

Section 4

Existing Regulatory Framework

4.1 State and Federal Regulations and Permits

Depending on the scope and size of the project, proposed mining operations may be subject to the following state and federal permitting regulations:

Department of Natural Resources – Water Appropriation Permit; Public Waters Work Permit; Burning Permit; Endangered or Threatened Species Taking Permit

Minnesota Pollution Control Agency – Section 401 Water Quality Certification; Storm Water NPDES/SDS Permit Construction Activity Permit and Construction Sand & Gravel, Rock Quarrying & Hot Mix Asphalt Production; and Air Quality Regulations

Board of Water and Soil Resources – Wetland Conservation Act

US Army Corps of Engineers – Section 404 Permit (discharge of dredged or fill material or excavation within waters and wetlands may require approval by the US Army Corps of Engineers)

Minnesota Department of Health – Drilling/Sealing Wells

Environmental Quality Board (EQB) – Conducts environmental reviews in the form of an Environmental Assessment Worksheet

(EAW) for operations excavating 40 or more acres of land at a mean depth of 10 feet and Environmental Impact Statement (EIS) for operations exceeding 160 acres.

4.2 City's Existing Zoning Regulations

Red Wing's zoning regulations describe mining operations as "Resource Extraction" which is defined in the ordinance as: A use involving on-site extraction of surface or subsurface mineral products or natural resources. Typical uses are quarries; borrow pits, sand and gravel operations, mining, and soil mining. Specially excluded from this use type shall be grading and removal of dirt associated with an approved site plan or subdivision. According to the City Zoning code, resource extraction is allowed as a Conditional Use Permit (CUP) in the (A) Agricultural District, (AR) Agriculture Residential District, and the (I-2) General Industrial District. There are no special provisions in the city current zoning regulations that relate directly to mining operations.

A processing plant that is separated from a mining operation is defined in the Red Wing zoning code as a Heavy Industrial Use, defined as follows:

Establishments involved in the manufacture, fabrication, processing, compounding, or assembling of materials from raw material or previously processed material. These uses have severe potential for adversely affecting surrounding land uses due to potential environmental impacts related to noise, smoke/particulate emissions, vibration, noxious gases, odor, glare/heat, fire/explosion hazards and waste disposal. In addition, these uses may generate large amounts of truck or auto traffic, may involve the use of large unenclosed production areas, or may require large, tall structures that are unsightly. Heavy industrial uses typically involve primary production

processes in the area of paper products (pulp mills), food processing (slaughterhouse, meat packing plant), chemicals (manufacture of inorganic chemicals, resins, plastics, paints, fertilizers, explosives, ink), petroleum products (refineries, bulk storage), primary metals (blasting, smelting, rolling), machinery and equipment manufacture (auto assembly, engines, construction equipment), leather (storing, curing, tanning), gravel based products (manufacture of bricks, concrete, abrasives), and lumber products (saw mills).

