the commissioner.

Significant historic site: Any archaeological site, standing structure, or other property that meets the criteria for eligibility to the National Register of Historic Places or is listed in the State Register of Historic Sites, or is determined to be an unplatted cemetery that falls under the provisions of Minnesota Statutes, section 307.08. A historic site meets these criteria if it is presently listed on either register or if it is determined to meet the qualifications for listing after review by the Minnesota state archaeologist or the director of the Minnesota Historical Society. All unplatted cemeteries are automatically considered to be significant historic sites.

Steep slope: Land where agricultural activity or development is either not recommended or described as poorly suited due to slope steepness and the site's soil characteristics, as mapped and described in available county soil surveys or other technical reports, unless appropriate design and construction techniques and farming practices are used in accordance with the provisions of this chapter. Where specific information is not available, steep slopes are lands having average slopes over 18 percent, as measured over horizontal distances of 50 feet or more, that are not bluffs.

Structure. Any building or appurtenance, including decks, except aerial or underground utility lines, such as sewer, electric, telephone, telegraph, gas lines, towers, poles, and other supporting facilities.

Subdivision. Land that is divided for the purpose of sale, rent, or lease.

Surface water-oriented commercial use: The use of land for commercial purposes, where access to and use of a surface water feature is an integral part of the normal conductance of business. Marinas, resorts, and restaurants with transient docking facilities are examples of such use.

Toe of the bluff: The lower point of a 50-foot segment with an average slope exceeding 18 percent.

Top of the bluff: The higher point of a ~~50~~100-foot segment with an average slope exceeding 18 percent.

Variance: The same as that term is defined or described in Minnesota Statutes, Chapter 462.

Water-oriented accessory structure or facility: A small, above ground building or other improvement, except stairways, fences, docks, and retaining walls, which, because of the relationship of its use to a surface water feature, reasonably needs to be located closer to public waters than the normal structure setback. Examples of such structures and facilities include boathouses, gazebos, screen houses, fish houses, pump houses, and detached decks.

Wetland: A surface water feature classified as a wetland in the United States Fish and Wildlife Service Circular No. 39 (1971 edition)

69.03 ADMINISTRATION

A. Notifications to the Department of Natural Resources

1. Notice of Public Hearings. Copies of all notices of any public hearings to consider variances, amendments, or conditional uses under local shoreland management controls must be sent to the commissioner or the commissioner's designated representative and postmarked at least ten days

of this section are different from those of the underlying zoning district, the more restrictive requirement shall apply.

C. Conditional Uses

All conditional uses and applicable attached conditions allowed and regulated by the applicable zoning district underlying the shoreland overlay district as indicated on the Official Zoning Map of the City shall be treated as conditional uses in the shoreland overlay district, subject to the provisions in Section 69.05 of this Chapter. Where requirements of this section are different from those of the underlying zoning district, the more restrictive requirement shall apply.

D. Prohibited Uses

Any uses which are not permitted or conditional uses as regulated by the applicable zoning district underlying this shoreland overlay district as indicated on the Official Zoning Map of the City are prohibited.

E. Certain Shoreland Areas Exempted from Certain Requirements of this Chapter – Urban Shoreland Zone

Minnesota Rules 6120.2800 provides for the flexible implementation of shoreland regulations under certain circumstances. The City of Winona finds that certain areas of shoreland existing within the community have been developed with an assortment of urban land uses for many years and much of that development does not meet the minimum standards contained within Chapter 6120 of the Minnesota Rules. Further, it has been determined that these shoreland areas are predominantly separated from public waters by man-made dike or levee systems. Based upon these findings, the shoreland areas identified on the Official Zoning Map as being within the area designated as Urban Shoreland Zone are exempted from meeting the following performance standards contained within this Chapter:

1. Lot width for lakes or rivers
2. Lot area for lakes
3. Structure setbacks from right-of-way lines
4. Height of structures if proposed height is compatible with underlying zoning
5. Impervious surface coverage of lots must not exceed 25 percent of the lot area.

Lots and structures located within the Urban Shoreland Zone shall not be considered as non-conforming if they are not in compliance with the exempted standards listed above. They shall be treated as non-conforming lots or structures if they are not in compliance with the other applicable standards contained within this Chapter and shall be treated as per the requirements of Section 69.06 of this Chapter with respect to the non-exempted shoreland standards.

