

5. Environmental Resources

Organization

- A. Overview
- B. Goal
- C. Key Findings
- D. Objectives and Strategies

Purpose

The purpose of the Environmental Resources Chapter is to define environmentally significant areas and establish objectives and strategies for their preservation, protection, enhancement and utilization.

A. Overview

An important part of Northfield's future vision is the preservation and enhancement of the community's environmental resources. Three of the land use principles in Chapter 4, developed during the Comprehensive Plan public meetings, reinforce the City's commitment to environmental stewardship:

- The natural environment will be protected, enhanced and better integrated in the community.
- Environmentally-sensitive and sustainable practices will be integrated into new developments and redeveloped areas.
- Rural character of certain areas of the community will be protected.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for environmental resources is provided below. The goal was developed by considering key findings related to environmental resources and integrating public input generated as part of the Plan update.

The natural environment will be protected, enhanced and better integrated into the community.

C. Key Findings

Northfield's character reflects a number of unique environmental qualities. This chapter of the Comprehensive Plan will identify many of those features and establish objectives and strategies for the preservation, protection and enhancement of Northfield's natural environment. Recently, the City has completed key documents that provide direction on the identification, enhancement and protection of the area's natural resources. These documents are the Natural Resources Inventory (NRI) completed in 2005, the Greater Northfield Greenway Corridor System Action Plan completed in 2007, and the Surface Water Management Plan, also completed in 2007. These documents will be referenced throughout this chapter.

Environmentally Significant Areas

The general topography, along with the soils, bedrock, water features and other natural community resources, are a defining element of the overall community (Map 5.1). These areas are described below. Each environmentally significant area should be evaluated

to determine whether the area should be protected, restored, or allowed to be altered.

General Topography

The Cannon River Valley is the dominant topographical element in Northfield. The river forms the low point of the community, but various high points are spread alongside the length of the river and certain hillsides and tributaries of the Cannon River feature steep slopes. Numerous wetlands of various types are located within many of the stream valleys, the Cannon River Valley and elsewhere.

Bedrock

According to the Bedrock Geologic Map and Bedrock Topographic Map of Dakota County (Minnesota Geological Survey, 1990) and the Rice County Water Resource Management Plan, the geomorphology of the uppermost geologic formation is a thin layer of quaternary deposits and, in many places, exposed bedrock. The current landscape results largely from glacial activity. The bedrock formations consist mainly of St. Peter Sandstone, Prairie Du Chien Group and Jordan Sandstone.

Depth to bedrock varies from 130 feet deep to exposure at the surface. Areas where the bedrock is shallow or exposed provide an increased potential for pollutants to reach the groundwater supply. As the City looks at infiltration practices in stormwater management, care should be taken to locate storm water improvement features away from shallow bedrock areas that could increase the risk of groundwater contamination.

Soils

The US Department of Agriculture and Rice County prepared the Rice County Soil Survey in 1975. Utilizing this survey, Carleton College developed a report called Northfield Land Use Suitability, which was used during the preparation of the 1977 Northfield Comprehensive Plan. The report generally analyzed the suitability of land for urban development, rural development (which relies on septic tanks), and agricultural use within Northfield and an area that includes today's urban expansion area.

Northfield is surrounded by agricultural land. Agricultural soils maintain a generally moderate to high level of productivity except for the western and northwestern extremes where agricultural lands are found to have very high productivity levels based on corn

suitability ratings. Conservation farming practices should be encouraged in the city's growth areas as a means of reducing soil loss from agricultural fields. Also, the rate of growth should be controlled with land use principles in Chapter 4 to reduce the amount of land taken out of agricultural production.

The agricultural lands surrounding Northfield may eventually develop. Soil types found in valleys and low areas following streams and the Cannon River, as well as areas with steeper slopes (as shown on Map 5.1) have a limited building suitability. Detailed topographic surveys will be completed as part of any development plan to determine the actual location of these areas. Development will mean soils will be highly susceptible to erosion and sedimentation during construction periods. Best Management Practices (BMPs) should be used and erosion and sediment regulations enforced to control soil loss.

