

City of Marine on St. Croix



COMPREHENSIVE PLAN INVENTORY

2007

INVENTORY

Introduction..... 1
Social Profile..... 4
Natural Environment.....9
Land Use 17
Transportation..... 32
Water Resources.....36
Community Facilities..... 39

LIST OF TABLES Page

Population and Households 4
Forecast 5
Population by Age 5
Education Levels (age 25 and over)..... 6
Education Levels (graph) 7
Employment Status 8
Occupation of Primary Wage Earner(s)..... 8
Existing Land Use 20
Vacant Land Development Capacity 25
Marine Residential Growth Summary..... 29
Age of Structures(Total HousingUnits).....29
Housing Mix 30
Marine Average Residential Value 30
Functional Classification System..... 32

LIST OF MAPS Page

Aerial Map.....3
Land Cover Map..... 13
Significant Natural Resources 14
Wetlands 15
Topography..... 16
Existing Land Use 21
Aggregate Resources..... 23
PotentiallyDevelopable Lands.....27
Existing Zoning..... 28
Functional Classification..... 35
Sanitary Sewer.....38

INTRODUCTION

The Planning Inventory provides a summary of the historic development patterns and existing conditions in the City of Marine on St. Croix. Attention is given to demographics, land use, housing, development regulations, transportation, community utilities and services. This information is intended to represent a data base to be utilized in the comprehensive planning process. Issues were identified and policies developed to address the issues. Information has been taken from the Comprehensive Plans completed in 1980 and 1999, building on past planning efforts while incorporating new information, data, and issues/ideas generated its by public workshops in 2007.

GEOGRAPHIC SETTING

The City of Marine on St. Croix is located on the St. Croix River between the City of Scandia to the north, and the City of Stillwater, 12 miles to the south, all linked by Minnesota TH 95 (St. Croix Trail). Marine on St. Croix is approximately four square miles in size (2,664 acres) with a 2007 estimated population of 650 people. The Village Center is located in the east central portion of the City, adjacent to the St. Croix River and includes the Village Center District. A number of residences are located on the river bluffs and have a commanding view of the river and the Wisconsin bluffs. The City is bounded on the south and west by May Township, on the east by the St. Croix River, and on the north by the City of Scandia.

HISTORICAL FACTORS

The community of Marine on St. Croix is shaped by its history, natural environment, and people.

Established in 1839 as a site for a water-powered sawmill supplying virgin white pine lumber to partners in Marine Settlement, Illinois, the new settlement of Marine Mill 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. A plat of the City shows City founders had more in mind than a sawmill, a school, and seminary, among other things.



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 sharing the available water power. A burgeoning market system joined the farmer immigrants with Marine, and an additional role as social center emerged.

While the lumber company's sawmill spurred development of commerce and community, 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 emigrants established neighborhoods located to the south and west of the Village Center and built less ornate, more utilitarian homes, which were reflective of the trade positions typically held by the residents.

With the immigration of new residents, developments 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 our past; almost half the existing buildings in Marine predate 1940.

After the lumbering era of the nineteenth century, Marine evolved into a commercial and agricultural center, continuing to benefit from the tradition of public education, with a school in Marine since 1849.

Transportation infrastructure improvements also benefited the City, with rail service available year round in the 1880s, and eventually a dependable road to Stillwater. Unfortunately, not all infrastructure improvements have been wholly welcome, with the re-routing and widening of Minnesota TH 95 in 1952, causing the loss of many Village Center buildings. High traffic flows, speed, pollution, and safety issues make Minnesota TH 95 an issue of continued concern.

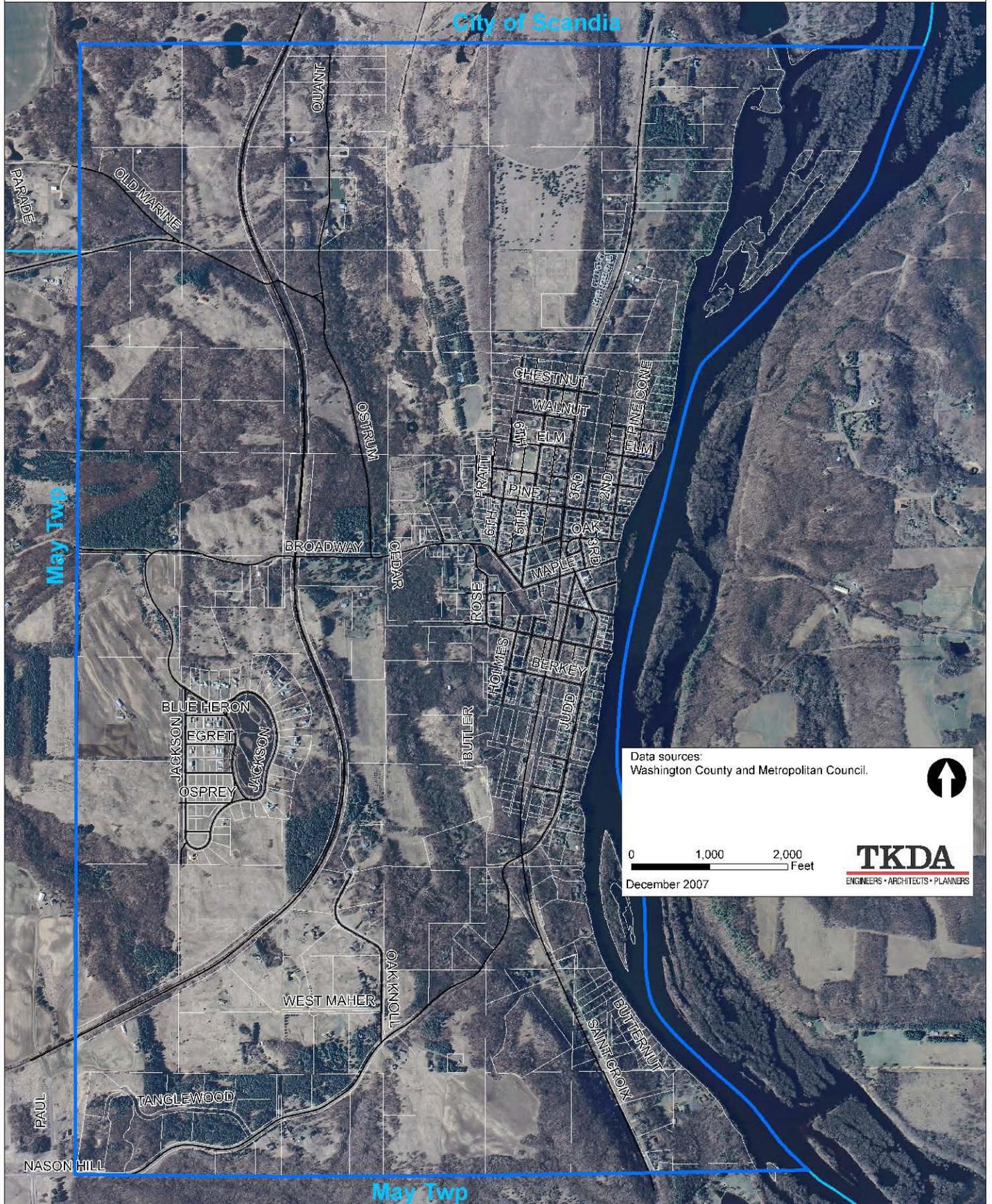
Cooperation with other units of government is a strong tradition in Marine, whether the issue is traffic, river use, land development, or trails. Today the City works with at least a dozen Federal, State, County or other governmental units on issues of mutual concern.

Equally important is the tradition of public service and participation, including philanthropic activities, as grand as the creation of William O'Brien State Park, or everyday volunteerism on the Fire Department, Emergency Medical Team, Planning Commission, or with many community groups.

With the City's population expected to surpass the all time high of 679 people in 1890, the sense of history and tradition continues to influence the City's current plans and actions.

Aerial Photo (2005)

Marine on St. Croix 2030 Comprehensive Plan



SOCIAL PROFILE

POPULATION AND HOUSEHOLDS

The 2000 Census data, Metropolitan Council estimates, and data generated by the City are used to describe the 2000 population and households.

The City conducted a mailed community survey in April of 2007, because of concern about the accuracy of the 2000 Census. The concern is that the Census was not delivered to post office mailboxes because of a policy that it had to be delivered to a home address. Since many Marine households use post office boxes, these households may not have been counted in the 2000 Census. The results from the community survey as well as City estimates based on the City’s household waste hauling list are used to complement other data sources.

Population and household data are reported below. The 1990 and 2000 data are from the Census, and the 2006 estimate is provided by the Metropolitan Council. The 2007 estimate is from the community survey. The data indicates that the City has grown by between 48 to 93 people since 1990. Most of this growth is a result of new development in Jackson Meadow, on the bluff above the Old Village.

POPULATION AND HOUSEHOLDS				
	1990	2000	2006 estimate	2007 estimate
Population	602	602	695	650
Households	234	254	290	280-285
Source: 2000 U.S. Census, Metropolitan Council, Marine Community Survey				

The Metropolitan Council provides forecasts for population, households, and employment for the years 2010, 2020, and 2030, reported below. These forecasts are based on past trends, and future demand and land availability. These forecasts would have the City increasing by 176 households and almost 400 people between 2000 and 2030. In order to meet this demand, the City needs to issue an average about six building permits for new housing units each year.

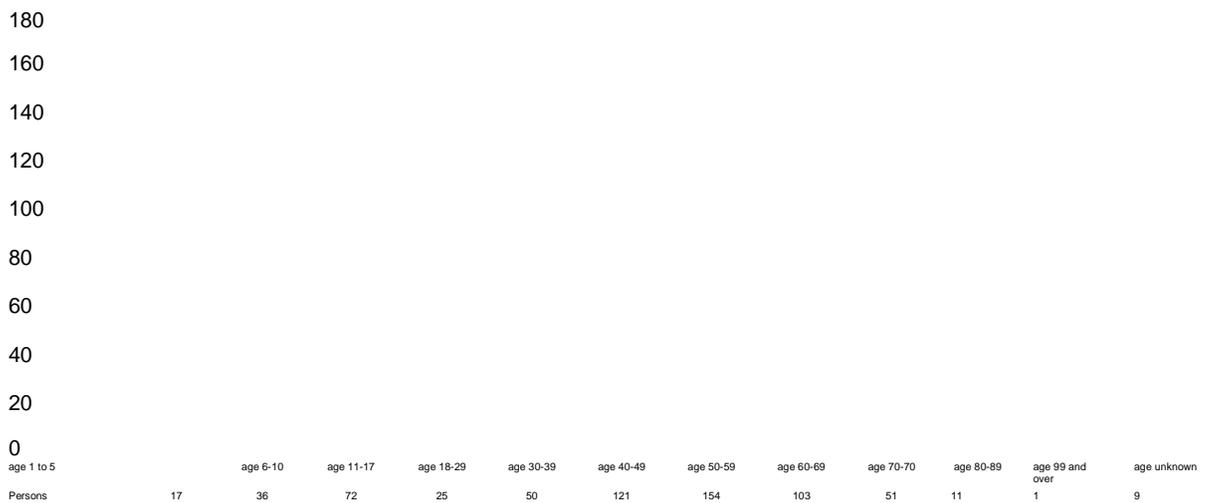


2010 2020 2030 POPULATION 760 880 1,000
HOUSEHOLDS 320 370 430 **EMPLOYMENT** 290 330 380
 Source: Metropolitan Council

AGE CHARACTERISTICS

The following graph shows the age characteristics of Marine in 2007, as determined by the City’s estimate from the household waste hauling list.

POPULATION BY AGE



Source: City of Marine data from 2007

The median age in Marine, as reported by the 2000 Census, was 44 years old. This compares to a median age of 35.1 years in Washington County and 35.4 years in the State of Minnesota in 2000. This shows that Marine’s population is generally older than both the County and the State. This older median age can be caused by a combination of factors, including limited turnover in housing, a shortage of less expensive “starter” homes and a smaller birth rate due to the age of the residents. Forty-two percent of Marine’s 2007 population is estimated between the ages of 40 and 59, usually beyond the child bearing ages. While the aging of the population is both a national and state

trend, the data suggests a situation of a stable population, aging in place without much in-migration by younger adults and families.

EDUCATION

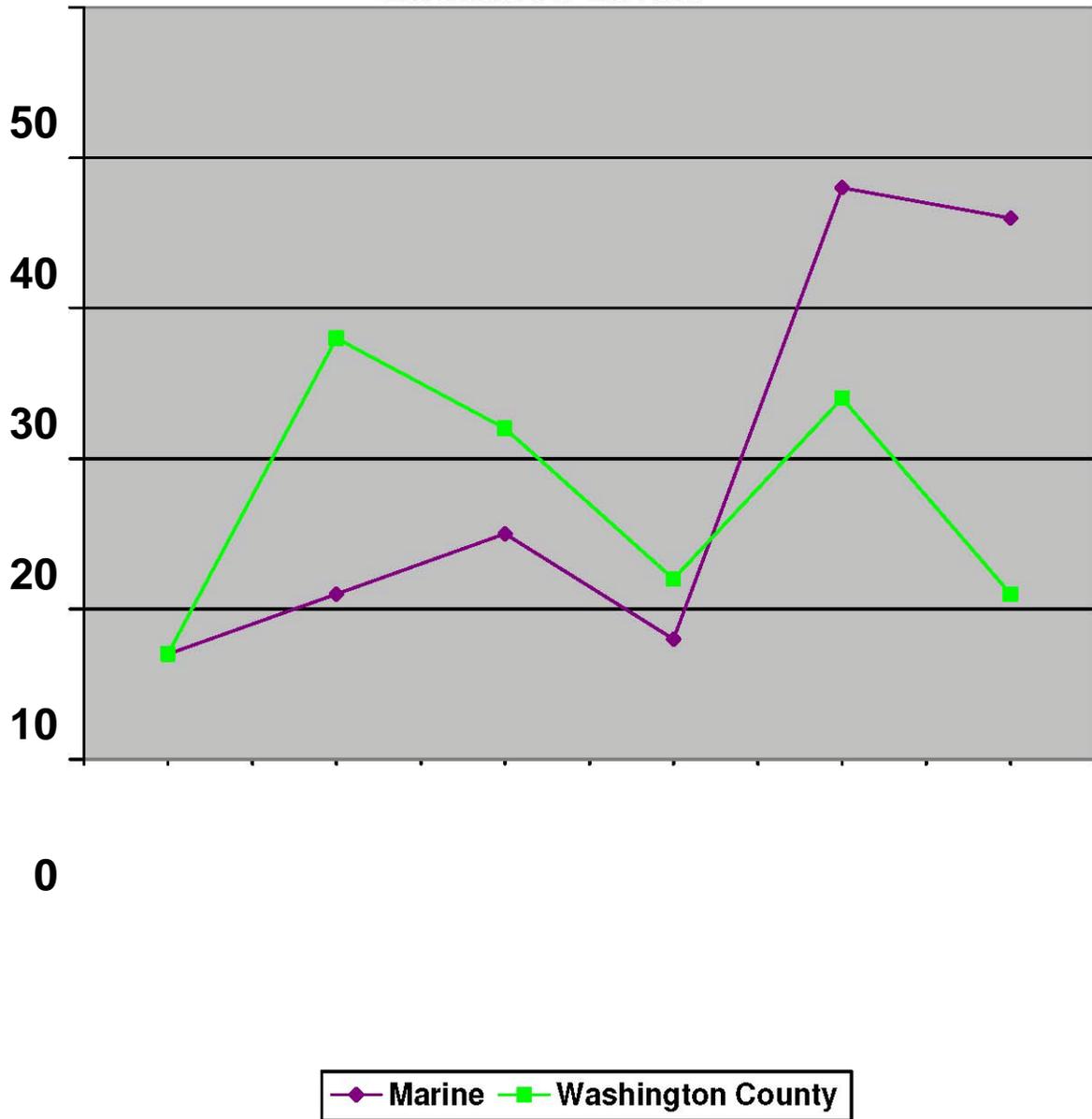
In 2000, the Census reported that of people 25 years of age or older, 49.7 percent of residents of Marine have a Bachelors Degree or more, compared to approximately 39 percent of Washington County residents and 33.3 percent of people in the Twin Cities Metropolitan area. Of those Marine residents that responded to the community survey, approximately 62 percent of people 25 years of age or older have a bachelor's degree or graduate degree. The high education achievement level of the City's residents is reflected in the employment profile and high income level.