F. Certain Shoreland Areas – Undisturbed Buffer Zone

An undisturbed buffer zone of not less than 100 linear feet from any special water (not including intermittent tributaries) shall be maintained at all times. Exemptions to this requirement may include water crossings, or vehicular water access, if an applicant fully documents, through a Storm Water Pollution Prevention Plan (SWPPP) the circumstances and reasons that the buffer encroachment is necessary. The SWPPP must show how potential water quality, scenic, and other environmental impacts of these exceptions will be minimized.

69.05 PERFORMANCE STANDARDS

A. Lot Area and Width Standards.

The lot area (in square feet) and lot width standards (in feet) for single, duplex, triplex and quad residential lots created after the date of enactment of this Chapter for the lake and river/stream classifications are the following:

(6) all efforts shall be made to minimize the number of stairways, lifts, and landings to a water body by encouraging cooperative arrangements providing for the joint development and use of such facilities by riparian owners.

(7) facilities such as ramps, lifts, or mobility paths for physically handicapped persons are also allowed for achieving access to shore areas, provided that the dimensional and performance standards of subsections (1) to (5) above are complied with in addition to the requirements of Minnesota Regulations, Chapter 1340.

d. Significant Historic Sites. No structure may be placed on a significant historic site in a manner that affects the value of the site unless adequate information about the site has been removed and documented in a public repository.

e. Steep Slopes. The City Manager or his/her designee must evaluate possible soil erosion impacts and development visibility from public waters before issuing a permit for construction of sewage treatment systems, roads, driveways, structures, or other improvements on steep slopes. When determined necessary, conditions must be attached to issued permits to prevent erosion and to preserve existing vegetation screening of structures, vehicles, and other facilities as viewed from the surface of public waters, assuming summer, leaf-on vegetation.

3. Height of Structures. All structures in residential districts, except churches and nonresidential agricultural structures, must not exceed 25 feet in height. Structures located in areas that are required to be flood-proofed may have a height not greater than 25 feet higher than the lowest finished floor elevation allowed under applicable regulations.

C. Shoreland Alterations

All alterations of vegetation and topography will shall fully adhere to Chapter 68, and shall be regulated to prevent erosion into public waters, fix nutrients, preserve shoreland aesthetics, preserve historic values, prevent bank slumping, and protect fish and wildlife habitat. If the shoreland includes a part of a Natural State Area as designated under Chapter 42 of the City Code, no alterations within the Natural State Area are permitted designation, the area shall be managed and maintained in accordance with City Code Chapter 42, Appendix 1, I.

1. Vegetation Alterations.

a. Exemption. Vegetation alteration necessary for the construction of structures and sewage treatment systems and the construction of roads and parking areas regulated by Section 69.05 D of this Chapter are exempt from the vegetation alteration standards that follow.

b. Removal or Alteration of Vegetation. Removal or alteration of vegetation, except for agricultural and forest management uses as regulated in Section 69.05 E.2, is allowed subject to the following standards:

(1) Intensive vegetation clearing within the shore and bluff impact zones and on steep slopes is not allowed. Intensive vegetation clearing for forest land conversion to another use outside of these areas is allowable as a conditional use if an erosion control and sedimentation plan is developed compliant with Section 68.04 of this Code.

(2) In shore and bluff impact zones and on steep slopes, no clearing of trees and shrubs and cutting, pruning, and trimming of trees is allowed unless necessary to mitigate a hazard to life/property and any vegetation removal within bluff impact zones must be compliant with an erosion and sediment control plan per Section 68.04 of this Code.

(3) The above provisions in (1) and (2) are not applicable to the removal of trees, limbs, or branches that are dead or diseased.

2. Topographic Alterations/Grading and Filling and Stormwater Management.

a. Stormwater Management. ~~The City of Winona Stormwater Management Chapter must be adhered to for~~ All grading, filling, excavation, and stormwater management activities, within the shoreland, must fully adhere to Chapter 68.

b. Grading and Filling Permit. Notwithstanding other requirements of ~~the Stormwater Management~~ Chapter 68, a grading and filling permit will also be required for:

- (1) the movement of more than ten (10) cubic yards of material on steep slopes or within shore or bluff impact zones; and
- (2) the movement of more than 50 cubic yards of material outside of steep slopes and shore and bluff impact zones.

c. Additional Requirements. The following considerations and conditions must be adhered to during the issuance of construction permits, grading and filling permits, conditional use permits, variances and subdivision approvals within the shoreland overlay zone:

- (1) Impervious surface coverage of lots must not exceed 25 percent of the lot area;
- (2) Fill or excavated material must not be placed in bluff impact zones;
- (3) Any alterations below the ordinary high water level of public waters must first be authorized by the commissioner of natural resources under Minnesota Statutes, Chapter 103G;
- (4) Alterations of topography must only be allowed if they are accessory to permitted or conditional uses and do not adversely affect adjacent or nearby properties; and
- (5) Placement of natural rock riprap, including associated grading of the shoreline and placement of a filter blanket, is permitted if the finished slope does not exceed three feet horizontal to one foot vertical, the landward extent of the riprap is within ten feet of the ordinary high water level, and the height of the riprap above the ordinary high water level does not exceed three feet.

d. Connections to Public Waters. Excavations where the intended purpose is connection to a public water, such as boat slips, canals, lagoons, and harbors, must be controlled by local shoreland controls. Permission for excavations may be given only after the commissioner of natural resources has approved the proposed connection to public waters.

D. Placement and Design of Roads, Driveways, and Parking Areas.

1. Design. Public and private roads and parking areas must be designed to take advantage of natural vegetation and topography to achieve maximum screening from view from public waters. Documentation must be provided by a qualified individual that all roads and parking areas are designed and constructed to minimize and control erosion to public waters consistent with the field office technical guides of the local soil and water conservation district, or other applicable technical materials.

2. Setbacks. Roads, driveways, and parking areas must meet structure setbacks and must not be placed within bluff and shore impact zones, when other reasonable and feasible placement alternatives exist. If no alternatives exist, they may be placed within these areas, and must be designed to minimize adverse impacts.

3. Watercraft Access. Public and private watercraft access ramps, approach roads, and access-related parking areas may be placed within shore impact zones provided the vegetative screening and erosion control conditions of this subsection are met. For private facilities, the grading and filling provisions of Section 69.05 C.2. of this Chapter must be met.

E. Special Provisions for Commercial, Industrial, Public/Semipublic, Agricultural, Forestry and Extractive Uses and Mining of Metallic Minerals and Peat.

1. Standards for Commercial, Industrial, Public, and Semipublic Uses.

32.03 WEEDS.

(a) "Weeds" Defined. "Weeds" shall mean and include not only such noxious weeds as are enumerated in Minnesota Rules ~~1505.0730~~1505.0751 subp. 8, but also such undesirable, useless, uncultivated and troublesome plants as are commonly known as weeds to the general public and all pollen producing plants which are a hazard to hay fever sufferers. Ord. 3450 05/01/00

CHAPTER 42 - SUBDIVISION REGULATIONS

42.04 The Preliminary Plat

(d) Existing and Proposed Features to be Shown. The preliminary plat shall clearly show the following features and information:

(1) Name. The proposed name of the subdivision which shall not duplicate or closely approximate the name of any other subdivision in Winona County.

(2) Owners record. The names and addresses of the owner of record, the subdivider and the engineer or surveyor.

(3) Abutting owners. The name of adjacent subdivisions and the names of record owners of adjacent parcels of unplatted land.

(4) Boundary lines. The boundary lines, accurate in scale, of the tract to be subdivided.

(5) Streets, Other features. The location, widths and names of all existing or platted streets or other public ways within or adjacent to the tract, and other important features such as existing permanent buildings, large trees, watercourses, railroad lines, corporation lines, township lines, etc.

(6) Existing utilities. Existing sewers, water mains, culverts and other underground structures within the tract and immediately adjacent thereto with pipe sizes and grades indicated.

(7) Topography. Contours, normally with intervals of 2 feet references to U.S.G.S. datum, as required by the commission.

(8) Proposed Design, Streets, Grading, Utilities, Etc. The layout, names and widths of proposed streets, alleys and easements; the layout, numbers and approximate dimensions of proposed lots. Proposed street names shall not duplicate or closely approximate any existing street names in the City of Winona/City of Goodview, except extensions of existing streets. Within well defined areas or subdivisions, consideration should also be given to the development of specific themes for proposed street names. The proposed street names in the preliminary plat shall be reviewed by the planning commission as provided in Section 41.01 of this Code.

(9) Zoning. Zoning boundary lines if any, proposed uses of property and proposed front yard setback lines.

(10) Public Uses. All parcels of land intended to be dedicated or temporarily reserved for public use, or to be reserved in the deeds for the common use of property owners in the subdivision, with the purpose, condition, or limitations of such reservation indicated.

(11) North point, etc. North point, scale, date, title.

