

The natural environment plays a large role in defining Faribault's landscape and overall character. Rivers, woods, prairies, bluffs, and wetland systems provide the wealth of natural resources that have played an important role in shaping Faribault. The Environmental Resources section of the Comprehensive Plan identifies many of those features and establish policies for the preservation, protection and enhancement of Faribault's natural environment.

The City has demonstrated its commitment to the preservation and management of its natural resource base by conducting a Natural Resources Inventory (NRI). The NRI contains an Inventory and Management Plan that will help the City to protect and enhance the health and value of these resources. The City Council adopted the NRI in August of 2002.

Landscape Features

The Cannon and Straight River Valleys are defining landscape features in Faribault. The rivers converge as the Cannon River north of the downtown at Two Rivers Park as they flow north towards Northfield. Along their banks are high bluffs, most notably those east of the downtown, that provide vistas of the community to the west. The topography of the Cannon River Valley in Faribault and areas west is flat and broad. Numerous wetlands are found in the stream valleys. Remnants of the hardwood forests that covered much of the area are still present. According to the NRI, approximately 15 percent of the native landscape remains in and around Faribault. Farming practices have removed much of original land cover and land development has had an impact as well. Much of the remaining landscape is located along river and stream corridors.

Wetlands

Wetlands usually consist of peat and mucky soils covered with marshy vegetation. These areas experience a seasonal to permanent wetness. Wetlands serve as natural components of the overall storm water management system by holding water during heavy rains until evaporation or percolation occurs. Wetlands also serve as natural filters by removing impurities as the water passes through them prior to entering the underground water table. Wetlands also serve a valuable habitat for wildlife providing food and cover. The wetlands map in figure 10-1 shows the predominance of wetlands are found along greenway corridors for rivers, streams and lakes. A lesser percentage of the wetlands are found in upland prairie areas as depressions. Many of these wet prairie and emergent marsh wetlands have been impacted by agricultural practices.

Under the authority of the Wetlands Conservation Act (WCA) (Minnesota Statute Section 105), Faribault has the permitting authority for activities that will impact a wetland. The City has designated the Natural Resource Conservation Service with the responsibility for administering and enforcing the provisions of the WCA.