Water Resources

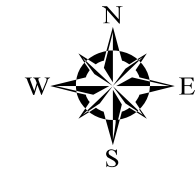
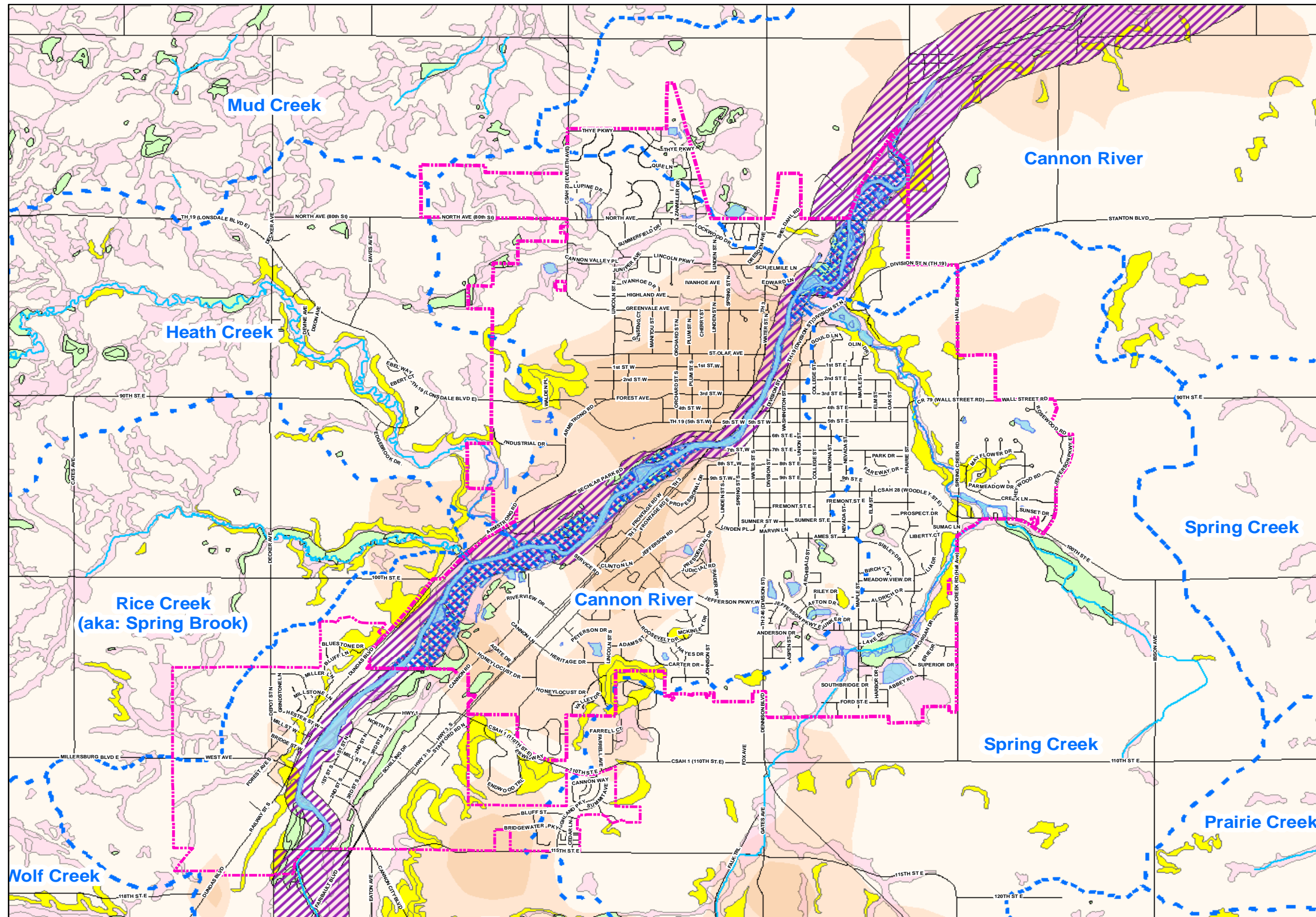
Groundwater

Aquifers provide the groundwater for the city and surrounding areas. The main aquifers within or near the city are the St. Peter Aquifer, the Prairie Du Chien-Jordan Aquifer, the St. Lawrence-Franconia Aquifer, and the Mt. Simon-Hinckley Aquifer. Within the city, five ground water wells provide the source for potable water needs. Groundwater resource data for areas within the city are available in the Rice County Water Resource Management Plan, as well as the Dakota County and Rice County Geological Atlas.

