

CITY OF

MARINE ON ST. CROIX

EST. 1839

Minnesota



**BOLTON
& MENK**

Real People. Real Solutions.

2040 Comprehensive Plan

Marine on St. Croix

DRAFT

August 2018



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I. INTRODUCTION

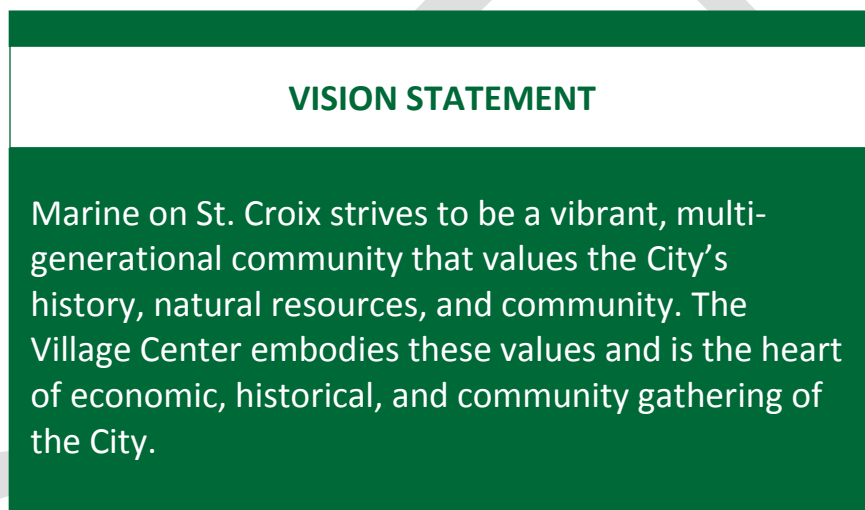
Marine on St. Croix is a community with beautiful natural areas, an attractive downtown, and a spirited community. Marine on St. Croix's success today is a result of active efforts through decades of community work, foresight, and planning. This Comprehensive Plan seeks to build on previous work and to enhance those qualities that make Marine on St. Croix a special place.

The Comprehensive Plan provides an overview of Marine on St. Croix, including historical context, existing land use, water and natural features, public facilities, transportation, population, housing, and employment trends and forecasts. It provides a vision for the future, as well as goals and policies to help anchor that vision, and an implementation plan to make the vision a reality by 2040.

A. Vision, Goals and Policies

Vision Statement

The City of Marine on St. Croix developed a vision statement, shown below, to create a picture of the community in the future, and to establish the framework for the Comprehensive Plan.



General Guiding Principles

Goals and policies provide the basis for development and redevelopment strategies. Goals identify various objectives of the City in managing future growth and protecting natural resources. Policies represent the official position of the City with respect to implementation of goals. The following five general guiding principles guided the preparation of this Comprehensive Plan update.

- Maintain the Village Center as a community gathering place by pursuing policies and decisions to help support an economically viable atmosphere for village businesses and organizations.
- Continue to be a good steward of the City's natural resources, and require and encourage private parties to do the same.
- Encourage policies and decisions to establish Marine on St. Croix as a multi-generational community.
- Maintain the central role of a school in the community. The Marine on St. Croix school is part of the City's physical fabric. It impacts the local housing market by attracting families to the community, it is a key to workforce attraction and retention, and it provides community-oriented spaces.
- Maintain the presence and vitality of community amenities such as libraries, health and safety response teams, and maintain and upgrade physical infrastructure to meet the needs of citizens as well as support measured growth.

B. Background/History of the Community

Marine on St. Croix has a rich history dating back to 1839. As the oldest European settlement site in Minnesota, Marine was the site of the first commercial, water-powered sawmill in Minnesota, supplying virgin white pine lumber to partners in Marine Settlement, Illinois. Originally named Marine Mill, the town immediately became a local interest and a landing site for immigrants searching for homesteads in the newly opened territory between the St. Croix and Mississippi Rivers. The earliest recorded plat of the City shows the City founders had more in mind than lumber, envisioning a park, school, and seminary, among other things.



Source: City of Marine on St. Croix

The sawmill was the catalyst for development of the community as well as its focal point and major industry. It was soon joined by a flour mill located about 100 vertical feet above the sawmill; both mills shared the available water power. A burgeoning market system joined the farmer immigrants with Marine, and an additional role as social center emerged.

As the lumber company's sawmill spurred commerce and community development, Marine quickly came to resemble a small New England town. The early residential architecture was highly influenced by the immigrants from New England and Sweden. The neighborhood located north of the Village Center was constructed for the lumber company owners and other influential residents and is characterized by the New England Yankee architectural style. Swedish immigrants established neighborhoods located to the south and west of the Village Center and built less ornate, more utilitarian homes, reflective of the trade positions typically held by the residents.

With the immigration of new residents, development continued westward up the bluffs of the St. Croix River Valley, expanding the original town site. Building and street locations were dictated by the physical environment of the area such as steep topography, bedrock, and wetlands, resulting in small neighborhoods and irregular street patterns. Many of the original buildings exist today, providing an architectural link with the past; almost half the existing buildings in Marine predate 1940. Many of the structures built by the first residents of the town are listed as Minnesota historical sites. The Village Hall on Judd Street is the oldest village hall in the state still being used for government purposes. There are historic markers dedicated to the early grist mill and one devoted to the early sawmill.

After the lumbering era of the nineteenth century, Marine evolved into a commercial and agricultural center. Transportation infrastructure improvements benefited the City, with rail service available year-round in the 1880s and eventually a dependable road to Stillwater. In 1850, Congress passed the Minnesota Road Act, authorizing five military roads and providing funds for their construction. These roads were intended for the protection of the frontier and provided access to undeveloped areas for settlers. Unfortunately, not all infrastructure improvements have been wholly welcome. The re-routing and widening of Minnesota TH 95 in 1952 resulted in the loss of many Village Center buildings. High traffic flows, speed, pollution, and safety issues make Minnesota TH 95 a continued concern.

As Marine on St. Croix's population surpasses the all-time high of 679 people set in 1890, the sense of history and tradition continues to influence the City's current plans and actions. Equally important is the tradition of public service and participation, including philanthropic activities and everyday volunteerism on the Fire Department, Emergency Medical Team, the Planning Commission, and many other volunteer organizations. These traditions were key components of the 2040 Comprehensive Plan update process.

C. Purpose of the Plan

This Comprehensive Plan responds to the requirements of the Metropolitan Land Planning Act: Minnesota Statutes, Section 473.859. The plan is intended to guide future land use development and redevelopment, protect natural resources, and outline other planning and policy concerns for the City of Marine on St. Croix.

D. Process

Descriptive data about the City of Marine on St. Croix was gathered through a variety of sources. These data identified community assets, weaknesses, values, goals, and basic demographics of the City:

- A series of public meetings and open houses were held between January 2017, and May 2018, to review the various issues addressed within the Comprehensive Plan.
- A community survey questionnaire was distributed in the summer of 2017. Questions in the survey asked about basic demographic data of the respondent, community assets and weaknesses, visions for the future, and investment priorities. Approximately 19% of households responded.
- A website was developed and remained active from spring 2017 to spring 2018. Residents could respond to the community survey through this site, learn about the comprehensive planning process, and stay informed about all public meetings and events regarding the comprehensive plan.
- A review committee was formed to oversee community engagement efforts and preparation of the plan. The committee was comprised of key community leaders and met several times throughout the comprehensive planning process.

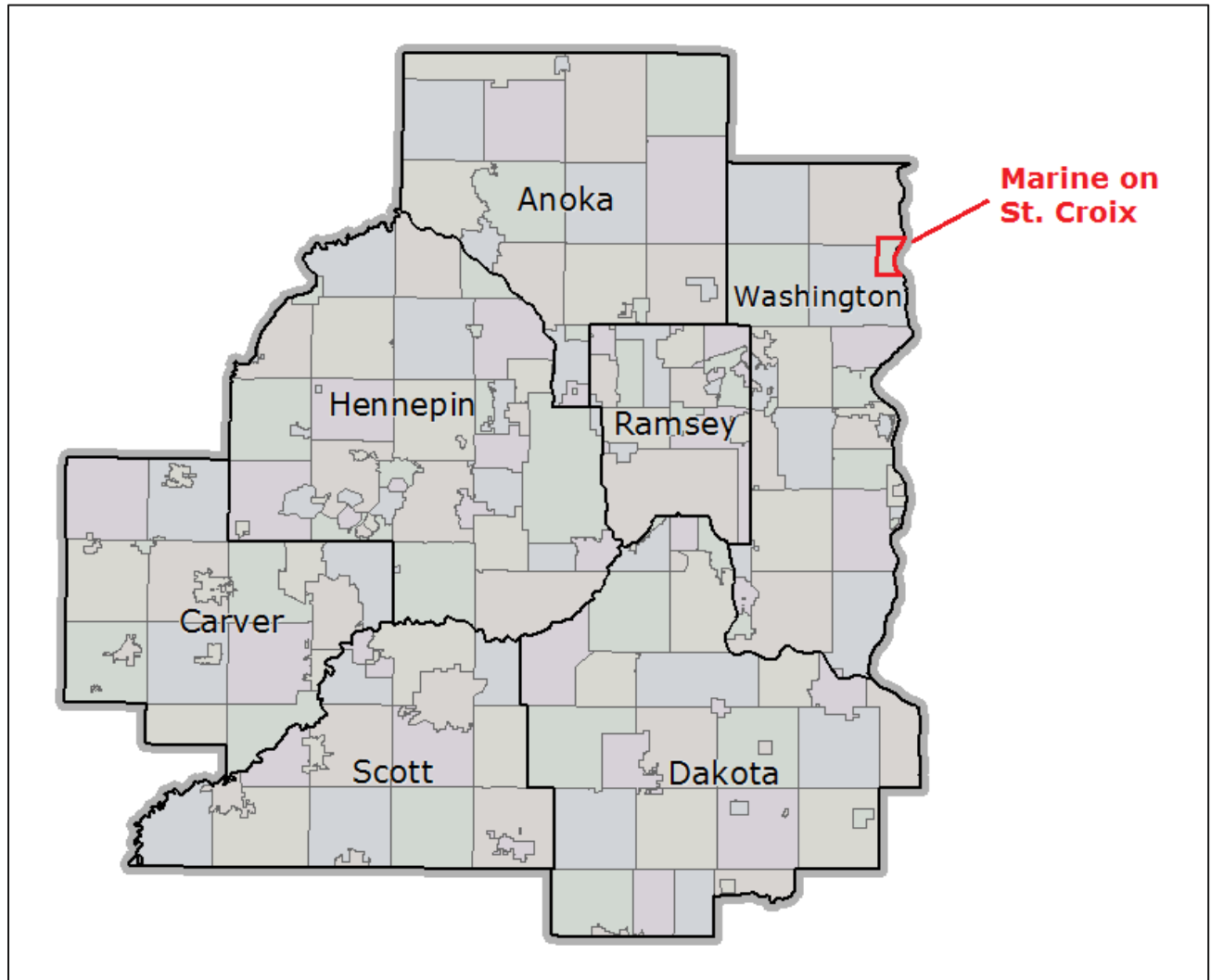


Source: Bolton & Menk

E. Regional Setting

Marine on St. Croix is located on four square miles in Washington County, about 12 miles north of Stillwater. It is on MN Highway 95/St. Croix Trail and neighbors Scandia and May Township in Washington County and Farmington and Somerset Townships in Wisconsin. Marine on St. Croix is located on the banks of the St. Croix River.

Figure 1-1 – Regional Setting



II. LAND USE

A. Goals and Policies

The specific goals and policies guiding the Land Use element of the Comprehensive Plan are:

- 1) Preserve and maintain contiguous common open spaces for scenic enjoyment, recreational use, environmental stewardship and rural identity.
- 2) Create cohesive neighborhoods to promote local identity and community interaction.
- 3) Reinforce Marine on St. Croix's identity through the integration of neighborhoods, open spaces, and community gathering places.
- 4) Ensure subdivision designs that provide for efficient delivery of public services.
- 5) Protect the natural areas by carefully zoning specific areas for further development.
 - a) Require any new development occurring within the St. Croix Rural Residential District to conserve and protect the natural scenic values and resources of St. Croix River Corridor.
 - b) Require that land to be developed in the St. Croix Rural Residential District is capable of accommodating individual sewage treatment systems (ISTS).
 - c) Require all new development within the St. Croix Rural Residential District comply with the St. Croix River Shoreland District regulations.
 - d) Require any new development within other Rural Residential areas be designed as clustered residential subdivisions.
- 6) Maintain the undeveloped existing street rights-of-way within the Urban Residential District as greenways.
- 7) Establish performance standards for setbacks and building envelopes for Urban Residential lots to protect green space areas and viewsheds between homes while accommodating the expansion or alteration of existing homes.
- 8) Maintain the geographic size of the Village Center, and investigate opportunities for new commercial growth.
 - a) Make the Village Center more inviting and useful for residents.
 - b) Provide space and support for public facilities and services within the Village Center.
 - c) Explore the use of architectural guidelines to preserve the historic identity of the Village Center.
 - d) Pursue streetscape design standards intended to complement the existing architecture, take advantage of the City's attractive natural setting, and improve the pedestrian access within the Village Center.
 - e) Support the economic vitality of the Village Center.
- 9) Ensure that private development pays its fair share of the cost of infrastructure required as a result of new development.
- 10) Preserve the Marine on St. Croix elementary school site for educational purposes.

B. Forecasts

In 2016, an estimated 682 people lived in Marine on St. Croix in 300 households. Other than a period between 1990 and 2000 when population remained stagnant, the population has been steadily increasing in the City. The number of households has also steadily increased since 1970, as shown in Table 2-1. According to the Minnesota Department of Employment and Economic Development (DEED), Marine on St. Croix experienced a spike in employment in 2000, 2001, and 2002. The data do not provide enough detail to explain this spike, although the difference appears to be higher employment numbers in the leisure and hospitality and construction industries. The spike in employment during these years is an anomaly. With these exceptions, employment in Marine on St. Croix has been largely consistent over time.

Table 2-1 – Historical Population, Households, and Employment					
	1970	1980	1990	2000	2010
Population	513	543	602	602	689
Households	170	201	234	254	302
Employment	50	50	126	235	124

Source: Metropolitan Council, Minnesota DEED

Table 2-2 shows forecasted populations, households, and employment to 2040. Overall, steady growth is anticipated in Marine on St. Croix.

Table 2-2 – Forecasted Population, Households, & Employment					
	2010	2016*	2020	2030	2040
Population	689	682	740	840	940
Households	302	300	340	400	450
Employment	124	94	140	150	160

**Metropolitan Council Estimates*

Source: Metropolitan Council

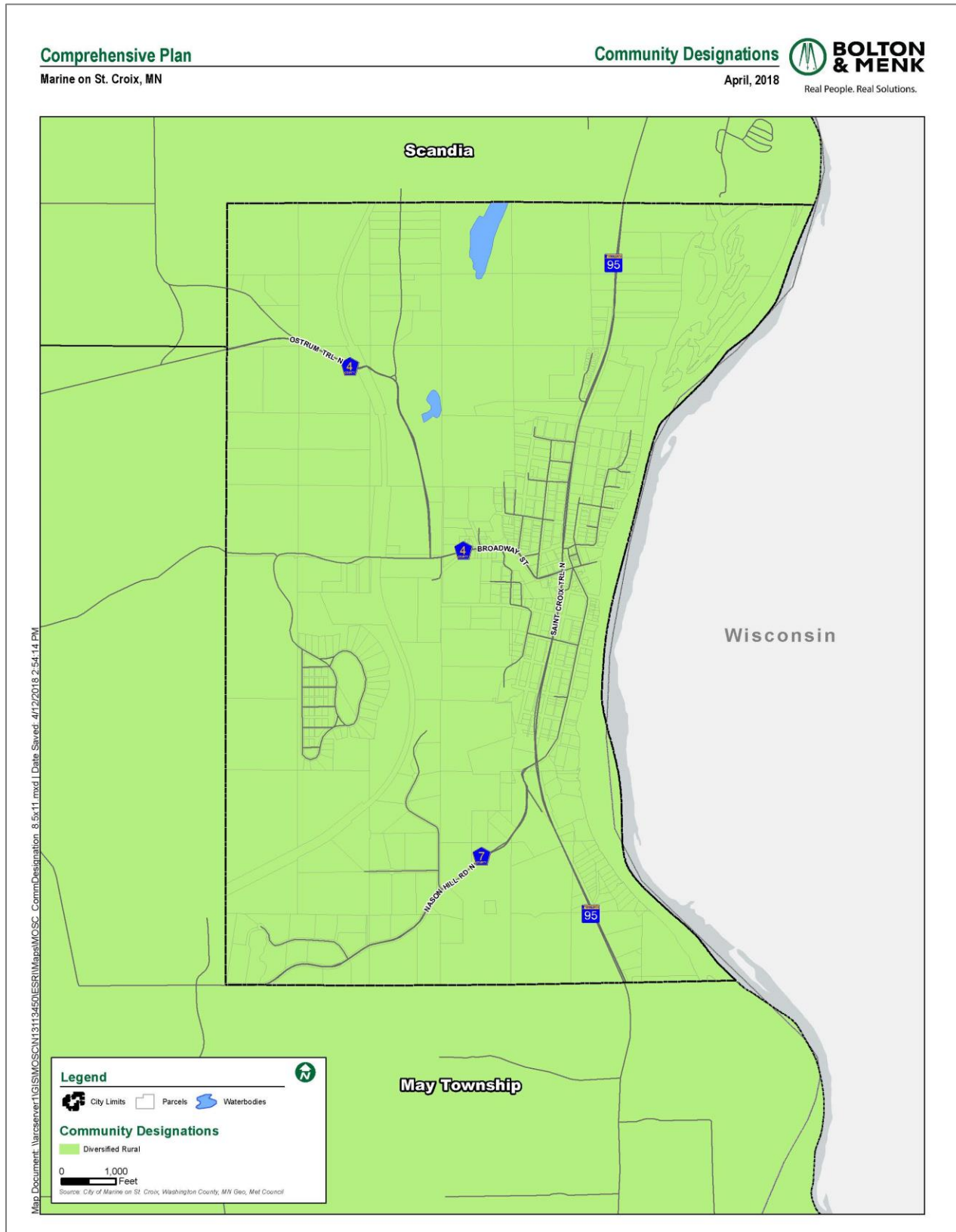
C. Community Designation

According to the Metropolitan Council, Marine on St. Croix is designated as a Diversified Rural Community. Diversified Rural communities contain a variety of agricultural and non-agricultural land uses at low densities (not to exceed 4 units per 40 acres) appropriate for a rural setting. These areas are intended to protect rural, agricultural lands while offering potential for future development.



Source: Bill Miller

Figure 2-1 - Community Designation

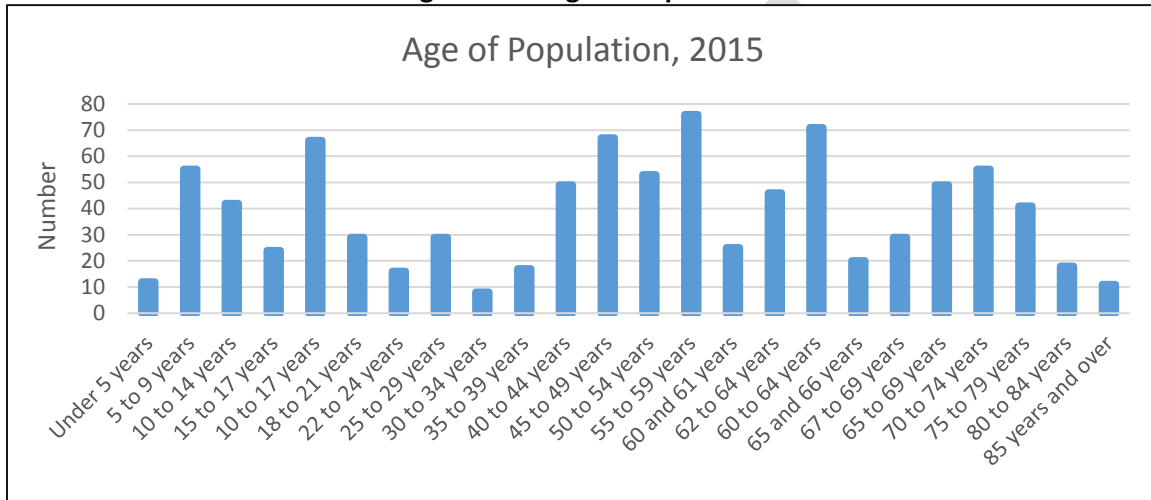


Source: Metropolitan Council

D. Demographics

In general, Marine on St. Croix's population is older than Washington County and the States' populations. The City's median age is 51.5, which is older than the County median age of 38.9 and the State median age of 37.7. This is an indication of limited turnover of existing housing or limited construction of starter homes that bring in younger families. It also indicates many residents are choosing to age in place. About 86% of survey respondents reported no children under 18 lived in their households. The community survey shows that at least a portion of the respondents felt like there is a lack of affordable housing in the community that might contribute to the lack of young families (Community Survey Results shown in Appendix A).

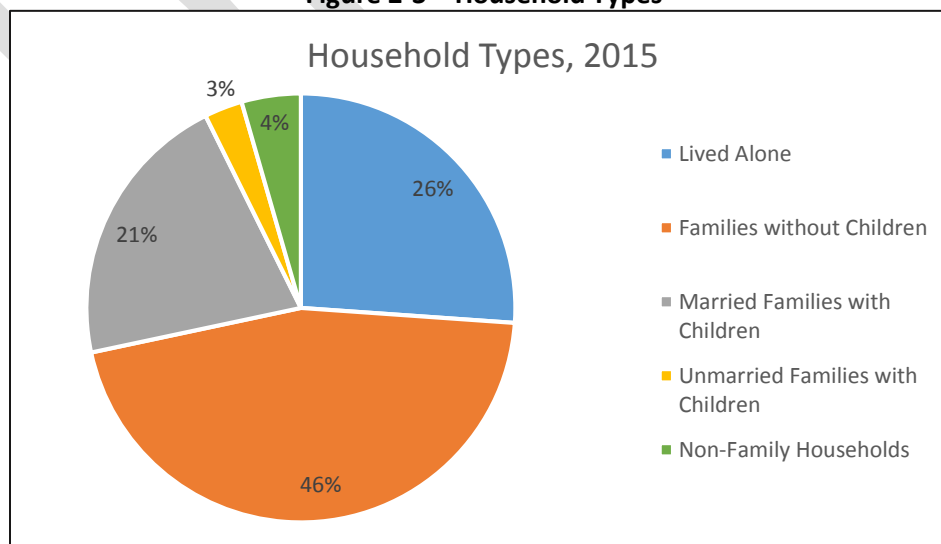
Figure 2-2 – Age of Population



Source: American Community Survey, 2011-2015

Figure 2-3 below shows the composition of households in Marine on St. Croix. Most households (46%) in the City are families without children, which is characteristic of an older community. About 24% of households in the City consist of families with children.

Figure 2-3 – Household Types



Source: American Community Survey 2011-2015

Summary:

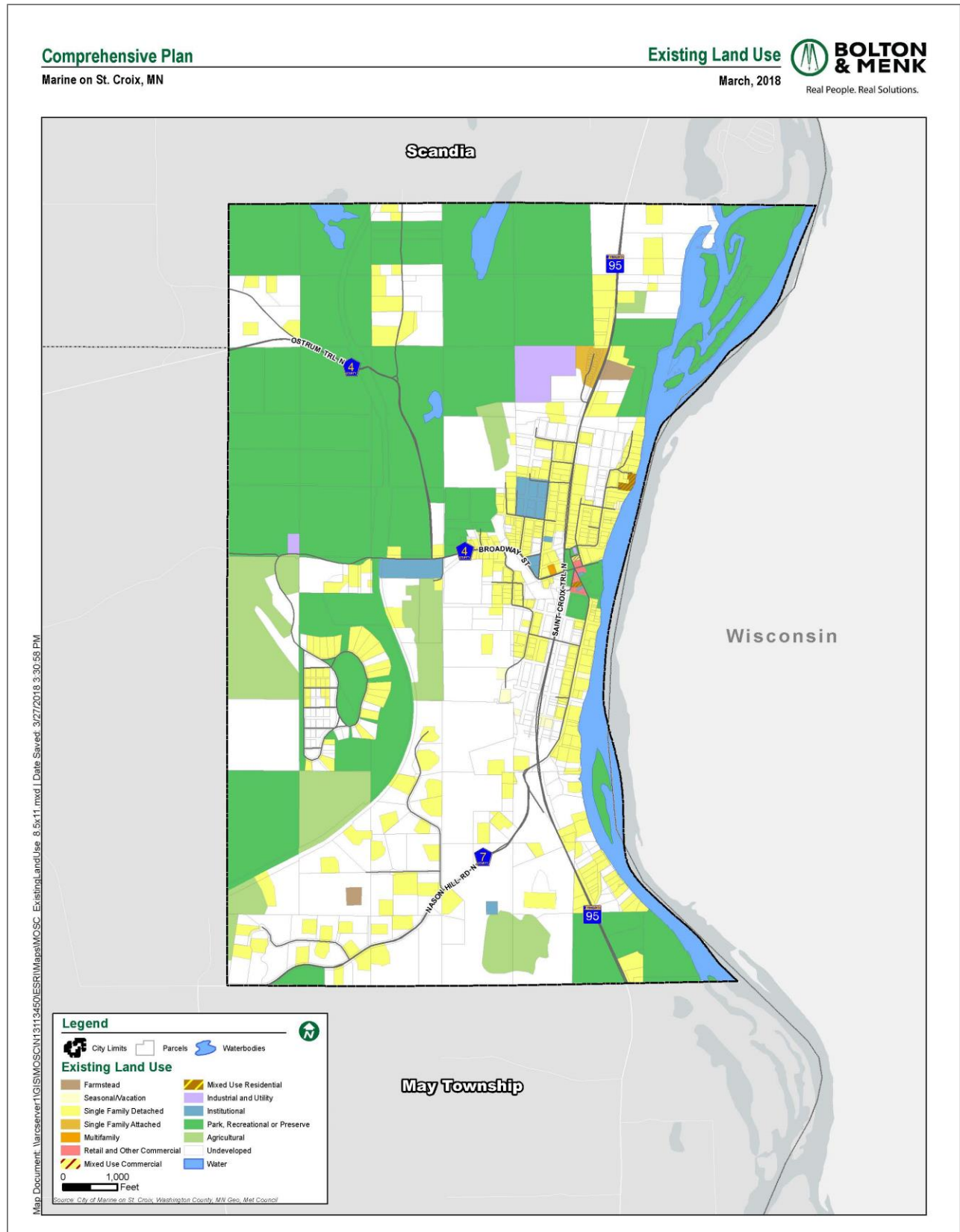
- Marine on St. Croix has seen gradual population and household growth over recent decades, though recent population estimates suggest slight population decline.
- The City has a larger population of older residents. This may impact development in the City as the population continues to age and demand increases for senior services. Marine on St. Croix hopes to reopen the school as a means to revitalize the community with an influx of young families.

E. Existing Land Use

Table 2-3 and Figure 2-4 identify existing land uses within the City of Marine on St. Croix. This data was derived from aerial photos dated April 2016.

Table 2-3 – Existing Land Use Characteristics		
Land Use	Gross Acres	Percent of Total
Agricultural	179	6.7%
Farmstead	6.2	0.2%
Industrial and Utility	23.5	0.9%
Institutional	23	0.9%
Mixed Use Commercial	0.4	0.0%
Mixed Use Residential	1.9	0.1%
Multifamily	0.6	0.0%
Park, Recreational or Preserve	1,020.5	38.1%
Retail and Other Commercial	2	0.1%
Seasonal/Vacation	4.9	0.2%
Single Family Attached	7.4	0.3%
Single Family Detached	335.3	12.5%
Undeveloped	903.2	33.8%
Water	168	6.3%
Total	2,676.1	100.0%

Figure 2-4 - Existing Land Use



The predominant land use within Marine on St. Croix is ‘Park, Recreational or Preserve’ because much of William O’Brien State Park is within the City. The second most common land use is “undeveloped” land, due in part to the abundance of natural resources in the City that can limit development, such as wetlands. Table 2-4 identifies the number of housing units in each of the land use categories.

Table 2-4 - Net Residential Density						
Future Land Use Category	Single Family Number of Units	Multi-Family Number of Units	Acres Gross Residential	Development Constraints	Net Residential Acres	Net Density Units/Acre
Rural Residential (Single Family Rural)	110	-	959.0	564.1	394.9	0.26
Rural Residential (St. Croix Rural)	25	-	111.1	57.8	53.3	0.26
Urban Residential (Single Family Urban)	93	4	142.5	92.9	49.6	1.87
Urban Residential (St. Croix Urban)	91	-	151.7	121.5	30.2	3.02
Multiple Family Residential	20	5	15.5	4.6	10.9	1.93
Park & Recreation	2	-	726.1	665.7	60.4	0.02
Total	341	9	2,105.9	599.2	1506.7	0.21

Calculated using the following methodology: <https://metro council.org/Handbook/Files/Resources/Fact-Sheet/LAND-USE/Net-Residential-Density.aspx>

Table 2-5 identifies the number of vacant parcels in each residential land use categories.

Table 2-5 – Vacant Parcels		
Land Use	Zoning	Number of Properties
Rural Residential	St. Croix Rural	11
Urban Residential	St. Croix Urban	21
Rural Residential	Single Family Rural	31
Urban Residential	Single Family Urban	19
Total		82

The Marine on St. Croix zoning code specifies a minimum lot size for various residential development. Based on these requirements, Table 2-6 shows the minimum lot size of units per acre that can be developed under current zoning regulations.

Table 2-6 – Allowed Residential Density	
Zoning District	Units/Acres (Ordinance Standards)
Single Family Rural	1 Unit/5 Acres
Single Family Urban	1.45 Units/Acre
St. Croix Rural Residential	1 Unit/2.5 Acres
St. Croix Urban Residential	1 Unit/1 Acre

Based on units/acre (or minimum lot size) in Zoning Ordinance

F. Future Land Use

The 2040 Planned Land Use Map shows the desired land use for all property in Marine on St. Croix. Table 2-7 summarizes the planned land uses by category shown on Figure 2-5. The planned future land uses shown on this map reflect previous community planning efforts as well as desired updates identified as part of the Comprehensive Plan Update process.

Table 2-7 – Planned Land Use Characteristics		
Land Use	Gross Acres	Percent of Total
Commercial	4.3	0.2%
Multiple Family Residential	15.5	0.6%
Open Water	168.3	6.3%
Park & Recreation	733.4	27.4%
Preservation Area	239.3	8.9%
Public Semi Public	108.4	4.1%
Railway	42.8	1.6%
Rural Residential (Single Family Rural)	959.0	35.8%
Rural Residential (St. Croix Rural)	111.1	4.2%
Urban Residential (Single Family Urban)	142.5	5.3%
Urban Residential (St. Croix Urban)	151.7	5.7%
Total	2,676.1	100.0%

The Development Constraints Map (Figure 2-6) shows the undevelopable areas in Marine on St. Croix. Undevelopable areas include park lands, areas with steep slopes, wetlands, and road and railroad right-of-way. The map also shows areas of prime agricultural land and shorelands in the City. While these lands may be developable, they may warrant additional considerations in development decisions.

Figure 2-5 - Planned Land Use

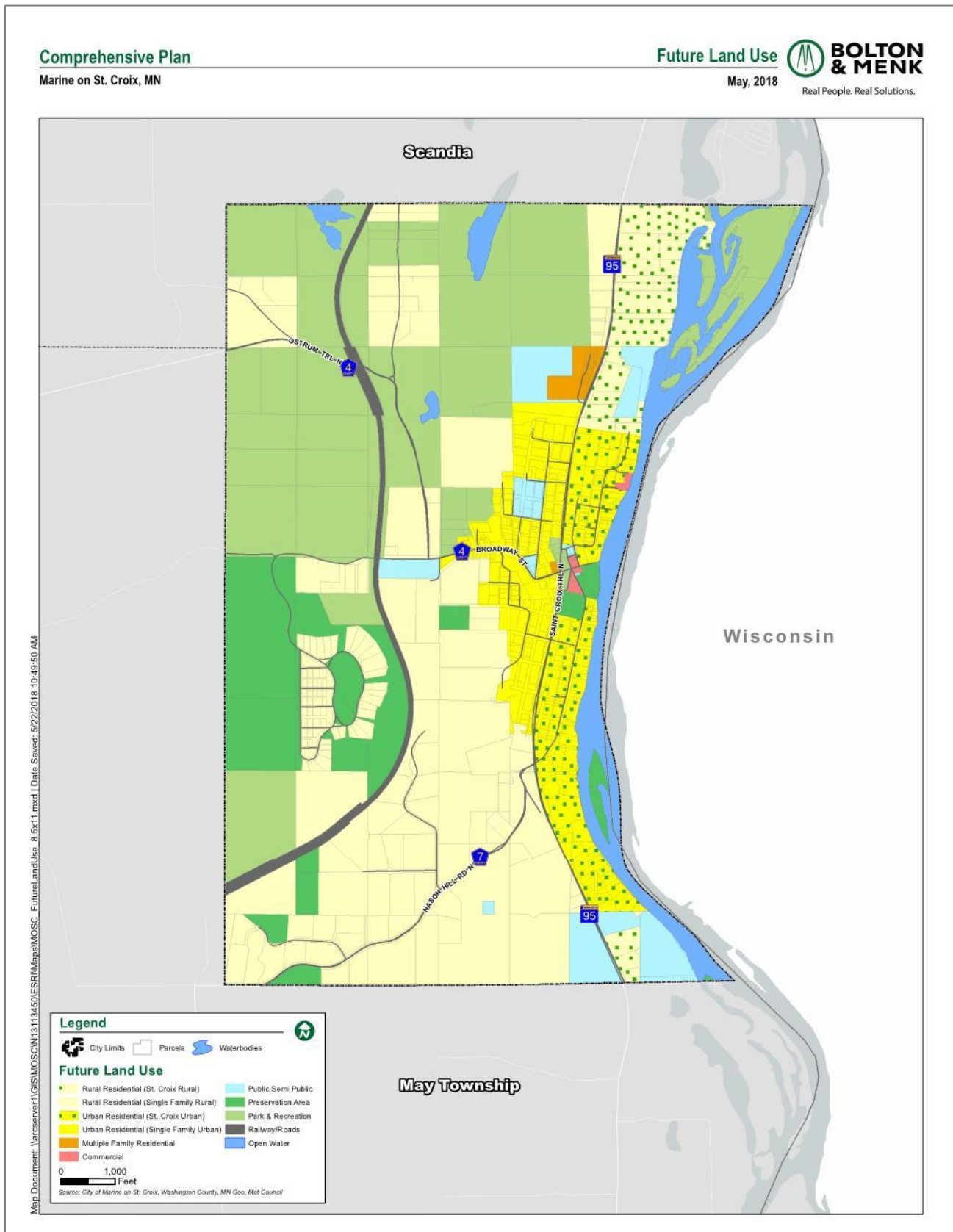


Figure 2-6 - Development Constraints

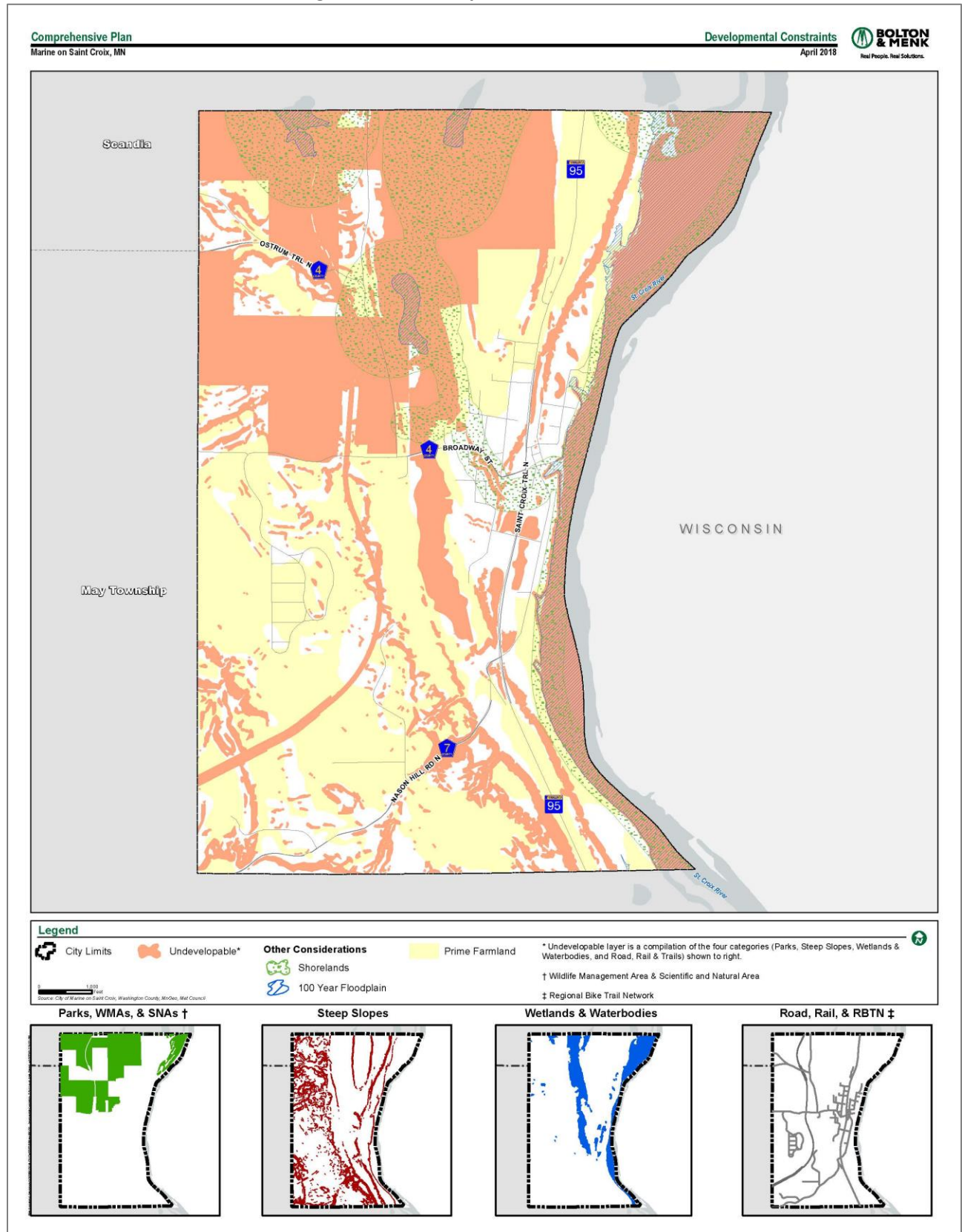


Table 2-8 summarizes the developable land available by decade in future land use classifications. These acres are not prohibited by the development constraints described above and do not have existing development. Development is forecasted for each decade at existing land use densities, which is discussed in more detail below in Section 2 (Staged Development) and is shown in Table 2-13. Forecasted development is based on projected housing and employment needs (as projected in Table 2-2 - Forecasted Population, Households and Employment) and an anticipated allocation of the projected housing development between each of the land use districts. Acres anticipated to develop in each decade are subtracted from total developable acres.

Table 2-8 – Developable Guided Land Use Acres				
Category	2015 (Current)	2020	2030	2040
	Developable	Developable	Developable	Developable
Rural Residential (Single Family Rural)	395 acres	305 acres	185 acres	85 acres
Rural Residential (St. Croix Rural)	53 acres	49 acres	43 acres	38 acres
Urban Residential (Single Family Urban)	50 acres	47 acres	42 acres	39 acres
Urban Residential (St. Croix Urban)	30 acres	23 acres	14 acres	7 acres
Multi-Family Residential	11 acres	10 acres	9 acres	8 acres
Commercial	1.5 acres	1 acres	0.8 acres	0.5 acres

To meet projected housing needs, it is anticipated that homes will be developed in the following percentages in each respective land use district.

Table 2-9 – Anticipated Residential Development	
Category	Percent
Rural Residential (St. Croix Rural)	15%
Rural Residential (Single Family Rural)	50%
Urban Residential (Single Family Urban)	18%
Urban Residential (St. Croix Urban)	15%
Multi-Family Residential	2%

The following land use descriptions will be used for planning purposes and guiding future land use. As much of the future land use will be a continuation of existing uses and zoning, key elements from the zoning ordinance are included here to detail future land uses.

- **Rural Residential (Single Family Rural and St. Croix Rural)**

All low density residential in Marine on St. Croix is rural residential. The rural residential land use areas are located outside the Marine community sanitary sewer system service area. The predominant land uses within these areas are single family homes on large lots and agricultural land uses. All residential developments are or will be reliant on private wells and independent sewer treatment systems (ISTS) or communal disposal systems and communal water systems.

The Zoning Ordinance outlines the following regulations and design parameters for rural residential areas:

- The maximum density is one unit per five acres based on the gross area of the subdivision.
- The City requires 50 percent of a subdivision's acreage be preserved as permanent open space. This open space is intended to protect environmentally sensitive areas, provide neighborhood recreational opportunities, preserve aesthetic viewsheds and provide for pedestrian trail corridors. The long-term preservation of the open space is ensured through the establishment of conservation easements which are held by either a land trust or the City.

- Neighborhood design standards were formulated to enable cluster-type designs. This was to encourage a sense of community and neighborhood interaction within the subdivision design. These guidelines addressed the size of the cluster, neighborhood identity, lot sizes, building orientation, and setbacks.
- All new cluster subdivisions may be platted to accommodate home sites with either ISTS or communal sanitary sewer systems.

The corresponding zoning districts for the Rural Residential designation are Single Family Rural and St. Croix Rural. These districts are described in more detail below.

Single Family Rural: The Single Family Rural District is intended to encourage rural residential development to be clustered to preserve contiguous open spaces, to create cohesive neighborhoods, to provide physical integration of neighborhoods, and to implement comprehensive plan objectives. The Single Family Rural designation allows a density of 1 unit per 5 acres. The majority of land area in the City is designated Single Family Rural, and up to 31 lots are unimproved vacant parcels; many of these parcels are significantly larger than the 5-acre minimum lot size and if developed for residential purposes could be subdivided, allowing for additional single-family rural lot development. The corresponding zoning district is Single Family Rural.

St. Croix Rural: The St. Croix Rural Zoning District is located in the northern and southern parts of Marine, east of Minnesota TH 95, and allows a maximum density of 1 unit per 2.5 acres. Marine has 11 parcels and 53 acres of vacant land in this district. However, much of this vacant land is constrained by environmental features, which reduces the amount of buildable land within these areas. Depending on the range of environmental constraints used to determine vacant acreage, between four and eight houses could be added to this district.

Through the enforcement of the existing and future Lower St. Croix River Shoreland District ordinance, the City will continue to regulate future development in the St. Croix River Rural Residential areas to conserve and protect the natural scenic values and resources of St. Croix River Corridor.

• **Urban Residential (Single Family Urban and St. Croix Urban)**

Urban Residential neighborhoods provide for higher density development in the City. The Urban Residential neighborhoods are characterized by random block arrangements, historic homes, and open space separating the buildings. This development pattern reflects the physical constraints of the area. The majority of the Urban Residential area is serviced by the City's sanitary collection system. The availability of the community sewer system has allowed for a denser development pattern than is allowed in the Rural Residential areas of the City.

A number of older homes exist as non-conforming buildings due to non-compliance with current zoning or shoreland regulations related to lot size or building setbacks. Most of these homes were constructed prior to the establishment of the current regulations. The City values these residential land uses as both housing stock as well as an extension of the City's historical character. The City will promote the continued use of these properties by encouraging their ongoing maintenance and improvement in a manner that reflects the historic architecture and development patterns of this. The City will also allow for the re-establishment or restoration of legal non-conforming homes to their present condition if they would be damaged or destroyed. This strategy is specifically applicable to the historic riverfront homes, which may not conform to current State shoreland guidelines.

Urban Residential areas are nearly fully developed. Only 90 acres of buildable land remains vacant in these areas of the City. The development potential of this remaining vacant land is limited in that it exists in scattered smaller parcels throughout the Urban Residential area. The limited size and

configuration of these parcels will prevent some of this land from being developed. The current capacity constraints within the City's community sewer utility will also limit the development potential of the remaining vacant land. Since the City will require all new development to provide its own ISTS, the number of buildable vacant parcels in the Urban Residential area is limited. Property owners pursuing development in this area of the City must provide information that demonstrates that their parcel is buildable and can accommodate an ISTS prior to the City approving a building permit.

The City Code also allows Planned Unit Developments (PUDs) in some zoning districts to allow property to be developed with more flexibility than what would otherwise be allowed. PUDs are allowed in Single Family Rural, St. Croix Rural and Single Family Urban Districts (described below).

The corresponding zoning districts for the Urban Residential designation are Single Family Urban and St. Croix Urban. These districts are described in more detail below.

Single Family Urban: Marine has 50 acres of vacant land in the Single Family Urban Zoning District. This district is located on the west side of Minnesota TH 95 and has a minimum lot size requirement of 30,000 square feet. Maximum density is 1.4 units per acre. Depending on the range of environmental constraints used to determine vacant acreage, up to 12 houses could be added to this district. The urban zoning districts contain a substantial number of lots with land ties to parcels too small to develop; therefore, the amount of development potential in this district may be less than what has been calculated.

St. Croix Urban: The St. Croix Urban Zoning District is located north and south of the Village Center District and east of Minnesota TH 95. Marine has 30 acres of vacant land in this district. The minimum lot size requirement is one acre, resulting in a maximum density of 1 unit per acre. Depending on the range of environmental constraints used to determine vacant acreage, up to 11 houses could be added to this district. This is a higher number because small parcels with land ties are included. Lots are constrained by wetlands, wet soils, steep slopes, and shallow bedrock.

Through the enforcement of the existing and future Lower St. Croix River Shoreland District ordinance, the City will continue to regulate future development in the St. Croix River Urban Residential areas to conserve and protect the natural scenic values and resources of St. Croix River Corridor.

- **High Density Residential**

Marine's Multiple Family Residential land uses are limited to the School House Apartments and the Stugas Townhomes. These areas are shown as Multiple Family Residential in the Future Land Use Map. Housing diversity and life-cycle housing are desired in the City. The City's infrastructure, topography, green space, and aesthetics will limit the ability to provide more multiple family housing. Future efforts to address life-cycle housing needs may focus on mother-in-law or accessory apartments and guest homes.

- **Commercial**

Commercial land uses within Marine on St. Croix will be limited to the City's historic village center. The Village Center is the gathering place for the community where City residents shop, entertain, socialize and participate in local government. Participants in community meetings regard the Village Center as a great asset of the community that should be preserved in design and function. To maintain the viability and function of the Village Center, the City will promote commercial and civic land uses including retail, service, office, and recreation and civic land uses. The corresponding zoning district for this designation is the Village Center District.

In 2012, the City convened a Village Center Task force to evaluate potential enhancements to increase the attractiveness of the Village Center. The Task Force developed a concept plan intended to enhance the livability and historical identity of the Village Center., attached as Appendix B. The Village Center concept plan is not a binding regulatory document; rather, it is intended to provide an idea of what the Village Center could be.

- **Public Semi-Public**

This category includes lands intended for city government, public, religious, or educational facilities. These uses are permitted in the Single Family Rural, Single Family Urban and Village Center Districts.

The elementary school in Marine on St. Croix closed its doors following the 2017 school year. The property is owned by the school district. The community survey asked residents what should be done with the property. Responses largely expressed a strong desire to keep it as a school. The City of Marine on St. Croix is not considering redevelopment or repurpose options for the site at this time. The City desires to continue to utilize this site as a school, and so the City is looking for opportunities to reopen it as a school.

- **Preservation Area**

Preservation Areas are lands protected from development that preserve the natural or historic character of the City. These areas may be publicly or privately owned and may or may not have recreational facilities. The majority of these areas are located within the Single Family Rural District.

- **Park and Recreation**

Park and Recreation lands include publicly-owned lands protected from development. The intention of these areas is to provide recreation amenities while preserving the natural environment of the area. Approximately thirty-eight percent of the City's total land area is comprised of parks and public and semi-public lands. These lands contribute to the character of the community; however, they do not contribute to the community's tax base. To offset the loss of tax base, the City may request a fee for services in lieu of taxes for public/semi-public land uses that receive services from the City. The majority of these areas are located within the Single Family Rural District.

- **Railway/Roads**

This area includes public or private railway and road right-of-way.

- **Open Water**

These areas include permanently flooded open water, rivers, and streams not including wetlands or periodically flooded areas.

1. Density Calculations

Based on the above future land use plan and land use descriptions, residential and commercial land use requirements have been calculated to help Marine on St. Croix plan for and meet Metropolitan Council projections for population, households, and employment. Residential calculations are detailed in Tables 2-10, and commercial calculations are detailed in Table 2-11.

Residential

Table 2-10 – Residential Density Acreages Needed

Category	Density Units/Acre	Units Needed	Vacant Lots	Net Units Needed	Minimum Acres
Rural Residential (St. Croix Rural)	0.4	23	11	12	4.6
Rural Residential (Single Family Rural)	0.2	75	31	44	8.8
Urban Residential (St. Croix Urban)	1.0	27	21	6	6.0
Urban Residential (Single Family Urban)	1.45	23	19	4	5.1
Multiple Family Residential (PUD)	3.0	3	0	3	9.0
Total		150	82	68	33.5

The above table shows the likely number of acres needed to accommodate projected growth based on the maximum densities. Multi-family residential units will likely be developed as a Planned Unit Development. Marine on St. Croix is a rural community without access to sewer or water, so development at higher densities is unlikely.

Planned Unit Developments (PUDs) can be considered in Single Family Rural, St. Croix Rural, and Single Family Urban Districts and allow the City to develop at higher densities than what is allowed in the underlying zoning district, provided there is innovative land planning and site design within the project that achieve a high level of environmental sensitivity, energy efficiency, aesthetics, high quality development, and other community goals. The PUD process is designed to provide the developer greater flexibility and creativity when developing a parcel of land.

The City of Marine on St. Croix can meet the Diversified Rural Met Council Community Designation units per acre through developing at the maximum density allowed in each respective zoning district, reserving developable land not anticipated to be utilized to meet housing needs and continuing to conserve land for park and recreation or preserve uses. As a whole, the City of Marine on St. Croix will maintain a low housing density not to exceed 4 units per 40 acres.

Commercial

The Zoning Ordinance for Marine on St. Croix provides a maximum impervious surface coverage for commercial and industrial development. The Metropolitan Council has provided estimates for the number of employees per square feet in various employment types; rates range from 556 square feet per job at the low end (medical clinics) to 2,500 square feet per job at the high end (hotels). Using the City's impervious surface allowance as guidance, an estimate of jobs/square foot can be estimated to project future employment based on future land use designations and planned development. The Village Center land use district allows a maximum impervious surface of 100 percent.

Table 2-11 – Employment Projections: Commercial Future Land Use Ranges

	Density Range (Jobs/Acre)		Jobs Needed	Minimum Acres	Maximum Acres
	Minimum	Maximum			
Commercial	8	22	64	2.9	8.0

There is very little undeveloped land located within the commercial land use area. Development in the Village Center is also limited by the capacity of the current community wastewater treatment system. In order to meet employment projections, some redevelopment of existing commercial land and uses will be needed. Additional redevelopment may also occur should there be an expansion of the community

wastewater system. Home occupations are also a current trend in Marine on St. Croix, as well as other areas. We expect this trend to continue, which will increase employment in the City.

2. Staged Development or Redevelopment

The goal of a Staging Plan is to manage growth and guide the orderly and cost-effective provision of infrastructure at a rate that is consistent with forecasted growth, at the same time responding appropriately to market conditions. Table 2-12 identifies the staging of future growth in Marine on St. Croix. This table indicates the anticipated timing and sequence of growth. It identifies the developable acres, number of housing units and jobs that may be developed in each 10-year planning period. The table is not intended to limit or to compel growth in any specific area within the planning period. Rather, it is an estimation of where growth may logically occur.

A staging plan cannot force development to occur, but can be used as a tool to guide development appropriately. In many cases, cities choose to stage and time growth in an orderly and contiguous manner; however, there is nothing about adopting a staged growth plan that forces any private property owner to sell or develop their land before they wish to do so. The City of Marine on St. Croix will make development decisions based on existing and development of new infrastructure, land capacity and market conditions.

Table 2-12 – Future Land Use Residential Units or Jobs/Acres

	Density Units/Acre	Existing Developed (2015)	Developable 2015	2020		2030		2040	
Residential Land Uses	Maximum	Acres	Acres	Units	Acres	Units	Acres	Units	Acres
Rural Residential (St. Croix Rural)	0.4	57	53	5	12.5	10	25.0	8	20.0
Rural Residential (Single Family Rural)	0.2	564	395	20	100.0	30	150.0	25	125.0
Urban Residential (St. Croix Urban)	1	122	30	7	7.0	11	11.0	9	9.0
Urban Residential (Single Family Urban)	1.45	93	50	6	4.1	9	6.2	7	4.8
Multi-Family Residential (PUD)	3	5	11	1	0.3	1	0.3	1	0.3
Total		841	539	39	124.0	61	192.5	50	159.1
Commercial Land Uses	Average Employee/ Acre	Developed Acres	Developable Acres	Jobs	Acres	Jobs	Acres	Jobs	Acres
Commercial	15	4.3	1.5	10	0.67	20	1.3	36	2.4

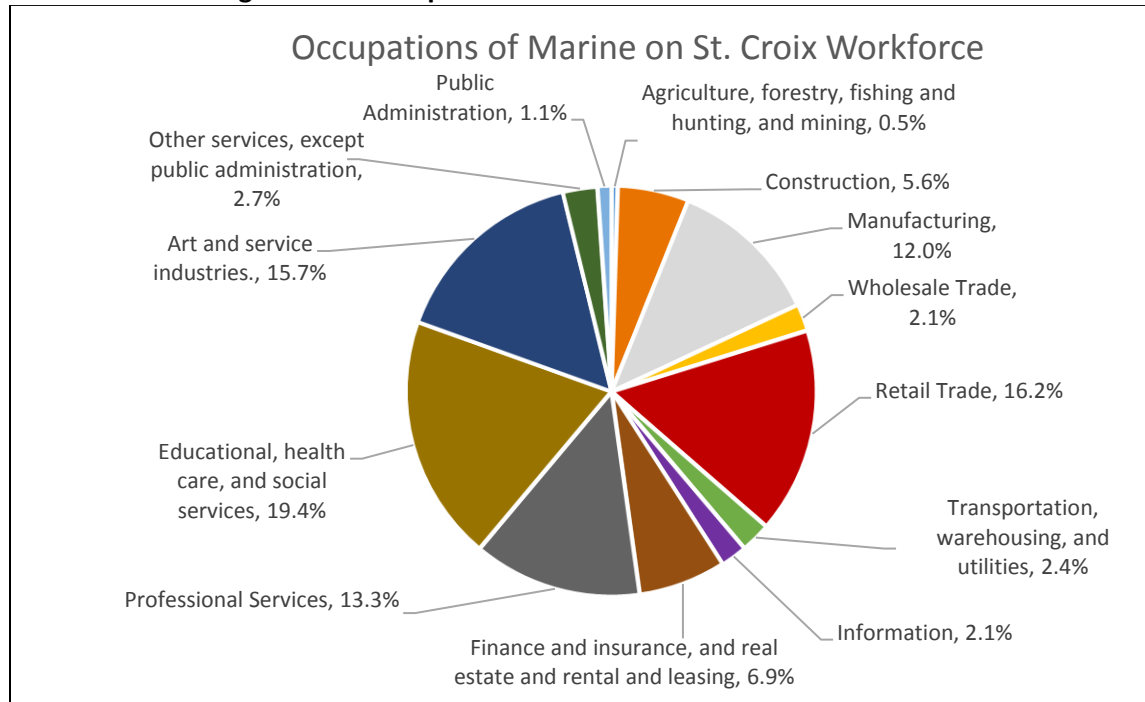
Source: Metropolitan Council Local Planning Handbook, Land Use, Density Calculations

Economic Competitiveness

Minnesota Statutes § 473.859 Subd. 1 states that local comprehensive plans “shall contain objectives, policies, standards, and programs to guide... redevelopment and preservation for all lands and waters within the jurisdiction of the local governmental unit”. To provide context for potential redevelopment efforts, this section details basic economic information about the City of Marine on St. Croix.

According to the American Community Survey (ACS), Marine on St. Croix residents are most commonly employed in education, health care, and social assistance services; retail trade; and arts, entertainment, and recreation, and accommodation and food services. In 2015, the unemployment rate in Marine on St. Croix was 4.6%. This was higher than both the unemployment rates for Washington County (3.5%) and the State (3.9%) in 2015. (ACS, 2011-2015 estimates).

Figure 2-7 – Occupations of Marine on St. Croix’s Workforce

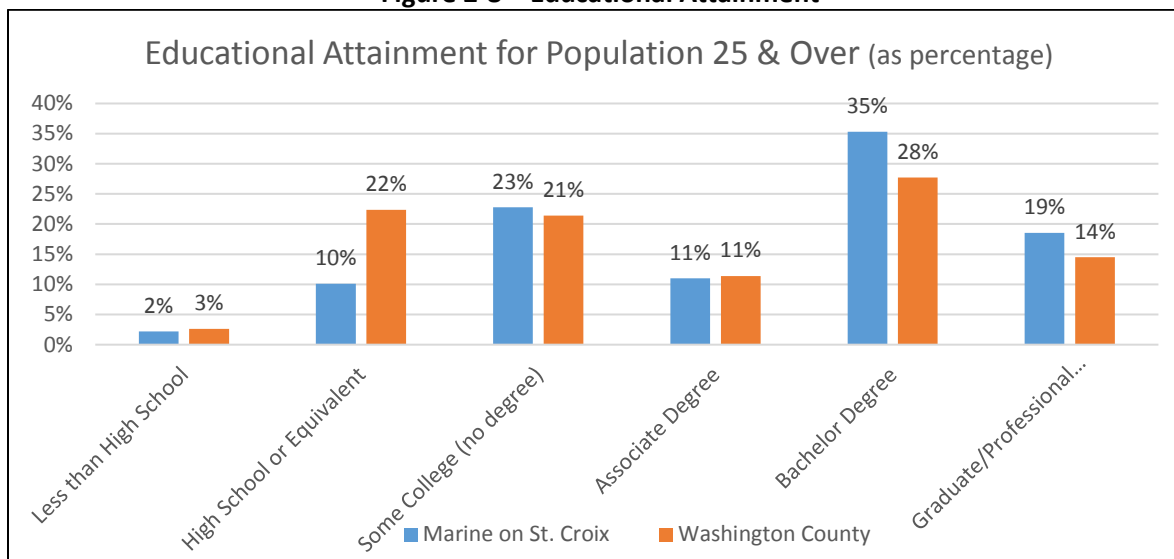


Source: American Community Survey, 2011-2015

According to the 2011-2015 American Community Survey, the median household income in Marine on St. Croix is \$99,375. This is higher than the Median income of Washington County as a whole (\$86,689). Only 3.6% of households in Marine on St. Croix had income below the poverty level. This is the same level as Washington County.

Marine on St. Croix is a highly educated community; approximately 54% of residents hold a bachelor’s or graduate/professional degree. This is higher than the Washington County average (42%). Of the residents who responded to the 2017 community survey, over 80% have a bachelor’s degree or graduate/professional degree.

Figure 2-8 – Educational Attainment



Source: American Community Survey, 2011-2015

The Marine on St. Croix community engages in many activities that bring attention to the community and contribute to social connectedness. The community is blessed with a high level of volunteerism amongst community members to make possible the several community festivals that are held in the community on a yearly basis.

There is one commercial district in the City. It is the policy of Marine on St. Croix to collaborate with agencies, including the Washington County Community Development Agency, on opportunities to renovate, redevelop, or restore properties in its commercial district. Employers in the area include the Marine General Store, Stonehouse Museum, Brookside Bar and Grill, Marine Mill Site, Marine Community Library, Marine Café, and St. Croix Chocolate Company.

Recent technologies have allowed a greater number of people to work remotely from their homes and telecommunicate for services. This can help expand economic opportunities for Marine residents and businesses. The City recognizes its rural location and size impact the ability to connect to digital infrastructure. The City will encourage and support efforts to improve and expand the availability of digital infrastructure and new technology within the City.

III. NATURAL RESOURCES

Natural resources are beneficial to the social, environmental, and economic vitality of a community. To ensure their quality and benefits, it is essential to plan and manage natural resources and areas as we do residential and commercial areas. The City of Marine on St. Croix includes significant natural resources; the St. Croix River, streams, wetlands, forests, prairie and grasslands, and its bluff land topography. These resources are important elements that help define the community's character. The City's natural landscape is an important part of its history and heritage and will remain an important asset if protected into the future.



Source: Bill Miller

The inventory data and maps along with the following principles are used to identify priority natural resources in Marine. These resources then are used to form the natural environment policies and to identify environmental preserve areas within the City.

Principles for Protecting the Natural Environment

- Maintaining or restoring natural diversity is important to the long-term health of natural communities and landscapes.
- Natural landscapes and habitats are usually more diverse than those created by people. Lawns, landscaped areas, and agricultural fields are typically simple habitats that support fewer species than natural habitats. Human actions often divide or “fragment” natural habitats, which reduces their diversity.
- The size of habitat patches is related to diversity; larger natural habitat patches are usually more diverse than smaller patches.
- Several connected small or large patches can function as a large patch for many species, but maintaining viable natural connections among the patches is critical.
- A connected mixture of habitat types is beneficial for diversity. Many species require both upland and wetland habitat types during their lifecycle.
- Natural resource corridors (Greenways) can be protected or designed to provide connections among habitat patches.
- Select priority areas for conservation.
- The overall health and ecological function of lakes, rivers, and streams is critical for overall habitat quality and the character of the City.

These principles, and an inventory of Marine's unique natural resources, may be used to identify Greenway corridors in Marine. Identifying the corridors on a map adopted by the City will encourage preservation and enhancement of Greenways with proposed changes in land use or development requests.

A. Goals and Policies

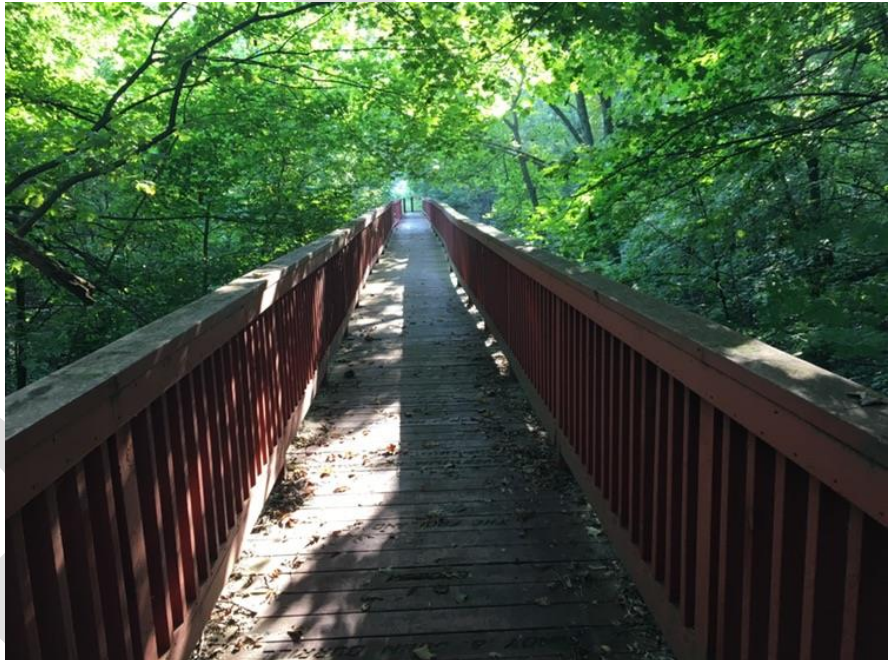
The specific goals and policies guiding the Natural Resources element of the Comprehensive Plan are:

- 1) Protect the environmental and scenic qualities of the St. Croix River Valley Corridor.
- 2) Preserve and restore sensitive natural resources, significant ecological areas, and habitat.
- 3) Maintain the City's long, progressive focus on conservation, recycling and sustainable development.