*Wetland at River Bend
Nature Center*

Figure 10-1 Wetlands

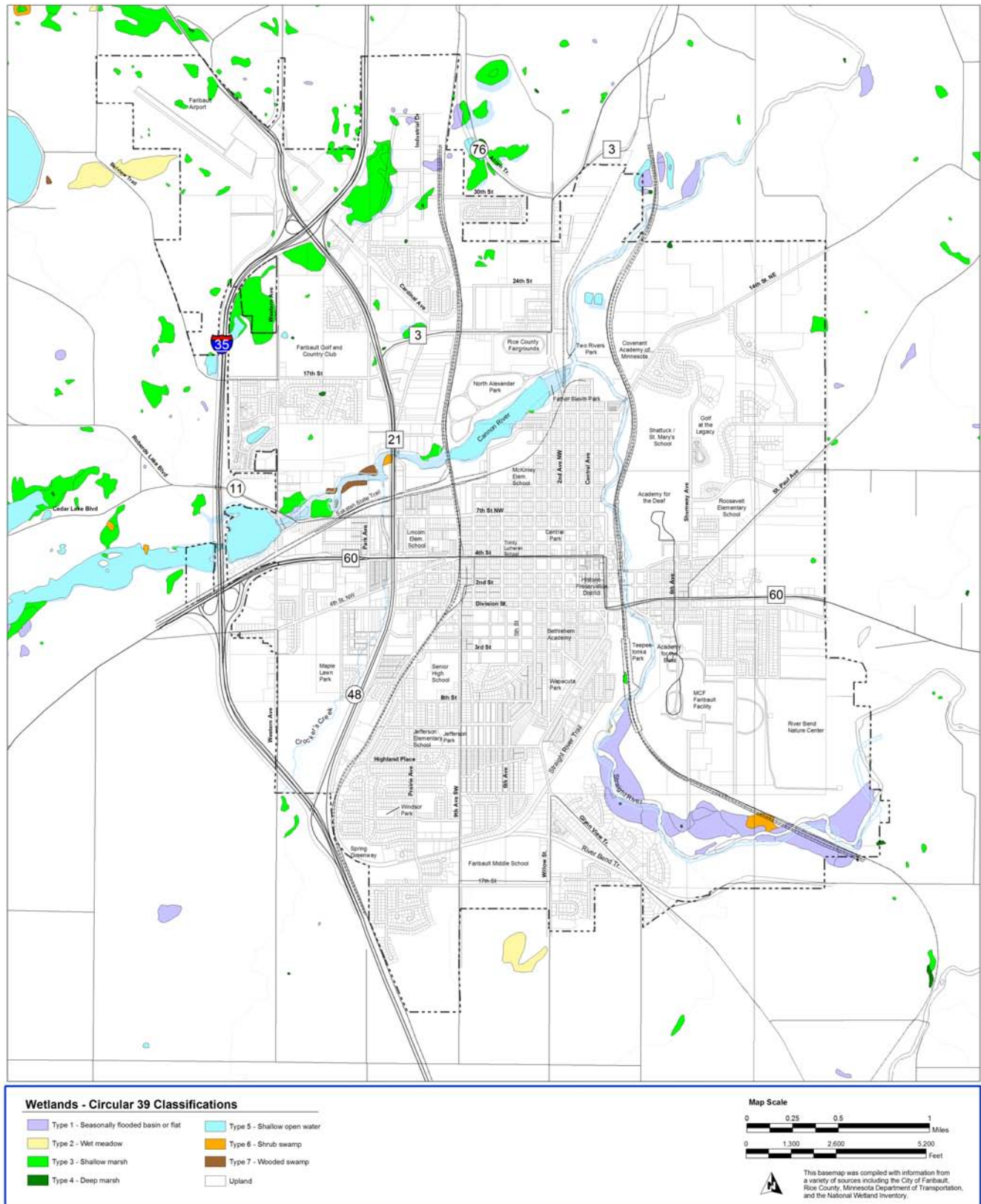
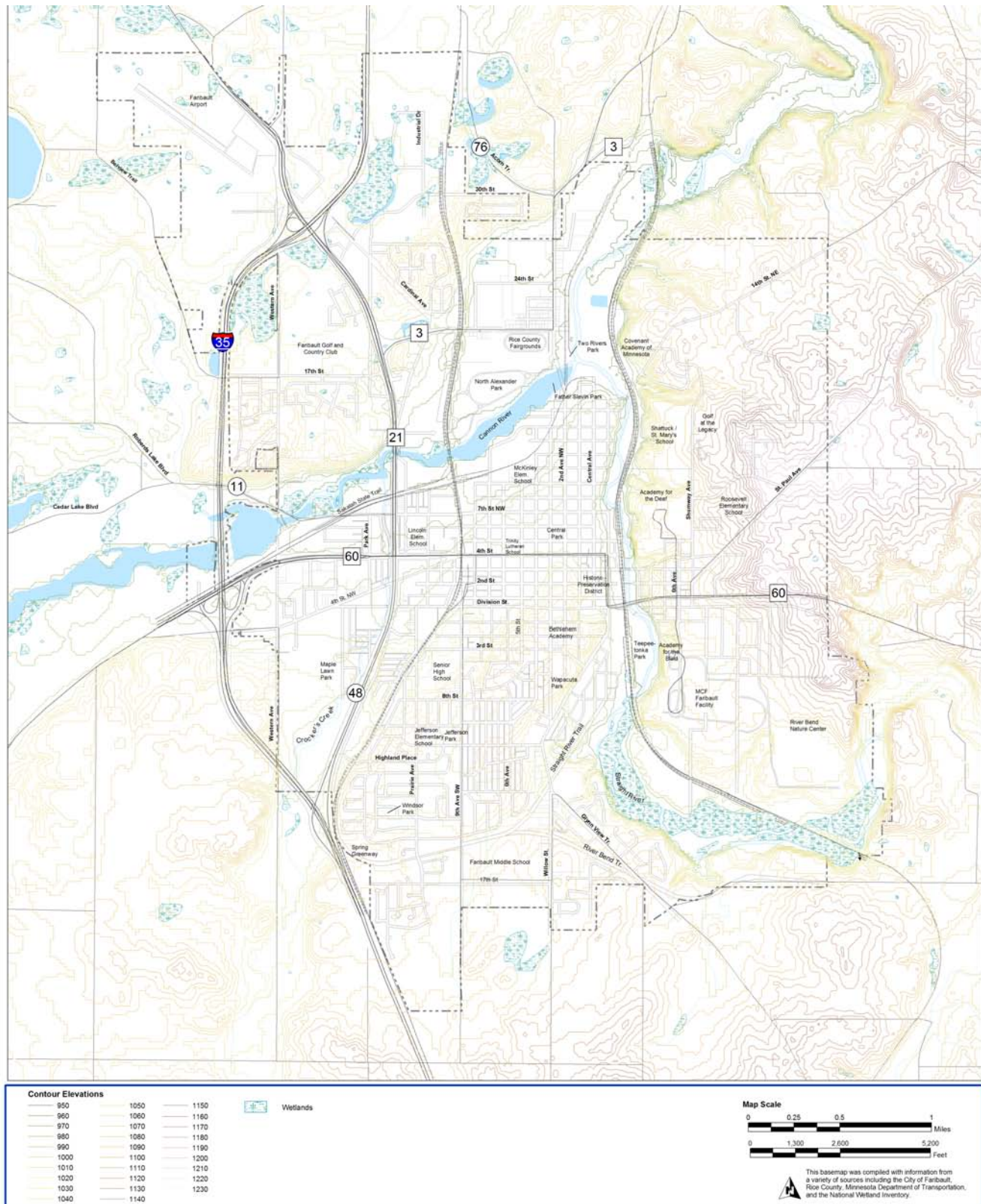