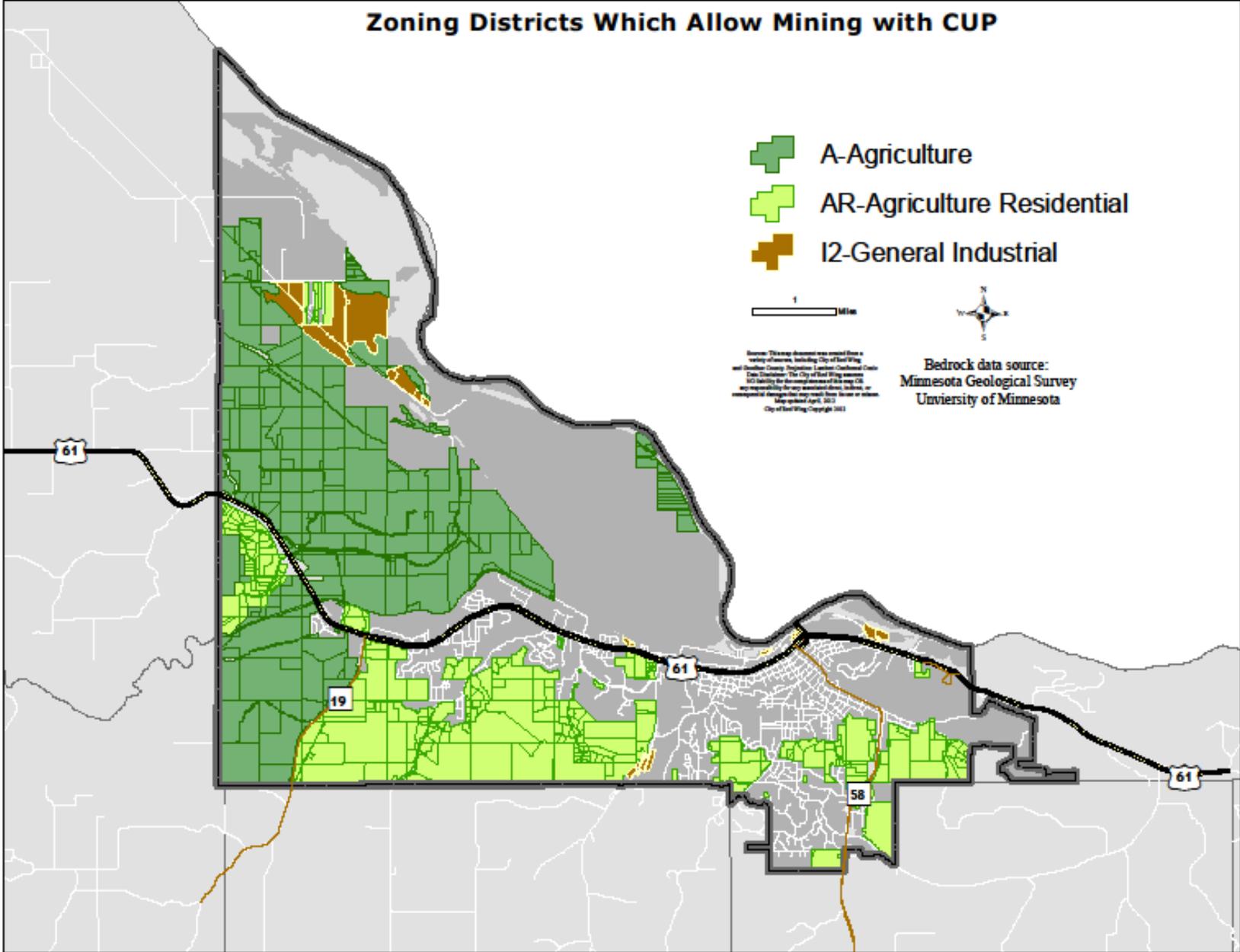
Heavy Industrial uses are a permitted land use in the (I-2), General Industrial Zoning District. There are currently no special provisions required for Heavy Industrial Uses (processing plants).

If a transportation land use is not located at the mining site or the processing plant site, for the purpose of shipping sand by rail or barge, the Red Wing zoning regulations regard the use as a Motor Freight and Warehousing land use, defined as follows: Establishments engaged primarily in either the storage or shipment of goods and materials, including terminal facilities for handling freight, and maintenance facilities in which the truck (including tractor trailer units) involved with the operation of the business are stored, parked and serviced. Materials within a warehouse or terminal facility may be combined, broken down, or aggregated for transshipment or storage purposes where the original material is not chemically or physically changed.

