Chapter 3
Protecting and Promoting our Natural, Cultural and Agricultural Resources

Introduction
The Protecting and Promoting our Natural, Cultural, and Agricultural Resources chapter provides an overview of the City of Prescott's resources and explores ways to promote and preserve these resources to benefit the community.

The City's natural, cultural, and agricultural resources are an important part of its identity and uniqueness. Prescott's natural resources can positively affect resident's health, provide wildlife habitat, increase property values, and spur economic growth. Cultural resources tell the story of early inhabitants, describe events that shaped the development of the area, and provide educational experiences for residents and visitors. Agriculture, a strong symbol of life in Wisconsin, is increasingly seen as a way to meet the food needs of local consumers.

As the City of Prescott grows, the protection and promotion of these resources will have a positive impact on the community in many ways.

Groundwater
Groundwater is the primary source for all water used for residential, industrial, and agricultural purposes within the planning district. The need for clean, reliable water supplies is essential to the health and wellbeing of the community. The groundwater quality in Prescott is very good

Groundwater is stored in underground aquifers and drawn out through wells. These water supplies are recharged through rainfall and melt water, which seeps through the porous soil under the force of gravity, settling at an impervious layer such as bedrock. Recharge areas are typically located in the upland areas, with the low-lying areas being discharge zones such as lakes, streams, and wetlands. Groundwater flow patterns typically follow the surface topography as the water slowly seeps to the discharge areas.

Groundwater contamination potential is influenced by soil characteristics such as chemistry, permeability, slope, and the ability of the unconsolidated materials overlying bedrock to filter contaminants (attenuation capacity). The bedrock geology of the Prescott area is predominantly dolomite with some sandstone and shale.

Groundwater quality is closely linked to land use practices. Substances deposited on the land surface are transported through the porous soil to the aquifer where they may

contaminate the water supply. Fertilizers, oil, lead, gasoline, and pesticides can leach into the aquifer causing contamination. Once contaminated, groundwater is difficult and expensive to mitigate.

Groundwater is also used to take showers, wash clothes, irrigate crops, and is used in manufacturing. The overuse of groundwater resources can lead to water shortages and the need for deeper wells and conservation.

The City of Prescott has a Wellhead Protection ordinance that regulates land uses within municipal well recharge areas in order to protect the City's municipal water supply.

Forested Lands and Urban Trees

The City of Prescott has a large tree canopy and the steep topography in the surrounding area lends itself to the preservation of large tracts of forested land *(see Map 3-1).* Forested lands and urban trees provide a wide range of benefits to a community. These benefits include:

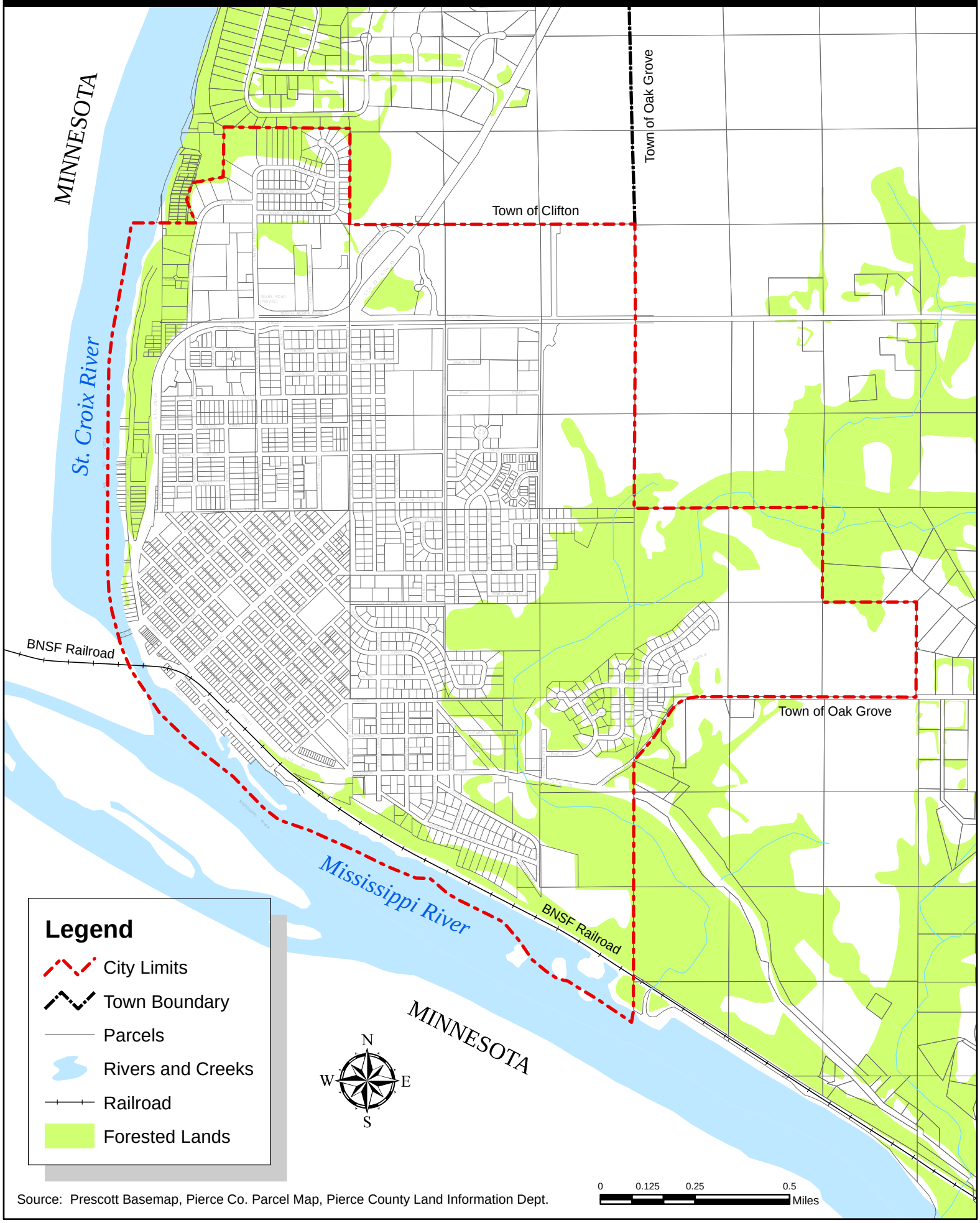
- Harvesting and turning into products and sold. Then replanting
- Providing areas for hiking and camping
- Providing wildlife habitat
- Reducing energy consumption in homes by providing shade and cooling
- Reducing the heating of asphalt and concrete surfaces
- Improving air quality
- Reducing greenhouse gases
- Preventing soil erosion
- Providing food
- Slowing traffic
- Increasing the value of your home