(12) Deed restrictions. Copies of any private restrictions to be included in the deeds should be attached to the preliminary plat. Ord. 3592 11-17-03

(e) A preliminary Stormwater Management, or Erosion and Sediment Control Plan meeting applicable standards of Chapter 68.

42.06 THE FINAL OR RECORD PLAT.

(b) Information to be Shown on Plat. In addition, the plat shall clearly show the following features and information:

(1) **Boundary lines.** The outside boundary lines shall be correctly designated on the plat and shall show bearings on all straight lines or angles at all angle points, and central angle, radii and arc length for all curves. The outside boundary lines of the plat shall close by latitude and departure with an error not to exceed one foot in 7500.

(2) **Recorded Streets.** The exact location and the width along the property line of all existing recorded streets intersecting or paralleling the boundaries of the tract.

(3) **Bearings, distances.** True bearings and distances to nearest established street bounds, patent or other established survey lines, or other official monuments, which monuments shall be located or accurately described on the plat. Any patent or other established survey or corporation lines shall be accurately monument marked and located on the plat, and their names shall be lettered on them.

(4) **Monuments.** Durable iron monuments shall be set at each angle and curve points on the outside boundary lines of the plat and at all block corners and at all intermediate points on the block lines indicating a change of direction in the lines. The plat shall indicate that the monuments have been set. There shall be shown on the plat all survey and mathematical information and data necessary to locate and retrace all interior and exterior boundary lines appearing thereon.

(5) **Layout.** The exact layout including:

- A. Streets and alley lines, their names, bearings, angles of intersection and widths.
- B. The length of all arcs, radii, points of curvature and tangent bearings.
- C. All easements and rights of way, when provided for or owned by public services.
- D. All lot lines with dimensions in feet and hundredths, and with bearings and angles to minutes if other than right angles to the street and alley lines. Ditto marks shall not be used on the plat for any purpose.

(6) **Lots and Block Numbers.** Lots numbered in numerical order. In tracts containing more than a block, the blocks shall be numbered in numerical order. In the case of resubdivision of lots in any block, such resubdivided lots shall be designated by their original number prefixed with the term most accurately describing such division, such as: W 1/2 of 3, 40' of 5, etc., or they shall be designated numerically, beginning with the number following the highest lot numbered in the block.

(7) **Property Offered for Dedication.** The accurate outline of all property which is offered for dedication for public use, and of all property that may be reserved by covenant in the deeds for the common use of the property owners in the subdivisions, with the purpose indicated thereon. All lands dedicated to public use other than streets or roads shall be marked "Dedicated to the Public". Streets and roads not dedicated shall be marked "Private Street".

(8) **Watercourses.** In case the subdivision is traversed by a watercourse, channel, stream or creek, the prior or present location of such watercourse, channel, stream or creek.

(9) **Setback Lines.** Setback building lines as fixed by the Zoning Ordinance or the official street map and any other setback lines or street lines established by public authority, and those stipulated in the deed restrictions.

(10) **Deed Restrictions.** Private restrictions, if any, including boundaries of each type of use restriction; and other private restrictions for each definitely-restricted section of the subdivision.

(11) **Name of Subdivision.** Name of subdivision and name or number of the larger subdivision or tract of which the tract now subdivided forms a part.

(12) **Adjoining Subdivisions, Lakes, etc.** Names and locations of adjoining subdivisions and location and ownership of adjoining unsubdivided property. Where provisions are made for access to an adjoining lake or stream, a sketch illustrating such access shall be submitted. The name and adjacent boundary lines of any adjoining platted lands shall be dotted on the plat.

(13) **Names of Owners. etc.** Names and addresses of the owner of record, the subdivider, and of the surveyor.

(14) **North point, etc.** North point, scale, date, title.

(15) **Statement concerning Lot Area.** Statement that any lot transferred will have a minimum width and area substantially the same as those shown on the plat, and that only one principal building will be permitted on any such lot. The area of each lot containing an area of one acre or more shall be shown on the plat.

(16) **Affidavits and Certificates.** Affidavits and certificates by a registered land surveyor to the effect that he has fully complied with the requirements of this chapter and the subdivision laws of the State of Minnesota surveying, dividing and mapping the land; that the plat is a correct representation of all the exterior boundaries of the land surveyed and the subdivision of it; that the plat represents a survey made by him and that all monuments indicated thereon actually exist and their location, size and material are correctly shown.