LEVEL ATTAINED PERCENT COUNTY PERCENT

	(2007)		(2000)	
12TH GRADE OR LESS (NO DIPLOMA)	9	4	5750	4
HIGH SCHOOL GRADUATE	27	11	35,753	26
SOME COLLEGE (NO DEGREE)	39	16	31,186	22
ASSOCIATE DEGREE	14	6	13,533	10
BACHELORS DEGREE	81	34	34,689	25
GRADUATE/PROFESSIONAL DEGREE	67	28	18,890	14
TOTAL	237	100	139,801	100

Source: City of Marine Community Survey, U.S. Census 2000

Education Levels



EMPLOYMENT

The Marine Community Survey reported that the majority of persons age 16 and over are employed. Seventy percent of primary wage earners work in management, professional, and related occupations. Assuming that retirees and stay at home parents are based in their home during the day, rather than commuting outside of Marine for employment, these cohorts likely form a notable population within Marine during the day. These groups, in addition to people employed in Marine or working from home, illustrate that Marine does not play the role of a bedroom community within the region, but has an active life of its own during the typical working hours.

IN LABOR FORCE -EMPLOYED	126
IN LABOR FORCE -UNEMPLOYED	13
IN LABOR FORCE -ARMED FORCES RETIRED	0
NOT ACTIVELY IN LABOR FORCE (INCLUDES STAY AT HOME PARENTS)	79
TOTAL	24
	242

Source: Marine Community Survey

MANAGEMENT, PROFESSIONAL, AND RELATED OCCUPATIONS 90
SERVICE OCCUPATIONS 17
SALES AND OFFICE OCCUPATIONS 9
FARMING AND FORESTRY OCCUPATIONS 0
CONSTRUCTION, EXTRACTION, AND MAINTENANCE OCCUPATIONS 6
PRODUCTION, TRANSPORTATION, AND MATERIAL MOVING OCCUPATIONS 5
Source: Marine Community Survey

NATURAL ENVIRONMENT

INTRODUCTION

The City of Marine includes significant natural resources; the St. Croix River, streams, wetlands, forests, prairie and grasslands, and its bluffland topography. These resources are important elements that help define the community's character. Natural areas and systems offer concrete benefits as well, they help to protect ground and surface water quality, provide wildlife habitat, maintain property values, provide buffers between land uses, and provide opportunities for recreation. 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.

EXISTING INVENTORIES OF NATURAL RESOURCES

Presettlement Landscape

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 that remnants of the forest and brushland areas are still present in portions of Marine today.

Land Cover

The Minnesota Land Cover Classification System (MLCCS), developed by the Minnesota Department of Natural Resources and partnering agencies, 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 (areas with developed impervious surface). The Land Cover map shows the MLCCS data for Marine. Marine's dominant land cover types are forests and grasslands. This data was used to assist in identifying the significant ecological areas discussed below.

Significant Ecological Areas

Regionally Significant Ecological Areas (RSEA) are identified by the Minnesota Department of Natural Resources and are shown on the Natural Resource Inventory map. RSEAs are places where intact native plant communities and/or native animal habitat are found. They are areas notable for animal habitat, biological diversity, groundwater recharge, and improved



water quality. The lands within William O'Brian State Park and a north-south stretch of forests and wetlands running through the middle of Marine, are recognized as ecologically significant.

The Minnesota County Biological Survey, which identifies significant natural areas, rare plants, rare animals, and native plant communities, was used in part to define the RSEAs. The Biological Survey includes 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.

Wetlands

The majority of wetlands in Marine are wooded wetlands. The wetlands are focused along the flat expanses on either side of State Highway 95. The City of Marine protects wetlands through its Development Code.

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.

Soils

Marine is located on a series of relatively narrow terraces of the Jordan, St. Lawrence, and Franconia formations. These are covered by only a thin layer of surface mantle composed of alluvium and drift. This surface mantle varies in thickness from approximately 60 feet on high ground in the west edge of the City to a few feet on the low ground along the river.

The City of Marine has several large areas that have severe limitations for on-site septic systems. Due to bedrock near the surface, steep slopes, wet or periodically flooded areas, or slow percolation rates, these soils have severe limitations for septic tank drainfields.

1. **Shallow Bedrock.** Bedrock near the surface is encountered along the St. Croix River and TH 95, as indicated on the soils map. 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.

2. **High Water Table.** Water tables are another factor in determining septic system suitability. 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 of the ground, or contaminate the groundwater.

A band of wet soils runs from the northern boundary of the City through the center of the City. Other small areas of wetlands are scattered throughout the City. These soils are those that are periodically flooded or have a high water table. The flooding or local ponding occurs after heavy rains and may persist for several weeks or longer during the spring. Usually a soil that has flooding characteristics will also tend to have a high seasonal water table.

3. **Steep Slopes.** Steep slopes are present throughout Marine, especially along the St. Croix River, west 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.

4. **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 pointed out that many of the existing housing units in the City are located in areas of high bedrock and water table, and most of these properties are connected to the existing municipal sewer system.

Marine's sewer system helps protect water resources, but is limited in capacity and extent. Caution should be used in the placement of individual sewage treatment systems because, due to a shallow depth to bedrock and high water tables, Marine's wells are susceptible to groundwater pollution. Environmental constraints and a limited sewer system capacity will limit development in the City. Marine has very limited areas for future development, with a relatively small area between TH 95 and CR 7 (Nason Hill Road) being the only area with more than one building site.

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 the Greenway corridor found later in the Comprehensive Plan.

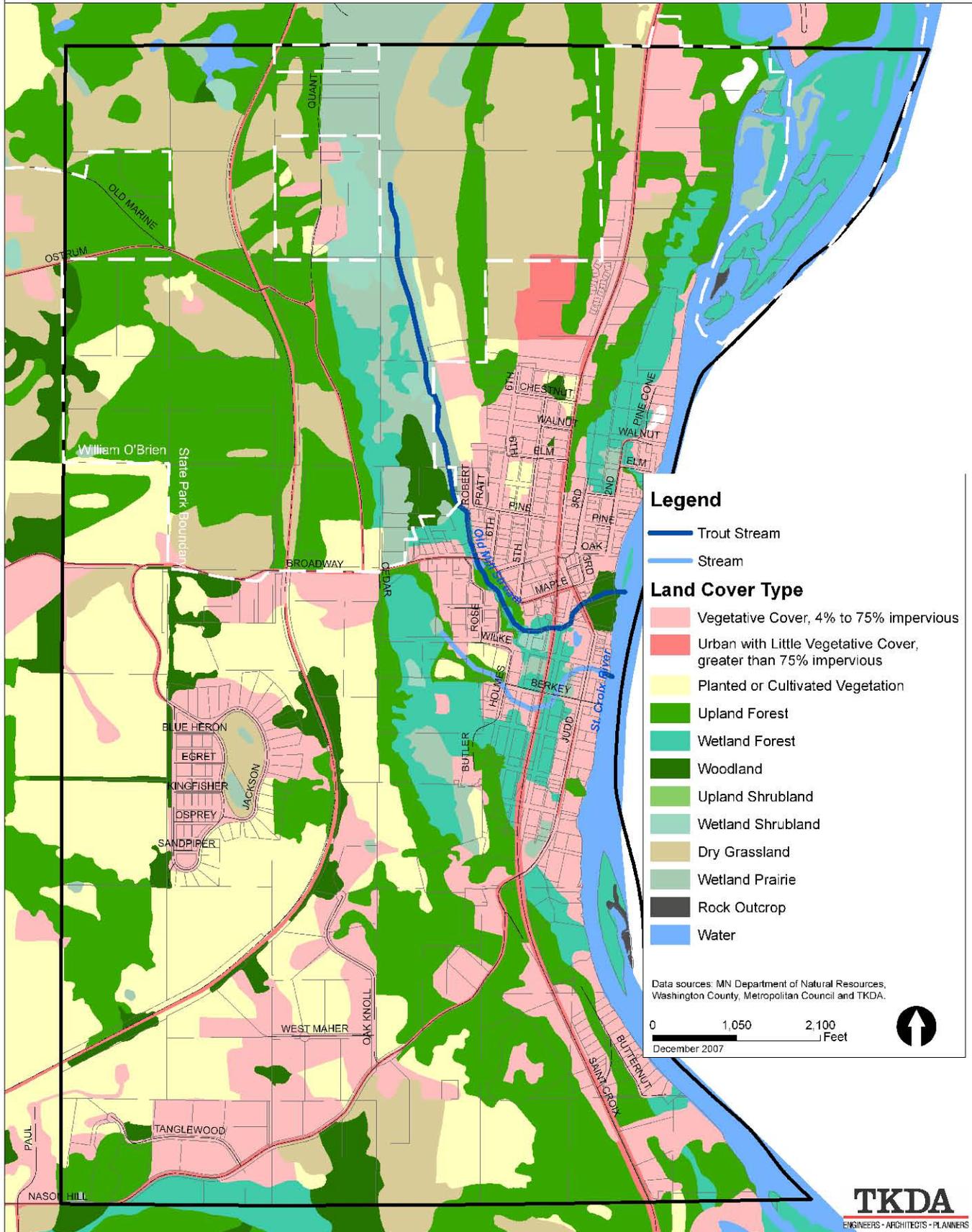
PRINCIPLES FOR PROTECTING THE NATURAL ENVIRONMENT

- **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.**
- **Selecting priority areas for conservation.**

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.

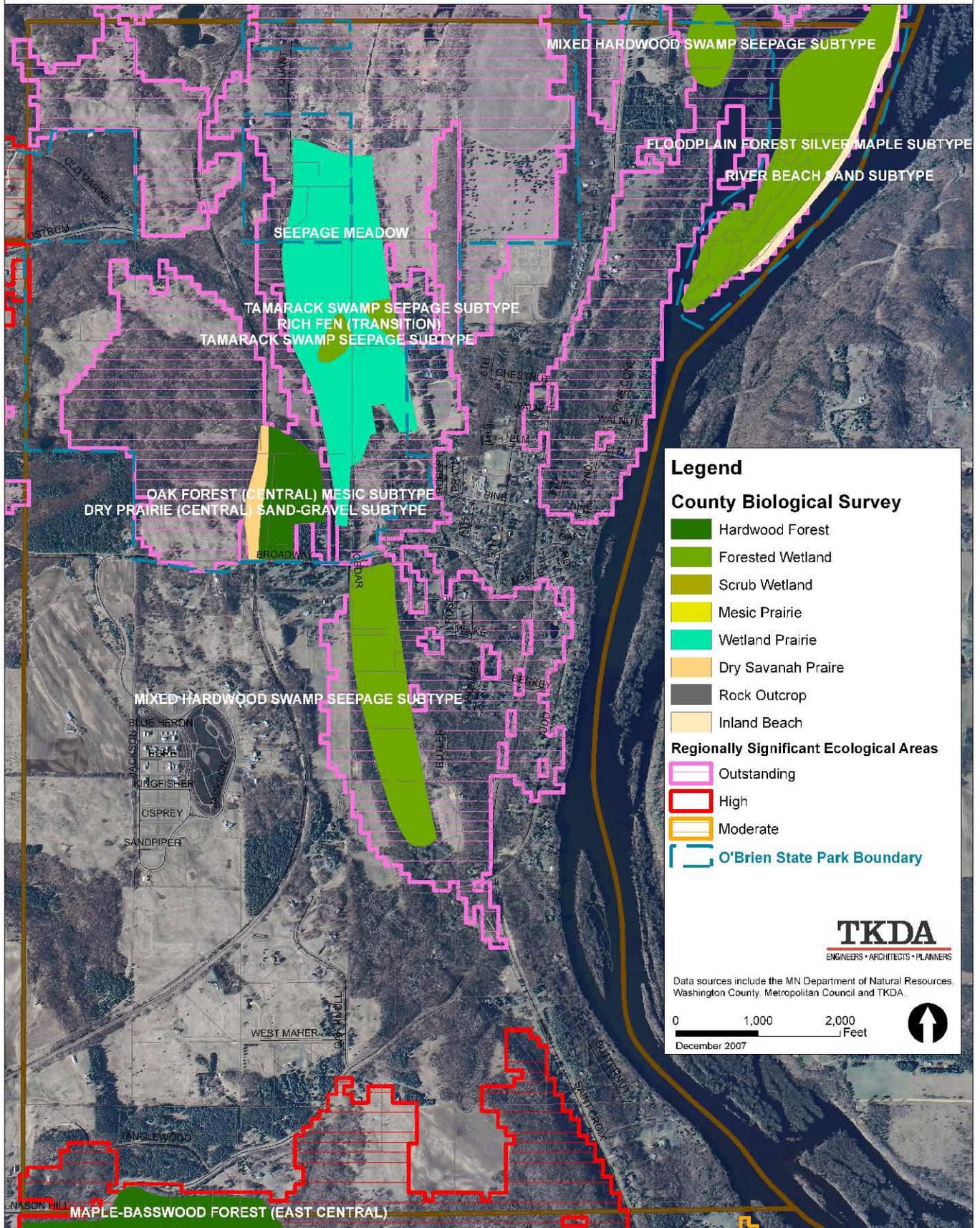
Land Cover

Marine on St. Croix 2030 Comprehensive Plan



Significant Natural Resources identified by the State of Minnesota

Marine on St. Croix 2030 Comprehensive Plan



Legend

County Biological Survey

- Hardwood Forest
- Forested Wetland
- Scrub Wetland
- Mesic Prairie
- Wetland Prairie
- Dry Savannah Prairie
- Rock Outcrop
- Inland Beach