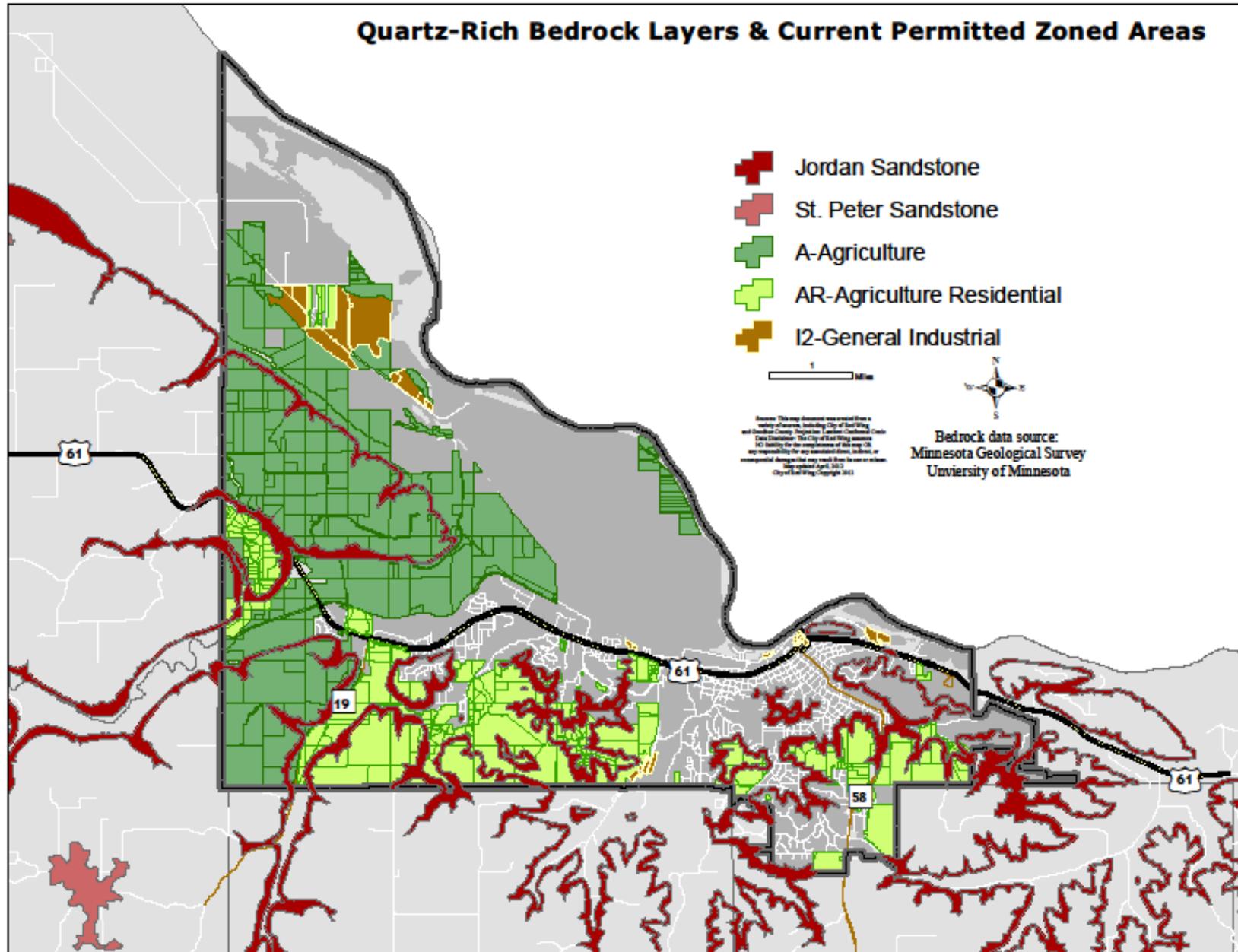
Motor Freight and Warehousing land uses are allowed as Certificates of Compliance in the (I-1) Light Industrial District and (I-2) General Industrial District. There are currently no special provisions in the Red Wing Zoning Code that apply to motor freight and warehousing land uses.

The City does have Special Provisions in Division 55 of the zoning code that establish “performance standards” for all land uses in the city. These special provisions establish standards in the following areas: Bulk Storage of liquids such as oil, gasoline, etc.; noise; explosives; radiation and electrical interference; vibration; odor; particulates; and Lighting (direct link to Division 55-100 of the Red Wing Zoning Code).

Map 11



Map 12



Section 5

Alternative Regulatory Approaches

5.1 Introduction to Alternative Regulatory Approaches

There has been a dramatic increase in mining and mining proposals in Minnesota and the Midwest over the past few of years attributed to the increase in the hydraulic fracturing process. Red Wing could potentially see proposals for mining sites, processing sites, and terminal uses related to shipping the material by rail or barge and the current city zoning codes are not well developed to respond to these uses. What follows is a list of alternative approaches, some of which could be taken independently or in combination with the other alternatives. The City Council could also decide that the existing framework that relies on performance standards in the current zoning regulations is sufficient to address any of these land uses.