B. Land Cover

Field notes from the time of the Public Land Survey completed in Minnesota in the 1840's indicate that Marine's vegetation was dominated by oak brushland and maple-basswood forest prior to settlement by Europeans. Natural resource inventories show remnants of the forest and brushland areas are still present in portions of Marine today. The Minnesota Land Cover Classification System (MLCCS) provides current land cover information for much of the Twin Cities region. It classifies land cover by type of vegetation, including natural and semi-natural areas such as forests and grasslands, as well as urban areas. Marine's dominant land cover types are forests and grasslands. This classification system was used to assist in identifying the significant ecological areas shown in Figure 3-1.

The Minnesota County Biological Survey notes a large swath of seepage meadow, a small rich fen, oak forest, dry prairie, tamarack swamp, mixed hardwood swamp, and silver maple floodplain forest with river beach within Marine on St. Croix



C. Wetlands

Wetlands are essential to healthy ecosystems and are noted on the exhibit on the following page. The majority of wetlands in Marine are wooded wetlands. The wetlands are focused along the flat expanses on either side of State Highway 95, shown in Figure 3-2. The City of Marine protects wetlands through its Development Code.



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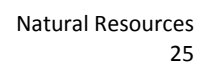
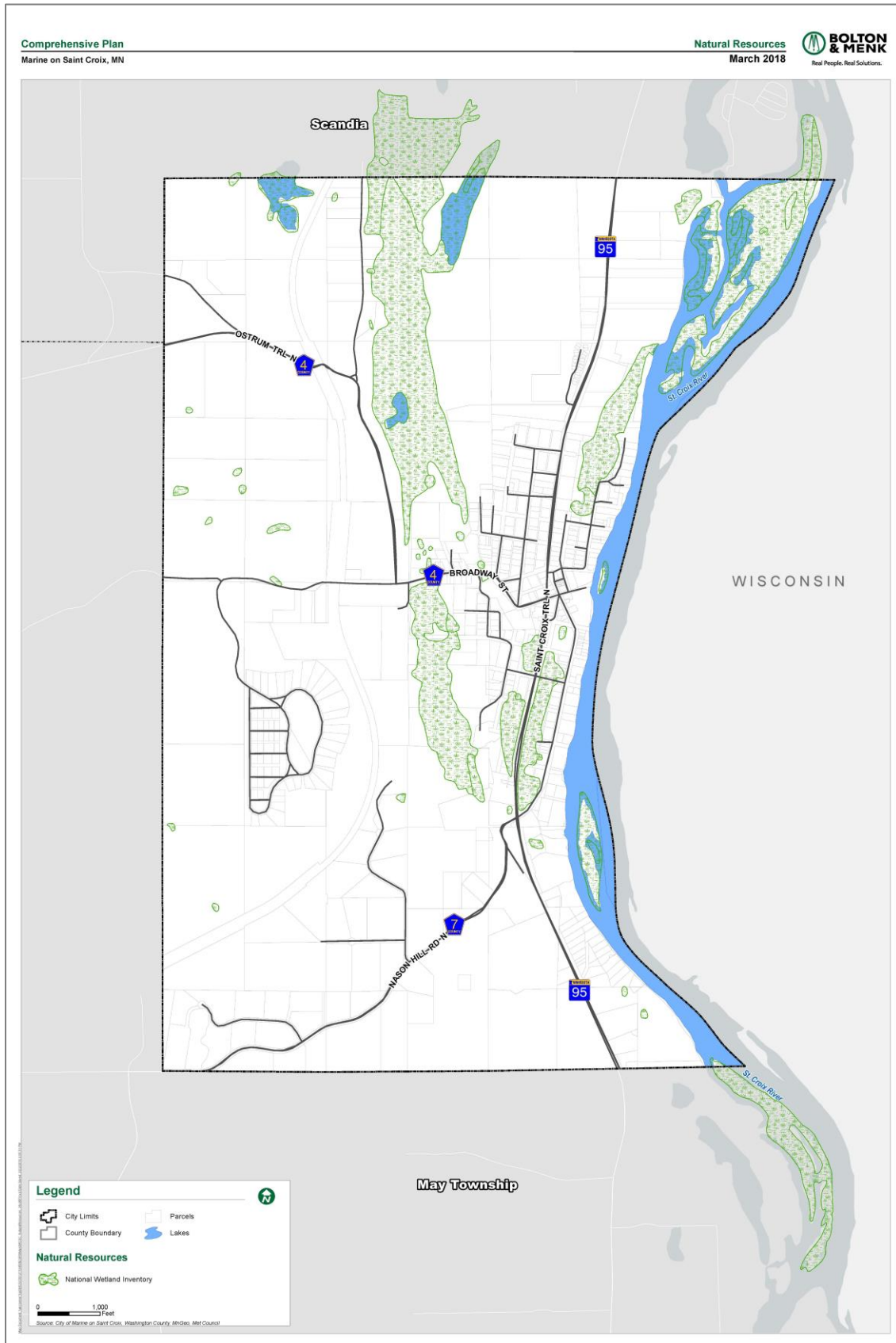


Figure 3-2 - Wetlands



D. Topography

The City is surrounded by a diverse landscape consisting of level areas, ravines, bluffs, and varied slopes. Due to the watershed area and volume of surface drainage, numerous ravines and drainageways were formed to accommodate the natural drainage to the river. This surface drainage cutting action was also responsible for the terracing effect present throughout the Marine area.

The Saint Croix River bluff is a defining physical feature for Marine. With the Saint Croix River at an elevation of approximately 675 feet, the Village Center sits above the river at approximately 700 feet. Moving westward, the bluff rises to an elevation of approximately 1,000 feet. The steep slopes of the bluff are interrupted with flat benches, landforms created by the river.

E. Urban Forest

Protecting and supporting the health of trees in the City can help improve water and soil issues while creating aesthetic appeal in the Village Center and surrounding neighborhoods. An inventory of roughly 900 trees was conducted in fall-winter 2016 in the central district of Marine on St. Croix and surrounding neighborhoods, or areas of the City considered “developed,” pictured at right. This inventory covered about 11% of the City’s total area.

This inventory revealed that the 10 most common species account for 70% of the total urban forest population. Spruce trees, both Norway and white spruce, were the most common tree in the urban forest study area, accounting for about 16% of trees. To protect the health of urban forests from diseases and pests, a general rule of thumb is that no more than 10 percent of one species, 20 percent of one genus, and 30 percent of any one family be planted within a City’s landscape.

Using i-tree software, it is estimated that Marine’s urban forest has an annual value of \$148,395, providing savings stormwater and energy use, improving air quality and carbon sequestration, and increasing property values.

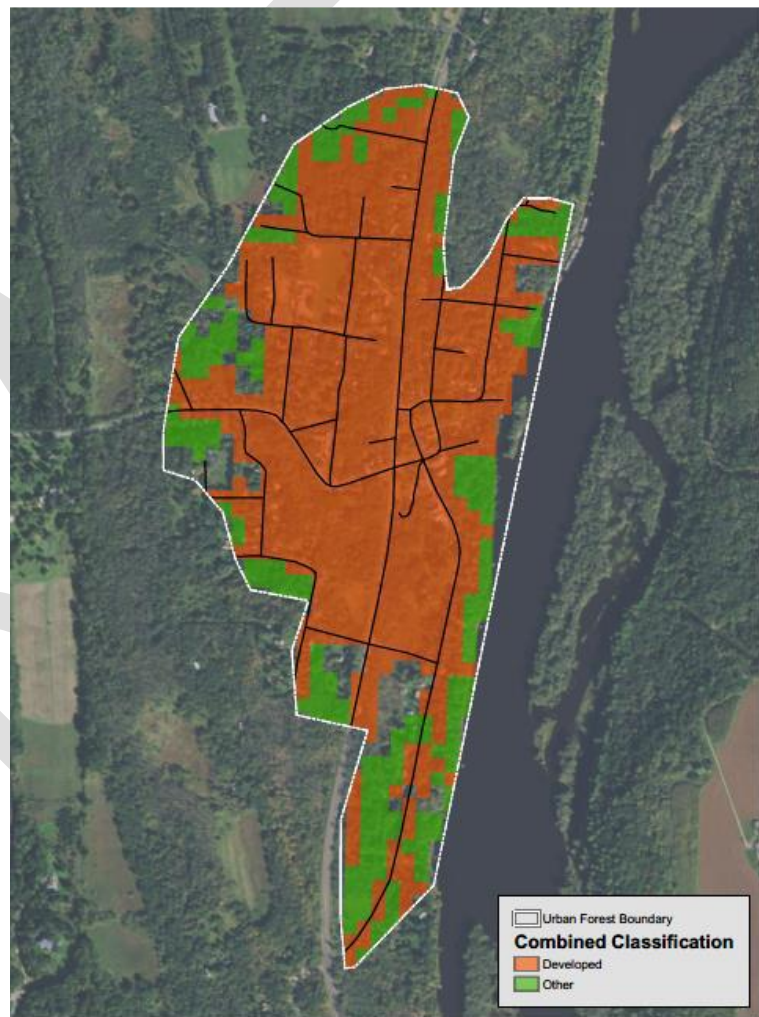


Figure 3-3 - Urban Forest Study Area

The inventory revealed three main issues:

- Lack of young trees: There are several large, mature trees in the City, adding to its history and character. However, younger, smaller trees are underrepresented in the urban canopy. Young trees are important to establish so they can grow to take the place of more mature trees as they die.

- Ash trees and the emerald ash borer: About 10% of the urban canopy is ash, and roughly 30% of trees in the central core of the City are ash. This will result in losses to the urban canopy, especially in the core of the City, when the emerald ash borer makes its way to Marine. While not yet sited in the community, Washington County has been placed under quarantine for infestations elsewhere.
- Turf grass and landscape practices: Turf grass competes with trees on many sites for soil nutrients and moisture. Turf grass maintenance can also pose a risk to trees, as string-based grass trimmers can damage tree bark, and herbicides can injure trees, especially conifers. Altering maintenance practices or landscape composition can help protect trees.

The City requires a tree preservation plan as part of residential subdivisions and business or industrial developments to help protect trees before, during, and after construction.

F. Special Resource Protection

1. Historic Sites

A planning team made up of the National Park Service, the Minnesota Department of Natural Resources, and the Wisconsin Department of Natural Resources prepared the St. Croix Comprehensive Management Plan, which was last updated in 2001. The management plan identified the land along the St. Croix River as a Small Town Historic Management Area. This landscape is mostly developed with single family residential housing, primarily historic in character. Land use rules for this area include requirements for a minimum lot width of 100 feet and a maximum building height of 35 feet. A Rural Residential Management Area covers land along the St. Croix River from Judd Street to the north limits of Stillwater. This area is relatively undeveloped. Land use rules for this area include requirements for a minimum lot width of 200 feet and a maximum building height of 35 feet.

The Marine Mill site is registered as a State Historic Site and is listed on the National Register of Historic Places as the site of Minnesota's first commercial sawmill. While the mill no longer stands, there is a historical marker and remnants of the foundation on the site. The Marine on St. Croix Historic District is a 450-acre area encompassing the downtown core of the City.

2. Aggregate Resources

The City of Marine on St. Croix has areas of aggregate-rich land, though there are no current extraction operations within the City. Aggregate resources within the City tend to be within areas having strong environmental constraints or existing development. This discourages and prevents aggregate operations from taking place in the City. Aggregate resources in the City are depicted in Figure 2-X, Planned Land Use.

3. Solar Resources

The Metropolitan Land Planning Act (Minnesota Statutes 473.859, Subd. 2) requires local comprehensive plans to include for the protection and development of access to direct sunlight for solar energy systems. Protection of solar access will be accomplished through the development review process. Building placement and height will be considered to minimize the shading of solar energy systems. The following variance procedure also ensure access to solar:

A variance to the provisions of the Zoning Ordinance may be issued to allow additions to existing buildings or alterations of natural features, by the City Council to provide relief to the landowner for solar energy systems when the variance is found to comply with the standards and procedures for relief found in Subdivision 311.1 and 311.3, and where applicable, Section 311.4, upon the Council making the following Findings upon evidence provided by the applicant:

- a) That a variance is required under the Marine on St. Croix City Code as the result of inadequate

access to direct sunlight for solar energy systems, said inadequate access being caused by existing buildings failure to meet the dimensional requirements of the Zoning Ordinance, and that no solar energy alternative exists, which is in greater harmony with the Comprehensive Plan and Development Code.

- b) The applicant has provided adequate proof that the proposed system is truly a functional solar energy system. Solar energy system means a set of devices whose primary purpose is to collect solar energy and convert and store it for useful purposes including heating and cooling buildings or other energy using processes, or to produce generated power by means of any combination of collecting, transferring, or converting solar generated energy.
- c) That the strict enforcement of the literal provisions of the ordinance would cause undue hardship because of circumstances unique to the individual property under consideration, and shall grant such variance only when it is demonstrated that such actions will be in keeping with the spirit and intent of the zoning ordinance.
- d) That upon evidence provided by the applicant the visual impact of the variance is in keeping with the spirit and intent of the Development Code 3-31 and the Marine on St. Croix Comprehensive Plan.
- e) Whether the variance, by allowing additions to existing buildings, thus allowing access to sunlight, is visually inconspicuous as viewed from the river during the summer months, and does not increase the visibility of existing structures, and preserves the scenic and recreational resources of the St. Croix River. The City Council shall determine that methods to prevent erosion and trap sediment are employed and structures are not placed on slopes with a greater than twelve (12) percent grade.

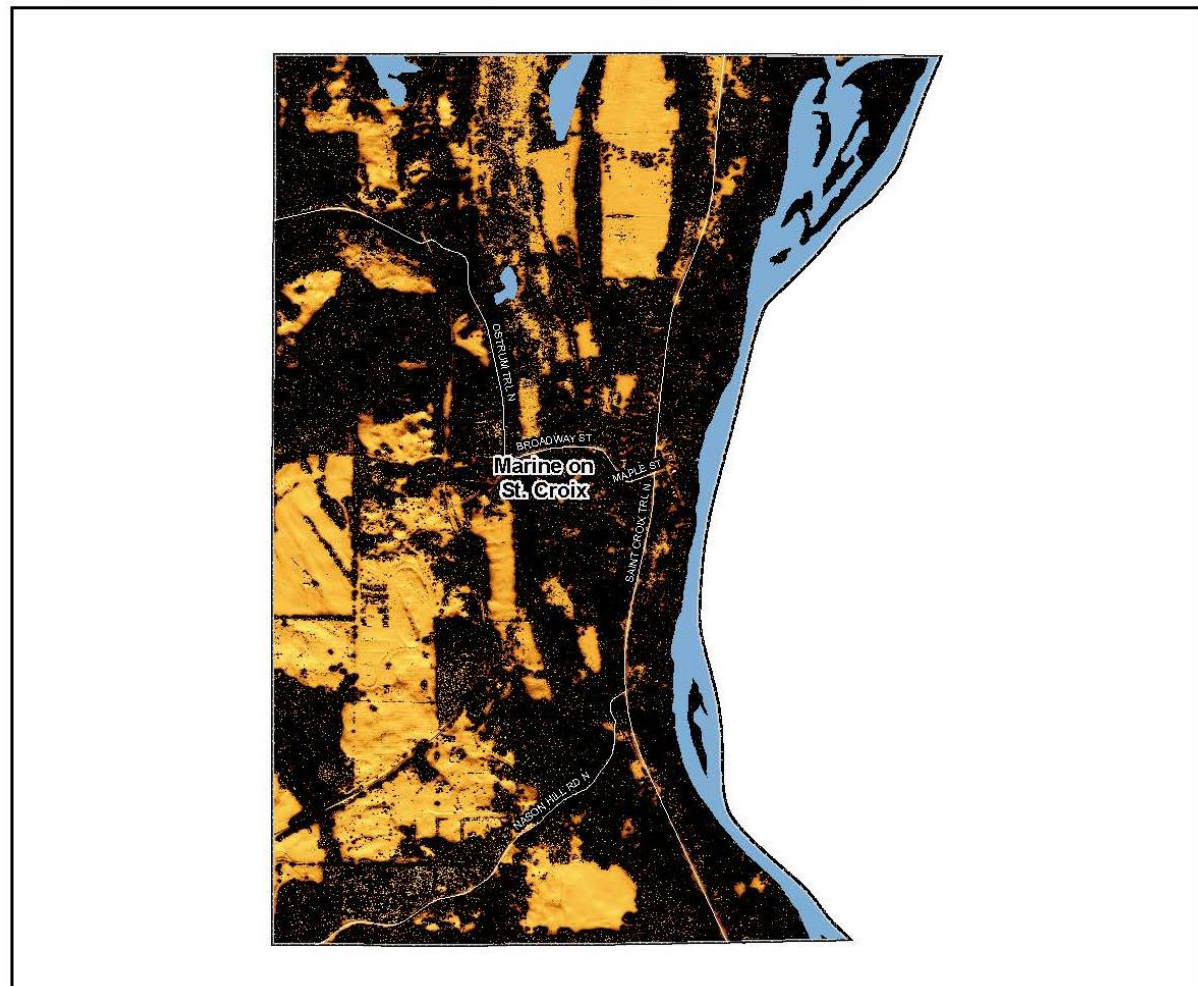
According to the Metropolitan Council, Marine on St. Croix has the following solar potential, detailed in the table below. These calculations assume a 10% conversion efficiency and current solar technologies. The average home in Minnesota consumes between 9 and 10 Mwh/year (Solar Energy Industries Association; US Energy Information Administration).

Table 3-1 – Solar Resource Calculations			
Gross Potential (Mwh/yr)	Rooftop Potential (Mwh/yr)	Gross Generation Potential (Mwh/yr ²)	Rooftop Generation Potential (Mwh/yr ²)
3,767,528	26,081	376,752	2,608

Source: Metropolitan Council

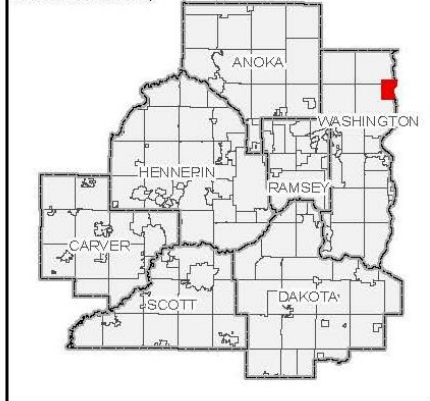
Figure 3-4 - Gross Solar Potential

Gross Solar Potential City of Marine on St. Croix, Washington County



12/22/2016

Extent of Main Map



Gross Solar Potential (Watt-hours per Year)

High : 1270474

Low : 900001

Solar Potential under 900,000 watt-hours per year

County Boundaries

City and Township Boundaries

Wetlands and Open Water Features

Source: University of Minnesota U-Spatial Statewide Solar Raster.

G. Resilience

Resiliency in planning and development helps to ensure the prosperity, livability, equity, and sustainability of a community for future generations. Resilience planning focuses on all aspects of community, ensuring the economy, the environment, and social/living conditions are vibrant and upheld through adversity.

Marine on St. Croix will strive to respond, adapt, and thrive under changing conditions and realities. Recognizing the vulnerability of individuals and local systems to the impacts of changing weather, climate, and environmental, societal and economic challenges. Marine on St. Croix recognizes resiliency is focused towards increasing a community's ability to survive a sudden disruption and to anticipate, adapt, and flourish in the face of change.

Marine on St. Croix residents value the natural beauty of the area and support measures to protect and enhance the community's natural resources, including involvement in the GreenStep Cities program. Minnesota GreenStep Cities is a voluntary challenge, assistance and recognition program to help cities achieve their sustainability and quality-of-life goals based upon 29 best practices. These actions focus on cost savings and energy use reduction, and encourage civic innovation. Marine on St. Croix became a GreenStep City in December 2014. To date, the City has completed 13 actions in building and lighting, land use, transportation, environmental management, and economic and community development and has achieved a STEP 3 ranking (<https://greenstep.pca.state.mn.us/>).



Marine on St. Croix is committed to continued active participation in the Minnesota GreenStep Cities program. The City will develop, with community participation, a sustainability plan to help inform future decision-making with regards to environmental, economic, and societal issues

Marine on St. Croix has completed two actions in building and lighting. Upgrades and energy saving technologies in Marine Village Hall earned the City two stars, and replacement of existing street lights with LEDs earned the City three stars. Marine on St. Croix has also earned two stars in land use, one for adopting both a City and Washington County's land use and one star for updating the City's zoning ordinance to comply with both comprehensive plans. In transportation, the City has earned two stars for existing and expanded bike and pedestrian trails in both residential and main transportation corridors in the City.

Marine on St. Croix has earned nine stars for four best practices in environmental management. The City Council approved environmentally preferable purchasing practices in March 2017 to conserve paper, energy, water, and reduce the City's carbon footprint, earning two stars for sustainable purchasing best practices. Marine has earned one star for completing a tree survey to assess the City's canopy cover. Additionally, the City has one star in access to and provision of public greenspace. Recent work in providing organics collection and increasing recycling, made possible by Ramsey and Washington County grants, has earned the City two stars in waste reductions. Lastly, the Marine on St. Croix community has a strong sense of connection and volunteerism, which has been demonstrated through the Marine Mill Site Committee. This group has been volunteering since 2010 to maintain the Historic Marine Mill, earning the City two stars in community stewardship in environmental management.

In community and economic development best practices, the City has earned a total five stars for three actions. The Marine GreenStep Cities Committee helps the community define and progress toward sustainability goals and best practices, earning the City two stars. Additionally, the City has two stars for education programs hosted by the Marine GreenStep Cities Committee, which have included a raingarden

workshop and a “Solar Power Hour.” To maintain public health and safety, the City earned one star by adopting the Washington County All-Hazard Mitigation Plan and the Washington County Emergency Operations Plan.

The City is proud of its GreenStep Cities accomplishments, and will continue to work towards further advancing the Best Practices defined by the program. The City will also explore, when opportunities exist, support of private and public development to incorporate resilient and sustainable practices when improvements are made in the future. Examples for consideration may include installation of EV charging stations, selecting climate tolerant tree species in plantings, incorporation of solar photovoltaic or other renewable energy technologies.

DRAFT

IV. HOUSING

A. Goals and Policies

The specific goals and policies guiding the Housing element of the Comprehensive Plan are:

- 1) Encourage a variety of housing to attract a diverse population to Marine on St. Croix.
 - a) Prioritize affordability in new housing units to attract younger families.
 - b) Develop life cycle housing to provide for the aging population and to further increase the housing stock in the city that is appealing to all ages.
 - c) Encourage establishment of accessory dwelling units within the City's single family residential areas, served by private ISTS and wells, to address life-cycle housing needs.
 - d) Evaluate the role of rental housing within Marine on St. Croix.

B. Existing Housing

Marine on St. Croix currently contains approximately 350 housing units, 97% of which are single family and 3% or which are multi-family. Most homes are owner occupied (89%). About 34% of homes in Marine on St. Croix are affordable to households with incomes below 80% Area Median Income (AMI). However, roughly 15% of households in Marine on St. Croix are cost burdened, the majority of which make 30% or less of AMI. There are no subsidized housing units in Marine on St. Croix. These and other housing conditions are outlined in Tables 4-1 and 4-2.

Table 4-1 – Housing Conditions		
Housing Units	Number of Units	Percent of Total
Total of Housing Units	350	100%
– Owner Occupied	310	89%
– Renter Occupied	40	11%
Single Family Homes	341	97%
Multi-family Homes	9	3%
Affordable Housing		
Housing Units affordable to households with incomes at or below 30% Area Median Income (AMI)	1	0.3%
Housing Units affordable to households with incomes between 31 and 50% Area Median Income (AMI)	4	1.1%
Housing Units affordable to households with incomes between 51 and 80% Area Median Income (AMI)	115	33%
Publicly Subsidized		
- Senior Housing	0	0%
– Housing for People with Disabilities	0	0%
– All Other Publicly Subsidized Units	0	0%

Source: Metropolitan Council

Table 4-2 - Households Experiencing Cost Burden	
Existing households experiencing housing cost burden with incomes below 30% AMI	31
Existing households experiencing housing cost burden with incomes between 31 and 50% AMI	5
Existing households experiencing housing cost burden with incomes between 51 and 80% AMI	18

Source: Metropolitan Council

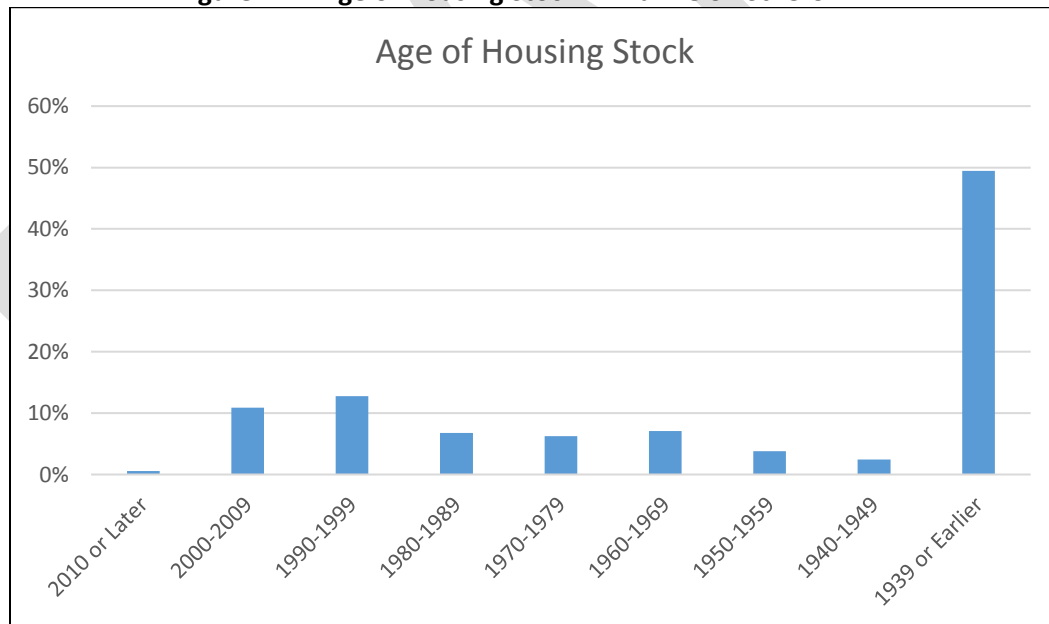
Marine on St. Croix is predominantly a single family residential community. Most housing units, both owner and renter occupied, are detached, single family homes, shown in Table 4-3. As with many metropolitan communities, the average household size has been gradually decreasing. In 2016, the average household size in Marine on St. Croix was 2.27 persons per household, which decreased from 2.37 persons in 2000. This rate of decline is similar to declines seen Washington County averages.

Table 4-3 - Housing Units by Type, 2016 Estimate		
Housing Unit Type	Number of Units	Percent of Total Units
1 Unit, detached	326	93%
1 Unit, attached	15	4.3%
2-4 Units	4	1.2%
5 or More Units	5	1.4%
Other Housing Types	0	0%
Total	350	100%

Source: Metropolitan Council

Almost half of housing units in Marine on St. Croix were built before 1939, many of those located in or adjacent to the historic Village Center. While this adds to the character and history of the community, it also limits the housing options available to residents.

Figure 4-1 - Age of Housing Stock in Marine on St. Croix



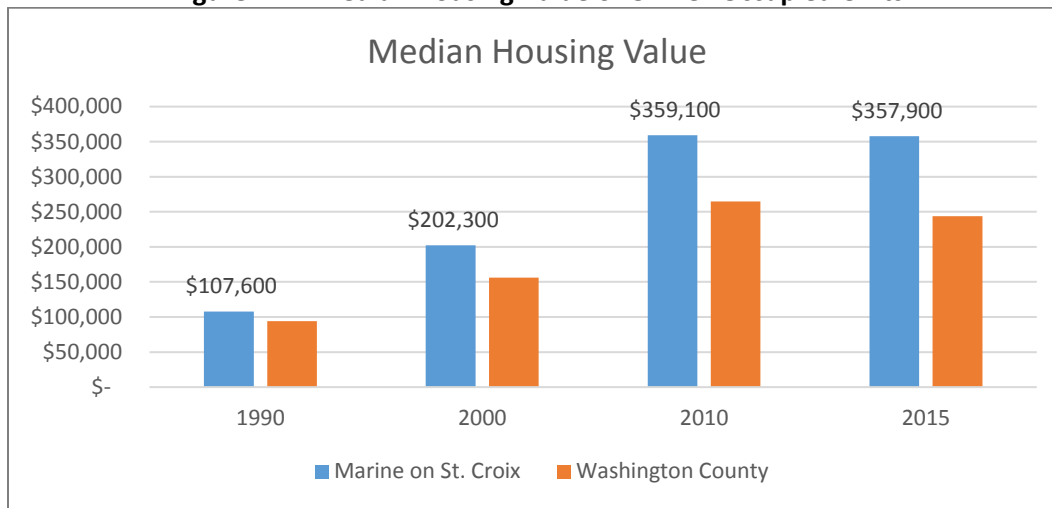
Source: American Community Survey, 201-2015

Many Marine residents have lived in the City for several years. About half of the City's population has been living in their current house for at least 20 years. The long tenure of Marine residents was also reflected in the community survey, with the majority of respondents saying they lived in the City for 15 years or longer (59%).

Housing Values

In 2015, the median housing value in Marine on St. Croix was \$357,900. This, and historical median housing prices, are higher than Washington County medians, shown below.

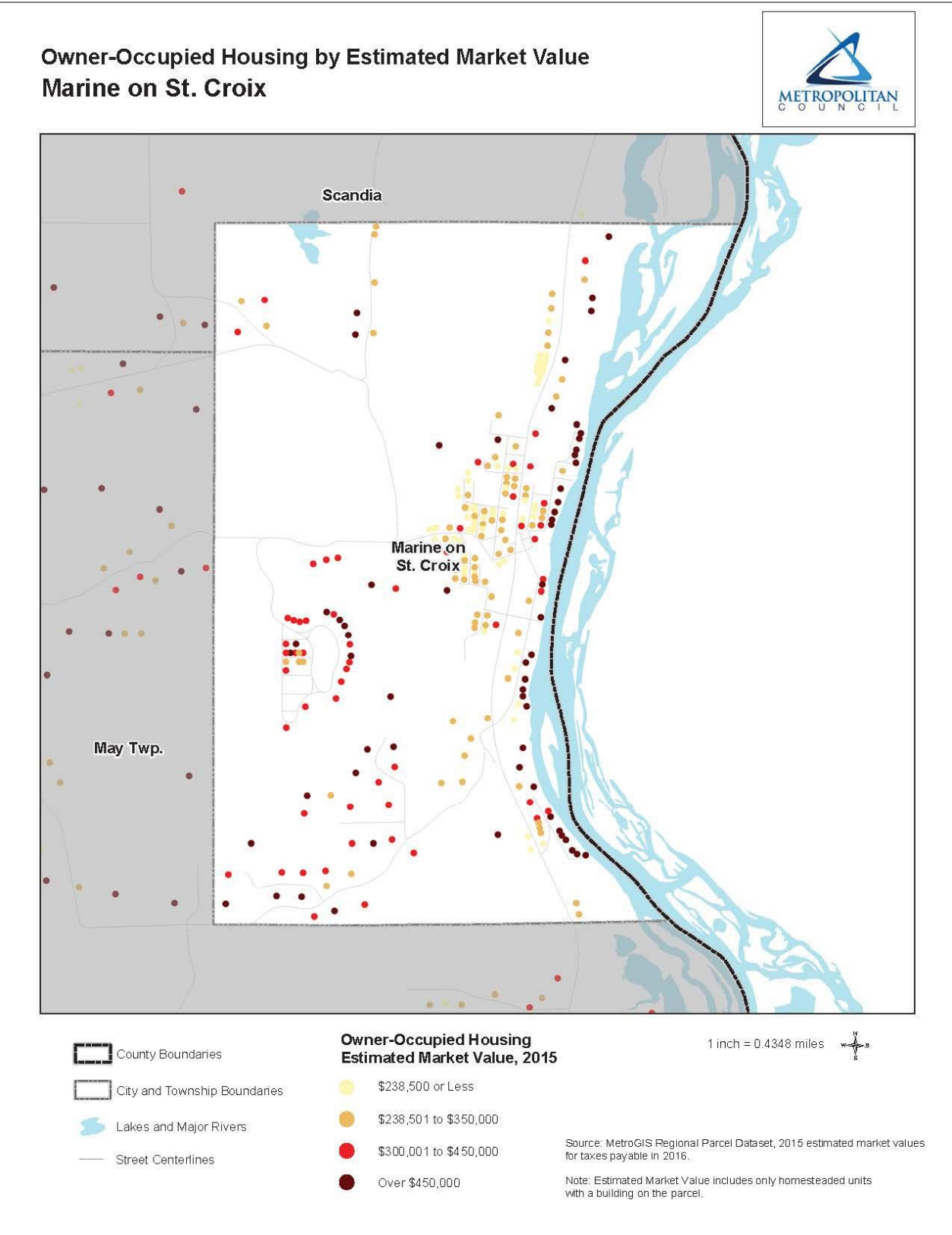
Figure 4-2 - Median Housing Value of Owner-Occupied Units



Source: American Community Survey, 2011-2015

Figure 4-3 maps the value of owner-occupied housing units. Higher valued homes are mainly located along the St. Croix River and in the Jackson Meadows cluster development. Older homes near the Village Center have slightly lower market values. While high homes values can benefit residents and the City, it can also create housing cost burden for households with lower income. It may also price younger families or older residents out of the community.

Figure 4-3 - Owner Occupied Housing Values



C. Existing and Projected Housing Needs

Survey respondents identified apartments/condos (rented or owned) and cluster developments as potential gaps in the housing market (19% each). With only 3% of the City's housing stock being multi-family housing, there is a shortage of apartment or condo options. However, the rural character of Marine on St. Croix makes multifamily housing development difficult. This will require creativity and partnerships between the City of Marine on St. Croix, Washington County, and developers. Additionally, the lack of younger families in the City suggests low rates of housing turnover. While long-time residents add to the small town feel in Marine on St. Croix, it does not provide young families the opportunity to move into the community. New housing units may be needed to accommodate young families, provide more housing options, and contribute to economic development in the City. This need can be fulfilled through cluster developments. Cluster developments provide the opportunity for higher densities that could facilitate more affordable housing prices. Likewise, the community survey shows a portion of respondents feels there is a lack of affordable housing in the community, which might also contribute to the lack of young families.

One of the top three priorities identified by community survey respondents was housing for all stages of life. As the population continues to age, senior housing may be needed to allow senior residents to age in the community they have lived in for many years. However, this will need to be balanced with the ability to provide services and resources to senior residents.

Given the rural location and nature of Marine on St. Croix, and the capacity limits of wastewater treatment systems, only modest growth is anticipated in the future. The future land use plan for Marine on St. Croix accommodates for the development of new housing units by zoning for residential land uses throughout much of the City. However, it is not anticipated that all residential land will be developed; cluster developments will be used to help preserve open spaces, natural resources, and agricultural lands. There is enough land zoned for residential to accommodate projected growth while preserving valuable natural resources. This also provides flexibility in development, depending on location, number of units, etc. to best serve the needs of current and future residents, while respecting the natural landscape.

D. Affordable Housing Allocation

The Affordable Housing Allocation reflects the region's forecasted population that will need affordable housing. According to the Metropolitan Council's affordable housing allocation, Marine on St. Croix's share of affordable housing need is 0 units, noted in the table below.

Table 4-4 – Affordable Housing Allocation	
At or below 30 AMI	0
From 31 to 50 AMI	0
From 51 to 80 AMI	0
Total Number	0

E. Housing Implementation Plan

Table 4-5 – Housing Implementation			
Housing Goal/Need	Available Tool	Opportunity and Sequence of Use	Potential Partners
Housing Quality	Zoning Ordinance Administration	Maintain compatible land uses in the community and maintain high community aesthetics. Provide a set of rules for new construction.	City Staff, League of Minnesota Cities, Property Owners
	Subdivision Ordinance		
	Ordinance Performance Standards and Nuisance Provisions		
Multi-Generational Community Living	Start-Up Loan Program	Assist first-time homebuyers with financing a home purchase and down payment assistance through a dedicated loan program	Minnesota Housing
	Home Improvement Loans	Assist homeowners in financing home maintenance projects to accommodating a physical disability	Washington County CDA, Minnesota Housing
	Accessory Dwelling Unit (ADU) Ordinance	Develop an ordinance permitting the construction of accessory dwelling units or guest homes in specific zoning districts	Property Owners
Maintaining Existing Housing Units	Home Improvement Loans	Assist homeowners in financing home maintenance projects like roof repair, plumbing and electrical work, accommodating a physical disability, or select energy efficiency improvement projects	Washington County CDA, Minnesota Housing
	Subsurface Sewage Treatment System Repair Grant/Loan	Assist homeowners with noncompliant subsurface sewage treatment systems	Washington County
	Housing Improvement Area	Community development program focused on preserving existing housing units through targeted redevelopment areas. This program is intended to preserve naturally occurring affordable housing.	Washington County CDA
New Housing Construction (provide a variety of housing options)	Tax Increment Financing	Encourage development of new housing units, redevelopment and/or infrastructure improvements through the creation of a TIF district	Washington County CDA
	GROW Fund	Provide gap financing for new or redevelopment projects affordable to owner or renter households at or below 60% AMI	Washington County CDA

V. PARKS AND TRAILS

A. Goals and Policies

The specific goals and policies guiding the Parks and Trails element of the Comprehensive Plan are:

- 1) Promote the William O'Brien State Park and the St. Croix River as recreational locations that add value to the City due to their proximity.
- 2) Encourage increased greenspace, improved pedestrian and accessible facilities, and river access.
- 3) Consider working with other organizations or agencies to improve existing regional trails and/or expand regional trail system, while avoiding integration of high volume regional trails into low capacity city trails.

B. Regional Parks and Trails

1. Regional Parks

A portion of William O'Brien State Park is located in the northwest quadrant of the Marine on St. Croix, as shown in the figure on the following page. William O'Brien State Park accounts for about 584 acres of park space located within City limits. The Minnesota DNR manages William O'Brien and several amenities are available including: a picnic area; two picnic shelters; two volleyball courts; four horseshoes pits; a fishing pier; swimming beach; boat access; and visitor center. Activities available at William O'Brien State Park encompass all seasons and include camping, canoeing, kayaking, fishing, volleyball, horseshoes, hiking, snowshoeing, and cross-country skiing.

2. Regional Trails

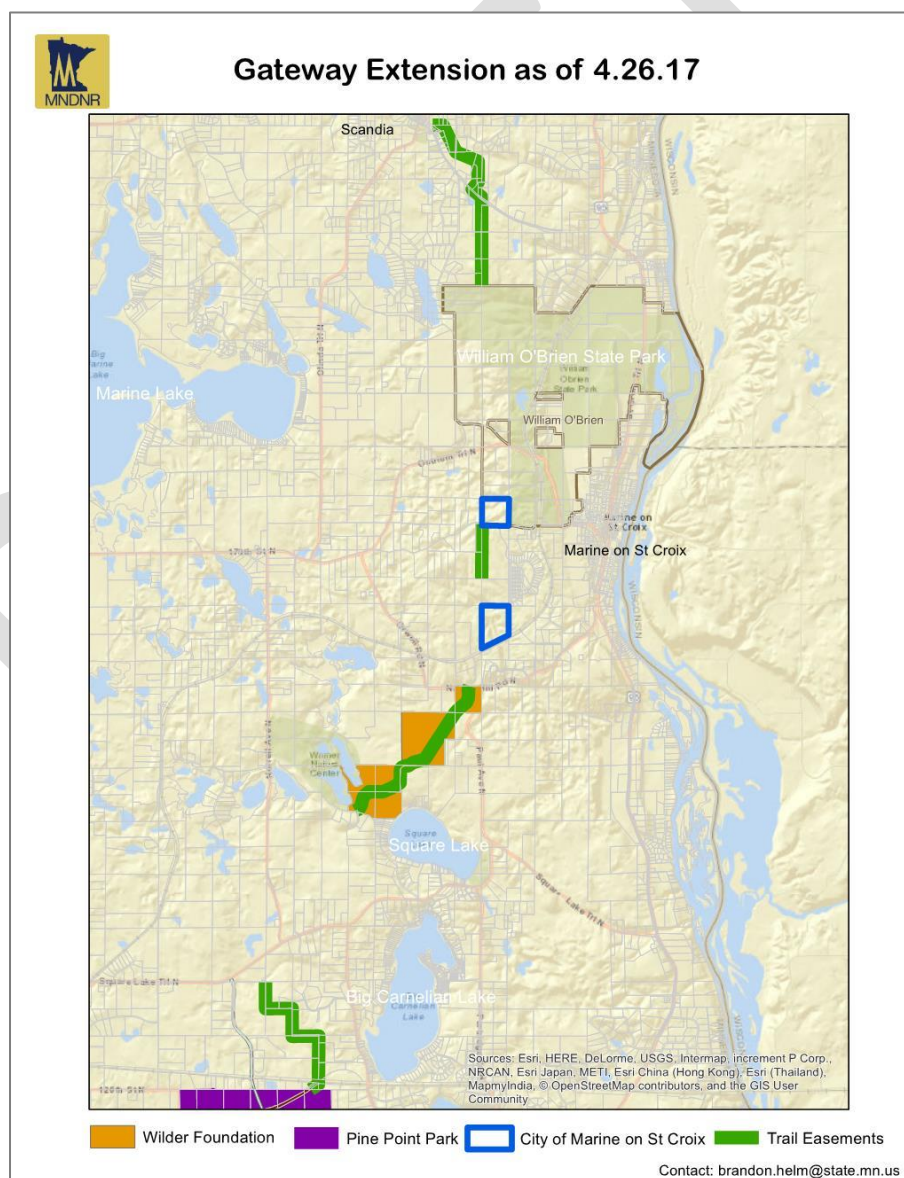
The **Glacial Hills Regional Trail Search Corridor** is partially located in Marine on St. Croix. This potential 12-mile trail would travel east/west along Washington County Road 4, connecting Marine on St. Croix and Hugo through May Township. There would be a trailhead located in Marine along the southern edge of William O'Brien State Park. The Glacial Hills Regional Trail Search Corridor intersects with the **Central Greenway Search Corridor** (north/south trail through the center of Washington County) and with **Hardwood Creek Regional Trail**, an existing north/south trail providing access to Forest Lake and the larger regional trail system. There is no Council approved master plan for this trail.



The **Gateway State Trail** is an 18-mile multiuse trail between City of St. Paul and Washington County providing recreational opportunities for biking, hiking, in-line skating, cross country skiing and horseback riding. The northeastern part of the trail travels through the countryside of Washington County and terminates at Pine Point Park in Stillwater Township. Ultimate plans are for the trail to extend to William O'Brien State Park and further north to Interstate State Park. As depicted in Washington County's 2030 Parks and Open Spaces Policy Guide, the search area for the future extension alignment encompasses the whole city of Marine on St. Croix.

Planning and development of the Gateway Trail continues to move forward. The State of Minnesota has been purchasing easements and properties for the extension of the Gateway Trail from Pine Point Park north to William O'Brien State Park and Scandia, as shown on Figure 5-1. The City of Marine on St. Croix entered into a cooperative agreement (see Appendix C) with the State to allow construction and maintenance of the trail on city-owned property. This will further facilitate the completion of this trail segment.

Figure 5-1 – Gateway Trail Extension



C. Local Parks and Trails

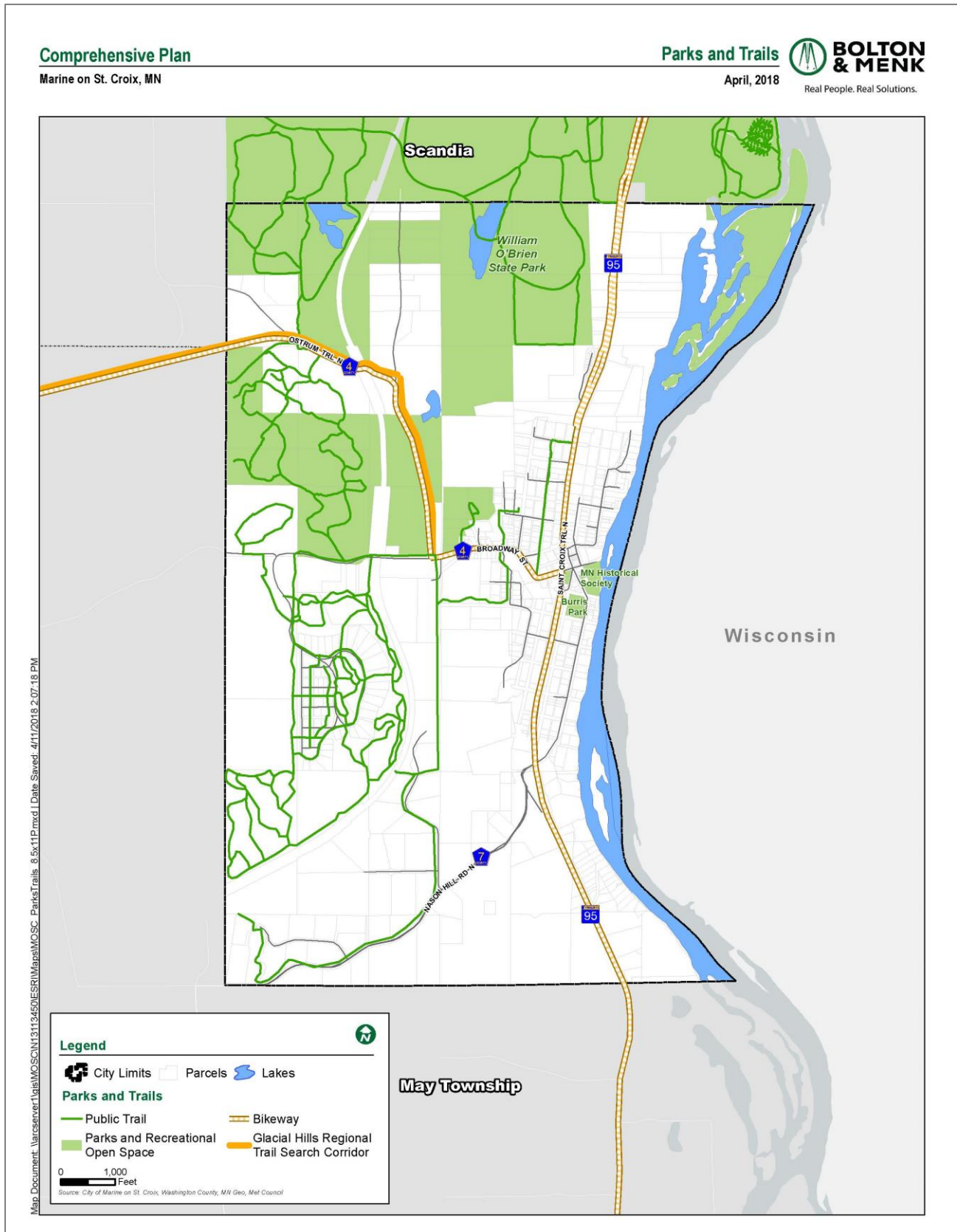
There are several acres of open and natural spaces in Marine on St. Croix. In addition to William O'Brien State Park, open spaces in Marine have a wide variety of uses and owners, including the City of Marine, the Minnesota Science Museum, Minnesota Historical Society, National Park Service, Kiwanis Club, and private property owners.

- **Jackson Meadow:** The Jackson Meadow neighborhood, on the west side of the City, includes 56.3 acres of designated open space with trails throughout. Marine on St. Croix owns a 14.7-acre parcel neighboring the Jackson Meadow development with trails that follow easements through Jackson Meadow and connect to other City trails.
- **Burris Park:** The City owns 2.89 acres at the south end of the Village Center that currently acts as open greenspace. The Early Settler's Cabin Historic site is located here with a cabin built in 1852 and a descriptive plaque. There are also a few picnic tables available. Long term plans for this greenspace may serve as a vista to the St. Croix River.
- **Marine Mill:** Minnesota Historical Society owns this 3.95-acre site dedicated to the historic Mill - the state's first commercial lumber mill. The site includes a crushed limestone path, signs explaining the history of the site, and a native tree population overseen, funded, and maintained through a collaboration between the City and Historical society.
- **Other City-Owned Property:** The City owns a 40-acre site on the northwestern edge of the City, adjacent to William O'Brien, which contains a 20-acre pine forest and a maintenance building.

Table 5-1 – Park Amenities by Location			
Amenities	<i>Jackson Meadow Development</i>	<i>Burris Park</i>	<i>Marine Mill</i>
Acres	56.3	2.89	3.95
Walking/Hiking Trails	X	X	X
Historic Site		X	X
River Access			X
Open Space	X	X	X
Picnic Facilities		X	
Playground			
Ball Field			
Soccer Field			
Volleyball			
Basketball			
Tennis Court			
Ice Skating Rink			

While many trails in Marine are maintained through regional or state agencies, there are a handful of local trails. These include sidewalks along segments of County Road 4 and MN Highway 95, shown in Figure 5-2.

Figure 5-2 - Existing and Planned Regional and Local Parks and Trails



D. Future Parks and Trails

Most respondents to the community survey reported using state and regional parks and the St. Croix River for outdoor recreation. Improving access to these existing public amenities may make them more convenient or user-friendly, specifically along the St. Croix River where public access is limited. Additionally, walking, biking, and horseback riding trails were identified as one of the top three priorities for Marine on St. Croix's future by community survey respondents. Identifying potential trails that connect to existing local and regional trails can facilitate connectivity between popular destinations throughout the City and the region.

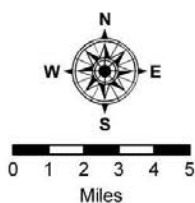
As mentioned above, there are two trail search corridors that run through Marine on St Croix: Gateway State Trail and Glacial Hills Regional Trail (see Figure 5-3). The City will work with Washington County, the State, and other planning agencies to continue planning, corridor alignment, and implementation efforts.

Figure 5-3 - Planned Parks and Trails



Regional Trail System

- Existing County Trail
- Planned County Trail
- Existing Regional Trail
- Planned Regional Trail
- Existing State Trail
- Planned State Trail
- Trail Search Area
- State Park
- Planned Master Plan Boundary
- County Park
- Scientific and Natural Area
- Wildlife Management Area



Prepared By: Washington County GIS Support Unit, IT Department
Data Source: Metropolitan Council - 2007, Washington County GIS Support Unit - 2007

Washington
County

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VI. TRANSPORTATION

A. Introduction

This Transportation chapter is consistent with requirements for transportation elements of comprehensive plans as captured in the Metropolitan Council's 2040 *Local Planning Handbook*. It is organized into the following sections:

- Existing Roadway Conditions
- Roadway System Plan
- Non-Motorized Existing Conditions and System Plan
- Transit Existing Conditions and System Plan
- Freight Plan
- Aviation Plan

B. Goals and Policies

The primary Transportation Goals for Marine on St. Croix are:

- 1) Maintain the conditions of roads and sidewalks and make improvements where necessary.
- 2) Improve roads to allow greater accessibility and safety for pedestrians and cyclists.
- 3) Seek out new possibilities for trails that will enable pedestrian, cycling, and horseback riding.
- 4) Although Marine on St. Croix is on the outskirts of the metropolitan area and not necessarily conducive to mass public transportation, the City will support private efforts to enhance the multimodal transportation, and support private electric vehicle charging services.

C. Existing Roadway Conditions

Existing Traffic Volumes and Jurisdictional Classification

The most basic characteristic of a given roadway is the volume of traffic that it carries. Existing traffic volumes on roadways within Marine are presented in Figure 6-1. This is the most current MnDOT data.

In addition, roadways are classified based on which level of government owns and has jurisdiction over them. In the case of Marine, roadways are under the jurisdiction of MnDOT, Washington County, or the City of Marine on St. Croix. Figure 6-2 depicts the existing roadway jurisdictional classification system in Marine.

Figure 6-1 - Existing Traffic Volumes

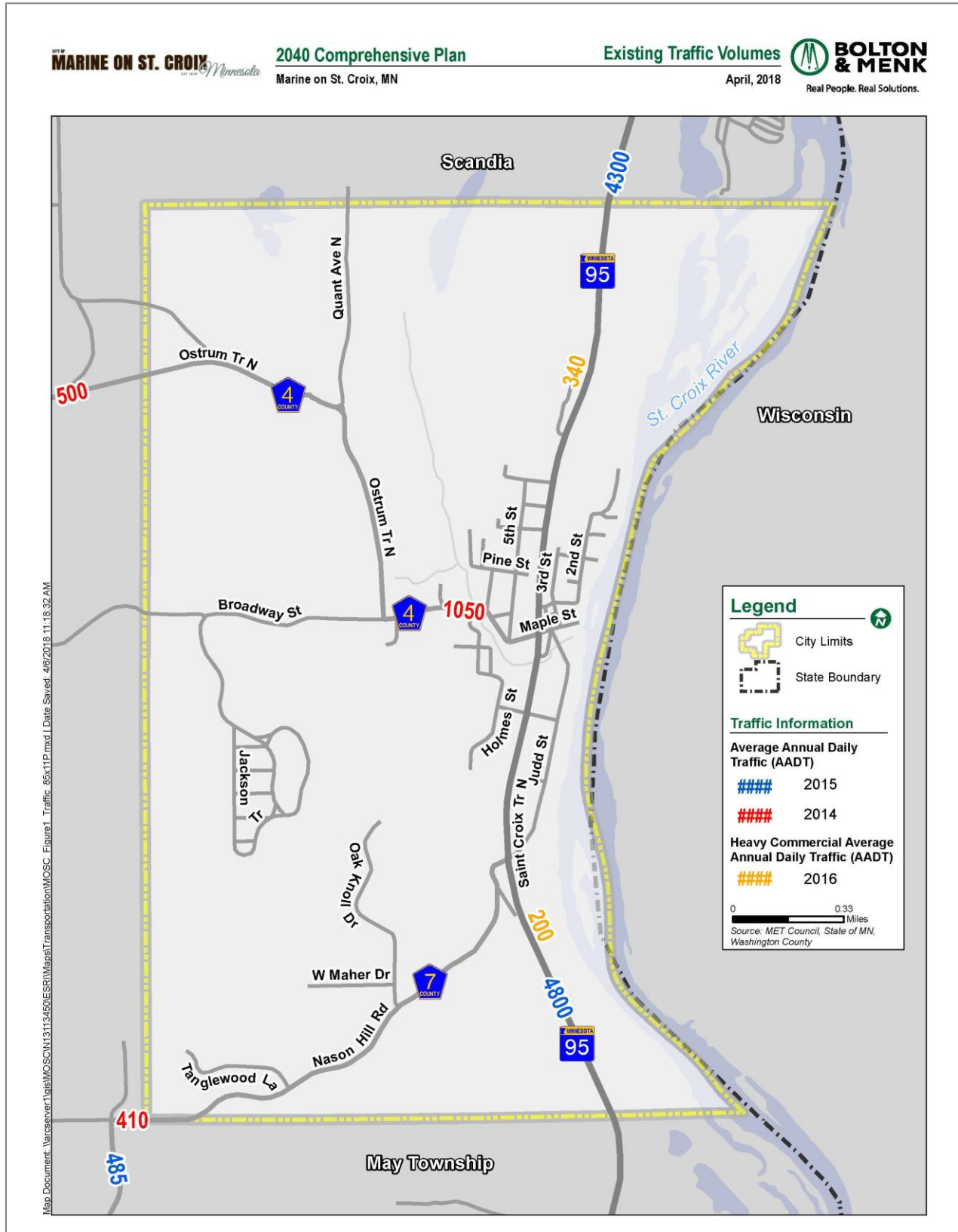
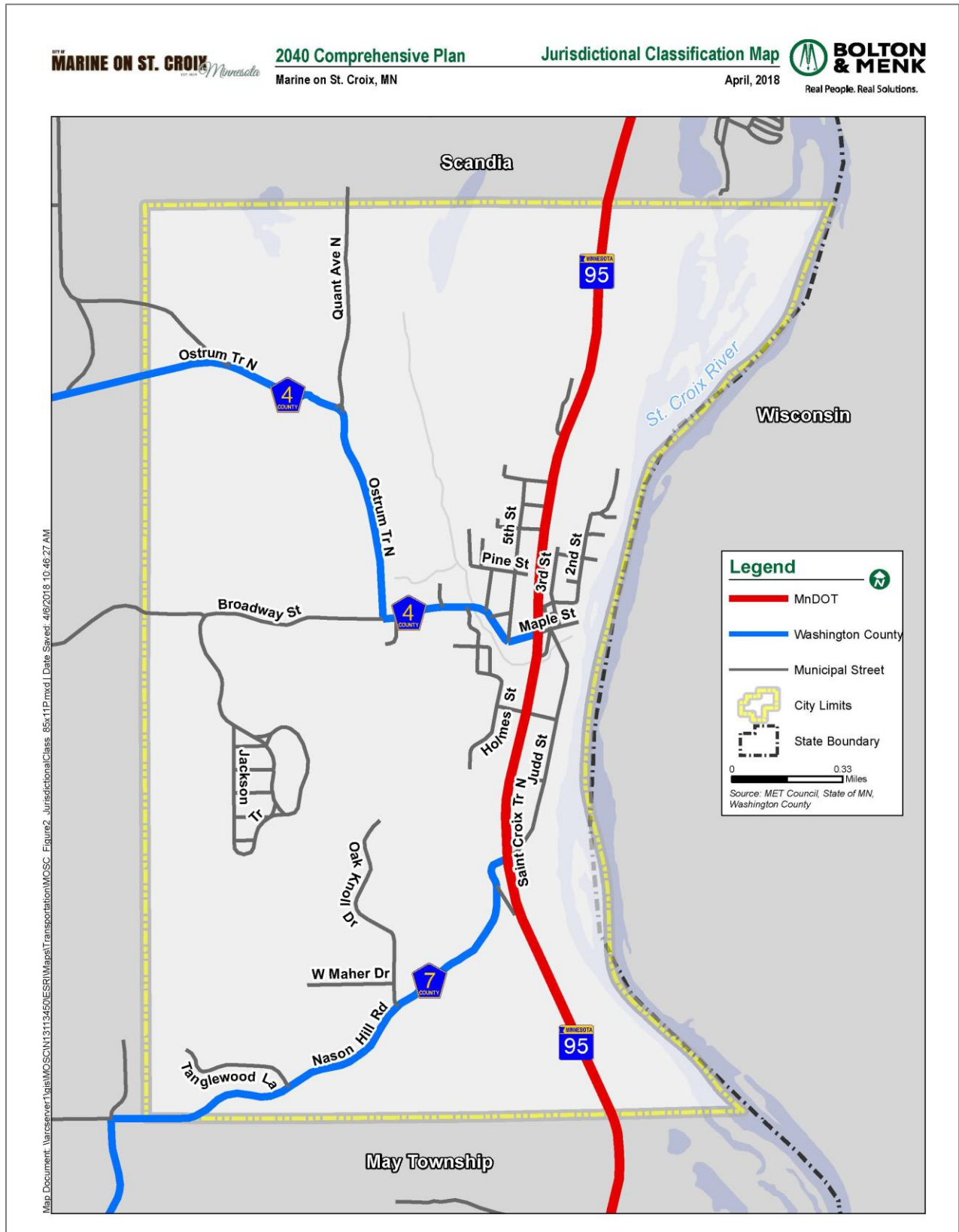


Figure 6-2 - Jurisdictional Classification



Functional Classification

The functional classification system is a roadway network that distributes traffic from neighborhood streets to collector roadways, then to minor arterials, and ultimately the Metropolitan Highway System. Roads are placed into categories based on the degree to which they provide access to adjacent land uses and lower level roadways versus providing higher-speed mobility for “through” traffic. Functional classification is a cornerstone of transportation planning. Within this approach, roads are located and designed to perform their designated function.

The current roadway functional classification map for Marine as identified by the Metropolitan Council is presented in Figure 6-3. The roadway system presently consists of six functional roadway classifications:

- Principal arterial
- “A” minor arterial
- Other arterial
- Major collector
- Minor collector
- Local street

The Metropolitan Council has defined four sub-categories of “A” minor arterials: reliever, expander, connector, and augments. These sub-categories have to do primarily with Metropolitan Council’s allocation of federal funding roadway improvements, but do not translate into specific design characteristics or requirements.

For arterial roadways, the Metropolitan Council has designation authority. Local agencies may request that their roadways become arterials (or are downgraded from arterial to collector), but such designations or re-designations must be approved by the Metropolitan Council. The agency which has jurisdiction over a given roadway (e.g. Washington County or the City of Marine on St. Croix) has the authority to designate collector status.

Principal Arterials

Principal arterials are the highest roadway classification and make up the Metropolitan Highway System. The primary function of these roadways is to provide mobility for regional trips, and they do not provide a land access function. They are intended to interconnect regional business concentrations in the metropolitan area, including the central business districts of Minneapolis and St. Paul. These roads also connect the Twin Cities with important locations outside the metropolitan area. Principal arterials are generally constructed as limited access freeways, but may also be multiple-lane divided highways. There are no principal arterials within the City of Marine on St. Croix.