Regionally Significant Ecological Areas

- Outstanding
- High
- Moderate

O'Brien State Park Boundary

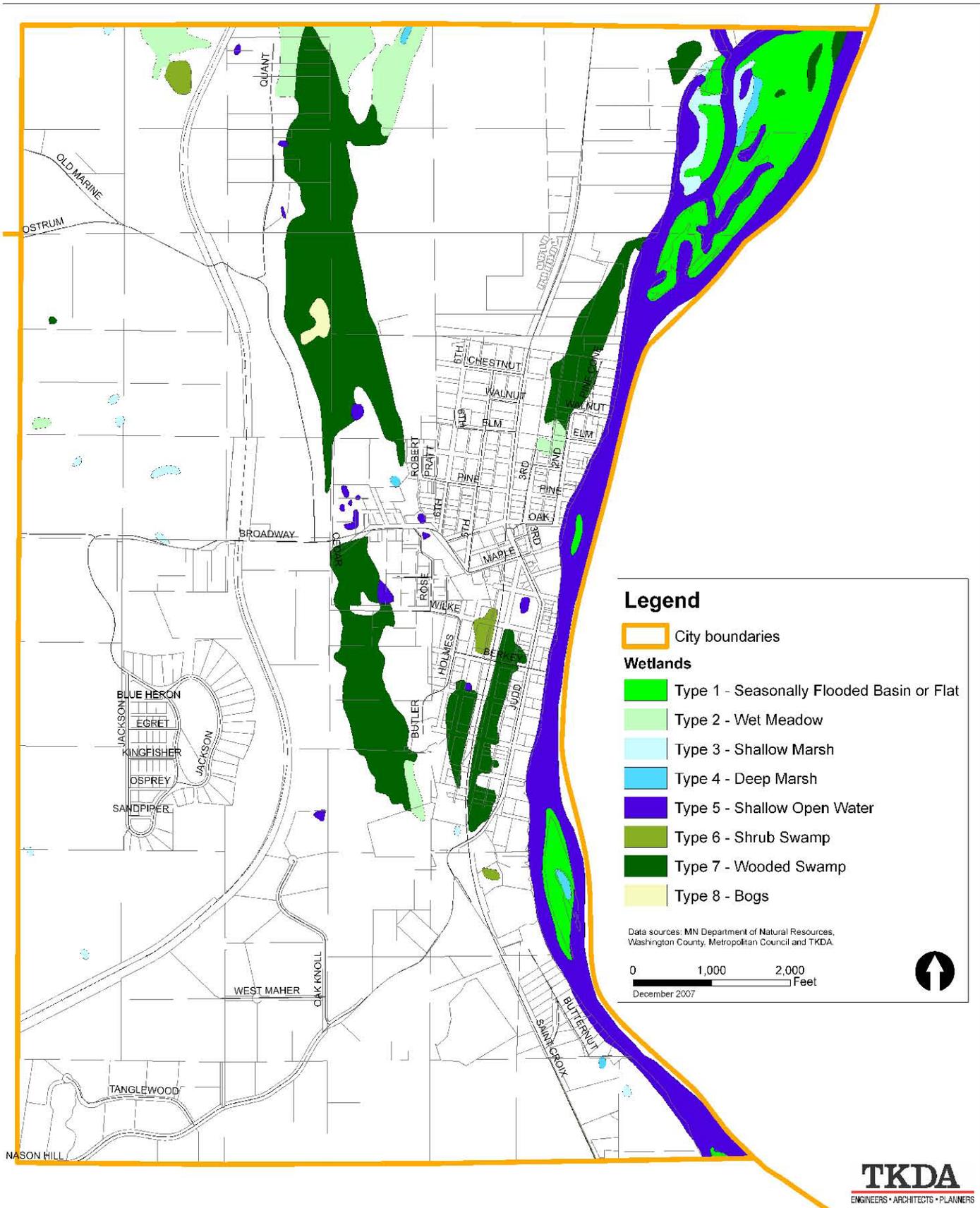
TKDA
ENGINEERS • ARCHITECTS • PLANNERS

Data sources include the MN Department of Natural Resources, Washington County, Metropolitan Council and TKDA.

0 1,000 2,000 Feet
December 2007

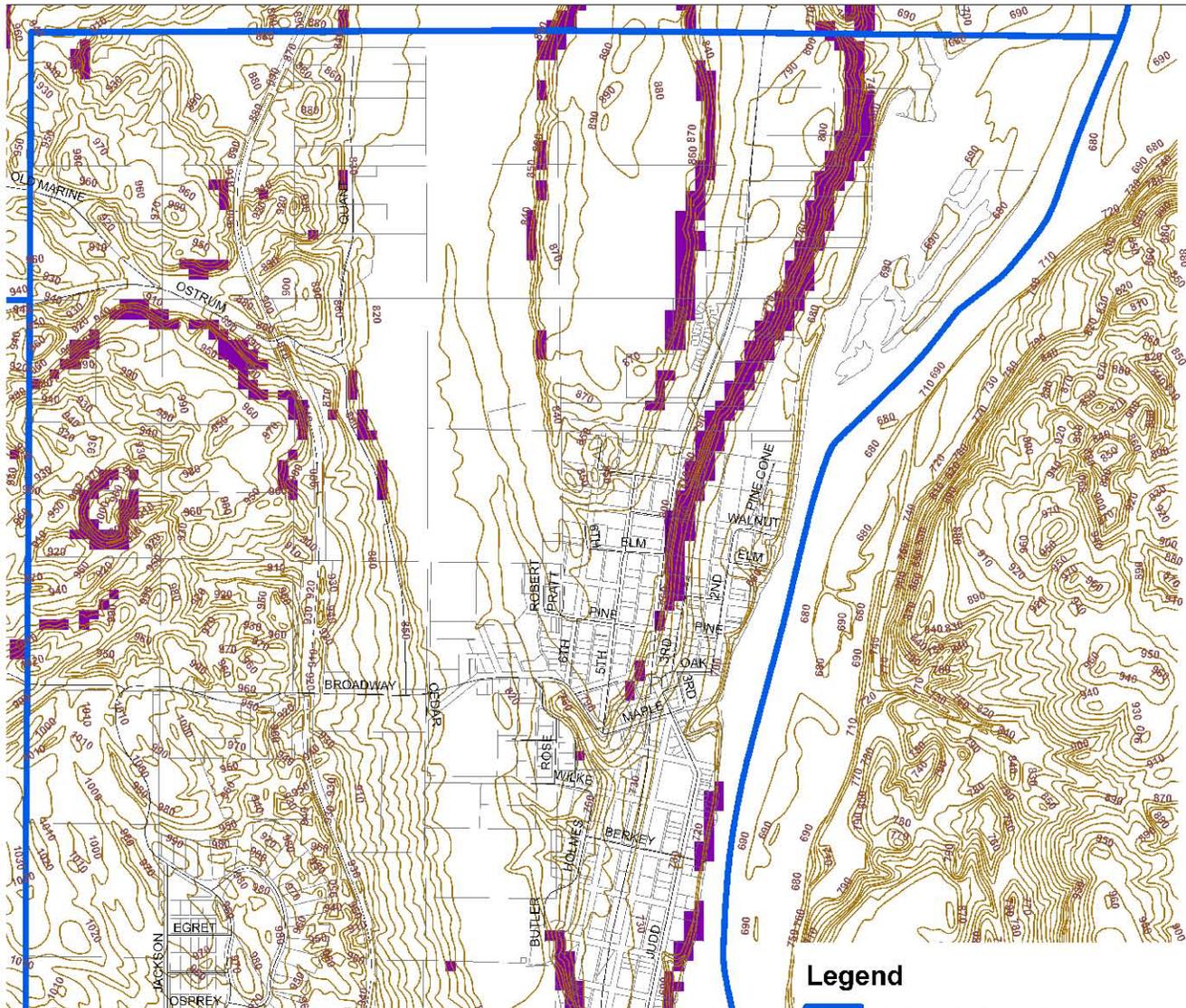
Wetlands

Marine on St. Croix 2030 Comprehensive Plan



Topography

Marine on St. Croix 2030 Comprehensive Plan



LAND USE

INTRODUCTION

The land use profile focuses on existing land use patterns, vacant land supply, development regulations, and housing characteristics. The City's historical development patterns provide guidance for future land use planning.

SMALL TOWN HISTORIC MANAGEMENT

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.

EXISTING LAND USE

Residential

Single Family Residential lands include one-family homes, seasonal/vacation homes, farmsteads, manufactured homes, and the open space adjacent to a residence. The portion of a residential lot that is not immediately adjacent to the residence is categorized as “undeveloped” in the existing land use data provided by the Metropolitan Council. Undeveloped is defined by the Council as land not currently used for any defined purpose that may or may not contain buildings or other structures or has no discernable use



based upon the aerial photos or available data. Undeveloped may include non-protected wetlands or lands currently under development.

The lands classified as undeveloped are shown in light green on the Existing Land Use map. This land is not necessarily developable, as much of it functions as the open space associated with rural residences. An evaluation of land with potential for development follows the descriptions of existing land uses.

Marine's zoning districts include rural and urban residential districts, and each of these districts is divided into a standard and a St. Croix district. The St. Croix districts occur between Minnesota TH 95 and the St. Croix River. Marine's housing stock is in good condition and is predominantly low density.

The Stugas Townhouse development, built in 1996-1997, is classified as multi-family land use. It provides 20 units of medium density housing for senior citizens on 12.4 acres of land in northern Marine.

Commercial

The commercial district identified as the Village Center, is located at the historic core of Marine, around the intersection of Judd Street and Maple Street, and at Marine's Landing on the shore of the St. Croix River, north of the Village Center District. This land use covers approximately four acres.

Light Industrial

Twenty-two acres of land are classified as light industrial. The majority of the Light/Industrial/Utility land is the City's wastewater drainfield. A small parcel within the Village Center is also used for utilities. The only area zoned for new light industrial is located in the western side of the City, next to the railroad tracks.

Institutional

Institutional land uses include Christ Lutheran Church, Oakland Cemetery, Marine Elementary School, and the Village Hall.

Park, Recreational, or Reserve

Parks, Recreational, or Reserve lands are for active recreational use, such as playfields, exercise equipment, or golf courses, and passive open spaces such as trails and picnic areas. They also include areas for protecting natural resources for environmental or aesthetic purposes. These lands may be publicly or privately owned.

Parks, Recreational, or Reserve lands make up a considerable area of the city: 32 percent of the total. William O'Brien State Park makes up the majority of this total with approximately 584 acres. Other state lands managed by the Minnesota Department of Natural Resources make up a significant portion of Marine's open spaces. Other 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.

Agricultural

Agricultural lands are used for purposes including farming, dairying, pasturage, horticulture, floriculture, viticulture, and animal and poultry husbandry and accessory uses. Residences on agricultural lands are shown as farmsteads on the Existing Land Use map.

The Existing Land Use table summarizes the rate of change in land uses from 2000 to 2005. Land area used for residential purposes has increased while the amount of undeveloped land has decreased. A change in the Metropolitan Council's classification practices resulted in changes to industrial and institutional acreages. More accurate data has also resulted in an increase in the area of open water within the City.

Existing Land Use				
Land Use Categories	2000 Total	2005 Total (in acres)	Change 2000 -2005	
			Absolute (in acres)	Relative Percentage
Residential	286	315	28	+ 10%
Single Family Residential	271	300	29	+ 11%
Farmstead	9	9	-0	-4%
Multi-Family Residential	6	6	-0	-2%
Commercial	3	4	0	+ 8%
Industrial Use	1	22	21	+ 3,922
Industrial and Utility	1	22	21	+ 3,922
Institutional	45	23	-21	-48%
Parks, Recreation & Preserves	848	849	1	+ 0%
Agriculture & Undeveloped Total	1323	1293	-29	-2%
Agriculture	162	169	7	+ 4%
Undeveloped Land	1161	1125	-37	-3%
Open Water	158	168	10	+ 7%
Total	2664	2674	10	

Source: Metropolitan Council

Development Capacity Evaluation

Marine has a total of 724 acres of vacant land. All of this land is located in Marine's four residential zoning districts. These zoning districts are Single Family Rural, St. Croix Rural, Single Family Urban, and St. Croix Urban. Some of the vacant land is constrained by wet soils, steep slopes, shallow bedrock, and/or low percolation rates.

The following paragraphs provide an evaluation of Marine's land use development capacity. The development capacity was determined for each zoning district in two ways to allow for variability caused by environmental development constraints. First, the development capacity was determined by applying each zoning districts' density and minimum lot size standards to the gross acreage of vacant land minus land with wet soils in each district. Second, the development capacity was determined by applying each zoning district's density and minimum lot size standards to the acreage of vacant land minus the land with development constraints in each district. Development constraints include wet soils, steep slopes, shallow bedrock, and low percolation rates.

Currently, some other developable parcels do not have access from streets. Some lots are constrained by wetlands, steep slopes, wet soils, and shallow bedrock. Most of the constrained lots have enough buildable land to allow clustered development.

AGGREGATE RESOURCES

The Metropolitan Council requires that communities identify aggregate resources within local boundaries and plan for the extraction of aggregate prior to urbanization. The City of Marine on St. Croix has areas of aggregate-rich land although there are no current extraction operations within the City and aggregate resources within the City tend to be within areas having strong environmental constraints or existing development.

The Metropolitan Council generated data for the metropolitan region showing sand, gravel and limestone and dolomite resources for the time periods of 1997, 2020, and 2040. The data for the three time periods reflect depletion by mining and areas that were occupied by urban and rural development in 1997, or are forecasted for development by 2020 and 2040. The data excludes aggregate deposits that coincide with environmental constraints such as wetlands, streams, scientific and natural resources areas, open water bodies, and roadways.

The aggregate resources located within the City are identified on the Aggregate Resources Map. Aggregate resources within Marine are shown only for the 1997 time period. This indicates that there are aggregate resource areas but the likelihood of these resources being extracted is limited due to either existing development or environmental constraints. There are no areas of aggregate resources identified within the City limits for the 2020 or 2040 time periods.

ZONING

Single Family Urban

Marine has 32 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. 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 this district has may be less than what has been calculated.

The vacant parcels without environmental constraints are located in the northwestern part of the platted area of Marine. Development in this area may require the extension of Chestnut and/or Sixth Street.

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 one dwelling unit per five acres. The majority of land area in the City is designated Single Family Rural, up to 57 lots could be created in this district.

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 51 acres of vacant land in this district. The minimum lot size requirement is one 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 high end number because small parcels with land ties are included. Lots are constrained by wetlands, wet soils, steep slopes, and shallow bedrock.

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 has a minimum lot size requirement of 2.5 acres. Marine has 21 acres of vacant land in this district. Depending on the range of environmental constraints used to determine vacant acreage, between four and eight houses could be added to this district. Lots are constrained by wetlands, wet soils, steep slopes, and shallow bedrock.

	ACRES			ADD
SINGLE FAMILY RURAL	GROSS ACRES	EXCLUDING DEVELOPMENT	DENSITY	HOUSING
SINGLE FAMILY URBAN	32	8	30,000 SF MINIMUM LOT SIZE	12
ST. CROIX RURAL	21	5	2.5 ACRE MINIMUM LOT SIZE	2
ST. CROIX URBAN	51	11	1 ACRE MINIMUM LOT SIZE	11
TOTAL	388	472		823

Source: TKDA. Development constraints include wetlands, wet soils, steep slopes, and shallow bedrock.

