

I. Introduction

The quality of life in most communities is determined by a host of factors including a strong economy, good schools, attractive and affordable housing, efficient infrastructure and services and a healthy, attractive, natural environment. Balancing the needs of the community and a healthy natural environment; however, requires good planning and the proper tools. The City of Afton Natural Resource Inventory describes the natural resources within the Afton area and serves as a blueprint for natural resource management. The Geographic scope of this Natural Resource Inventory includes the entire area within the City of Afton, as shown below in Figure I-1.

This Natural Resource Inventory uses a comprehensive “landscape” based approach, meaning that the physical and biological features of the landscape, and their relationships are detailed in this report. The unifying theme used in this report that binds these diverse areas together is the classification and evaluation of *Natural Communities*.

Natural Communities are assemblages of plants and animals and include the physical conditions such as soils, slope, aspect and climate upon which plants and animals occur. Included in this definition are natural disturbance regimes that tend to reoccur, sometimes at a frequency of hundreds of years or more. Disturbance regimes include fires, grazing, flood events and geologic processes such as erosion caused by wind and water.

Natural communities may occur in both terrestrial and aquatic forms. The physical and biological forces that define aquatic and terrestrial natural communities, are, however, very different. In this report, the emphasis is on terrestrial natural communities with consideration given to how aquatic and terrestrial natural communities interact. Attention is also given to how land use, whether occurring in an urban or agricultural setting, impacts natural communities.

This Natural Resource Inventory includes evaluation of forest, woodland, wetland and prairie natural communities. Natural communities are described with respect to species composition, ecological structure, and what functions are provided. For example, upland forest areas absorb rainfall and promote stormwater infiltration while providing for wildlife habitat and aesthetics.

The City as we know it today was shaped by the forces of ice, water and wind during the two glacial episodes; first the Superior lobe, a sheet of ice, which reached this area around 20,000 years ago and then, later, the Grantsburg sublobe of the Des Moines lobe, which receded approximately 10,000 years ago. In addition to these glacial events, meltwater from Glacial Lake Duluth, flowed southward, carving out the St. Croix River Valley south of present day Talors Falls and creating a variety of other unique landforms that today define the St. Croix River Valley.

Prior to European settlement, the area now occupied by the City of Afton contained a mixture of oak woodland and savanna, dry and mesic prairie and the rich, mesic hardwood forests associated with the “Big Woods”. The distribution of these plant communities was determined by soils, topography, slope aspect and the frequency and distribution of fires and grazing.

Today, most of the native prairie has been converted to cropland or pasture and much of the original oak savanna, in the absence of fire and grazing has succeeded to oak woodland and forest. Although much has changed in the last 150 years, the City of Afton still retains large areas of forest and woodland, much of it in good condition. These remnants of historic vegetation have

great importance, and serve to define the places that we live and work. The purpose of this study is to identify the remaining natural areas within the and recommend a stewardship plan that will protect these resources for future generations to enjoy.

West Lakeland twp.

Denmark twp.

Afton

Afton State Park

18

20

**Afton NRI
Figure 1.1**

-  DNR State Park
-  Afton boundary
-  Management Units
-  Roads
-  NRI
-  Streams



1000 0 1000 2000 3000 Feet

1:50000