5.2 Prohibit Frac Sand Mining/Processing

Citizens opposed to silica/frac sand mining have argued that the City should prohibit mining and processing plants from the City altogether. This would be a blanket approach that would have to rely on the fact that the potential impacts of the operations would endanger the public health and welfare and

that a conditional use permit with specific special provisions focused on these operations would not be sufficient protection. Another approach could be to prohibit surface quarrying operations and limit mining to only underground operations that would have less impact on Red Wing's scenic qualities and tourism industry. Either of these approaches would require additional research and documentation to support the finding that mining and processing operations should be prohibited in the City Limits. In addition, the City Attorney should be asked to provide some feedback about how regulations could be established to prohibit these land uses and what the potential legal risk is to the City.

Another approach to consider is to pursue several of the following alternatives that would severely limit the location that mining operations and processing plants could be established in the City based on Comprehensive Plan guidelines.

5.3 Limit Frac Sand Mining/Processing to (A) Agriculture and (I-2) General Industrial Zoning Districts

Currently, the Red Wing zoning code allows Mining Operations and Mining Operations with Processing Plants to be located in the (A) Agricultural Zoning District; the (AR) Agriculture Residential Zoning District; and the (I-2) General Industrial Zoning District; with an approved conditional use permit. One alternative approach would be to eliminate the (AR) Agriculture Residential Zoning District, as a zoning district that would allow these operations. The rationale for this would be based on the

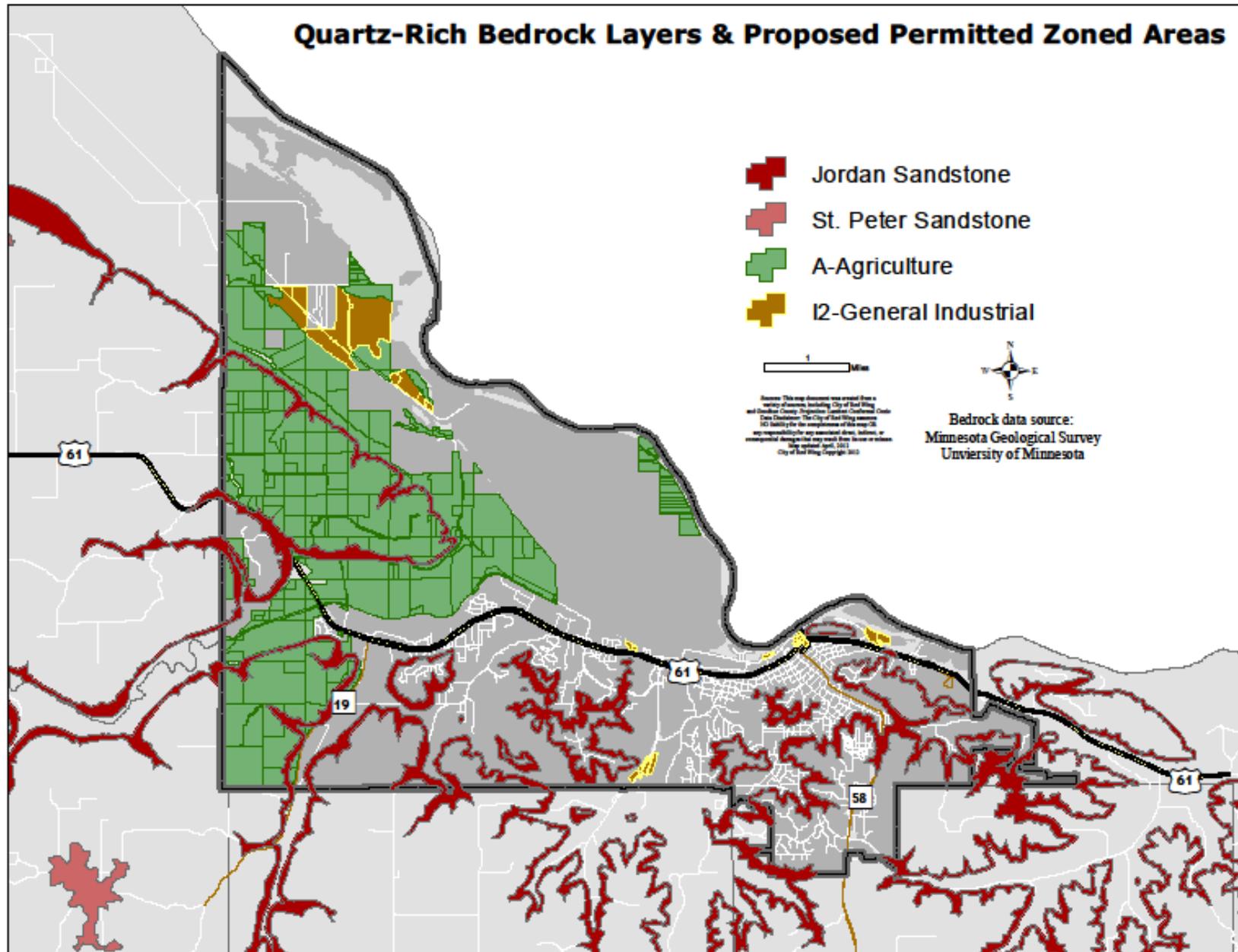
intent of the (AR) zoning district which is “to provide for limited large lot, low density residential development in a rural life style, where agricultural uses can be continued and where orderly growth and sanitary facilities may be extended with zoning district changes at some future date, but which at present, is considered a rural service area with limited city facilities”. Areas in Red Wing that are zoned (AR) are areas that may develop at greater densities in future. The City may not want to see mining and processing plant operations in these areas where future development is contemplated (See Map 13 Showing Proposed Zoning Map).