Trees can be negatively impacted by development and by insects such as the Emerald Ash Borer. The Emerald Ash Borer, an invasive species, was detected in Wisconsin in 2008 and kills all ash trees. It is important to plan and budget for the removal of ash trees because removing dead ash trees in a community can be very expensive and detrimental to the aesthetics.

Emerald Ash Borer

Implementing urban forestry programs, starting programs encouraging tree donations, and requiring trees in new subdivisions are ways the City can maintain and expand forested lands and urban trees.

Map 3-1: Forested Lands



Source: Prescott Basemap, Pierce Co. Parcel Map, Pierce County Land Information Dept.

Threatened or Endangered Species

An "endangered" species is one that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is one that is likely to become endangered in the foreseeable future. These species are protected because of their scientific, educational, aesthetic, and ecological importance.

The Wisconsin Natural Heritage Inventory Program maintains data on the location and status of natural features, rare species, and natural communities in Wisconsin. These sites are broad in nature and provide a general location for rare, threatened, or endangered species as well as high-quality natural communities.

Common threats to some of these natural communities are invasive plants, animal specific, or land development. Projects that are funded with state or federal money or disturb more than an acre of land require an investigation where threatened or endangered species are present.

A search of the Wisconsin DNR's Natural Heritage Inventory database shows there are areas that include Prescott and the adjacent towns that contain known occurrences of endangered resources. These species are legally protected. The Inventory does not indicate where the resources are located to discourage human disturbance. The City or landowner may request or be required to request an Endangered Resources Review for some projects.

Environmentally Sensitive Areas and Wildlife Habitat

Environmentally sensitive areas are areas where the natural environment can easily be harmed. These areas include steep slopes, forested areas, wetlands, shorelands and water resources. These areas provide essential areas for wildlife. Steep slopes are shown in Map 3-2.

The removal of trees and vegetation on steep slopes and shorelands can result in erosion that allows sediment to flow into wetlands, lakes and rivers. This degrades the environment, wildlife habitat, aesthetic view, recreational experience, and economic value.

Protecting these areas is extremely important for the protection of the environment and aquatic and terrestrial wildlife and plants. The preservation of these areas is vital to maintaining a diverse ecosystem, quality of life, and economic development.

Surface Water

Map 3-3 shows that the Mississippi River and St. Croix River are the two main surface waters in Prescott. Protection of surface water resources is critical to maintaining the water quality and diversity of wildlife. Development in the City and lands within the watersheds should take into account the impact on the function of natural systems, and

address potential pollution problems through the use of best management practices such as shoreland buffers and the preservation of environmentally sensitive areas.

Best Management Practices (BMP) designed to control stormwater runoff rates, volumes, and discharge quality can be used to protect water resources in developed areas. The City of Prescott has a stormwater management master plan to address runoff.

These rivers also play an important economic role in the area. Recreational opportunities, such as boating, fishing, and swimming provide revenue to the community and attract visitors from outside the City.