Figure 10-2 Topography



Uplands

Upland areas support prairie and forest systems, generally with better, higher class soils. Historical agriculture and land development of the area sought these soils because they are more suitable for these activities. Faribault is located in the Big Woods ecosystem that covered much of southeastern Minnesota. Figure 10-3 shows the remnants of upland communities in and around Faribault. The Big Woods ecosystem has a number of community types that are found in and around Faribault. They include:

- Maple-Basswood Forest
- Floodplain Forest
- Shrub Swamp
- Emergent Marsh
- Wet Prairie

Two other communities noted by the Minnesota Biological Survey include Hardwood Swamp and Moist Cliff.

Development and agricultural practices have severely impacted some plant communities to a level where they are not able to grow naturally in large systems. They include:

- Pasture/Savanna
- Old fields
- Disturbed deciduous woodlands
- Floodplain areas occupied by reed canary grass

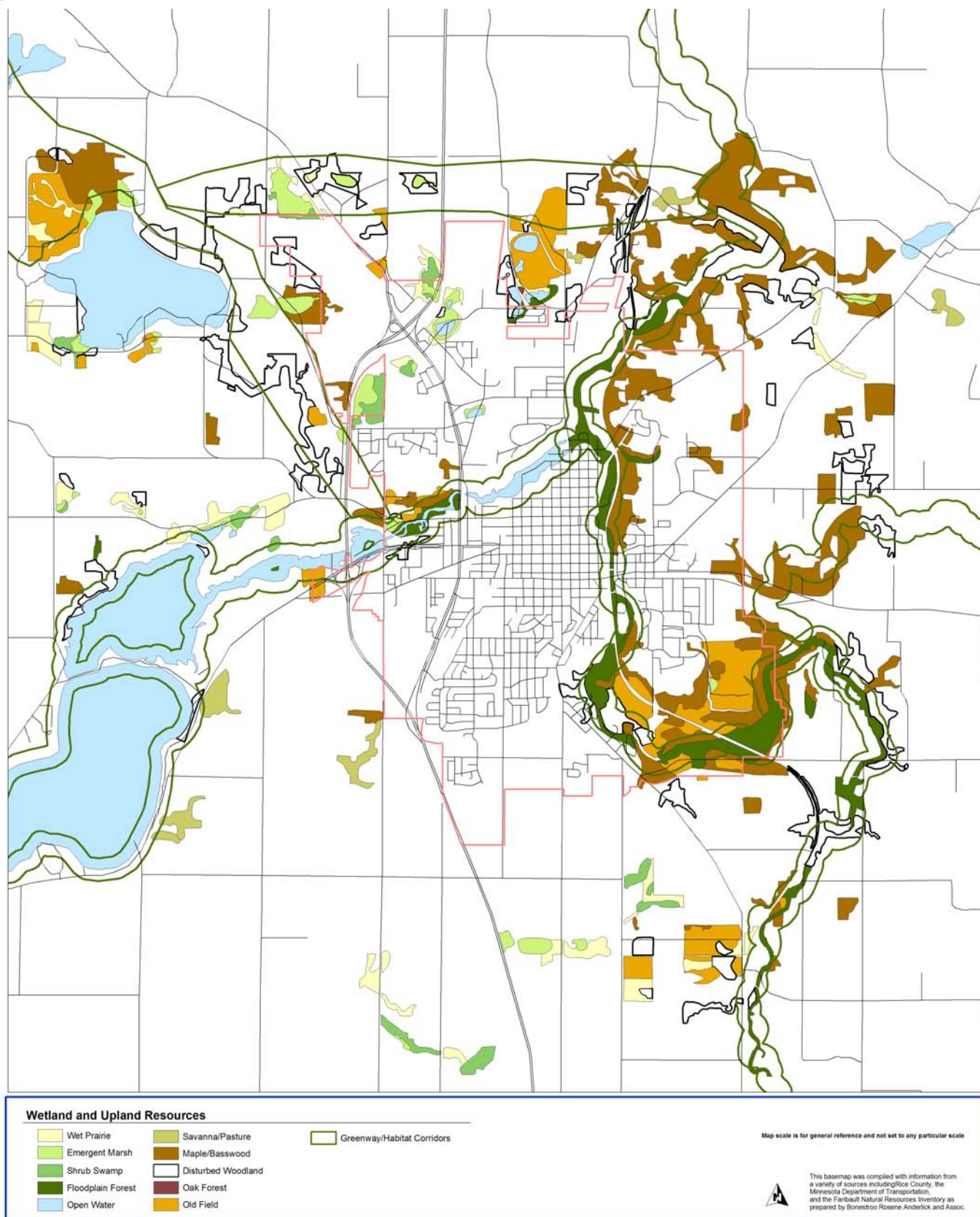
Greenway/Habitat Corridors

As a part of the NRI, greenway and habitat corridors with high resource values were identified. The identified corridors in Figure 10-3 were selected because they contain large areas of diverse upland and wetland habitat. Maintaining these corridors allows wildlife to move and migrate which supports their survival. The corridors identified in the NRI include:

- Straight River Corridor
- Cannon River Corridor
- Falls Creek Corridor
- A wooded corridor from Wells Lake north through Roberds Lake
- Woods and wetlands from Roberds Lake east to the Cannon River
- A migratory bird corridor from Shields Lake to Nerstrand Woods



Figure 10-3 Natural Communities



Floodplain

In 1969, the Minnesota Legislature enacted the State Flood Plain Management Act. This Act was made part of state law to solve flood problems in a comprehensive manner. The Act requires flood prone communities to adopt floodplain regulations and enroll and maintain eligibility in the National Flood Insurance Program (NFIP). This program allows people to insure property and possessions from losses caused by flooding. The Department of Natural Resources is the state agency designated with implementation responsibility of the Act.



Cannon River Falls Dam

The City participates in the NFIP which is administered by the Federal Emergency Management Administration (FEMA). As a part of the program administration, communities receive a Flood Insurance Study (FIS) which usually contains Flood Hazard Boundary Map (FHBM) and a Flood Insurance Rate Map (FIRM) that are used to show areas with flood potential. Faribault uses the FIRM to determine in properties and structures are located in the 100 year floodplain. A number of maps called Community-Panels are used to determine if properties and structures are if designated flood areas. A number of these maps make up the FIS.