“A” Minor Arterials

These roads connect important locations within the City of Marine on St. Croix with access points of the metropolitan highway system and with important locations outside the City. These arterials are also intended to carry short to medium trips that would otherwise use principal arterials. While “A” minor arterial roadways provide more access than principal arterials, their primary function is still to provide mobility rather than access to lower level roadways or adjacent land uses. The “A” minor arterial roadways within Marine are in the “connector” category and are identified in Table 6-1, below:

Table 6-1 - “A” Minor Arterial Roadways			
Roadway	From	To	Number of Lanes
Trunk Highway (TH) 95 (St Croix Trl)	South City Limit	North City Limit	2
County State Aid Highway (CSAH) 7 (Nason Hill Rd)	West City Limit	TH 95 (St Croix Trl)	2

Other Arterials

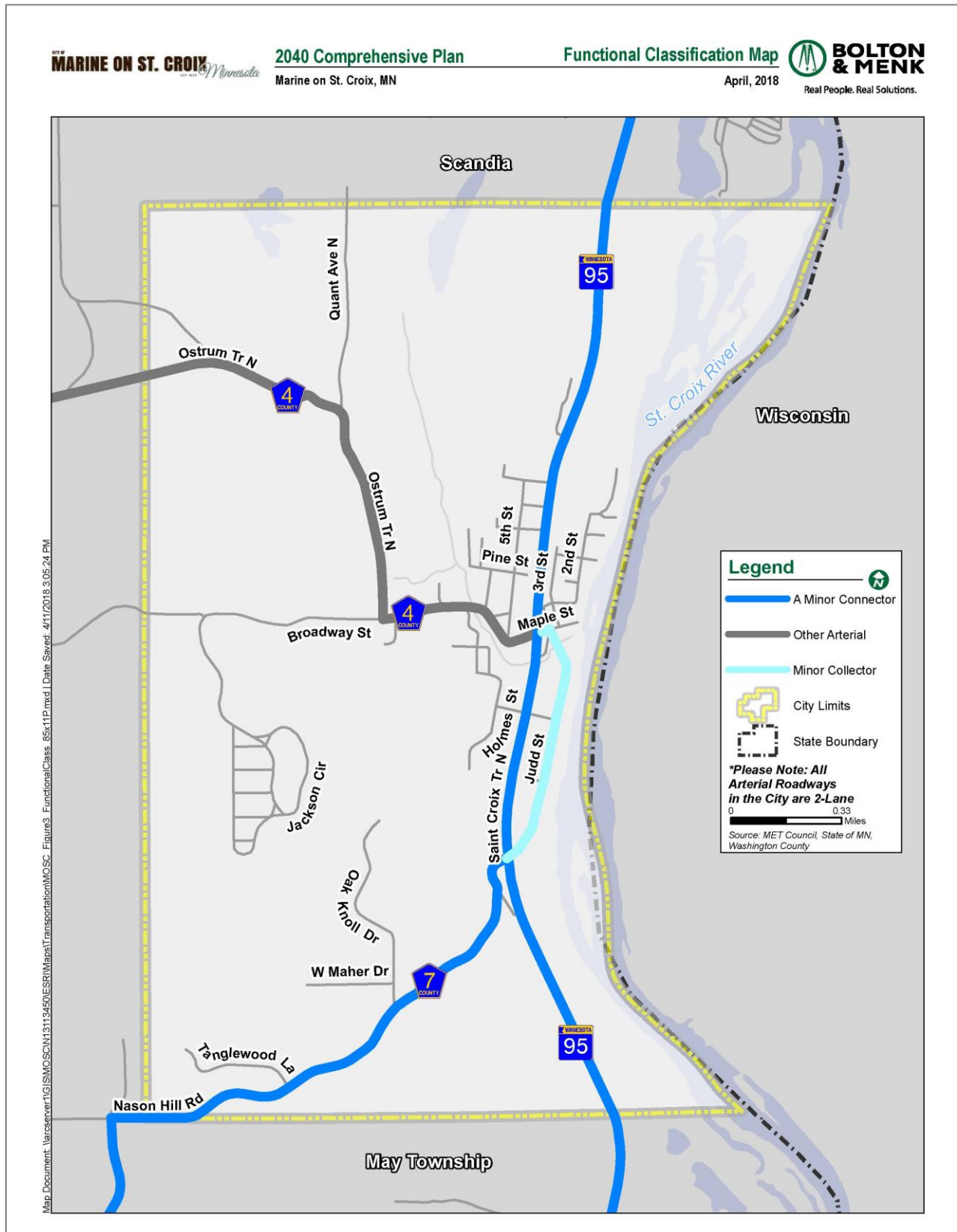
Like “A” minor arterials, these roadways also serve more of a mobility function than access function. However, they may not have as much regional importance as “A” minor arterials and are not eligible for federal roadway improvement funding. There is one “other arterial” within the City of Marine on St. Croix which is identified in Table 6-2, below.

Table 6-2 - Other Arterial Roadways			
Roadway	From	To	Number of Lanes
CSAH 4 (Broadway St/Ostrum Trl)	West City Limit	TH 95 (St Croix Trl)	2

Collector Street

Collector roadways provide a balance of the mobility and land-use access functions discussed above. Minor collectors generally are shorter in length, with lower volumes and lower speeds than major Collectors. As depicted in Figure 6-3, the only collector in Marine is Judd Street/Maple Street between Hwy 95 access points.

Figure 6-3 - Functional Classification



Summary of Relevant Corridor Studies

There have been no relevant corridor studies in recent years which pertain to Marine-area roadways. An Environmental Assessment Worksheet was completed in 2016 for improvements to CSAH 4 within the City. These improvements were completed in 2017.

D. Roadway System Plan

2040 Traffic Projections and Roadway Segment Capacity Deficiency Analysis

Transportation Analysis Zones (TAZs) are used to project future traffic volumes. Each TAZ has demographic and employment information that translates to vehicular trip origins and destinations. A map of Marine TAZs is provided in Figure 6-4. The anticipated future land use patterns discussed in the Land Use chapter of this Comprehensive Plan were assumed for the 2040 TAZ allocations identified in Table 6-3, below.

Table 6-3 - 2040 Marine on St. Croix TAZ Data									
TAZ	2020			2030			2040		
	HH	Pop	Jobs	HH	Pop	Jobs	HH	Pop	Jobs
2306	123	269	5	146	306	6	163	342	7
2307	107	231	59	125	262	62	141	294	66
2308	110	240	76	129	272	82	146	304	87
TOTAL	340	740	140	400	840	150	450	940	160

Figure 6-4 - Transportation Analysis Zones

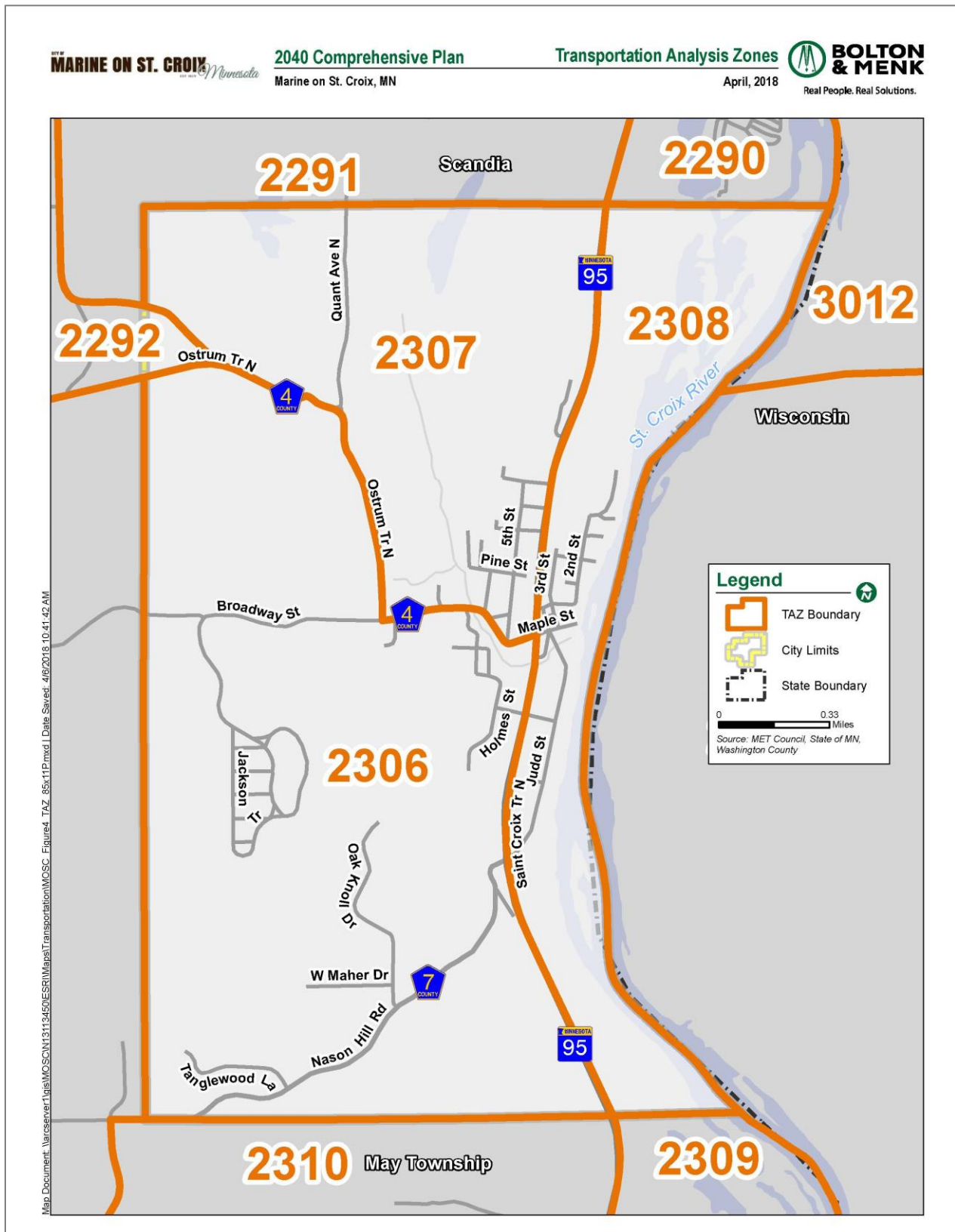
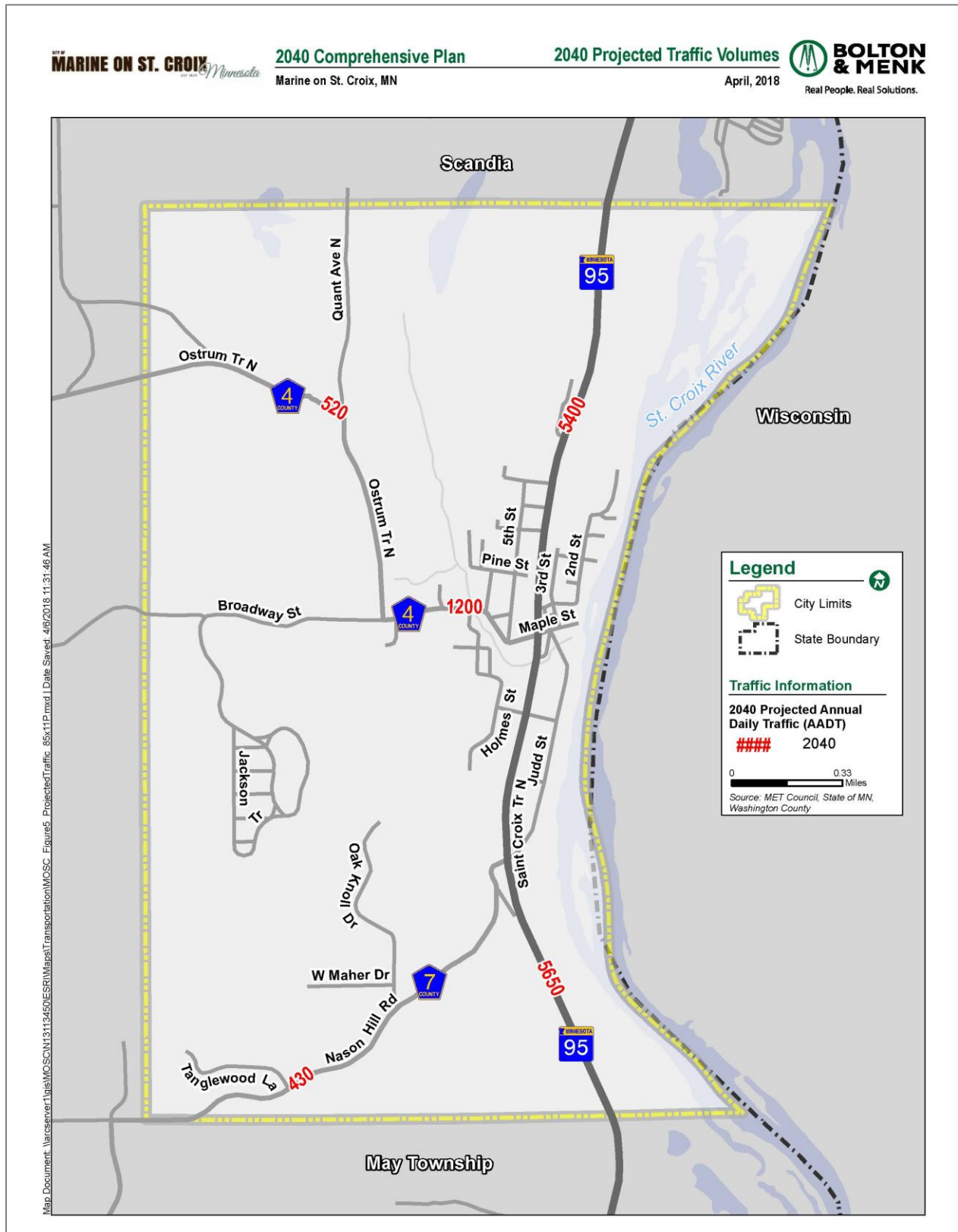


Figure 6-5 - Projected Traffic Volumes



Estimated 2040 traffic volumes for roadways in Marine are presented in Figure 6-5. These projections are based on the following methodology:

- Review of forecasts from the 2030 Marine Comprehensive Plan
- Historic trend analysis for volumes on individual roadway segments
- Consideration of local context and anticipated development patterns
- Comparison with the results of Washington County's 2040 forecasts for the area

Table 6-4 provides a method to evaluate roadway capacity for mid- to long-range planning purposes. Typical planning-level roadway capacities are presented for different functional classifications and facility types. These capacities are presented in terms of Average Annual Daily Traffic (AADT) and may be compared against the projected 2040 volumes summarized in Figure 6-5. These estimates were based on methods and guidance from Transportation Research Board's Highway Capacity Manual (Sixth Edition). Only the roadway categories applicable to Marine are shown.

Table 6-4 - Typical Traffic Capacity by Roadway Type/Configuration		
Functional Classification	Facility Type	Planning Level Capacity
Local Road	Gravel Road	500
	2-Lane Local/Residential Road	1,000
Minor Collector	Rural 2-Lane	7,700
	Urban 2-Lane	1,700
Major Collector/Minor Arterial	Rural 2-Lane Undivided	16,000
	Urban 2-Lane Undivided	11,000

Source: Bolton & Menk, Inc., using 6th Edition Highway Capacity Manual guidance and methods.

It can be seen that projected 2040 volumes do not exceed or approach planning level capacity on collector/arterial level roadways in Marine. Therefore, no roadway capacity expansion projects are identified at this time.

Please note that this capacity review is for overall roadway segments and does not cover any detailed intersection analyses which may be required over the planning horizon.

Future Functional Classification

As referenced previously, re-designation of roadways involving the minor arterial functional classification (e.g. from collector to arterial, from arterial to collector, or changing designations within arterial) is under the authority of the Metropolitan Council. For collector roadways, the functional class designation is under the authority of the agency which owns the given road.

The City of Marine on St. Croix does not feel that any roadways within its borders need to be re-classified from a functional classification perspective. The City is not aware that MnDOT or Washington County wish to advance any such re-classifications. Therefore, Figure 6-3 is the functional classification map for current and 2040 conditions.

Future Jurisdictional Classification

The City of Marine on St. Croix does not anticipate a desire for jurisdictional transfers regarding roadways within its borders through the 2040 timeframe. Moreover, the City is not aware that Washington County or MnDOT desire any such transfers. Therefore, Figure 6-2 identifies both current and future jurisdictional classification information.

Access Management

Access management refers to balancing the need for connections to local land uses (access) with the need for network-level movement (mobility) on the overall roadway system. By functional classification, this may be summarized as follows:

- Arterials generally have limited access in the form of driveways and low volume side streets because their role in the network is to support relatively long, high speed traffic movements
- Collectors allow a greater degree of access given their combined mobility/access function
- Local streets have relatively few limits on access because their primary function is to provide access to adjacent land uses

Appropriate access control preserves the capacity on arterial and collector streets, and improves safety by separating local turning movements from higher-speed “through” traffic. Moreover, it concentrates higher volume traffic linkages at intersections controlled with traffic signals, roundabouts, or other measures.

MnDOT and Washington County Roadways in Marine are identified in Figure 6-2. For MnDOT roadways, MnDOT access management guidelines apply. Similarly, for County roadways, Washington County’s access management guidelines apply. MnDOT’s access management guidelines are described in detail in their Access Management Manual. When reviewing MnDOT’s access guidelines, Hwy 95 in Marine is classified as 5A (minor arterial, rural). Washington County access management guidelines may be found in the Transportation section of their current Comprehensive Plan. Summary access management tables for MnDOT and Washington County, respectively, are provided in Appendix D.

Land use planning and subdivision regulation are the responsibility of the City. In conjunction with local land planning, Marine will require that new land development complies with MnDOT and County access management guidelines as applicable. The City will work with MnDOT and Washington County to consolidate driveway and street access to collector and arterial roadways where applicable and feasible. Proper access management has the benefit of improved local safety conditions by limiting conflict points between local and through traffic on higher classification roadways.

Future Right-of-Way Preservation

The City of Marine on St. Croix does not have any programmed or planned new roadways or roadway expansions at known locations. Therefore, there are no known right-of-way preservation requirements. It is the City’s policy to retain undeveloped platted streets.

E. Transit Existing Conditions and System Plan

Transit Market Area

The Metropolitan Council has defined Transit Market Areas based on the following primary factors:

- Density of population and jobs
- Interconnectedness of the local street system
- Number of autos owned by residents

In general, areas with high density of population and jobs, highly interconnected local streets, and relatively low auto ownership rates will have the greatest demand for transit services and facilities. Transit Market Areas are a tool used to guide transit planning decisions. They help ensure that the types and levels of transit service provided, fixed-route bus service, match the anticipated demand for a given community or area.

Based on this analysis, the Metropolitan Council categorizes the City of Marine on St. Croix as Transit Market Area V. As identified in the Metropolitan Council’s 2040 Transportation Policy Plan (TPP), the characteristics of this category area are as follows:

Transit Market Area V has very low population and employment densities and tends to be primarily Rural communities and Agricultural uses. General public dial-a-ride service may be appropriate here, but due to the very low-intensity land uses these areas are not well-suited for fixed-route transit service.

Current and Planned Service and Facilities

Scheduled Transit Service - Consistent with the Metropolitan Council classification of Marine as Transit Area V, there is no scheduled transit service serving Marine due to lack of demand. This includes no service or facilities in the following categories:

- Scheduled local bus service
- High-frequency routes
- Peak hour commuter bus service
- Rapid Bus Service
- Light Rail Transit (LRT) or Bus Rapid Transit (BRT)
- Transit facilities
- Transit advantages

The City of Marine on St. Croix is not aware of any planned scheduled transit service within the City.

Demand Responsive Transit Service - Demand responsive transit service for all communities in Washington County is provided by Metropolitan Council Metropolitan Transportation Services (MTS), and consists of complementary services that are compliant with Americans with Disabilities Act (ADA), as well as general public dial-a-ride services. These services are anticipated to continue in their current form into the foreseeable future.

Metro Mobility – Provides demand responsive service for certified riders with disabilities that prevent them from using the regular route system.

Transit Link is the Twin Cities dial-a-ride minibus or van service for the general public where regular route service is not available. Fares are based on time of day and distance traveled.

F. Non-Motorized Transportation

The Metropolitan Council has designated Marine as a Diversified Rural community. As stated in the Thrive MSP 2040 Plan, these communities are:

...home to a variety of farm and non-farm land uses including very large-lot residential, clustered housing, hobby farms, and agricultural areas...the Diversified Rural Area protects rural land for rural lifestyles today and potential urbanized levels of development sometime after 2040.

Existing and future trail facilities are mapped in Chapter 5 of this Comprehensive Plan. The primary existing non-motorized elements of Marine's transportation network include:

- Off-road Washington County trail on the west side of Hwy 95 between the north city limit and Chestnut Street, and between Maple Street and approximately 1,000 feet north of the south city limit (north of Marine, the trail extends through the William O'Brien State Park in Scandia)
- Sidewalk along Broadway/Maple Street from Oak Lawn Cemetery to Hwy 95 (recently improved between Ostrum Avenue and Hwy 95 with a 2017 roadway reconstruction project)
- Sidewalk along approximately 500 feet of Judd Street, serving commercial establishments in the Village Center
- A flashing beacon pedestrian safety system at the Hwy 95/Maple Street intersection; pedestrians wishing to cross Hwy 97 can push a pole-mounted button to activate flashing lights bringing attention to a pedestrian crossing sign

There are also walking trails in William O'Brien State Park and some other locations within the City.

In general, non-motorized travel in most of Marine is not problematic due to low traffic volumes and slow speeds, as well as sidewalk and trail segments that do exist. Crossing Hwy 95 between residential areas to

the west and the Village Center area can be a challenge, but the flashing beacon system is in place as discussed previously. This type of instillation has been empirically demonstrated to improve driver yield compliance. A pedestrian overpass or underpass at this location would likely be cost-prohibitive.

While there are pedestrian accommodations in the Village Center area, they are in need of improvement. This was one of the primary reasons that the City applied for Local Road Improvement Program (LRIP) funding from the Minnesota Department of Transportation for Village Center improvements. Currently, the sidewalks in the Village Centre area are narrow (under four feet in areas), in poor condition, and are not compliant with requirements associated with the Americans with Disabilities Act (ADA). There are also no pavement crosswalk markings. The proposed LRIP project would provide ADA-compliant facilities, widen pedestrian facilities where necessary, add marked crosswalks, and add curb and gutter throughout, separating pedestrians from parked cars and keeping water off the sidewalk surface. The project would also close street access to Hwy 95 at Parker Street and close Judd Street between Oak Street and Linden Street, thus improving overall safety conditions for the Village Centre area. If the City is not successful in securing LRIP funding, it will pursue other options to implement these improvements.

Washington County has identified a planned Glacial Hills Regional Trail corridor along CSAH 4. This trail would connect the Hardwood Creek Regional Trail in Hugo with the County trail along Hwy 95 in Marine. No master plan has been prepared for this future trail. The City of Marine on St. Croix supports the development of this regional trail.

The City also supports the potential development of the state Gateway State Trail through Marine. The Gateway Trail currently extends from the City of St. Paul northeast through the cities of Maplewood, North St. Paul, and Oakdale, and ends at Pine Point Regional Park in Stillwater Township. Ultimate plans are for the trail to extend to William O'Brian State Park and further north to Interstate State Park. As depicted in Washington County's 2030 Parks and Open Spaces Policy Guide, the search area for the future extension alignment fully encompasses the City of Marine on St. Croix.

Metropolitan Council has designated the Regional Bicycle Transportation Network (RBTN). This consists of prioritized alignments and corridors (where alignments have not yet been established) that were adopted in the Council's 2040 Transportation Policy Plan. There are no RBTN alignments or corridors within or close to Marine.

G. Freight

One railroad passes through the western portion of Marine on generally a north-south alignment. This is a Canadian National Railway line, and approximately two trains per week utilize the railroad tracks, based on MnDOT information. It has an at-grade crossing at Broadway Street approximately 1,000 feet west of Ostrum Trail, and a grade-separated crossing at Ostrum Trail (County State Aid Highway 4) further to the north. There are no manufacturing or distribution centers in Marine. Freight movement is not a major factor for the City. Existing HCAADT information is depicted in Figure 6-1.

H. Aviation

There are no aviation facilities or navigational aids located in Marine. The City is not in an influence area of a regional airport. The closest public-use airport to Marine is located seven miles to the north-northwest in Osceola, Wisconsin.

There are no structures within Marine that exceed 500 feet in height. Any applicant who proposes to construct a structure 200 feet above the ground that could affect navigable airspace level must get appropriate approvals. The Federal Aviation Administration and the Minnesota Department of Transportation must be notified at least 30 days in advance of construction, as required by law per MCAR 8800.1200, Subpart 3 and FAA Form 7460-8. It is unlikely such a structure would be proposed in Marine.

I. Upcoming Trends and Technology

The City of Marine on St. Croix recognizes that a number of emerging trends in transportation technology are forthcoming and may have implications on future planning and development. Some of these emerging trends include autonomous vehicles (AV's), Mobility-as-a-service (MaaS), logistics, and other communication and information technologies. As these trends and technology become accessible to the public, the City of Marine on St. Croix will strive to adapt to the shift in technology and develop smooth transitions.

Autonomous vehicles or AV's, which operate with little or no human action, have entered the market place as prototypes by some automakers. Some of the components of AV's include autopilot, automatic parallel parking and other features. Research suggest that by 2040 autonomous vehicles will be the primary personal transportation mode. Furthermore, the shift towards AV's on roadways over nonautonomus vehicles will have direct impact on transportation-related fatalities, road design priorities, speed limit increases, and increased travel distances for work and play. The City of Marine on St. Croix will consider ordinances and regulations to allow AV's to operate efficiently. Examples of changes include parking spaces in the Village Center, dedicated parking and travel lanes on city streets, speed limit changes for AV's on arterials, and promotion of telecommute and increased distance from home and work.

Mobility-as-a-service or MaaS is a transportation trend already in progress through shared car services. Companies such as Uber and Lyft offer ride-sharing services and may reduce the need for personal car usage and ultimately car ownership. In addition, planning and designing for MaaS in urban settings will occur as is the practice for taxi's and transit options. The City of Marine on St. Croix will consider regulations and ordinances for MaaS, such as creating dedicated drop-off and pick-up lanes and parking and staging spaces for vehicles.

Upcoming trends and technology in logistics and communications such as e-shopping, telecommuting, and delivery methods will all have impacts on the transportation system. Increased volumes of freight vehicles may impact traffic volumes and capacity on existing city roadways. Therefore, considerations for freight planning and transportation in the City of Marine on St. Croix might dictate suggested freight vehicle routes and shared-lanes on arterials.

VII. WATER RESOURCES

A. Wastewater

1. Forecast Table

According to the Metropolitan Council population, household, and employment forecasts, the City of Marine on St. Croix may have the following wastewater demands, as detailed in Table 7-1. Wastewater management in Marine on St. Croix takes a variety of forms, detailed below. However, none of these systems feed into sub-regional or regional wastewater treatment facilities; therefore, all wastewater systems in the City are considered “unsewered” for larger, regional wastewater management purposes.

Table 7-1 – Population, Housing, & Employment Sewer Allocation Forecasts					
	Forecast Component	2010	2020	2030	2040
Population	Unsewered	689	740	840	940
Households	Unsewered	302	340	400	450
Employment	Unsewered	124	140	150	160

2. Existing System

The sanitary sewer system for Marine on St. Croix includes the following:

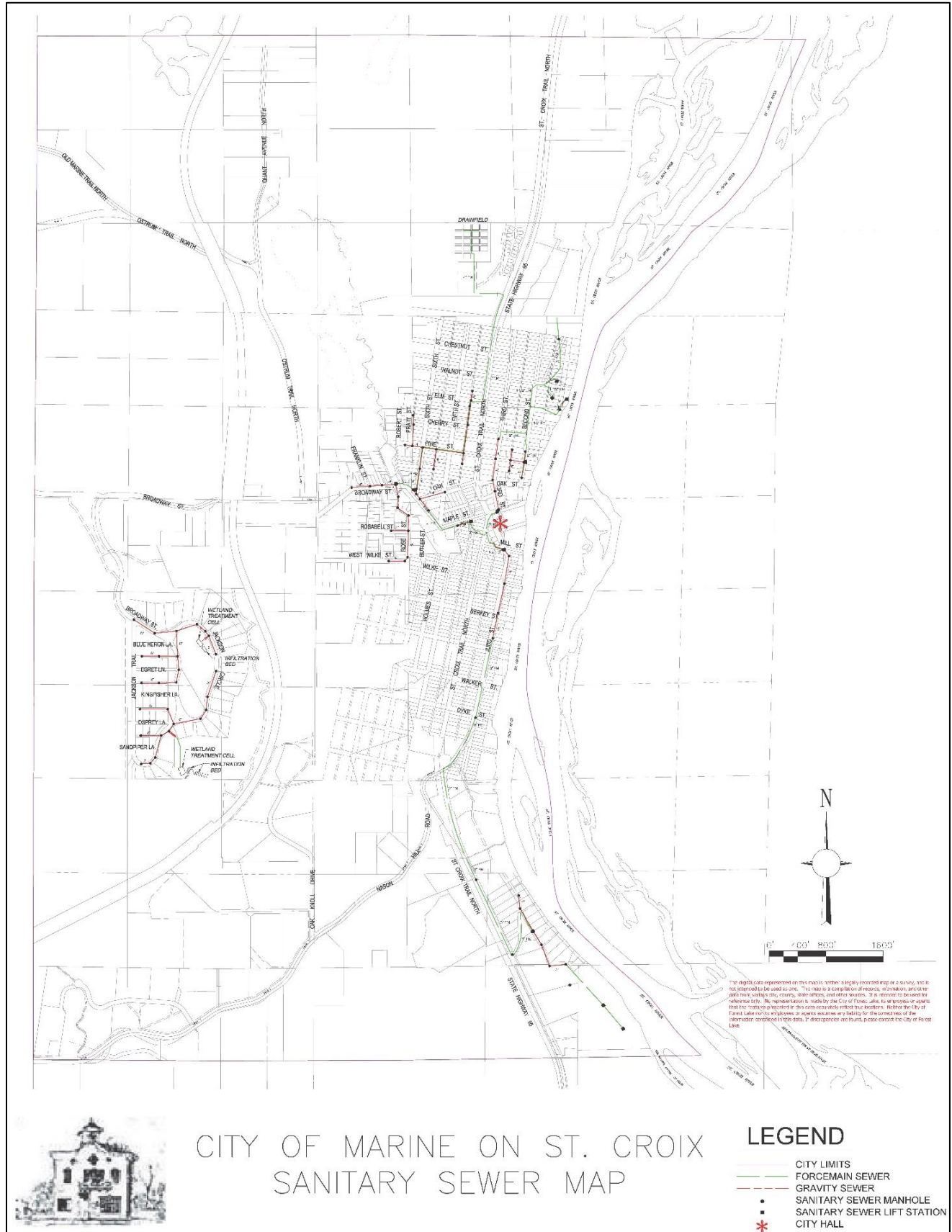
- The City owns and maintains a septic tank collector system whereby the effluent generated by each connected home and business is directed to a community drainfield. This community system serves about 142 properties. A system of pipes and pumps takes effluent from individual properties to the drainfield located north of the City. Solids remain in septic tanks located on each property. Many of the inspection pipes for the community drainfield are damaged and in need of repair. Additionally, the drainfield contains a number of concrete splitter box structures, most of which are deteriorating and in need of rehab or replacement.
- The system includes 7 lift stations, which convey wastewater to the community drainfield system.
- The City owns and maintains 13 individual sewage treatment facilities, including both drainfield and mound systems.
- There are approximately 60 private ISTS consisting of both drainfield and mound systems.

The Jackson Meadow neighborhood, located southwest of the town, has its own sanitary sewer system, including two lift stations and two community septic tank configurations. This system is not currently operated by the City, but an agreement is in place by which the City will take over its operation once the development has reached 80% of its full buildout capacity of 64 homes.

The Marine Stugas Townhome neighborhood, located north of the town on TH 95, has a community water system that is privately owned and maintained for ten twin townhomes, totaling twenty units.

The existing wastewater system is shown in Figure 7-1.

Figure 7-1 - Existing Wastewater System

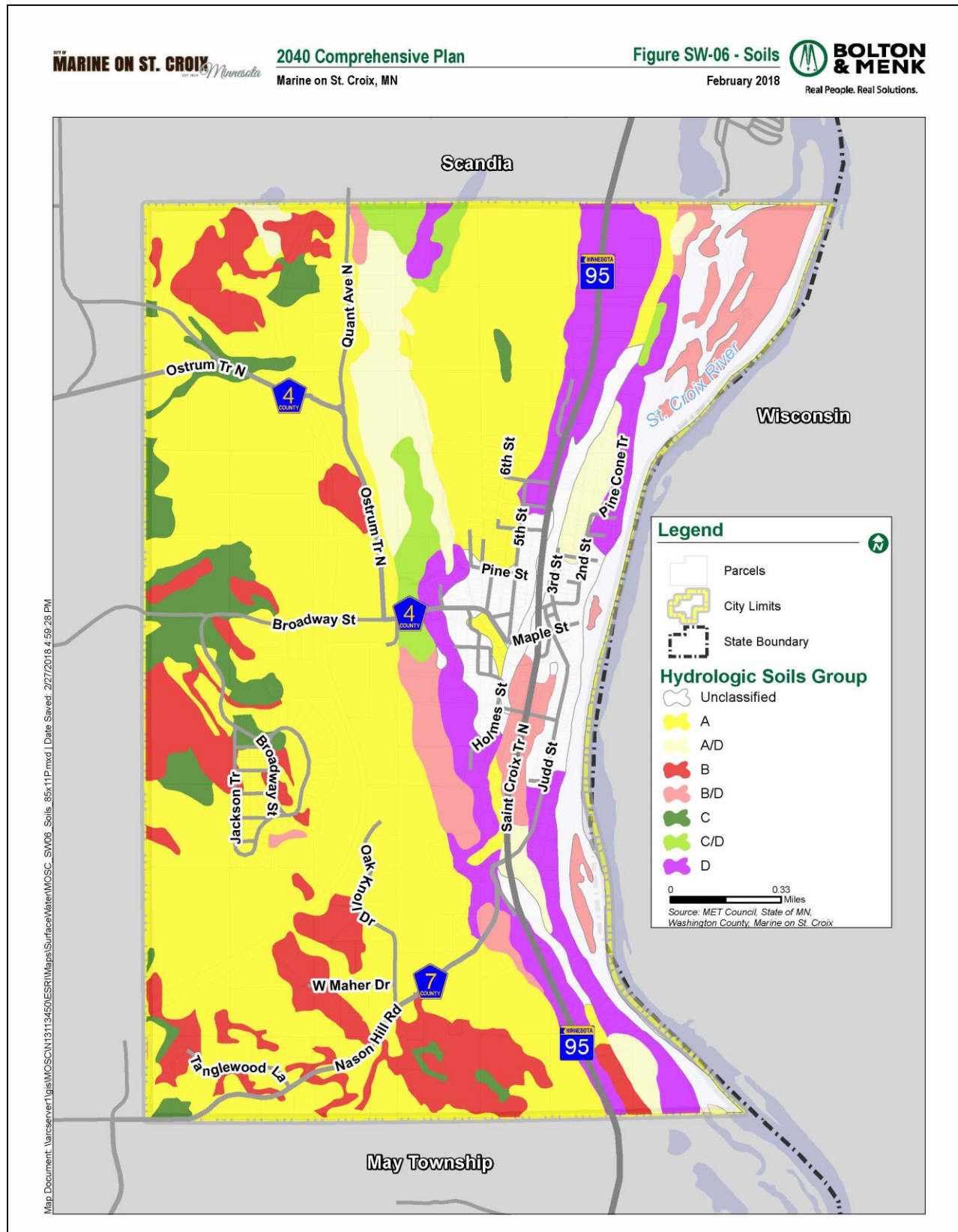


There are several large areas in Marine on St. Croix that have severe limitations for on-site septic systems:

- a. **Shallow Bedrock.** Bedrock near the surface is encountered along the St. Croix River and TH 95, as indicated on the Soils map (Figure 7-2). This creates severe limitations for private septic systems. Soil treatment systems that are placed too close to fractured bedrock do not treat sewage effluent well. Under these conditions, sewage may move through the rock and enter wells without receiving sufficient filtration to remove the chemical and bacteriological contamination.
- b. **High Water Table.** The depth of the water table is the elevation at which the soil profile is totally saturated. If a septic system is installed at this depth or deeper, no sewage effluent will be able to move into the ground since the soil is already saturated. The sewage will then either back up in the residence, seep to the surface, or contaminate the groundwater.
- c. **Steep Slopes.** Steep slopes are present throughout Marine, especially along the St. Croix River east of TH 95 and in the northwestern area of Marine. The Washington County ordinance prohibits the installation of septic systems on land in excess of a 13 percent slope. Steep slopes present difficulties in residential layout and construction as well as increased risks of erosion, lateral seepage, and the down slope flow of effluent.
- d. **Drainage Limitations.** Soils with slow percolation qualities such as clay are found in the far western side of Marine and in scattered areas in the southwest portions of the City. Slow percolation rates indicate soils that are too tight to adequately treat sewage effluent.

It should be noted that many existing housing units located in areas of high bedrock and water table, and most of these properties are connected to the existing municipal sewer system. Septic systems within Marine are required to be pumped and inspected on a two-year cycle or more frequently, if inspection history warrants.

Figure 7-2 - Soil Groups



3. Capacity

The community drainfield is likely near capacity, and no new hookups will be allowed to preserve the life of the drainfield. The exception to this policy will be in cases where aging ISTS systems fail, and there is no possibility of a new ISTS due to topography or soil restrictions. An expansion of the drainfield would require a significant capital outlay. The most logical expansion plan would be to add an additional four drainfield cells, adjacent to the 20 that are already there. Marine on St. Croix may investigate expansion, if funding can be identified. Even if this expansion is built, the entire drainfield system will likely require relocation and replacement at some point between 2030 and 2040, due to the surrounding soils reaching their capacity for organic solids loading.

The reliance on individual systems for future growth and development in the City will influence the feasibility of development, densities, and lot sizes. New development will need to provide for their own wastewater systems. This will be influenced and impacted by the topography and soil restrictions in the City. Densities will need to be low enough to safely accommodate septic systems or a new community drainfield.

4. Inflow and Infiltration (I/I)

The City has made several efforts to locate the sources of I/I, including the adoption of ordinances prohibiting the discharge of storm water, ground water, roof runoff, sump pumps, etc. to the sanitary sewer system. Current city ordinances require on-site water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems, and new or replacement on-site sewage treatment systems must be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and they shall not be subject to impairment or contamination during times of flooding. Any sewage treatment system designed in accordance with the State's current statewide standards for on-site sewage treatment systems shall be determined to be in compliance with City ordinances.

5. Community and Subsurface Treatment Systems

Where access to the Community Sewage treatment system is not available, the Building Sewer shall be connected to an Individual Sewage Treatment System complying with the rules and regulations of the City (Chapter 19 of City Code), with Minnesota Rules Chapters 7080-7083, and Chapter 7-14 of Washington County Ordinance #178. Cesspools, seepage pits, dry wells, and leaching pits shall not be installed and shall not remain in operation.

Installation of individual sewage treatment systems into low swampy areas, drainage swales, floodplains or other areas subject to recurrent flooding is prohibited. Notwithstanding the foregoing, individual sewage treatment systems in existence may continue in use if they are repaired and maintained in conformity with the requirements of existing City and County Ordinances, and maybe replaced if normal repairs and maintenance to the existing system would not reasonably be expected to permit such system to operate in conformity with the requirements of existing ordinances. Individual Sewage Treatments Systems shall not be located within utility or drainage easements nor within dedicated public or private rights-of-way without proper approvals. The City will consider alternative options as technology changes.

B. Surface Water

1. Local Water Management Plan

The City of Marine on St. Croix has prepared a Local Surface Water Management Plan (LSWMP) to serve as a comprehensive planning document and to guide the City in conserving, protecting, and managing its surface water resources. The LSWMP has been developed to meet the requirements of

Minnesota Statutes 103B and Minnesota Rules 8410, to be consistent with the goals and policies of the Metropolitan Council's Water Resources Management Policy Plan, and the goals and policies of the Carnelian Marine St. Croix Watershed District (CMSCWD). The plan and its amendments will be adopted by the City as an element of this Comprehensive Plan. In a three-part process, the LSWMP supports the following:

- Collect and compile the efforts of agencies and organizations including various departments of the City of Marine on St. Croix. This includes past reports and studies, management plans, monitoring studies, as well as completed and proposed improvement projects.
- Review the current state of the City's surface water resources in the context of goals and policies, ordinances, operations and maintenance, flood mitigation, and achievement of targeted water quality levels in its surface waterbodies.
- Establish reasonable, achievable and affordable goals, and support them by a strong regulatory and management culture. Develop an implementation plan that includes projects and processes that derive from a thorough assessment of current City problem areas and current City stormwater regulations and controls.

City staff has participated in collecting data, providing feedback, and contributing knowledge of local systems to aid in developing a strategy that encompasses water quality and quantity issues. The City of Marine on St. Croix is the organizer of the final document, which includes contributions from the following agencies and watershed organizations:

- Metropolitan Council
- Carnelian-Marine St. Croix Watershed District
- Washington County

Currently, the City defers the administration and establishment of stormwater management rules and standards to the watershed district. It is not the intent of the City to pursue gaining local regulatory authority at this time. However, the City reserves the right to gain local regulatory control and assume permitting authority at a future date.

Any changes to the plan will be discussed and adopted by the City Council as an amendment to the plan at a regularly scheduled Council meeting. A comprehensive review of the plan will occur every five years to ensure the plan continues to meet the Metropolitan Council's objective of achieving cost-effective management of the region's water quality and quantity.

Marine on St. Croix has a floodplain ordinance and a state-approved shoreline ordinance. The City has also adopted the Lower St. Croix Bluffland and Shoreland Management Ordinance. Support for lakes and rivers was identified as one of the top three priorities for the future among community survey respondents, showing local support for the City's many surface water resources.

2. Watershed District

Marine on St. Croix is located in the Carnelian Marine St. Croix Watershed District (CMSCWD). The CMSCWD is operated under the authority of Minnesota Statutes Chapter 103B and Chapter 103D to protect and improve the water resources, natural habitat, and personal property within its boundaries; to educate property owners and the community on the value of water resources; and to promote progressive public relationships and interagency consistency.

The Carnelian Marine-St. Croix Watershed District's (CMSCWD) most recent watershed management plan was adopted in 2015. The plan's goals and policies are based on the outcome of a strategic planning effort that identified a need to prioritize the District's activities and expenditures to protect and improve the water resources of the District, and to focus on protecting the District's high-quality resources.

The plan includes a Focused Watershed Management process that is based on three levels of activity:

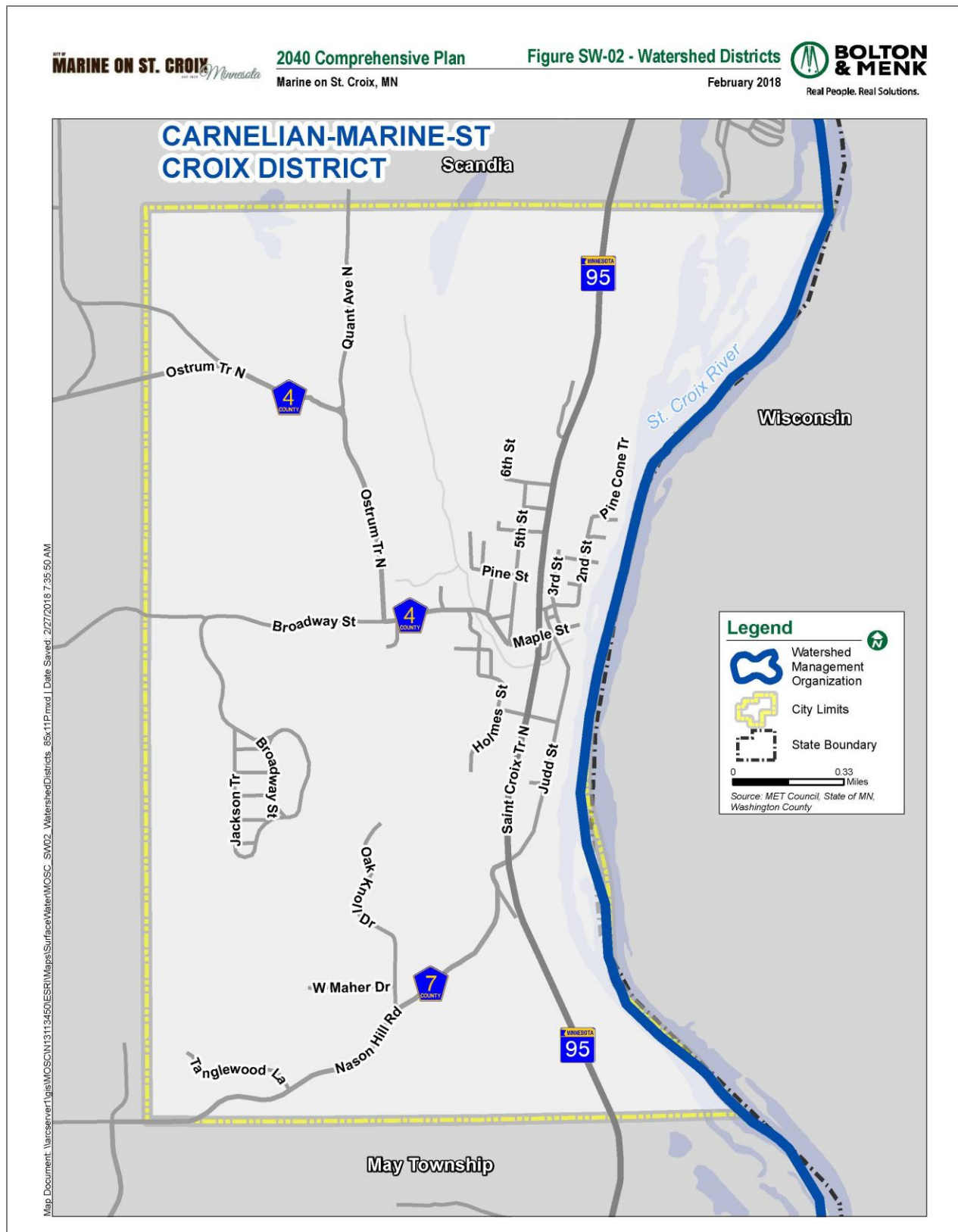
- *Routine Watershed Management* for the non-impaired water resources of the District—these are the basic, day-to-day programs that are implemented throughout the District.
- *Impaired Watershed Management* for water resources that are classified as impaired waters—includes completion of TMDL studies for impaired waters and implementation of the recommendations from these studies
- *Focused Watershed Management* for non-impaired waters—includes efforts to protect non-impaired waters so that they do not become impaired, by enhancing routine management activities on identified water bodies.

CMSCWD completed a district-wide Wetland Management Plan in July 2010. An electronic version of the plan can be found on the District's website. The plan includes a wetland function and value assessment, wetland management goals, management standards, buffer standards, and identification of Wetland Preservation Areas within the District.

Based on the functions and values assessment, the plan includes a wetland classification system with four categories. The categories include:

- High Quality/Highest Priority
- Stream Corridor and Shoreland Wetlands
- Isolated Wetlands
- Utilized Wetlands

Figure 7-3 - Stormwater Drainage Area



3. Physical Environment and Land Use

Marine on St. Croix is characterized by steep terrain, river terraces, and well-defined watercourses. The drainage density is medium, an indication of the permeable nature of the soils and the moderate to steep relief of the terrain. The following water ways and resources help define the City's landscape.

St. Croix River: The St. Croix River is the eastern boundary of Marine on St. Croix. The Lower St. Croix River, which includes the portion flowing by the City, was designated as a National Wild & Scenic Riverway by Congress in 1972. The river is a significant natural and recreational resource to the City.

The St. Croix River is currently classified by the State of Minnesota as an Outstanding Resource Value Water for its water quality, wildness and other benefits. By state statute, new or expanded discharges (changes in volume, quality, location or any other manner) to the St. Croix River must be controlled so as to prevent deterioration in the quality of the St. Croix River (MN Statute 7050.0180 Subp. 9).

Streams and Natural Springs: Marine on St. Croix has four major streams identified in the CMSCWD Plan: Dunn's Creek, Judd Street Creek, Mill Stream, and Marine Landing Creek. All four streams have a good and very good overall water quality "grade" as determined by the District per the 2010 Plan. However, monitoring of Dunn's Creek has indicated some water quality impacts, which may require further monitoring or mitigation actions, conducted in partnership with CMSCWD. Marine is proud of the condition of our streams and strives to maintain and possibly improve their conditions.

Mill Stream, which runs through the center of the City, is also a trout stream. The perennial portion of the Mill Stream begins in a large, groundwater-dependent wetland complex north of the City in William O'Brien State Park and flows about 1.5 miles where the stream enters the City. The 'Nine Springs' wetland complex and natural springs also feed into Mill Stream, which is a tributary of the Lower St. Croix. Silting does exist in the Mill Stream, and dredging may need to occur in the future to ensure the quality of water and habitat.

The City also has many small, unnamed springs and seeps that flows into the St. Croix River. These smaller water bodies were the subject of a comprehensive study entitled St. Croix Spring Creek Stewardship Plan (Emmons and Olivier Resources, Inc. 2003). A wetland area identified as 'Nine Springs' was significantly restored by the Minnesota DNR, which includes some of the natural springs located within the City.

Wetlands: A large portion of the City has been identified as wetlands complex. In the 'lower' City, wetlands can be found in the area between Highway 95 and Judd Street, south of the Village Center. More wetlands are sited in the area west of the St. Croix River and north of the Village Center along Second Street. There are additional wetland areas on top of the bluff, including the 'Nine Springs' restoration area as well as the area south of 'Nine Springs' and across County Road 4.

Groundwater: The Washington County Groundwater Plan was adopted in September 2014, which is in effect at the time of adoption of the City of Marine on St. Croix LSWMP. The goal of the Washington County Groundwater Plan (Plan) 2014-2024 is to:

"Manage the quality and quantity of groundwater in Washington County to protect health and ensure sufficient supplies of clean water to support human uses and natural ecosystems."

The Plan describes a need for increased coordination and collaboration amongst water management agencies, additional groundwater research, and understanding needs of competing interests for County groundwater. Marine on St. Croix has incorporated by reference the Washington County Groundwater Plan 2014-2024 and includes relevant implementation actions from the County Ground Water Work Plan into the forthcoming Comprehensive Plan update. The City of Marine will follow the groundwater protection framework identified in the County's plan.

Land Use: Most land use in the City is either open space or low density residential, with the Village Center serving some commercial and institutional uses. These land uses are anticipated to define Marine on St. Croix to 2040 and beyond, given its rural character and modest projected population growth.

4. Existing and Potential Water Resource Related Problems

As part of the federal Clean Water Act, the State of Minnesota is required to adopt water quality standards to protect lakes, streams, and wetlands from pollution. These standards identify how much bacteria, nutrients and other pollutants can be present and still have the water body meet its designated uses such as fishing and swimming. If a water body does not meet one or more of these standards, it is identified as “impaired”. The Minnesota Pollution Control Agency (MPCA) administers this program in which the State of Minnesota is required to identify and restore impaired waters. To meet this requirement, the MPCA has developed a three-step program in which:

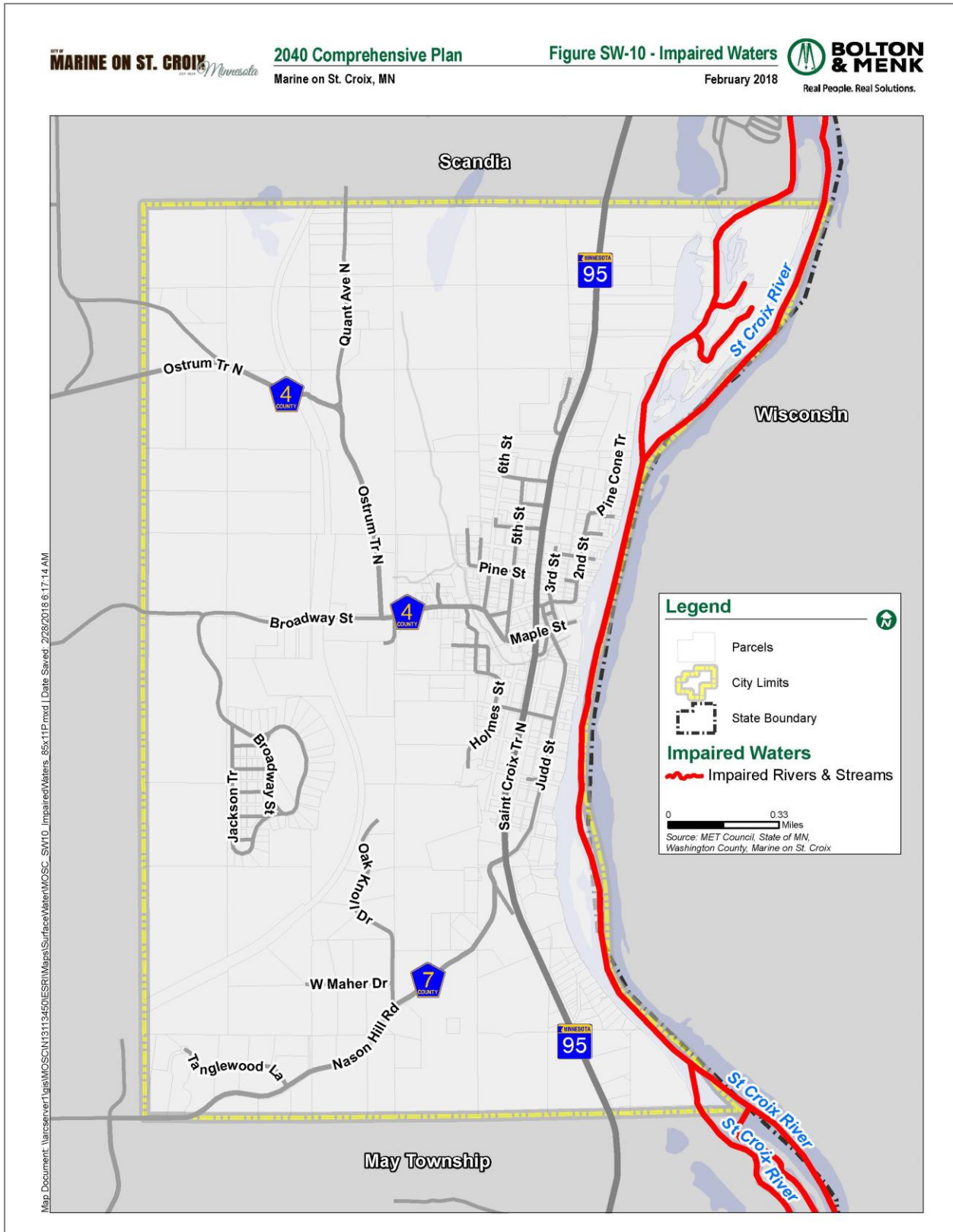
- Assesses all waters of the state to determine if they meet water quality
- Lists all waters that do not meet standards
- Conducts studies to establish pollution reduction measures to restore the water bodies.

Once these steps are completed, each water body will have a pollutant reduction goal defined as a TMDL, or Total Maximum Daily Load, which represents the maximum amount of a pollutant a water body can receive and still meet water quality standards.

In Marine on St. Croix, the St. Croix River is impaired for Mercury and Polychlorinated Biphenyls in fish tissue (Hg-F and PCB-F) from Taylors Falls to the confluence of the Apple River in Wisconsin. There currently is not an approved TMDL for either of these impairments. Also, Lake St. Croix is impaired for excess nutrients between Stillwater, MN and Prescott, WI. A TMDL will be jointly prepared by the Minnesota Pollution Control Agency and the Wisconsin Department of Natural Resources. Key management recommendations to protect and improve the quality of St. Croix River waters from the CMSCWD include:

- Protect the groundwater-dependent natural resources of the St. Croix Basin.
- Manage groundwater within the framework of the three Groundwater Management Zones as defined in the Washington County Groundwater Study.
- Maintain groundwater recharge to groundwater-dependent natural resources.
- Maintain stormwater volume and peak flow rates at predevelopment levels.
- Limit sediment and nutrient loads to spring creeks and the St. Croix River.
- Avoid outletting landlocked basins to spring creeks.

Figure 7-4 - Impaired Waters



5. Local Implementation Plan/Program

The City of Marine on St. Croix is responsible for wetland management within its boundaries. The City has a responsibility to maintain the public health and safety of all its citizens, which includes surface water management. As a member of the CMSCWD, the City will see synergistic benefits when its citizens' share of the watershed budget is combined with other members of the district. The CMSCWD will develop and support watershed projects which will benefit the entire watershed district. The City will work cooperatively with the watershed district to avoid duplication of effort and to simplify any processes a land owner will need to follow in his or her attempt to use best practices with regard to surface water issues on private land. Implementation costs and technical assistance associated with key recommendations and CMSCWD CIP projects will be primarily provided by the CMSCWD in partnership with the City of Marine on St. Croix.

The Marine on St. Croix Local Surface Water Management Plan policies incorporates by reference the following:

- Carnelian Marine Watershed District 2015 Watershed Management Plan, including the Wetland Management Plan, the Northern Washington County Spring Creek Study, and the District Rules.
- The *Washington County Groundwater Plan*, adopted 2014. Participate with the CMSCWD in imminent update of the ten-year County Groundwater Plan process.
- Implementation of CSMCWD Rules in the St. Croix Urban Residential, Single Family Urban and the Village Center zoning districts through a Memorandum of Understanding between the CMSCWD and the City of Marine on St. Croix for Local Water Planning and Regulation.
- Amend local ordinances within six months to ensure local official controls are consistent with District standards and Rules.

The City supports priorities identified in the implementation section of the CMSCWD Plan, specifically under Capital Improvement Projects item B, Neighborhood Wide Small Lot Stormwater Management Incentive Program, and Non-Structural Projects and Studies item Highway 95 Wetlands in Marine Management Plan. The City supports priorities identified in the implementation section of the CMSCWD Plan as well as the following relevant capital improvement projects:

- The City of Marine on St. Croix has identified areas within the adopted District Rules that are problematic in implantation and inconsistent with the existing urban residential areas of our City. However, re-examining the policies derived from a) the Natural Environment Goal 2 of the city's 2008 Comprehensive Plan (above), b) the CMSWD Plan's recommendations for the four major streams in the City (as follows), and c) noting that the historical development of the City placed the greatest density of impervious surfaces adjacent to these streams, it is apparent that runoff from these impervious surfaces into the streams is and has been a factor in maintaining water quality of the streams and ultimately the St. Croix River. Problems and inconsistencies for these urban areas therefore are less in the stated policies and more in defining implementation steps, especially in coordination with the more recent CMSCWD plan.
- The Mill Stream Remeander project will identify stream reconstruction in areas of Marine on St. Croix and William O'Brien State Park to reduce sediment and increase trout habitat.
- CMSCWD has identified key management recommendations for Dunn's Creek including development controls, generous buffers along the bluff line in key groundwater discharge areas and specific sensitivities to nitrate and chloride levels.
- Rain gardens will be encouraged with associated residential projects in the Marine Landing Creek area. Also, CMSCWD will establish stormwater demonstration projects for public education.
- The City and CMSCWD intend to develop a Wetland Management Plan surrounding Hwy 95.

- Marine on St. Croix Village Center Stormwater Water quality projects associated with storm water management in conjunction with street and public space redesign.
 - This project is currently underway through a partnership between the City, the Carnelian Marine St. Croix Watershed District and the Board of Water and Soil Resources (BWSR). The project involves constructing rain gardens on small lots throughout the City based on property owner interest. Additionally, the project plan includes two large biofiltration or iron-enhanced sand filters on City owned property. Roughly 80% of funding for this investment will be provided by using Minnesota Land and Legacy dollars. This project is funded through 2018.

Table 7-2 - Marine on St. Croix Water Resources CIP		
Project	Improvement Cost Estimate	
	Low	High
Dredging of Upper & Lower Mill Ponds	\$35,000	\$100,000
Village Center Stormwater Improvements	\$50,000	\$250,000
Improve stormwater collection and pre-treatment of City streets, as part of on-going street improvement projects	\$10,000	\$35,000
Residential Rain Garden Implementation, Phase 2	\$200,000	\$250,000
Request help from CMSCWD to define scope of study on runoff sources and volumes within the City, identify partners, kickoff meeting to design and begin study, put in City budget.	TBD	
Highway 95 Runoff Collection Improvements	TBD	
Dunn's Creek Improvements	TBD	
Judd Creek Improvements	TBD	
Mill Stream Improvements	TBD	
Marine Landing Creek Improvements	TBD	
Total	\$295,000	\$635,000

C. Water Supply

1. Local Water Supply Plan

Each property within Marine on St. Croix is serviced by individual private wells. Due to the reliance on individual well sites, the City has established standards for well design and location within its Subdivision Ordinance. City ordinances require that an individual well produce at least ten gallons per minute, have a well casing at least four inches in diameter, and be grouted to provide a safe, potable water supply. The City will continue its enforcement of these regulations as a means of protecting the City's water resources.

The Jackson Meadow neighborhood has a community water system with a full build-out capacity of 64 houses and currently serves 39 homes. This water system is managed by the City. Because the system is not considered by the DNR to be a municipal water supply system, a water supply plan is not required for this system. Jackson Meadow owns two wells for its water supply, only one of which is regularly operated. A wellhead protection plan for these is in place with the Minnesota Department of Health (MDH).

2. Assessing and Protecting the Water Source

Marine on St. Croix is part of the DNR's North and East Metro Groundwater Management Area, shown in Figure 7-5. There are no DNR observation wells or aquifer test sites located in Marine on St. Croix. The City will work with the DNR, Department of Health, and Washington County as necessary to ensure groundwater is protected. The City will also take special consideration for wetlands that receive and discharge groundwater or recharge aquifers to prevent potential contamination of groundwater drinking sources, shown in Figure 7-6.

Sub-Regional Collaboration

The Washington County Groundwater Plan provides a county-wide framework for the protection and conservation of groundwater resources. The current plan was approved in 2014 and guides the protection of groundwater resources in the county until 2024.

The overall goal of the Washington County Groundwater Plan is to protect the economic and environmental values groundwater provides through coordinated, intergovernmental efforts in research and assessment, policies, political influence, regulation, education, and consultation, and technical assistance. The plan has six main goals:

- Concisely outline the physical nature of groundwater resources, discuss the issues that threaten groundwater, and provide direction and strategies on how to protect groundwater for future generations
- Provide context and organization for stakeholders and residents to better understand the complex water governance structure
- Serve as a framework to develop annual work plans for the county and its stakeholders that give specific implementation actions to address the groundwater issues in this plan
- Compliment and coordinate with other state, regional, county, and local planning efforts
- Guide collaboration on groundwater initiatives with state, regional, and local partners more efficiently and effectively
- Be a resource for stakeholders and residents regarding groundwater information pertinent to the county.