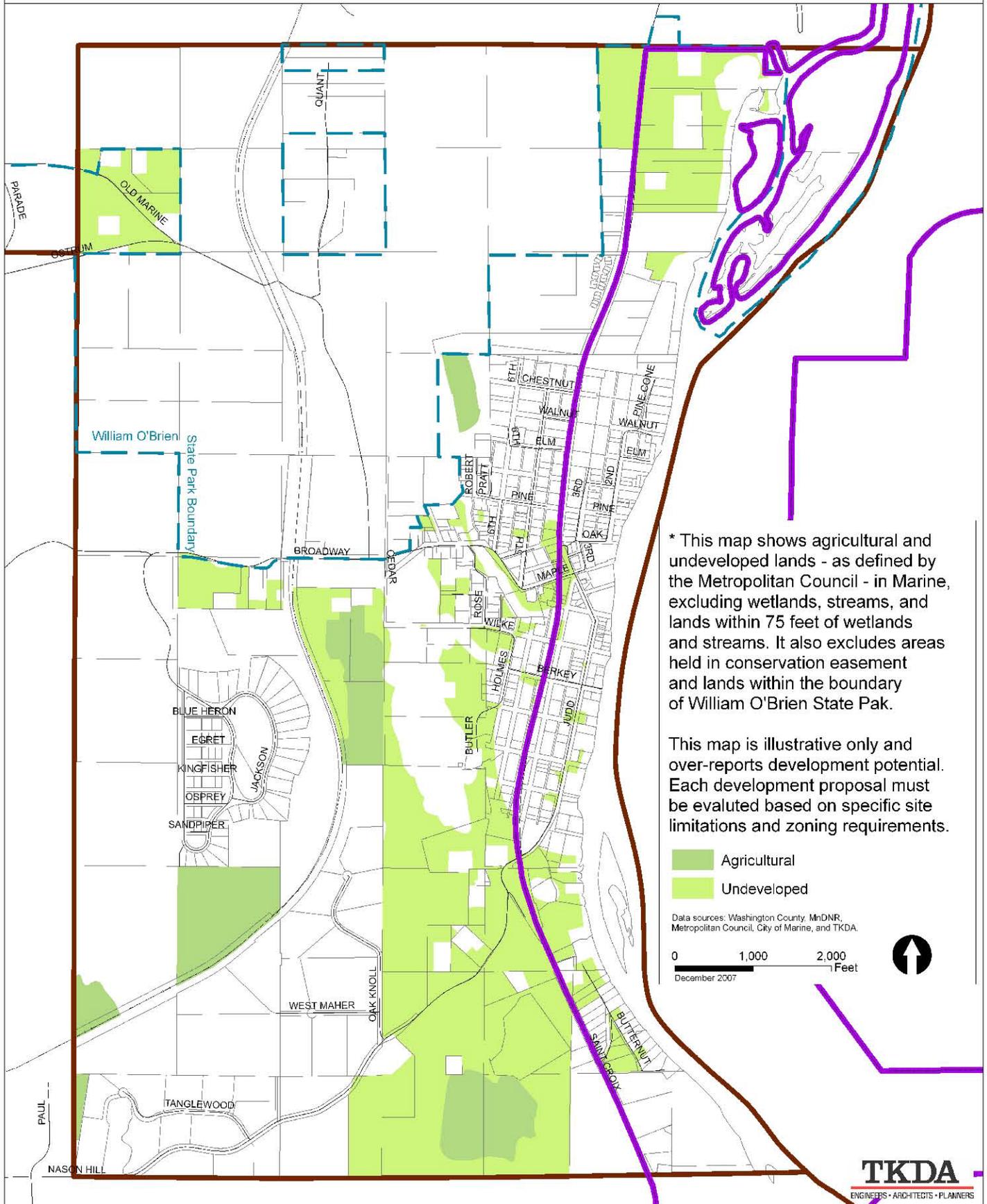
² Based on acres excluding all development constraints with maximum density allowed.

³ Vacant land supply includes parcels that are too small to be developed, therefore, the development potential numbers are high end numbers.

Based on the analysis of potential capacity and the acreages shown in each zoning district, we can see that without any constraints, there is a potential for 162 additional housing units in the City between 2006 and 2030. Based on the fact that the forecasts are for 140 additional units by 2030 it appears that Marine could make its additional number of units. However, with constraints, there is potential for only 82 units, which makes meeting these forecasts impossible. The only way these forecasts could be met is either through re-sizing selected parcels to a higher density or annexation.

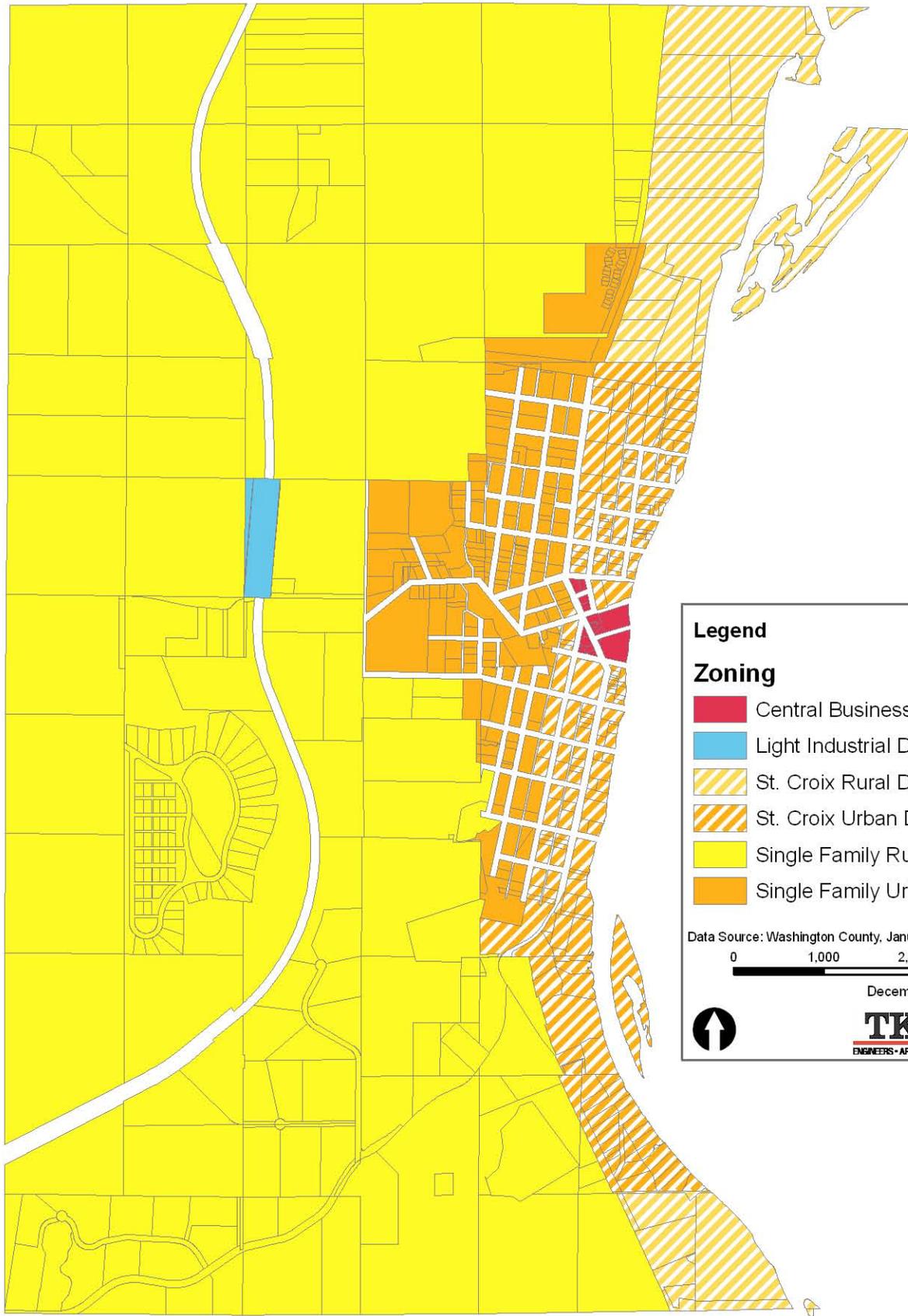
Potential Developable Lands*

Marine on St. Croix 2030 Comprehensive Plan



Zoning Map

Marine on St. Croix 2030 Comprehensive Plan



Legend

Zoning

- Central Business District
- Light Industrial District
- St. Croix Rural District
- St. Croix Urban District
- Single Family Rural
- Single Family Urban

Data Source: Washington County, January 31, 2007

0 1,000 2,000 Feet

December 2007



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HOUSING

Housing Units

The Metropolitan Council reports 256 housing units in Marine in 2000 in its Marine Community Housing Profile. The Washington County Assessor's office reports a count of 290 housing units in 2007.

YEAR PERCENT					
2007	0.5	2006	10.3	2005	9.9
2004	21.7	2003	7.1	2002	12.8

Source: Washington County Assessor's Office

Housing Stock Age

The following table shows that half the structures in the City were built before 1950. Many of the older structures are located in the historic village part of the City adjacent to the St. Croix River. New housing has been built primarily in the western portions of the City, (Jackson Meadow).

YEAR BUILT	NUMBER	PERCENT
1990 - 1994	9	4
1980 - 1989	17	7
1970 - 1979	24	9
1960 - 1969	25	10
1950 - 1959	20	8
1940 - 1949	11	4
1939 OR EARLIER	119	46
TOTAL	256	100.0

Source: Community Housing Profile, Metropolitan Council

Housing Mix

In 1996-1997, the Stugas Townhouse development was built, creating medium density housing for senior citizens. In 2000, 25 of the 256 housing units were renter occupied.

HOUSING MIX		
	1990	2000
OWNER OCCUPIED	100%	90%
RENTER OCCUPIED	0%	10%

Source: Metropolitan Council, Marine Building Permit Data

Housing Value

Marine, like the greater metropolitan region, has experienced steeply rising property values over the past ten years. The Washington County Assessor's office provides an annual report of residential property assessed values.

Marine's average assessed value is consistently above the average value for Washington County. This is at least in part due to the fact that Washington County has a greater percentage of its housing stock as multi-family, which usually holds a lower value per unit than single-family housing. For example, in 2007, the average single family unit assessed value approached \$350,000 in Washington County, while the 2007 multi-family unit value was \$200,000.

2007	\$448,600	2006	\$455,700
2005	\$412,400	2004	\$380,200
2003	\$309,200	2002	\$282,600
2001	\$255,100	2000	\$224,000

Source: Washington County Assessor's Office

For 2007, the range in residential sale values was \$217,900 to \$765,000, with an average sales price of \$421,200. Seven sales were reported for the year.

A variety of housing types and prices is a topic that received attention at the community meetings and further discussion in developing the comprehensive plan. A need for a broader range of housing choices correlates with concerns about an aging population with few younger households moving to Marine. These interconnected issues are further discussed in the Policy Plan.

TRANSPORTATION

INTRODUCTION

The following section describes the transportation infrastructure of Marine on St. Croix.

ROADS

The City of Marine on St. Croix is well served by a combination of state, county, and local roads. The roadway system is designed as a hierarchy that collects and distributes travelers. The roadway system must accommodate both shorter and longer trips, and balance the demand for local property access with the demand for mobility across greater distances. In creating a system that allows for both access and mobility, a functional roadway classification system aids in determining appropriate roadway widths, speed limits, intersection control, design features, accessibility, and maintenance priorities.

CLASSIFICATION	DESCRIPTION
MINOR ARTERIAL	Provide connections from principal arterials to collectors for short to medium trips. Mobility takes priority over land access.
COLLECTOR STREET	Provide increased land accessibility and usually connect arterials to local streets.
LOCAL STREET	Provide high accessibility to a variety of community destinations, designed for low speeds.

The Transportation map shows the road system in Marine and the functional classification of each existing road. A description of the hierarchy of street functions follows.

Minor Arterial Streets

A minor arterial street functions to connect major arterials and collector streets. Marine has three streets that are classified as minor arterials, Minnesota TH 95 (Saint Croix Trail), County Road 4 (Maple, Broadway, and Ostrum Trail), and County Road 7 (Nason Hill Road).

Minnesota TH 95, an "A" minor arterial, is a two lane state highway that carries traffic through Marine as well as provides access to the collector streets and indirect access to the Central Business District.

The 2005 traffic counts show average daily traffic counts of 4,900 where TH 95 enters Marine and 4,400 vehicles where it leaves Marine. For 2030, Washington County forecasts 6,000 vehicles on the south end of Marine and a modest increase to only 4,800 vehicles on the north end. This implies that Marine is expected to be a destination, with most trips not continuing on to the north. Marine can be a destination either for housing or some kind of attraction. There are some minor improvements being discussed for this stretch of TH 95 in about the year 2010.

CR 7, an "A" minor arterial, extends into Marine from the southwest, providing a minor arterial connection between Marine and other County roads and highways. County Road 7 should average daily traffic of 480 vehicles in 2005 where it enters Marine. This traffic is expected to increase to 750 average daily traffic by 2030. Washington County has no plans to improve CR 7 within the next ten years.

CR 4, classified as a "B" minor arterial, provides an indirect east-west route and access to local streets, as well as some direct land access. This road will increase traffic from 600 vehicles in 2005 to 910 vehicles in 2030. Washington County has no plans to improve this road within the next ten years.

Collector Streets

A collector street is intended to provide both mobility and access to land and usually connects local streets with minor arterials. Marine has two streets that are classified as collector streets, Judd Street and Broadway Street west of CR 4. Judd Street provides a north-south route to the Village Center. It connects with CR 7 and Minnesota TH 95. Broadway Street provides a direct east-west route from the Village Center.

Local Streets

Local streets are intended to provide access to land within neighborhoods rather than to carry through traffic. Streets classified as local can be seen on the Transportation map. Local streets in Marine have a small town character with varying widths and swales and ditches rather than curbs and gutters to deal with storm water.

Marine's village local street pattern was originally platted as a traditional grid. Today, it functions as a web of local streets spreading to and from the Village Center on both sides of Saint Croix Trail.

TRAILS

The City has worked to expand its trail system. A bicycle trail follows Minnesota TH 95 with the exception of the central part of the City, where the trail runs one block west of Minnesota TH 95 along local streets. There is a network of walking trails in the southwest portion of the City, through Jackson Meadow, through the City's passive parkland located to the southwest of Jackson Meadow, along Nason Hill Road, along Oak Knoll Drive and northward. Trails in the northern part of the City run from the TH 95 trail through the area by the City's wastewater treatment drainfield and northward to O'Brien State Park.