(17) **Owners Certificate.** A certificate by the owner of the land in substantially the following form: "As owner I hereby certify that I caused the land described on this plat to be surveyed, divided, mapped and dedicated as represented on this plat." This certificate shall be executed as a conveyance is executed.

(18) **Certificate of Taxes Paid.** A certificate issued by the authorized city and county officials to the effect that there are no unpaid taxes or unpaid special assessments on any of the lands included in the plat.

(c) A final Stormwater Management or Erosion and Sediment Control Plan meeting applicable standards of Chapter 68.

43.83 Bluff Protection

- (J) **Performance Standards – Variances.** Any person who feels that the strict enforcement of any part of this ordinance, would cause practical difficulties, because of circumstances unique to his/her property, may request a variance ~~to the standard from the Board of Adjustment. Any such request may be considered on its own merit, or concurrently with an application for a Land Disturbance Activity Permit, and in accordance with those procedures of Part H of this ordinance.~~ The consideration of a variance request shall be based upon those defined practical difficulties criteria contained in Minnesota Statutes, Section 462.357, subd. 6 (2), and any final action of the request shall be supported by findings.

2012 – PROPOSED AMENDMENTS TO SENSITIVE LAND DEVELOPMENT/OTHER CODE SECTIONS

(Sections relate to numbering system of present ordinance.)

Section 1 (Purpose & Intent)

Current: Defines 10 specific goals to be achieved.

Proposed: Eliminates goal listing in favor of language relating to Natural Resource Protection goals/objectives of the Comprehensive Plan.

Rationale: Given reference to Comprehensive Plan goals, specific goal listing is redundant. (City Attorney Opinion) Section is simplified.

Section 2 (Natural State Area (NSA) Established)

Current: Establishes a definition for the term “disturb”, and presents two tables that define environments to be set aside as Natural State Areas on plats. In summary, these include:

Table A – Any part of a subdivision that is labeled as a wetland, watercourse floodway, rare plant and animal habitat (as defined in 1996 Winona County Biological Survey), Shoreland corridors, and slopes exceeding grades of 30%.

Table B – If lots within a subdivision exceed “average slopes” of 10%, they are subject to standards of this table, requiring that portions of lots be set aside as NSA. These “portions” are a direct result of average slope. As average slope increases, the ratio of NSA increases. When the average exceeds a threshold of 30%, a lot would not be developable.

This section also contains a definition for the term “average slope”.

Proposed: Delete all of current language and replace with:

1. A “revised” listing of protected environments to include:
 - A. Delineated Wetlands (per State Wetland Conservation Act Standards/Requirements).
 - B. Lands located with a defined Bluff Impact Overlay District (per standards/requirements of Chapter 43, Article XVII, Section 43.81 B. Bluffland Protection Ordinance).
 - C. Lands located within 100 feet from a defined special water (per standards/requirements of City Code Chapters 68 (Stormwater Management) and 69 (Shoreland Management)).
 - D. Other environments who’s protection may be mandated by State/Federal law, or environmental study.
2. Once previous environments are established on approved preliminary/final plats, no “Land Disturbance Activity” is permitted. New definition for term “Land Disturbance Activity” is included.

3. Move Sections 4 A and B to Section 2 as “exempted activities” to the Land Disturbance Activity definition.

Rationale: With one exception (rare plant and animal habitats-defined by 1996 MN County Biological Study), the four categories of environments listed, under the proposed amendment, will continue to recognize “current” protection categories, but with support from other code provisions (Stormwater Management, Shoreland, Bluff Protection) that have been adopted following development of the Sensitive Land Ordinance. Given, that standards between these presently vary, a fundamental purpose for amendments is to promote standard consistency by simply mirroring, within the Sensitive Land Ordinance, environments defined in other Code Chapters/Sections. Since proposed language of this Section would simply reference protected environments found under other code provisions, there is no longer a need to define them under the Sensitive Land Ordinance. As such, the majority of this section may simply be deleted (simplified).

Outside of the three specific environments pertaining to Wetlands, Bluffs, and Shoreland buffers, new language would include a “generic” category of “other environments”. As catch-all language, this provision would apply to specialty environments that may be deemed worthy of protection as the result of special studies, Federal/State “law”, etc. An example of such a “special study” would be the 2008 Alternative Urban Areawide Review (AUAR). As a formally adopted environmental document, development/mitigation strategies of it require:

- The identification and protection of timber rattlesnake, and non tropical bird habitats.
- The protection, through NSA designations, of areas with high/moderate biodiversity significance.