5.4 Prohibit Mining in Open Space Preservation Priority Areas

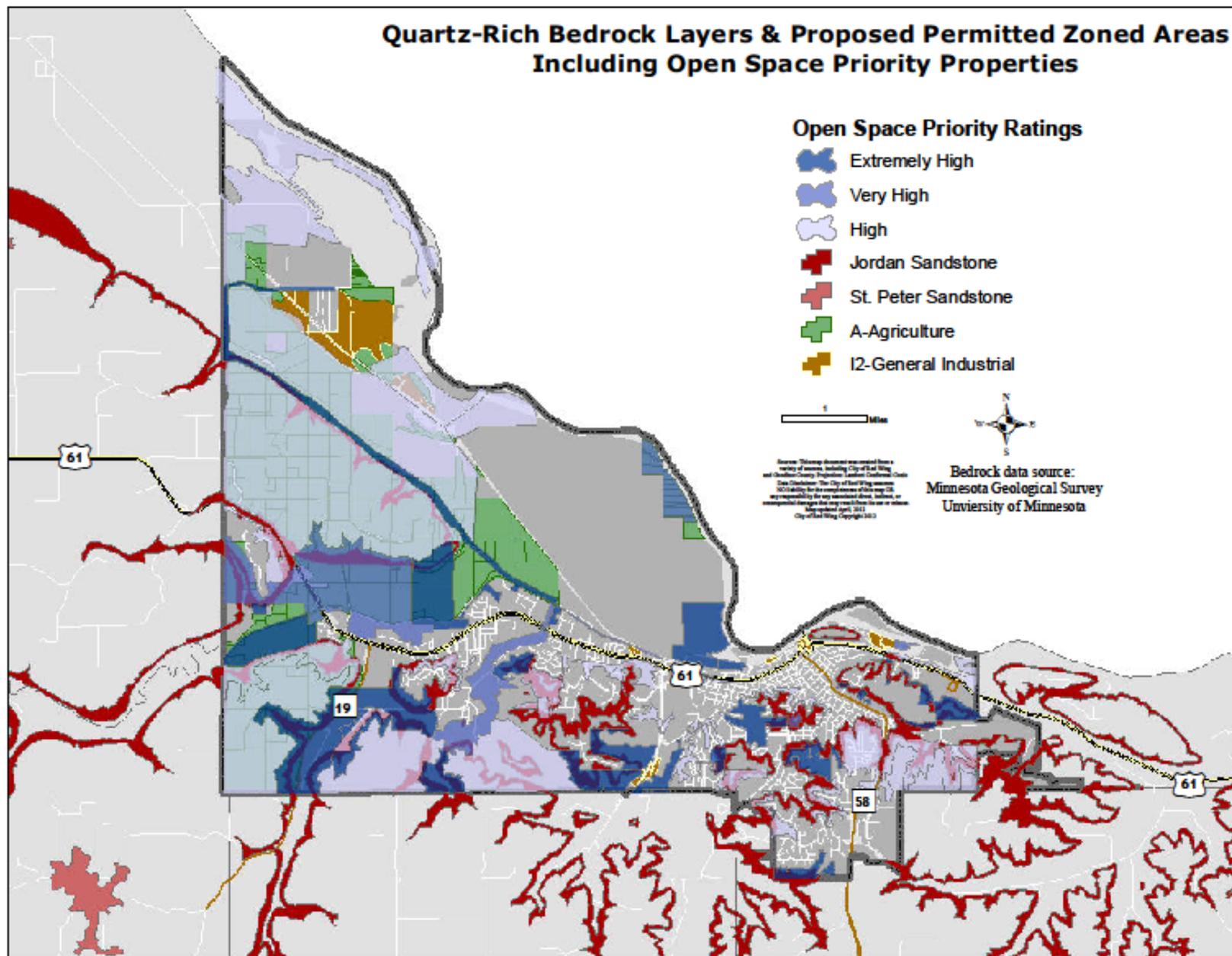
The City has identified open space priority areas in the 2008 Open Space Preservation Plan that was adopted as an amendment to the City’s Comprehensive Plan. These parcels were identified based on open space criteria that were established in order to preserve open space values. Open space preservation criteria that was used included: 40 acres or more of connected open space; geology; management opportunity; high threat; high opportunity; archaeology; endangered species; high quality agricultural soils; high grading in resource inventory report; trails; natural community; urbanized forest; active outdoor recreation; hydrological; gateway; scenic views and vistas; and historic sites and districts. The City could establish an overlay zoning district that provide additional protections by prohibiting resource extraction within this overlay zone (See