Mississippi and St. Croix Rivers

The City of Prescott is the southern stop along the St. Croix National Scenic Riverway. The Riverway is a federally protected system of riverways located in eastern Minnesota and northwestern Wisconsin. It protects approximately 250 miles of river, including the St. Croix River. The Riverway attracts a large amount of tourists during the summer months. The Mississippi River also is popular with birdwatchers that come to the river to observe eagles and other avian species.

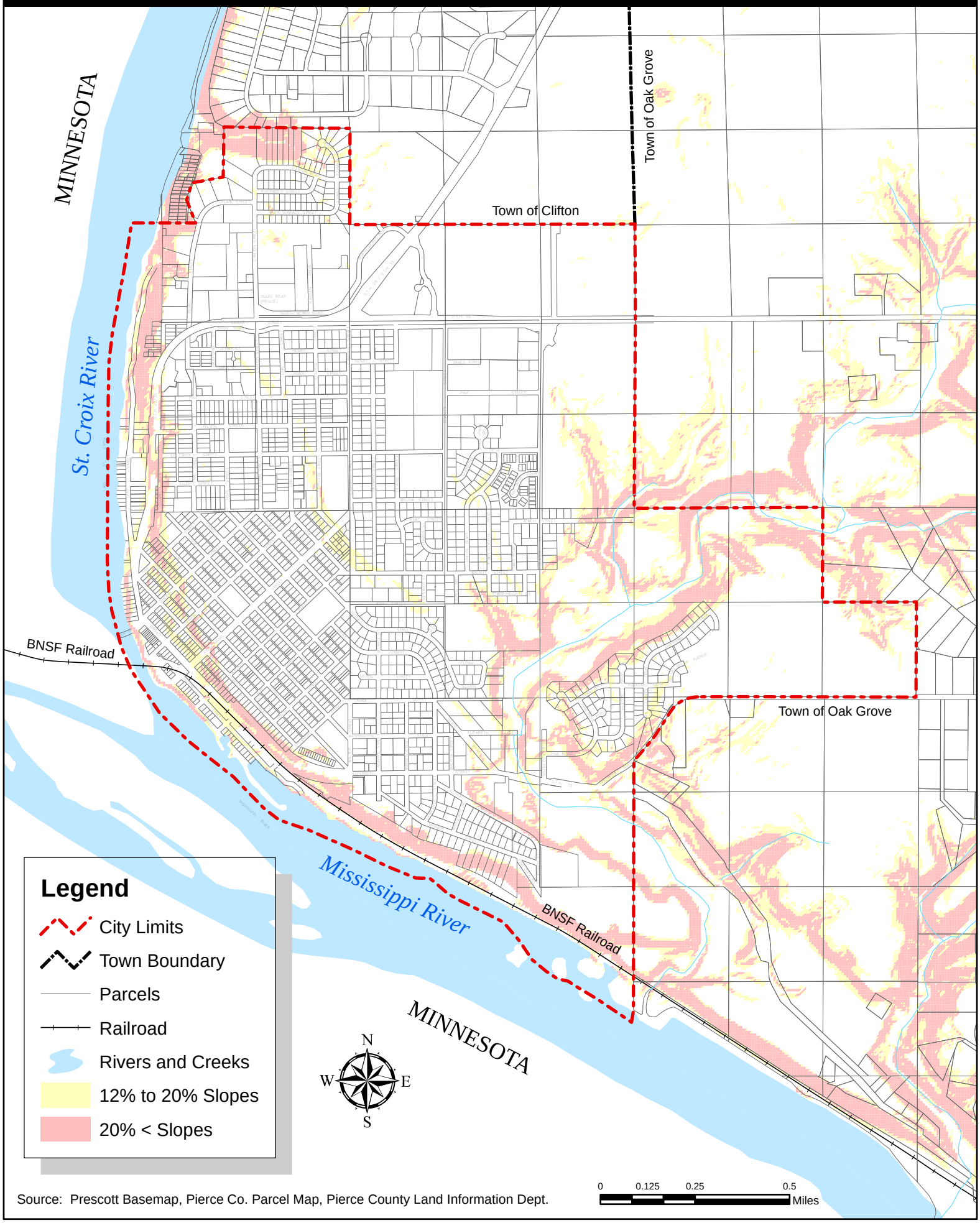
To protect these surface waters, buffer zones along the shores restrict what development activities can occur in these zones. Shorelands are vital components to the relationship between the land and the water. Shoreland areas serve as environmental buffer zones that catch pollutants and filter runoff before it enters the waterway. These buffer zones also provide habitat for a wide range of plant and animal species and would be considered environmentally sensitive areas. Shoreland areas are also very attractive as housing sites, and the demand for waterfront property is placing evermore pressure on these fragile areas.

In Prescott, shoreland zoning applies to all lands within 300' of a river or stream or to the landward edge of the floodplain or within 1000' of the ordinary high-water mark of navigable lakes, ponds, or flowages. Shoreland-Wetland Zoning, in conjunction with the Lower St. Croix Scenic Riverway Code, limits the type and amount of permitted development within the jurisdictional boundary, and regulates general land uses within this boundary.