Figure 7-5 - Water Supply Interconnections and Management Area

**Municipal Public Water Supply System Interconnections and Management Areas
City of Marine on St. Croix, Washington County**

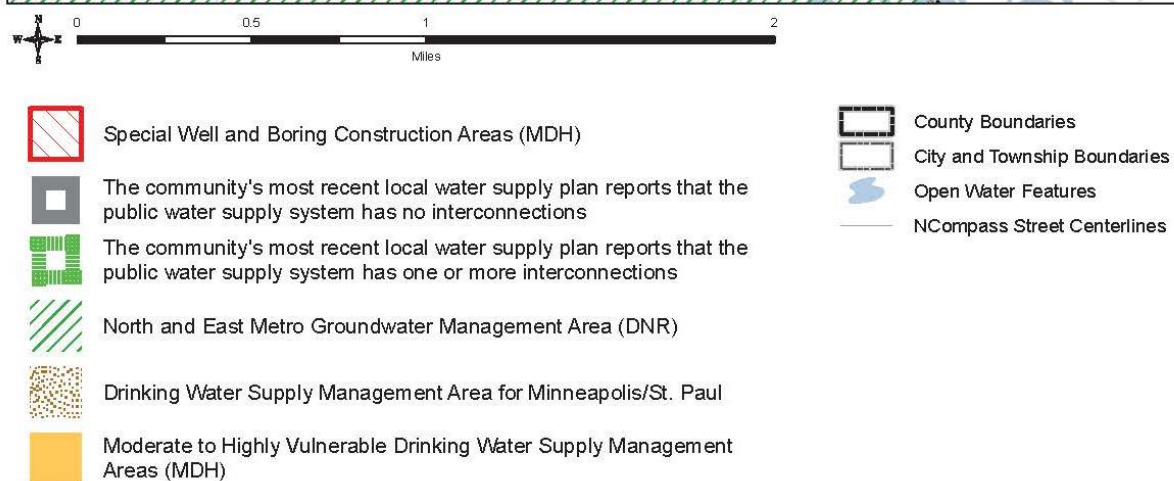
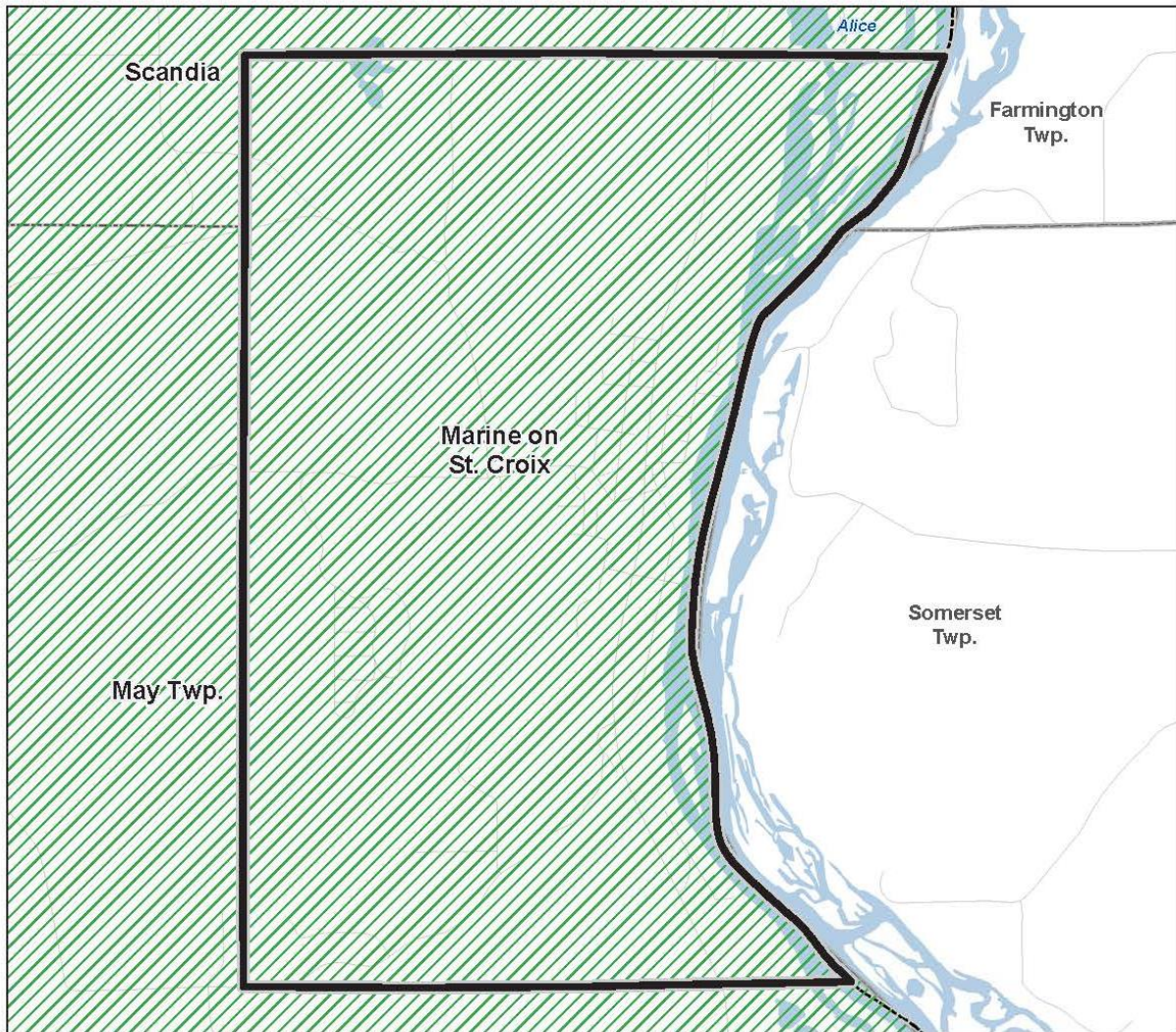
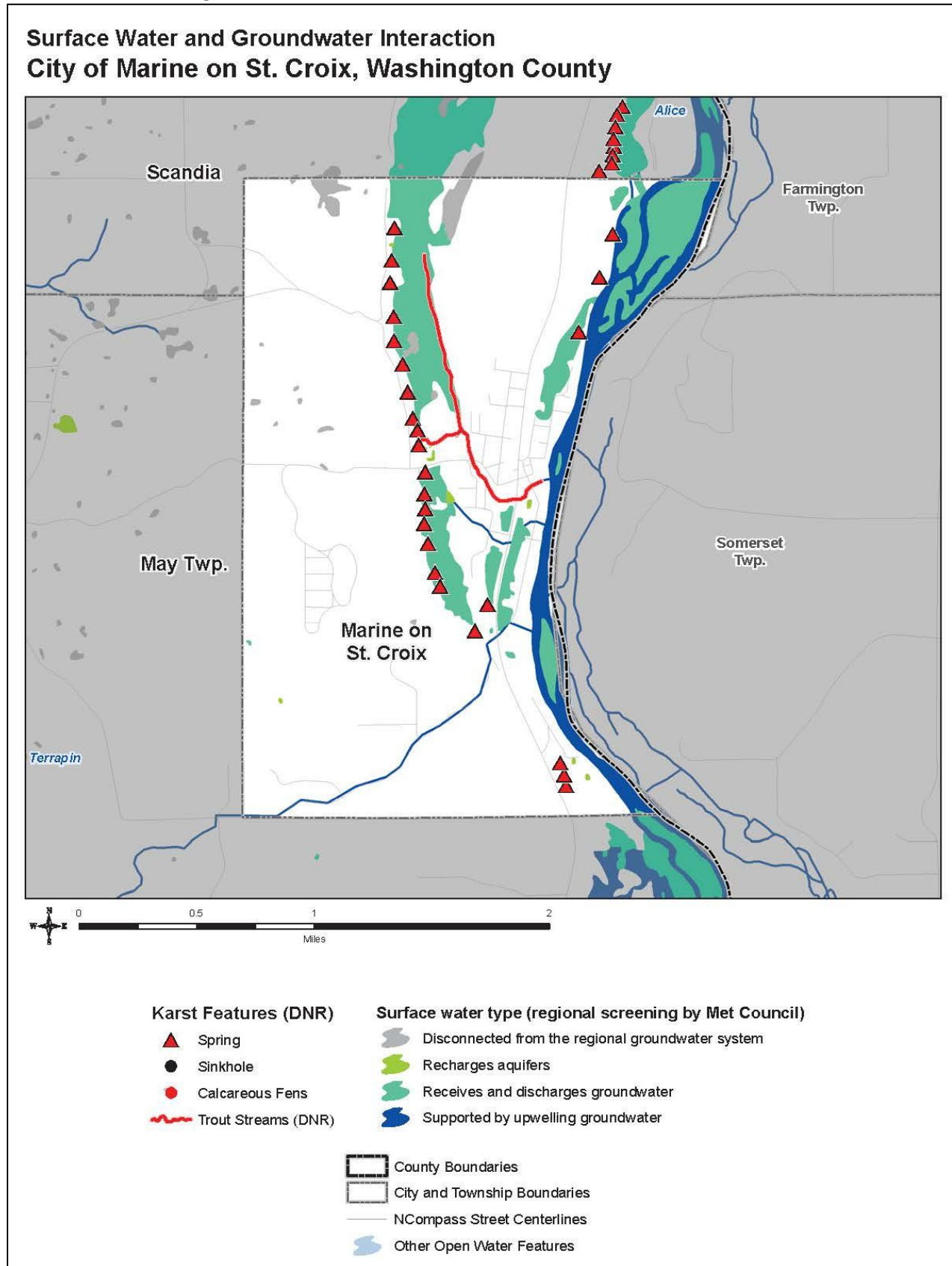


Figure 7-6 - Surface Water and Ground Water Interconnections



VIII. IMPLEMENTATION

The Comprehensive plan creates a vision for the City of Marine on St. Croix and guides land use and infrastructure improvements so that the City can meet the needs of the community in the future. The vision of the plan can only be realized if the plan is used. Tools to implement the plan will vary in that some will be reactive, such as zoning and subdivision ordinances that guide private developments, and others will be proactive, such as the City's Capital Improvement Program (CIP) for undertaking public improvement projects.

A. Official Controls

To achieve the goals and objectives of this Comprehensive Plan, Marine on St. Croix has adopted a City Code to establish regulations for zoning, subdivision of land, and shoreland and floodplain areas.

Zoning

City zoning codes regulate land use to promote the health, safety, order, convenience, and general welfare of all citizens. They regulate location, size, use and height of buildings, the arrangement of buildings on lots, and the density of population within the City. The City's zoning districts effectively guide development in the City.

Marine on St. Croix is divided into five zoning districts, detailed below and shown in Figure 8-1. There are also two overlay districts established by the City outside of shoreland and floodplain overlays. The zoning ordinance specifies the permitted and allowed accessory uses in each district as well as procedures for permitting conditional uses or obtaining variances in special situations. The zoning ordinance contains performance standards and lot dimensional standards to assure compatible land uses in the community.

- Single Family Rural: The purpose of this district is to encourage rural residential development to be clustered in a pattern which satisfies the following planning objectives:
 - Preservation of contiguous common open spaces for scenic enjoyment, recreational use, and rural identity.
 - Creation of cohesive neighborhoods to establish local identity and community interaction.
 - Physical integration of neighborhoods, open spaces, and places of destination to establish municipal identity and community interaction.
 - To implement the Comprehensive Plan objectives and policies with regard to rural area residential development, natural resource, preservation, and public service delivery.

Permitted uses include single family, detached residences and agriculture. The maximum permitted density is one lot per five acres. The ordinance details neighborhood and open space performance standards to help achieve the above objectives.

- Single Family Urban: The purpose of this district is to allow continued urban residential development and to fill in older, platted areas of the city at densities that will minimize demands for urban services. Permitted uses include single family, detached residences, churches, and schools. The maximum permitted density in the district is 1.5 units per acre.
- Neighborhood Service Overlay District: This district is created for the purpose of preserving congruent and compatible uses in the Single Family Urban District and for the following additional purposes:
 - to provide that land and buildings which have been historically integrated in and providing service directly to the residents of the adjoining neighborhood continue to be put to compatible uses
 - to avoid disruption to longstanding development patterns and neighborhood uses.

- St. Croix Rural Residential: The purpose of this district is to set forth standards for rural residential development consistent with the purpose and intent of the Lower St. Croix River Overlay District. Permitted uses include agriculture, single family residential, and conservancy. This district is also subject to shoreland visibility requirements. The maximum permitted density is 0.4 units per acre (1 unit per 2.5 acres)
- St. Croix Urban Residential: The purpose of the district is to set forth standards for urban residential development within the Lower St. Croix River Overlay District. Permitted uses include agriculture, single family residential, and conservancy. This district is also subject to shoreland visibility requirements. The maximum permitted density is one unit per acre.
- Village Center District/Central Business District: The purpose of the district is to provide a commercial center for the City and to:
 - Maintain commercial activities as the primary role of the Village Center District.
 - Have the Village Center serve as the social, cultural and commercial center of the City.
 - Promote the Village Center area as the historic center of the City.
 - Allow non-street level residential uses as a supporting use to commercial activities, so long as such uses do not interfere with the commercial uses allowed in the zoning district.

Permitted uses include municipal government buildings, office businesses, restaurants, retail businesses, services, and clubs/lodges.

- Lower St. Croix Overlay District: This overlay district is created for the purpose of protecting the natural resources and natural scenic values of land within the boundaries of the Lower St. Croix Riverway and for the following additional purposes:
 - Designating suitable land use districts: along the bluffland and shoreland of the Lower St. Croix River.
 - Regulating lot sizes, and the length of bluffland and water frontage suitable for building sites.
 - Regulating the setback of structures and sanitary waste treatment facilities from bluff lines to protect the existing and/or natural scenic values, vegetation, soils, water, and bedrock from disruption by man-made structures or facilities.
 - Regulating the setback of structures and sanitary waste treatment facilities from shorelines to protect the natural scenic value, floodplain, and water quality.
 - Regulating alterations of the natural vegetation and topography.
 - Conserving and protecting the natural scenic values and resources of the river valley and maintaining a high standard of environmental quality to comply with Minnesota Department of Natural Resources Standards and Criteria for the Lower St. Croix National Scenic Riverway (9NR 220-2202).
 - Preserving the historic character, values, and significance represented in the City of Marine on St. Croix.

The St. Croix Rural Residential District, the St. Croix Urban Residential District, and the Village Center District are all subject to this overlay district.

- Limited Industry: This District is intended to provide for compact, limited industries and industrial uses that may suitably be located in areas of relatively close proximity to non-industrial development. As such, industries that pose problems of air pollution, noise, vibration, etc. are restricted from this district. All limited industrial uses must be supported with on-site individual or communal sewer treatment systems and private wells.

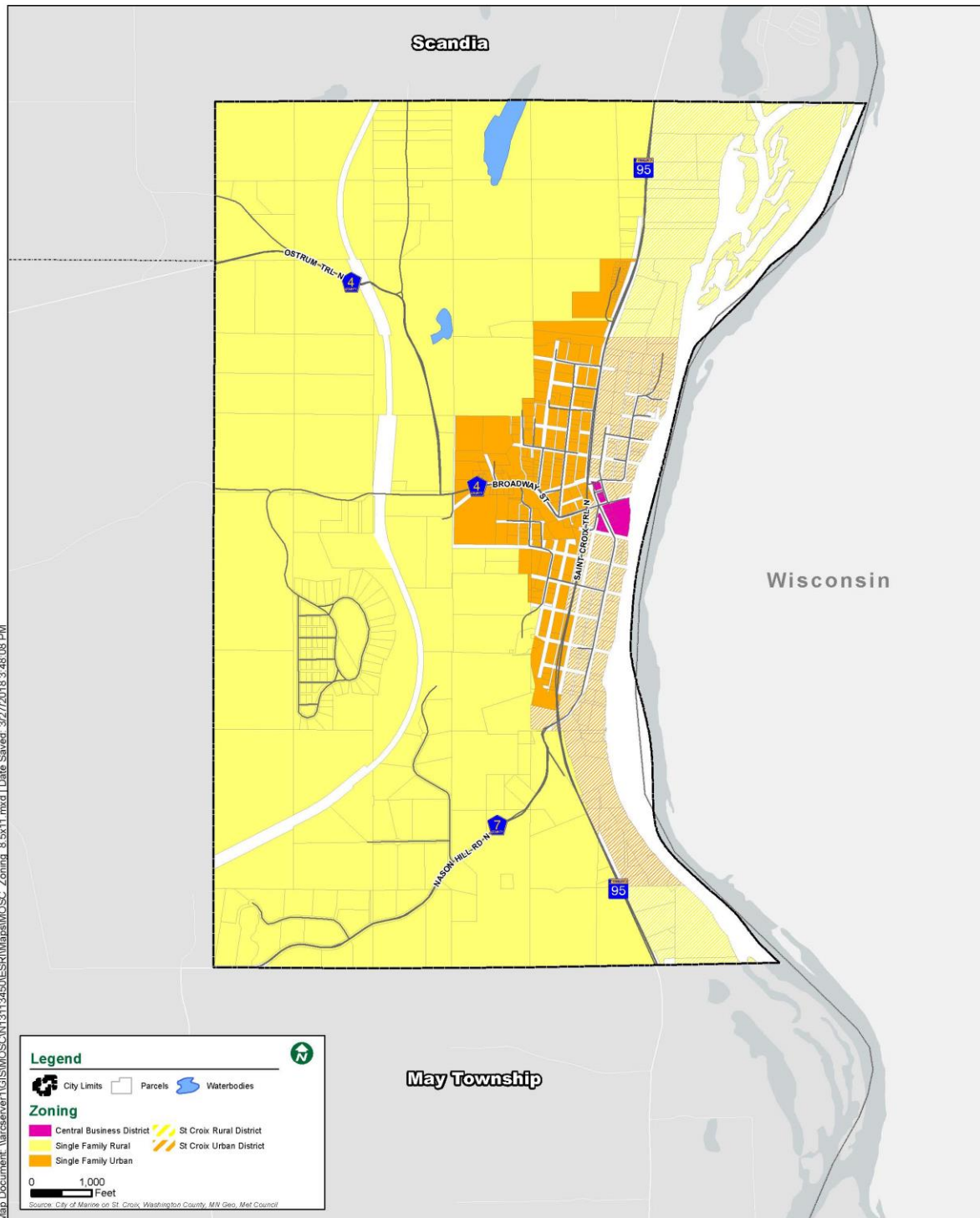
Permitted uses include auto repair garages, building material sales, utility buildings, and warehouses.

Zoning Ordinance Updates

The zoning ordinance should be in compliance with the comprehensive plan. Any change in the community vision as a result of comprehensive plan updates should also be incorporated into the zoning ordinance. To ensure compliance with this 2040 Comprehensive Plan, the following zoning ordinance changes will need to be implemented:

- Update zoning map based on future land use plan
- Reconcile inconsistencies between current zoning ordinance and intended future land uses

Figure 8-1 - Zoning Map



Subdivision of Land

The Subdivision Ordinance regulates the subdivision and platting of land within the City providing for the orderly, economic, and safe development of land and facilitating the adequate provision for transportation, water, sewage, storm drainage, electric utilities, streets, parks, other public services and facilities essential to any development. City controls to regulate subdivision of land include an application process, legal notice and public hearings by the Planning Commission, and approval by the City Council. The process includes imposing applicable fees, a development agreement prescribing the standards for the development and imposing penalties for the violation of its provisions. The subdivision of land promotes the public health, safety, and general welfare of the people and helps achieve the vision of this comprehensive plan by providing for standards in the development of land.

B. CIP

Capital improvement projects are major projects that benefit the City, including the construction or reconstruction of roads and sidewalks, sewer and water utilities, trails, and park and recreation facilities, as well the purchase of new or replacement equipment and buildings. A capital improvements program (CIP) is a budgeting plan which lists future years of needed capital improvements, their order of priority, and the means of financing.

The Marine on St. Croix CIP lists a wide variety of projects totaling more than \$4 million over the next 25 years. These projects are intended to meet the City's goals. The CIP is reviewed and updated annually by the City Council, to ensure the proper priorities and funding. The 25-year CIP is included in Appendix E. Table 8-1 details the City's five-year CIP.

Table 8-1 - Five Year Street Capital Improvement Plan	
Year	Street Project
2019	-
2020	** Judd -Maple - 3rd - Linden (Village Phase 1)
2021	-
2022	Elm-Cherry-Pine-3rd + Repeat 2016 Seal
2023	5 th -Chestnut-Oak-Robert-Pratt-Pine-6th
2024	-
TOTAL	

** Dependent on LRIP funding; otherwise, project will be postponed until other funding secured

C. Updating the Comprehensive Plan

To keep the Comprehensive Plan current, it may be necessary to make amendments from time to time. As the foundational document guiding development, most amendments should occur through a comprehensive effort to address changes to the community overtime.

The provisions of the zoning ordinance will be maintained and preserved through the term of the Comprehensive Plan, unless formally amended. Amendments to the local zoning ordinance will be consistent with the Comprehensive Plan

Appendix A: Community Survey Results



2040 Comprehensive Plan Update

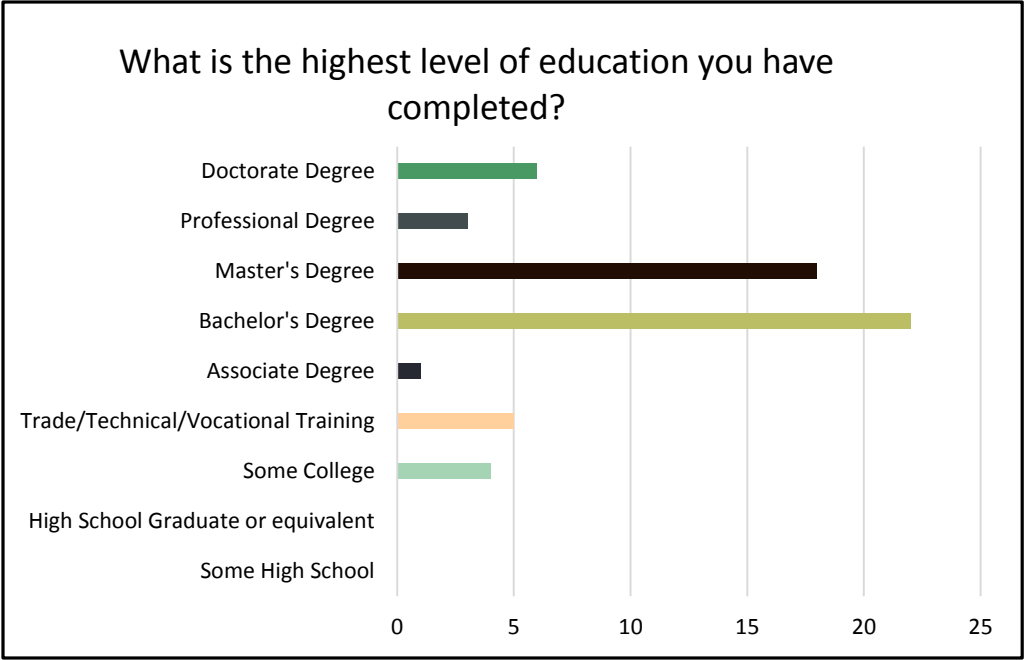
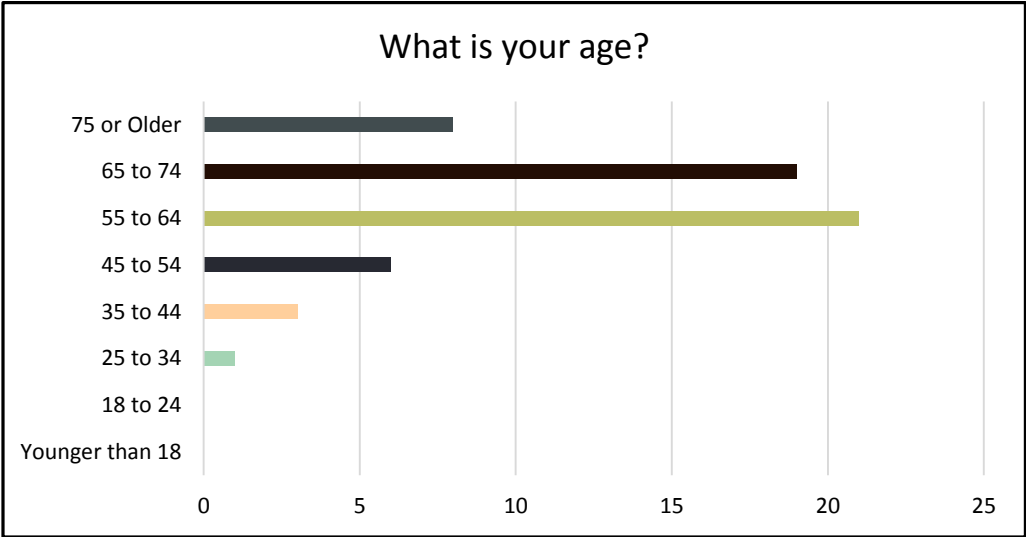
COMMUNITY SURVEY RESULTS

Survey Facts

- Surveys were distributed through the City Newsletter
- 58 responses were gathered
 - Representative of 8% of the population and 19% of the households of Marine on St. Croix.
- Questions included demographics, housing preference and supply, city services and utilizes, and priorities and goals for the city.

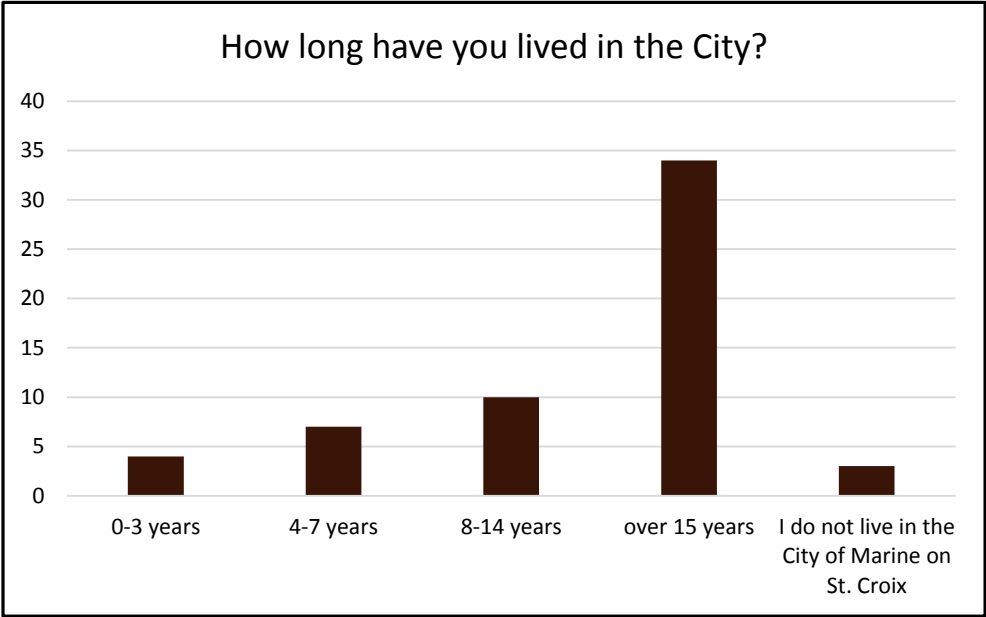
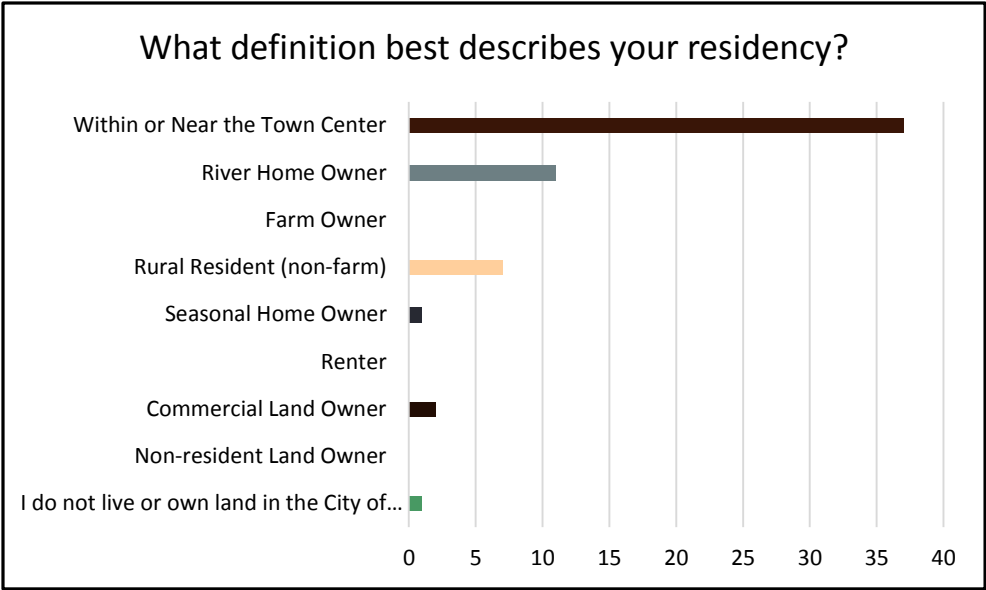
Survey Results

Demographics



Survey Results

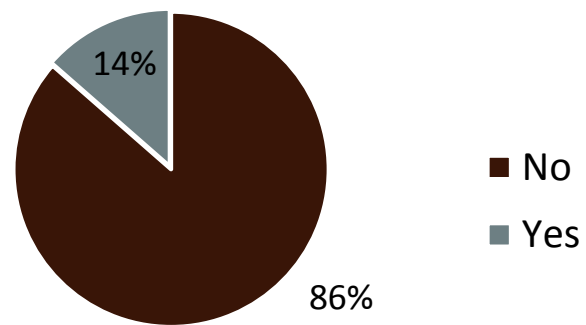
Demographics



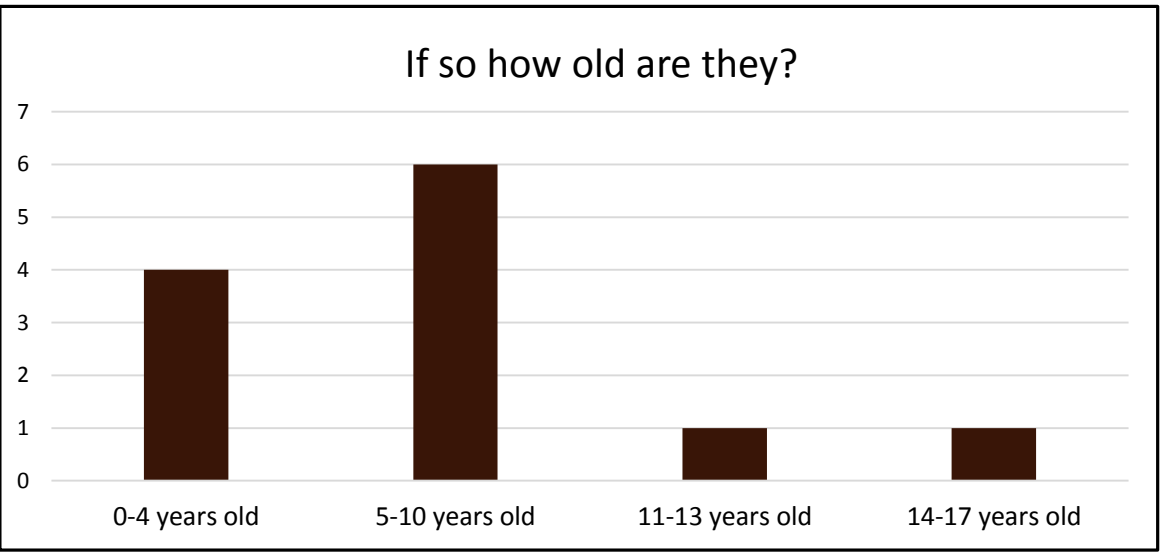
Survey Results

Demographics

Do you have children under 18 years old living in your household?

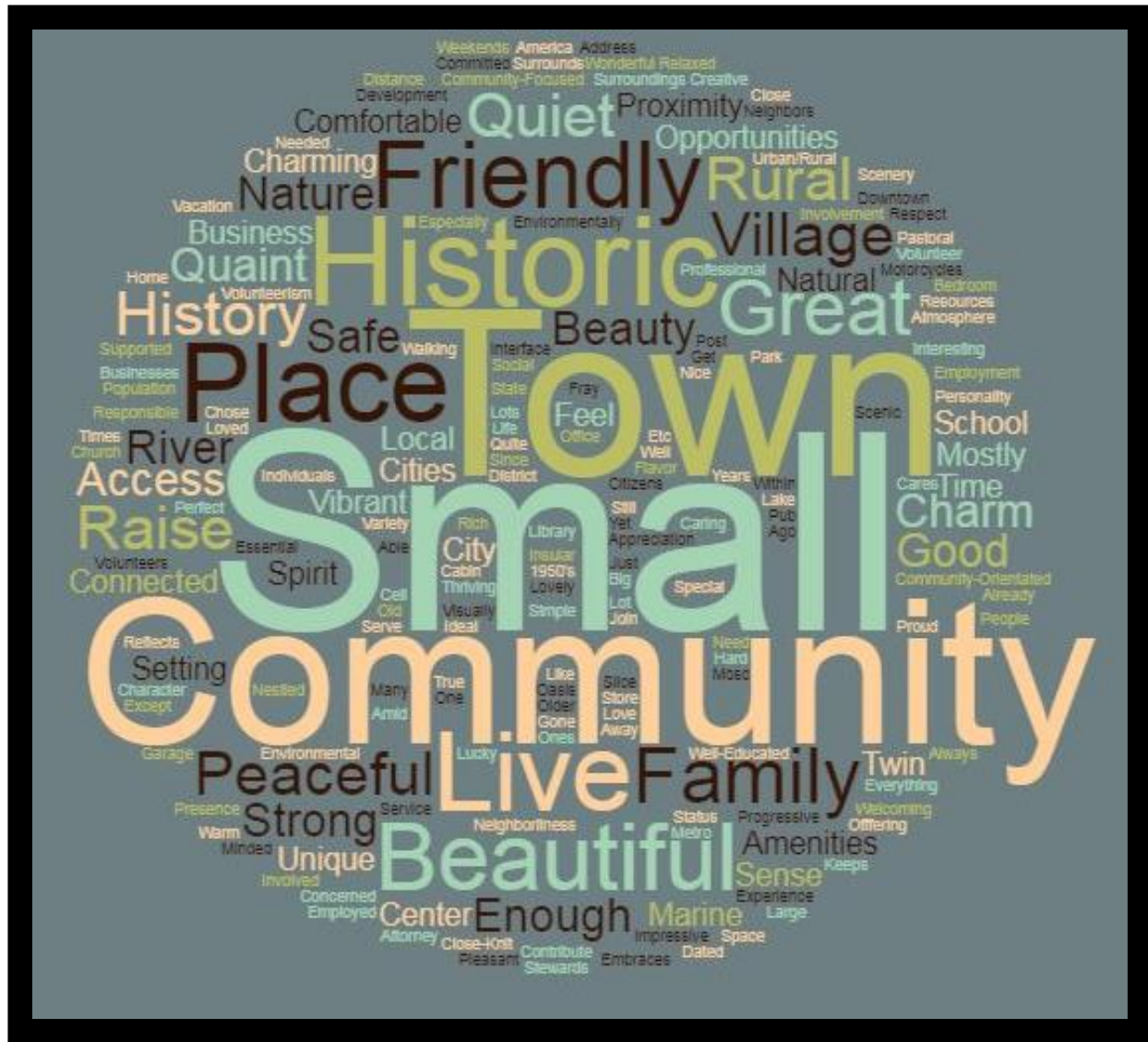


If so how old are they?



Survey Results

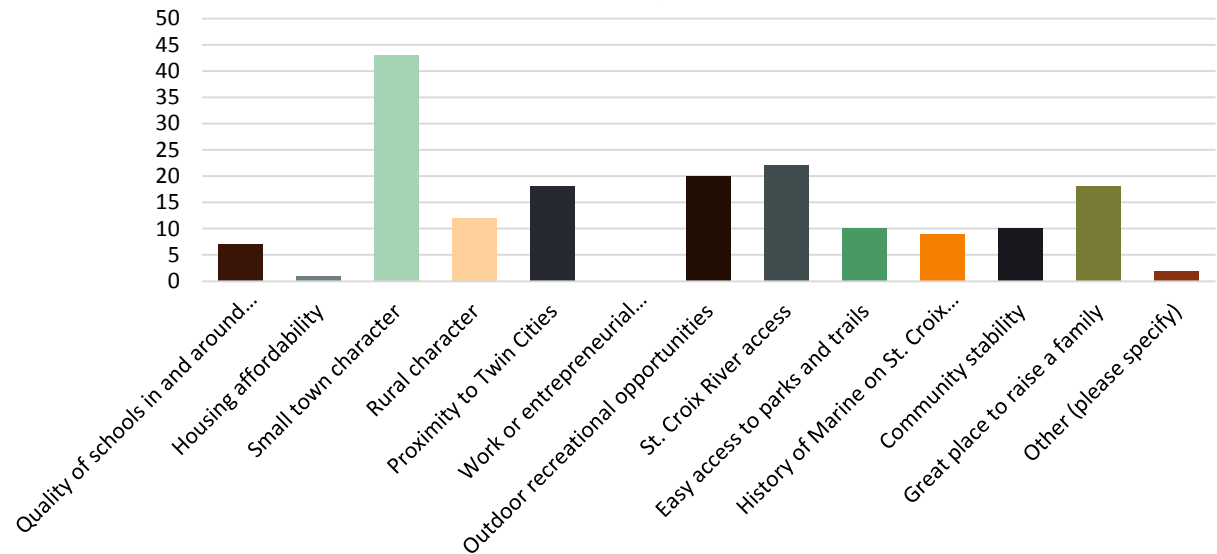
Define the Character of Marine on St. Croix



Survey Results

Why recommend
Marine on
St. Croix?

Why would you recommend Marine on St. Croix as a place to live? Select up to 3

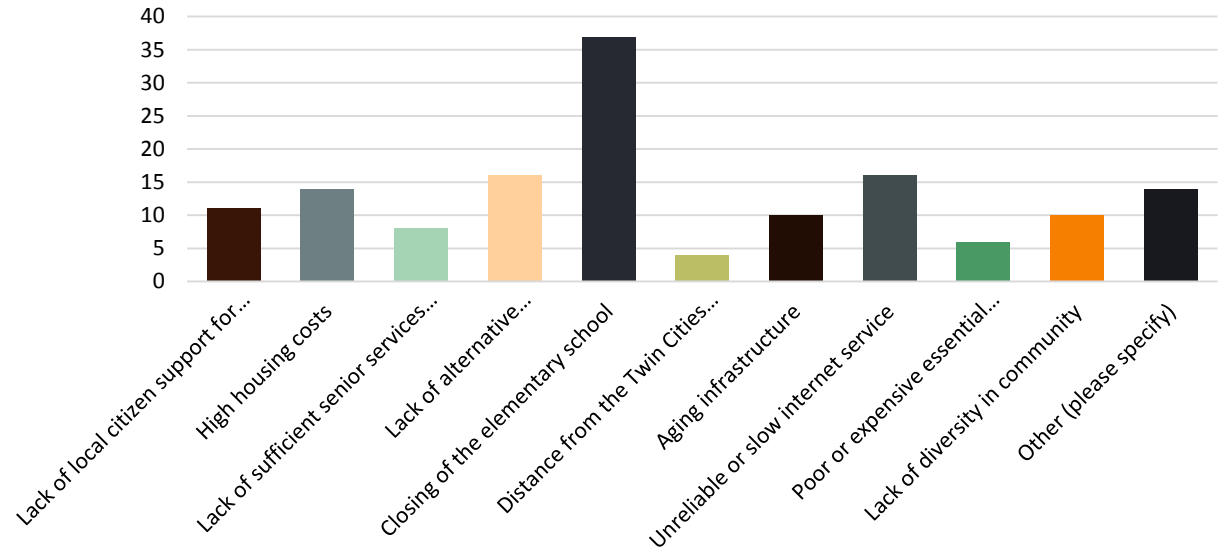


1. Small town feel (25.0%)
2. St. Croix River Access (12.8%)
3. Outdoor recreational opportunities (11.6%)

Survey Results

Significant Challenges

What are the most significant challenges facing Marine on St. Croix in the future? Select up to 3

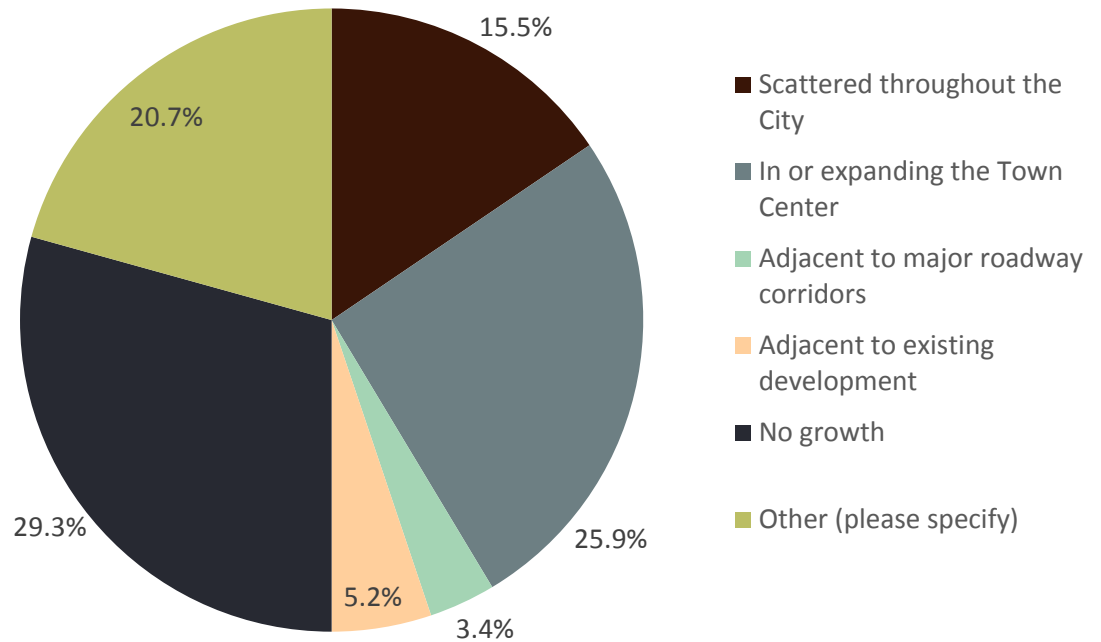


1. Closing of the elementary school (25.3%)
2. Lack of alternative transportation options (11.0%)
3. Unreliable or slow internet service (11.0%)

Survey Results

Development

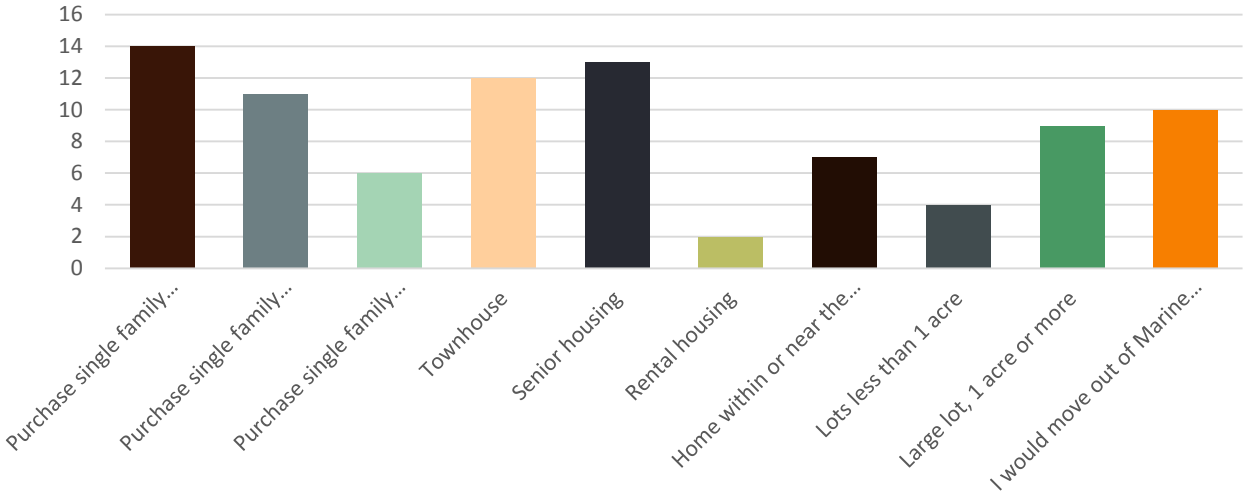
Where would you most like to see new development occur in Marine on St. Croix in the future?



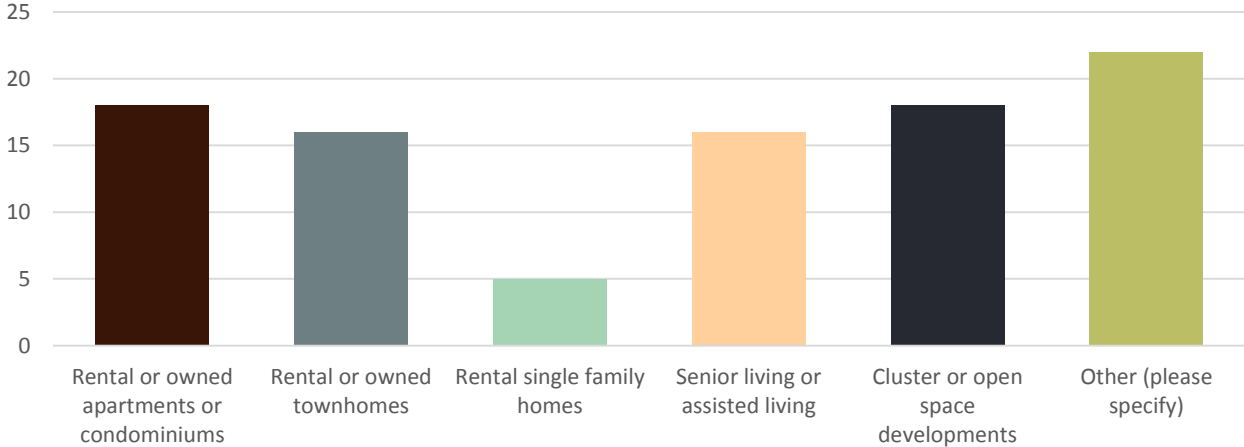
Survey Results

Housing

If you were looking for a new home in Marine on St. Croix, what type of housing would you be looking for? Select all that apply

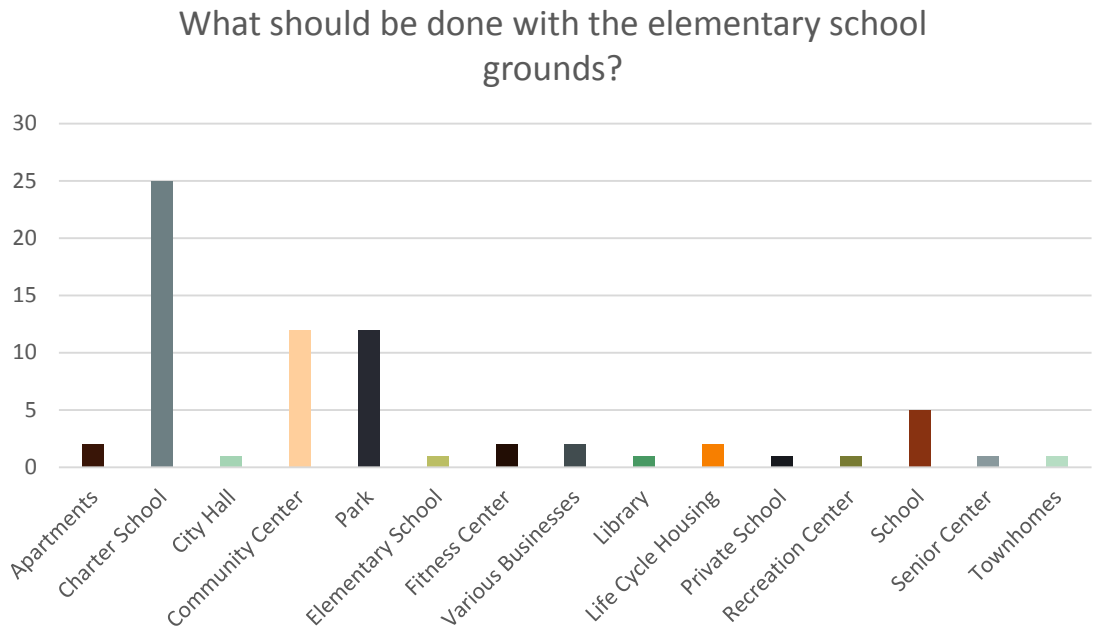


What types of housing are needed to fill gaps in the market, while retaining the character of Marine on St. Croix over the next 20 years? Select all that apply.



Survey Results

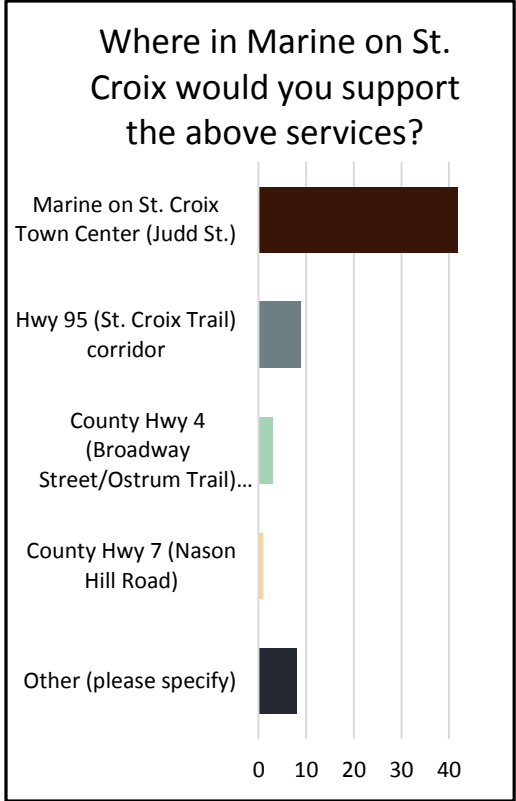
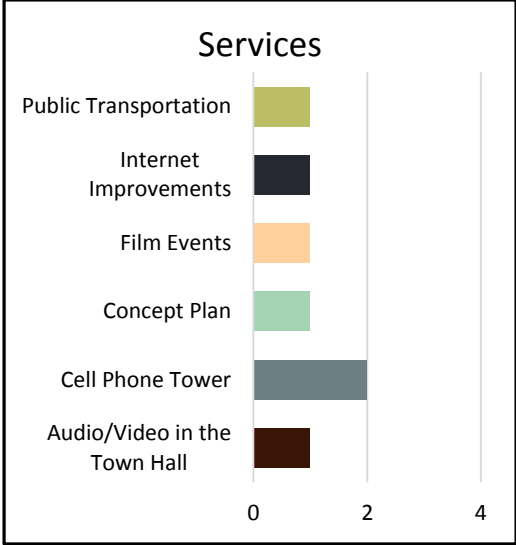
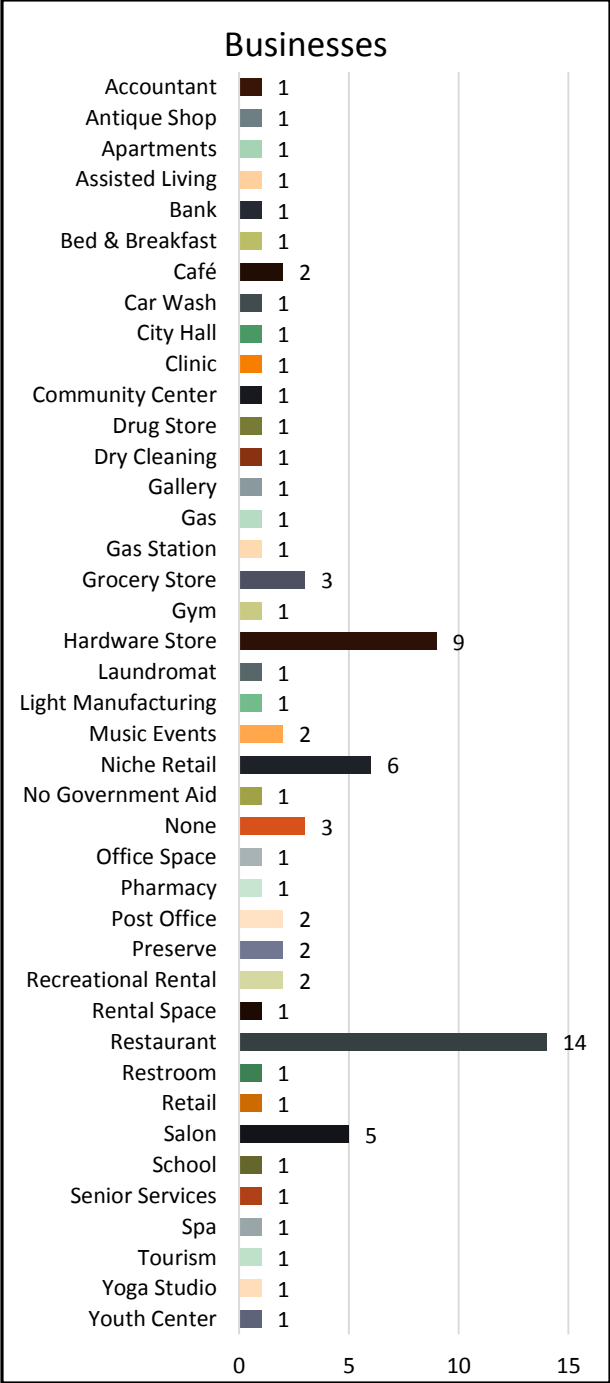
Elementary School Grounds



- Overwhelming preference for a charter school
 - Some just wanted a school, but did not specify charter as a type or wanted another type like private or public
- Approximately 50% of those that said park or community center said this would be a preference only if the charter school was not possible.

Survey Results

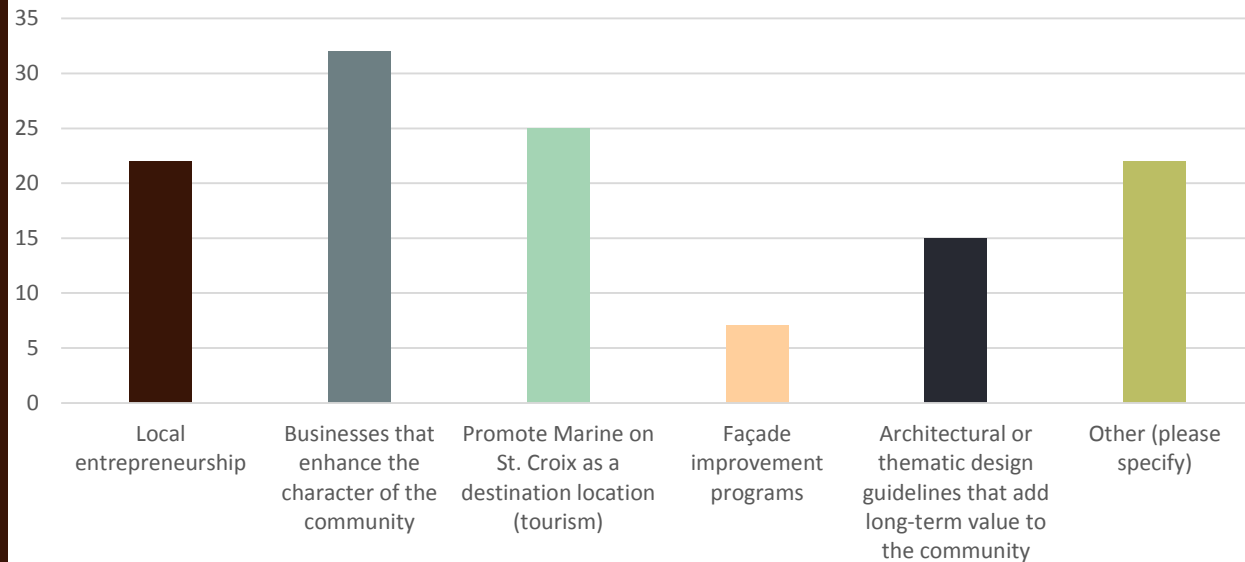
Businesses or Services in the Community



Survey Results

Economic Development

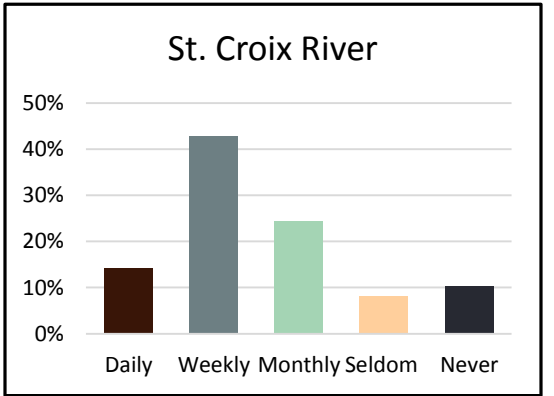
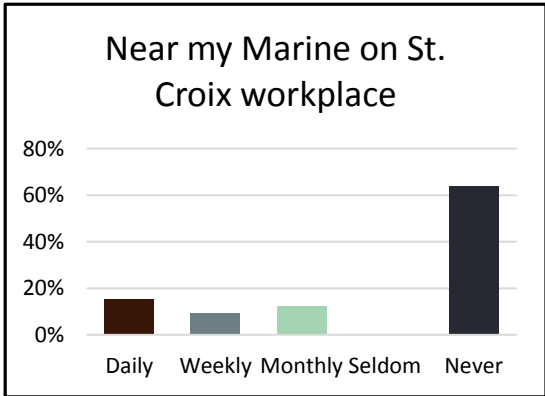
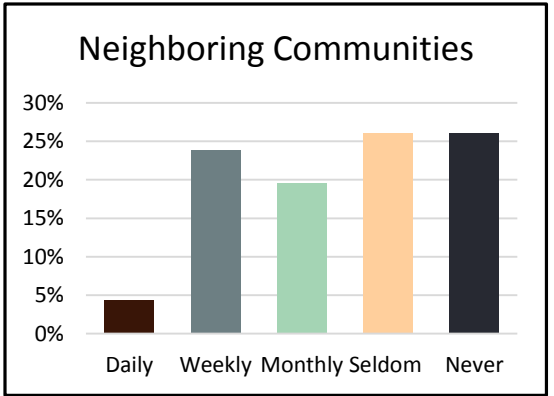
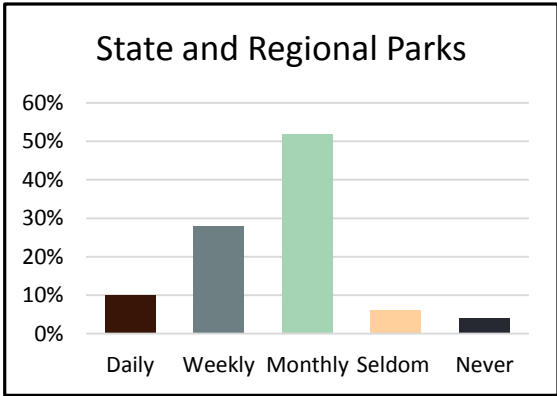
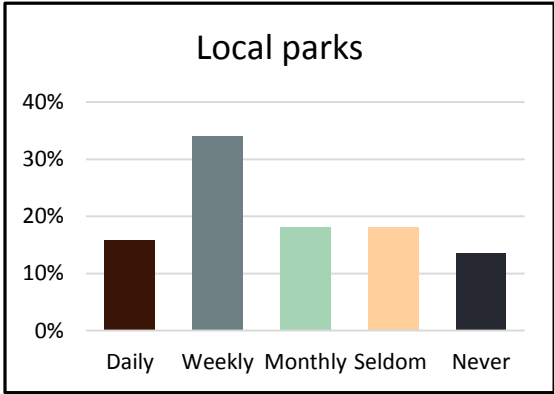
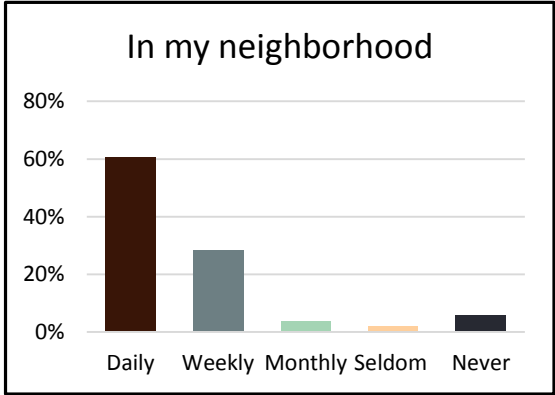
What economic development activities should the City focus on to provide support and incentives to entrepreneurs? Select up to 3



Where do you like to go for leisure walks, bike rides, or other outdoor activities, and how often do you go?

Survey Results

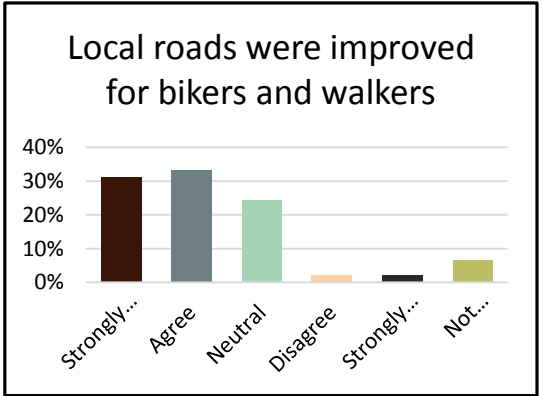
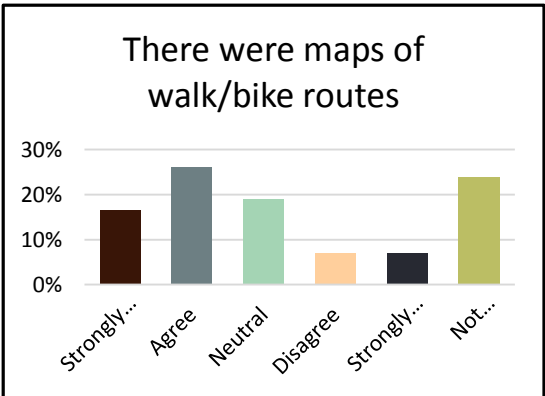
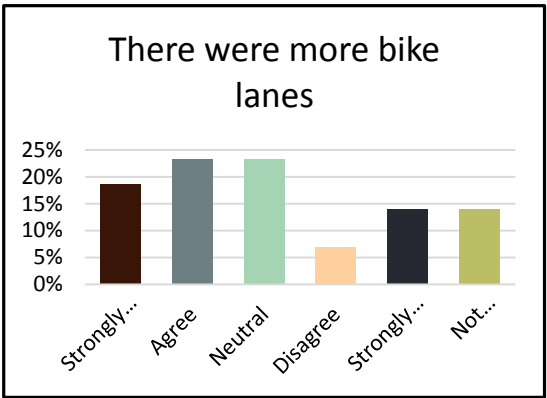
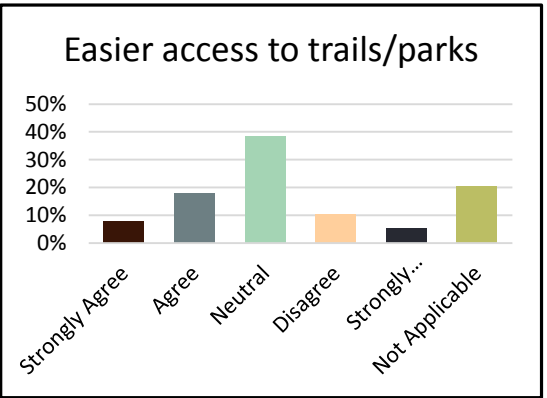
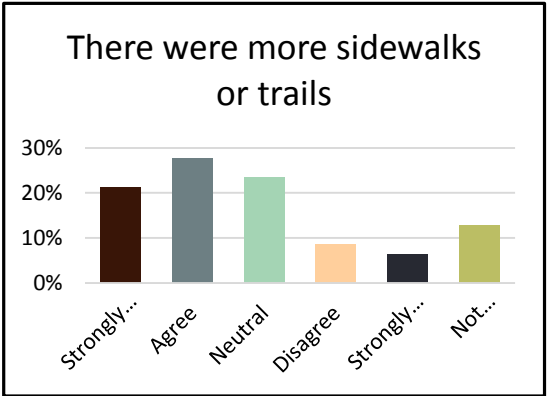
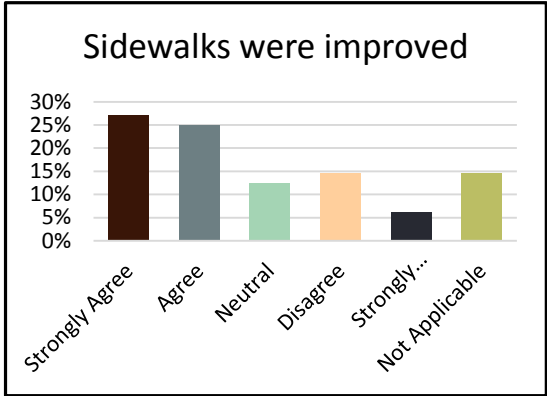
Recreational Walking



Survey Results

Recreational Walking/Biking

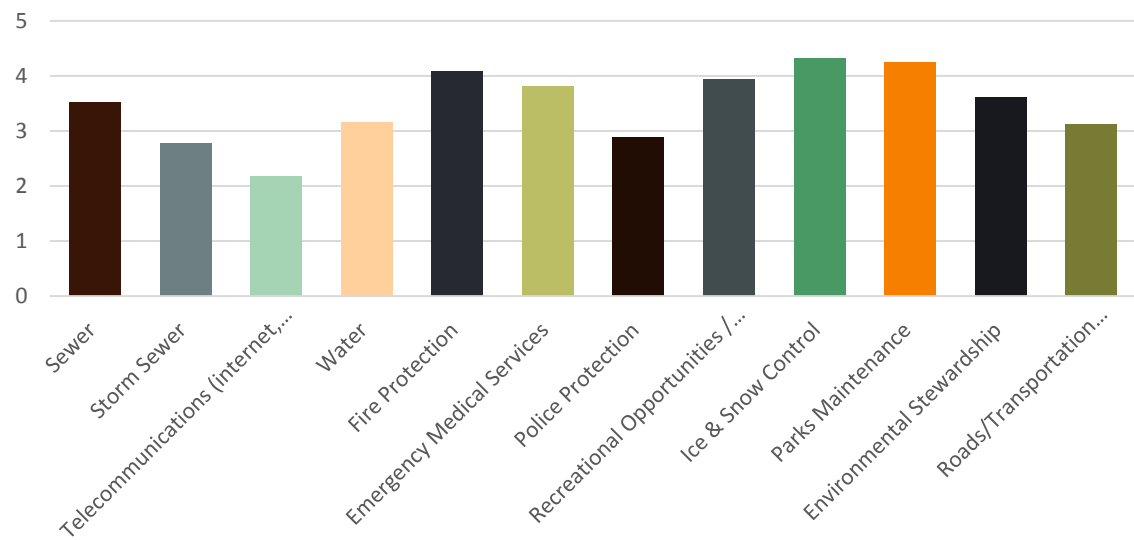
I would walk or bike more if...