Map 14 Showing Proposed Overlay District based on Priority Open Space Preservation Areas).

Map 13



Map 14



5.5 Establish Special Provisions for Motor Freight and Warehousing Operations related to Frac Sand Shipping and Require CUP (Barge and Rail Terminals)

The existing City zoning code allows Motor Freight and Warehouse land uses in both the (I-1) Light Industrial Zoning District and the (I-2) General Industrial Zoning District as a Certificate of Compliance, which is an administratively approved zoning permit. No public hearing is required for such uses and there are no special provisions in the zoning code written specifically for these land uses. The City could amend the City Zoning Code to require that Motor Freight and Warehousing Operations require a Conditional Use Permit for the handling of Industrial Silica Sand. The zoning code could be further amended to include special provisions for Motor Freight and Warehousing that require an applicant provide a fugitive dust mitigation plan; dust monitoring; storm water/erosion control plan; and/or a Road Maintenance Agreement.

5.6 Establish Special Provisions for Heavy Industrial Uses related to Frac Sand Processing Plants

The existing City zoning code allows Heavy Industrial land uses in the (I-2) General Industrial Zoning District as a permitted land use without requiring any zoning permit. There are no special provisions in the zoning code that regulate heavy industrial uses in the (I-2) zoning district. The City could amend the City zoning code to require that new Heavy Industrial Uses related to Industrial Silica Sand Processing require a Conditional Use