Floodplains

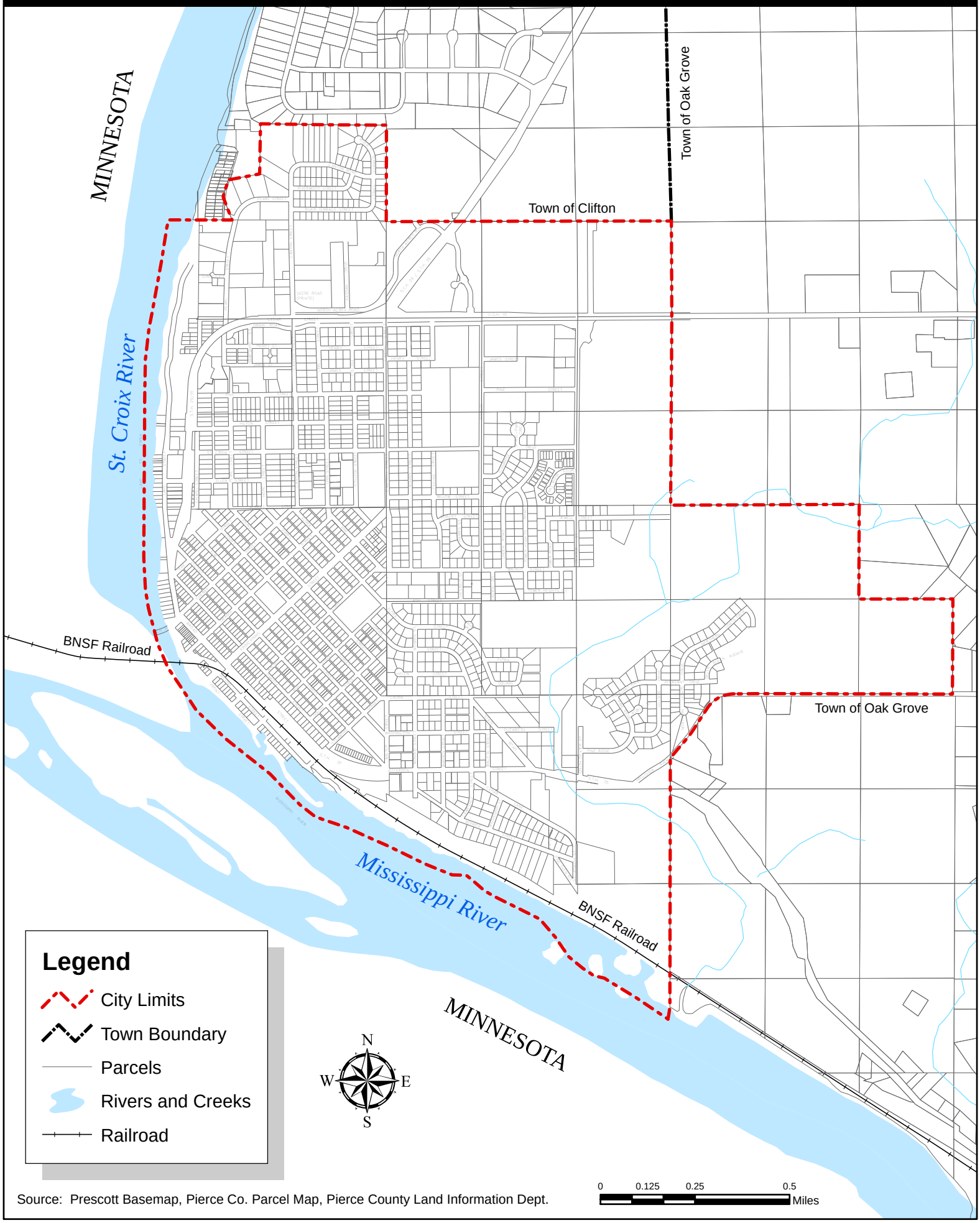
Floodplains are areas, which have been, or may become inundated with water during a regional flood. Floodplains are comprised of two components, the floodway and floodfringe. Floodways are areas, which directly adjoin the channel of a stream and are