AVIATION

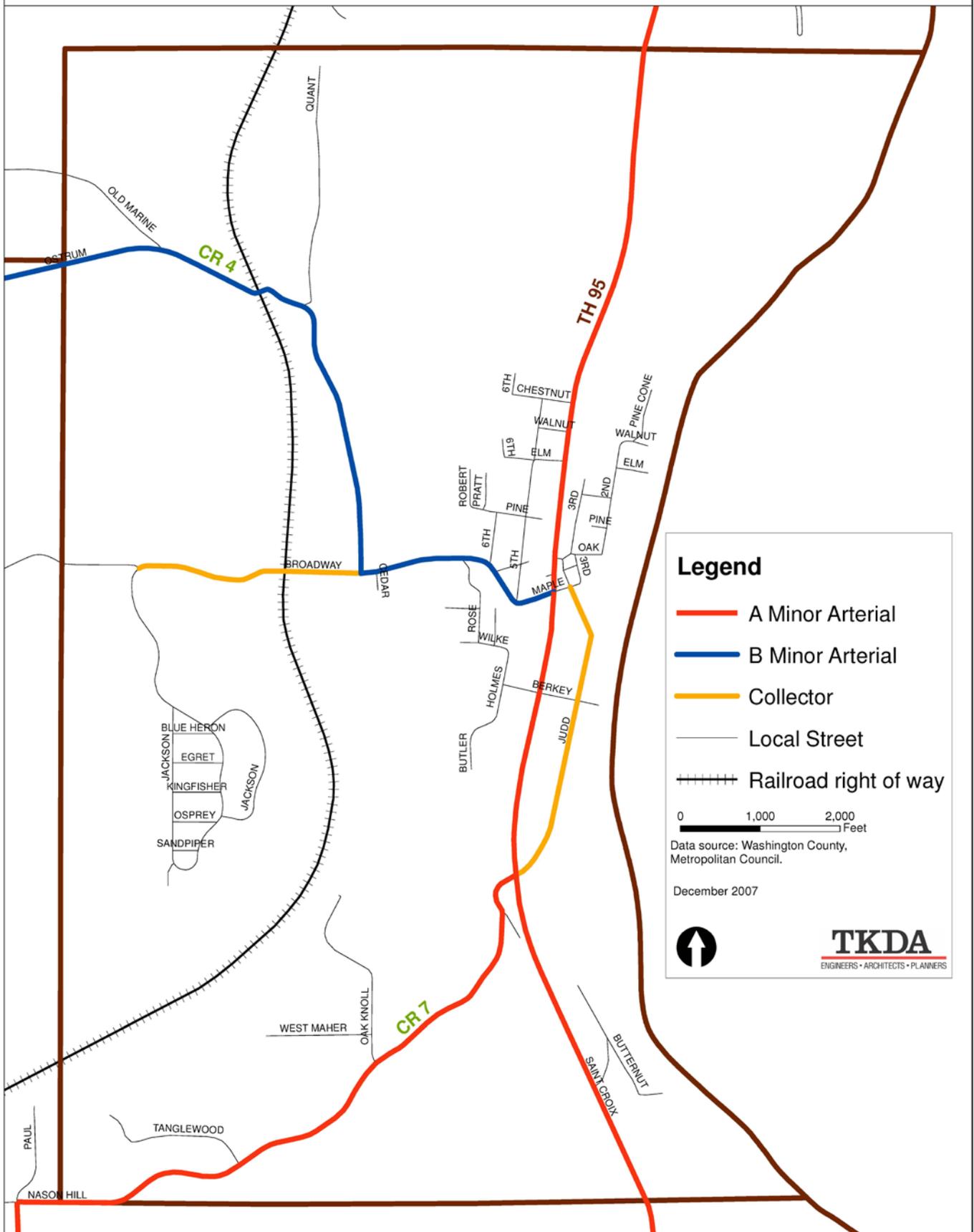
There are no airports located in the City. The closest regional minor airport is located in Lake Elmo.

TRANSIT

Marine is outside of the regional transit taxing district and does not have transit service. The nearest transit service can be accessed in the City of Stillwater where there is a park-and-ride with express service to downtown Saint Paul.

Transportation Functional Classification System

Marine on St. Croix 2030 Comprehensive Plan



WATER RESOURCES

SANITARY SEWER

The City of Marine on St. Croix has a community drainfield that treats effluent collected from many properties in the City, but not all. Solids remain in septic tanks located on each property. A system of pipes and pumps takes the effluent from the individual properties to the drainfield located north of the City. The drainfield is at 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 City may investigate expansion, if funding can be identified.

The City of Marine has several large areas that have severe limitations for on-site septic systems. Due to bedrock near the surface, steep slopes, wet or periodically flooded areas, or slow percolation rates, these soils have severe limitations for septic tank drainfields.

1 **Shallow Bedrock.** Bedrock near the surface is encountered along the St. Croix River and TH 95, as indicated on the Soils map. 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.

2 **High Water Table.** Water tables are another factor in determining septic system suitability. 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 of the ground, or contaminate the groundwater.

A band of wet soils runs from the northern boundary of the City through the center of the City. Other small areas of wetlands are scattered throughout the City. These soils are those that are periodically flooded or have a high water table. The flooding or local ponding occurs after heavy rains and may persist for several weeks or longer during the spring. Usually a soil that has flooding characteristics will also tend to have a high seasonal water table.



1 **Steep Slopes.** Steep slopes are present throughout Marine, especially along the St. Croix River west 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.

2 **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 pointed out that many of the existing housing units in the City are located in areas of high bedrock and water table, and most of these properties are connected to the existing municipal sewer system.

In July 1998, Marine revised its septic system regulations to reflect changes in State requirements. The Minnesota Pollution Control Agency has approved Marine's revised requirements that regulate the construction and inspection of individual sewage treatment systems and the correction of failed systems. Septic systems within Marine are required to be pumped and inspected on a two year cycle or more frequently, if inspection history warrants.

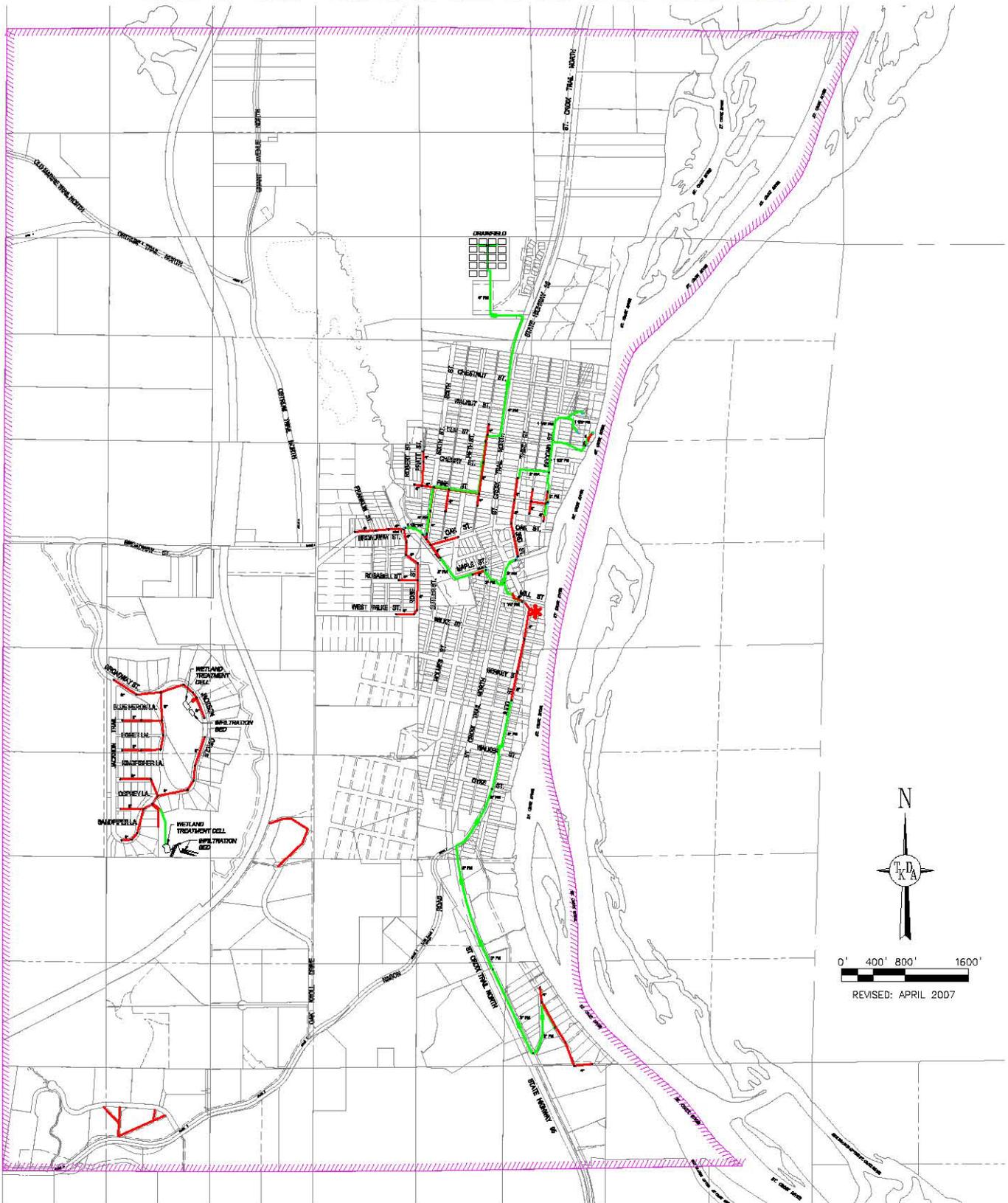
WATER SUPPLY

Water is provided through a combination of individual private wells and one community water system. 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 Jackson Meadow neighborhood has a community water system, serving 32 houses currently, with a capacity of 64 houses. Although this system remains under the management of the Developer, it is anticipated the City will take over the management in 2008.

SURFACE WATER MANAGEMENT

Marine is located within the newly created Carnelian Marine St. Croix Watershed District, which recently formed through a joining of the previous Carnelian Marine Watershed District and Marine Saint Croix Watershed Management Organization. The new Watershed District is operating under the surface water management plans created for the previous two organizations and is preparing to update the watershed plan. The City has two years from the completion of the Watershed District's plan to develop its local surface water management plan.

CITY OF MARINE ON ST. CROIX



LEGEND

-  CITY LIMITS
-  FORCEMAIN SEWER
-  GRAVITY SEWER
-  SANITARY SEWER MANHOLE
-  SANITARY SEWER LIFT STATION
-  CITY HALL

SANITARY SEWER MAP

TKDA
ENGINEERS • ARCHITECTS • PLANNERS

COMMUNITY FACILITIES

INTRODUCTION

This section of the Inventory identifies the available community facilities within the City of Marine on St. Croix. Community facilities contribute to the City's identity and level of self-sufficiency. Future land use planning efforts must be measured against the City's ability to maintain quality community facilities and services that contribute to the quality of life within the City.

POLICE PROTECTION

The Washington County Sheriffs Department is currently providing a "general patrol" level of service to the City of Marine. The department has no contract with Marine. The department receives a relatively low level of calls from Marine, averaging less than one per day with only about one-third of those calls being serious enough for the State to record them.

FIRE PROTECTION

Fire protection is provided by a volunteer fire department of approximately 24 people. The department's equipment includes two first line pumpers, a tanker, a grass fire fighting truck, and a stationary pump that is used for filling the trucks and has enough hose to cover the central business district of Marine. Fire protection service is provided for the City and the north-east twenty percent of May Township. The fire department has mutual aid agreements with other fire departments to share personnel and equipment when necessary. The fire department makes approximately sixty runs a year and shares a building and training facilities with the ambulance squad. Both the fire and ambulance departments evaluate the need for equipment based on an assessment of risks formulated from a complete history of services provided.

AMBULANCE SERVICE

Basic life support service is provided by a volunteer ambulance squad of 15 people. The squad has one ambulance and makes approximately 180 runs per year. Ambulance service is provided for the City, approximately one-third of May Township, and approximately three-quarters of New Scandia Township. The ambulance service has working relationships with two advance life support services that provide ALS service when requested, as well as backup.

SCHOOLS

Marine on St. Croix is located within the Stillwater School District (ISD #834). Elementary students attend school in Marine, and junior and senior high students travel to Stillwater. Parents in Marine have other school options including the Charter school and parochial schools.

Elementary Students

The oldest continually operating public school in Minnesota, Marine Elementary School serves grades K through 6. Beginning in grade 7, students are bussed to the Junior High and Senior High in Stillwater. The elementary school has a capacity of about 175 students, with a current enrollment of 140. About 20 percent of the students at Marine School come from outside the school's boundary (as set by the district administration), with children coming from Scandia and Stillwater.

PARKS AND OPEN SPACE

The City is bordered on its eastern side by the St. Croix River, a federally protected waterway. The river acts as greenspace and park land, and is used by City residents and visitors throughout the year. The Jackson Meadow neighborhood, on the west side of the City, includes 56.3 acres which are permanently open space set aside as part of the Jackson Meadow development. In addition, the City owns a 14.7 acre park neighboring the development, with trails that connect to trails following easements through Jackson Meadow and on to other City trails. The City also has park acres at the south end of the Village Center, Burris Park. Finally, the City owns a 40 acre site on the northwestern edge of the City which contains a 20-acre pine forest and a maintenance building. The Marine Elementary School has several recreation facilities, including a hockey rink, two baseball diamonds, a tennis court, and playground equipment.

The William O'Brien State Park is partially located in the City, making up a total of approximately 584 acres, located in the northern and western parts of the City.

REST AREAS

Minnesota Department of Transportation right-of-way for Minnesota TH 95 provides greenspace rest area within the Village Center. These green spaces provide aesthetic accents for the Village Center as well as functional open spaces. The City is currently discussing with Mn/DOT a possible transfer of these rights-of-way back to the City. If the transfer occurs, it is anticipated the land will remain greenspace.

City of Marine on St. Croix



2030 COMPREHENSIVE PLAN POLICY FRAMEWORK

2030 COMPREHENSIVE PLAN POLICY FRAMEWORK

Introduction Guiding Principles.....1
Plans..... 3
Natural Environment Plan 5 Land Use Plan..... 12
Transportation Plan.....24
Community Facilities Plan.....30
Implementation 33

LIST OF TABLES Page

Marine onSt. CroixForecasts.....2
Existing Land Use Table 14
Proposed Land Use Table..... 15
Vacant Land Development Capacity 22

LIST OF MAPS Page

Greenway Map.....11
Existing Land Use Map 13
2030 Land Use Plan Map.....16
Trails Map 28
Zoning Map 36

INTRODUCTION

PURPOSE

The 2030 Comprehensive Plan Policy Framework builds upon the Inventory and lays out the policies to guide Marine into the future. It serves as a foundation for local government decision makers, guides land use and provides the basis for zoning, and documents local priorities and values.

The 2030 Comprehensive Plan complements the City's maps, ordinances, and codes which are more detailed documents. It may be the case that a new situation, proposal, or opportunity arises which is not addressed by the Plan. The Plan should be a living policy document, updated or modified as needed to continually serve the community.

As a member community of the Twin Cities Metropolitan Area, Marine on St. Croix has updated its Comprehensive Plan in accordance with the 1995 Metropolitan Land Planning Act and the Metropolitan Council Regional Framework. In undertaking the update of its 1999 Comprehensive Plan, the City of Marine has re-established the community values and development parameters for guiding future land use growth and resolving local development issues.

REGIONAL CONTEXT

Located in northeastern Washington County, Marine is identified by the Metropolitan Council in the Regional Framework as “Rural Center” and “Diversified Rural Community.” In its system statement in September 2005, the Council recommends: “ Marine on St. Croix should consider changing its planning area designation in its 2008 comprehensive plan entirely to ‘diversified rural.’ Diversified rural areas should accommodate growth without requiring the provision of regional urban services.” It continues: “Diversified rural areas include a mix of a limited amount of large-lot residential and clustered housing with agricultural and other rural uses. Growth in the diversified rural areas should be consistent with regional forecasts, at clustered densities that do not exceed 1 housing unit per 10 acres.”