Watersheds

Northfield is part of the Cannon River Watershed. This watershed can be subdivided into four subwatersheds within the city that feed the Cannon River. These subwatersheds include Spring Creek, Rice Creek (locally known as Spring Brook), the Lincoln Waterway, and Heath Creek (Map 5.1). The City's Surface Water Management Plan describes these subwatersheds in more detail. The Cannon River and Rice Creek are waterways protected by the Minnesota Department of Natural Resources (DNR), which warrants further discussion of these waterways, below. The Lincoln Waterway and Heath Creek are discussed more in depth in the Surface Water Management Plan.

Map 5.1 Environmentally Significant Areas



Legend

- Northfield
- Dundas
- Watersheds
- Water
- Floodway
- Wild & Scenic Boundary
- Wetland
- Steep Slopes (> 8%)
- Hydric Soils

Depth to Bedrock

- 1 - 10 ft
- 11 - 20 ft
- Over 20 ft

Map Sources:

- Rice County GIS Division
- Dakota County Office of GIS
- Minnesota DNR: FEMA Q3 Floodway Data, Minnesota DNR - Division of Waters, National Wetland Inventory
- USDA Natural Resources Conservation Service
- R.S. Lively, E.J. Bauer, and V.M. Chandler Minnesota Geological Survey, January, 2006

- 1. Cannon River.** The Cannon River, one of the most significant identity elements of Northfield, originates in Rice County at Shields Lake and flows through the heart of Northfield's downtown en route to the Mississippi River.

Many tributaries in Northfield flow into the Cannon River providing surface (rain) water drainage for much of the community as well as some of the agricultural uses in surrounding townships.

In 1980, the Cannon River was added to Minnesota's State Wild & Scenic Rivers Program. This program was established by the State in 1973 in order to protect rivers with outstanding natural, scenic, geographic, historic, cultural and recreational values. Only six rivers have had segments designated as 'wild, scenic, or recreational' under the program. Each of the six designated river segments in Minnesota has a management plan outlining the rules and goals for that waterway. These rules work with local zoning ordinances to protect the rivers from factors that undermine the wild, scenic and recreational qualities for which they were designated; factors such as pollution, erosion, over-development and degradation.

Segments of the Cannon River fall under both "scenic" and "recreational" classifications. Through Northfield, the river is designated as "recreational", a designation given to those rivers that may have undergone some impoundment or diversion in the past and may have adjacent lands that are considerably developed, but are still capable of being managed in accordance with the act. This means that bordering lands may have already been developed for a full range of agricultural or other land uses, and may also be readily accessible by pre-existing roads or railroads.

- 2. Rice Creek (Spring Brook).** One of the more notable Cannon River tributaries is Rice Creek, located in the southwest portion of the community. Rice Creek is one of the last remaining cold water native trout streams in Minnesota and the only one in Rice County. Cool, clean, spring-fed water within this creek provides the necessary habitat for the survival and breeding of Brook Trout, the native trout species in Minnesota. In fact, the DNR has restocked Brook Trout in other streams throughout the state using fish eggs originating from Rice Creek.

Thus far, Rice Creek has been able to maintain the necessary habitat and water conditions for the survival of trout. The primary threats to this habitat come from existing agricultural practices or future development and include surface water runoff containing excessive sediment, pesticides, or fertilizers, and an increase to the speed, volume, or temperature of runoff water.

In 1997 the Cannon River Watershed Partnership began working with a committee composed of local landowners, representatives of various governmental jurisdictions, fishing enthusiasts, and the DNR to learn about Rice Creek and its watershed, and to discuss ways to preserve and protect it. The Committee created a vision for the watershed and Rice Creek entitled "Description of the Spring Brook Watershed in 2050."

The Surface Water Management Plan has identified three specific strategies for future regulations the City could adopt to protect and enhance the Rice Creek watershed. These strategies include more stringent rate and quality controls for any development project within the watershed. To achieve this, runoff from developed sites should be kept to a minimum and infiltration should be required to a greater degree than other watersheds within the city. The City will also work with Bridgewater Township and other regulatory agencies to develop a trout stream management plan.