Map 3-2: Steep Slopes



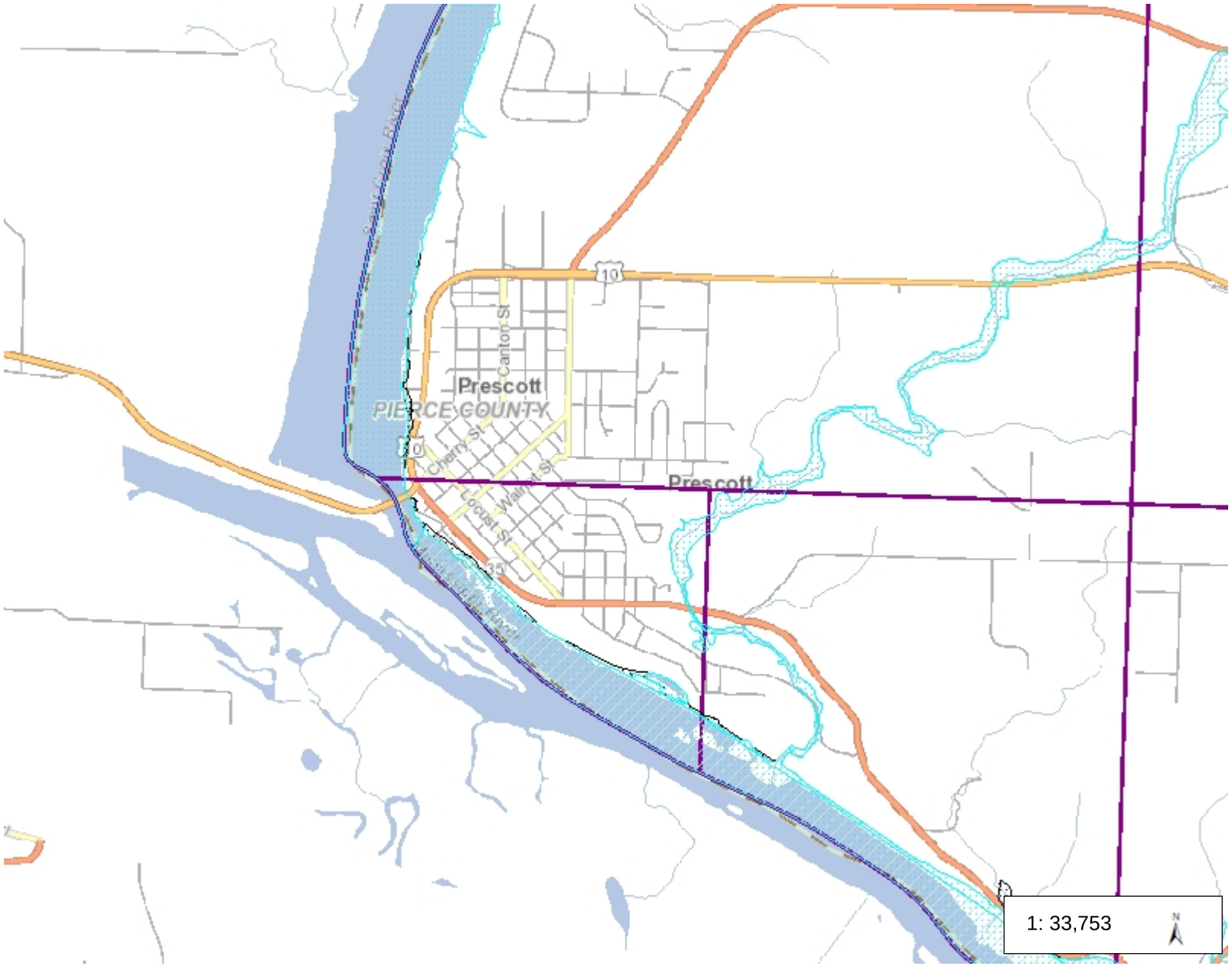
Source: Prescott Basemap, Pierce Co. Parcel Map, Pierce County Land Information Dept.

Map 3-3: Surface Water



Source: Prescott Basemap, Pierce Co. Parcel Map, Pierce County Land Information Dept.

Surface Water Data Viewer Map



Legend

Dams
- Dams with FERC License
- Dams

Floodplain Analysis Lines
- Other
- Flood Insurance Study
- Letter of Map Revision
- Case By Case Analysis
- Bridge

Floodplain Analysis Points
- Other
- Flood Insurance Study
- Letter of Map Revision
- Case By Case Analysis
- Bridge

- 1% Annual Chance Flood Haz
- 0.2% Annual Chance Flood Ha
- Floodway
- FIRM Panel Index
- FIRM_Index
- Rivers and Streams
- Open Water