In part, this “other” category will serve to replace the “rare plant and animal habitat” category contained under present language. Ultimately however, new language could serve to protect rare plant and animal habitats, if these are (first) certified through special studies, or required by other laws.

With the previous, changes to Section 2 would include a revised definition for the term “Land Disturbance Activity” that is consistent with that found under Bluff Protection and Stormwater Management Ordinances. Other amendments would serve to restructure language to provide greater clarity, and remove redundancy.

Section 3 (Determination of Maximum Density)
Current: Permits defined NSA designations to be used in meeting lot area/yard requirements.
Proposed: Although its intent/purpose is retained, language has been restructured for clarity.

Section 4 (Disturbance of Natural State Areas)
Current: Presently requires that once established on plats, NSAs may not be disturbed unless approved through a defined process including the Planning Commission – In these cases, Planning Commission would review a request in accordance with “practical difficulty” (variance) standards of MN Statutes 462.357 (subd. 6, 2).
Proposed: Unless associated with either “exemption” or “exception” categories of the Bluff Protection Ordinance, established NSAs could not be disturbed unless first approved as a variance by the City Board of Adjustment. Under this change, language referencing Planning Commission “approvals” would be deleted.
Rationale: Per discussion with City Legal Counsel, “variances”, permitting NSA disturbances, should be addressed by the Board of Adjustment, rather than Planning Commission.

Section 5 (Transfer of Natural State Areas)
Current: Provides a process for transferring defined NSAs within a plat if certain thresholds are met.
Proposed: Delete all.
Rationale: Section was added a number of years ago to address certain special circumstances resulting from the application of (existing) Table B, Section 2 standards to an area. In practice, the provision has not been popular, and is relatively complex to administer. Additionally, given the proposed deletion of Table B, Section 2, there is no longer a need for this language.

Section 6 (Modification of Natural State Area)
No change proposed to this section.

Section 7 (Preservation Method)
Current: Defines acceptable options to be used in promoting the retention of defined NSAs.
Proposed: Although purpose/intent of this section will not change, minor language changes are proposed to improve clarity.

Section 8 (Review Criteria)
Current: Section lists several criteria to be used in evaluating a plat including proposed NSA lands.
Proposed: Delete all.
Rationale: Given other code provisions relating to those protected environments listed under Section 2, this language is now redundant.

Section 9 (Preliminary Plat Additional Requirements)
Current: Section lists preliminary grading plan information to be included with a preliminary plat.
Proposed: Delete all.
Rationale: Since “present” language was added to the Sensitive Land Ordinance, the City adopted Chapter 68 (Stormwater Management) in 2007. In part, this ordinance defines Stormwater Management requirements for most land activities including typical plats. Present language of the Sensitive Land Ordinance is redundant.

Section 10 (Final Plat Additional Requirements)
All to be deleted – reference previous rationale.

Section 11 (Natural State Areas Field Identification)
No change.

New Section (Natural State Areas – Previous Approval)
Proposed: Section would add language stating that previous NSA approvals would continue to be guided by terms/conditions of initial approvals.

Changes to the following other code sections are proposed as part of amendments to the Sensitive Land Development Ordinance:

- Shoreland Management – 69.04-will be amended to add a section (f), requiring that land within 100 feet from both sides of a “special water” be set aside as an undisturbed buffer. This language would mirror “special water” requirements of the Stormwater Management Ordinance. Although not (presently) included in the Shoreland Ordinance, its proper implementation requires a presence in that ordinance.

69.02 (g) (definitions). Amendments to the “Bluff” and “Top of Bluff” definition are proposed to bring these in line with City bluff definition.

69.05 (c) (Shoreland Alterations) – Minor change proposed that would link Shoreland NSAs to the Sensitive Land Ordinance.

- “Weed” definitions of Sensitive Land Ordinance Section 2 (B) and City Code Section 32.03 (Nuisances) to be linked to a revised MN Statute. Former reference was deleted from statute.
- Subdivision Regulations
42.04 Preliminary Plat Requirements – add a Section (E) that would require the submittal of a required preliminary storm water management plan (meeting Chapter 68 provisions) with a preliminary plat application.

- 42.06 Final Plat Requirements – add a Section (C) requiring the submittal of a final Stormwater Management Plan (meeting Chapter 68 provisions) with a final plat application.
- Bluff Protection Ordinance
Section 43.83 – Modify section to require that variances be reviewed by Board of Adjustment rather than Planning Commission. Recommended by City legal counsel.