Natural Communities

A Natural Resources Inventory (NRI) was completed in 2005. The NRI revealed that natural communities (a distinct and identifiable association of plants and animals), as well as a number of semi-natural areas that provide connectivity between the natural communities, are primarily concentrated along the river and stream corridors. Several important and unique natural features in the community were identified in an inventory in the NRI. These features are shown on Map 5.2 and listed below:

- Rich fen (a type of wetland) at Hauberg Woods
- High quality floodplain forests along the Cannon River
- Good quality maple-basswood and oak forests along the stream corridors, especially Heath Creek

- Rice Creek (this site is of regional significance as it is the only trout stream in Rice County, and is an uncommon resource type in southern Minnesota)
- Limestone cliffs along Heath Creek
- Numerous scenic overlooks along the stream corridors and in some outlying areas
- Cannon River (designated as a state Wild and Scenic River)
- Open space areas on the campuses of St. Olaf and Carleton Colleges, which have high ecological value due both to their overall size and the significant efforts the colleges are making to restore and manage existing native habitat. The Carleton College Arboretum provides areas of open space, native species and wetland restoration for both educational purposes and recreational enjoyment for students and Northfield residents. St. Olaf College also maintains a nature preserve containing open spaces, wetlands and natural habitat.

The NRI also described the quality of the various identified natural features. The “Qualitative Rank” and “Restoration Potential” described in the NRI, and the contiguity of non-developed space regardless of its quality, should be taken into account when determining whether the resource should be protected, restored, or allowed to be altered.

Additional Environmental Issues

Resource Conservation

The City makes use of many resources to enhance the quality of life, including the use of non-renewable fossil fuels. Conserving these resources to minimize the impact on the environment and provide for sustainability has become a goal of the City. Sustainable development practices are strategies and actions to achieve economic and social goals in ways that can be supported for the long term by conserving resources, protecting the environment, and ensuring human health and welfare. These practices ensure that current uses of resources and the environment do not restrict their use by future generations. Sustainable development is a process of change in which the use of resources, the direction of investments, the orientation of technological development and institutional change are made consistent with the future as well as present needs.

A task force was established in 2007 to assess opportunities for local development of energy efficiency and clean energy projects that will protect the

community from future energy price and supply instability, enhance local economic development, and provide local, regional and global environmental benefits. The task force will also assess the efficacy of creating a municipal electric utility or special energy district in achieving energy opportunities. Finally, the task force will recommend citywide target greenhouse gas emission reductions to fulfill Milestone 2 of the City’s commitment to the Cities for Climate Protection Campaign (CCPC) and develop an action plan to meet these targets. The City Council will evaluate the recommendations of the energy task force and implement new appropriate policies.