Notes

Map 3-4: Prescott Area Floodplains

1.1 0 0.53 1.1 Miles

NAD_1983_HARN_Wisconsin_TM

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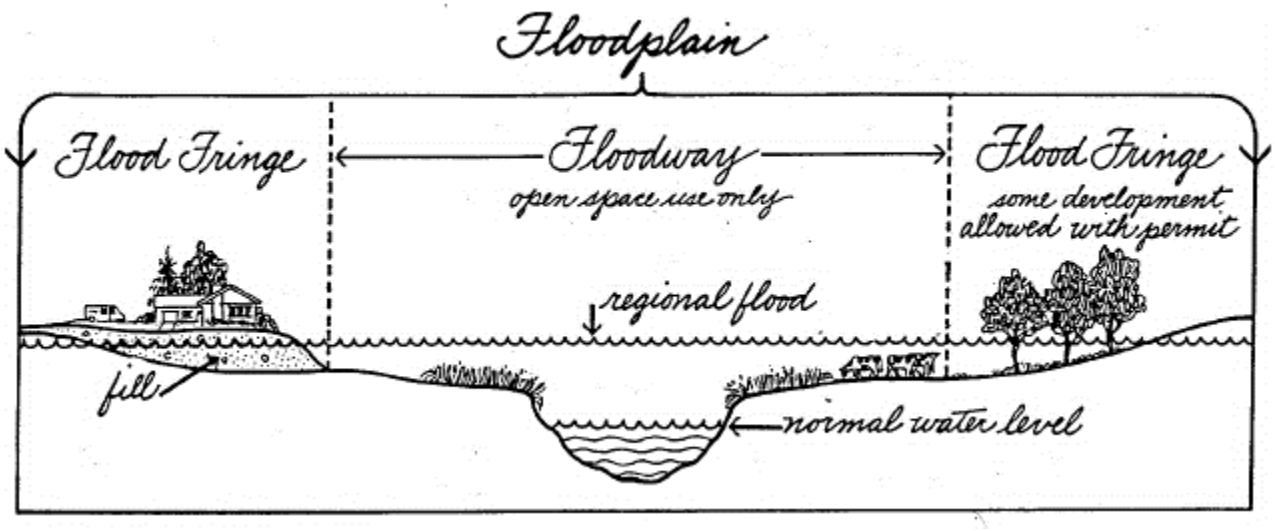
characterized by deep, fast moving water. The floodway is typically the most dangerous part of a floodplain, and uses in this area should be limited to conservation areas or open space. Map 3-4 shows the floodplain locations in the Prescott area. Floodplains are along the shores of the St. Croix River and Mississippi River as well as the creek/ravine that drains into the Mississippi River.

The floodfringe is generally associated with standing, or slow flowing water adjacent to the floodway. Development within the floodfringe is generally accepted, provided adequate flood proofing measures are in place. Wisconsin statutes direct all Wisconsin counties, cities, and villages to adopt floodplain zoning ordinances. The Federal Emergency Management Agency (FEMA) has mapped flood plains in the planning district. These maps delineate the entire flood plain boundary, and do not distinguish between floodway and floodfringe.

Figure 3-1: Floodplains



Source: Wisconsin DNR

Wetlands

Wisconsin statutes define a wetland as "an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic (water-loving) vegetation and which has soils indicative of wet conditions." Wetlands act as natural filters, removing sediments and contaminants from water.

Wetlands also regulate water levels by containing water during periods of excessive rain or snow melt. These unique environments are host to wide variety of plant and animal communities, including some threatened and endangered species. Wetlands also serve as rest areas for migratory waterfowl during the fall and spring months. Prescott has a small amount of wetlands in its planning area which occur mainly along the Mississippi River.

City Landscaping, Tree Planting and Edible Landscapes

Wildlife is often negatively impacted by urban development. The impact may come from the destruction of its habitat or the use certain products, such as pesticides, that may not be selective in what they eliminate.

The City of Prescott can implement guidelines for the use of pesticides on public land in order to protect vulnerable wildlife. At the same time, it can develop landscaping guidelines increasing wildlife habitat by requiring specific trees, native plants, and flowers to help maintain and increase the plant, animal, and insect diversity in the City. This also creates important habitat for pollinating species such as bees, hummingbirds, and butterflies that are essential to the production of crops that produce fruits or seeds.

Bee Balm

The City can also implement a policy of incorporating edible landscaping into public projects such as parks. Edible landscaping is the practical integration of food plants, such as fruit trees or herbs within an ornamental or decorative setting. Residents can pick the edibles for their own use.

Metallic/Non-Metallic Mineral Resources

Metallic and Non-metallic mineral resources are naturally occurring sources of metal-bearing ore and non-metallic (rock or sand and gravel) materials, respectively. When economically viable, these materials may be removed through mining.

The most common type of non-metallic mining is for the extraction of sand and gravel for road construction. Recently, an increase in interest in the mining of silica sand in western Wisconsin is attributed to the increase in the use of a well stimulation technique called hydraulic fracturing. Hydraulic fracturing is used to maximize the extraction of oil or natural gas. There are several mines near the City of Prescott that extract silica sand. Most of them are underground beneath the bluffs overlooking the Mississippi River.

Extraction of mineral resources typically requires the development of large areas of land, which also can cause significant environmental impacts to that land and the surrounding environment.

Prescott has a Nonmetallic Mining ordinance that requires a permit for mining activities as well as a reclamation plan. Some activities are exempt from the permitting requirement.

Historical / Cultural Resources

Historical and archeological sites can tell us many things about our past. They add value to your community by providing educational, aesthetics, and economic benefits. The

Wisconsin Historical Society estimates that 80% of our state's archeological sites have been severely damaged or destroyed. Currently, City projects that are state or federally funded must go through a review process to ensure that these sites, if within a project area, are not disturbed.