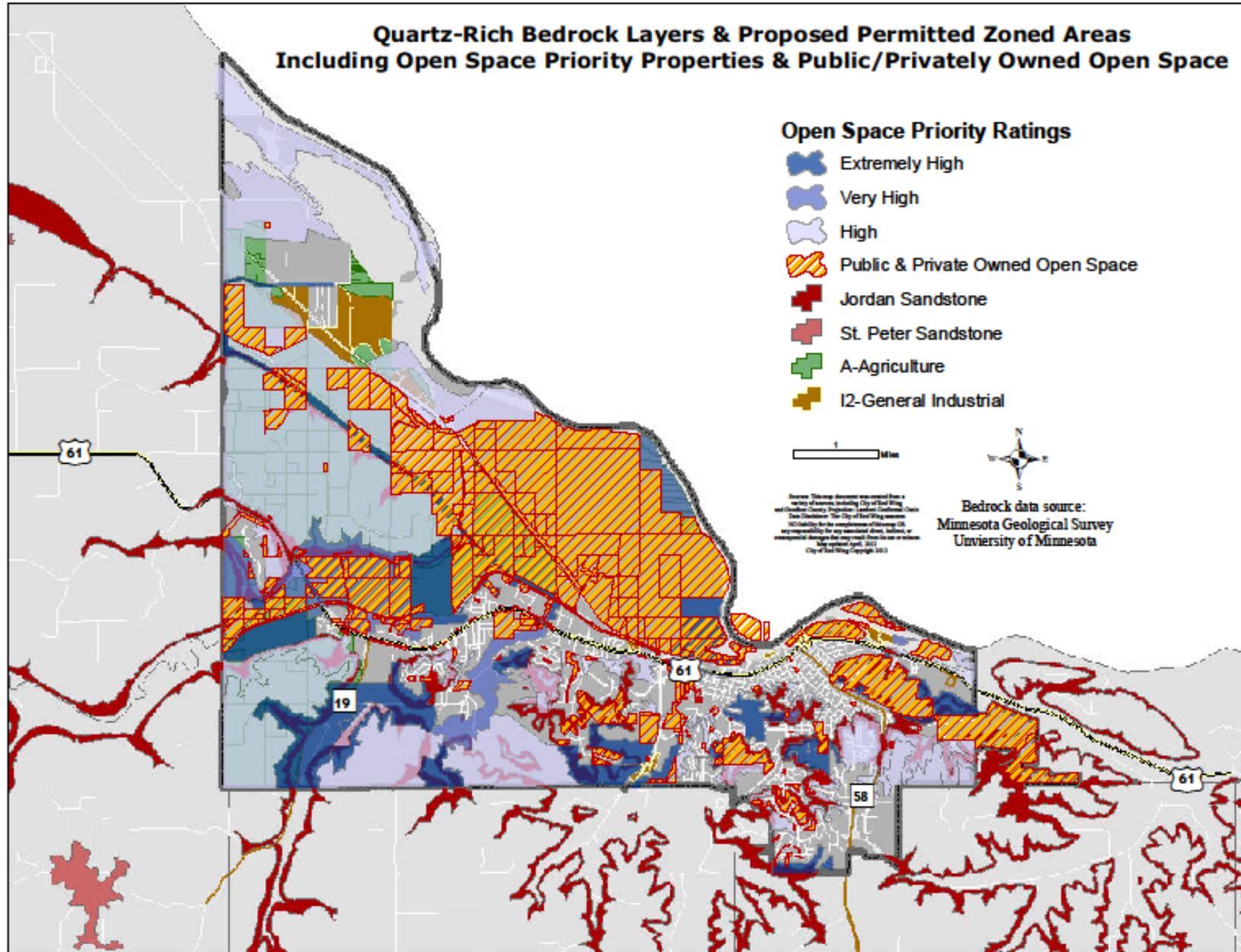
Permit in the (I-2) zoning district and could also amend the zoning code to establish Special Provisions related to Heavy Industrial Uses related to Industrial Silica Sand Processing Plants. These Special Provisions could be written so that they apply to Industrial Silica Sand Processing Plants either at the mining location or at an independent location and could contain portions of the same requirements listed in the discussion below in section 5.7.

5.7 Establish Special Provisions for Mining and On-site Processing Plants

Division 55 of the Red Wing City Code includes special provisions for a number of specific land uses that the City has determined are in need of more specific regulations and guidance. The City Council could decide to amend the City zoning code by adding a special provision for Mining and On-site Processing Plants. It was determined by the City Attorney that there was no advantage to the City in this case and that a licensing requirement in addition to traditional zoning regulations could prove to be administratively cumbersome. With this in mind, a sample ordinance is shown in the appendix that illustrates how these special provisions could be developed. These special provisions could be developed to include the following: Purpose Statement, Application Submittal Information, Special Definitions, Exemptions from the Regulations, Minimum Standards of Operation, Annual Reporting, Inspection and Enforcement Provisions, Financial Assurance, Roadway Impact Agreement, Reclamation

Requirements, Emergency and Management Plan and Other Considerations.