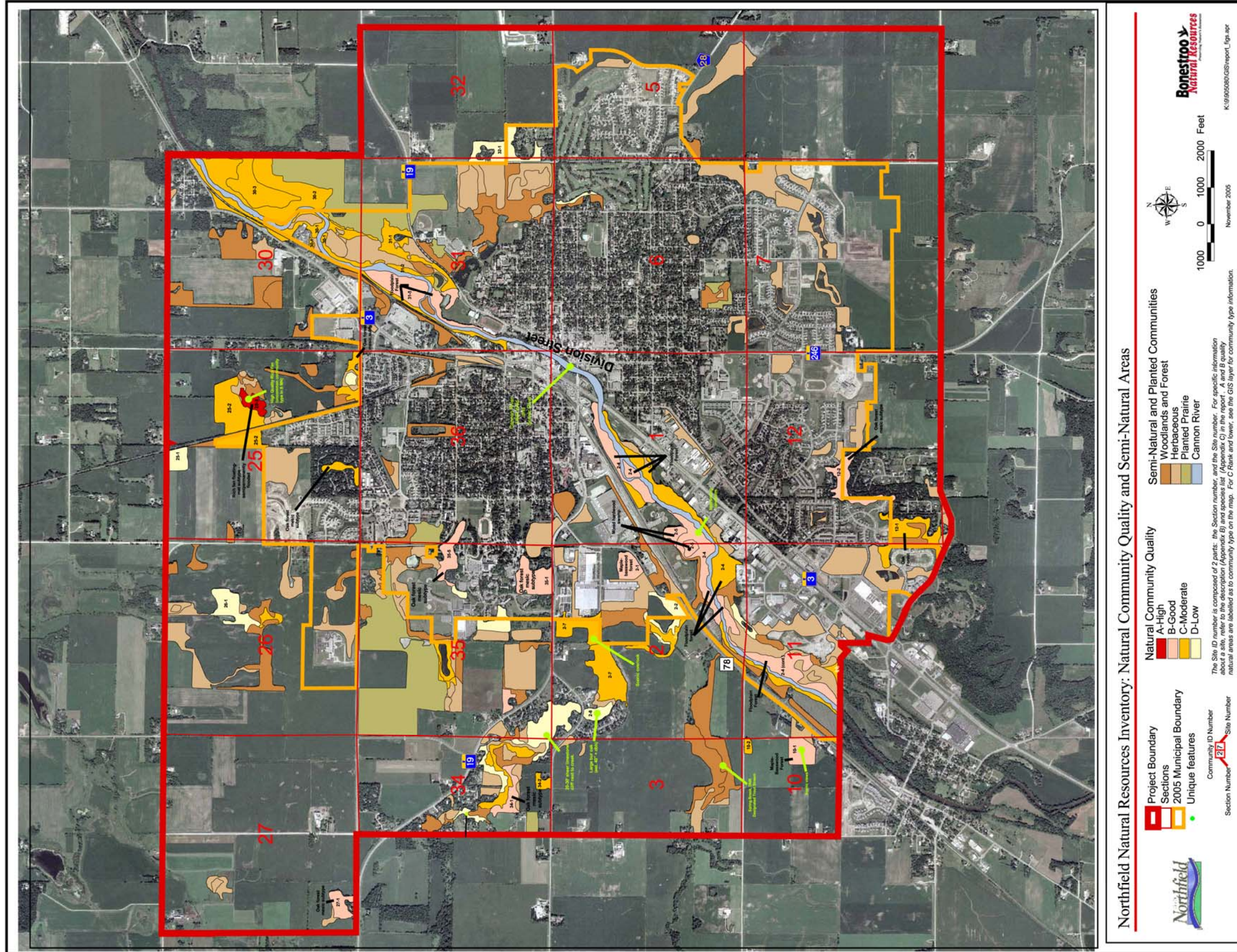
Reduction of Waste Materials

The City has a number of programs to encourage the reduction of waste materials. Normal curbside pickup of refuse is supplemented with single sort curbside recycling. The following materials can be comingled and are currently accepted for recycling curbside: aluminum cans, brown paper bags, glass bottles and jars, newspapers, small-mouth plastic bottles and jugs, tin and steel cans. Catalogs, magazines, phone books, cardboard boxes and mixed-use paper can also be comingled or dropped off at recycling containers located in the parking lots of two of Northfield’s major grocery stores. Households that produce less than 14 gallons of garbage or refuse per week may also qualify for a reduced garbage/recycling fee.

The City and the currently licensed refuse collector also sponsor Annual Clean-Up Days. Once a year, the currently licensed refuse collector provides dumpsters in Babcock Park located at Woodley Street and Hwy 3. City residents may unload debris from their households free of charge at the site. Disposal of electronic appliances are taken, but do require an additional disposal fee.

Yard waste (leaves, grass clippings and garden/flower waste) is collected curbside seasonally (spring and fall) if waste is contained in specially-marked biodegradable paper bags. Northfield residents also have the option of disposing of yard wastes, including brush, branches and shrubbery, at the City’s and Rice County’s compost sites. Finished compost is also available for pickup at the site. The City’s compost site is located between Northfield and Dundas on Armstrong Road, just south of Sechler Park. The Rice County compost site is located between Northfield and Faribault off Hwy 3 on County Road 75.

MAP 5.2 NATURAL COMMUNITY QUALITY AND SEMI-NATURAL AREAS



Source: City of Northfield

Hazardous Materials

Minimizing the contamination of the environment, whether its water, soil or air pollution, is a priority. Practices within the community can have both a local and regional affect on the environment. Locally there are a number of facilities that store and use hazardous materials that have the potential to pollute the environment. Federal and state regulations require these facilities to address storage and handling of these materials and develop a plan of action in the unlikely event that these harmful substances are released into the environment. The City, along with the other required authorities, should be notified in the event of a regulated release that could potentially be harmful.

Much of the city's solid waste products are taken to the Rice County landfill. The landfill is permitted to accept certain waste products such as household refuse, furniture, empty dried paint cans and construction materials. Hazardous waste is not allowed to be disposed of in the Rice County Landfill, as they have the potential to contaminate the landfill. Household Hazardous Waste (HHW) and qualifying Very Small Quantity Generators (VSQG) can dispose of their hazardous waste at the Rice County Hazardous Waste Facility and/or Dakota County Hazardous Waste Facility. Disposal of Household Hazardous Waste should take place in residents' respective counties. Business VSQG hazardous waste is paid for by the company and on appointment. There is also the potential that these materials are disposed of in an illegal matter such as dumping in the storm sewer system. As part of the City's NPDES MS4 permit, the City will develop an education program on the proper disposal of household hazardous materials.