To protect the sites and landowner rights the locations of archaeological sites are exempt from public disclosure. Under state law it is illegal to remove objects or artifacts or conduct archaeological research of any kind on state and municipal lands (County, Civil Town, City, and Village) without a permit from the State Archaeologist. The law also applies to the bottomlands of lakes and rivers owned by the state or municipal governments and also covers submerged sites such as shipwrecks.

The State Historical Society's website also hosts the Wisconsin Architecture & History Inventory (AHI). An architectural inventory was done in communities beginning in the mid-1970s until 1980 with the help of State grant money. A search in 2014 revealed that Prescott has 48 properties listed. The majority of properties listed in the AHI are privately owned and not open to the public. Their inclusion in AHI conveys no special status such as National Register designation, rights or benefits for owners of these properties.

Locally, the City has a Welcome and Heritage Center that houses the Prescott Area Chamber of Commerce and Prescott Area Historical Society. The offices provide exhibits highlighting local heritage including maps and brochures. Visitors can take historic walking tours to learn about local buildings, businesses, and parks.

Welcome and Heritage Center

Prescott Area Historical Society members donate time to Prescott's Welcome and Heritage Center and were responsible for the design and building of a brick tower to house the old Prescott High School clock, which stands next to the Heritage Center.

The Great River Road Learning Center in Prescott also provides an opportunity to learn about the areas environment and history. The Center is situated to provide scenic views of the confluence of the Mississippi River and St. Croix River. These local Centers draw a significant amount of visitors to Prescott every year.

The City of Prescott can create a Façade Improvement Program that provides limited low interest loans to downtown businesses that want to redo their building facades. Typically the program will have architectural guidelines that have to be followed.

Prime Farmland

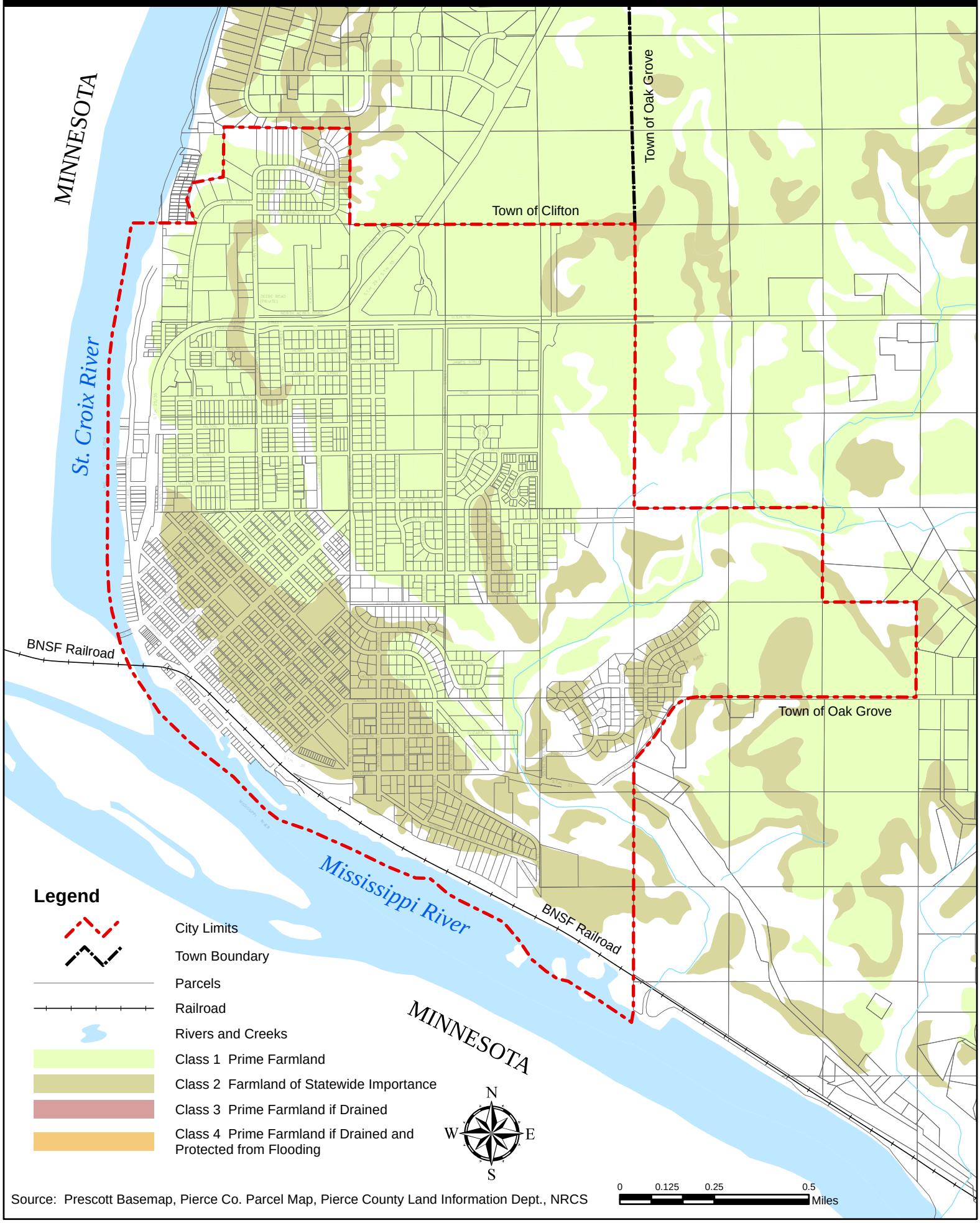
Agriculture is an important part of Wisconsin's history and economy. Wisconsin produces corn, soybeans, and other crops that are processed and sold throughout the world. Wisconsin is also known for its production of milk and cheese. Agriculture is an important part of the economy and way of life in towns surrounding the City of Prescott.