The City of Marine believes that the present designation of the community as “Rural Center” and “Diversified Rural Community” best fits the character of the City now and in the future. The description of “Rural Centers” in the framework most closely fits the Old Village area of Marine. It states” Rural Centers are the small towns located throughout the Rural Area. The 17



Rural Centers include residential neighborhoods surrounding a center that provides basic consumer services and community activities. These are older communities, many of them established more than a century ago to serve surrounding farms.” The Regional Framework defines “Diversified Rural Communities” as hosts of the widest variety of farm and non-farm land uses in patterns that include a mix of a limited amount of large-lot residential and clustered housing with agriculture and other uses, including facilities and services requiring a rural location.” One key policy of this designation is a one unit per 10 acre density. This density is lower than existing densities in the rural portions of the City and certainly the Old Village. For this reason, the City wishes to maintain its existing geographic designations, including that for Diversified Rural and Rural Center. The Regional Framework makes a distinction between Rural Centers and Rural Growth Centers. The essential difference is that Rural Centers are not served by public sewer systems, while Rural Growth Centers either are or wish to be served by public sewer systems. While Marine does look for modest growth over the next 25 years in keeping with Council forecasts, if possible, it does not wish to be designated a Rural Growth Center. The City will look for a combination of methods for accommodating limited growth. These include modest infill development on on-site septic systems where they can meet all ISTS requirements or on community septic systems, or utilizing the existing 201 system for remediation when septic systems have failed. The other method of growth is limited development in the rural portions of the Community. With these options, the City believes by maintaining its current designations of Rural Center and Diversified Rural it can accommodate modest growth (about four to five new households per year), protect the environment, and maintain a vibrant and livable life-style. The Metropolitan Council has established growth forecasts for the region and each of the metropolitan communities in an effort to plan for cost effective, contiguous growth. The regional forecasts including the City of Marine on St. Croix are below:

FORECASTS				
	2000	2010	2020	2030
POPULATION	602	760	880	1,000
HOUSEHOLDS	254	320	370	430
EMPLOYMENT	224	290	330	380

GUIDING PRINCIPLES

INTRODUCTION

The primary needs to be addressed in 2030 Comprehensive Plan were identified through a year-long process involving the City Council and Planning Commission, and also included a series of three town meetings. Notices of the town meetings were sent to all Marine households to encourage participation and participation was, in fact, excellent. (Complete summaries from the meetings can be found in the Appendix.)

From the information gathered through the planning process, the City has identified three principle issues confronting the community: Natural Resources, The Village Center, and Community Sustainability.

GUIDING PRINCIPLES

The Plan offers three guiding principles intended to address the priorities identified in the planning process. These guiding principles are reflected in each section of the 2030 Comprehensive Plan.

Natural Resources Stewardship

Marine's natural resource base is a valued community asset. Natural resources contribute to the community's character, protect ground and surface water quality, provide wildlife habitat, maintain property values, form buffers between land uses, and create opportunities for recreation.

There is clear recognition that the surrounding natural landscape makes Marine a great place to live. Given the village's unique location on the St. Croix River, the City will consider village land use practices in the context of the St. Croix River resources. The City is focused on continuing to be a good steward of its natural resources, and will continue to require and encourage private parties to do the same.

Village Center Vitality

Marine's historic Village Center is a defining element of the community, part of Marine's unique sense of place. Keeping the Village Center as a community gathering place is a key priority. Citizens of the City benefit from the goods and services provided by local establishments (including for-profit, non-profit, and governmental). Local government has limited impact on the market forces which ultimately determine the success or failure of



businesses and organizations. Nevertheless, the City will pursue policies and decisions which may help support an economically viable atmosphere for village businesses and organizations.

Multi-Generational Community

While the population of Marine is stable, the elder, albeit more affluent, demographic profile suggests challenges for the future. To remain viable, the City needs to entice younger families, and encourage civic involvement on the part of all citizens. Innovative approaches will be required to address such issues as the need for housing with cost/value ratios that attract younger families, the need to maintain the presence and vitality of community amenities such as schools, libraries, health and safety response teams, and the need to maintain physical infrastructure which will meet the needs of citizens as well as support measured growth.

NATURAL ENVIRONMENT PLAN

GOAL 1.

Protect the environmental and scenic qualities of the St. Croix River Valley Corridor.

Policies

1 The City will remain an active participant, together with National Park Service and the Minnesota DNR, in river management. The City participates in the Lower St. Croix Partnership Team, attending bi-monthly review of land use decisions along the riverway.

2 The City supports a small town historic land management designation for Marine on St. Croix extending from Greenburg Island to the south end of Butternut Falls. The small town historic designation recognizes the developed urban character of this part of the City. The predominant character of this portion of the City reflects a late 19th or early 20th Century development pattern and architecture. The City will encourage any new infill development to reflect the historic development patterns and architecture of this area of Marine.

3 The City Ordinances continue to allow the re-establishment of non-conforming buildings along the river in the event that they are damaged or destroyed. The City of Marine on St. Croix has numerous homes and historic buildings that are nonconforming with regard to lot size or setback from the river. The City values these land uses as part of the historic character of the community and will oppose any regulations that may prohibit a private property owner from re-establishing their home within the current building site, if the building is damaged or destroyed. The City will review the proposed riverway rules within the Management Plan update, to confirm non-conforming structures are allowed to be improved and maintained.

4 The City believes it is important to retain local control of land use decisions affecting the Village Center, and supports the current riverway management plan which retains local control. The City is expressly against any requirements that existing commercial land uses would be required to pursue conditional use permits for improvements or expansions.



- a. The City will explore the possibilities of

redefining the Lower St. Croix Management classification within the boundaries of Marine.

b. The City will modify its ordinances once the revised Lower St. Croix National Scenic Riverway Cooperative Management Plan is adopted.

5. Marine's local ordinances and policies will protect the environmental and scenic qualities of the St. Croix River.

- The City will promote the integration of future development into riparian lots in a manner that reduces its visual impact from the riverway.
- The City will prohibit new development or the construction of individual sewage treatment systems within designated floodplains.
- The City encourages improvements and maintenance of existing non-conforming buildings provided the degree of non-conformity is not increased.
- The City will require low impact lighting that is reflected downward to prevent glare or light spillage on adjoining properties, rights-of-way, or skyward.
- The City will maintain its shoreland regulations to provide proper building height, setback, and screening from the St. Croix River Corridor.
- The City will maintain ordinances which regulate utility and telecommunication tower heights to reduce their visual impact on the community and river corridor.
- The City will act to preserve a balance between the visual aesthetics of the riverway and the Historic District.

6. The St. Croix River will continue to be a City-wide amenity that is a resource for all of its citizens.

7. The City will work with citizens and riparian owners to ensure neighboring private property is respected by the users of rights of way.

- The City will maintain the existing marina at its current size, configuration and use. Marina expansion will be discouraged.
- The City will continue to review current ordinances to ensure existing viewsheds of the river and river valley are protected

GOAL 2.

Protect and maintain surface waters including natural wetlands, floodplains, ponding areas, and drainageways.

Policies

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 implementation of Marine's Sewer Use Regulation Ordinance No. 93, prohibiting the placement of independent sewage treatment systems within any wetland drainage area or floodplain.
4. 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.
5. The City will consider adopting an impervious surface ordinance for the Single Family Urban Zone.
6. Site plans and subdivision designs will be subject to the regulations of the Wetland Conservation Act.
7. The City will enforce its Floodplain Ordinance on any development interest within the City's designated 100-year flood zone.
8. Within the rural residential land use areas, the City will require wetland and storm water facilities to be designated as protected open space areas.
9. 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.
10. The City will continue to require natural vegetative buffer areas along the St. Croix River, wetlands, creeks, and drainageways.
11. The City has banned the use of phosphorous fertilizers and will limit its use of herbicides and pesticides on lawns to prevent their runoff into wetland areas and contamination of ground and surface water resources.

12. The City will promote awareness of the value and importance of the environment through community education, volunteerism in open space maintenance, and citizen stewardship activities.

GOAL 3.

Preserve and restore sensitive natural resources, significant ecological areas, and habitat.

Policies

- 1 Promote programs designed to protect trees through disease control and reforestation.
- 2 Require proper soil preparation for new development to ensure deep rooting of new landscaping and minimal irrigation.
- 3 Promote the use of native plants, grasses, shrubs, and trees in development site restoration.
- 4 The City will encourage landowners to restore native habitats and control exotic species such as buckthorn, and provide incentives for buckthorn control.
- 5 Proposals to develop in poor soil areas (as identified by the Washington County Soil Survey) are required to field check soil conditions to verify the extent of poor soils and their ability to support development. It must be demonstrated that the development site is capable of accommodating an ISTS in accordance with the Marine Sewer Use Regulations.
- 6 The City will maintain and enforce its erosion control ordinance for all development requests to ensure property erosion control and slope protection.
- 7 Through its zoning regulations, the City will require subdivisions within wooded areas to be designed in a manner that minimizes tree removal. Street layouts, lot configurations, and building pad locations will be evaluated through the development review process in an effort to minimize the loss of significant trees.
- 8 The City will mandate residential clustering within its rural residential land use areas. Through the cluster subdivision, permanent open space will be established in areas with significant tree cover.
- 9 The City will identify Greenway corridors that connect habitat areas, parks and other significant natural areas. These large areas of contiguous open spaces are a means of maintaining the City's open rural character, preserving ecological sensitive areas, protecting rare species and high quality natural communities,

maximizing the diversity of natural features and habitat, and providing passive recreational trail opportunities for residents of Marine on St. Croix.

- The City will adopt a map identifying Greenway corridors to be used in making land use decisions.
- The City will utilize various methods to establish Greenways including implementing zoning and environmental ordinances to regulate development. These include the riverway ordinance, floodplain ordinance, wetland buffer requirements, open space subdivisions, and park and trail dedication requirements.
- In rural residential land use areas, the City will promote the establishment of conservation easements and/or land donations to the City or other land conservation groups.
- The City will mandate residential clustering in the rural residential land use area. Designated open space will be required to be contiguous and accessible. Open space areas must give attention to the preservation of natural habitats, protection of viewsheds, creation of neighborhood recreational areas, and the creation of pedestrian trail corridors.
- To garner support for their establishment and maintenance, the City will promote community-wide awareness of the value and importance of Greenways. Community education pertaining to citizen land stewardship programs will be pursued to solicit private property owner participation in the creation of the Greenways. Citizen volunteerism will also be pursued to assist in ongoing restoration and maintenance of established Greenways.

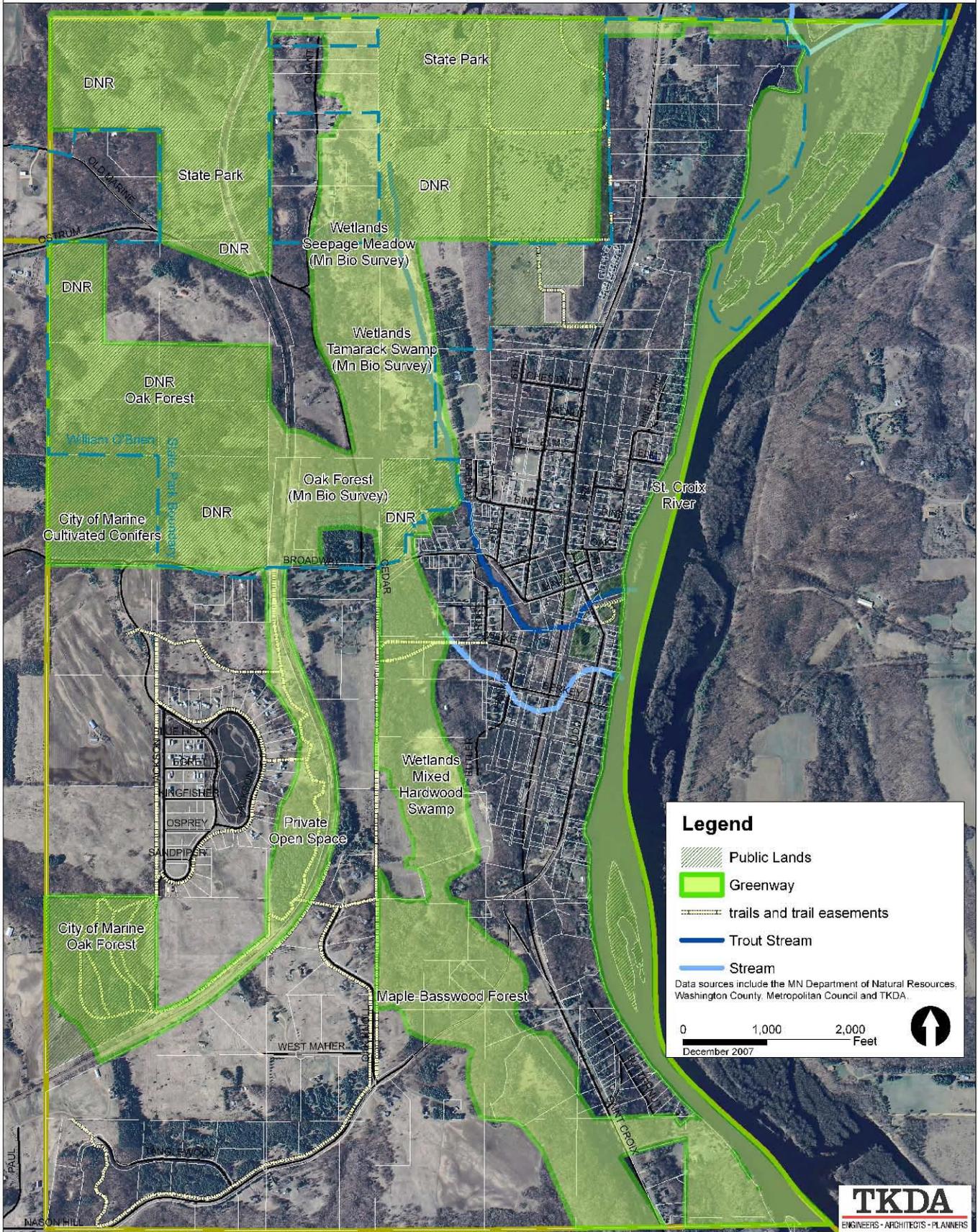
GOAL 4.

Maintain the City's long, progressive focus on conservation, recycling and sustainable development.

1. Review on an annual basis opportunities for strengthening this commitment by addressing:

- Green or sustainable building practices.
- Open space and conservation developments.
- Sustainable road design, repair and construction.
- Renewable energy alternatives
- Carbon footprint management and mitigation.

2. Plan for protection of solar access to encourage the use of solar energy systems. This will be accomplished through the development review process. Building placement and height will be considered to minimize the shading of solar energy systems.



LAND USE PLAN

INTRODUCTION

The Land Use Plan takes projected growth rates and applicable City policies and formulates a description of desirable locations for future land uses. The plan map, when used in conjunction with the Land Use Plan narrative, provides a graphic description of future land uses within the community. The Land Use Plan should serve as a graphic guide in assessing development requests and how they may affect or relate to the desired land use in a given area.

In the sections that follow, the specific land use categories of rural residential, residential, commercial, and industrial land are described in greater detail.