Air Quality

The City values the quality of the air in and around the community. In general, the City controls and directs those activities that would subject the citizens of the community to unacceptable air pollutants, such as burning of hazardous materials and burning leaves and brush. Currently, the City does not have regulations prohibiting residential burning of wood in conventional fireplaces, wood and pellet stoves, or outdoor wood-fired boilers. The City has adopted by reference the Minnesota Pollution Control Agency's (MPCA) regulations and standards relating to air quality.

Noise Pollution

The City currently has several ordinances in place that address various noise disturbances. These disturbances include animals, parties or large assemblies, and other noise producing activities in residential or commercial areas. These ordinances should be evaluated to determine if further measures could be taken to reduce noise impacts.

Current Protection Programs

Environmental Quality Commission

The City maintains a citizen advisory board called the Environmental Quality Commission. This volunteer board advises the City Council on the creation of appropriate policies, programs, and regulations for the protection and preservation of the community's natural resources.

NPDES MS4 Permit

The MPCA implemented the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Program in March 2003. Phase II requires (as amended in 2006) municipal separate storm sewer systems (MS4s) in urban areas with a population over 10,000 to obtain an NPDES permit. Permits for construction sites greater than one acre are also required as part of the Phase II requirements. The City submitted its Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) in conformance with the MPCA guidelines in the spring of 2007. More information about the permit can be found in the City's Surface Water Management Plan.

Organic Pest Management Policy

The City acknowledges the potential health risks associated with exposure to pesticides and is committed to phasing out the use of pesticides on City owned land through the implementation of an Organic Pest Management Policy for Turf & Non-Aquatic Landscape ("OPM Policy"). Organic Pest Management (OPM) is a problem-solving strategy that prioritizes a natural, organic approach to turf grass and landscape management without the use of synthetic pesticides. It mandates the use of natural, organic cultural practices that promote healthy soil and plant life as a preventative measure against the onset of turf and landscape pest problems. OPM responds to site-specific conditions by

integrating cultural, biological and mechanical practices that foster cycling of resources and promote ecological balance and conserve biodiversity. Implementation of the OPM Policy is intended to augment and guide the existing turf and landscape management practices on property under the City’s control and to set an example for residents of environmentally sustainable turf and landscape practices.

Other Protection Programs

- The City currently has a tree preservation policy, which will be updated in the revision of the Land Development Regulations.
- The City has a Well Head Protection Program that is detailed in Chapter 6, Sewer and Water Resources.
- The City will strive to use Leadership in Energy and Environmental Design (LEED) standards for environmentally sustainable construction of public facilities.
- The Greater Northfield Greenway System Action Plan preserves a corridor for trail connections and recreation, and also serves as a stream buffer to filter pollutants and preserve wildlife habitat. Further detail about the greenway corridor is found in Chapter 8.
- There are many other tools and strategies for protecting environmental resources, some of which are very aggressive and require high degrees of public involvement, and others that are less aggressive and require minimal to no public involvement. These strategies may assume a variety of forms including regulatory requirements, incentives, or a combination of both. The following is a list of strategies for environmental and open space preservation/protection that may be targeted towards significant tree stands (woodlands), stream buffers that may also serve as trail corridors, or areas with significant natural habitats/species. The zoning and subdivision revision currently underway may make some of the strategies less appropriate.
 - ❖ *Fee simple acquisition* – A municipality or land trust purchases the desired preservation area outright, guaranteeing its protection and public access.
 - ❖ *Conservation or preservation easement* – A landowner agrees to place desired preservation areas in an easement that is