Survey Results

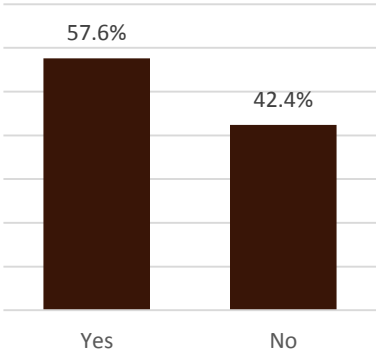
City Services

Average Rankings of City Services



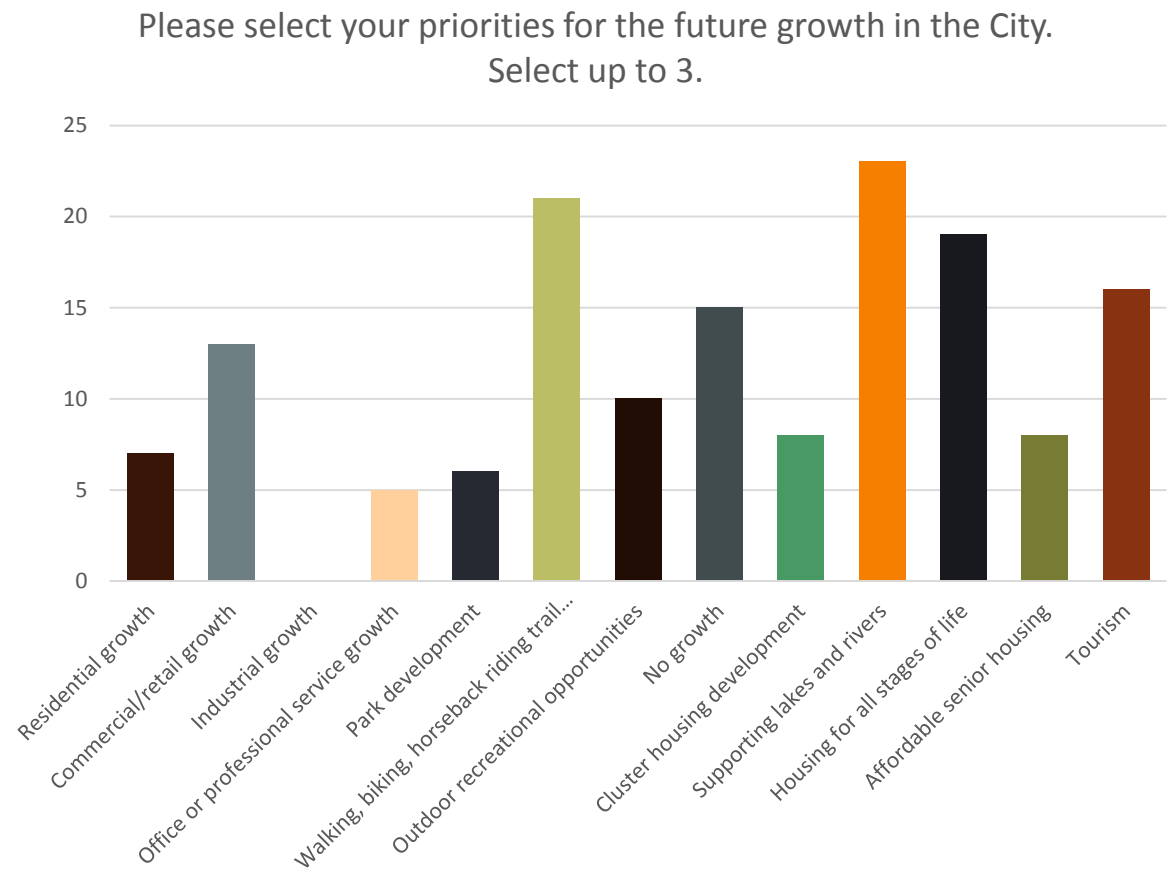
Ice & Snow Control	4.33
Parks Maintenance	4.25
Fire Protection	4.08
Recreational Opportunities / Facilities	3.94
Emergency Medical Services	3.82
Environmental Stewardship	3.61
Sewer	3.53
Water	3.15
Roads/Transportation Infrastructure	3.13
Police Protection	2.88
Storm Sewer	2.77
Telecommunications (internet, etc.)	2.17

Would you be willing to support a property tax increase to improve Fair/Poor services?



Survey Results

Future Priorities



1. Supporting lakes and rivers (15.2%)
2. Walking, biking, horseback riding trail development (13.9%)
3. Housing for all stages of life (12.6%)

Survey Results

Comments on the City and Initiatives for the Next 20 Years

- Keep the small town feel
- The school will matter and it is critical for attracting new and younger families
- The character of the city and downtown are important and should be maintained
- The downtown needs improvements but should not be changed in major ways
 - Wayfinding was also often included with this sentiment
- Need a variety of housing to support all economic levels and attract younger families
- Businesses should be encouraged and should be cohesive with the character of the city

Appendix B: Village Center Concept Plan

MARINE ON ST CROIX VILLAGE CENTER
TASK FORCE 2011

	FEATURE	RATIONALE	BENEFIT	LINKS (ref Comp Plan)
1	Open vistas from Maple – Judd intersection toward east, north and south	Maple – Judd is the primary entry point; the first impression	Capitalizes on the Maple St. entry to VC, broadens the appeal of the VC, draws visitors beyond the intersection	6
2	Move utility pole and electrical panel now in Maple St. (leave buried wastewater utilities as is)	Now a visual and traffic barrier	Opens view toward river; makes road care easier and Third St. more accessible	1,6
3	Construct “walkway” along east side of store by change in color or texture; build sidewalk on north side of Maple St.	River access hardly apparent; Third St. does not present an attraction; present access appears to be “car territory”	Draws the eye and facilitates pedestrian access toward river and to Third St.; defines parking spaces on north side of street	6
4	Construct RIVER GATE access point at east side of Third – Maple intersection; site an information board	Need a transition for access to river beyond	RIVER GATE access point gives pedestrians an opportunity to learn about and to view river , (and optionally) to proceed to river	6,7
5	Build a lower level structure as part of RIVER GATE to collect sediment and retain storm water	Need an “outfall” for storm water (appears to be the location of the largest single flow through or from VC)	RIVER GATE outfall structure meters and cleanses storm water and decreases erosion north and south of trail toward river	8
6	Clear trail toward river on Maple St. ramp (old access to sawmill); construct durable trail surface	Pedestrian river access now mostly hidden, storm water causing erosion along slope to river resulting in a “mud delta” now forming at river bank	Decreases erosion along north side of ramp; channels water to a controlled path, channels pedestrians to the trail; provides access to RIVER PLACE (river bank), and to interpretive sites at MILL PLACE (lower level of Mill Site)	7
7	Build canoe rack(s) at RIVER	Locals and visitors deposit canoes,	Helps define river’s presence and	7

	GATE and/or RIVER PLACE	kayaks randomly	passive use of river; confines watercraft to defined area, security	
8	Narrow Maple St. and Judd St. at Maple – Judd intersection with “bump-outs” of plantings or of texture change; define pedestrian crossing with texture or color	Large expanse of blacktop does not channel traffic, makes pedestrian crossing challenging; aesthetics of blacktop conflict with more green and historic small town character	Simplifies traffic flow for visitors, eases pedestrian crossing, improving safety; decreases visual impact of blacktop by making street appear narrower when it actually isn’t	6
9	Widen north end of Judd St. to west a small amount to provide 90 degree parking, leaving trees to define visual edge of street and parking alignment	Need more parking	Provides parking spaces with a subtle (trees, not signs) way of defining orientation (might be left as parallel parking in winter to facilitate plowing and snow storage)	1,6
10	Terminate Judd St. at Linden; reduce elevation at Judd – Linden intersection	Slope of Judd St. leads to awkward, nose-down parking on east side; Judd St. now a conduit for storm water from north, water then flowing along Linden, Judd, Maple and causing erosion and sedimentation around commercial buildings and sidewalks	Enables an area to intercept storm water coming from TH 95; slows traffic (safety dividend) and distributes parking load; improves parking on Judd; enables changes to Linden	6,7
11	Construct GARDEN PLACE, a focus point at end of Judd	Village Center lacks a north end focus or means to attract visual interest toward Linden and eventually to Third	GARDEN PLACE can be an attraction itself	7
12	Install storm water intercepts on green area to west and north of Judd St. (cooperative with MNDOT, possible grant funds)	Storm water a major issue for stability of local streets and buildings, causes sedimentation and pollution issues at river and MHS Mill Site; mud and water flows are unfriendly to pedestrians	Enables solutions (may be mandated) to reduce direct pollution of river and deposits onto Mill Site and into Mill Stream, also reduces damage to city structures and streets	8
13	Widen Linden to provide more formal parking on north side	Parking in post office area often congested	Provides better parking and a wider access to Third St. and to Second St.	1,6

			neighborhood	
14	Install fire hydrant at Judd – Linden (piped from pump at fire hall)	Access to water in event of a fire requires hard-to-find equipment and persons	Supply of water would be faster, less demanding of personnel	3
15	Bury utility lines on Judd, Maple, and Third Streets	Aesthetics of poles and lines conflict with emphasis on riverway and historic small town character	More attractive aesthetics, removes poles as obstructions to parking and plowing	6
16	Move entry of Parker St. into Judd St. to south (tee intersection) and make Parker one way away from Judd; replace with VILLAGE PLAZA (plaza and plantings)	Parker is a fifth street entering this intersection, significantly expanding appearance of asphalt; leads to traffic confusion; prevents other uses	Extends the plaza or green space across from the store toward Judd St. to form VILLAGE PLAZA, creating a green counterpoint for store and enabling an area for farmers' market and gatherings; simplifies traffic flow	1,6
17	Create bump-outs of green or change in texture along Judd St. near bank, Brookside, and falls	Visual effect of asphalt at present dominates, leaving edges of street ambiguous; parking alignment is uncontrolled	Makes street appear narrower, better defines street and parking, provides jump-off spots for pedestrians crossing street – safer crossings; provides a green space above falls	6
18	Add low level light poles and plantings or planters along Judd St.	Present light poles especially conflict with emphasis on riverway and historic small town character	Reduced height and added greenery, especially of lighting in a historic design, adds to ambiance and pedestrian scale	5
19	Control storm water now draining from Judd St. to Mill Stream, remove sediment	Storm water and snow melt on street now drains (three places) into Mill Stream or ravine without treatment, contributing to erosion in ravine and entry of sediments and pollutants into stream; stream now showing evidence of meandering as sediments build up, eroding bank below Village Hall	Reduces pollution and sediment load on river, expected to make stream stay in established channel and away from slope on south side of Village Hall	8

20	Extend parking area for emergency personnel with color or texture	Parking is limited and can impair exit of fire vehicles	Allows more space in street for maneuvering fire equipment	3
21	Extend sidewalk leading south from store to Mill St., to the site of HISTORY PLACE to further explain history of site and Marine	Sidewalk now terminates in puddle just short of Mill Site grass area; little attraction to proceed further south, e.g. to Burris Park	Provides a visual edge leading eye south and to HISTORY PLACE; enables pedestrian access to street level of Mill Site and to Burris Park; provides safer pedestrian and bicycle access to business areas	1,7
22	Create a HISTORY PLACE focus, a small building or kiosk adjacent to Mill Site, on Mill St. at intersection with Judd St.	No apparent reason to go there; settler's cabin underutilized	Leads eye to end of Mill Site and trail entry, then across Judd St. to Burris Park, forming HISTORY PLACE; expands appeal of Village Center; links to trails	7
23	Build public toilets near Judd St. – Mill St. intersection	Facilities not now available for visitors unless they are customers of businesses	Relief for visitors (and locals)	7
24	Add to Burris Park facilities to include play equipment (and potential pavilion)	A children's attraction now not available	COMMUNITY PARK provides a relaxing/play place as parents shop or stop in community; facilitates local events	7
25	Enhance upper level of Mill Site	Has been overgrown and not attractive (some tasks accomplished in 2010 and 2011)	Invasives are largely cleared out and tree planting under way, more picnicking and hiking through site observed; river and some artifacts more visible	7
26	Expand Mill Site trails to descend into ravine and adjacent to sites of engine room, sawmill, and wharf and eventually to river's edge and link with Maple St. trail (cooperative with MN Historical Society –	Formal trails are only on street level, leaving sites of historic interest inaccessible (or accessed in an uncontrolled manner)	Opens lower level of Mill Site to interpretive viewing in a manner protective of site; enables a loop trail from Maple – Third St. through Mill Site to RIVER PLACE and MILL PLACE, and returning to Judd St. and	7

	owner)		HISTORY PLACE; provides views of ravine and falls	
27	Add to Burris Park interpretive facilities	Interpretive sign now explains cabin (from outside Marine) but does not explain relationship of park to Mill Site and role in Marine history	Will further explain extent of saw mill operations and dependence on water power	7
28	Build trail from Parker St. parking area into Burris Park and around Mill Pond	Surroundings of pond are not well defined but are an attractive walking area	Defines walking path around pond and to stream, links to parking area on Parker St.; adds to appeal of Parker St, businesses; offers option of a larger loop by linking with trails east of Judd St.	7
29	Build parking area at Burris Park	Visitors park randomly; absence of parking area does not lead visitors to stay	Anticipate more use of Burris Park by locals and visitors	7
30	Improve and expand parking area on Parker St. by slight widening and bump-outs in green or texture change; add sidewalk to east side	Need more parking in Village Center, this parking lot now uses almost enough area for a double sided lot, but is single sided	Expanded parking capability with better definition of parking alignments; sidewalk ties parking area to Judd St. in front of bank, at Brookside, and to Burris Park	1
31	Provide more effective control of storm water from TH 95 including sedimentation control (cooperative program with MNDOT)	Present shaping of highway allows significant water flow into Oak – Judd intersection and into VC; storm drains on highway now drain directly to Mill Stream, creating high peak flows and sediment load and pollution at Mill Pond	Large fraction of storm water is expected to be intercepted at green areas at north end of Judd St., easing control measures needed elsewhere in VC; sedimentation control at outfalls of storm drains will decrease need for dredging Mill Pond (now a city cost)	8
32	Reposition edges of Third St. to provide added parking, formalize a location for dumpsters and screen same	Unpredictable location of dumpsters negates usefulness of west side of Third St. for parking; dumpsters not attractive; Third St. side of businesses	Provides more parking; better defines street to allow freer traffic flow and more secure pedestrian flow; more parking and improved attractiveness	1

		not attractive and business potential not achieved	effectively expand business area; amenable to trailer parking for visitors	
33	Provide storm water absorption and channeling as needed to direct storm water to outfall structure at Maple – Third intersection	Third St. and Maple St. are major conduits for storm water runoff from Judd St. and business areas leading to erosion	Provides some absorption and better channeling of storm water; improves aesthetics of street	8
34	Develop recommendations for sidewalks, parking areas, signage, other common infrastructure items	Provide guidance for ongoing design decisions – not necessary to re-invent solutions	Anticipated guidance may include colors, textures, material selections to result in more uniform designs while coordinating with desired aesthetics	6
35	Build storm water control means on Oak St. (not part of VC)	Study of storm water flow into VC indicate an associated problem at Oak St., resulting in sedimentation and eroded road shoulders	May be able to achieve lower road maintenance costs and lessened deposits into river, at lowest cost, with concurrent design and construction	8

Appendix C: Cooperative Agreement

**GATEWAY STATE TRAIL
COOPERATIVE AGREEMENT
BETWEEN
THE STATE OF MINNESOTA AND THE CITY OF MARINE ON ST.CROIX**

This Agreement, between the State of Minnesota, acting by and through the Commissioner of the Department of Natural Resources, hereinafter referred to as the "State" and the City of Marine on St. Croix hereinafter referred to as the "City".

WITNESSETH:

WHEREAS, the Commissioner of Natural Resources has the authority, duty and responsibility under Minnesota Statutes Section 85.015, sub. 14, to establish, develop, maintain and operate the Willard Munger Trail System which includes the Gateway State Trail Segment; and

WHEREAS, the State and the City are authorized under Minnesota Statutes Section 471.59 to enter into agreements to jointly or cooperatively exercise common powers; and

WHEREAS, the City owns or has easements over lands described as: **Sec. T N, R W**, City of Marine on St. Croix, as shown on the map attached and incorporated into this agreement as **Exhibit A** and hereinafter referred to as "City Property"; and

WHEREAS, the State and City have determined that providing a trail corridor for the Gateway State Trail is of high priority; and

WHEREAS, the State shall manage and administer the Gateway State Trail as established hereinafter referred to as the "Trail"; and

WHEREAS, upon completion, the Trail shall be the sole responsibility of the State; and

WHEREAS, upon completion the City shall maintain its ownership and/or interest on the City Property as described in **Exhibit A**; and

WHEREAS, a resolution or copy of the City board meeting minutes authorizing the City to enter into this agreement is attached and incorporated into this agreement as **Exhibit B**; and

NOW, THEREFORE, in consideration of the mutual benefit to be derived by the public bodies hereto and for the benefit of the general public, the parties agree as follows:

I. STATE'S DUTIES AND RESPONSIBILITIES

- a. The State shall prepare the necessary conceptual, preliminary and final design plan, specifications, and proposal for the Trail. The design shall meet the applicable requirements of the ADA.
- b. The State shall bid and administer any construction contracts for this project, as well as provide all construction engineering, staking, materials testing, record keeping and construction inspection.
- c. The State shall obtain all federal and state permits necessary for the construction of the Trail.

- d. The State will encumber funds for development of the Trail through the standard internal purchasing process including, but not limited to, a separate requisition request.
- e. The State shall permit the City to review and approve the preliminary and final plans, as proposed by the State for the segments of the Trail to be located on the City Property as identified in **Exhibit A**.
- f. The State shall permit the City to review and approve any modifications/revisions to the Trail on City Property proposed by the State during the term of this Agreement.
- g. The State shall be permitted to review and approve any modifications/revisions to the Trail on City Property proposed by the City during the term of this Agreement.
- h. The State will provide and install the appropriate signage for the Trail and Trail which may include a sign which indicates the Trail is cooperatively provided by the City of Marine on St. Croix and the Minnesota Department of Natural Resources ("DNR"). The State shall also provide all trail related informational signs necessary for the facility as determined by Department of Natural Resources policy.
- i. Upon completion, the Trail shall be the sole responsibility of the State and shall be managed, operated, maintained and administered, as a portion of the Gateway State Trail as established.
- j. The State reserves the right to inspect the State Trail at any time to ensure that the City is in compliance with this Agreement.

II. CITY DUTIES AND RESPONSIBILITIES

- a. The City shall permit the State to construct the Trail on the City Property as identified in Exhibit A.
- b. The City shall be permitted to review and approve the conceptual, preliminary and final plans for the Trail located on City Property as prepared by the State.
- c. The City shall permit the State to review and approve any modifications/revisions to the Trail on City Property proposed by the City during the term of this Agreement.
- d. The City shall be permitted to review and approve any modifications/revisions to the Trail on City Property proposed by the State during the term of this Agreement.
- e. The City shall be permitted to install additional information signs for the Trail, with the approval of the State's designated Contact.
- f. The City may close the Trail for emergencies, or for other reasons, without prior written consent of the State. The City shall notify the State within 48 hours of closing the Trail for emergency reasons or if the Trail will remain closed longer than 24 hours.

III. FUNDING

The State shall provide funding for its responsibilities under Article I (a)(b)(c)(d)(e)(f)(g)(h)(i) above through the standard internal purchasing process including, but not limited to, a separate requisition in which funds will be encumbered. The total obligation of the State is limited to the amount of funds legislatively appropriated and administratively allocated to this project.

IV. LIABILITY

Each party agrees that it will be responsible for its own acts and the results thereof to the extent authorized by the law and shall not be responsible for the acts of the other party and the results thereof. The State's liability shall be governed by the provisions of the Minnesota Tort Claims Act, Minnesota Statutes Section 3.736, and other applicable law. The City's liability shall be governed by Minnesota Statutes Sections 466.01-466.15, and other applicable law.

V. TERM

a. **Effective Date: XXXX, 2017**, or the **State obtains all required signatures** under Minnesota Statutes Section 16C.05, Subdivision 2, **whichever is later**.

b. **Expiration Date: XXXX, 2052**, for a period of thirty five (35) years except as otherwise provided herein or agreed to in writing by both parties. This agreement shall renew at the end of the term for an additional five (5) year period unless a party gives three (3) months written notice to the other party to terminate the agreement. This agreement shall continue to automatically renew as the end of each five (5) year period unless the required given notice is given.

VI. AUDIT

Under Minnesota Statutes Section 16C.05, sub. 5, the books, records, documents and accounting procedures and practices of the City relevant to the agreement shall be subject to examination by the Commissioner of Natural Resources, the Legislative Auditor and the State Auditor for a minimum of six years from the end of this agreement.

VII. ANTITRUST

The City hereby assigns to the State any and all claims for overcharges as to goods and/or services provided in connection with this Agreement resulting from antitrust violations that arose under the antitrust laws of the United States and the antitrust laws of the State of Minnesota.

VIII. CANCELLATION

This Agreement may be cancelled by the State at any time with cause or as necessary as provided in Article III, upon thirty (30) days written notice to the City.

This Agreement may also be cancelled by the State if it does not obtain funding from the Minnesota Legislature, or other funding sources, or if funding cannot be continued at a level sufficient to allow for the completion of the activities covered under this agreement. The State will notify the City by written or fax notice. The State will not be obligated to pay for services provided after the notice is given and the effective date of cancellation. The State will not be assessed any penalty if the agreement is cancelled because of a decision of the Minnesota Legislature, or other funding source, not to appropriate the necessary funds. The State shall provide the City notice of lack of funding within a reasonable time of the State's receiving that notice.

IX. GOVERNMENT DATA PRACTICES

The City and the State must comply with the Minnesota Data Practices Act, Minn. Stat. Ch. 13, as it applies to all data provided by the State under this agreement, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the City under this agreement. The civil remedies of Minn. Stat. 13.08 apply to the release of the data referred to in this clause by either the City or the State.

X. PUBLICITY AND ENDORSEMENT

Any publicity regarding the subject matter of this agreement must identify the State and the City as sponsoring agencies and must not be released without prior written approval from the State's and City's Authorized Representatives. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the State or City individually or jointly with others, or any subcontractors, with respect to the program and services provided from this agreement.

XI. COMPLETE AGREEMENT

This Agreement, and amendments, constitutes the entire agreement between the parties. Any amendment to this agreement must be in writing and will not be effective until it has been executed and approved by the same parties who executed and approved the original agreement, or their successors in office.

XII. OTHER TERMS AND CONDITIONS

NOTICES: Any notice, demand or communication under this Agreement by either party to the other shall be deemed to be sufficiently given or delivered if it is dispatched by registered or certified mail, postage prepaid to:

The State

Minnesota Department of Natural Resources
Parks and Trails Division Area (3B) Supervisor
1200 Warner Road
St. Paul, MN 55106

The City

City of Marine on St. Croix
City Clerk
121 Judd Street
Marine on St. Croix, MN 55047

[THE BALANCE OF THIS PAGE IS LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, the parties have caused the Agreement to be duly executed intending to be bound thereby.

DEPARTMENT OF NATURAL RESOURCES

CITY OF MARINE ON ST.CROIX

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

DEPARTMENT OF ADMINISTRATION
Delegated to Materials Management Division

CITY OF MARINE ON ST.CROIX

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

(Effective Date)

STATE ENCUMBERANCE VERIFICATION

Individual certifies that funds have been encumbered as req. by
Minn. Stat. 16A.15 and 16C.05.

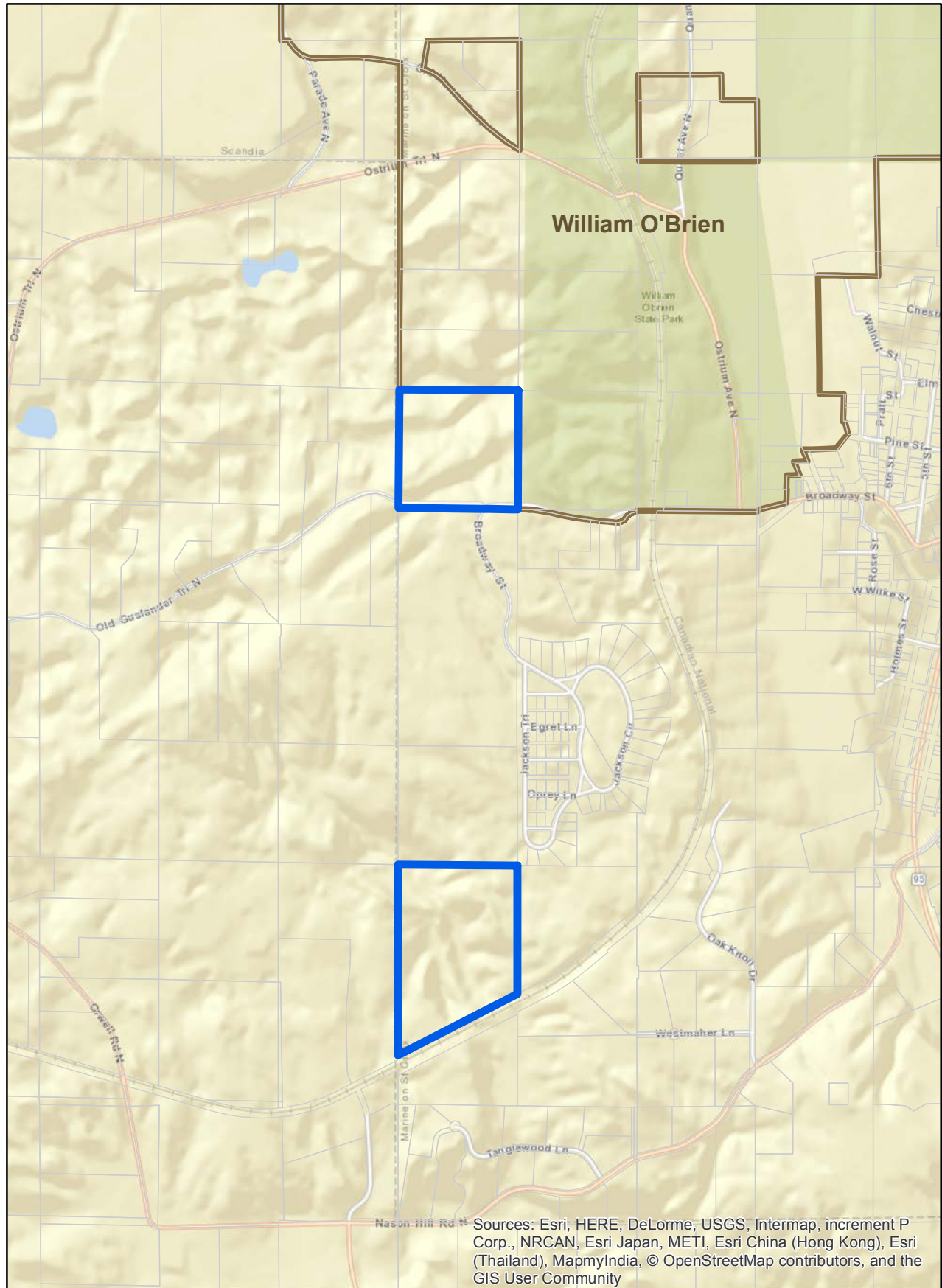
Signed:

Date:

Contract: _____



GATEWAY STATE TRAIL: COOPERATIVE AGREEMENT BETWEEN THE STATE OF MINNESOTA AND THE CITY OF MARINE ON ST.CROIX EXHIBIT A



 City of Marine on St Croix

Appendix D: Access Management Guidelines

Mn/DOT Access Management Manual

Figure 3.2 – Summary of Recommended Street Spacing for Non-IRCs

Category	Area or Facility Type	Typical Functional Class	Public Street Spacing		Signal Spacing
			Primary Full-Movement Intersection	Secondary Intersection	
4 Principal Arterials in the Twin Cities Metropolitan Area and Primary Regional Trade Centers (Non-IRCs)					
4AF	Non-Interstate Freeway	Principal Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		Interim
4A	Rural		1 mile	1/2 mile	See Section 3.2.5
4B	Urban/Urbanizing		1/2 mile	1/4 mile	1/2 mile
4C	Urban Core		300-660 feet, dependent upon block length		1/4 mile
5 Minor Arterials					
5A	Rural	Minor Arterials	1/2 mile	1/4 mile	See Section 3.2.5
5B	Urban/Urbanizing		1/4 mile	1/8 mile	1/4 mile
5C	Urban Core		300-660 feet, dependent upon block length		1/4 mile
6 Collectors					
6A	Rural	Collectors	1/2 mile	1/4 mile	See Section 3.2.5
6B	Urban/Urbanizing		1/8 mile	Not Applicable	1/4 mile
6C	Urban Core		300-660 feet, dependent upon block length		1/8 mile
7 Specific Area Access Management Plans					
7	All	All	By adopted plan		



Table 4-7
Access Spacing Guidelines ⁽¹⁾
Washington County

Type of Access	Functional Classification of County Highway				
	Principal Arterial	Minor Arterial ⁽²⁾		Collector	Local
		> 7,500 ADT	< 7,500 ADT		
Private residential driveways	No direct access	No direct access	variable ⁽³⁾	variable ⁽³⁾	variable ⁽³⁾
Commercial driveways or non-continuous commercial streets	No direct access	No direct access	1/8 mile	1/8 mile	variable ⁽³⁾
Non-continuous residential streets ⁽⁴⁾	No direct access	1/8 mile with no median opening	1/8 mile	1/8 mile	variable ⁽³⁾
Continuous local streets and collector streets	½ mile	¼ mile	¼ mile	1/8 mile	1/8 mile
Minor arterials	½ mile	½ mile	½ mile	½ mile	½ mile

- (1) Distances shown are minimums. The county reserves the right to increase the minimum distances based on other criteria. The type of traffic control, turn lanes and bypass lanes required are determined based upon the projected traffic volumes on the type of access requested.
- (2) ADT is the 20-year forecast for average daily traffic.
- (3) Spacing is based on criteria such as sight distance, speed, traffic volumes, etc.
- (4) Cul de sac or short-length streets (less than ½ mile) that do not cross a county highway.

Appendix E: 25 Year Capital Improvement Plan

Appendix F: Comments and Responses to Draft Comprehensive Plan

Appendix G: Resolutions and Minutes

Appendix H: Surface Water Management Plan



**BOLTON
& MENK**

Real People. Real Solutions.

Local Surface Water Management Plan City of Marine on St. Croix

April 2018

DRAFT

Submitted by:

Bolton & Menk, Inc.

1035 County Road D East

Maplewood, MN 55109-5314

P: 651-704-9970

F: 651-704-9971

Certification

Local Surface Water Management Plan

for

City of Marine on St. Croix

March, 2018

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By: **DRAFT**

Timothy J. Olson, P.E.
License No. 49129

Date: _____

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- Figure SW-02: Watershed Districts
- Figure SW-03: Existing Land Use
- Figure SW-04: Zoning
- Figure SW-05: Future Land Use
- Figure SW-06: Hydrologic Soils
- Figure SW-07: Public Waters
- Figure SW-08: CMSCWD Wetlands
- Figure SW-09: Natural Areas, Open Space, & RSEA
- Figure SW-10: Minnesota Land Cover Classification
- Figure SW-11: Impaired Waters

Appendix B: Agreements and Resolutions

Appendix C: Ordinances

- Zoning Ordinance and Subdivision Regulations – Section 405: Environmental Standards
- Zoning Ordinance and Subdivision Regulations – Section 5: Zoning Districts and District Provisions

I. EXECUTIVE SUMMARY

The City of Marine on St. Croix, established in 1839 as a site for a water-powered sawmill, has not only history tied to the significant water resource of the St. Croix River but present-day culture, respect and pride for our significant natural resources. The St. Croix River, streams, wetlands, forests, prairie and bluffland topography are important to Marine residents and influence all levels of community decision-making.

Marine is required to complete a Local Surface Water Management Plan for approval by the Carnelian-Marine-St. Croix Watershed District (CMSCWD) and in conformity with MN Statutes Section 103B.235 and MN Rules 8410.0160. In order to fulfill these requirements, the City through this Plan and the Memorandum of Understanding between the CMSCWD and the City for Local Water Planning and Regulation (approved by the City Council October 10, 2013), incorporates the CMSCWD Plan, the Northern Washington County Spring Creek Study, the Wetlands Management Plan, and District Rules.

The Carnelian-Marine-St. Croix Watershed District is operated under the authority of Minnesota Statutes Chapter 103B and Chapter 103D to protect and improve the water resources, natural habitat, and personal property within its boundaries; to educate property owners and the community on the value of water resources; and to promote progressive public relationships and interagency consistency.

The City of Marine on St. Croix (Marine) is located within the Carnelian-Marine-St. Croix Watershed District (CMSCWD, District). The total area of the District encompasses portions of Grant, Hugo, Marine on St. Croix, May Township, Scandia, Stillwater, and Stillwater Township. Marine is located on the far eastern edge and central (north-south) area of the District, bordered to the east by the St. Croix River. Marine does not have any lakes, but has four streams, and Category 1 and 2 wetlands.

- This LWMP includes the following sections:
- Table of Contents
- Executive Summary
- Introduction
- Land and Water Resource Inventory
- Goals and Policies
- Implementation
- Administrative Procedures regarding Carnelian- Marine- St. Croix Watershed District Rules, adopted December 14th, 2016.
- Appendix

This LWMP updates the plan that was included in the City's 2040 Comprehensive Plan updated in 2018, and will be applicable until the City is required to update its plan for the next Comprehensive Plan Update. Periodic amendments may also be required to incorporate changes in local policies as well as changes to the Watershed Management Plans of the watersheds with jurisdiction in the City.

II. INTRODUCTION

A. Background

The City of Marine on St. Croix was founded in 1839 when it was referred to as Marine Mills. Marine on St. Croix is a community surrounded with beautiful natural areas, an attractive downtown and spirited community. Marine on St. Croix's success today is a result of active efforts through decades of community work, foresight, and planning. This Comprehensive Plan seeks to build on previous work and to enhance those qualities that make Marine on St. Croix a special place. The Local Water Plan is an extension of the Comprehensive Plan and identifies critical natural resources and the goals, policies and implementation strategies that are in place to protect them.

As Marine on St. Croix's population surpasses the all-time high of 679 people set in 1890, the sense of history and tradition continues to influence the City's current plans and actions. The City's current population is 695 (2014 census) and has been forecasted to increase from the current population to 940 in the year 2040¹. The City is engaged in a continuous planning effort that is imperative for development of a community that places value on the preservation of natural resources, construction of interconnecting park and trail systems, and general creation of an enjoyable place to live.

The City of Marine on St. Croix is located in the northeast corner of Washington County. Relative to the Twin Cities, Forest Lake is located approximately 20-30 miles north-northeast as seen in Figure SW-01. The City of Forest Lake is bounded on the north by Scandia, on the west and south by May Township and on the east by the St. Croix River.

This report provides the City of Marine on St. Croix with a local surface water management plan (LSWMP) that will serve as a guide for expansion and development of the City's surface water system. This report builds upon previous studies within the City, including the:

1. 2030 and 2040 Comprehensive Plans
2. 2013 Local Surface Water Management Plan
3. Carnelian Marine-St. Croix Watershed District, Watershed Management Plan, amended 2015
4. 2014 – 2024 Washington County Groundwater Management Plan

B. Purpose

The Local Surface Water Management Plan (LSWMP) will serve as a comprehensive planning document to guide the City in conserving, protecting, and managing its surface water resources. The LSWMP meets requirements as established in Minnesota Rules 8410, Metropolitan Council's SWMP Guidelines, and all rules and regulations of the Carnelian-Marine St. Croix Watershed District. In a three-part process, the LSWMP does the following:

1. Collect and compile the efforts of agencies and organizations including various departments of the City of Marine on St. Croix. This includes past reports and studies, management plans, monitoring studies, as well as completed and proposed improvement projects.
2. Review the current state of the City's surface water resources in the context of goals and policies, ordinances, operations and maintenance, flood mitigation, and achievement of targeted water quality levels in its surface waterbodies.
3. Establish reasonable, achievable and affordable goals, and support them by a strong regulatory and management culture. Develop an implementation plan that includes

¹ Metropolitan Council, 2015 System Statement, September 17, 2015

projects and processes that derive from a thorough assessment of current City problem areas and current City stormwater regulations and controls.

In order to arrive at a LSWMP that adequately addresses surface water needs, the emphasis has been on identifying important issues. City staff has participated in collecting data, providing feedback, and contributing knowledge of local systems to aid in developing a strategy that encompasses water quality and quantity issues. The City of Marine on St. Croix is the organizer of the final document which includes contributions from the following agencies and watershed organizations:

- Metropolitan Council
- Carnelian-Marine St. Croix Watershed District (refer to Figure SW-02)
- Washington County

Currently, the City defers the administration and establishment of stormwater management rules and standards to the watershed district. It is not the intent of the City to pursue gaining local regulatory authority at this time. However, the City reserves the right to gain local regulatory control and assume permitting authority at a future date.

C. Consistency with Marine on St. Croix 2040 Comprehensive Plan

The City's Comprehensive Plan, originated in 2007 and 2008, and updated in 2018, defines Natural Environment Goals and Policies to protect the environmental and scenic qualities of the St. Croix River Valley Corridor; preserve and restore sensitive natural resources, significant ecological areas, and habitat; and maintain the City's long, progressive focus on conservation, recycling and sustainable development. The relevant policy statements, relating to streams, derived from these goals include the following.

1. The City will improve the storm water system in the Village Center.
2. The City will encourage rain gardens in an effort to establish a City-wide storm drainage system that promotes storm water infiltration and water quality.
3. The City will continue to review ordinances to ensure the natural drainage systems within the City, including wetlands, ponds, and runoff, will be protected to manage both the quantity and quality of the City storm water. The City will require new development to manage storm water runoff in a manner that limits post development storm water flows to the same volumes and rates as the pre-development condition.
4. The City will work cooperatively with the Carnelian Marine Saint Croix Watershed District and Washington County to achieve the goals of improved stormwater management and water quality throughout the watershed.

The City will address its local surface water management plan within two years of the newly created Carnelian Marine St. Croix Watershed District watershed plan. The Watershed District will continue to have permitting authority and the City will continue to cooperate with the Watershed District through development review and the permitting process. This Local Surface Water Management Plan is consistent with and is an extension of the City of Marine on St. Croix 2040 Comprehensive Plan.

III. LAND AND WATER RESOURCE INVENTORY

A. Land Use

Refer to the Land Use section of the 2040 Comprehensive Plan for additional information on the City's current land use and zoning and the anticipated development patterns. Further, refer to Figure SW-03 for the existing land use, Figure SW-04 for the current zoning, and Figure SW-05 for the future land use. The Comprehensive Plan defines goals and policies that preserve the contiguous open spaces throughout Marine on St. Croix, create cohesive neighborhoods, and maintain the geographic size of the Village Center. Table 1 is a summary of the current zoning in Marine on St. Croix.

Table 1: Summary of zoning and area within the City.

Zoning Designation	Area (ac)	Percent of Area
Central Business District	6	0.3%
Single Family Rural	1862	78.6%
Single Family Urban	162	6.8%
St Croix Rural District	202	8.5%
St Croix Urban District	137	5.8%

B. Soils

The soils information in this section is taken from the USDA-NRCS Soil Survey of Washington County. The soils maps in that report are general and intended for broad planning purposes. The major soil associations found within the City are summarized below. Details on the soils included in each association can be found in the aforementioned report. The generalized soils located within the City have been mapped, and are shown on Figure SW-06. In general, hydrologic soils group A tend to be sandier soils with high infiltration capacity. Conversely, hydrologic soils group D tends to be more clayey soils with low infiltration rates.

Table 2 is a summary of the design infiltration rates and corresponding soil types as defined by the Minnesota Pollution Control Agency (MPCA) Minnesota Stormwater Manual (updated 2017). The infiltration rates listed in the table were updated with the most recent updates to the Manual which resulted lower design infiltration rates for B and D soils. The soils maps in that report are general and intended for broad planning purposes. Details on the soils included in each association can be found in the aforementioned report. The generalized soils located within the City have been mapped and are shown on Figure SW-06.

Table 2: Summary of Hydrologic Soils Groups, Design Infiltration Rates and Unified Soil Classifications.

Source: Minnesota Stormwater Manual (MPCA, 2017).

Hydrologic soil group	Infiltration rate (in/hr)	Infiltration rate (cm/hr)	Soil textures	Corresponding Unified Soil Classification
A	1.63	4.14	gravel	GW - well-graded gravels, sandy gravels
			sandy gravel	GP - gap-graded or uniform gravels, sandy gravels
			silty gravels	GM - silty gravels, silty sandy gravels
				SW - well-graded gravelly sands
	0.8	2.03	sand	SP - gap-graded or uniform sands, gravelly sands
			loamy sand	
			sandy loam	
B	0.45	1.14		SM - silty sands, silty gravelly sands
	0.3	0.76	loam, silt loam	MH - micaceous silts, diatomaceous silts, volcanic ash
C	0.2	0.51	Sandy clay loam	ML - silts, very fine sands, silty or clayey fine sands
D	0.06	0.15	clay loam	GC - clayey gravels, clayey sandy gravels
			silty clay loam	SC - clayey sands, clayey gravelly sands

C. St. Croix River

Refer to Figure SW-07 for the national wetlands inventory (NWI) and public waters inventory (PWI) for the City of Marine on St. Croix. The St. Croix River joins with the Mississippi River at Point Douglas, MN / Prescott, WI and then flows south to the Gulf of Mexico. The Lower St. Croix River was designated as a National Wild and Scenic Riverway by Congress in 1972. The portion of the river given the Wild and Scenic designation extends from its source in Wisconsin to its mouth at Point Douglas, MN/Prescott, WI. In 2000, a Cooperative Management Plan was developed for the Lower St. Croix by the Lower St. Croix Management Commission with the assistance of the Lower St. Croix Planning Task Force. The portion of the St. Croix River that forms the eastern boundary of the CMSCWD is listed on the MPCA Impaired Waters List per Section 303(d) of the federal Clean Water Act. This part of the River is identified as impaired for aquatic consumption by mercury and PCBs. Just downstream of the CMSCWD, the St. Croix River widens to form Lake St. Croix which extends to the confluence with the Mississippi River. Lake St. Croix is listed as impaired for aquatic recreation by excess nutrients.

The St. Croix River is currently classified by the State of Minnesota as an Outstanding Resource Value Water for its water quality, wildness and other benefits. By state statute, new or expanded discharges (changes in volume, quality, location or any other manner) to the St. Croix River must be controlled so as to prevent deterioration in the quality of the St. Croix River (MN Statute 7050.0180 Subp. 9).

D. Streams

Marine on St. Croix has four major streams identified in the CMSCWD Plan as well as numerous smaller springs and seeps but no lakes. All four streams have a good and very good overall water quality “grade” as determined by the District per the 2010 Plan. However, since that time monitoring of Dunn’s Creek has indicted some water quality impacts that are

currently under study. The City will work in partnership with the District to address key management recommendations described by the CMSCWD 2010 Watershed Management Plan. Marine is proud of the condition of our streams and strives to maintain and possibly improve their conditions.

Dunn's Creek

Most of Dunn's Creek is located on the Pine Needles Land Preserve, which was originally the property of James Dunn and today is owned by the St. Croix Watershed Research Station. The 27-acre watershed draining to Dunn's Creek is located within the northern limits of the village of Marine-on-St. Croix. The upper one-third of this watershed includes the Highway 95 right-of-way and several residential homes on large lots, set above the bluff line. The lower two-thirds of this watershed is completely forested and undeveloped, with the exception of a small cabin and access road to a rustic cabin. Dunn's Creek begins at the confluence of two large springs discharging midway between the middle and lower terraces of the St. Croix River. A third spring-fed tributary joins the creek as it flows along the base of the bluff within a mixed hardwood seepage swamp before discharging to the St. Croix River.

The lower portion of Dunn's Creek watershed encompasses the northerly portion of a large mixed hardwood seepage swamp extending, more or less, from the north boundary of the village of Marine-on-St. Croix, to the south of William O'Brien State Park. This mixed hardwood seepage swamp includes numerous, small inclusions of tamarack swamp, rich fen and spring discharge points that support, in addition to Dunn's Creek, several other spring creeks.

This diverse, groundwater-dependent wetland complex is at its highest quality in the vicinity of Dunn's Creek. An excellent quality white pine-mesic hardwood forest is also present along a narrow rock outcrop that borders the bank of the St. Croix River. Although no rare feature records are specific to this area, many of the species of birds noted elsewhere along the river are likely present here. In addition, the Blanding's turtle (*Emydoidea blandingii*) is a state-listed threatened species that may be encountered throughout the watershed. In-stream conditions would support cold water fish species; however none are documented for this stream.

Based on macroinvertebrate data from the 2003 Lower St. Croix River Spring Creek Stewardship Plan, Dunn's Creek has a water quality rating of 'B.' Hilsenhoff's biotic index (HBI) is good, and the data show a decent percent EPT (percent of pollutant intolerant mayflies, stoneflies and caddisflies in the sample) and low dominance of any single species.

Judd Street Creek

Judd Street Creek is located within the southern portion of Marine-on-St. Croix. Judd St. Creek drains from the upper St. Croix River terrace located upslope of Highway 95. From this upper terrace, flows spill down a short slope to the middle St. Croix River terrace along Highway 95. From Highway 95, Judd Street Creek flows approximately one half mile as a ditch to Judd Street.

Much of this section appears to have been routed around residential homes on the west side of Judd Street. Where the stream meets Judd Street, a concrete cistern box collects ground water and contributes additional flows to the creek. Downstream of Judd Street, the stream flows about 150 feet, where it outlets to the St. Croix River. Judd St. Creek receives runoff from a 61 acre watershed.

The upper-most portion of the watershed ends abruptly at the Wisconsin Central Rail. While the topography continues to slope upward, west of the rail (in the general vicinity of Jackson Meadows) the rail grade has interrupted this flow and diverted it towards the Mill Stream

watershed. Land use includes hayfields in the upper watershed and residential in the lower watershed.

The middle portion of the watershed, however, is forested. The Judd St. watershed receives groundwater discharges from two groundwater-dependent wetland complexes.

The wetland complex located on the upper St. Croix River terrace is a continuation of the wetland complexes that encompass the Minnow Farm site to the north. The wetland communities present within the Judd Street watershed include mixed hardwood seepage swamp and rich fen. Unfortunately, these wetland communities are dominated by smooth buckthorn (*Rhamnus frangula*) and reed canary grass (*Phalaris arundinacea*), which has substantially lowered the quality of the wetlands. Judd Street Creek flows through a mixed hardwood seepage swamp wetland complex as it crosses Highway 95. This mixed hardwood seepage swamp includes numerous, small inclusions of tamarack swamp, rich fen and spring discharge points that support, in addition to Judd Street Creek, several other spring creeks. No rare feature records are known for this area. Although some fish habitat is present, there are no records of fish for this stream. However, the Blanding's turtle (*Emydoidea blandingii*) is a state-listed threatened species that may be encountered throughout the watershed.

Based on macroinvertebrate data from the *2003 Lower St. Croix River Spring Creek Stewardship Plan*, Judd Street Creek has a very good water quality rating of 'A-.' Hilsenhoff's biotic index (HBI) is very good, and the data show a decent percent EPT (percent of pollutant intolerant mayflies, stoneflies and caddisflies in the sample) and richness. Organic enrichment is likely natural from wetlands.

Mill Stream

The Mill Stream watershed is just over 2000 acres. Much of the upper watershed includes small depressions that may only hold water on a seasonal basis. Unless very wet conditions prevail, most of the water within these depressions either infiltrates into the ground or is lost to evapotranspiration. During wet conditions, particularly frozen-ground, snowmelt-runoff periods, these depressions may fill up with enough water to outlet to Mill Stream. This relationship also holds true for the two headwaters lakes, Sand Lake and Hay Lake.

Outflow from Sand Lake through the ephemeral channel within William O'Brien State Park has occasionally occurred in the past. Downstream of the ephemeral channel that outlets from Sand Lake, the perennial portion of Mill Stream starts within a rich fen/cattail swamp located just west of the Park Headquarters. From this northerly point, Mill Stream flows south for about 1.5 miles to the village of Marine-on-St. Croix. Within this 1.5 mile reach, flows increase significantly, as groundwater discharges off the terrace slope located to the west of Mill Stream.

Within the lower-most portion of this reach, DNR Parks has restored wetland communities and approximately 1000 feet of tributary channel that historically flowed to Mill Stream from the numerous springs within this reach. This restoration site, referred to as the Minnow Farm Site, historically consisted of a series of four large ponds and several smaller ponds contained by berms and water control structures. The ponds were fed by numerous groundwater seeps along the terrace slope to the west.

Downstream of the Minnow Farm Site, Mill Stream is impounded (Upper Mill Pond) behind a concrete weir constructed across what was historically a waterfall. Below the Upper Mill Pond, Mill Stream flows as a high gradient stream over bedrock within a deep valley for several hundred feet. Approximately 200 feet upstream of Highway 95, the gradient of Mill Stream lessens considerably as it flows across the middle terrace of the St. Croix River and through the center of Marine-on-St. Croix. Just above Judd Street, Mill Stream is again impounded behind a concrete weir, forming the Lower Mill Pond. Below the concrete weir, Mill Stream flows under the Brookside Bar and outlets over a second waterfall. Below the

second waterfall, Mill Stream flows several hundred more feet through a floodplain forest where it discharges into the St. Croix River.

The watershed of Mill Stream is a diverse mixture of agricultural land, large-lot residential, forest, and woodland and grassland. The lower section of the stream flows through a relatively dense urban community with substantial direct drainage of impervious surfaces, mostly from a combination of residential streets, Highway 95 and CR 4, which all converge near the lower end of the creek and convey storm flows directly to Mill Stream.

Mill Stream is the largest spring creek in the Watershed District in terms of base flow and stream length. Brook Trout (*Salvelinus fontinalis*) are known to occur throughout the entire stream, including the recently restored tributaries on the Minnow Farm site. The best habitat, however, is within the lower sections of the creek below the Upper Mill Pond. In particular, the section directly above Highway 95 contains good habitat and contains fish as large as ten inches. The headwaters of Mill Stream within William O'Brien State Park contain a large, groundwater-dependent wetland complex. This wetland complex has probably been ditched and altered from past grazing more than other wetlands in the area. However, some portions of this wetland complex do include good quality tamarack swamp, mixed hardwood seepage swamp and rich fen. Below Highway 95, Mill Stream flows through an additional groundwater-fed wetland complex. This second wetland complex encompasses many of the same wetland types and is generally of higher quality than wetlands within the headwaters. Silting does exist in the Mill Stream and dredging may need to occur in the future to ensure the quality of water and habitat.

Based on macroinvertebrate data from the 2003 *Lower St. Croix River Spring Creek Stewardship Plan*, Mill Stream has a very good water quality rating of 'A.' Hilsenhoff's biotic index (HBI) is very good, and the data show an excellent percent EPT (percent of pollutant intolerant mayflies, stoneflies and caddisflies in the sample) with other values also indicating good stream health. In addition, the Blanding's turtle (*Emydoidea blandingii*) is a state-listed threatened species that may be encountered throughout the watershed.

Marine Landing Creek

Marine Landing Creek is located just north of Marine-on-St. Croix and outlets to the south of Marine Landing. The stream originates from a series of seeps located at the ridge line along Highway 95. The watershed area is about 36 acres in size, of which approximately 50% is residential land use

The remaining area of the watershed is forested with some areas of open wetland/old field. Marine Landing Creek is one of the shorter streams in the study area, extending approximately 300 feet from its start, just north of the driveway into the Marina to the St. Croix River.

Marine Landing Creek outlets from a hardwood seepage swamp extending, more or less, from the north boundary of the Village of Marine-on-St. Croix to the south of William O'Brien State Park. This mixed hardwood seepage swamp includes numerous, small inclusions of tamarack swamp, rich fen and spring discharge points that support several other spring creeks.

Although no rare feature records are specific to this area, many of the species of birds noted elsewhere along the river are likely present here. The Blanding's turtle (*Emydoidea blandingii*) is a state-listed threatened species that may be encountered throughout the watershed.

Based on macroinvertebrate data from the 2003 *Lower St. Croix River Spring Creek Stewardship Plan*, Marine Landing Creek has a very good water quality rating of 'A-.' Hilsenhoff's biotic index (HBI) is good, and the data show an excellent percent EPT (percent

of pollutant intolerant mayflies, stoneflies and caddisflies in the sample) with other values also indicating good stream health.

E. Wetlands

The CMSCWD 2015 Watershed Management Plan includes a Wetland Management Plan, adopted with the District Plan in 2010 and amended in 2015. The purposes of the Wetland Management Plan is to evaluate the wetland resources of Carnelian-Marine-St. Croix Watershed District (CMSCWD), describe the approach to protecting the functions and diversity of the district's wetlands, and lay the groundwork to improve these resources. Figure SW-08 shows the CMSWD wetland boundaries identified within the City of Marine on St. Croix.

The main emphasis of the Carnelian-Marine-St. Croix Watershed District is the "protection and improvement of water quality" and according to their Second Generation Plan, CMSCWD operates "with intent to protect and improve the water resources, natural habitat and personal property within its boundaries; to educate property owners and the community on the value of water resources; and to promote progressive public relationships and interagency consistency." These goals are consistent with the intent of state and federal rules for wetland protection. The strategy for addressing these goals is to evaluate wetland resources on an individual basin scale, and on a watershed scale. The watershed scale of analysis allows ecological functions and values to be realized that are lost at a smaller scale. The Wetland Management Plan provides a mechanism to address local wetland management and preservation of aquatic resource functions and values at an individual wetland scale and a watershed scale.

The City of Marine contains all three wetland management categories, with Category 3 the smallest total area. The CMSCWD defines the Categories as follows:

Category 1 - High Quality/Highest Priority

Wetlands classified as High Quality/Highest Priority have at least one of the following characteristics:

1. Wetlands rated with exceptional vegetative diversity/integrity, which may include wetlands with natural communities not significantly impacted by invasive species or other human-induced alterations, wetlands harboring endangered or threatened plant species, or rare wetland habitats classified as imperiled (S1) or critically imperiled (S2) by the state rankings.
2. Wetlands that are groundwater dependent plant communities and have a vegetative
3. diversity/integrity rating of medium or higher were also placed in this category. These wetlands may have suffered some degradation from human influences due to their heightened sensitivity.
4. Wetlands with a high vegetative diversity/integrity rating and a high rating for hydrologic regime. The vegetative community in these wetlands typically has been only slightly affected by humans and still maintains high functioning levels for hydrologic regime, which is critical to wetland sustainability.
5. Wetlands with a high vegetative diversity/integrity rating and a high rating for wetland water quality; OR wetlands with a high vegetative diversity/integrity rating and a high rating for downstream water quality. The vegetative community in these wetlands typically has been only slightly affected by humans and still maintains high functioning to maintain water quality, which is critical to wetland sustainability.

6. Wetlands rated as exceptional for wildlife habitat. These include wetlands known to harbor endangered or threatened animal species, rare communities, or wildlife refuges and fish and wildlife management areas whose purpose is maintaining suitable habitats for wildlife.

Category 2 - Stream Corridor and Shoreland Wetlands (that are not a Category 1)

Wetlands classified as Stream Corridor and Shoreland Wetlands have at least one of the following characteristics:

7. These wetlands include all Stream Corridor and Shoreland Wetlands not already classified as Category 1.
8. Wetlands rated as high for amphibian habitat.
9. Wetlands rated as exceptional or high for fish habitat. These wetlands include those specifically managed for fish management; designated trout streams, lakes or adjacent wetlands; and known spawning habitat for game fish.
10. Wetlands with a medium vegetative diversity/integrity rating and a high rating for hydrologic regime. The vegetative community in these wetlands has only been moderately affected by humans and still maintains high functioning levels for hydrologic regime, which is critical to wetland sustainability. These wetlands would likely benefit from active management.
11. Wetlands that are highly sensitive to stormwater impacts and have a vegetative diversity/integrity rating of medium or high were also placed in this category.
12. Wetlands with a medium vegetative diversity/integrity rating and a high rating for wetland water quality. The vegetative community in these wetlands has only been moderately affected by humans and still maintains high functioning levels for water quality, which is critical to wetland sustainability.

Category 3 - Isolated Wetlands (that are not a Category 1)

These wetlands include all other isolated wetlands not already classified as Category 1. These wetlands receive the third highest level of protection.

F. Groundwater

The County adopted the Washington County Groundwater Plan in September 2014, which is in effect at the time of adoption of the City of Marine on St. Croix Local Surface Water Management Plan. The goal of the Washington County Groundwater Plan (Plan) 2014-2024 is to:

“Manage the quality and quantity of groundwater in Washington County to protect health and ensure sufficient supplies of clean water to support human uses and natural ecosystems.”

The Plan describes a need for increased coordination and collaboration amongst water management agencies, additional groundwater research, and understanding needs of competing interests for County groundwater. Marine hereby incorporates by reference the Washington County Groundwater Plan 2014-2024 and includes relevant implementation actions from the County Ground Water Work Plan into the forthcoming Comprehensive Plan update. The City of Marine will follow the groundwater protection framework identified in the County’s plan.

G. Land Cover

Figure SW-09 displays the natural areas, open spaces and Regionally Significant Ecological Areas (RSEA) within the City of Marine on St. Croix. Also, Figure SW-10 displays land cover using the Minnesota Department of Natural Resources’ (MN DNR) Minnesota Land

Cover Classification System (MLCCS). MLCCS combines the Minnesota Natural Heritage native plant community types with a cultural classification system to distinguish among different types and amounts of land cover, vegetation and impervious surfaces. Information on the location, type, size, and quality of remaining natural areas is included in the MLCCS. Approximately 95% of the land cover in the City of Marine on St. Croix is classified as some form of natural area. Figure SW-10 shows remaining natural areas within the City and the table below summarizes the acreage of each type of natural area within the City.

Table 3: Summary of Land Cover.

Land Cover Code	Land Cover Type	Area (ac)	Percent
11	5-10% Impervious	341	2%
12	11-25% Impervious	147	1%
13	26-50% Impervious	82	1%
14	51-75% Impervious	6	0%
15	76-100% Impervious	163	1%
21	Short Grasses	7	0%
22	Agricultural Land	96	1%
23	Maintained Tall Grass	347	2%
24	Tree Plantation	105	1%
31	Forest	1146	7%
32	Wetland Forest	319	2%
51	Shrubland	0	0%
52	Wetland Shrubs	36	0%
61	Tall Grasses	164	1%
62	Wetland Emergent Veg	162	1%
63	Dry Tall Grasses	275	2%
71	Lichen Schrubland	0	0%
81	Rock Outcrop	0	0%
82	Mud Flat	2	0%
90	Open Water	12022	78%
92	Wetland Open Water	12	0%

H. Impaired Waters

As part of the federal Clean Water Act, the State of Minnesota is required to adopt water quality standards to protect lakes, streams, and wetlands from pollution. These standards identify how much bacteria, nutrients and other pollutants can be present and still have the water body meet its designated uses such as fishing and swimming. If a water body does not meet one or more of these standards it is identified as “impaired”. The Minnesota Pollution Control Agency (MPCA) administers this program in which the State of Minnesota is required to identify and restore impaired waters. To meet this requirement the MPCA has developed a three step program in which:

1. Assesses all waters of the state to determine if they meet water quality
2. Lists all waters that do not meet standards
3. Conducts studies to establish pollution reduction measures to restore the water bodies.

Once these steps are completed, each water body will have a pollutant reduction goal defined as a TMDL, or Total Maximum Daily Load, which represents the maximum amount of a pollutant a water body can receive and still meet water quality standards.

In Marine on St. Croix, the St. Croix River is impaired for Mercury and Polychlorinated Biphenyls in fish tissue (Hg-F and PCB-F) from Taylors Falls to the confluence of the Apple River in Wisconsin. There currently is not an approved TMDL for either of these impairments. Also, Lake St. Croix is impaired for excess nutrients between Stillwater, MN and Prescott, WI. A TMDL will be jointly prepared by the Minnesota Pollution Control Agency and the Wisconsin Department of Natural Resources. Impaired waters for Marine on St. Croix can be seen in Figure SW-11.

IV. GOALS AND POLICIES

A. Village Center Comprehensive Plan Addenda

In a parallel planning effort to the development of the Local Surface Water Management Plan, the City of Marine on St. Croix has prepared an addenda to the 2040 Comprehensive Plan focused on the Village Center recognizing four distinguishing factors:

1. The identity and character of the historic village (large parts of the City, including the Village Center, are a National Historic District). The Village Center also contains the Marine Mill Site, a National Historic Site based on its history as the first commercial industrial site – a sawmill - in Minnesota.
2. Proximity to the St. Croix River, which borders the Village Center. The St. Croix is protected and enjoyed as a National Wild and Scenic River; the adjoining areas, including the Village Center, are part of the associated Riverway.
3. Green space throughout the city. The City, by its topography and development patterns, retains large undeveloped or sparsely developed areas, providing a more human scale and natural appearance as well as protective features for the environment.
4. A pervasive community participation and interaction. The Village Center provides spaces for interaction among the local population and also visitors; volunteer participation provides a higher level of services than normally found in like sized communities in the metro area.

A primary goal of the Village Center Plan and Task Force work effort is to address stormwater quantity and quality within the Village Center prior to discharging to the St. Croix River. Policies of the Addenda reflect a strong commitment to improved stormwater management.

B. Marine on St. Croix Local Surface Water Management Plan Policies

1. Incorporates by reference the following:
 - a) Carnelian Marine Watershed District 2015 Watershed Management Plan, including the Wetland Management Plan, the Northern Washington County Spring Creek Study, and the District Rules.

- b) The *Washington County Groundwater Plan*, adopted 2014. And, participate with the CMSCWD in imminent update of the ten-year County Groundwater Plan process.
2. Implementation of CSMCWD Rules in the St. Croix Urban Residential, Single Family Urban and the Village Center zoning districts through a Memorandum of Understanding between the Carnelian-Marine-St. Croix Watershed District and the City of Marine on St. Croix for Local Water Planning and Regulation (see attached).
3. Support the stormwater management Policies described by the Village Center Comprehensive Plan Addenda.
4. Amend local ordinances within six months to ensure local official controls are consistent with District standards and Rules.