EXISTING LAND USE

The existing development patterns in Marine are clearly influenced by the following factors:

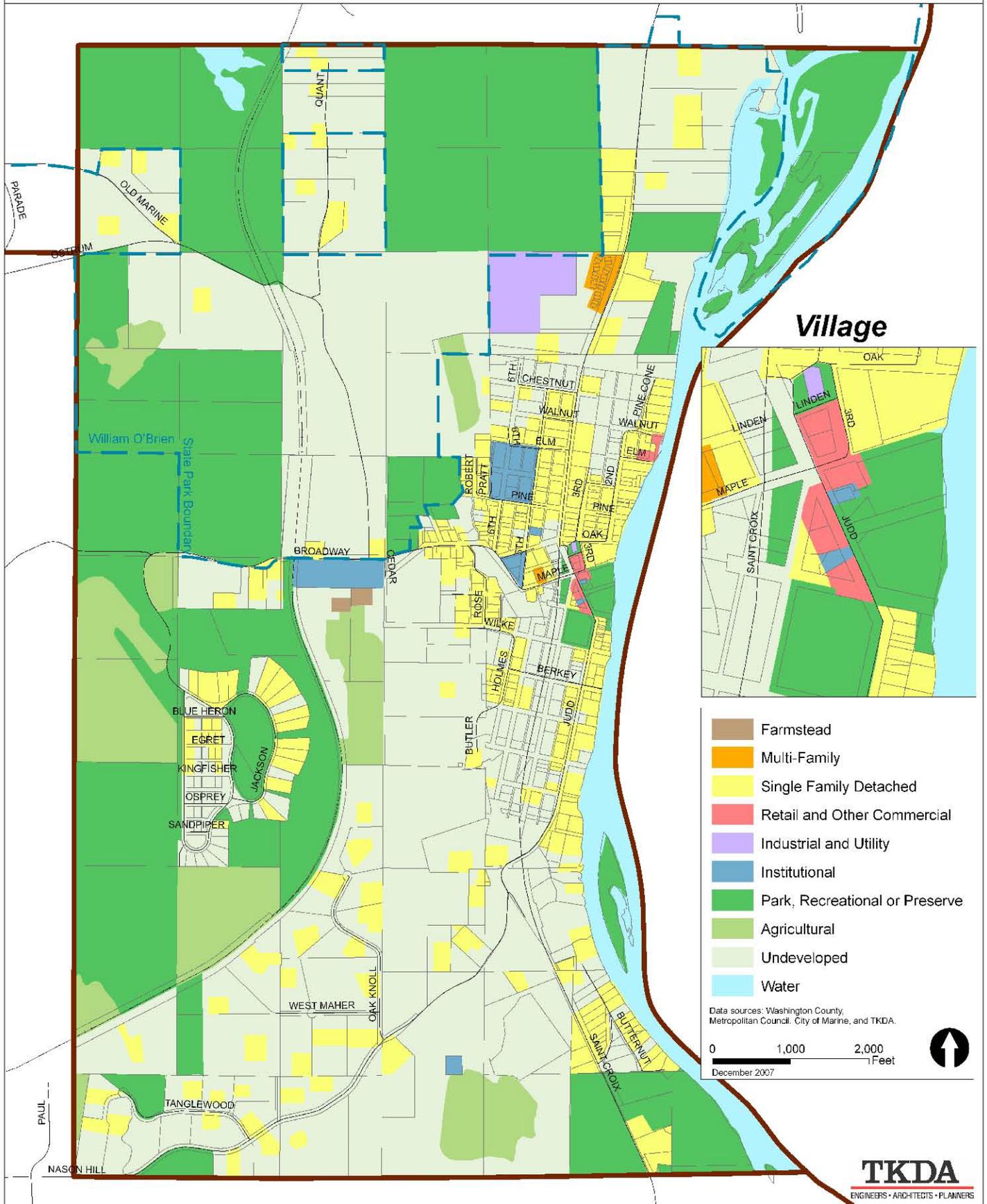
- 1 The older portions of the community reflect the early history of the City. Development follows a loose grid design, with residential neighborhoods radiating away from the City's commercial Village Center.
- 2 Environment has contributed to the City's development patterns. Throughout the City of Marine on St. Croix, features such as streams, wetlands, high water tables, high bedrock, and steep slopes have constrained development patterns, influencing the location, buildings and streets.
- 3 The City has limited community utilities (i.e. sanitary sewer). The existing City sewer system is at capacity, requiring new development to be served by individual sewage treatment systems or approved communal systems. The reliance on individual systems influences development densities and lot sizes.

The map that follows illustrates the 2005 distribution of land uses within the City of Marine on St. Croix. The specific breakdown of land use by acreage is shown in the table on page 49.



Existing Land Use (2005)

Marine on St. Croix 2030 Comprehensive Plan



EXISTING LAND USE				
Land Use Categories	2000 Total	2005 Total (in acres)	Change 2000 -2005	
			Absolute (in acres)	Relative Percentage
Residential	286	315	28	+ 10%
Single Family Residential	271	300	29	+ 11%
Farmstead	9	9	-0	-4%
Multi-Family Residential	6	6	-0	-2%
Commercial	3	4	0	+ 8%
Industrial Use	1	22	21	+ 3,922
Industrial and Utility	1	22	21	+ 3,922
Institutional	45	23	-21	-48%
Parks, Recreation & Preserves	848	849	1	+ 0%
Agriculture & Undeveloped Total	1323	1293	-29	-2%
Agriculture	162	169	7	+ 4%
Undeveloped Land	1161	1125	-37	-3%
Open Water	158	168	10	+ 7%
Total	2664	2674	10	

Source: Metropolitan Council

PROPOSED 2030 LAND USE PLAN

Reflective of existing land use patterns, the proposed 2030 Land Use Plan, on the following page, has been formulated. The plan emphasizes infill development of the vacant land, preservation of valued open space, as well as the maintenance and enhancement of the existing land use areas.

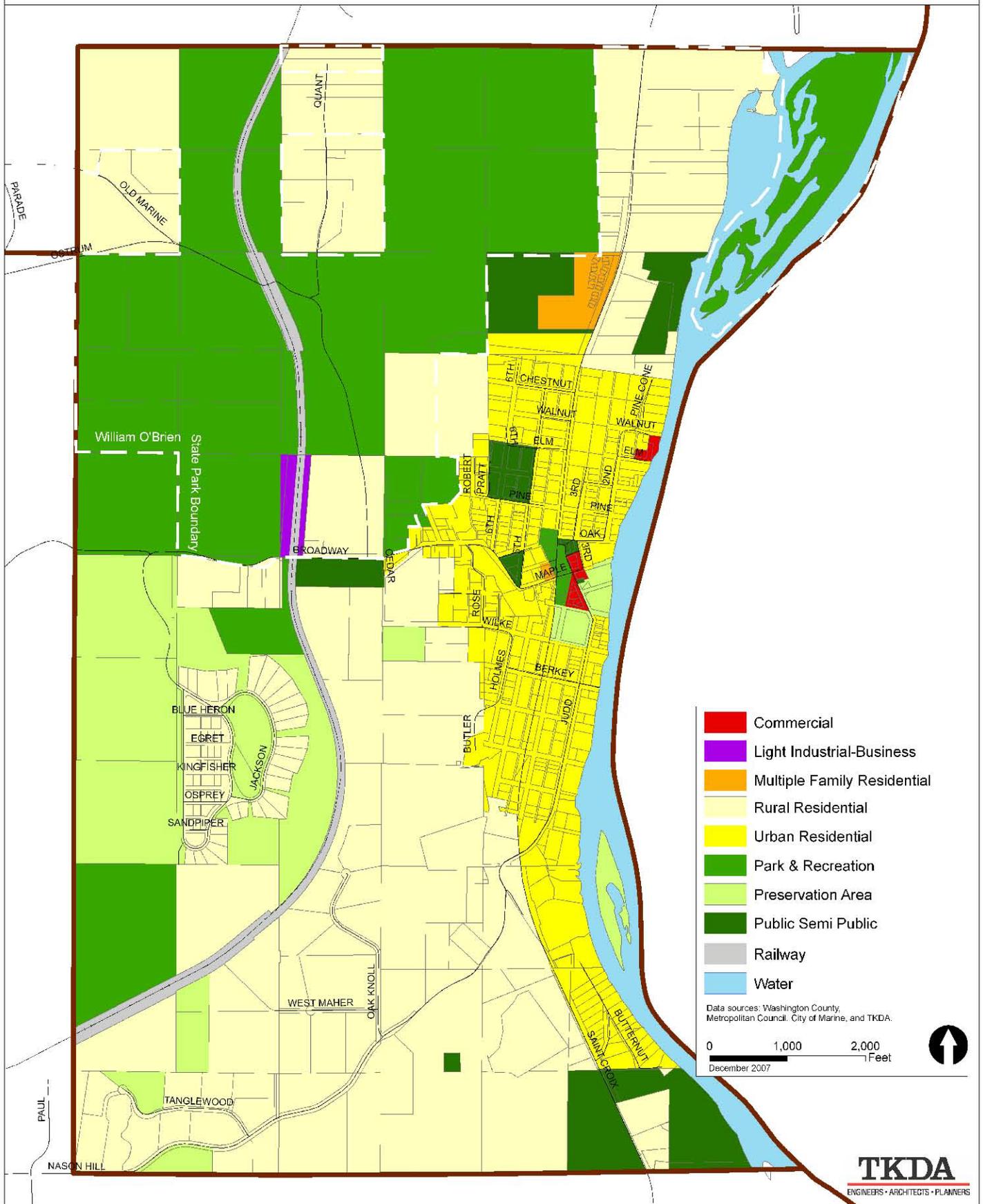
OF TOTAL COMMERCIAL 4.4 .2
PUBLIC/SEMI-PUBLIC 107.9 4.4 LIGHT INDUSTRY-BUSINESS 7.3
.3 MULTIPLE FAMILY

RESIDENTIAL PARKS AND RECREATION 15.5 .6 722.6 29.4
PRESERVATION 239.5 9.7 RURAL

RESIDENTIAL/AGRICULTURE 1.0 72.1 43.5 292.8 11.9
URBAN RESIDENTIAL
TOTAL* 2,462.1 100 Source: TKDA *TOTAL does not include rights of way or water bodies

2030 Land Use Plan

Marine on St. Croix 2030 Comprehensive Plan



RESIDENTIAL

The 2030 Land Use Plan divides the residential land use types into three categories: Rural Residential, Urban Residential, and Multiple Family. Each of the land use categories identifies a different development density reflective of the physical environment, City sanitary sewer infrastructure, and existing land uses.

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 reliant on private wells and independent sewer treatment systems (ISTS) or communal disposal systems and communal water systems. The City has divided the rural residential land use area into two zoning districts.

The St. Croix Rural Residential District is located at both the north and south ends of the City, between Minnesota TH 95 and the St. Croix River. These areas are distinguished from the City's other rural residential areas of the community due to the proximity to the river and the imposition of Lower St. Croix River shoreland regulations. Land uses in these areas will be limited to agriculture, conservancy, and single family residential land uses at a density of one unit per 2.5 acres.

Approximately 21 acres of vacant land exists within the St. Croix Rural Residential areas. However, much of this vacant land is constrained by environmental features which reduce the amount of buildable land within these areas. Through the enforcement of the Lower St. Croix River Shoreland District, the City will 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. In this regard, the following development strategies will be implemented:

- 1 Any development occurring within this land use area must demonstrate that the land is capable of accommodating ISTS in accordance with the City's sewer use regulations Ordinance No. 93.
- 2 All new development within the St. Croix Rural Residential area must comply with 100 foot setback standards from the ordinary high water level of the St. Croix River or bluff for both building and ISTS.
- 3 Within this Rural Residential District, structures must be earth tone in color to blend with the natural features of the shoreline.

The majority of Marine's remaining vacant land supply lies within the Rural Residential land use area lying west of Minnesota TH 95. The predominant land uses in this area are agriculture, conservancies, and single family residential. In 1995, the City amended its zoning regulations to mandate clustered residential subdivisions within this area of the City as a means of achieving the following community objectives:

- 1 The preservation of contiguous common open spaces for scenic enjoyment, recreational use, and rural identity.
- 2 The creation of cohesive neighborhoods that promote a local identity and community interaction.
- 3 The reinforcement of Marine's identity through the integration of neighborhoods, open spaces, and community gathering places.
- 4 The promotion of subdivision designs that provide for efficient delivery of public services.

Through the Zoning Ordinance, the City outlines the following design parameters for new residential development in the Rural Residential areas:

- 1 The maximum density is one unit per five acres based on the gross area of the subdivision.
- 2 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.
- 3 Neighborhood design standards were formulated in an effort 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.
- 4 All new cluster subdivisions may be platted to accommodate home sites with either ISTS or communal sanitary sewer systems.

Consistent with its zoning regulations, the City approved a planned unit development and subdivision for the Jackson Meadow subdivision in 1998. This subdivision embraced the City's residential clustering objectives for open space protection and neighborhood design beyond the standards established in the Zoning Ordinance.

The Jackson Meadow subdivision encompasses 336 acres to west of Wisconsin Central Limited Railroad tracks consuming 75 percent of the vacant land supply within the City. The developer, through the PUD, was able to cluster 64 single family lots on approximately 50 acres, establishing conservation easements over the remaining 286 acres.

Using communal sewer and water systems, the development was able to create a tight neighborhood design that was well integrated with natural features of the site. The subdivision amenities include the permanent open spaces, recreational areas,

attractive streetscapes, a ten acre community park, and an extensive trail system that is available to residents community-wide. The Jackson Meadow subdivision will serve as a model for future residential clusters.

Other vacant Rural Residential properties exist as smaller parcels which will be developed over time.

Urban Residential

The Urban Residential land use areas represent the Single Family Urban and St. Croix Urban Zoning Districts that surround the Village Center. 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 sewer collection system and drainfield. The availability of the community utility has allowed for a more dense development pattern than is allowed in the Rural Residential areas of the City.

The Urban Residential areas are nearly fully developed. Only 19 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.

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 area of Marine. 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 be non-conforming with regard to State shoreland guidelines.

The open space separation between homes in the Urban Residential land use area contributes to the rural small town character of the City. The City will undertake the following efforts to maintain these urban open spaces:

1 The City will maintain the undeveloped existing street rights-of-way as greenways within the Urban Residential areas of the community.

2 The City will consider performance standards for defining 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. This effort will give specific attention to protecting sight lines to the river and valley between riverfront properties.

Multiple Family Residential

Marine's Multiple Family Residential land uses are limited to the School House Apartments and the Stugas Townhomes. 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 will focus on mother-in-law or accessory apartments and guest homes, which may be accommodated within the City's single family residential areas and served by private ISTS and wells.

VILLAGE CENTER

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 the 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 following efforts will be pursued as a means of maintaining and enhancing the Village Center commercial area:

1. The current size and scale of the Village Center provides a comfortable shopping and social environment. The City desires both to maintain the geographic size of the Village Center, and investigate opportunities for new commercial growth. Due to its limited geographic size, the following efforts will be investigated to create new building sites:

- Pursue the re-conveyance of Mn/DOT right-of-way along Minnesota TH 95. The oversized right-of-way may provide a potential development site for a public service facility between Minnesota TH 95 and Judd Street.
- The City will investigate the potential redevelopment of the site containing the Frontier building.

2. The Village Center is important to the community. The City encourages development and redevelopment in the Village Center. The City will work with property owners subject to the City's means and constraints.

3. As part of the City's Village Center core, the City's intent is to provide space and support for public facilities and services.

4. The identification of new Village Center building sites will be important not only as an incentive for new development but also for the retention of existing land uses. These public uses (e.g., post office, City Hall, library) each are in need of additional floor space. To retain the existing core uses in the Village Center, some building solutions will be necessary.