Map 15



Section 6

Recommendations

On June 26, 2012 the Red Wing Sustainability Commission and the Red Wing Advisory Planning Commission conducted an Open House and Public Hearing to consider citizen comment on a draft of this report. At that time, Section 1, 2, 3, 4, and 5 were drafted and this Section 6, recommendations was not drafted. Citizen comments were generally supportive of the draft report but did make suggestions for improvement to sections dealing with transportation, public health, and the discussion about prohibition of mining operations. The City was also advised to collaborate with Goodhue County and the surrounding townships so that regulations would be somewhat uniform in the region. The two commissions met twice after the June 26, 2012 Public Meeting on July 17, 2012 and July 24, 2012 to review the comments made and to consider final recommendations. Both Commissions had an extended discussion about whether they should recommend a complete prohibition of silica/frac sand mining within the City of Red Wing. This could be done based on the unknown nature of the health impacts of the mining operations and other environmental concerns. The two commissions developed a consensus that the City should pursue a set of recommendations that limits where operations can apply for a permit that is primarily based upon the Comprehensive Plan, including the Open Space Preservation Plan. Other recommendations will also set forth a set of standards that will regulate mining, processing, and transportation terminals. If the City Council adopts these recommendations, mining and processing of Silica/Frac sand in Red Wing would be severely limited.

If the City Council adopts these recommendations, mining and processing of Silica/Frac sand in Red Wing will be severely limited

and managed to protect the public health and welfare and to further the goals of the City's Comprehensive Plan. Below are the Joint Recommendations of the Red Wing Advisory Planning Commission and the Red Wing Sustainability Commission.

Recommendation #1: Amend the zoning ordinance to Only Allow Mining and On-Site Processing in the Agricultural Zoning District with a Conditional Use Permit

Recommendation #2: Amend the zoning ordinance to only allow Off-Site Processing Plants with a Conditional Use Permit in the I-2 zoning district

Recommendation #3: Amend the zoning ordinance to Prohibit Mining and On-Site Processing Plants in all Open Space Priority Areas as determined in the 2008 Open Space Preservation Plan. This would be implemented by establishing an Open Space Preservation Overlay.

Recommendation #4: Amend the zoning ordinance to require a Conditional Use Permit for all Motor Freight and Warehousing Operations (Barge, Rail, and Truck Terminals Use) related to the transportation of Industrial Silica Sand and develop Special Provisions in the zoning code that establish the following requirements for these operations:

- Baseline Air Quality Report
- Dust Mitigation Plan
- Storm Water Management Plan
- Transportation Impact Study/Road Maintenance Agreement
- Continuous Air Quality Monitoring
- Buffer Requirements from residential, park, and public assembly land uses
- Emergency Management Plan

Recommendation # 5: Amend the zoning ordinance to require a Conditional Use Permit for all Heavy Industrial Land Uses (Processing Plants) related to the processing of Industrial Silica Sand and develop Special Provisions in the zoning code that establishes the following requirements for these operations:

- Baseline Air Quality Report
- Dust Mitigation Plan
- Storm Water Management Plan
- Transportation Impact Study/Road Maintenance Agreement
- Continuous Air Quality Monitoring
- Buffer Requirements from residential, park, and public assembly land uses
- Require EAW for Processing Plants
- Emergency Management Plan

Recommendation #6: Amend the zoning ordinance to provide Special Provisions in the zoning code that establishes the following requirements for Resource Extraction land uses:

- Baseline Air Quality Report
- Dust Mitigation Plan
- Storm Water Management Plan
- Transportation Impact Study/Road Maintenance Agreement
- Continuous Air Quality Monitoring
- Buffer Requirements from residential, park, and public assembly land uses
- Development Agreement and Financial Assurances
- Reclamation
- Loss of Property Value
- Require EAW for Resource Extraction
- Emergency Management Plan

Recommendation #7: Collaborate with Goodhue County and Townships that surround Red Wing to establish regulations for Industrial Silica Sand Mining, Processing and Transportation

Terminal Land Uses including regulations that will apply to existing mining operations.