C. City Development Controls

1. Erosion Control

The City is committed to the goal of no adverse impact (nondegradation goal) on our water resources. In support of that goal, the City has a policy of managing new construction to minimize erosion control and to avoid large grading and reclamation projects unless the project is properly managed. The City adopted Zoning Ordinances in 2018 including erosion and sediment controls (see Appendix C). These ordinances addresses, new construction and those sites where grading or reclamation will take place.

The 2040 Comprehensive Plan highlights that the City has very few sites left for new home construction, and all commercial development is restricted to the Village Center (downtown area). The City's ability to manage and effect erosion control associated with construction will primarily be in the areas of house remodeling or renovation, lot improvements such as driveway construction, and street, county road or state highway construction.

2. Peak Runoff Control

It is City policy to recognize the impact of stormwater runoff on the sensitive wetland areas of the City and on the St. Croix River, and to manage peak runoff to minimize this impact. The topography of the Marine on St. Croix area increases the importance of stormwater runoff control.

A study entitled 'Preventing Stormwater Runoff Problems Through Watershed Land Design' (Vogel et.al, 1999, Department of Landscape Architecture, University of Minnesota) included a thorough study of the stormwater flow within the City of Marine on St. Croix. This study identified the 19th Century village characteristics that have been retained within the City, noting that development patterns were greatly influenced by the topography of the area, as buildings were sited away from ravines, natural drainageways, and wetlands since large earthmoving equipment was non-existent during the development of the City. This development pattern continues today, as many of the areas of overland drainageways, streams, natural wetlands and swales/ditches have been retained as parks or right-of-ways that act as a greenway within the City, and allow the temporary retention and filtration of stormwater. In fact, the overland flow of water has become a feature that is treated as an amenity in the City, whether it is a street side rain garden, or a bridged community ravine (Vogel, et al, 1999). To further aid in erosion control and surface water management, the massing of vegetation along ravine banks and other overland water drainageways greatly aids transpiration, infiltration and soil stabilization. Additionally, streets and structures are located and aligned in a manner that often does not disrupt the original, natural drainage patterns.

Streets have tended to follow existing topography, requiring less grading, and preserving the natural slopes, plus traditional minimal use of street curbs allows water to sheet flow into roadside swales. Here the water is more gradually carried away to the river or infiltrates into the soil below. In addition, there are several undeveloped meadows, located on the upper river terraces (Jackson Meadow is one site), that function as holding areas for stormwater, before it continues on its way to the St. Croix River (Vogel, et al, 1999).

The City has adopted ordinances which help to control and minimize peak runoff. In the St. Croix River Urban and Rural districts, ordinances require lower density (1 acre lots), and also require less than 20 % impervious surface. In all districts construction is prohibited on slopes greater than 18 %. Within the St. Croix River districts no construction is allowed on slopes greater than 12 %. In other City districts construction on slopes between 12 and 18% is carefully reviewed.

The City's subdivision ordinance requires a 50% set aside of green space for major subdivisions. The City works with the County to identify and maintain critical wetlands and no construction is allowed in these areas. The City continues to minimize the use of street curbs, and continues to use its traditional stormwater management system of ditches, swales and meadows. In addition, as the City undertakes street improvement projects it has a policy of working to improve stormwater pre-treatment.

Additional policies and ordinances which support the goal of no adverse impact on our water resources include the City's long-time policy of not vacating City right-of-way's. This policy is especially important as many east-west streets are platted to the St. Croix River, providing additional greenways as these streets are not maintained for vehicular traffic. The City's erosion control ordinance includes the requirement that new construction ensure surface water runoff from a lot is at its pre-development rate, and also requires new construction to maintain the natural drainageways of the City. The City anticipates these requirements will become part of the watershed district permitting process, once the CMSCWD completes its initial, rule development phase. The City will review its ordinances which address erosion control and stormwater runoff when the CMSCWD.

V. IMPLEMENTATION

The City supports priorities identified in the implementation section of the CMSCWD Plan, specifically under Capital Improvement Projects item B, Neighborhood Wide Small Lot Stormwater Management Incentive Program, and Non-Structural Projects and Studies item Highway 95 Wetlands in Marine Management Plan.

A. Stormwater Management Programs

The City of Marine on St. Croix has identified areas within the adopted District Rules that are problematic in implantation and inconsistent with the existing urban residential areas of our City. However, re-examining the policies derived from a) the Natural Environment Goal 2 of the city's 2008 Comprehensive Plan (above), b) the CMSWD Plan's recommendations for the four major streams in the City (as follows), and c) noting that the historical development of the City placed the greatest density of impervious surfaces adjacent to these streams, it is apparent that runoff from these impervious surfaces into the streams is and has been a factor in maintaining water quality of the streams and ultimately the St. Croix River. Problems and inconsistencies for these urban areas therefore are less in the stated policies and more in defining implementation steps, especially in coordination with the more recent CMSCWD plan.

The Neighborhood Wide Small Lot Stormwater Management Incentive Program supports projects directed towards entire neighborhoods that consist of high-density, single-family residential development. The purpose is to implement stormwater BMPs throughout an entire neighborhood as a community program.

1. The City will direct its surface water management efforts to two control zones within the City; one covering the Single Family Rural and St. Croix Rural zoning districts, and the other covering all other areas of the City which include Single Family Urban, St. Croix Urban, and Village Center zoning districts.
2. In the Single Family Rural and St. Croix Rural zoning districts the City and CMSCWD will administer the CMSCWD Plan and Rules.
3. In the Single Family Urban, St. Croix Urban, and Village Center zoning districts the City will manage surface water issues as enabled by Section 2.7.4 of CMSCWD Rules and the MOU approved by the City Council October 10, 2013.
4. In the Single Family Urban, St. Croix Urban, and Village Center zoning districts the City will place priority on limiting the effects of additional impervious areas thru the mitigation of the surface water flows from those areas, using the provisions of CMSCWD's Neighborhood Wide Small Lot Stormwater Incentive Program.
5. The City, as funds and designs become available, will install run off management structures to protect the streams designated in the CMSCWD Plan.
6. The City will continue ongoing negotiations with MNDOT to facilitate solutions to surface water issues related to or adjacent to TH 95.

Implementation costs paid for through a combination of City funds, District funds and grants. IE: A submitted grant request (October 5, 2013) for Clean Water Fund funding as administered by the Board of Water and Soil Resources. Marine on St. Croix is listed as an example area where the District's Neighborhood Wide Small Lot Stormwater Management Incentive Program may be applicable. The District budgeted funds for 2014, and 2017 for this effort.

In 2017, CMSCWD and the City revived additional funding for Phase 2 of the residential rain garden implementation project. Numerous rain gardens will be constructed in conjunction with the grant between 2017 and 2019.

B. Support for Management Recommendations of Four Streams in Marine on St. Croix

Described by the CMSCWD Northern Washington County Spring Creek, 2003 for its streams as follows:

A. CMSCWD Plan Key Management Recommendations for Dunn's Creek:

1. All existing and new development along the bluffline above Dunn's Creek should limit stormwater runoff to pre-development levels.
2. Landowners along the bluffline above the groundwater discharge areas should retain a generous buffer of native vegetation.
3. Elevated nitrate and chloride levels in Dunn's Creek suggest that local runoff (from the Marine-on-St. Croix Wastewater Treatment Facility) and impervious roadway surfaces may be impacting water quality. The Watershed (Research Station) may want to monitor water quality in this stream. Note: Since the District adopted this plan in 2010, the City has and continues to monitor the groundwater wells surrounding the City drainfield according to MPCA requirements.

C. CMSCWD Plan Key Management Recommendations for Judd Creek:

1. Install rain-water gardens in swales along Judd St. Creek. Because of their visibility, these rain gardens could serve as educational/demonstration sites.
2. Where stream-side buffers are lacking or of poor quality, create/improve buffer with plantings of native vegetation.

Within mixed hardwood seepage swamp (between Highway 95 and Judd Street), the City, Watershed and Mill Stream Association should work together to control buckthorn and, where appropriate, reestablish native tree and shrub species. In particular, these efforts should be encouraged along the stream corridors.

D. CMSCWD Plan Key Management Recommendations for Mill Stream:

1. Stabilize streambank of Mill Stream on cut bank just above footbridge in Zoller's Ravine.
2. Within Zoller's Ravine, establish shade-tolerant understory shrubs and groundcover species to stabilize stream bank and improve fish habitat.
3. Encourage landowners to retain woody debris within stream channel to improve fish habitat.
4. Within Mill Stream just upstream of Highway 95, place rock or stone deflectors within channel to reverse aggrading.
5. The Highway 95 culvert should be replaced, with the upstream and downstream culvert invert placed below the existing stream grade Alternatively, options to raise the grade of the stream (to reduce the head between the upstream and downstream end of the culvert) should be considered.
6. Work with Marine-on-St. Croix and private landowners to create a continuous vegetative buffer of native vegetation between Highway 95 and the Brookside Bar and Grill at Judd Street.
7. Work with Marine-on-St. Croix to install stormwater infiltration and rainwater gardens to intercept stormwater runoff that is currently discharging into Mill Stream from impervious surfaces.
8. Remove sediment from City Mill Pond and partially route Mill Stream around pond. Install native vegetative buffer around edges of pond.
9. Where Mill Stream crosses under Judd Street, install trench drains to intercept stormwater and discharge it to water quality treatment waterway/vegetative swale.
10. Consider taking Lower Mill Pond offline and reroute base flow only into pond.
11. City of Marine on St. Croix to take over maintenance of the Judd Street ditch.

E. CMSCWD Plan Key Management Recommendations for Marine Landing Creek:

1. For residential areas draining to Marine Landing Creek, encourage the use of residential rain gardens and vegetated swales to store and convey stormwater. The springs emanate from the middle Mazomanie Facies of the Franconia Formation. The stream also receives surface runoff from the river terraces above.
2. Establish stormwater demonstration sites to educate residents on stormwater management BMPs.
3. Work with Mn/DOT and the City to control stormwater runoff from residential area and Highway 95. Several areas to the north of Marine-on- St. Croix along Highway 95 could potentially serve as regional infiltration basins. The water is has a low

calcium/magnesium ratio, indicating that recharge of the water could be coming from a nearby lake or lakes, possibly in the area of Big Marine Lake.

4. The in-slope of Highway 95 is severely eroded in several places. Once #3 is addressed, these areas should be stabilized and restored cooperatively with Mn/DOT and the City of Marine-on-St. Croix Marine Landing Creek.

Implementation costs and technical assistance primarily provided by the CMSCWD in partnership with the City of Marine on St. Croix.

F. Implementation of Wetlands Conservation Act

The Washington Conservation District (WCD) assists the local Municipalities as the Local Government Unit (LGU) for implementing the Wetland Conservation Act (WCA), which regulates activities having the potential to drain, fill, or alter wetlands.

The City of Marine on St. Croix has identified areas within the adopted District Rules that are problematic to implement and inconsistent with the existing urban residential areas of our City. Due to this unique and historic platting and development, any land parcel occupied by a legally conforming use as defined by the Marine on St. Croix Zoning Ordinance, or having been occupied by such legally conforming use since January 1, 2000, shall be allowed to continue in that use. Existing separation from wetlands of improvements associated with that use or uses shall be allowed to continue but may not be reduced. Existing buffers around wetlands and streams shall be allowed to continue but may not be reduced. In addition, any increase in impervious surface in these areas is subject to the same guidelines for stormwater management mitigation as other uses within the same City zoning district.

Implementation primarily provided by the City of Marine on St. Croix in partnership with CMSCWD.

G. Development of a Highway 95 Wetlands Marine Management Plan

Marine on St. Croix supports, as described in the CMSCWD Plan under Capital Improvement Projects, the development of a plan to restore or enhance wetland vegetation and the historic hydrology of a wetland complex. Recognizing the plan will need to be sensitive to local homeowners currently experiencing water problems in their buildings.

Implementation costs and technical assistance primarily provided by the CMSCWD in partnership with the City of Marine on St. Croix.

Table 4: Summary if Implementations Projects.

Project	Improvement Cost Estimate	
	Low	High
Dredging of Upper & Lower Mill Ponds	\$35,000	\$100,000
Village Center Stormwater Improvements	\$50,000	\$250,000
Improve stormwater collection and pre-treatment of City streets, as part of on-going street improvement projects	\$10,000	\$35,000
Residential Rain Garden Implementation, Phase 2	\$200,000	\$250,000
Request help from CMSCWD to define scope of study on runoff sources and volumes within the City, identify partners, kickoff meeting to design and begin study, put in City budget.	TBD	
Highway 95 Runoff Collection Improvements	TBD	
Dunn's Creek Improvements	TBD	
Judd Creek Improvements	TBD	
Mill Stream Improvements	TBD	
Marine Landing Creek Improvements	TBD	
Total	\$295,000	\$635,000

H. Administrative Procedures regarding Carnelian- Marine- St. Croix Watershed District Rules, adopted December 14th, 2016.

1. Permit application or inquiry received.
2. Review to see if CMSCWD Rules will apply. If uncertain, the determination will be made in consultation with the CMSCWD.
3. If no, proceed with normal permit application process without referral to Watershed District.
4. If yes, provide applicant with appropriate information and refer to Watershed District for required permits and process.
5. Issue building permit only after valid watershed permit is received.
6. Issue final certificate of occupancy only after written notice from watershed district that final inspection has been satisfied.

Implementation costs primarily provided by the City of Marine on St. Croix, and when the Rules apply, by the CMSCWD.

VI. AMENDMENT PROCEDURES

The Marine on St. Croix LSWMP is intended to extend through the year 2028. Updates to this plan will occur every 10 years and align with the Comprehensive Plan update schedule defined by the Metropolitan Council. For the plan to remain dynamic, an avenue must be available to implement new information, ideas, methods, standards, management practices and any other changes that may affect the intent and/or results of the LSWMP. The amendment procedure for the LSWMP is presented below.

A. Request for Amendment

Written request for a plan amendment is submitted to City staff. The request shall outline the need for the amendment as well as additional materials that the City will need to consider before making its decision.

B. Staff Review of Amendment

A decision is made as to the validity of the request. Three options exist: 1) reject the amendment, 2) accept the amendment as a minor issue, with minor issues collectively added to the plan at a later date, or 3) accept the amendment as a major issue, with major issues requiring an immediate amendment. In acting on an amendment request, City staff shall recommend to the City Council whether or not a public hearing is warranted.

C. Council Consideration

The amendment and the need for a public hearing shall be considered at a regular or special Council meeting. Staff recommendations should also be considered before decisions on appropriate action(s) are made.

D. Public Hearing and Council Action

This step allows for public input based on public interest. The City Council shall determine when the public hearing should occur in the process. Based on the public hearing, the City Council could approve the amendment.

E. Watershed District Approval

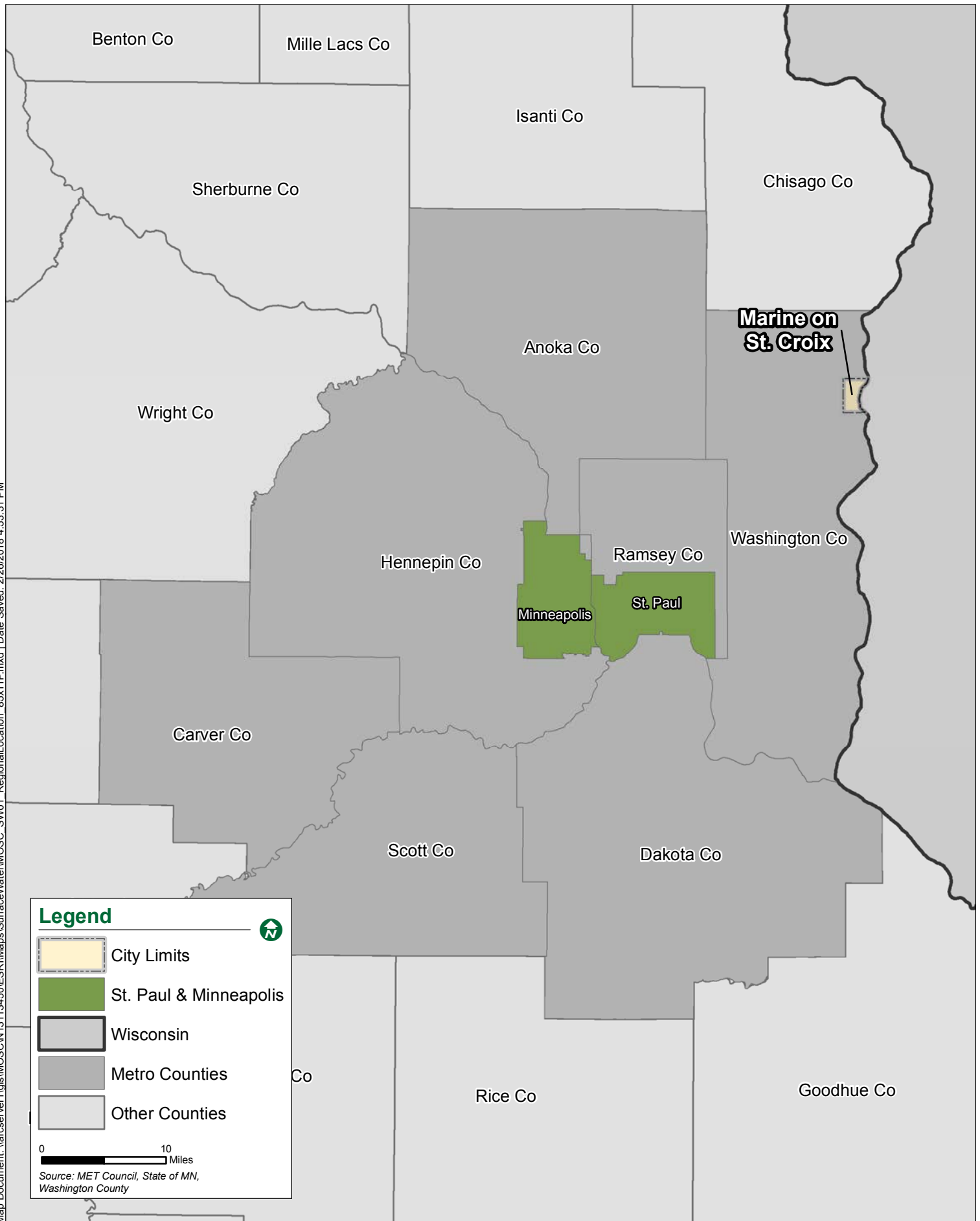
All proposed amendments must be reviewed by the Watershed Districts prior to final adoption of the amendments.

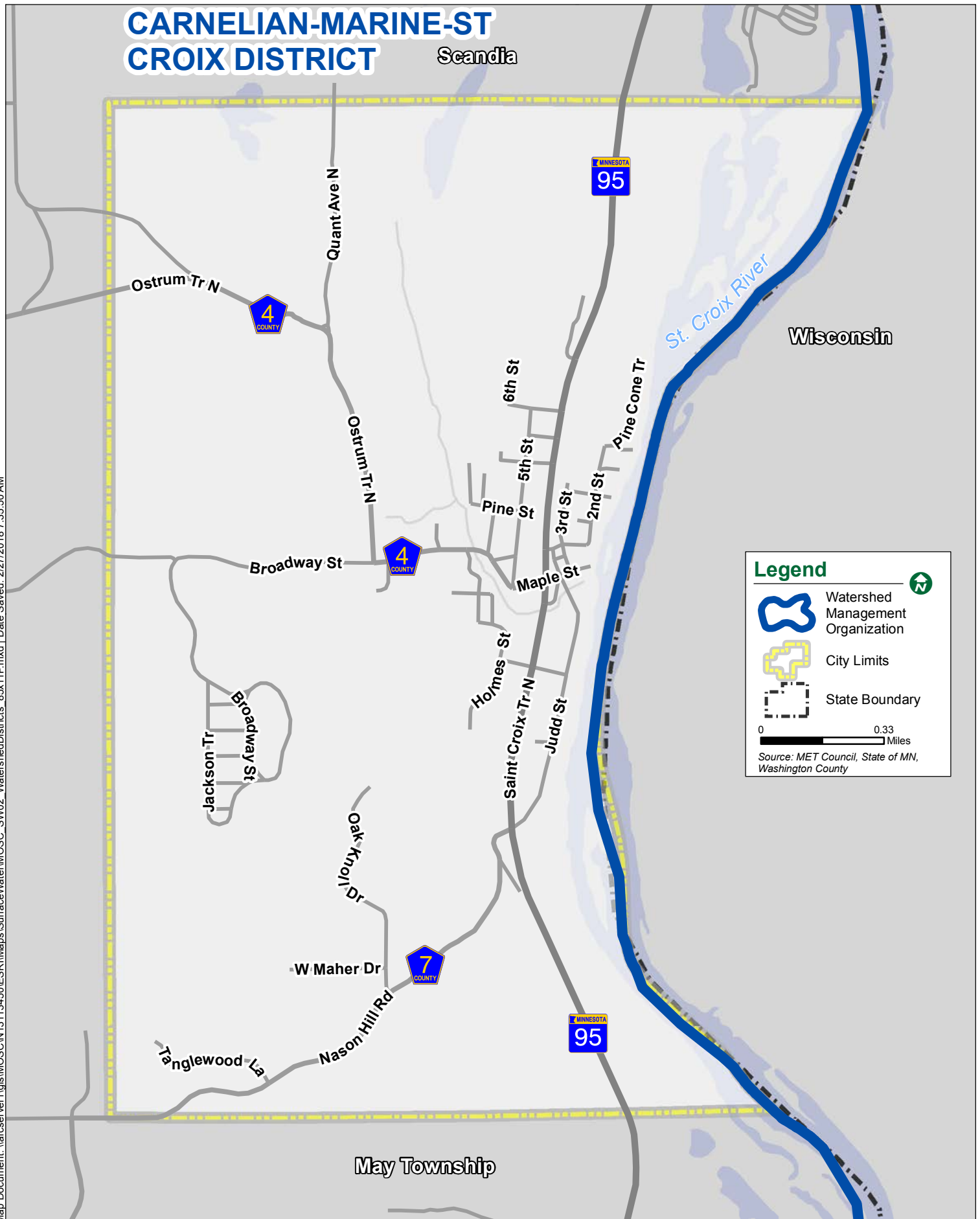
F. Council Adoption

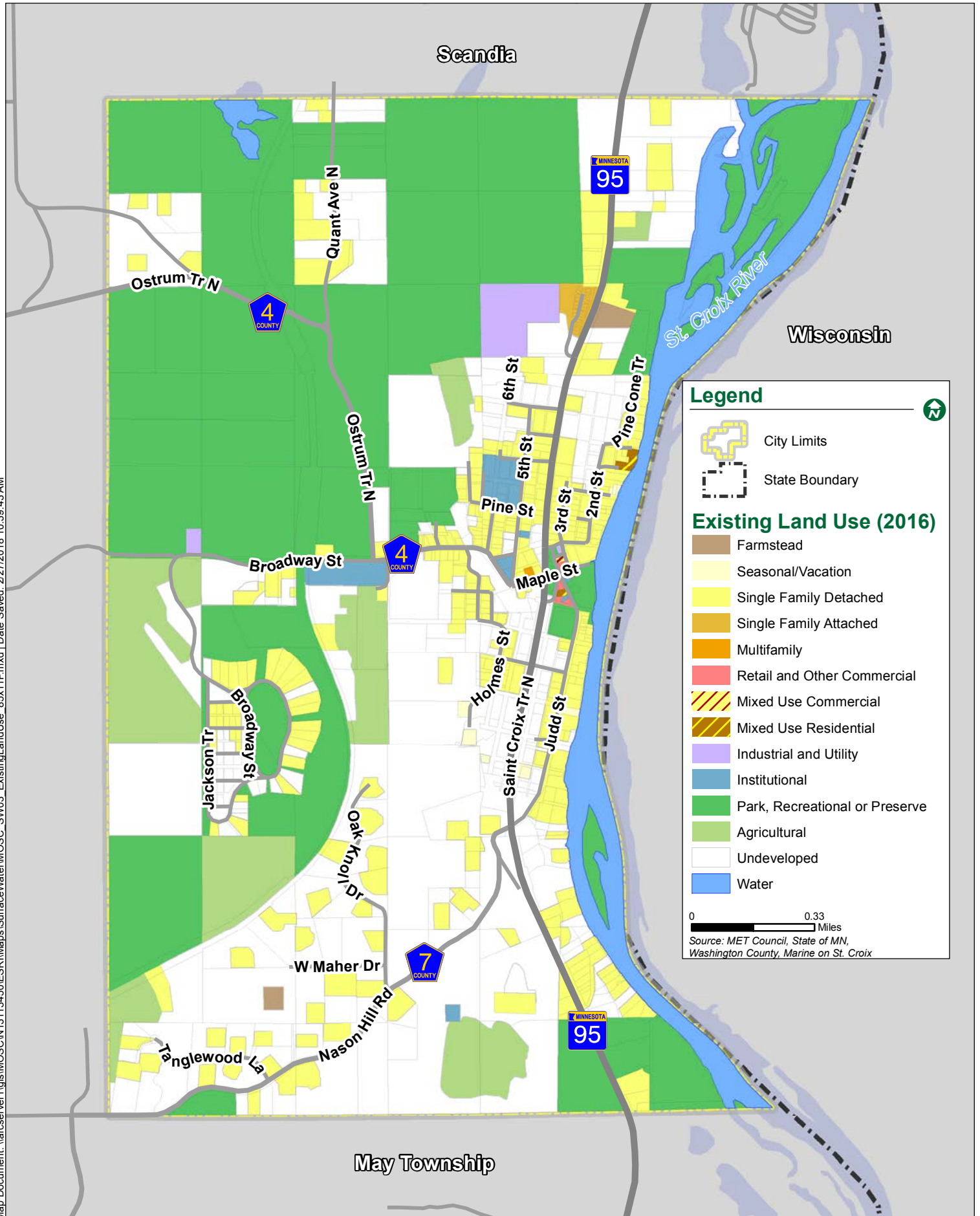
Final action on an amendment, following approval by the Watershed Districts, is City Council adoption. However, prior to the adoption, an additional public hearing could be held to review the plan changes and notify the appropriate stakeholders.

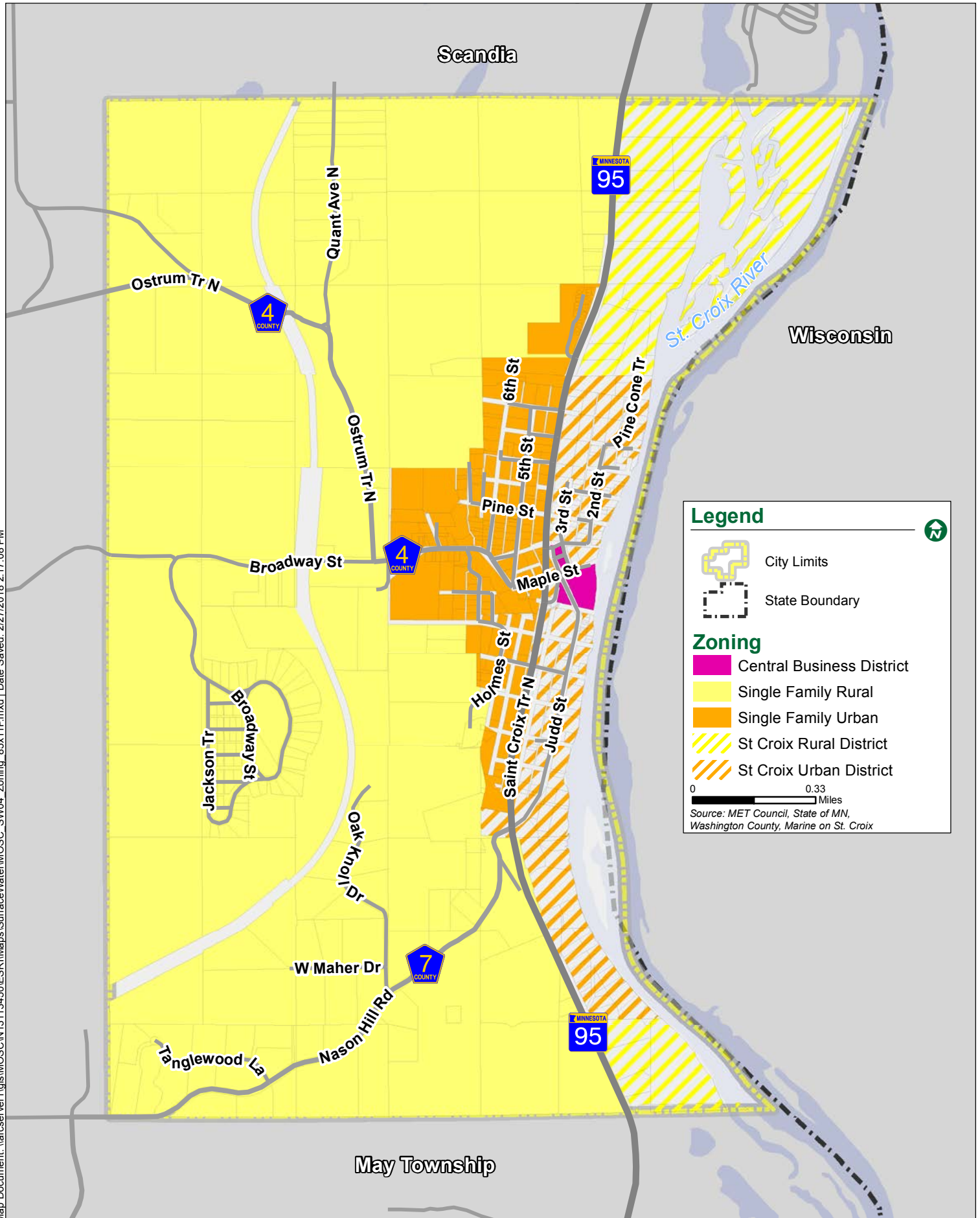
Appendix A: Figures

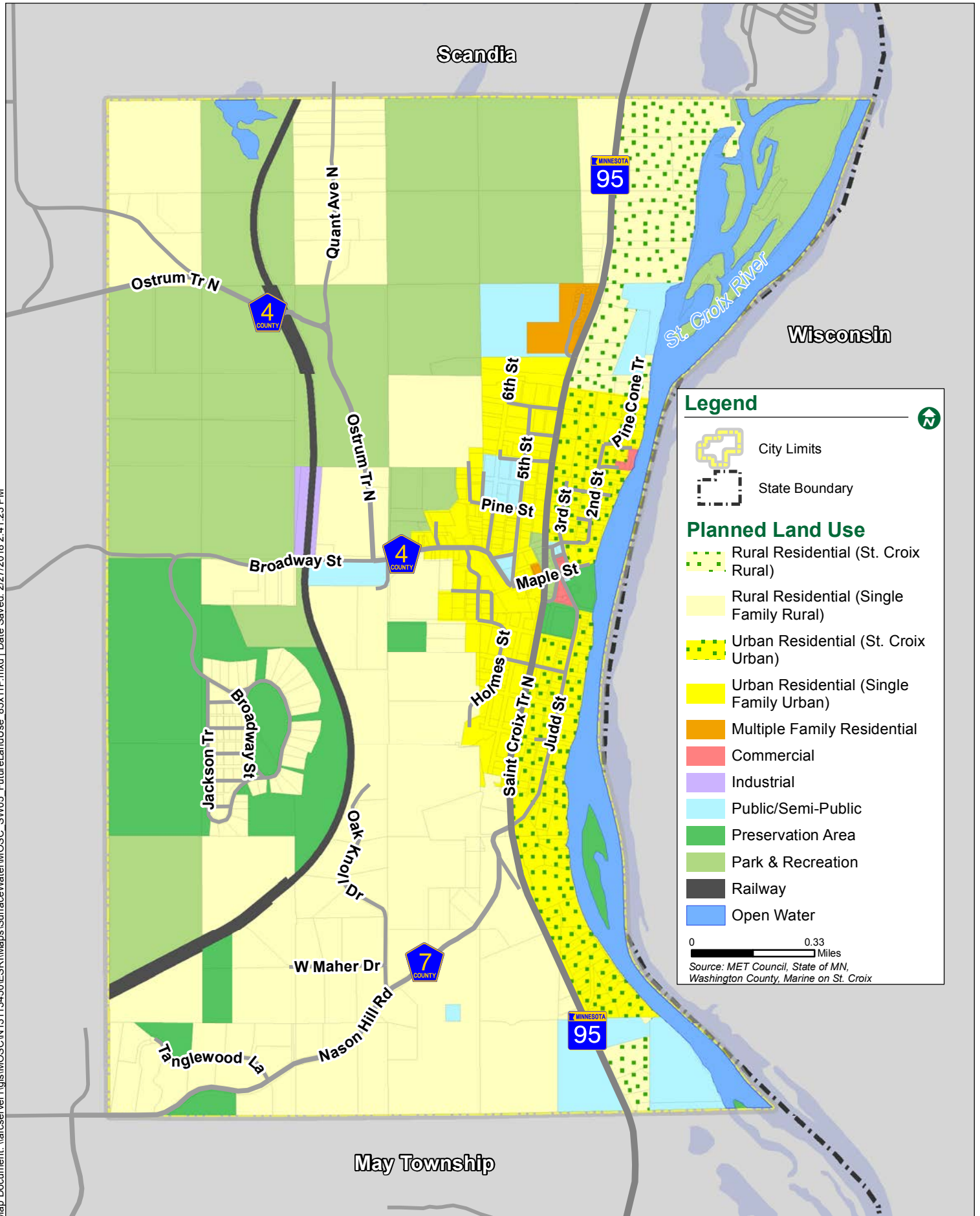
- Figure SW-01: Regional Location Map
- Figure SW-02: Watershed Districts
- Figure SW-03: Existing Land Use
- Figure SW-04: Zoning
- Figure SW-05: Future Land Use
- Figure SW-06: Hydrologic Soils
- Figure SW-07: Public Waters
- Figure SW-08: CMSCWD Wetlands
- Figure SW-09: Natural Areas, Open Space, & RSEA
- Figure SW-10: Minnesota Land Cover Classification
- Figure SW-11: Impaired Waters

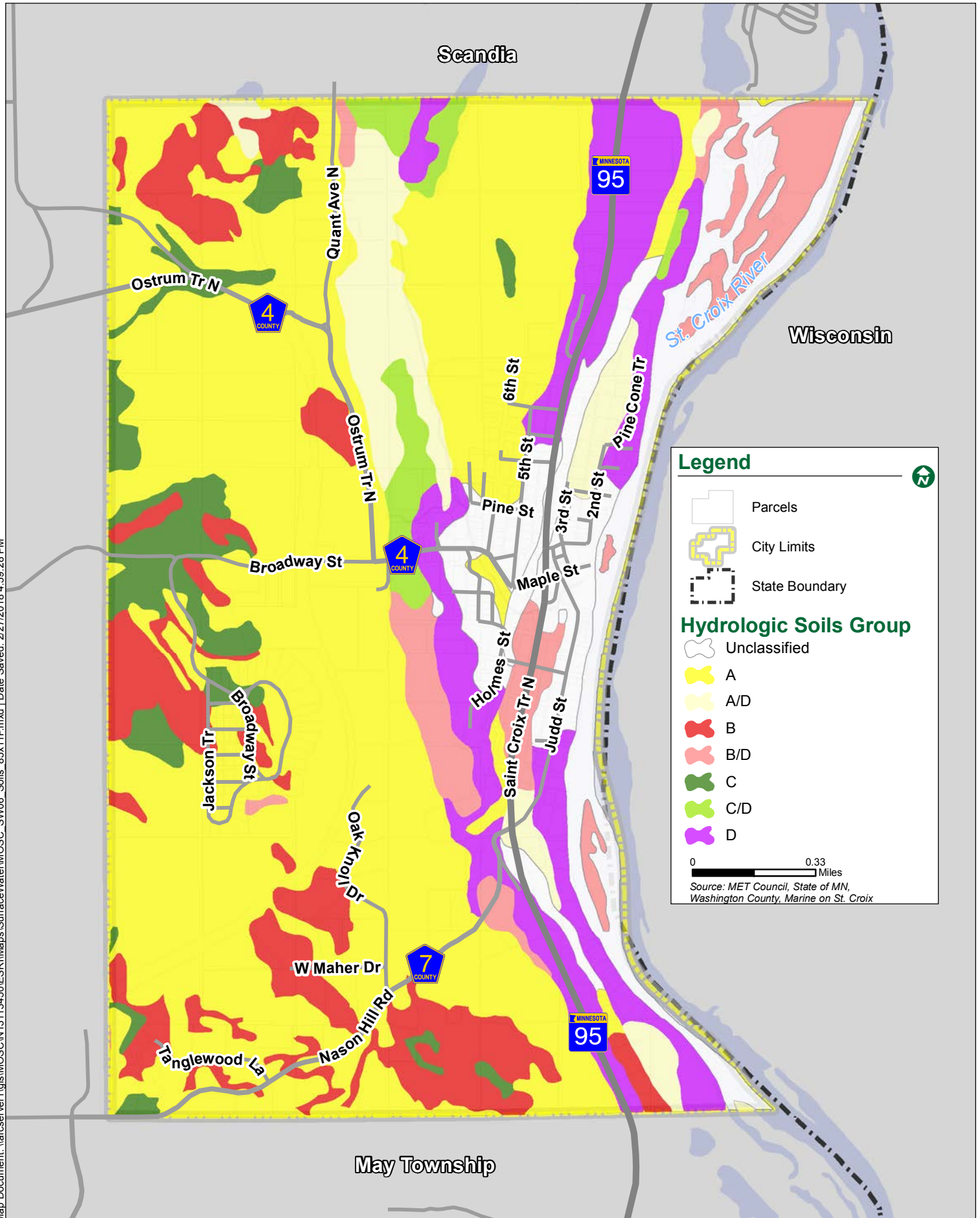


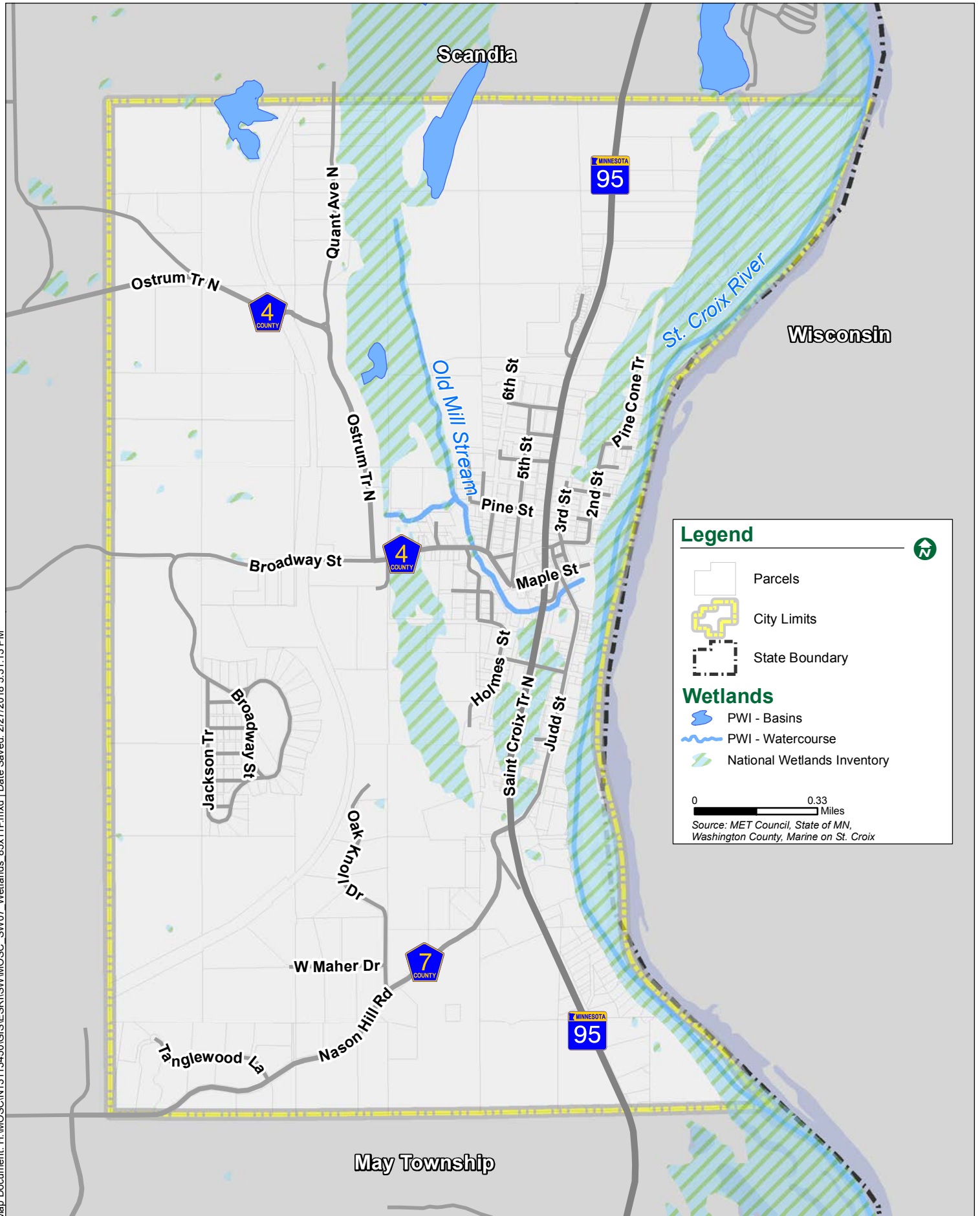


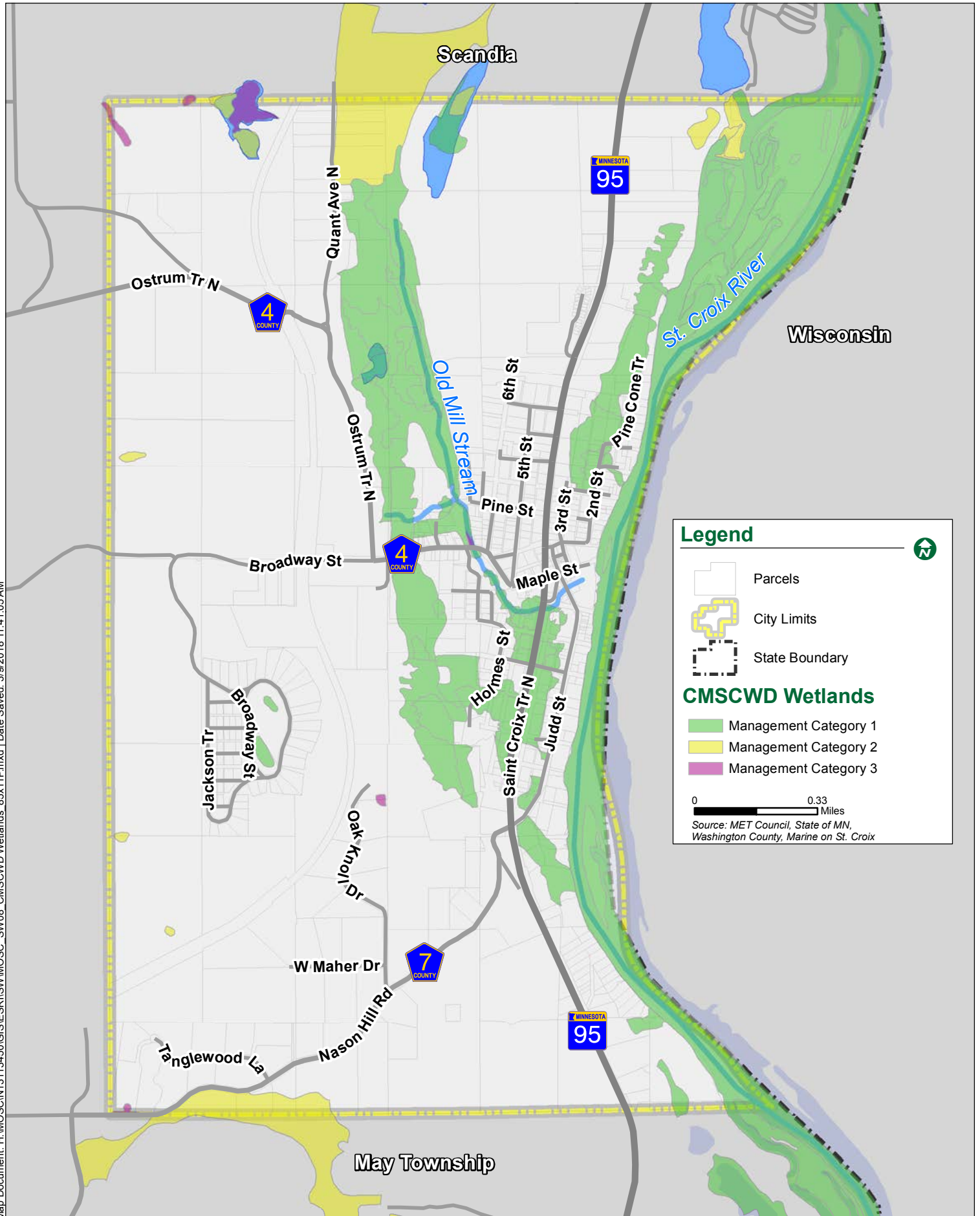


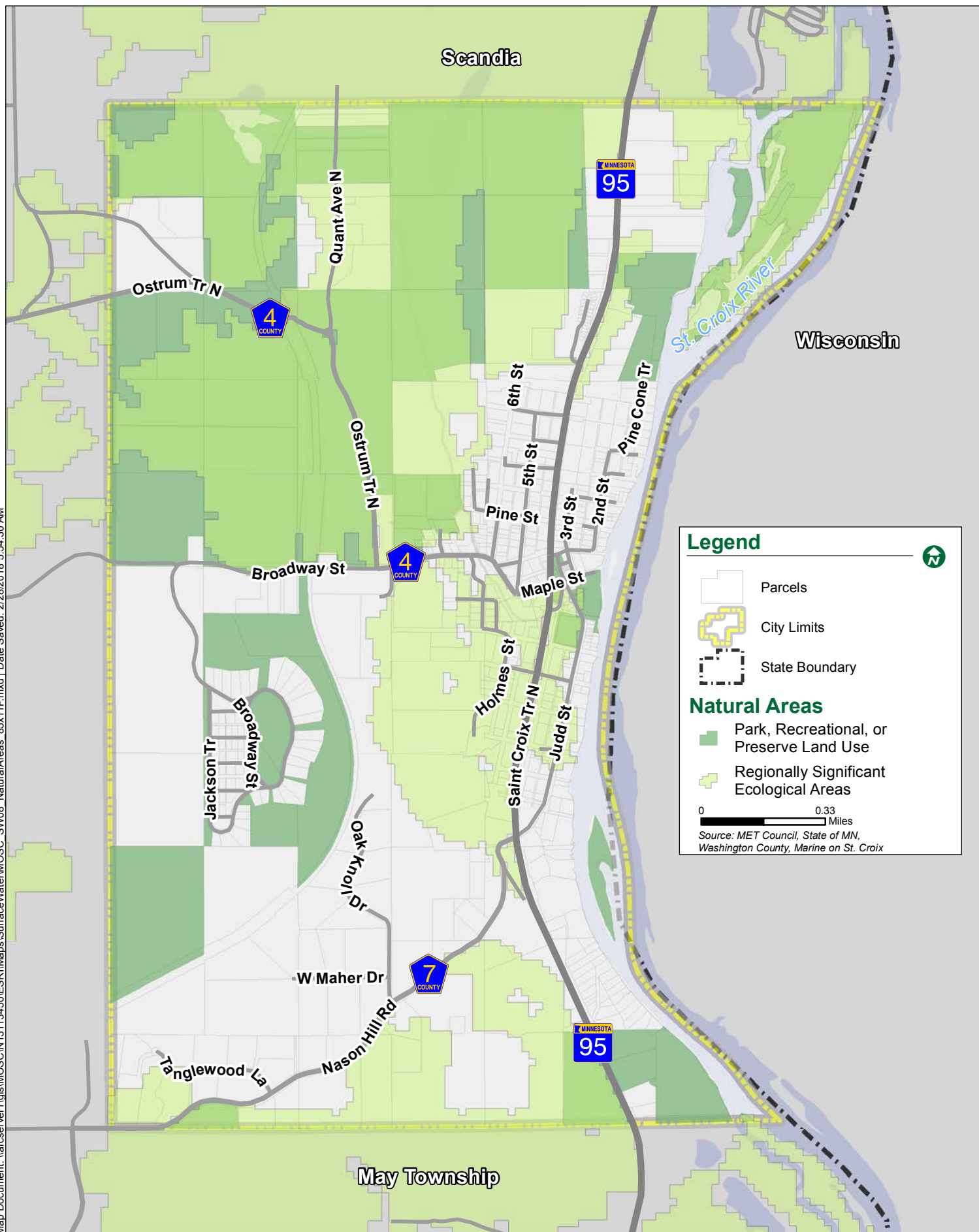


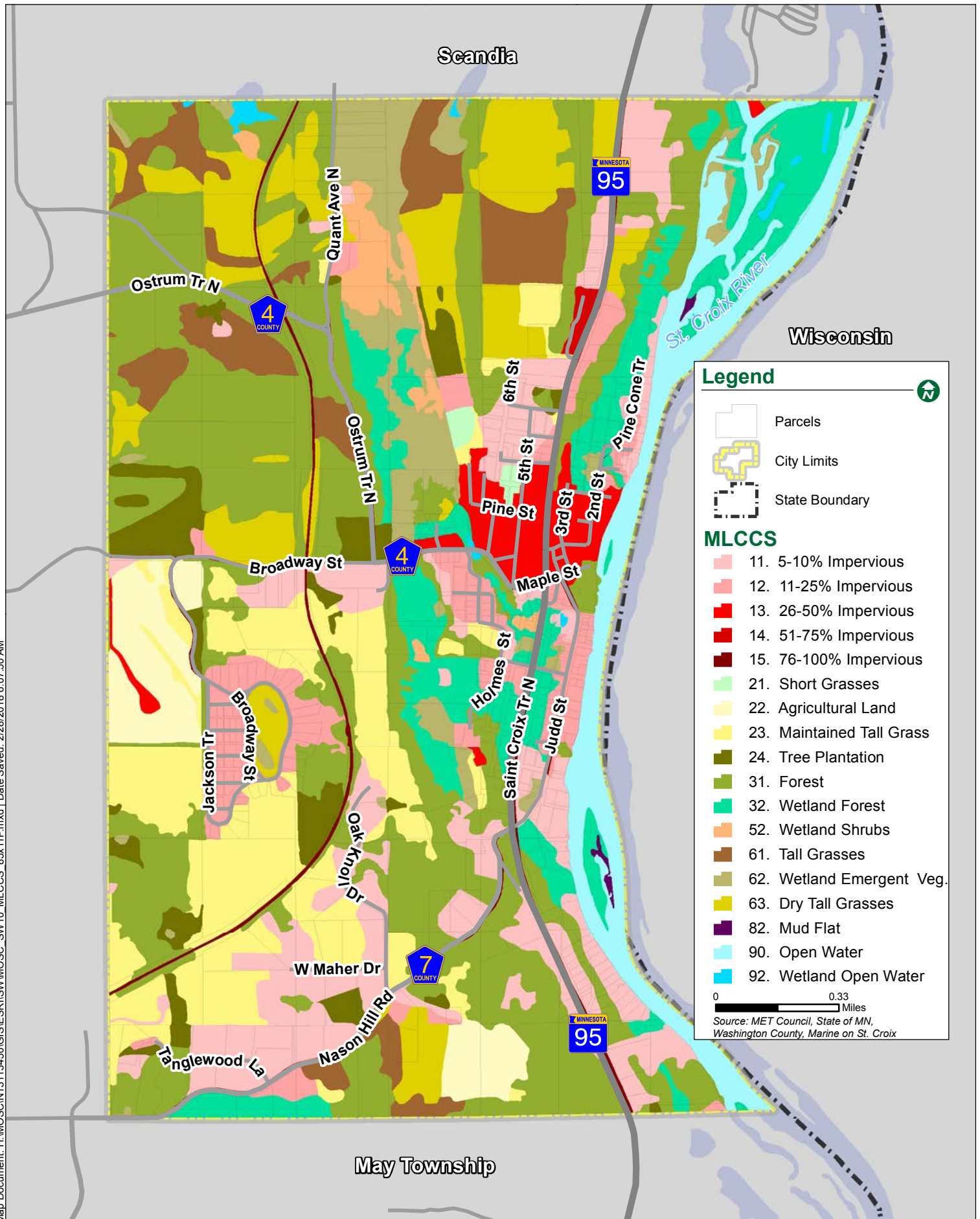


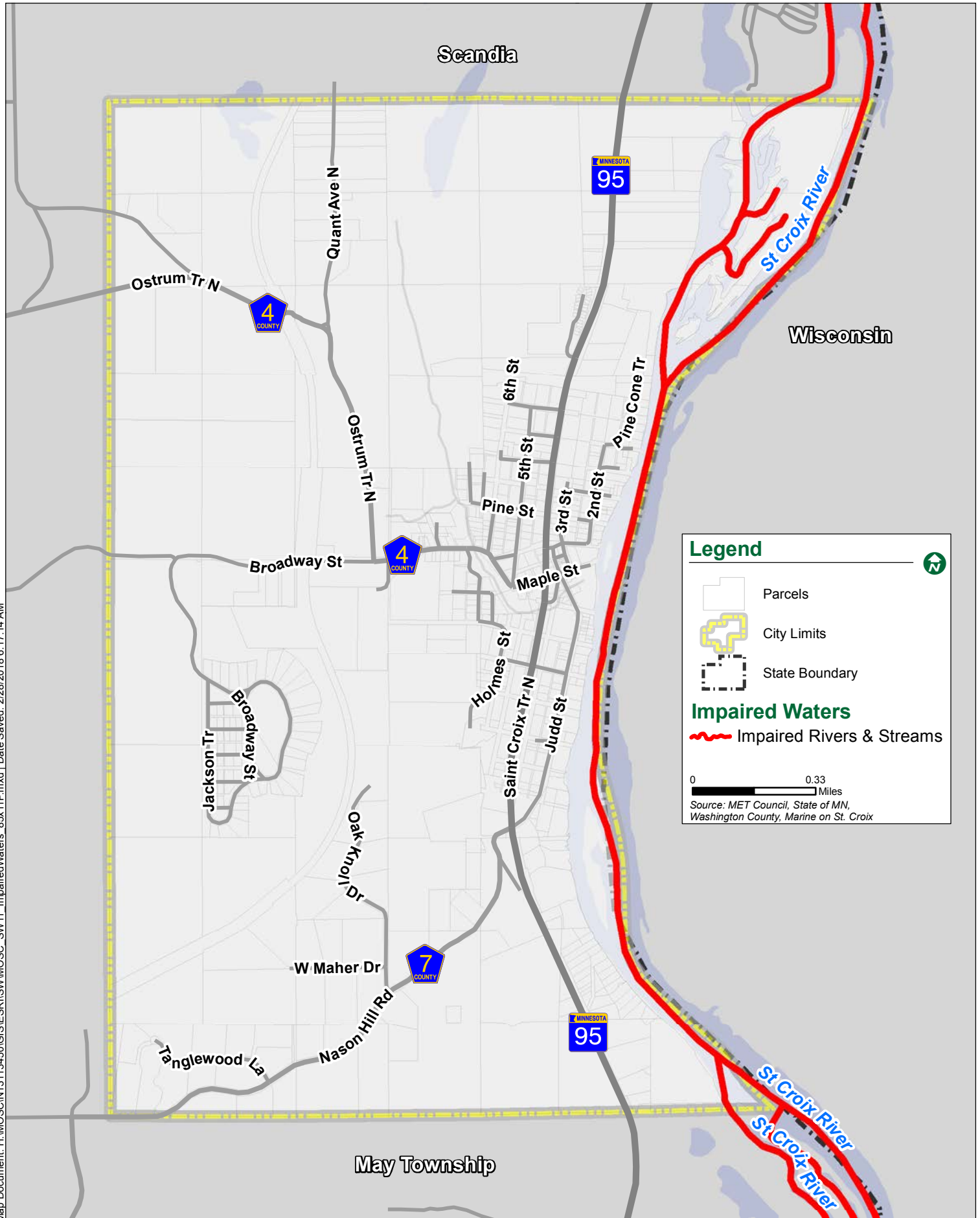












Appendix B: Agreements and Resolutions

RESOLUTION NUMBER 031215-01

A Resolution to partner with the Carnelian-Marine-St. Croix Watershed District (The District) in the Performance of BWSR Grant C15 1992: Marine on St. Croix Innovative Stormwater Management Implementation- Phase 1 (the Project)

WHEREAS, The City has adopted a Local Water Management Plan signed on November 13, 2013 which specifically lists the Project, and

WHEREAS, The City and the District entered into a MOU signed October 10th, 2013, and

WHEREAS, The District's 2010 Watershed Management Plan adopted September 12, 2010 specifically lists the Project as a Cost Share project, and

WHEREAS, the City approved a motion on September 12, 2013 to participate in and support a grant for the Project, formerly called Neighborhood Wide Small Lot Stormwater Management Program, which proposes the construction of raingardens, a biofiltration basin, and an iron enhanced sand filter basin on City owned land and right-of-way, and

WHEREAS, The Project was approved for funding by BWSR on 1/28/15 with a project total of \$98,200 and a \$24,550 (25%) local match required

THEREFORE NOW BE IT RESOLVED, that the City of Marine on St Croix agrees:

- to participate in ½ of the local match required, \$12,275, by cash contribution or a combination of approved in-kind and cash contribution totaling \$12,275
- that the grant will be administered by The District
- to actively participate in grant activities involving Outreach, Siting, Design, Construction, Operations and Maintenance of project components throughout their expected lifespans
- that the Project components will be designed to standards specified in the Minnesota Stormwater Manual by a registered engineer or equivalent qualified professional acceptable to grantor
- to enter into an agreement (or contract) with the District as needed to provide the project assurance required by the grantor regarding operations and maintenance of the project components on City property and to acquire the required assurances and easements for components sited on private property within the City. Assurances will also include potential payback of grant funds to CMSCWD (then returned to Grantor)

for installed projects that are not maintained and functioning as designed throughout the projects expected lifespans.

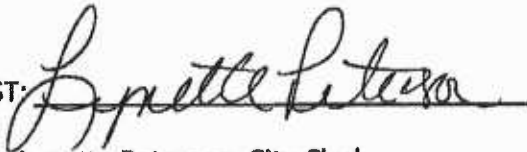
Approved by the Marine on St. Croix City Council this 12th day of March, 2015

BY:

A handwritten signature in cursive script, appearing to read "Glen Mills", written over a horizontal line.

Glen Mills, Mayor

ATTEST:

A handwritten signature in cursive script, appearing to read "Lynette Peterson", written over a horizontal line.

Lynette Peterson, City Clerk

Appendix C: Ordinances

Zoning Ordinance and Subdivision Regulations – Section 405: Environmental Standards

Zoning Ordinance and Subdivision Regulations – Section 5: Zoning Districts and District Provisions

disposal system discharging upon the surface of the ground, or dumping the contents thereof at any place except as authorized.

- (2) The pollution of any public well or cistern, stream or lake, canal or body of water by sewage, industrial waste or other substances.

405. Environmental Standards.

405.1 Land Reclamation and Land Grading.

- (1) Within this Ordinance, land reclamation is the reclaiming of land by depositing or moving material so as to alter the grade. Land reclamation shall be permitted by Grading and Filling Permit in all districts. Depositing a total of more than fifty (50) cubic yards of material per 1/2 acre or less, either by hauling in or regrading the area, shall constitute land reclamation. The permit shall be issued only after the City has received and approved a finished grading plan, pursuant to Section 306 of this Ordinance, which shows that the land reclamation will not adversely affect the adjacent land. The permit may include conditions regarding the type of material permitted, program for rodent control, plan for fire control, and general maintenance of the site controls of vehicular ingress and egress, drainage and control of material dispersed from wind or hauling of material to or from the site.
- (2) A grading and filling permit may be issued only if:
 - (a) Slopes greater than twelve (12) percent (twelve (12) feet vertical rise in one hundred (100) horizontal feet) are preserved to the greatest extent possible;
 - (b) Earth moving, erosion, vegetative cutting, drainage to adjacent properties, filling of wetlands, and the destruction of natural amenities is minimized;
 - (c) The smallest amount of ground is exposed for as short a time as possible;
 - (d) During construction, temporary ground cover such as mulch is used and permanent ground cover such as sod is planted upon completion, taking into consideration seasonal conditions;
 - (e) Methods to prevent erosion and trap sediment are employed; and
 - (f) Fill is stabilized to accepted engineering standards.
- (3) A separate grading and filling permit is not required for grading, filling, or excavating the minimum area necessary for a structure, sewage disposal system and private road and parking area undertaken pursuant to a validly issued building permit.

- (4) No water area shall be filled, partially filled, dredged, altered by grading, mining or otherwise utilized or disturbed in any manner without first securing a permit from the Minnesota Department of Natural Resources, the U.S. Army Corps of Engineers, and the affected Watershed District or Watershed Management Organization, as applicable. Such grading may be reviewed and approved by the Department of Natural Resources, the city engineer, the Watershed District, Watershed Management Organization, and the Planning Commission.
- (5) Water areas shall include all lakes, ponds, swamps, streams, drainageways, floodways, natural water courses, underground water resources and similar features involving directly or indirectly the use of water within the community

405.2 Drainage Plans.

- (1) In case of all residential subdivisions containing three (3) or more lots, and business and industrial developments, the grading and drainage plans shall be submitted to the City Engineer for review and the final grading and drainage plans shall be subject to the City Engineer's written approval. The grading and drainage plans must show compliance with all of the applicable performance standards of Section 405 of this Ordinance.
- (2) As part of a building permit application for a single family home, a site survey showing grading, drainage, and building pad (location and elevation) must be submitted. Such documents shall be consistent with the approved final grading plan of the subdivision. If a final grading plan for the subdivision does not exist, the grading plan must demonstrate site drainage that meets the standard of this section and will not result in drainage or flood that may encumber adjoining properties.
- (3) Prior to issuance of a certificate of occupancy, the holder of the building permit must submit certification that the grading and drainage was performed consistent with the approved grading and drainage plan. The City may, at the permit holder's expense, direct the City Engineer to review, inspect, and verify that the actual site grading has been completed in accordance with the approved grading and drainage plan.
- (4) Storm water drainage may be discharged into marshlands, swamps, retention basins after passing through appropriate water quality treatment facilities. Diversion of storm water to marshlands or swamps may be considered for existing or planned surface drainage. Marshlands and swamps used for storm water storage shall provide for natural or artificial water level control. Retention and water quality treatment basins scattered throughout developed areas shall be encouraged to improve storm water quality, reduce peak flow, erosion damage, and construction cost.

- (5) Storm water drainage plans for any development site or subdivision, except those sites in the Village Center Zoning District, shall manage storm water flows from the site at pre-development volumes and rates both during and at the completion of site development.

405.3 Soil Erosion and Sedimentation Control. All site grading shall meet the following soil erosion and sediment control standards:

- (1) All grading, filling and development shall conform to the natural limitations presented by the topography and soil so as to create the best potential for preventing soil erosion.
- (2) Slopes over eighteen percent in grade shall not be developed.
- (3) Development on slopes with a grade between twelve to eighteen percent shall be carefully reviewed to insure adequate measures are taken to prevent erosion, sedimentation, and structural damage.
- (4) Erosion and siltation control measures shall be coordinated with the different stages of development. Appropriate control measures shall be installed prior to development when necessary to control erosion.
- (5) Land shall be developed in increments of workable size such that adequate erosion and siltation controls can be provided as construction progresses. The smallest practical area of land shall be exposed at any one period of time.
- (6) The drainage system shall be constructed and operational as quickly as possible during construction.
- (7) Whenever possible, natural vegetation shall be retained and protected.
- (8) Where the topsoil is removed, sufficient arable soil shall be set aside for respreading over the developed area. The soil shall be restored to a depth of four (4) inches and shall be of a quality at least equal to the soil quality prior to development.
- (9) When soil is exposed, the exposure shall be for the shortest feasible period of time. No exposure shall exceed sixty (60) days. Said time period may be extended only if the Planning Commission is satisfied that adequate measures have been established and will remain in place.
- (10) The natural drainage system shall be used as far as is feasible for storage and flow of runoff.
- (11) A signed Erosion Control Agreement providing that erosion control standards and requirements will be met must be secured by the City before a building permit shall be issued.