Prime farmland is land with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oil seed crops and is available to be used for cropland, pasture land and forest land but not urban development. Map 3-5 shows the location of prime farmland in the Prescott Area.

Climate change has brought the issue of food security to the forefront**.** Food security is a condition related to the ongoing availability of food. Severe drought conditions in many parts of country along with flooding in other parts have reduced the ability of these areas to produce food for distribution throughout the nation. At the same time, food deserts, geographic areas where affordable and nutritious food is difficult to obtain, are increasing in number and typically affect residents in small communities, lower income areas of communities, and residents without access to transportation.

There has been an increase in the number of small farms and urban farms that produce food for the adjacent population. Most of this food is sold on site or through farmers markets, community supported agriculture (CSA) shares, and local grocery stores. In Prescott, the Borner Farm Project grows organic produce that is sold at the farm and through CSA shares. The agricultural land surrounding the City of Prescott holds great potential for the entrepreneurial development of small, medium, and large scale farms that produce food for local residents, and rebuilding of a local and regional food economy.

Map 3-5: Prime Farmland



Source: Prescott Basemap, Pierce Co. Parcel Map, Pierce County Land Information Dept., NRCS

Goals, Objectives, and Recommendations

Goal 1: The City of Prescott conserves, utilizes, and promotes the aesthetic value of its natural resources to the benefit of its residents and enhancement of a sustainable local economy.

Objectives:

1. Increase the awareness of the benefits of the City's natural resources to residents and the local economy.
2. Increase the quantity and diversity of trees and other native vegetation in the City.
3. Enhance the natural habit to support urban wildlife such as birds, butterflies, and bees.

Recommendations:

1. Conduct a tree inventory to help manage City trees.
2. Create a policy to minimize the use of persistent pesticides on public lands and near public buildings.
3. Support the use of local alternative energy sources that will reduce the use of fossil fuels and the community's carbon footprint, to protect the local environment and keep energy dollars in the local economy.
4. Establish metrics to benchmark and track the value and effectiveness of natural resources to the local economy.
5. Review and update the City's stormwater management plan and best management practices to reflect local goals for local water resources such as water quality, quantity, and adapting to changing weather patterns.
6. Pursue the Tree City USA, Bird City Wisconsin, and Water Star Wisconsin designations.

Goal 2: The City of Prescott and local organizations and groups preserve and promote the history of the City's natural environment and people to provide quality educational experiences for residents and visitors and enhance the local economy.

Objectives:

1. Identify, preserve and promote historical and archeological sites in the community.
2. Expand opportunities for residents and visitors to learn about Prescott's natural environment, community and people.
3. Improve access to the natural environment.

Recommendations:

1. Continue to identity and mark historical sites, buildings, and historical events.
2. Collaborate with the Prescott Area Historical Society, local businesses and organizations to develop a "History Preservation Week".

3. Establish metrics to benchmark and track the value and effectiveness of promoting Prescott's cultural history to the local economy.
4. Explore options such as trails, docks, and overlooks to provide access to the City's natural resources.

Goal 3: Prescott residents support and have access to a diverse agricultural economy that produces commodities for regional, national, and international markets, and provides for local food self-sufficiency and security.

Objectives:

1. Increase the number of farms that produce local food and build an urban agricultural economy.
2. Protect prime farmland and soil fertility and water quality.
3. Increase access to healthy locally produced food.

Recommendations:

1. Create urban farming ordinances that allow small scale entrepreneurial farming within the City limits.
2. Support existing and the establishment of medium to large scale farms in the surrounding towns.
3. Explore options such as creating a policy allowing for the buying and selling of development rights and supporting small entrepreneurial farms to help preserve farmland and the ability to have small farms.
4. Establish metrics to benchmark and track the value and effectiveness of the local farm economy.
5. Work with the surrounding Towns to identify prime farmland and mutually beneficial policies that support the agricultural economy.
6. Create community gardens that are accessible to neighborhoods.
7. Expand the Farmers Market opportunities and capacity for vendors and buyers.
8. Encourage the Prescott School District to buy locally produced fruits, vegetables, meat, dairy, grain, honey, and eggs whenever possible.