Floodplain areas in Faribault are located along the Cannon and Straight Rivers, their tributaries, lakes, and some wetland areas. Good and accurate information is critical to protecting structures from flooding. When applications for development adjacent to floodplains are proposed, it is important that professional surveys be prepared to determine building locations and floor elevations. This is the only way the City can certify construction complies with the Floodplain Act. Proper certifications also keep the city in good standing with the NFIP.

Special Designations

In 1980, the Cannon River was added to Minnesota's State Wild and Scenic Rivers Program, which was established by the State of Minnesota 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. The official Wild and Scenic designation begins at Faribault's northern city limits. The Department of Natural Resources is charged with preparing a management plan for the river. The original management plan for the stretch of the Cannon River was adopted in 1980. A community-based planning process to update this plan is expected within the near future but additional designation of upstream segments in Faribault are not planned at this time. Further details on the designation of these rivers can be found in Minnesota Rules Chapter 6105.



Natural Resource Objectives

The City of Faribault's policies related to natural resource protection and enhancement include:

1. To protect the environment and preserve clean water and clean air.
2. To preserve the scenic and environmental qualities of the Cannon and Straight River Valleys and their tributaries.
3. To preserve sufficient natural open space in order to provide habitat for wildlife and provide scenic and recreational qualities for the community.
4. To guide development and redevelopment in a manner that protects and enhances the air, water and land resources in the City.

Natural Resource Policies

The natural resource protection and enhancement policies of the City include:

1. Practice conservation of energy in all public and private sector planning and development programs by encouraging the use of energy conservation technologies and techniques, and promoting the exploration and innovation of new methods to conserve energy.
2. Protect significant trees and woodland, and promote reforestation and tree-planting programs within the City.
3. Promote private- and public-sector conservation of water and environmentally sensitive lands.
4. Protect and enhance wetlands, wildlife habitats, woodlands, and major waterways as vital natural resources, and as vital ingredients of the human and natural living environment of the City.
5. Promote programs to reduce the amount of solid waste generated in the City, and to increase the use of recyclable, reusable or biodegradable materials.
6. Require natural vegetation buffers along undeveloped streams, waterways and wetlands, and encourage restoration efforts along developed streams, waterways and wetlands.
7. Encourage planting of original vegetation and habitat (such as native species, trees and grasses with deep root structures) within buffer areas along streams and waterways.
8. Study application of alternative storm water management techniques (utilizing infiltration and overland flow for example) in locations where direct outlet of surface or storm water into a water body will have detrimental impacts on the quality of the water body.
9. Discourage use of chemicals and fertilizers within the City's wellhead protection area and within buffer areas of streams and water features, especially in areas that are already developed and have manicured lawns.

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10. Prohibit development in flood plains unless flood-proofing techniques can be implemented without imposing negative consequences downstream or on surrounding lands.
 11. Utilize a regional storm water management approach where feasible and appropriate, as opposed to individual on-site management facilities to control storm water discharge rates and provide necessary storage volumes.
 12. Prohibit channeling of untreated storm water runoff through buffer areas of streams.
 13. 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.
 14. Incorporate and require the use of performance standards consistent with “Best Management Practices” (as defined in the handbook titled Protecting Water Quality, MPCA) to provide specific controls related to erosion, sediment and water quality issues during and after construction.
 15. Promote sustainable architecture.

Protection and Management Strategies

There are many 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 habitat/species:

1. *Fee Simple Acquisition* - A municipality or land trust purchases the desired preservation area outright, guaranteeing its protection and public access.
2. *Conservation or preservation easement* - A landowner agrees to place a desired preservation area in an easement that is recorded on the deed and prohibits development of the land. In return the landowner would receive some property tax relief.
3. *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.



4. *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, Faribault 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 Faribault legal control of the area without having to own the property.
5. *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.
6. *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 in a zone to build 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.
7. *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.
8. *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.

9. *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.
10. *Urban Growth Boundaries* - This is a zoning district established to encourage development within the district and discourage development outside the district boundaries.