- recorded on the deed and prohibits development of the land. In return, the property owner receives some property tax relief. The easement should be conveyed to an organization that will be responsible for management of the easement area.
- ❖ *Purchase of Development Rights* – A municipality or land trust purchases the development rights (PDR) to the property allowing the private landowner to retain ownership, but not the property’s development rights. The private landowner would be required to place the land area that would have been developed in a permanent conservation easement or other land protection program.
- ❖ *Overlay Zoning* - Overlay zones are a type of resource protection zoning superimposed on traditional zoning in order to protect environmentally sensitive areas while still allowing the underlying use in suitable forms. As an example, Northfield has a flood plain district in its zoning code that complies with the Federal Flood Insurance Program and regulates what can be done in the flood plain area. In the area designated as an Overlay District, the use and intensity of riparian activities are regulated by a zoning ordinance containing several riparian corridor protection standards. This strategy considers all the land uses that are within the federally designated flood plain areas and gives Northfield legal control of the area without having to own the property.
- ❖ *Transfer of Development Rights* – A transfer of development rights (TDR) program allows municipalities to preserve unique and environmentally sensitive areas through a form of overlay zoning that targets specific segments of a community for preservation. Landowner property values are protected because they are permitted to transfer their right to develop, based on the underlying zoning district, to a portion of the municipality designated for more intensive development (i.e., sell development rights to other developers within the community). This allows the environmental corridors to be permanently preserved while still

providing a return on investment to the developer and retaining additional development capacity in the community. The community would have to identify areas where the transfer of density is desired (sending areas) and areas where the density would be received (receiving areas) within its zoning code. This approach relies on a market that is accepting of higher density development patterns.

- ❖ *Bonus/Incentive Zoning* – Bonus zoning is similar to transferable development rights except that the additional development rights are generated and used by the developer rather than purchased from another landowner. Incentive zones may establish a required set of conditions and an optional set of incentives that the developer may choose to meet in exchange for greater flexibility. For example, an incentive zoning law may allow a developer to build in a zone at a higher density than is normally allowed if the developer agrees to set aside more open space or adopt certain energy-saving or transportation measures.
- ❖ *Clustering* – This strategy, sometimes called open space zoning, allows municipalities to offer incentives or use regulation to ensure that new subdivisions cluster homes on smaller lots, allowing the environmentally sensitive area to be set aside and protected as a common area for the enjoyment of those who live in the community.
- ❖ *Performance-based Zoning* – This type of subdivision expands on the overlay concept. The municipality identifies the performance criteria that must be met by any development in the zone, but gives the developer flexibility in planning and developing the subdivision, as long as the criteria are met.
- ❖ *Streambank Setback or Resource Protection Zones* – The municipality can protect environmentally sensitive areas through use of an established buffer strip. The buffer is similar to a utility right-of-way. The width of the setback is determined before construction of the subdivision begins. Zoning ordinances use two approaches – a

fixed buffer or a floating buffer. A fixed buffer may prohibit development within 200 feet of the high water line of a perennial stream, but a floating buffer may vary in width depending on site, soil and runoff characteristics.

- ❖ *Urban Growth Boundaries* – This is a zoning district established to encourage development within the district and discourage development outside the district boundaries.

Collaboration Opportunities

Many organizations have an interest in preserving the environment and maintaining an abundance of open space. The opportunity to work with many special interest groups, private philanthropists, the development community and other regulatory agencies should be explored when seeking solutions to environmental protection. There are a number of state and local agencies that regulate many of the environmental features within Northfield. The Surface Water Management Plan has a list of these agencies. The University of Minnesota Extension Service and the Cannon River Watershed Partnership are good sources for technical and educational materials. The Department of Natural Resources (DNR) and other governmental agencies such as the Minnesota Pollution Control Agency (MPCA) and the Rice County Soil and Water Conservation District also offer good technical and/or financial resources.

D. Objectives and Strategies

Outlined below are ten objectives and 32 strategies. The objectives indicate a specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1: Develop and approve a city-wide sustainability plan.

ER 1.1 Promote education about energy and resource conservation in the community.

ER 1.2 Incentives should be developed to promote energy efficiency in the design, construction and

operation of residential, commercial and industrial buildings.

ER 1.3 Natural resource conservation will be incorporated into the design and construction of residential, commercial and industrial development.

ER 1.4 New development will enhance conservation of surface water resources, including management of storm water runoff.

Objective 2: Protect and enhance environmentally significant areas.

ER 2.1 Maintain standards and regulations to control development on steep slopes (generally those over 12%) to control soil erosion and sedimentation and to minimize the removal of natural vegetation.

ER 2.2 Preserve sufficient natural open space, and greenway corridors, as identified in the 2008 Park System Plan and the Natural Resources Inventory (NRI), in order to provide habitat for wildlife and provide scenic and recreational qualities for the community.

ER 2.3 Encourage planting of native vegetation and development of habitat (such as native species, trees and grasses with deep root structures) within buffer areas and along streams and waterways as identified in the Greater Northfield Greenway System Action Plan and the NRI, and educate residents about the benefits of using native plant species in residential landscaping.