405.4 Exposed Slopes. The following control measures shall be taken to control erosion during construction:

- (1) No exposed slope steeper in grade than five (5) feet horizontal to one (1) foot vertical is permitted.
- (2) Exposed slopes steeper in grade than ten (10) feet horizontal to one (1) foot vertical shall be contour plowed to minimize direct runoff of water.
- (3) At the foot of each exposed slope, a channel and berm shall be constructed to control runoff. The channelized water shall be diverted to a sedimentation basin (debris basin, silt basin, or silt trap) before being allowed to enter the natural drainage system.
- (4) Along the top of each exposed slope, a berm shall be constructed to prevent runoff from flowing over the edge of the slope. Where runoff collecting behind said berm cannot be diverted elsewhere and must be directed down the slope, appropriate measures shall be taken to prevent erosion. Such measures shall consist of either an asphalt paved flow apron and drop chute laid down the slope or a flexible slope drain. At the base of the slope drain or flow apron, a gravel energy dissipator shall be installed to prevent erosion at the discharge end.
- (5) Exposed slopes shall be protected by whatever means will effectively prevent erosion considering the degree of slope, soils material, and expected length of exposure. Slope protection shall consist of mulch, sheets of plastic, burlap or jute netting, sod blankets, fast growing grasses or temporary seedlings of annual grasses. Mulch consists of hay, straw, wood chips, corn stalks, bark, or other protective material. Mulch shall be anchored to slopes with liquid asphalt, stakes, and netting, or shall be worked into the soil to provide additional slope stability.
- (6) Control measures, other than those specifically stated above, may be used in place of the above measures if it can be demonstrated that they will as effectively protect exposed slopes.

405.5 Preservation of Natural Drainageways.

- (1) Waterways.
 - (a) All new development and subdivisions shall be designed to retain the natural drainage systems in the City, including existing wetlands and ponds. The natural drainage system will be maintained by the City where they exist within a public easement. Above-ground runoff disposal waterways may be constructed to augment the natural drainage system. The natural and constructed waterways may be coordinated with an open space trail system.

- (b) The widths of a constructed waterway shall be sufficiently large to adequately channel runoff from a ten (10) year storm. Adequacy shall be determined by the expected runoff when full development of the drainage area is reached.
- (c) No structures except bridges shall be constructed across ~~the~~ any waterway, tributary, stream, or wetland.
- (d) No building shall be located within twenty (20) feet of the ordinary high water level of any waterway, tributary, stream, or wetlands.
- (e) No fence or bridge shall be constructed across or over any waterway, tributary, stream, or wetland that will reduce or restrict the flow of water.
- (f) The banks of the waterway shall be protected with a permanent turf vegetation.
- (g) The banks of the waterway shall not exceed five (5) feet horizontal to one (1) foot vertical in gradient.
- (h) The gradient of the waterway bed shall not exceed a grade that will result in a velocity that will cause erosion of the banks of the waterway.
- (i) The bed of the waterway shall be protected with turf, sod, or concrete. If turf or sod will not function properly, rip rap may be used. Rip rap shall consist of queried limestone, fieldstone (if random rip rap is used) or construction materials provided said construction materials are limited to asphalt, cement and concrete. The rip rap shall be no smaller than two (2) inches square nor no larger than two (2) feet square. Construction materials shall be used only in those areas where the waterway is not used as part of a recreation trail system.
- (j) If the flow velocity in the waterway is such that erosion of the turn side-wall will occur and said velocity cannot be decreased via velocity control structures, then other materials may replace turf on the side walls. Either gravel or rip rap would be allowed to prevent erosion at these points.

(2) Waterway Velocity.

- (a) The flow velocity of runoff in waterways shall be controlled to a velocity that will not cause erosion of the waterway.
- (b) Flow velocity shall be controlled through the installation of diversions, berms, slope drains, and other similarly effective velocity control structures.

(3) Sediment Control.

- (a) To prevent sedimentation of waterways, pervious and impervious sediment traps and other sediment control structures shall be incorporated throughout the contributing watershed.
- (b) Temporary pervious sediment traps could consist of a construction of bales of hay with a low spillway embankment section of sand and gravel that permits a slow movement of water while filtering sediment. Such structures would serve as temporary sediment control features during the construction stage of development. Development of housing and other structures shall not be permitted in the area on either side of the waterway required to channel a twenty-five (25) year storm.
- (c) Permanent impervious sediment control structures consist of sediment basins (debris basins, desilting basins, or silt traps) and shall be utilized to remove sediment from runoff prior to its disposal in any permanent body of water.

(4) Maintenance of Erosion Control Systems.

- (a) The erosion and velocity control structures shall be maintained in a condition that will insure continuous functioning according to the provisions of this ordinance.
- (b) Sediment basins shall be maintained as the need occurs to insure continuous desilting action.
- (c) The areas utilized for runoff waterways and sediment basins shall not be allowed to exist in an unsightly condition. The banks of the sediment basins and waterways shall be landscaped.
- (d) Prior to the approval of any plat for development, the developer shall make provisions for continued maintenance on the erosion and sediment control system.

405.6 Wetland Preservation.

(1) General Provisions.

- (a) All wetlands in the city including marshlands and swamps shall be retained in their natural state to serve as storm water runoff basins and also as wildlife habitat. Filling or excavation of wetlands is prohibited.

(2) Vegetation. No wetland vegetation may be removed or altered except that reasonably required for the placement of structures and use of property as permitted by this Ordinance.

405.7 **Tree and Woodland Preservation.**

- (1) The following restrictions shall apply to all residential development occurring in wooded areas:
 - (a) Structures shall be located in such a manner that the maximum number of significant trees shall be preserved (see Section 202, Significant Tree).
 - (b) Prior to the granting of a building permit, it shall be the duty of the person seeking the permit to demonstrate that there are no feasible or prudent alternatives to the cutting of significant trees on the site and that if trees are cut, the applicant will restore the density of trees to that which existed before development but in no case shall he be compelled to raise the density above ten (10) trees per acre.
 - (c) Forestation, reforestation or landscaping shall utilize a variety of indigenous tree and shrub species and shall not utilize any species that is invasive or presently under disease epidemic. Species planted shall be hardy under local conditions and compatible with the local landscape.
 - (d) Development including grading and contouring shall take place in such a manner that the root zone aeration stability of existing trees shall not be affected and shall provide existing trees with a watering equal to one-half the crown area.
 - (e) Notwithstanding the above, the removal of trees seriously damaged by storms or other acts of God, or diseased trees shall not be prohibited.
- (2) Tree and Woodland Preservation Plans.
 - (a) In the case of all single family subdivisions, business, and industrial developments, a tree preservation plan shall be submitted to the Planning Commission for review and then to the City Council for approval. The tree preservation plan shall include identification of significant trees and tree masses within the construction area, tree preservation measures to be implemented during building construction, and site grading to protect identified significant trees.

405.8 **Agriculture Operations.** All farms in existence upon the effective date of this Ordinance shall be a permitted use where the operator can conduct a farming operation. However, all regulations contained in these performance standards shall apply to all changes of the farming operation which will cause all or part of the area to become more intensively used or more urban in character.

405.9 **Mining.** All mining activities, including that of gravel mining, are prohibited within the City.

SECTION 5. ZONING DISTRICTS AND DISTRICT PROVISIONS

501. **Zoning Districts.** The zoning districts are so designed as to assist in carrying out the intents and purposes of the Comprehensive Plan and are based upon the Comprehensive Plan which has the purpose of protecting the public health, safety, convenience, and general welfare. For purposes of this ordinance, Marine On St. Croix is hereby divided into the following Zoning Districts.

Symbol

SFR	Single Family Rural
SC-RR	St. Croix Rural Residential District
SFU	Single Family Urban
SC-UR	St. Croix Urban Residential District
VC	Village Center
LI	Limited Industry
LSCRO	Lower St. Croix River Overlay District
FP	Floodplain

502. **Zoning Map.** The location and boundaries of the district established by this Ordinance are set forth on the Zoning Map which is hereby incorporated as part of this ordinance and is on file at Marine On St. Croix City Hall. It shall be the responsibility of the Zoning Administration Staff to maintain and update this map and the amendments to such map shall be recorded on such map within thirty (30) days after official adoption of the zoning amendments.

Zoning updates since 1975:

- (1) Those parts of the NW Quarter of the NW Quarter and of Government Lot 5, Both in Section 6, Township 31 North, Range 19 West, Washington County, Minnesota, commonly known as "Marine Senior Housing Addition" from Single Family Rural (SFR) to Single Family Urban (SFU).
 - (2) Lots 2-12 Block 1, Roses Addition from Single Family Urban (SFU) to Single Family Rural (SFR).
503. **Vacated Streets.** Whenever any street, alley, easement, or public way is vacated by official action, the zoning district abutting the centerline of the said vacated area shall not be affected by such proceeding.

504. Single Family Rural (SFR).

504.1 Purpose

- (1) The fundamental purpose of this district is to encourage rural residential development to be clustered in a pattern which satisfies the following planning objectives:
 - (a) Preservation of contiguous common open spaces for scenic enjoyment, recreational use, and rural identity.
 - (b) Creation of cohesive neighborhoods in order to establish local identity and community interaction.
 - (c) Physical integration of neighborhoods, open spaces, and places of destination in order to establish municipal identity and community interaction.
 - (d) To implement the Comprehensive Plan objectives and policies with regard to rural area residential development, natural resource, preservation, and public service delivery.
- (2) The diagram included in this section are provided to demonstrate graphically the purpose of the SFR District, its performance standards, and strategies by which the intended development pattern described by this ordinance may be achieved.
- (3) Creative application of this Ordinance is encouraged. However, its purpose and intent must be preserved. The City of Marine on St. Croix is prepared to encourage and support new development planned in compliance with the performance standards described by this ordinance.

504.2 Permitted Uses. The following are permitted uses in the SFR District:

- (1) Single family detached residences.
- (2) Essential services – telephone, power distribution equipment, etc.
- (3) Residential care facilities serving six (6) persons or less.
- (4) Day care facilities serving twelve (12) persons or less.
- (5) Agriculture. Prior to subdivision, land may be used for agricultural purposes and be considered a permitted use in the SFR District. Any change to such a use creating a lot ten (10) acres or less shall require subdivision approval and any required conditional use permits be processed according to this Ordinance.
- (6) Permitted home occupations as defined in Section 407.2.

504.3 Accessory Uses. The following are permitted accessory uses in the SFR District. All accessory buildings are subject to the provisions of Section 402.3 of this ordinance.

- (1) Garages and accessory buildings.
- (2) Fences.
- (3) Gardening and other horticultural uses, including greenhouses
- (4) Recreation equipment, provided they are accessory to an existing principal permitted use on the same lot and which are operated for the enjoyment and convenience of the residents and their occasional guests.
- (5) Tool houses, sheds and similar buildings for storage of domestic supplies and noncommercial recreational equipment.
- (6) Private garages and off-street parking spaces and carports.
- (7) Any uses customarily associated with and incidental to the permitted uses.
- (8) "Horse Boarding of five (5) or fewer horses owned by the resident and if complaint with all other provisions of this code. This shall also apply to cattle, mules, donkeys, llamas"
- (9) "Exception for yearlings: In addition to the animals permitted under Paragraph 8, two (2) additional animals are less than one year in age and all other area and performance standards of this ordinance are met."
- (10) "Pasturing and grazing of horses for which there is no Conditional Use Permit required is permitted to occur up to the property boundaries."

504.4 Interim Uses. The following are interim uses in the SFR District and are subject to the provisions of Section 309 (Interim Use Permits) of this Ordinance:

- (1) Home occupations provided they are in compliance with Section 407.3 of this Ordinance.
- (2) Temporary classrooms.

504.5 Conditional Uses. The following are conditional uses in the SFR District:

- (1) "Agriculture, farms, hobby farms, commercial horse boarding and/or horse boarding, if not permitted under paragraphs 504.3(8), (9), provided that:"
 - (a) Only one lot may be subdivided, from a larger parcel such that the resulting two lots are each greater than five (5) acres in area, and this practice shall not be repeated.

- (b) The subdivision is processed according to the City's Subdivision ordinance.
- (c) The subdivided lots do not interfere with the subdivision of lots on adjacent parcels.
- (d) The subdivided lots are capable of accommodating a private well and septic system.
- (e) A deed restriction is placed on the lots which prohibits additional subdivision unless it conforms to SFR Zoning District requirements.
- (f) A maximum number of farm animals per acre of farmland as specified below:

	<u>Animals</u>	<u>Number/Acre</u>
(1)	Horses	1/2
(2)	Cattle, mules, donkeys, llama	1/2
(3)	Goats, sheep, swine	2/1
(4)	Turkeys, ducks, geese, chicken, rabbits	5/1
(5)	Other animals as permitted by the City Council upon evaluation of size, required habitat, and ratio per acre of animals for the specific lot.	

Farmland acreage for the purpose of this computation shall not include or encroach on slopes in excess of eighteen (18) percent, wetlands, wetland transition areas, and floodplains.

- (g) All horse stables and structures or other facilities for housing animals shall be located a minimum distance of two hundred (200) feet from any property line, and all corral areas shall be located a minimum distance of one hundred (100) feet from any property line except where used in connection with Horse Boarding allowed under S.504.3 (8, 9, 10) in which case standard setbacks requirements shall apply to fences and accessory buildings.
- (h) An applicant for a horse boarding conditional use permit shall submit for Council consideration:
 - i. A plan for the storage and removal of manure and control of odors from the operation.
 - ii. Traffic and parking plan.
 - iii. Lighting plan.
 - iv. A schedule of planned operations.

- v. Hours of operation.
- vi. A summary of noise producing activities and a plan to dissipate the noise by screening or otherwise.
- vii. Fencing and building plans showing setbacks from adjoining properties, roads and buildings on and off the site
- viii. An erosion control and storm water runoff management plan.
- ix. Such other and further information as required by the City to evaluate the affect of the use or public health, safety and welfare.
- x. These requirements are in addition to those governing the issuance of a conditional use permit.

(2) Churches and schools, provided that:

- (a) Side yards shall have a forty (40) foot setback.
- (b) Adequate screening from abutting residential uses and landscaping is provided.
- (c) Off-street parking and access is provided on the site in accordance with Section 406.3 of this Ordinance, and that such parking is adequately screened and landscaped from surrounding and abutting residential uses.
- (d) Off-street loading and service entrances are provided and regulated where applicable.

(3) Seasonal produce stand accessory to a farm, provided that:

- (a) The produce was grown on the property.
- (b) Only temporary, unenclosed display facilities are used to exhibit produce items.
- (c) Adequate off-street parking is provided and no parking related to produce sales occurs in the public right-of-way.
- (d) Signs:
 - (1) Are located only on the private property of the farm owner/operator and are no more than one hundred (100) feet from the point of sale.
 - (2) Are located no closer than fifteen (15) feet from any lot line.

- (3) Are limited to no more than two (2) signs together totaling no more than sixteen (16) square feet.
 - (4) Are removed at times when the sales operation is closed for the season.
- (4) Federal, state, and local government buildings and structures, including police and fire stations.
- (5) Public parks and playgrounds provided that:
 - (a) The site is landscaped.
 - (b) The use is available to the public.
 - (c) The site has access to a City street.
- (6) Accessory apartments, provided that they are in compliance with Section 409 of this Ordinance.
- (7) Use of an accessory structure for residential purposes where there is a sewer hook-up provided that:
 - (a) The facility is used by the occupants of the principal structure as an extension of their residential use of that structure;
 - (b) The facility does not contain both bathroom and kitchen facilities;
 - (c) The facility is located in a permanent structure; and
 - (d) The facility is not sold or rented separately from the principal structure.

504.6 District Performance Standards.

- (1) Density. The maximum permitted density within the district shall be one (1) lot per five (5) acres. In order to calculate the maximum permissible number of lots within a tract, the total gross tract acreage is multiplied by 0.20 and the result, if a fraction, is rounded down to the nearest whole number see Figure 504-A, Page 5-8. All development within SFR Zoning Districts shall be subject to planning for cluster development, as defined in Section 202.

504.7 Open Space Performance Standards.

- (1) It is the intention of this Ordinance to promote common open space development which provides a unified landscape for the use and enjoyment of the neighborhood community. Evaluation and subdivision approval by the City Council shall be subject to demonstration by the applicant that the proposed development plan provides common open spaces in a site design appropriate to the location of building lots.

(2) Area Regulations.

- (a) A minimum of fifty (50) percent of land subdivided for development shall be dedicated to open space consisting of natural habitat, neighborhood recreation, and/or pedestrian corridor open space, as defined in Section 202 see Figure 504-B Page 5-9.
- (b) All designated open space shall be platted as outlot parcels held as open space in perpetuity.
- (c) Each open space outlot shall be classified as natural habitat, neighborhood recreation, or pedestrian corridor open space, and shall conform to the type of use, location criteria, and deed restrictions of that classification.

(3) Location Criteria. Open space outlets shall be located on the development site according to the following locational criteria:

- (a) Viewsheds. The open space outlots shall preserve the maximum quantity of viewshed open space for the anticipated homesite lots on the development tracts see Figure 504-C Page 5-10.
- (b) Natural Habitat. The development shall preserve the maximum quantity of natural habitat open spaces in a contiguous, connected configuration. Natural habitat open spaces may include, but are not limited to fields, wetlands, slopes, bluffs, dense woods, lakes, ponds, streams, shorelands, and other environmentally sensitive areas or desirable viewsheds.
- (c) Pedestrian Corridors. The development shall locate pedestrian corridor open spaces in strategic places such that larger open space outlots and designated places of destination both on the development tract and adjacent tracts are connected with one another. Pedestrian corridor open spaces may include, but are not limited to established regional trails, local pathways, paved walkways, and shorelines. Pedestrian corridor outlots shall be a minimum of twenty (20) feet in width.
- (d) Neighborhood Recreation. The development shall locate neighborhood recreation open spaces such that they are an integral part of the neighborhood of surrounding homesites, at an elevation appropriate to their intended recreational use, defined by coherent boundaries, and accessible to all neighborhood residents. Neighborhood recreation open spaces may include, but are not limited to greens, commons, playgrounds, ball fields, gardens, or other recreational areas.

Figure 504-A

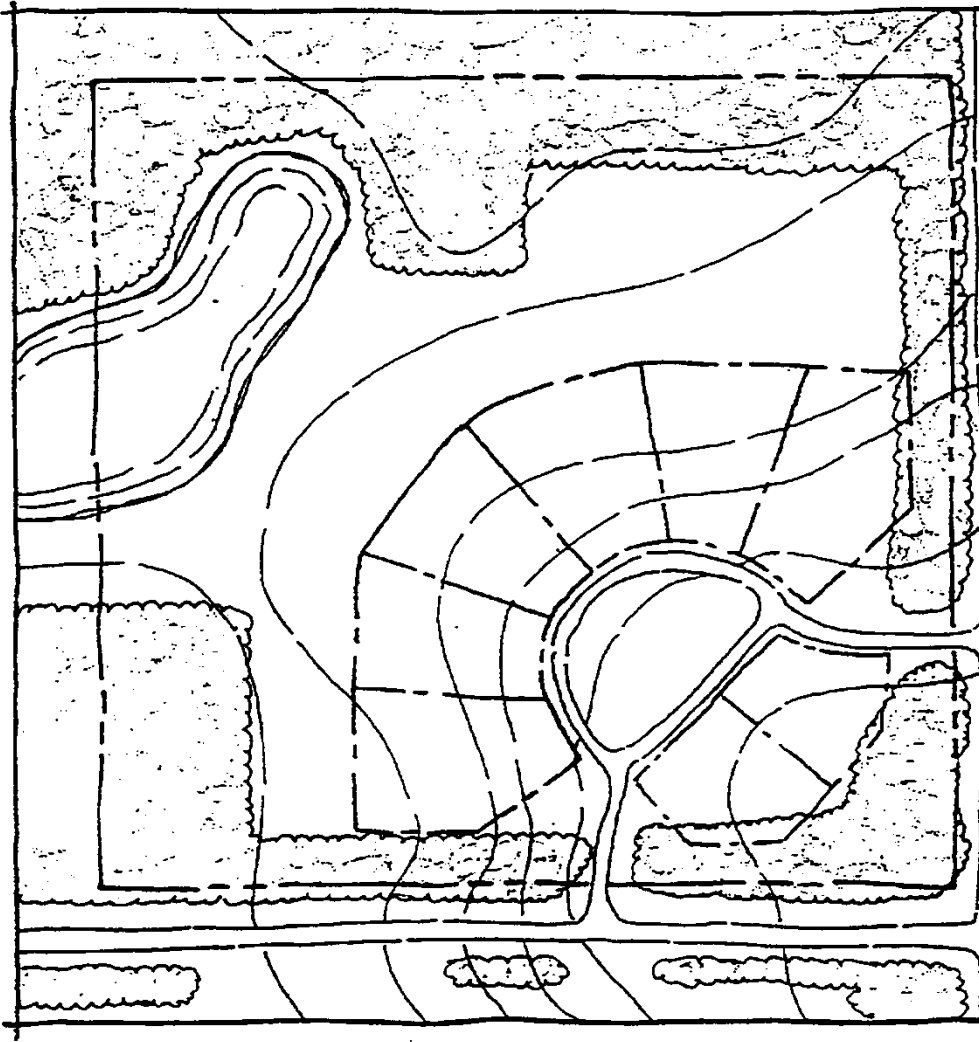


Figure 504-A The maximum permitted density for the district is one (1) unit per five (5) acres. For a forty (40) acre tract, a maximum of eight (8) lots are permissible. A Minimum of fifty (50) percent of the land being subdivided for development dedicated to open space.

Figure 504-B

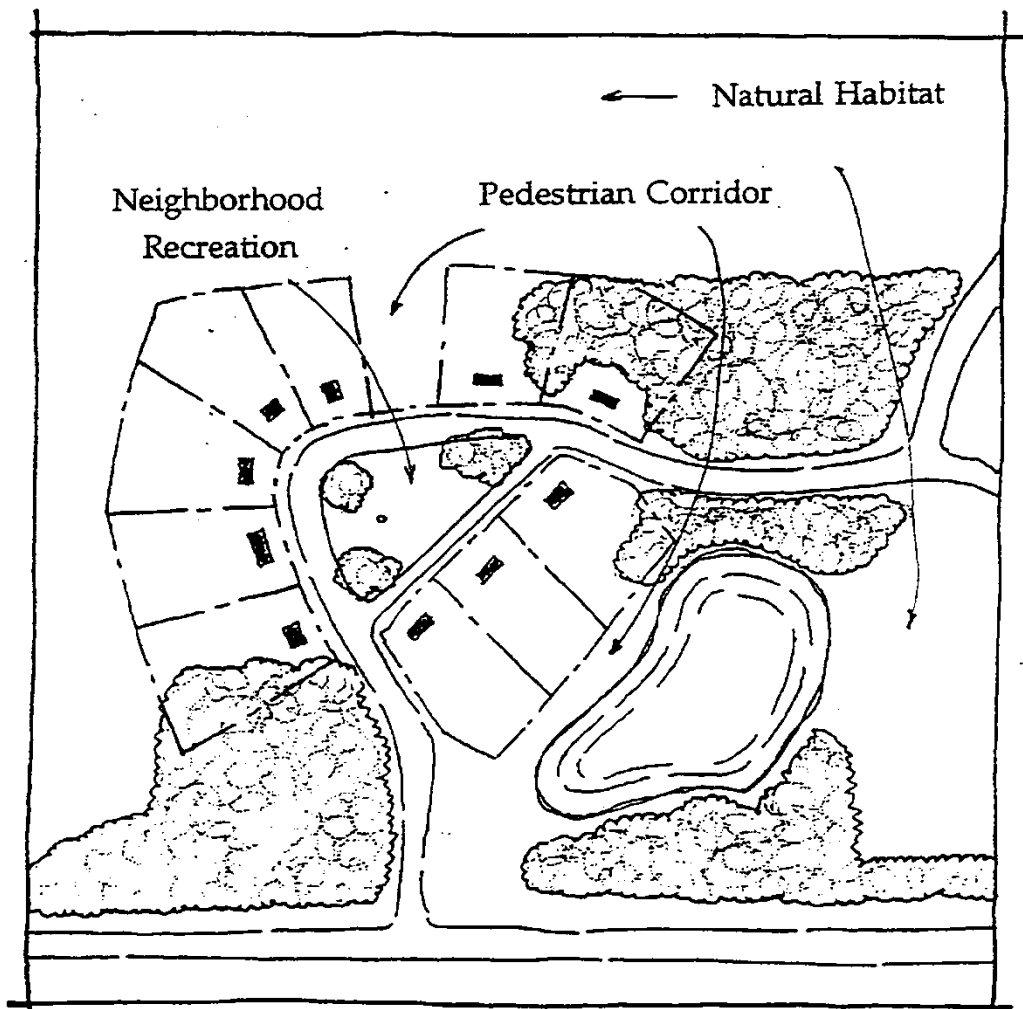


Figure 504-B Natural habitat, pedestrian corridor and neighborhood recreation open spaces are located on the development site according to their type of use.

Figure 504-C

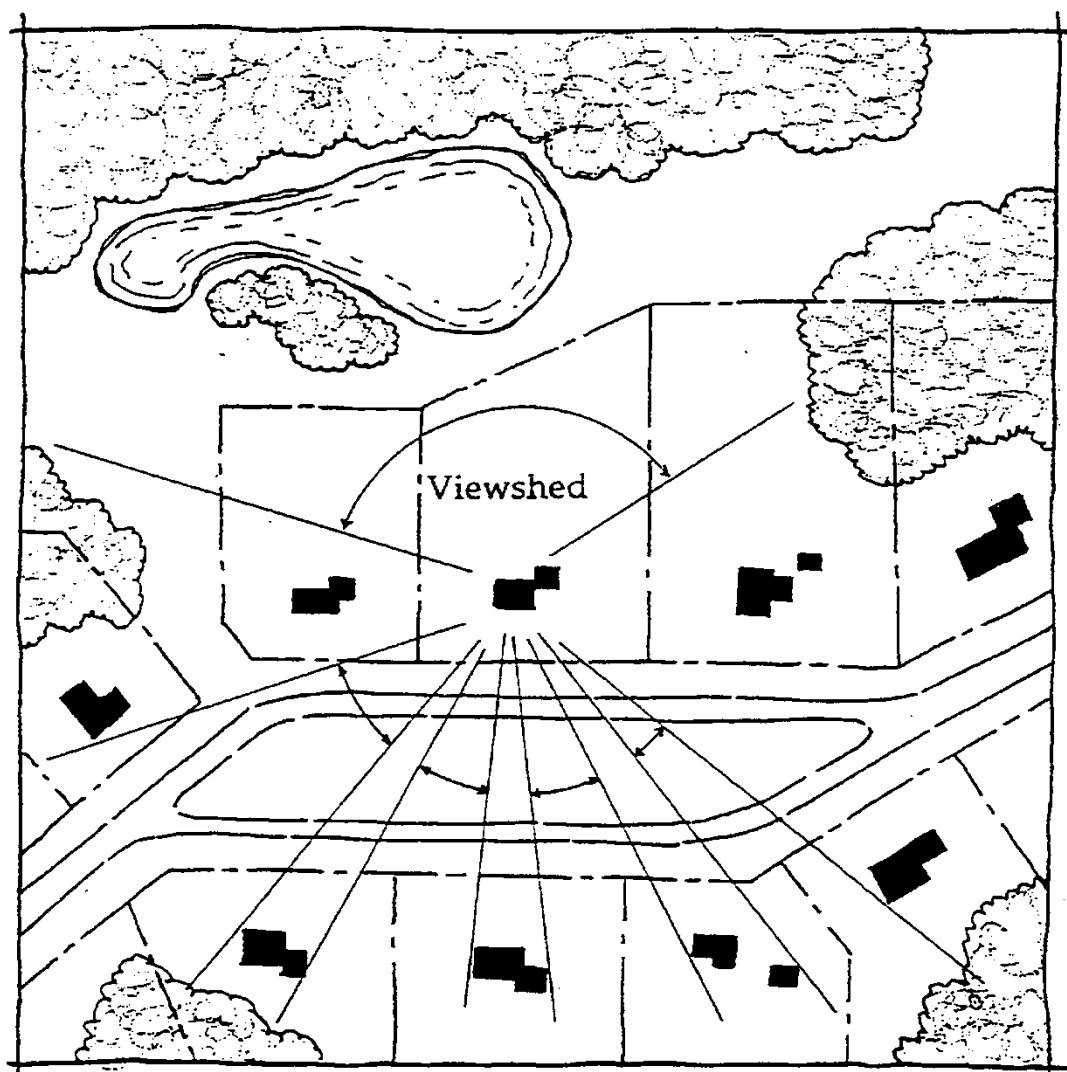


Figure 504-C Viewsheds are directional open space vistas from a homesite and between tree stands and other neighborhood buildings.

- (4) Accessibility. Open spaces shall be accessible to pedestrians at no less than one thousand two hundred (1,200) foot intervals along public roadways. Where necessary, pedestrian access corridor outlots between private lots shall be at least twenty (20) feet in width.
- (5) Deed Restrictions. Each open space outlot shall conform to the deed restrictions associated with its open space classification.
- (a) Natural habitat open spaces shall be considered conservation easements and are for the responsible use and enjoyment of adults and children. Construction in these areas shall be limited to trails (paved or unpaved), open air shelters, bridges, benches, bird houses, wood fencing, and communal drainfields.
 - (b) Neighborhood recreation open spaces shall be used for active or passive recreational purposes, including gardening. Construction in these areas shall be limited to gravel or paved walkways, open air shelters, bird houses, bridges, garden storage sheds no larger than one hundred twenty (120) square feet, wood fencing, landscape planting, play equipment, outdoor furniture, and facilities for active recreation.
 - (c) Pedestrian corridor open spaces shall be used for pedestrian, bicycle, and/or equestrian travel. Motorized vehicles shall be prohibited. Construction in these areas shall be limited to gravel or paved pathways, wood fencing, and landscape planting.
 - (d) Habitable structures shall not be permitted in any open space outlot.
- (6) Ownership and Management. Each designated open space outlot shall be owned and managed as set forth below, subject to City Council approval.
- (a) Open space may be owned in common by the property owners of the subdivision. In the case where at least one (1) outlot of open space is held in common ownership, a homeowner association shall be established for that subdivision and membership in the association by all property owners in the subdivision shall be mandatory. Management shall be the responsibility of that subdivision's homeowner association.
 - (b) Open space may be deeded to an established land trust. Management shall be the responsibility of the land trust. Maintenance may be performed by the neighborhood homeowner association, through written agreement between the association and the land trust.
 - (c) Open space may be deeded to the City of Marine on St. Croix. Management shall be the responsibility of the City.

- (d) Open Space may be protected by establishing conservation restrictions in perpetuity in favor of the City as provided in Minnesota Statutes 84.64-84.65. Unless the document establishing the restrictions specifically provides to the contrary, the City shall have no responsibility for the maintenance or management of the area subject to the restrictions. The form and content of the deed or other instrument establishing the restrictions must be approved by the City prior to the execution and delivery thereof. Notwithstanding any provision of this Ordinance to the contrary, the City may, in cases where conservation restrictions are utilized to meet open space dedication requirements of this ordinance, waive the requirement that the area subject to the restrictions be platted as a separate outlot.

504.8 Neighborhood Performance Standards.

- (1) It is the intention of this Ordinance to promote neighborhood development which offers a variety of lot sizes, configurations, topography, and affordability. Evaluation and subdivision approval by the City Council shall be subject to demonstration by the applicant that the proposed development plan provides a cohesive neighborhood(s) in a site design appropriate to the location of common open spaces.
- (2) Neighborhood Configuration.
 - (a) In order to establish a cohesive neighborhood unit, residential lots shall be located in a neighborhood cluster. A neighborhood cluster shall include a minimum of five (5) lots or twenty-five (25) percent of the allowable number of lots on the parcel to be subdivided, whichever is greater. An efficiency of land utilization and community development should be encouraged by maximizing the number of lots in any one cluster development, while adhering to the underlying density and open space requirements of this Ordinance. See Figure 504-D, Page 5-14.
 - (b) A neighborhood cluster shall be oriented toward an identifiable feature which all residential units share in common. See Figure 504-E, Page 5-15 through 5-18. Neighborhood identity may be established by one or more of the following features:
 - (1) Viewshed. The lots of a neighborhood may be arranged such that a majority of the principle structures will take visual advantage of a field, wetland, woods, lake, stream, or other open space which could be described as a viewshed.
 - (2) Physical Amenity. The lots of a neighborhood may be arranged such that a majority of the principle structures will face a green, playground, ball field, rock out cropping, stand of trees, church, school, or other physical feature unique to that particular neighborhood.

- (3) Streetscape. The lots may be arranged such that the principle structures will face a street space enhanced with landscaping, street trees, boulevards, medians, or other landscaping techniques appropriate to the City's street design standards.
 - (c) The principal and accessory structures on private lots, and the structures of neighborhood recreation open spaces are encouraged to convey a particular architectural style through use of similar building components, materials, roof pitches, landscaping, and/or other construction techniques.
- (3) Lot Area Regulations.
- (a) Lot Area. Platted lots shall be a minimum of one (1) acre and a maximum of five (5) acres in area with the exception of a conditional use permit for agricultural use, farms, hobby farms, or horse boarding.
 - (b) Lot Width. Platted lots shall be a minimum one hundred fifty (150) feet and a maximum two hundred fifty (250) feet in width measured at the required front yard setback, with the exception of a conditional use permit for agricultural use, farms, hobby farms, or horse boarding (see Figure 504-F, Page 5-19).

Figure 504-D(1) and 504-D(2)

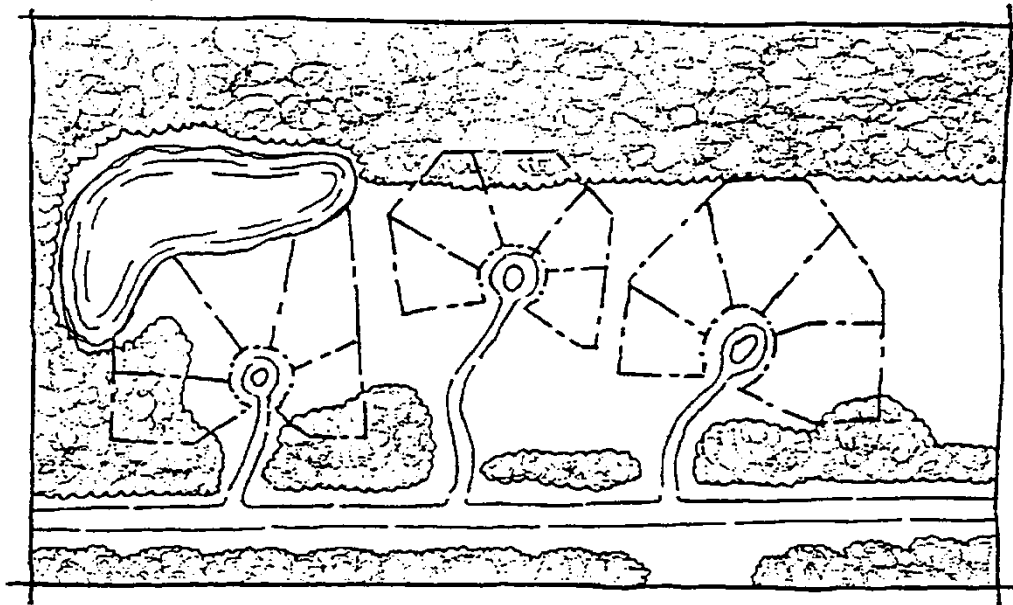


Figure 504-D(1) An example of a cul-de-sac development pattern discouraged by this Ordinance.

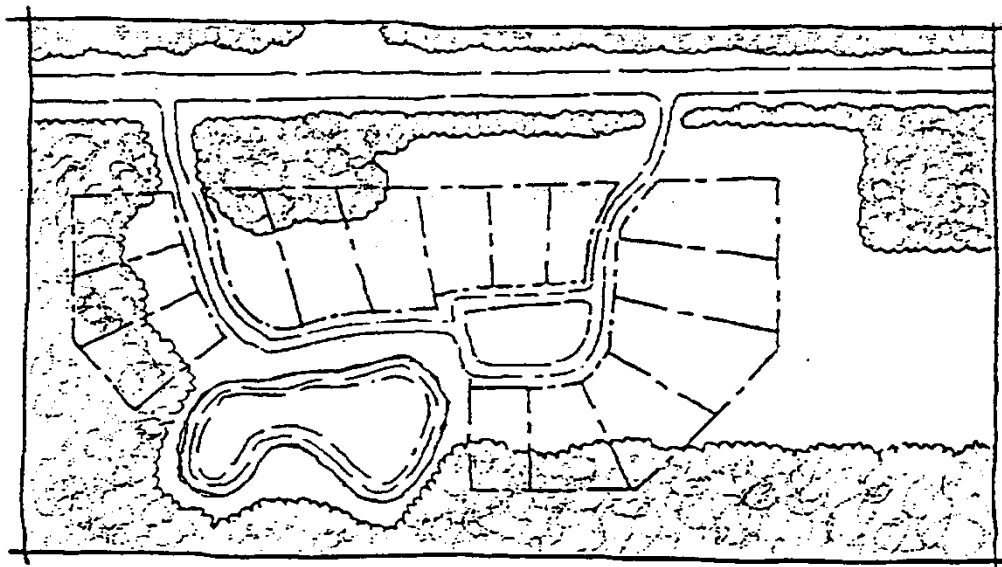


Figure 504-D(2) An example of a neighborhood cluster development pattern encouraged by this ordinance. The neighborhood cluster configuration permits an efficiency of land utilization and opportunities for community development.

Figure 504-E(1)

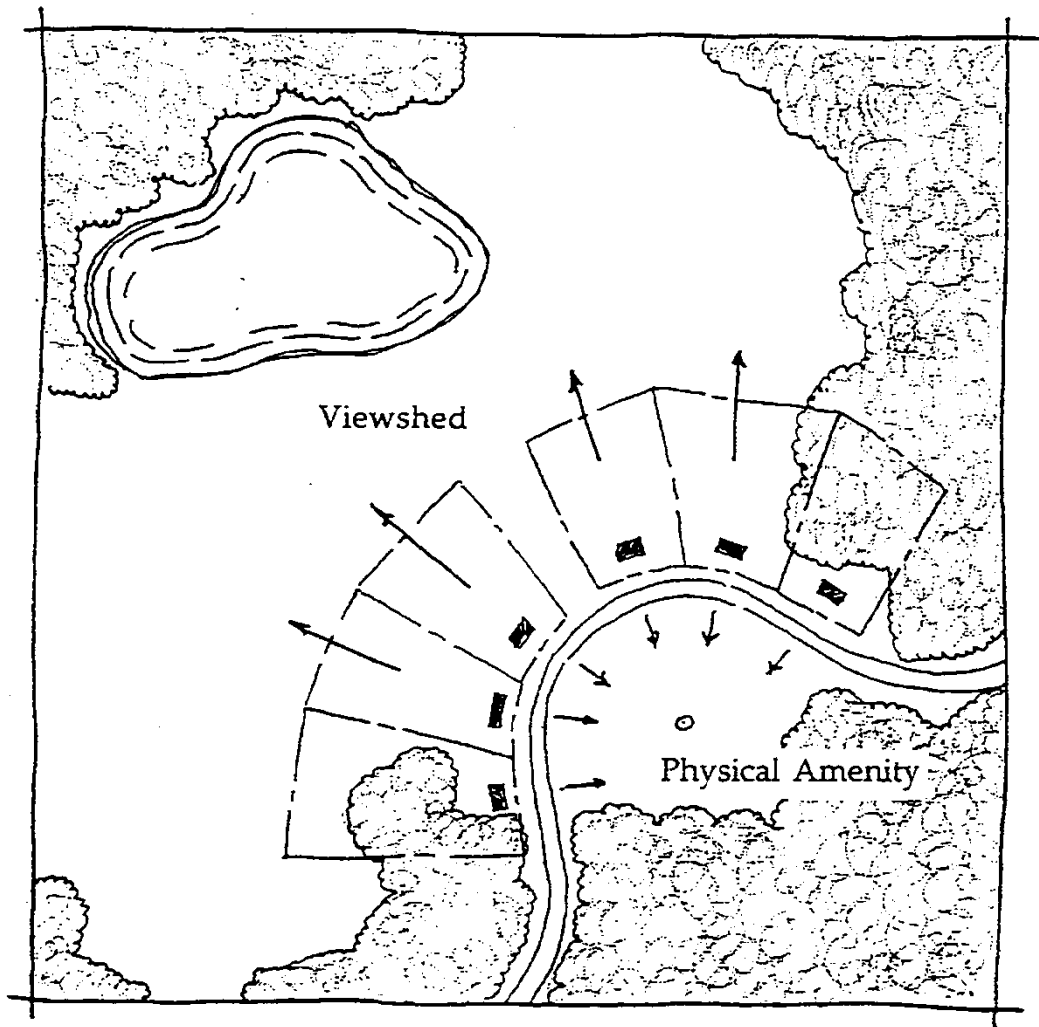


Figure 504-E(1) An example neighborhood cluster oriented toward a viewshed or a physical amenity.

Figure 504-E(2)

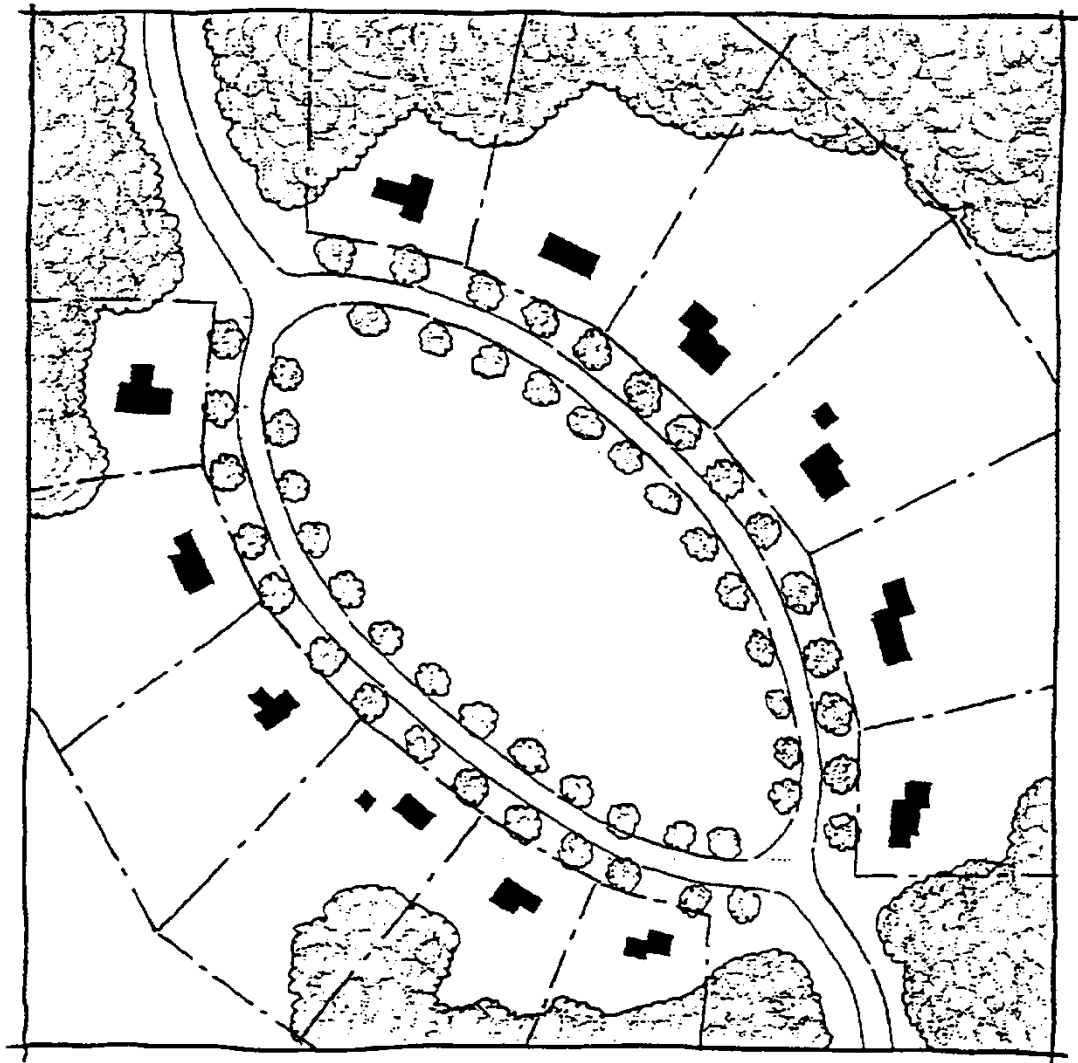


Figure 504-E(2) An example neighborhood cluster oriented toward common green and streetscape.

Figure 504-E(3)

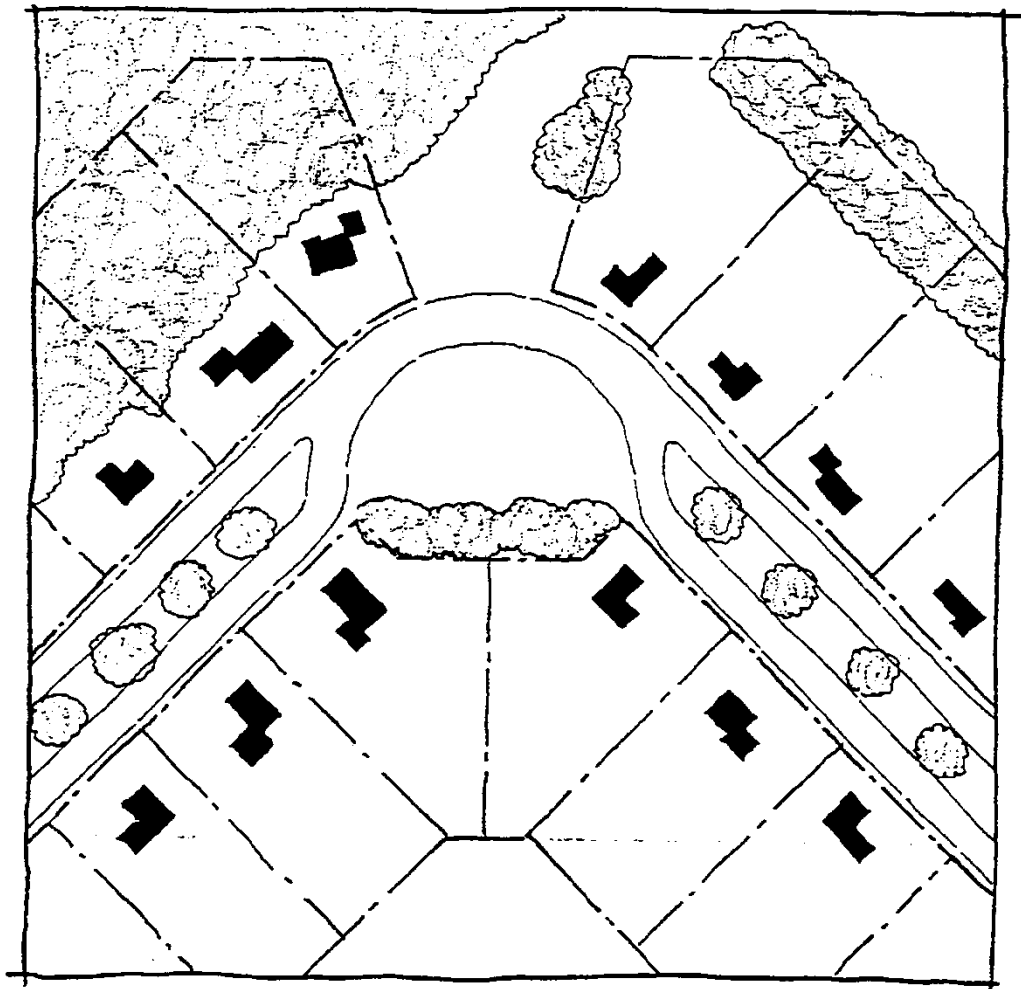


Figure 504-E(3) An example neighborhood cluster oriented toward a corner park or green streetscape.

Figure 504-E(4)

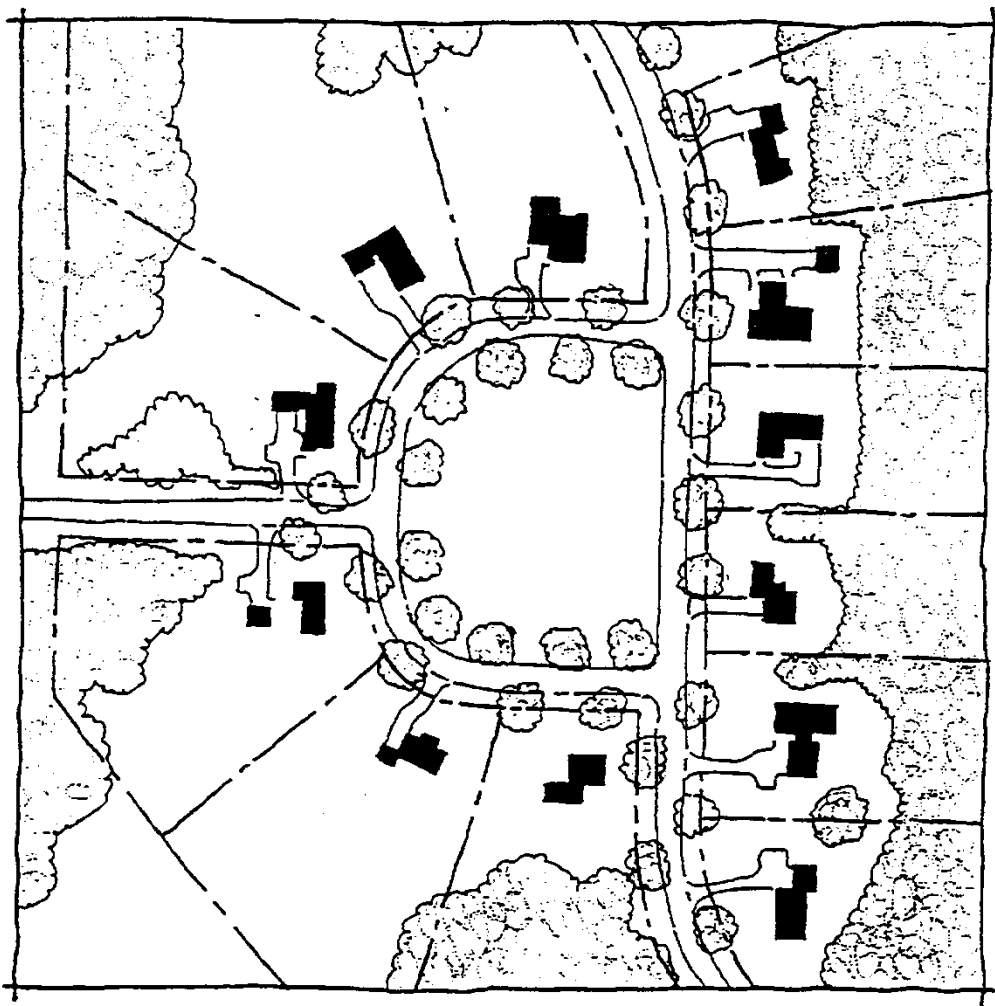


Figure 504-E(4) An example neighborhood cluster oriented toward a park or green at an intersection.

Figure 504-F

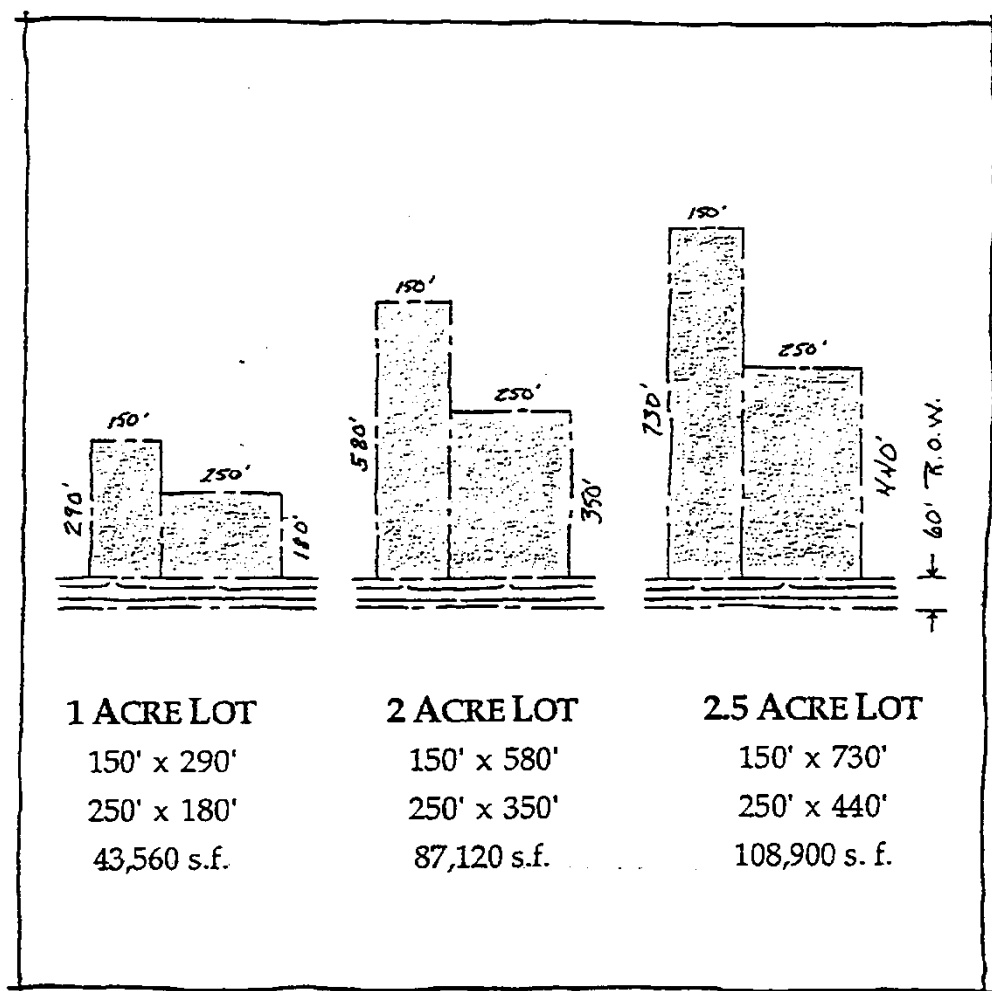


Figure 504-F Lot area to lot width comparisons for one (1) acre, two (2) acre, and two and one half (2.5) acre lots, using rectangular lot configurations.

(4) Building Envelope Regulations.

- (a) The principal structure shall dictate the area and location of the building envelope see Figure 504-G, Page 5-22. All detached accessory buildings shall be:
- (1) Located behind the rear-most building line of the principle structure.
 - (2) Within the side and rear setbacks identified in Section 504.8 (4)(d).
 - (3) Within an area one hundred fifty (150) feet from the rear-most building line of the principle structure.
 - (4) In conformance with the building area requirements of Section 402.3 of the Zoning Ordinance.
- (b) Buildings less than one hundred (100) square feet in floor area may be located outside the building envelope, within the rear yard and the required setback distances.
- (c) Development of neighborhood clusters is encouraged in locations which minimize the visual impact of the development on the landscape to the greatest extent reasonably possible.
- (d) Building envelopes shall not encroach on view sheds, ridge lines, slopes in excess of eighteen (18) percent, wetlands, wetland transition areas, and floodplains.
- (e) Setbacks. Building line setbacks shall be within the following setback distances from platted lot lines except existing lots of record are not subject to a maximum setback:
- (1) Front Yard:
Required Distance from
Road Right-of-Way

		<u>Road Class</u>
<u>Minimum</u>	<u>Maximum</u>	
50 feet	-----	State Highway
40 feet	-----	County Road
40 feet	80 feet	City Street
 - (2) Side Yard: Minimum twenty (20) feet.
 - (3) Rear Yard: Minimum fifty (50) feet.

- (4) Side yard building envelope setbacks on corner lots shall be a minimum of forty (40) feet.
- (e) Septic drainfields and water wells may be located outside the building envelope, but within the setback distances described in Section 504.8 (4)(d).

Figure 504-G

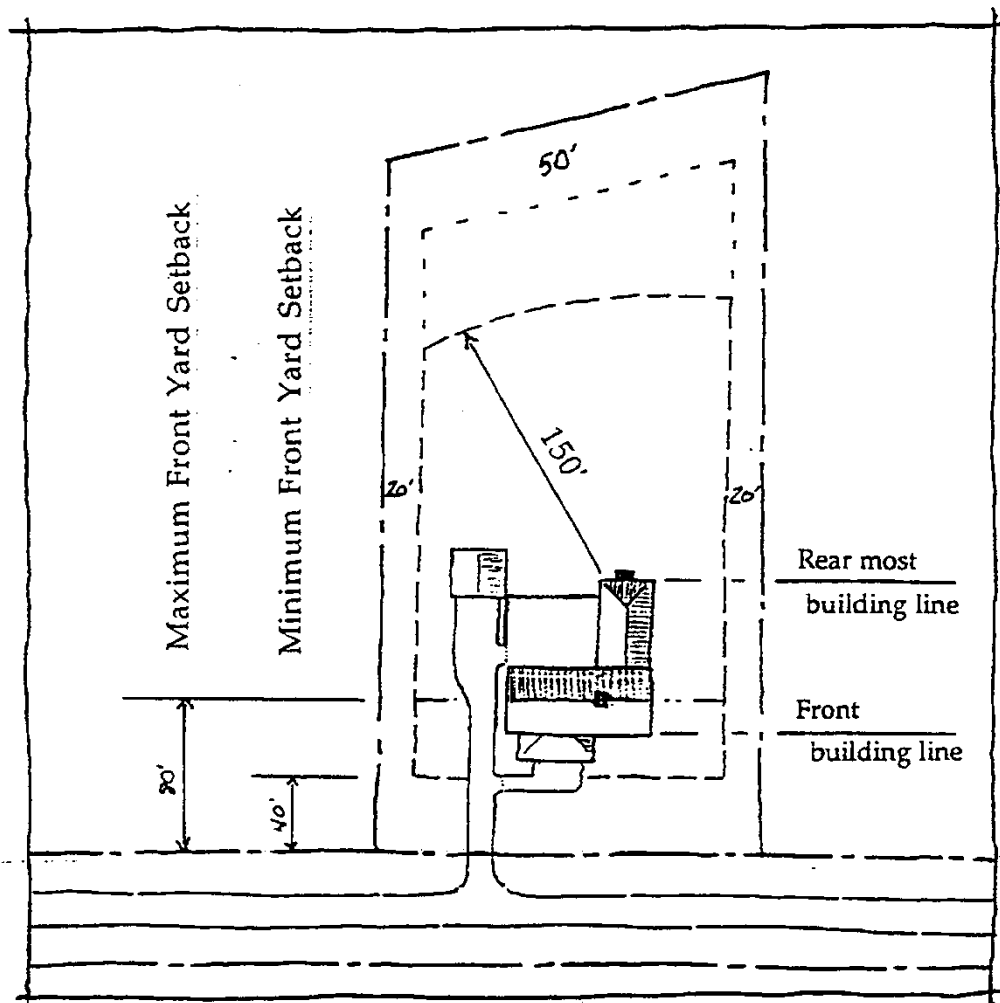


Figure 504-G The front building line setback a minimum of forty (40) feet and a maximum of eighty (80) feet from the street right-of-way line. The building envelope consists of an area within the front and side yard setbacks and within one hundred fifty (150) feet from the rear-most building line of the principal structure.

(5) Building Height.

- (a) Principal structures shall have a maximum building height of thirty-five (35) feet.
- (b) No accessory building shall exceed the height of the principal building.
- (c) The building height limits established for the SFR District shall not apply to the following:
 - (1) Belfries.
 - (2) Chimneys or flues.
 - (3) Church spires.
 - (4) Farm buildings.
- (d) Antennas and satellite dishes accessory to the principal structure shall not be subject to the height limitations of the SFR District provided:
 - (1) Antenna structures attached to the principal structure shall not extend more than fifteen (15) feet above the roof line.
 - (2) Detached antenna structures shall be set back from property lines a distance of one (1) foot for every one (1) foot of height, and have a maximum thirty-five (35) foot height.
 - (3) Detached antenna structures shall be located within the building envelope defined in Section 504.8 (4).

(6) Driveways.

- (a) Driveways may be located outside the building envelope.
- (b) Paving shall be required in areas where the driveway grade is in excess of six (6) percent.

(7) Landscaping and Lawns.

- (a) On individual lots, existing vegetation considered indigenous and appropriate to the natural landscape shall be preserved to the extent reasonably possible.
- (b) Homesite lots shall be prepared according to the tree preservation measures described in Section 405.7 of the Zoning Ordinance.

- (c) The use of indigenous species shall be encouraged where landscaping enhancement is proposed.

504.9 General Development Standards.

(1) Roadways.

- (a) All new roadways shall be constructed and maintained in compliance with Section 705 of the Subdivision Ordinance for the City of Marine on St. Croix.
- (b) Local streets should be so planned as to discourage their use for regional traffic. Streets shall connect with one another or be terminated by other streets. Dead-end streets are prohibited, and cul-de-sacs shall be permitted only where topography or other physical conditions justify their use.

(2) Storm Water Management. Storm water management techniques shall be consistent with Sections 405.1 through 405.6 of the Zoning Ordinance with the following additions:

- (a) All retention basins shall resemble natural ponds to the maximum extent possible.
- (b) Basin landscaping shall include indigenous plants and landscaping materials.

(3) Utilities.

- (a) All new subdivisions may be platted to accommodate homesite lots with either individual or communal septic systems.
- (b) All septic systems shall conform to the performance standards of the Marine on St. Croix Sewer Use Ordinance No. 72.
- (c) A certified inspector designated by the City shall review all subdivision proposals for suitability of platted lots to accommodate individual and/or communal septic systems that include back-up drain fields.
- (d) Communal domestic sewage treatment systems may be used as an alternative to individual sewage treatment systems. See Figure 504-H.
- (e) Communal drainfields shall be installed at two (2) times capacities of all homes sharing the system and sufficient area for a back-up drain field shall be reserved.
- (f) Communal septic systems may have all or a portion of their required drainfields in natural habitat open spaces provided:

- (1) The ground cover is restored to its natural condition after installation.
 - (2) Recreational uses are prohibited above or within fifty (50) feet of their installation.
- (g) All homesite lots shall accommodate an on-site or an approved communal water well.
- (h) All utility, power, and cable service lines shall be installed below grade unless permitted otherwise by the City Council upon evaluation of demonstrated hardship.
- (4) Signs.
 - (a) Neighborhood or development identification signs shall not be permitted.
 - (b) Temporary real estate or development sales signs shall conform to the provisions of the City Zoning Ordinance pertaining to signs.
- (5) Homeowners Association. A homeowners association shall be established with bylaws and deed restrictions which include, but are not limited to, the following:
 - (a) To provide maintenance for open spaces owned in common.
 - (b) To provide maintenance for shared private facilities.
 - (c) To establish and maintain architectural guidelines for principle structures, accessory structures, and structures built on open space outlots.