ER 2.4 The NRI should be consulted when development is proposed to verify the presence of any significant natural resources. Also, land use decisions in natural areas should consider the connectivity of a given natural area to other nearby areas. The loss of lower-quality natural areas can affect the ecological function of other nearby natural areas, including higher-quality areas. For this reason, the criteria for protecting or restoring a natural area should not be limited to the quality rank or restoration potential, but should also consider the location of a natural area in the local landscape and the potential utilization of the area by local wildlife.

Objective 3: Protect and enhance water quality.

ER 3.1 As the City looks at infiltration practices in stormwater management, care will be taken to locate these features away from shallow bedrock areas that could increase the risk of groundwater contamination.

ER 3.2 Protect and enhance the quality of groundwater to minimize the potential of contamination to the drinking water supply.

ER 3.3 Protect and enhance the quality of surface waters including the Cannon River and its creek tributaries. The Surface Water Management Plan identifies current strategies that should be updated periodically to remain current with regulations and acceptable practices. The City may consult with other educational and technical agencies and/or organizations to achieve this strategy.

ER 3.4 The City will cooperate with Bridgewater Township, the City of Dundas, the Minnesota DNR and any other regulatory agency to manage the regional creeks, especially Rice Creek, which is a trout stream.

Objective 4: Conserve energy in public and private sector development efforts.

ER 4.1 Encourage the use of energy conservation technologies and techniques, and promote the exploration and innovation of new methods to conserve energy.

ER 4.2 Strive to build or renovate city-owned buildings to meet LEED standards.

ER 4.3 Building design standards will allow for and accommodate changing solar technologies.

ER 4.4 Evaluate the recommendations of the Energy Task Force and promote implementation of the strategies as appropriate.

Objective 5: Promote the reduction of solid waste generated.

ER 5.1 Promote programs to reduce the amount of solid waste generated in the City and to increase the use of recyclable, reusable or biodegradable materials.

ER 5.2 The City will work with its contracted waste haulers to provide volume pricing that encourages the reduction of waste.

ER 5.3 The City will develop programs that promote and facilitate the reuse of building and construction materials in demolition, remodeling and new construction projects in Northfield in consultation with regional conservation groups such as the Green Institute's Re-Use Center in Minneapolis.

Objective 6: Minimize the negative consequences of hazardous materials.

ER 6.1 The City will review its use of hazardous materials and substitute safer alternatives wherever possible.

ER 6.2 Educate Northfield businesses and residents on the storage, use and disposal of hazardous materials.

ER 6.3 Promote organic pest management policies and objectives, including establishing a baseline inventory and reduction in the use of synthetic chemicals on City-owned properties.

Objective 7: Work toward the goal of maintaining or improving air quality in the community.

ER 7.1 City will evaluate its current ordinances and policies that affect air quality and adopt ordinances and policies, as applicable.

ER 7.2 Plan and implement a multi-faceted program of education and regulation regarding the use of indoor fireplaces and wood and pellet burning stoves, and outdoor wood-fired boilers, to protect residents from pollutants and unhealthy emissions from airborne toxins and fine particulate matter.

ER 7.3 Explore the possibility of incentives to encourage the use of high-efficiency carbon neutral stoves.

ER 7.4 Educate the businesses and residents on alternatives that can provide better air quality, such as encouraging the planting of perennials and groundcover, reducing lawn size, which leads to less frequency of use of gasoline-powered lawn mowers.

Objective 8: Minimize negative noise impacts within the community.

ER 8.1 City will review ordinances and policies related to noise to see if improvements can be made.

Objective 9: Increase the density of the community's urban forest.

ER 9.1 The City will develop an urban forest management policy that addresses protection or replacement of significant trees on developed property and all land scheduled for development. This management policy will also establish standards for tree species and location within and near public right-of-way and easements.

Objective 10: The City will remain responsive to issues of climate change and will act to reduce Northfield's contribution to climate change.

ER 10.1 Continue to act on its commitment to the Cities for Climate Protection campaign begun in 2005.

ER 10.2 Develop land use policies to manage and reduce urban heat island effects, including promoting shading of streets and parking lots with more trees.

ER 10.3 Promote the reduction of green house gas emissions at residential, industrial and commercial scales.

ER 10.4 Encourage conservation standards at residential, industrial and commercial scales.