Figure 504-H

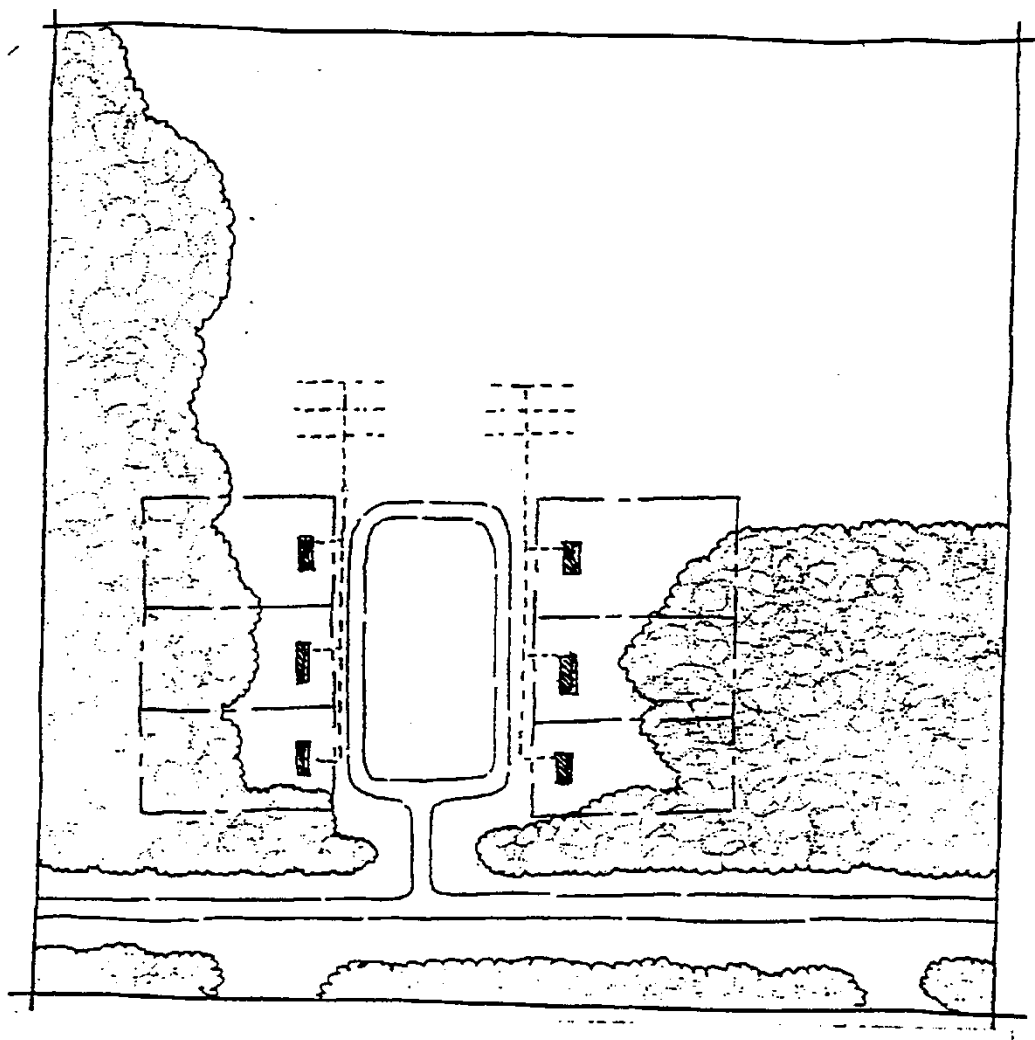


Figure 504-H Communal septic systems may have all or a portion of their required drainfields in natural habitat open spaces.

505. St. Croix – Rural Residential District (SC-RR).

505.1 Purpose. The purpose of this district is to set forth standards for rural residential development consistent with the purpose and intent of the Lower St. Croix River Overlay District described in Section 510 of this Ordinance.

505.2 Permitted Uses.

- (1) Conservancy.
- (2) Agriculture.
- (3) Single Family Residential.
- (4) Essential services – telephone, telegraph, and power distribution poles and lines and necessary appurtenant equipment and structures such as transformers, unit substations, and equipment houses.
- (5) Residential care facilities serving six (6) or fewer persons or less.
- (6) Day care facilities serving twelve (12) or fewer persons or less.
- (7) Home occupations described in Section 407.2 of this Ordinance.

505.3 Accessory Uses.

- (1) Garages and accessory buildings.
- (2) Fences.
- (3) Gardening and other horticultural uses, including greenhouses.
- (4) Recreational equipment, provided they are accessory to an existing principal permitted use on the same lot and which are operated for the enjoyment and convenience of the residents and their occasional guests.
- (5) Tool houses, sheds and similar buildings for storage of domestic supplies and noncommercial recreational equipment.
- (6) Private garages, off-street parking, and carports
- (7) Seasonal docks and boat lifts necessary for the launching and mooring of watercraft.
- (8) Any use customarily associated with and incidental to the permitted uses.
- (9) Horse Boarding of five (5) or fewer horses owned by the resident and if compliant with all other provisions of this code. This shall also apply to cattle, mules, donkeys, llamas.
- (10) Exception for yearlings: In addition to the animals permitted under Paragraph 9, two (2) additional animals owned by the resident shall be permitted provided that the animals are less than one year in age and all other area and performance standards of this ordinance are met.

505.4 **Interim Uses.** The following are interim uses in the SC-RR District and are subject to the provisions of Section 309 (Interim Uses) of this Ordinance.

- (1) Home occupations provided they are in compliance with Section 407.3 of this Ordinance.
- (2) Temporary classrooms.

505.5 **Conditional Uses.**

- (1) Churches and schools, provided that:
 - (a) Side yards shall have a forty (40) foot setback.
 - (b) Adequate screening from abutting residential uses and landscaping is provided.
 - (c) Adequate off-street parking and access is provided on the site and that such parking is adequately screened and landscaped from surrounding and abutting residential uses.
 - (d) Adequate off-street loading and service entrances are provided and regulated where applicable.
- (2) Seasonal produce stand accessory to farms, provided that:
 - (a) Only members of the family occupying the residence on the farmstead are engaged in such seasonal sale of produce.
 - (b) Only temporary, unenclosed display facilities are used to exhibit produce items.
 - (c) Adequate off-street parking is provided and no parking related to produce sales occurs in the public right-of-way.
 - (d) Signs:
 - 1. Are located only on the private property of the farm owner/operator and are no more than one hundred (100) feet from the point of sale.
 - 2. Are located no closer than fifteen (15) feet from any lot line.
 - 3. Are limited to no more than two (2) signs totaling no more than sixteen (16) square feet.
 - 4. Are removed at times when the sales operation is closed for the season.

- (3) Federal, state, and local government buildings and structures, including police and fire stations.
- (4) Public parks and playgrounds provided that:
 - (a) The site is landscaped.
 - (b) The use is available to the public.
 - (c) The site has access to a City street.
- (5) Accessory apartments provided they are in compliance with Section 409 of this Ordinance.
- (6) Use of an accessory structure for residential purposes where there is a sewer hook-up provided that:
 - (a) The facility is used by the occupants of the principal structure as an extension of their residential use of that structure;
 - (b) The facility does not contain both bathroom and kitchen facilities;
 - (c) The facility is located in a permanent structure; and
 - (d) The facility is not sold or rented separately from the principal structure.

505.6 Prohibited Uses. The following uses are not permitted in the SC-RR District.

- (1) New or expanded marinas.

505.7 District Performance Standards.

- (1) Lot Standards.
 - (a) Minimum lot size above ordinary high water mark: Two and one-half (2.5) acres.
 - (b) Lot width at building setback line: Two hundred (200) feet.
 - (c) Lot width at waterline: Two hundred (200) feet.
 - (d) The site shall be capable of supporting a standard septic treatment system as required in the Marine on St. Croix Sewer Use Ordinance No. 72.

- (2) Setbacks. Building line setbacks shall be within the following setback distances from platted lot lines:

- (a) Front Yard:

Road Right-of-Way

Road Classification	Required Setbacks from Road Right-of- Way
State Highway	50 feet
County Road	40 feet
City Street	40 feet

- (b) Side Yard: Minimum twenty (20) feet.
- (c) Side yard building setbacks on corner lots shall be a minimum of forty (40) feet.
- (d) Rear Yard: Minimum fifty (50) feet.
- (e) Setbacks from Ordinary High Water Level.(OHWL) measured horizontally, not following any slope:
1. Building and deck setback: Two hundred (200) feet.
 2. On-site sewage treatment system: Two hundred (200) feet.
 3. Controlled vegetative cutting pursuant to Section 510.6(1)(a) of this Ordinance setback (on slopes less than twelve (12) percent): Two hundred (200) feet.
- (f) Setbacks from Bluffline:
1. Building and deck setback: One hundred (100) feet.
 2. On-site sewage treatment system: Forty (40) feet.
 3. Controlled vegetative cutting pursuant to Section 510.6(1)(a) of this Ordinance setback (on slopes less than 12 %): Forty (40) feet.

- (3) Exceptions to the minimum dimensional requirements:

- (a) On shoreline lots where adjoining lots contain principal buildings within two hundred (200) feet of the OHWL, any new principal building may be set back the average setback of said adjacent structures or fifty (50) feet, whichever is greater.

- (b) On bluffline lots where adjoining lots contain principal buildings within one hundred (100) feet of the bluffline, any new principal building may be set back the average setback of said adjacent structures or fifty (50) feet, whichever is greater.
- (c) Except as described in Section 505.7(3)(a) or (b), structures setback from the bluffline may be located within the 40-100 foot range from the bluffline only by the granting of a variance in accordance with the procedures of this Ordinance. In the event that such a variance is necessary, the following items shall be conditions of the variance.
 - 1. The existing drainage patterns shall not be disturbed.
 - 2. All construction and grading excavations or disruption of the natural ground cover due to the on-site construction shall be re-sodded or seeded within 180 days of the date of issuance of the building permit.
- (4) Height Regulations. The maximum height of all structures shall not exceed thirty-five (35) feet.
- (5) Impervious Surface. Maximum total lot area covered by impervious surface: Twenty (20) percent of lot area or one-half (1/2) acre, whichever is less.
- (6) Slopes. No structures shall be placed or grading done on any slopes greater than twelve (12) percent a vertical rise of (twelve (12) feet in one hundred (100) feet horizontal distance).
- (7) Floodway. No structures shall be placed in any floodway.
- (8) Shoreland Visibility.
 - (a) Color of Structures. The exterior color of new structures, including roofs, shall be of earth or summer vegetation tones, unless completely screened from the river during all seasons of the year.
 - (b) The structure shall be visually inconspicuous as viewed from the river during summer months.
 - (c) Stairways and lifts enabling access to the river from steep slopes shall be visually inconspicuous as viewed from the river during summer months.
 - (d) Only signs which are necessary for public health and safety or which designate areas available or not available for public use shall be allowed within the required OHWL setback.

- (9) Tree Preservation. The location and siting of a principal accessory building shall be done in accordance with Section 405.7 of this Ordinance.

505.8 **Additional Requirements.** Refer to Section 510, Lower St. Croix River Overlay District for additional requirements.

506. **Single Family Urban (SFU).**

506.1 **Purpose.** The purpose of this district is to allow continued urban residential development and to fill in older, platted areas of the city, but at densities which will minimize demands for urban services.

506.2 **Permitted Uses.**

- (1) Single-family detached residences.
- (2) Churches.
- (3) Schools.
- (4) Essential services - telephone, telegraph, and power distribution poles and lines and necessary appurtenant equipment and structures such as transformers, unit substations, and equipment houses.
- (5) Home occupations as defined in Section 407.2.

506.3 **Accessory Uses.**

- (1) Garages.
- (2) Fences.
- (3) Gardening and other horticultural uses.
- (4) Recreational equipment.
- (5) Any uses customarily associated with and incidental to the permitted uses.

506.4 **Interim Uses.** The following are interim uses in the SFU District and are subject to the provisions of Section 309 (Interim Use Permits) of this Ordinance:

- (1) Home occupations provided they are in compliance with Section 407.3 of this Ordinance.
- (2) Temporary classrooms.
- (3) Maintenance, facility and storage buildings owned and operated by property associations on lots without a principle structure.

506.5 Conditional Uses.

- (1) Public Parks and Playgrounds provided that:
 - (a) The site is landscaped.
 - (b) The use is available to the public.
 - (c) The site has access to a City street.
- (2) Federal, State and Local Government buildings and structures, including police and fire stations.
- (3) Cemeteries.
- (4) Accessory apartments provided they are in compliance with Section 409 of this Ordinance.
- (5) Use of an accessory structure for residential purposes where there is a sewer hook-up provided that:
 - (a) The facility is used by the occupants of the principal structure as an extension of their residential use of that structure.
 - (b) The facility does not contain both bathroom and kitchen facilities.
 - (c) The facility is located in a permanent structure.
 - (d) The facility is not sold or rented separately from the principal structure.

506.6 District Performance Standards.

- (1) Lot Standards.
 - (a) Lot Area. The minimum lot size shall be thirty thousand (30,000) square feet unless it is determine that a larger lot size is required to safely install a private sewer system.
 - (b) Lot Width. The minimum lot width is one hundred (100) feet.
 - (c) Lot Depth. The minimum lot depth is one hundred fifty (150) feet.
- (2) Front Yard Regulations.
 - (a) There shall be a front yard having a depth of not less than thirty (30) feet, except in a block where two or more residences have been erected facing the same street, the setback for the remaining lots in that block fronting on the same street shall be determined by using the average setback of the existing residences.
 - (b) Where a lot is located at the intersection of two or more roads or highways, there shall be a front yard setback on each road or highway side of each corner lot.
- (3) Side Yard Regulations. There shall be a side yard of not less than ten (10) feet on each side of the building.

- (4) Rear Yard Regulations. There shall be a rear yard of not less than twenty-five (25) feet.
- (5) Height Regulations. The maximum height of all structures shall not exceed thirty-five (35) feet.
- (7) General Regulations. Additional requirements for parking, sewage systems, signs and other regulations are set forth in Section 4 of this Ordinance.

506.7. Neighborhood Service Overlay District.

- (1) **Purpose.** This district is created for the purpose of preserving congruent and compatible uses in the Single Family Urban District and for the following additional purposes:

- (a) to provide that land and buildings which have been historically integrated in and providing service directly to the residents of the adjoining neighborhood continue to be put to compatible uses, and
 - (b) to avoid disruption to longstanding development patterns and neighborhood uses.

- (2) **Application.** The provisions of this section are hereby adopted as an overlay district and shall apply to the following underlying Zoning Districts.

SFU Single Family Urban

- (3) **District Boundaries.**

- (a) The boundaries of the Neighborhood Service Overlay District are identified as depicted in the Amended Zoning Map which the City adopted January 11, 2018.

- (4) **Uses.** The permitted, accessory, interim and conditional uses set forth in § 506.2 – 506.5 shall not apply. Instead, the following listed uses shall be allowed:

- (a) **Permitted Uses.**

- i. Single family detached residential residences
 - ii. Schools
 - iii. Federal, state and local government buildings and structures, including police and fire stations, public works facilities
 - iv. Churches
 - v. Public Parks and playgrounds
 - vi. Home Occupations as defined in § 407.2.

- (b) **Accessory Uses.**

- i. Garages
 - ii. Fences
 - iii. Gardening and other horticultural uses

iv. Recreational equipment

The District Performance Standards at § 506.6 shall apply

507. **St. Croix – Urban Residential District (SC-UR).**

507.1 **Purpose.** The purpose of this district is to set forth standards for urban residential development within the Lower St. Croix River Overlay District.

507.2 **Permitted Uses.** All structures associated with the following uses are permitted in the SC-UR District subject to the dimensional requirements.

- (1) Conservancy.
- (2) Agriculture.
- (3) Single-family detached residences.
- (4) Essential Services – telephone, telegraph, and power distribution poles and lines and necessary appurtenant equipment and structures such as transformers, unit substations, and equipment houses.
- (5) Home occupations as described in Section 407.2.

507.3 **Accessory Uses.** The following are permitted accessory structures in the SC-UR District. All accessory buildings are subject to the provisions of Section 402.3 of this Ordinance.

- (1) Garages.
- (2) Fences.
- (3) Gardening and other horticultural uses.
- (4) Recreational Equipment.
- (5) Any uses customarily associated with and incidental to the permitted uses.
- (6) Docks and boat lifts necessary for landing and mooring watercraft.

507.4 **Interim Uses.** The following are interim uses in the SC-UR District and are subject to the provisions of Section 309 (Interim Uses) of this Ordinance.

- (1) Home occupations provided they are in compliance with Section 407.3 of this Ordinance.

507.5 **Conditional Uses.** The following are conditional uses in the SC-UR District.

- (1) Public Parks and Playgrounds provided that:
 - (a) The site is landscaped.
 - (b) The use is available to the public.
 - (c) The site has access to a City street.
- (2) Accessory apartments provided they are in compliance with Section 409 of this

Ordinance.

507.6 **Prohibited Uses.** The following uses are not permitted in the SC-UR District.

- (1) New or expanded marinas.

507.7 **District Performance Standards.**

- (1) Lot Standards.

- (a) Minimum lot size above ordinary high water mark: One (1) acre.
- (b) Lot width at building setback line: One hundred fifty (150) feet.
- (c) Lot width at waterline (riparian): One hundred fifty (150) feet.
- (d) Site shall be capable of supporting a standard septic system compliant with the Marine on St. Croix Sewer Use Ordinance No. 72.

- (2) Setbacks. Building line setbacks shall be within the following setback distances from platted lot lines:

- (a) Front Yard Regulations:

1. There shall be a front yard having a depth of not less than thirty (30) feet, except in a block where two or more residences have been erected facing the same street, the setback for the remaining lots in that block fronting on the same street shall be determined by using the average setback of the existing residences.
2. Where a lot is located at the intersection of two or more roads or highways, there shall be a front yard setback on each road or highway side of each corner lot. No accessory buildings shall project beyond the front yard of either road.

- (b) Side Yard Regulations:

1. Lots of record having a lot width of ninety-five (95) feet or less shall have a side yard of not less than ten (10) feet on each side of the building.
2. Any lots having a lot width of more than ninety-five (95) feet shall have a side yard of not less than twenty (20) feet on each side of the building.

- (c) Rear Yard Regulations: There shall be a rear yard of not less than twenty-five (25) feet.

(e) Setbacks from Ordinary High Water Level (OHWL) measured horizontally, not following any slope:

1. Building and deck setback: One hundred (100) feet.
2. On-site sewage treatment system: One hundred (100) feet.
3. Controlled vegetative cutting areas setback (on slopes less than 12%): One hundred (100) feet.

(f) Setbacks from Bluffline:

1. Building and deck setback: Forty (40) feet.
2. On-site sewage treatment system: Forty (40) feet.
3. Controlled vegetative cutting areas setback (on slopes less than 12%): Forty (40) feet.

- (3) Exception to the minimum dimensional requirements. On shoreline lots where adjoining lots contain principal buildings within one hundred (100) feet of the OHWL, any new principal building may be set back the average setback of said adjacent structure or fifty (50) feet, whichever is greater.
- (4) Height Regulations. The maximum height of all structures shall not exceed thirty-five (35) feet.
- (5) Impervious Surface. The maximum total lot area which can be covered by impervious surface shall not exceed twenty (20) percent of the total lot area or eight thousand seven hundred (8,700) square feet, whichever is less.
- (6) Slopes. No structures shall be placed or grading done on any slopes greater than twelve (12) percent (a vertical rise of twelve (12) feet) in one hundred (100) feet horizontal distance).
- (7) Floodway. No structures shall be placed in any floodway.
- (8) Shoreland Visibility.
 - (a) Color of Structures. The exterior color of new structures, including roofs, shall be earth or summer vegetation tones, unless completely screened from the river during all seasons of the year.
 - (b) The structure shall be visually inconspicuous as viewed from the

river during summer months.

- (c) Stairways and lifts enabling access to the river from steep slopes shall be visually inconspicuous.
- (d) Only signs which are necessary for public health and safety or which designate areas available or not available for public use shall be allowed within the required OHWL setback.

- (9) Tree Preservation. The location and siting of a principal accessory building shall be done in accordance with Section 405.7 of this Ordinance.

507.8 **Additional Requirements.** Refer to Section 510, Lower St. Croix River Overlay District for additional requirements.

508. **Village Center District (VC).**

508.1 **Purpose.**

- (1) The purpose of this district is to provide a commercial center for the City and to:
 - (a) Maintain commercial activities as the primary role of the Village Center District.
 - (b) Have the Village Center serve as the social, cultural and commercial center of the City.
 - (c) Promote the Village Center area as the historic center of the City.
 - (d) Allow non-street level residential uses as a supporting use to commercial activities, so long as such uses do not interfere with the commercial uses allowed in the zoning district.

508.2 **Permitted Uses.**

- (1) Church
- (2) Clubs or Lodges.
- (3) Essential Services.
- (4) Library.
- (5) Municipal Government and Utility Buildings.
- (6) Office Businesses (commercial, professional, and medical).
- (7) Restaurants (café, delicatessens, coffee shops, convenience foods).
- (8) Retail Businesses.
- (9) Schools.
- (10) Service Businesses.
- (11) Taverns.

508.3 **Accessory Uses.**

- (1) Uses which are customarily associated with or incidental to the permitted primary uses of the property are permitted.
- (2) Accessory Buildings for commercial use shall not exceed thirty (30) percent of the gross floor space of the principal building.
- (3) Outdoor dining areas accessory to a restaurant or tavern.

508.4 **Interim Uses.** The following are interim uses in the Village Center District and are subject to the provisions of Section 309 (Interim Uses) of this Ordinance.

508.5 **Conditional Uses.** The following are conditional uses in the Village Center District. (Requires the issuance of a conditional use permit in accordance with the procedures set forth in and regulated by Section 308 (Conditional Use Permits) of this Ordinance.

- (1) Auto Service Station (Auto Repair, Service, Fuel) subject to the following standards:
 - (a) Lot Size. A service station site shall be a minimum of twenty thousand (20,000) square feet in size.
 - (b) Setbacks. The building or buildings shall be set back at least thirty-five (35) feet from the street right-of-way. Near residential districts, the service station buildings, signs, and pumps shall be a minimum of twenty-five (25) feet from adjoining property. In commercial areas, the structures shall be set back at least ten (10) feet from adjoining property.
 - (c) Fencing and Screening. When adjacent or near to residential property, there shall be a screening fence. When adjacent to commercial property, there shall be a bumper-type fence about eighteen (18) inches high between the station and the adjacent commercial property.
 - (d) Vehicles. No vehicles shall be parked on the premises other than those utilized by employees or awaiting service. No vehicle shall be parked or be waiting service longer than fifteen (15) days.
 - (e) Exterior Storage. Exterior storage besides vehicles shall be limited to service equipment, and items offered for sale on pump islands, exterior storage of items offered for sale shall be within yard setback requirements and shall be located in containers such as the racks, metal trays, and similar structures designed to display merchandise.
 - (f) Screening. All areas utilities for the storage, disposal, or burning of trash,

debris, discarded parts, and similar items shall be fully screened. All structures and grounds shall be maintained in an orderly, clean, and safe manner.

- (g) **Architecture.** If possible, the station should be of a type that is reasonably compatible with the surroundings. Most national oil companies have a variety of building types which could be viewed for selection of the most suitable.
 - (h) **Outdoor Displays.** The storage of used tires, batteries, and other such items for sale outside the building should be controlled; such items should be displayed in specially designed containers and be limited to one (1) or two (2) areas well back from the street right-of-way line. Junk cars, empty cans, and other unsightly materials should not be permitted in an area subject to public view.
 - (i) **Conditional Uses.** Business activities not listed in the definition of service stations in this Ordinance are not permitted on the premises of a service station unless a conditional use permit is obtained specifically for such business. Such activities include, but are not limited to, the following:
 - 1. Automatic car and truck wash.
 - 2. Rental of vehicles, equipment or trailers.
 - 3. General retail sales.
- (2) Residential and non-residential uses together in one (1) building, the principal use of which is commercial, subject to the following conditions:
- (a) Residential uses shall not be located on the first floor (street level), or the basement level of the building.
 - (b) Residential uses shall have a separate entrance/exit from the commercial entrance/exit.
 - (c) Adequate parking is provided in compliance with Section 406.3 (Parking requirement) of this Ordinance.
 - (d) The provisions of Section 308 of this Ordinance are considered and satisfactorily met.
 - (e) All current building, fire and safety codes of the City of Marine on St. Croix are complied with.
 - (f) Notwithstanding the requirement contained in the foregoing paragraph (2) that residential and non-residential uses be located together in one (1) building, the principal use of which is commercial, a conditional use

permit may be issued under this Section 508.5 for a residential use located in a structure the principal use of which is not commercial subject to the following conditions:

1. the structure is less than 1,500 square feet in total size, consists of only one floor, is on street level, freestanding, and is not a part of, contained within or built into a larger structure or building;
2. the structure complies with all current rules and regulations governing septic systems;
3. adequate off street parking is available on the subject property;
4. the building does not front upon, or have vehicle ingress or egress over Judd Street;
5. the remaining requirements of sections (2)(d),(e) are met;
6. the structure was constructed before the effective date of this code.

- (3) Outdoor Sales or Storage. Open or outdoor sales, rental, or storage is an accessory use which requires the issuance of a conditional use permit and is subject to the following conditions:

- (a) Area Limit. Outside services, sales, rental, or storage connected with the principal use is limited to thirty (30) percent of the gross floor area of the principal building.
- (b) Screened from Residential. Outside sales areas shall be fenced or screened from view of neighboring residential uses or abutting residential zoning districts in compliance with Section 404.3 of this Ordinance.
- (c) Lighting Shielded. All lighting shall be hooded and so directed that the light source shall not be visible from the public right-of-way or from neighboring residences and shall be in compliance with Section 404.7 (1) of this Ordinance.
- (d) Surfacing. The sales area shall be grassed or surfaced to control dust and mud, and to provide a clean, attractive and usable surface.

508.6 Prohibited Uses. The following uses are not permitted in the Village Center District.

- (1) New or expanded marinas.
- (2) Outdoor sales lots as a principal use.

508.7 District Performance Standards.

- (1) Lot Standards.
 - (a) Minimum lot size above ordinary high water level: N/A
 - (b) Lot width at building setback line: Seventy-five (75) feet.

- (c) Lot width at waterline (riparian): Seventy-five (75) feet.
- (1) Setbacks. Building line setbacks shall be within the following setback distances from platted lot lines:
 - (a) Front Yard: Zero (0) feet.
 - (b) Side Yard: Zero (0) feet.
 - (d) Rear Yard: Zero (0) feet.
 - (e) Setbacks from Ordinary High Water Level (OHWL) measured horizontally not following any slope:
 - 1. Building and deck setback: One hundred (100) feet.
 - 2. On-site sewage treatment system: One hundred (100) feet.
 - 3. Controlled vegetative cutting areas setback (on slopes less than 12%): One hundred (100) feet.
 - (f) Setbacks from Bluffline:
 - 1. Building and deck setback: Forty (40) feet.
 - 2. On-site sewage treatment system: Forty (40) feet.
 - 3. Controlled vegetative cutting areas setback (on slopes less than 12%): Forty (40) feet.
- (3) Exceptions to the minimum dimensional requirements. On shoreline lots where adjoining lots contain principal buildings within one hundred (100) feet of the OHWL, any new principal building may be set back the average setback of said adjacent structures or fifty (50) feet, whichever is greater.
- (4) Height Regulations. The maximum height of all structures shall not exceed forty-five (45) feet.
- (5) Impervious Surface.
 - (a) Impervious surface coverage of lots developed after June 1, 2001 shall not exceed seventy-five (75) percent.
 - (b) Lots of record that have been developed up to one hundred (100) percent of impervious surface coverage on or before June 1, 2001 shall be

considered legally conforming structures/lots.

- (c) Impervious surface may be allowed to exceed seventy-five (75) percent of the lot upon approval of a conditional use permit provided the measures are taken for the treatment of stormwater runoff and/or prevention of stormwater from directly entering a public water. Measures may include, but are not limited to, the following:

1. Install sedimentation basins, debris basins, desilting basins, or silt traps.
2. Install debris guards and microsilt basins on storm sewer inlets.
3. Use oil skimming devices or sump catch basins.
4. Direct drainage into pervious, grasses, yards through site grading, use of gutters and downspouts.
5. Construct sidewalks and driveways of partially pervious raised materials such as decking which has natural earth or other pervious material beneath or between the planking.
6. Use grading and construction techniques which encourage rapid infiltration, e.g. sand and gravel under impervious materials with adjacent infiltration swales graded to lead into them.
7. Install berms, water bars, or terraces which temporarily detain water before dispersing it into pervious area.

- (6) Color of Structures. The exterior color of new structures, including roofs, shall be of earth or summer vegetation tones, unless completely screened from the river.

- (7) Slopes. No structures shall be placed or grading done on any slopes greater than twelve (12) percent (a vertical rise of twelve (12) feet in one hundred (100) feet horizontal distance).

- (8) Floodway. No structures shall be placed in any floodway.

508.8 **Additional Requirements**. Refer to Section 510 Lower St. Croix River Overlay District for additional requirements.

509. **Limited Industry (L-I).**

509.1 **Purpose**. This District is intended to provide for compact, limited industries and industrial uses that may suitably be located in areas of relatively close proximity to non--

industrial development. As such, industries that pose problems of air pollution, noise, vibration, etc. are restricted from this district. All limited industrial uses must be supported with on-site individual or communal sewer treatment systems and private wells.

509.2 Permitted Uses. The following permitted uses shall be allowed within the L-I Zoning District provided they will not produce exterior noise, glare, fumes, obnoxious products or by-products or wastes that violate the standards of this Ordinance.

- (1) Auto Repair Garages.
- (2) Building Material Sales.
- (3) Contractors Shops including building, plumbing, heating, electrical, painting, and landscaping, but not including storage yards.
- (4) Commercial/Professional Offices.
- (5) Essential.
- (6) Manufacturing, assembly, or repair of products.
- (7) Public Utility Buildings.
- (8) Public Vehicle Garages.
- (9) Transportation or freight terminals.
- (10) Warehouses.

509.3 Accessory Uses.

- (1) Any incidental repair, processing, or storage necessary to conduct a permitted principal use.
- (2) Accessory buildings.
- (3) Off-street parking.
- (4) Off-street loading.

509.4 Interim Uses. The following are interim uses in the L-I District and are subject to the provisions of Section 309 (Interim Uses) of this Ordinance:

- (1) None.

509.5 Conditional Uses.

- (1) Open and outdoor storage as an accessory use provided that:
 - (a) The storage area is landscaped and screened from view of neighboring uses and abutting residential zoning districts and public rights-of-way.
 - (b) The storage area is fenced to delineate the limits of the storage area. Outdoor storage shall not exceed the height of the provided fencing or screening.
 - (c) The storage area is surfaced to control dust.
 - (d) All lighting shall be in compliance with Section 404.7 of this Ordinance.

- (e) The storage area does not take up parking space or loading space as required for conformity to this Ordinance.
- (2) Railroad storage and switching yards and rail lines.

509.6 District Performance Standards.

- (1) Height, Regulations. No structure shall hereafter be erected or structurally altered to exceed forty-five (45) feet in height.
- (2) Front Yard Regulations.
 - (a) Required setbacks from public road right-of-way – one hundred (100) feet.
 - (b) Where a lot is located at the intersection of two (2) or more roads or highways there shall be a front yard setback on each road or highway side of each corner lot. No building shall project beyond the front yard setback line of either road.
- (3) Side Yard Regulations.
 - (a) There shall be a side yard having a width of not less than fifteen (15) feet on each side of a building.
 - (b) No building shall be located within fifty (50) feet of any side lot line abutting a lot in any residential or agricultural district.
- (4) Rear Yard Regulations.
 - (a) There shall be a minimum rear yard of thirty (30) feet.
 - (b) No building shall be located within fifty (50) feet of any rear lot line abutting a lot in any residential or agricultural district.
- (5) Screening and Fencing. The City may require the screening or fencing of industrial uses to prevent visual blight, especially on side yards which face residential or agricultural districts.
- (6) General Regulations. Other applicable regulations related to signs, parking and other regulations are set forth in Section 4 of this Ordinance.

510. Lower St. Croix River Overlay District.

510.1 **Purpose.** This district is created for the purpose of protecting the natural resources and natural scenic values of land within the boundaries of the Lower St. Croix Riverway and for the following additional purposes:

- (1) Designating suitable land use districts: along the bluffland and shoreland of the Lower St. Croix River.
- (2) Regulating lot sizes, and the length of bluffland and water frontage suitable for building sites.
- (3) Regulating the setback of structures and sanitary waste treatment facilities from bluffs to protect the existing and/or natural scenic values, vegetation, soils, water, and bedrock from disruption by man-made structures or facilities.
- (4) Regulating the setback of structures and sanitary waste treatment facilities from shorelines to protect the natural scenic value, floodplain, and water quality.
- (5) Regulating alterations of the natural vegetation and topography.
- (6) Conserving and protecting the natural scenic values and resources of the river valley and maintaining a high standard of environmental quality to comply with Minnesota Department of Natural Resources Standards and Criteria for the Lower St. Croix National Scenic Riverway (9NR 220-2202).
- (7) Preserving the historic character, values, and significance represented in the City of Marine on St. Croix.

510.2 **Application.** The provisions of this section are hereby adopted as an overlay district and shall apply to the following underlying Zoning Districts.

SC – RR	St. Croix – Rural Residential District
SC – UR	St. Croix – Urban Residential District
VC	Village Center District

510.3 **District Boundaries.**

- (1) The boundaries of the Lower St. Croix Riverway include all of the land riverward of the legally described boundary line in the official copy of the Lower St. Croix National Scenic Riverway Master Plan and as shown on the map designated as the City of Marine on St. Croix official zoning map.
- (2) The boundaries of the Lower St. Croix River Overlay District include all of the areas as shown on the City of Marine on St. Croix official zoning map on file with the City Zoning Administration Staff.

510.4 **General Provisions.**

- (1) Non-Conforming Uses. Uses which are prohibited by this Ordinance but which are in existence prior to the effective date of this Ordinance shall be non-conforming uses and may continue as lawful, non-conforming uses. Such uses shall not be intensified, enlarged, or expanded beyond the permitted or delineated boundaries of the use, activity, or reclamation plan as stipulated in the most current permit issued prior to the adoption of this Ordinance.
- (2) Substandard Structures. All structures in existence prior to the adoption date of this Ordinance which do not meet the structure setbacks and other dimensional standards of this Ordinance shall be considered substandard structures. All substandard structures that need replacing due to destruction, deterioration, or obsolescence, shall be allowed to be replaced, restored, or rebuilt as necessary to remain the same as they exist on the date of the enactment of this Ordinance; but any change beyond the established structural dimensions of each such substandard structure shall be in compliance with the setback requirements of this Ordinance or any variance that may be obtained or issued for such increase in size.

510.5 **Review Criteria.** When considering a proposal or zoning amendment within the St. Croix River Overlay District, the City Council shall address the following items in making its decision.

- (1) The preservation of the scenic and recreational resources of the St. Croix Riverway, especially in regard to the view from and use of the river.
- (2) The maintenance of safe and healthful conditions.
- (3) The prevention and control of water pollution.
- (4) The location of the site with respect to floodways, floodplains, slopes, and blufflines.
- (5) The erosion potential of the site based on degree and direction of slope, soil type, and vegetation cover.
- (6) The potential impact on game and fish habitat.
- (7) The location of the site with respect to existing or future access roads.
- (8) The amount of wastes to be generated and the adequacy of the proposed disposal systems.
- (9) The anticipated demand for police, fire, medical, and school services and facilities.
- (10) The compatibility of the proposed development with uses on adjacent land.

510.6 **District Requirements.** The following standards and criteria shall apply to development within the Lower St. Croix River Overlay District.

- (1) Site Preservation. The following standards and criteria are provided to preserve vegetative and topographical screening, and to retard runoff, soil erosion, and nutrient loss.
 - (a) Vegetative Cutting. On land within 200 feet of the ordinary high water level in rural districts, 100 feet of the ordinary high water level in urban districts, and 40 feet landward of blufflines and on slopes greater than 12 percent in all districts, there shall be no vegetative cutting of live trees or shrubs without a vegetative cutting permit from the City's zoning administration staff. A permit may be issued only if:
 1. The cutting, including topping:
 - a. Involves trees less than 6 inches in diameter at breast height; and
 - b. Involves vegetation which is not screening any structure from view from the river; and
 - c. Preserves the essential character, quality, and density of existing growths; and
 - d. Maintains continuous canopy cover or
 2. Diseased trees are to be removed and their removal is in the public interest; or
 3. The cutting is necessary for the maintenance of transportation or utility rights-of-way.
 - (b) Vegetative Cutting Permit. A vegetative cutting permit is not required for the following provided the existing quality, character, density, and canopy is maintained as viewed from the river.
 1. Clearing for a validly permitted structure, septic system, roadway, or parking area.
 2. Maintenance trimming or pruning on a particular parcel or in transportation or utility rights-of-way.
 - (c) Grading and Filling. Grading, filling, excavating or otherwise changing the topography landward of the ordinary high level mark shall not be conducted without a grading permit from the City's Zoning Administration Staff. A grading permit may be issued only if:

1. Slopes greater than 12 percent (12 feet vertical rise in 100 horizontal feet) are preserved to the greatest extent possible.
 2. Earth moving, erosion, vegetative cutting, drainage, filling of wetlands, and the destruction of natural amenities is minimized,
 3. The smallest amount of ground is exposed for as short a time as feasible.
 4. During construction, temporary ground cover such as mulch is used and permanent ground cover such as sod is planted upon completion.
 5. Methods to prevent erosion and trap sediment are employed and
 6. Fill is stabilized to accepted engineering standards.
- (d) A separate grading and filling permit is not required for grading, filling or excavating the minimum area necessary for a structure, sewage disposal system, private road or parking area undertaken pursuant to a validly issued building permit.
- (2) Sewage Disposal.
- (a) Any premises intended for human occupancy must be provided with an adequate method of sewage disposal. Public or municipal collection and treatment facilities must be used where available and where feasible. Where public or municipal facilities are not available, all on-site individual sewer disposal systems shall conform to the Marine on St. Croix Sewer Use Ordinance No. 72. A septic tank drainfield system shall be the only acceptable system for installation unless it can be demonstrated that this system is not feasible on the particular lot in question and it can be demonstrated that the system being proposed as an alternative will not cause a pollution problem.
 - (b) No person, firm, or corporation shall install, alter, repair, or extend any individual sewer disposal system without first obtaining a permit therefore from the City's Zoning Administration Staff for the specific installation, alteration, repair, or extension.
- (3) Alterations in Public Waters. Changing the course, current, or cross-section of public waters shall require state and federal permits as specified in sub-paragraph (g) of NR 2201 before any local permits may be issued.
- (4) Transmission Services. A permit from the Commissioner of Natural Resources is

required pursuant to Minnesota Statutes, Sections 84.415 or 105.42 before transmission services may cross state owned lands or public waters and transmission services shall be in accordance with the Natural Resources Regulations including NR 2201(h).

- (5) Public Roads. A permit from the Commissioner of Natural Resources is required before construction, reconstruction, removal or abandonment of any road or railroad crossing of public waters within the Riverway. Said permit shall be in accordance with the Natural Resources Regulations including NR 2201(1).
- (6) Planned Cluster Development. A pattern of subdivision development which places dwelling units into compact groupings may be allowed when the proposed clustering provides a better means of preserving agricultural land, open space, woods, scenic views, wetlands, and other features of the natural environment than traditional subdivision development.

510.7 **Application Procedures.**

- (1) Administrative Procedure. In addition to the applicable administrative procedures set forth in the Zoning Ordinance of the City, the following procedures shall be implemented with respect to land within the Lower St. Croix River Overlay District.
 - (a) A public hearing shall be held by the local authority for all zoning district amendments, conditional use permits, subdivisions, and variances.
 - (b) No less than 20 days prior to the public hearing, the Zoning Administration Staff shall send notice and copies of the applicant's information as specified to the following agencies for review and comment:
 - 1. Department of Natural Resources.
 - 2. City Planning Commission.
 - 3. Regional Planning Commission.
 - 4. Minnesota/Wisconsin-Boundary Area Commission.
 - (c) The applicant for any permit requiring a public hearing shall submit to the City Council at least 30 days prior to such hearing an abstractor's certificate showing the names and addresses of all property owners within 250 feet of the affected property in all areas or a list of names and addresses of all property owners within two hundred fifty (250) feet of the affected property that is acceptable to the City's Zoning Administration Staff.

- (d) Notice of the purpose, time, and place of any such public hearing shall be mailed to all property owners and the elected officials listed in (2) by the local authority at least ten (10) days prior to the date of the hearing.
- (e) Before any zoning district or ordinance amendment or variance becomes final, the City of Marine on St. Croix shall forward the decision to the Commissioner of Natural Resources. The Commissioner of Natural Resources shall certify in writing that the proposed action complies with the intent of the Wild and Scenic Rivers Act and the Master Plan for the Lower St. Croix River in the manner specified in Department of Natural Resources Regulations, including NR 2202 (e).
- (f) The City of Marine on St. Croix shall forward to the Commissioner of Natural Resources all decisions on all conditional use permits and subdivisions within ten (10) days of final action thereof.

(2) Preliminary Plans.

- (a) Preliminary plans for all plats, including planned cluster development, shall be approved by the Commissioner of Natural Resources or his agent in writing prior to preliminary approval by the City Council
- (b) All subdivisions shall comply with the Marine On St. Croix Subdivision Regulations.

(3) Variances.

- (a) Variances shall only be granted the strict enforcement of this Ordinance would cause an undue hardship because of circumstances unique to the particular property at issue. Undue hardship means the proposed use of the property and associated structures in question cannot be put to a reasonable use under the conditions allowed by this Ordinance; the plight of the landowner is due to circumstances unique to his property, not created by the landowner after August 9, 2001; and the variance, if granted, will not alter the essential character of the locality. Economic considerations alone shall not constitute a hardship, if reasonable use of the property and associated structures exists under this Ordinance. In addition, no variance shall be granted that would permit any use that is prohibited by this Ordinance in the zone or district where the subject property is located. Conditions may be imposed in the granting of a variance to insure compliance and to protect adjacent properties and the public interest, especially in regard to the view from the river.

510.8 **Application Submittal Requirements.** The applicant shall submit sufficient copies of the following information, if appropriate, and additional information as requested, to the local authority thirty (30) days prior to the public hearing on the application for an amendment, conditional use, variance, or subdivision.

- (1) Plat of survey showing the property, location, boundaries, dimensions, elevations, blufflines, utility and roadway corridors, the ordinary high water level, floodway, and floodplain.
- (2) The most recent aerial photo of the property lines drawn in.
- (3) Location of existing and proposed structures including height and setback dimensions.
- (4) Location of existing and proposed alterations of vegetation and topography.
- (5) Adjoining water-oriented uses.
- (6) Suitability of the area for on-site waste disposal. Type, size, and location of the system shall be indicated. If a public or municipal wastewater collection and treatment system is to be utilized, the applicant must submit a written agreement from the municipality or sanitary authority indicating that the system has the capacity to handle the development.
- (7) Water supply system.
- (8) An estimate of permanent and transient residents.

510.9 Permit Process and Review Authority. The following table indicates the reviewing authority and process for all permit applications within the Lower St. Croix River Overlay District.

Permit Type	SC-UR <i>(Urban District)</i>	SC-RR <i>(Rural District)</i>	SC-VC <i>(Village Center District)</i>
Building Permits	LP	LP	LA-FD
Septic Permits	LP	LP	LP
Grading Permits	LP	LP	LP
Tree Cutting Permits	LP	LP	LP
Conditional Use Permits	PH-FD	PH-FD	PH-FD
Amendments to Ordinance	PH-CC	PH-CC	PH-CC
Amendments to District Boundary	PH-CC	PH-CC	PH-CC
Plats and Cluster Developments	PH-WA-FD	PH-WA-FD	PH-WA-FD
Variances	PH-CC	PH-CC	PH-CC

LP Permit issued by the local authority in accordance with this Ordinance and all other local permit requirements.

CC Certification by the Commissioner of Natural Resources prior to final, local approval.

PH Public hearing necessary by the local authority giving 20 days notice of meeting to the Commissioner of Natural Resources and other agencies listed in Section 510.7(1)(b) of this Ordinance.

- FD Local authority forwards any decisions to the Commissioner of Natural Resources within 10 days after taking final action.
- WA The Commissioner of Natural Resources shall submit, after notice of public hearing and before the local authority gives preliminary approval, a written review and approval of the project.
- LA Application for permit review by the City Planning Commission and City Council.
- NA Not Applicable

511. Floodplain District.

- 511.1 Purpose.** The purpose of this ordinance is to maintain the community's eligibility in the National Flood Insurance Program and to minimize potential losses due to periodic flooding including loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare of the community.
- 511.2 Statutory Authorization.** The Legislature of the State of Minnesota has, in Minnesota Statutes Chapters 103F and Chapter 194 (for counties) and Chapter 462 (for municipalities) delegated the authority to local governmental units to adopt regulations designed to minimize flood losses. Minnesota Statutes, Chapter 103F further stipulates that communities subject to recurrent flooding must participate and maintain eligibility in the National Flood Insurance Program. Therefore, the City of Marine on St. Croix, Minnesota does ordain as follows:
- 511.3 Warning of Disclaimer of Liability.** This Ordinance does not imply that areas outside of the Floodplain District or land uses permitted within such districts will be free from flooding and flood damages. This Ordinance shall not create liability on the part of the City of Marine on St. Croix or any officer or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decisions lawfully made thereunder.
- 511.4. General Provisions.**
- (1) Adoption of Flood Insurance Rate Map. The Flood Insurance Rate Map for the City of Marine on St. Croix, dated September 27, 1985, developed by the Federal Emergency Management Agency is hereby adopted by reference as the official Floodplain Zoning District Map and made a part of this Ordinance. This map was previously entitled the Flood Hazard Boundary map dated March 15, 1975.
 - (2) Lands to Which Ordinance Applies. This Ordinance shall apply to all lands designated as floodplain within the jurisdiction of the City of Marine on St. Croix.
 - (3) Interpretation. The boundaries of the Floodplain District shall be determined by scaling distances on the Official Floodplain Zoning District map. Where

interpretation is needed as to the exact location of the boundaries of the Floodplain District, the City of Marine on St. Croix shall make the necessary interpretation based on elevations on the regional (100-year) flood profile, if available. If 100-year flood elevations are not available, the community shall:

- (a) Require a floodplain evaluation consistent with Section 5.117 of this Ordinance to determine a 100-year flood elevation for the site; or
- (b) Base its decision on available hydraulic/hydrologic or site elevation survey data which demonstrates the likelihood the site is within or outside of the floodplain.

511.5. Conflict with Pre-Existing Zoning Regulations and General Compliance.

(1) The Floodplain District as overlay Zoning District. The Floodplain Zoning District shall be considered an overlay zoning district to all existing land use regulations of the community. The uses permitted in Sections 511.6 and 511.7 of this Ordinance shall be permitted only if not prohibited by any established, underlying zoning district. The requirements of this Ordinance shall apply in addition to other legally established regulations of the community and where this Ordinance imposes greater restrictions, the provisions of this Ordinance shall apply.

(2) Compliance: No new structure or land shall hereafter be used and no structure shall be located, extended, converted, or structurally altered without full compliance with the terms of this Ordinance and other applicable regulations which apply to uses within the jurisdiction of this Ordinance. Within the Floodway and Flood Fringe, all uses not listed as permitted uses in Section 511.6 shall be prohibited. In addition, a caution is provided here that:

- (a) New manufactured homes, replacement manufactured homes and certain travel trailers and travel vehicles are subject to the general provisions of this Ordinance and specifically Sections 511.6 and 511.15;
- (b) Modifications, additions, structural alterations or repair after damage to existing nonconforming structures and nonconforming uses of structures or land are regulated by the general provisions of this Ordinance and specifically Section 511.12; and
- (c) As-built elevations for elevated structures must be certified by ground surveys as stated in Section 511.10 of this Ordinance.

511.6. Permitted Uses, Standards, and Floodplain Evaluation Criteria.

(1) Permitted Uses in the Floodplain. The following uses of land are permitted uses in the Floodplain District:

(a) Any use of land which does not involve a structure, an addition to the outside dimensions of an existing structure or an obstruction to flood flows such as fill, excavation, or storage of materials or equipment.

(b) Any use of land involving the construction of new structures, the placement or replacement of manufactured homes, the addition to the outside dimensions of an existing structure, or obstructions such as fill or storage of materials or equipment, provided these activities are located in the flood fringe portion of the floodplain. These uses shall be subject to the development standards in Section 511.6(2) of this Ordinance and the flood plain evaluation criteria in Section 511.7 of this Ordinance for determining floodway and flood fringe boundaries.

(c) Travel trailers and travel vehicles are regulated by Section 511.15 of this Ordinance.

(2) Standards for Floodplain Permitted Uses.

(a) Fill shall be properly compacted and the slopes shall be properly protected by the use of riprap, vegetative cover or other acceptable method. The Federal Emergency Management Agency (FEMA) has established criteria for removing the special flood hazard area designation for certain structures properly elevated on fill above the 100-year flood elevation – FEMA's requirements incorporate specific fill compaction and side slope protection standards for multi-structure or multi-lot developments. These standards should be investigated prior to the initiation of site preparation if a change of special flood hazard area designation will be requested.

(b) Storage of Materials and Equipment:

(1) The storage or processing of materials that are, in time of flooding, flammable, explosive, or potentially injurious to human, animal, or plant life is prohibited.

(2) Storage of other materials or equipment may be allowed if readily removable from the area within the time available after a flood warning or if placed on fill to the Regulatory Flood Protection Elevation.

(c) No use shall be permitted which will adversely affect the capacity of the channels or floodways of any tributary to the main stream, or of any drainage ditch, or any other drainage facility or system.

(d) All structures, including accessory structures, additions to existing structures and manufactured homes, shall be constructed on fill so that the basement floor, or first floor if there is no basement, is at or above the Regulatory Flood Protection Elevation. The finished fill elevation must be no lower than one foot below the Regulatory Flood Protection Elevation and shall extend at such elevation at least fifteen (15) feet beyond the limits of the structure constructed thereon.

(e) All Uses. Uses that do not have vehicular access to lands outside of the floodplain at or above an elevation not more than two feet below the Regulatory Flood Protection Elevation shall not be permitted unless granted a variance by the City Council. In granting a variance, the City Council shall specify limitations on the period of use or occupancy of the use and only after determining that adequate flood warning time and local emergency response and recovery procedures exist.

(f) Commercial and Manufacturing Uses. Accessory land uses, such as yards, railroad tracks, and parking lots may be at elevations lower than the Regulatory Flood Protection Elevation. However, a permit for such facilities to be used by the employees or the general public shall not be granted in the absence of a flood warning system that provides adequate time for evacuation if the area would be inundated to a depth greater than two (2) feet or be subject to flood velocities greater than four (4) feet per second upon occurrence of a regional flood.

(g) On-site Sewage Treatment and Water Supply Systems:
Where public utilities are not provided:

(a) On-site water supply systems must be designed to minimize or eliminate infiltration of flood waters into the systems; and

(b) New or replacement on-site sewage treatment systems must be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and they shall not be subject to impairment or contamination during times of flooding. All on-site sewer disposal systems shall conform to the standards of the Marine on St. Croix Sewer Use Ordinance No. 72.

(h) All manufactured homes must be securely anchored to an adequately anchored foundation system that resists flotation, collapse and

lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state or local anchoring requirements for resisting wind forces.

511.7. Floodplain Evaluation.

(1) Upon receipt of an application for a permit, manufactured home park development or subdivision approval within the Floodplain District, the City of Marine on St. Croix shall require the applicant to furnish sufficient site development plans and a hydrologic/hydraulic analysis by a qualified engineer or hydrologist specifying the nature of the development and whether the proposed use is located in the floodway or flood fringe and the Regulatory Flood Protection Elevation for the site. Procedures consistent with Minnesota Rules 1983 Parts 6120.5600 (Technical Standards and Requirements For Floodplain Evaluation) and 6120.5700 (Minimum Floodplain Management Standards for Local Ordinances) shall be followed during the technical evaluation and review of the development proposal.

(2) The City of Marine on St. Croix shall submit one copy of all information required by Section 511.7(1) of this Ordinance to the respective Department of Natural Resources' Area Hydrologist for review and comment at least twenty (20) days prior to the granting of a permit or manufactured home park development/subdivision approval by the community. The City of Marine on St. Croix shall notify the respective Department of Natural Resources Area Hydrologist within ten (10) days after a permit or manufactured home park development/subdivision approval is granted.

511.8. Utilities, Railroads, Roads and Bridges in the Floodplain District. All utilities and transportation facilities, including railroad tracks, roads and bridges, shall be constructed in accordance with state floodplain management standards contained in Minnesota Rules 1983 Parts 6120.5000 - 6120.6200.

511.9. Subdivisions.

(1) No land shall be subdivided and no manufactured home park shall be developed or expanded where the site is determined to be unsuitable by the City of Marine on St. Croix for reason of flooding or inadequate drainage, water supply or sewage treatment facilities. The City of Marine on St. Croix shall review the subdivision/ development proposal to insure that each lot or parcel contains sufficient area outside of the floodway for fill placement for elevating structures, sewage systems and related activities.

(2) In the Floodplain District, applicants for subdivision approval or development of a manufactured home park or manufactured home park expansion shall provide the information required in Section 511.7(1) of this Ordinance. The City of Marine on St. Croix shall evaluate the proposed subdivision or mobile home park development or expansion in accordance with the standards

established in Sections 511.6(2), 511.7, and 511.8 of this Ordinance.

(3) For all subdivisions in the floodplain, the Floodway and Flood Fringe boundaries, the Regulatory Flood Protection Elevation and the required elevation of all access roads shall be clearly labeled on all required subdivision drawings and platting documents.

(4) Removal of Special Flood Hazard Area Designation. The Federal Emergency Management Agency (FEMA) has established criteria for removing the special flood hazard area designation for certain structures properly elevated on fill above the 100-year flood elevation. FEMA's requirements incorporate specific fill compaction and side slope protection standards for multi-structure or multi-lot developments. These standards should be investigated prior to the initiation of site preparation if a change of special flood hazard area designation will be requested.

511.10.Administration.

(1) Permit Required. A permit issued by the City of Marine on St. Croix or its designated official shall be secured prior to the construction, addition, or alteration of any building or structure; prior to the use or change of use of a building, structure, or land; prior to the change or extension of a nonconforming use; and prior to excavation or the placement of an obstruction within the floodplain.

(2) State and Federal Permits. Prior to granting a permit or processing an application for a variance the City of Marine on St. Croix shall determine that the applicant has obtained all necessary State and Federal permits.

(3) Certification of Lowest Floor Elevations. The applicant shall be required to submit certification by a registered professional engineer, registered architect, or registered land surveyor that the finished fill and building elevations were accomplished in compliance with the provisions of this Ordinance. The City of Marine on St. Croix shall maintain a record of the elevation of the lowest floor (including basement) for all new structures and alterations or additions to existing structures in the Floodplain District.

511.11.Variances.

(1) A variance is a modification of a specific permitted development standard required in an official control including this Ordinance to allow an alternative development standard not stated as acceptable in the official control, but only as

applied to a particular property for the purpose of alleviating an undue hardship as defined and elaborated upon in a community's respective planning and zoning enabling legislation.

(2) The City Council may authorize upon application in specific cases such relief or variance from the terms of this Ordinance as will not be contrary to the public interest and only for the purpose of alleviating an undue hardship because of circumstances unique to the property under consideration which are not created by the property owner, as provided for in the respective enabling legislation for planning and zoning for cities or counties as appropriate. In the granting of such variance, the City Council shall clearly identify in writing the specific conditions that existed consistent with the criteria specified herein and in the respective enabling legislation which justified the granting of the variance.

(3) Variances from the provisions of this Ordinance may be authorized where the City Council has determined the variance will not be contrary to the public interest and the spirit and intent of this Ordinance. No variance shall allow in any district a use prohibited in that district or permit a lower degree of flood protection than the Regulatory Flood Protection Elevation. Variances may be used to modify permissible methods of flood protection.

(4) The City Council shall mail a copy of the application for proposed variance to the Commissioner of Natural Resources at least fifteen (15) days in advance of the meeting. A copy of all decisions granting a variance shall be forwarded by mail to the Commissioner of Natural Resources within ten (10) days of such action.

(5) Appeals. Appeals from any decision of the City Council may be made, and as specified in this Ordinance and also Minnesota Statutes.

(6) Flood Insurance Notice and Record Keeping. The Zoning Administration Staff shall notify the applicant for a variance that:

(a) The issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as twenty-five (25) dollars for one hundred (100) dollars of insurance coverage; and

(b) Such construction below the 100-year or regional flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions. A community shall maintain a record of all variance actions, including justification for their issuance, and report such variances issued in its annual or biennial report submitted to the Administrator of the National Flood Insurance Program.

511.12. **Non-Conformities.** A structure or the use of a structure or premises which was lawful before the passage or amendment of this Ordinance but which is not in

conformity with the provisions of this Ordinance may be continued subject to the following conditions:

- (1) No such use shall be expanded, changed, enlarged, or altered in a way which increases its nonconformity.
- (2) An alteration within the inside dimensions of a nonconforming use or structure is permissible provided it will not result in increasing the flood damage potential of that use or structure.
- (3) The cost of all structural alterations or additions both inside and outside of a structure to any nonconforming structure over the life of the structure shall not exceed fifty (50) percent of the market value of the structure unless the conditions of this Ordinance are satisfied. The cost of all structural alterations and additions constructed since the adoption of the community's initial floodplain controls must be converted into today's current cost which will include all costs such as construction materials and a reasonable cost placed on all manpower or labor. If the current cost of all previous and proposed alterations and additions exceeds fifty (50) percent of the current market value of the structure, then the structure must meet the standards of Section 511.6 of this Ordinance for new structures.
- (4) If any nonconforming use of a structure or land or any nonconforming structure is destroyed by any means, including floods, to an extent of fifty (50) percent or more of its market value at the time of destruction, it shall not be reconstructed except in conformity with the provisions of this Ordinance. The City of Marine on St. Croix may issue a permit for reconstruction if the use is located outside the floodway and upon reconstruction, is adequately elevated on fill in conformity with the provisions of this Ordinance.

511.13. Penalties for Violation. A violation of the provisions of this Ordinance or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with grants of variance) shall constitute a misdemeanor.

- (1) In responding to a suspected ordinance violation, the Zoning Administration Staff and local government may utilize the full array of enforcement actions available to it including, but not limited to, prosecution and fines, injunctions, after the fact permits, orders for corrective measures or a request to the National Flood Insurance Program for denial of flood insurance availability to the guilty party. The community must act in good faith to enforce this Ordinance and to correct ordinance violations to the extent possible so as not to jeopardize its eligibility in the National Flood Insurance Program.
- (2) When an ordinance violation is either discovered by or brought to the attention of the Zoning Administration Staff, the Zoning Administration Staff shall investigate the situation and document the nature and extent of the violation of the Ordinance. As soon as is reasonably possible, this information will be submitted to the appropriate Department of Natural Resources' and Federal

Emergency Management Agency Regional Office along with the City's plan of action to correct the violation to the degree possible.

- (3) The Zoning Administration Staff shall notify the suspected party of the requirements of this Ordinance and all other Official Controls and the nature and extent of the suspected violation of these controls. If the structure and/or use is under construction or development, the Zoning Administration Staff may order the construction or development immediately halted until a proper permit or approval is granted by the City. If the construction or development is already completed, then the Zoning Administration Staff may either:
 - (a) Issue an order identifying the corrective actions that must be made within a specified time period to bring the use or structure into compliance with the official-controls, or
 - (b) Notify the responsible party to apply for an after-the-fact permit/development approval within a specified period of time not to exceed thirty (30) days.
- (4) If the responsible party does not appropriately respond to the Zoning Administration Staff within the specified period of time, each additional day that lapses shall constitute an additional violation of this Ordinance and shall be prosecuted accordingly. The Zoning Administration Staff shall also upon the lapse of the specified response period order the landowner to restore the land to the condition which existed prior to the violation of this Ordinance.

511.14.Amendments. All amendments to this Ordinance, including revisions to the official Floodplain Zoning District Map, shall be submitted to and approved by the Commissioner of Natural Resources prior to adoption. The floodplain designation on the official Floodplain Zoning District Map shall not be removed unless the area is filled to an elevation at or above the Regulatory Flood Protection Elevation and is contiguous to lands outside of the floodplain. Changes in the Official Zoning Map must meet the Federal Emergency Management Agency's (FEMA) Technical Conditions and Criteria and must receive prior FEMA approval before adoption. The Commissioner of Natural Resources must be given ten (10) days written notice of all hearings to consider an amendment to this Ordinance and said notice shall include a draft of the ordinance amendment or technical study under consideration.

511.15.Travel Trailers and Travel Vehicles. Travel trailers and travel vehicles that do not meet the exemption criteria specified in Section 511.15(1) below shall be subject to the provisions of this Ordinance and as specifically spelled out in Sections 511.15(3) and 511.15(4) below.

- (1) Exemption travel trailers and travel vehicles are exempt from the provisions of this Ordinance if they are placed in any of the areas listed in Section 511.15(2) below and if they meet the following criteria:

- (a) Have current licenses required for highway use.
 - (b) Are highway ready, meaning on wheels or on an internal jacking system, are attached to the site only by quick disconnect type utilities commonly used in campgrounds and trailer parks, and the travel trailer/travel vehicle has no permanent structural type additions attached to it.
 - (c) The travel trailer or travel vehicle and associated use must be permissible in any pre-existing, underlying zoning use district.
- (2) Areas Exempted For Placement of Travel/Recreational Vehicles:
 - (a) Individual lots or parcels of record.
 - (b) Existing commercial recreational vehicle parks or camp-grounds.
 - (c) Existing condominium type associations.
- (3) Travel trailers and travel vehicles exempted in Section 511.15(1) lose this exemption when development occurs on the parcel exceeding five hundred (500) dollars for a structural addition to the travel trailer/travel vehicle or an accessory structure such as a garage or storage building. The travel trailer/travel vehicle and all additions and accessory structures will then be treated as a new structure and shall be subject to the elevation requirements and the use of land restrictions specified in Section 511.6 of this Ordinance.
- (4) New commercial travel trailer or travel vehicle parks or campgrounds and new residential type subdivisions and condominium associations and the expansion of any existing similar use exceeding five (5) units or dwelling sites shall be subject to the following requirements:
 - (a) Any new or replacement travel trailer or travel vehicle will be allowed in the Floodway or Flood Fringe Districts provided said trailer or vehicle and its contents are placed on fill above the Regulatory Flood Protection Elevation determined in accordance with the provisions of Section 511.7 of this Ordinance and proper elevated road access to the site exists in accordance with Section 511.6 of this Ordinance. No fill placed in the floodway to meet the requirements of this Section shall increase flood stages of the 100-year or regional flood.
 - (b) All new or replacement travel trailers or travel vehicles not meeting the criteria of (a) above may, as an alternative, be allowed if in accordance with the following provisions. The applicant must submit an emergency plan for the safe evacuation of all vehicles and people during the 100 year flood. Said plan shall be prepared by a registered engineer or

other qualified individual and shall demonstrate that adequate time and personnel exist to carry out the evacuation. All attendant sewage and water facilities for new or replacement travel trailers or other recreational vehicles must be protected or constructed so as to not be impaired or contaminated during times of flooding in accordance with Section 511.6(2)(g) of this Ordinance.