5. The architecture within the Village Center reflects the City's historic background and small town character. To preserve the historic identity of the Village Center, the City will explore alternative methods of establishing architectural guidelines. Guidelines may address exterior building design related to building context and character, building orientation, setbacks, height, building massing, and facade treatment to ensure new development will be complementary to the existing Village Center land uses.

6. To further enhance the Village Center, streetscape improvements will be pursued. The streetscape design is intended to complement the existing architecture, take advantage of the City's attractive natural setting, and improve the pedestrian access within the Village Center. Suggestions for streetscape improvements may include:

- Reducing the local street width through the Village Center.
- Reconfigure streets and improve the existing sidewalks to promote traffic safety and the aesthetic value of the Village Center.
- Adding a landscape component to the sidewalk including trees or planters.
- Using the waterfall as a landscape focal point for the Village Center.
- Burying overhead utilities.
- Provide pedestrian scale lighting as part of the streetscape design.
-

7. Other efforts to improve the attractiveness of the Village Center include promoting the improvement and use of the publicly owned lands. The City has created a passive recreation park on the Burris property on the south end of the Village Center. The City will continue to cooperate with the Minnesota Historical Society in the planning and use development of the Old Mill site located in the Village Center. This is a significant property for the City both historically and geographically.

8. The City will work to better address stormwater runoff in the Village Center.

INDUSTRIAL-BUSINESS

The 2030 Land Use Plan shows 7.3 acres of land designated for industrial-business land use. This land use represents existing industrial zoned land along the Wisconsin Limited Railroad. In retaining the industrial land use area, the City will consider the introduction of light industrial uses or business for the area. Suggested uses may include professional offices, or office warehousing. This industrial-business area offers a location for office or office warehouse type facilities that may serve growing home occupations within the City. Any future industrial-business land use within this area will be evaluated in relation to land use compatibility with nearby residential neighborhoods, its impact on the local environment, and traffic generation on the local street system.

In view of the limited land area that Marine has designated for commercial and industrial land uses, the City will investigate alternative means of providing local employment opportunities. The City will encourage opportunities for home occupations that may compatibly coexist within the City's residential neighborhoods. To promote the local business opportunities, the City will pursue needed infrastructure to support these inhouse businesses (e.g. retention of the local post office, improved telecommunication infrastructure).

PUBLIC LAND USES

Approximately thirty-five 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.

ACRES

	GROSS ACREAGE	EXCLUDING DEVELOPMENT CONSTRAINTS ¹	DENSITY	ADD HOUSING UNITS ²
SINGLE FAMILY RURAL	284	NA	1 LOT PER 5 ACRES	57
SINGLE FAMILY URBAN	32	8	30,000 SF MINIMUM LOT SIZE	12
ST. CROIX RURAL	21	5	2.5 ACRE MINIMUM LOT SIZE	2
ST. CROIX URBAN	51	11	1 ACRE MINIMUM LOT SIZE	11
TOTAL	388	472		82 3

Source: TKDA

¹ Development constraints include wetlands, wet soils, steep slopes, and shallow bedrock.

² Based on acres excluding all development constraints with maximum density allowed.

³ Vacant land supply includes parcels that are too small to be developed, therefore, the development potential numbers are high end numbers.

TRANSPORTATION PLAN

INTRODUCTION

In response to the transportation issues identified through the Comprehensive Plan process, the City will implement the following strategies and recommendations.

STREETS

Minnesota TH 95 is not a transportation corridor that is compatible with the small town character of Marine on St. Croix. Minnesota TH 95 is a physical barrier that divides the community. Concern exists with regard to the public safety for both motorists and pedestrians that must cross Minnesota TH 95 to access the Village Center due to speeds and volumes of traffic on the highway. These conditions are only expected to worsen as northern Washington County continues to grow.

To address the issue, the City proposes the following strategies:

1 The City proposes that major north/south traffic flows through Marine be rerouted to an alternative highway corridor west of the City's boundaries. Manning Avenue is a north/south travel corridor located away from the St. Croix River that may offer an alternative route for Minnesota TH 95 traffic. The City will pursue the traffic reduction efforts on Minnesota TH 95 with future transportation planning with Washington County and Mn/DOT.

2 The City will pursue more immediate efforts to mitigate traffic concerns along Minnesota TH 95 including methods for reducing traffic speeds, providing for traffic controls (i.e. signals) at the Maple Street/Minnesota TH 95 intersection and improving pedestrian and bicycle crossing opportunities. The City will investigate the traffic safety options with Mn/DOT.

3 The County has expressed interest in street turnbacks to the City. The City is interested in receiving the street turnback only under the conditions that the County roadway scheduled for turnback meet the design standards of the City and the City has an investment in street repairs or upgrades.



Traffic Forecasts



Source: Washington County

Washington County has no plans for improvements to either CRs 7 or 4. The City has issues with these County roadways related to traffic visibility and pedestrian safety. The City will cooperatively work with Washington County in any future planning of these streets to resolve these issues.

Street Design

Well functioning local streets are those that give safe access for all users: Pedestrians, cyclists, and motorists of a variety of ages and abilities. Streets that encourage multi-modal travel can be encouraged through design standards, speed limitations, and adjacent land uses. Solutions will vary depending on the unique circumstances of the individual street. Streets that make walking and biking easier encourage a healthier community, in terms of exercise and public health, air quality, and community design, such as reduced need for parking.

Many of Marine's local streets are comfortable for pedestrians and cyclists as well as for motorists. Sidewalks, slow speed limits, adequate shoulders, and close destinations that encourage modes of travel other than driving, make the Village Center an accessible place for many types of travelers.

On a local basis, residents expressed an appreciation for narrower street widths. There is a desire to integrate new development within the City through the use of narrower streets to discourage high traffic speeds and volumes in residential areas. This policy will continue with any future development.

RAIL SERVICE

The Wisconsin Central Limited Railroad traverses Marine. This is currently an active rail freight line. The City of Marine would support the future reuse of this rail corridor as a light rail commuter route between Marine and the Twin Cities Metropolitan Area.

TRAIL SYSTEM

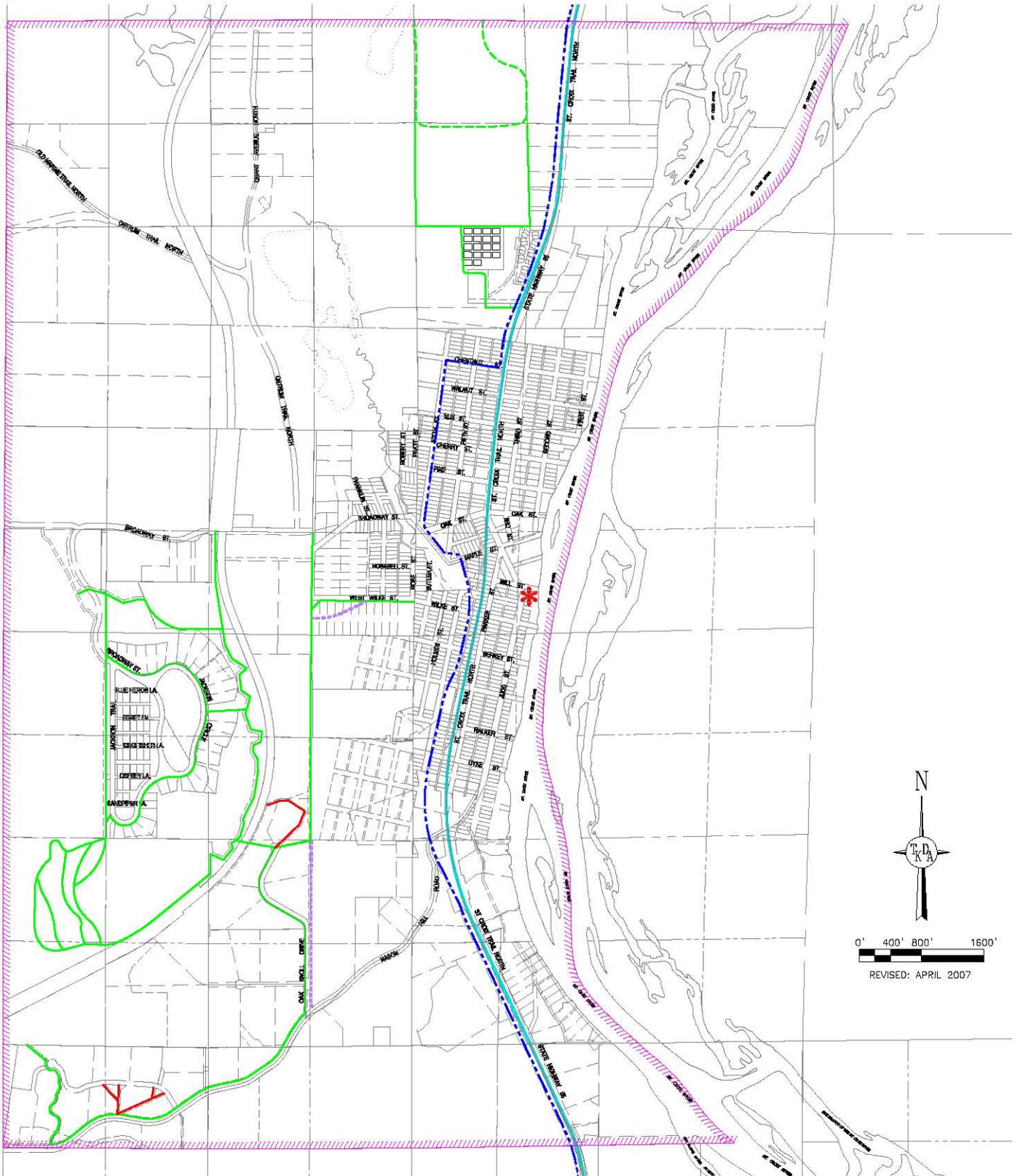
The City of Marine has established an extensive local trail system that serves community residents. The map on the following page illustrates the City's trail system. The following strategies will guide future trail planning:

- 1 The City will evaluate connection of the local low-volume trail system with large-volume regional trails.
- 2 The City will acquire additional trail segments as land is subdivided for development.
- 3 The pedestrian trail will be natural in design to reduce development and maintenance costs.

4. The overall trail system is intended to link major destinations within the City such as neighborhoods, the Village Center, the school, the church, etc. as a means of promoting a sense of community.

Marine is supportive of the Gateway Regional Trail. The preferred routing would be west of Marine, entering the City and William O'Brien State Park from the west, north of Broadway Avenue.

CITY OF MARINE ON ST. CROIX



LEGEND

-  CITY LIMITS
-  WALKING TRAIL
-  BIKING TRAIL
-  PARK TRAIL
-  DEDICATED TRAIL R.O.W.
-  DRAINAGE EASEMENT
-  CITY HALL

EXISTING TRAIL MAP

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AIRPORTS

Marine is not located within a flight zone or search area for any regional airport. In accordance with the Metropolitan Council, the City will notify Mn/DOT Aeronautics and the Federal Aviation Authority (FAA) of any proposed structure within Marine that may exceed 200 feet in height in an effort to protect regional air space.

TRANSPORTATION ANALYSIS ZONES

The Metropolitan Council requires that local comprehensive plans assign the population and household and employment forecasts to Transportation Analysis Zone (TAZ) geographies. Marine is within one TAZ, and so all of Marine's forecasts are allocated to this TAZ.

ACCESS MANAGEMENT

Access management represents guidelines and regulations that affect where and how driveways and new streets connect to existing roadways. It is important for safety and helps maintain the functionality of the road. Access management strategies include aligning access points with other existing or potential access points, and establishing minimum distances between access points for different roadway types. The City of Marine will consider County and State access guidelines where appropriate.

COMMUNITY FACILITIES PLAN

INTRODUCTION

In order to enhance the quality of life within a community, it is fundamentally important to provide adequate community facilities for residents. The commonly provided facilities are parks and open space, administrative offices and public utilities. The following sections outline the planning strategies for Marine's community facilities.

PARKS

Marine on St. Croix has limited City park facilities, however, it benefits from its proximity to William O'Brien State Park and the availability of Marine Elementary School recreational facilities.

The City received approximately 68.3 acres of park land through dedication as part of the Jackson Meadow subdivision. Due to the environmental diversity and the natural beauty of the Jackson Meadow sites, they will continue to be passive recreation parks.

There have been concerns expressed over the lack of active recreational facilities for organized sports. The City will need to look for future opportunities to address this need as the City continues to grow. Future park development opportunities may include:

- 1 A private property owner has expressed some willingness to participate with the community in the creation of an active recreational park on the west side of town, south and east of Broadway Avenue.
- 2 The City has created a community park on the City-owned Burris property at the south end of the Village Center.
- 3 Following completion of the Comprehensive Plan, the City will prepare a complete inventory of its parks, facilities, trails and open space parcels.

SANITARY SEWER

Wastewater

City values dictate that future growth should embrace the historic identity and rural small town character of the community. Consistent with these values, the City desires to manage growth based upon its ability to provide effective, quality utilities and services. Marine's



ability to provide services will directly influence the rate and density of future growth. Due to limitations within the City's sanitary sewer system, future development will have to occur using independent sewage treatment systems (ISTS) or communal sanitary sewer systems approved by the MPCA. This utility issue will influence future land use and development patterns.

The 2006 sanitary sewer system for Marine on St. Croix includes the following:

- 1 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 170 sites.
- 2 The City owns and maintains 13 individual sewage treatment facilities, including both drainfield and mound systems.
- 3 There are approximately 60 private ISTS consisting of both drainfield and mound systems.

A 1998 examination of the community collector system and associated drainfield revealed that the system is near its service capacity. To preserve the life of the facility, the City will not permit any additional residential connections to the system.

The City expects all future residential development to be served by privately owned ISTS, with the exception of an experimental communal system that will serve 64 homes in the Jackson Meadows subdivision. This communal system will be City-owned and maintained.

The City will not approve future development unless it is demonstrated that it can accommodate a private ISTS on-site. This restrictive policy is necessary and required because of the existence of environmental constraints such as wetlands, wet soils, high water tables, steep slopes, high bedrock through the community which are not conducive to the operation of ISTS. Individual property owners must demonstrate that their property can provide for an ISTS in compliance with Marine's Sewer Use Regulations, Ordinance No. 93.

In June 1998, Marine on St. Croix adopted updated regulations for the Sanitary Sewer Use Ordinance No. 93. The ordinance outlined the rules and performance standards for both use of the City's public system, as well as the installation of individual sewage treatment systems. All future development shall be required to comply with Ordinance No. 93 pertinent to sanitary sewer construction.

With the Jackson Meadow subdivision, the City will be accepting ownership of a communal sewage treatment system serving 64 homes, when at capacity. While still owned and maintained by the Developer, it is expected the system will be turned over to the City when conditions outlined in the Development Agreement are met and the City Engineer gives final approval. This turnover is not expected for several years. The City will consider similar sewage treatment systems with future development provided the system is approved by the Minnesota Pollution Control Agency.

WATER SYSTEM

Each property within Marine on St. Croix is serviced by individual private wells. With the development of the Jackson Meadow subdivision, the City approved its first communal water system.

Due to the reliance on individual well sites, the City has established standards for well design and location within its Subdivision Ordinance. The City will continue its enforcement of these regulations as a means of protecting the City's water resources.

STORM WATER MANAGEMENT

Marine is located within the new Carnelian Marine St. Croix Watershed District (WMD) boundary. The WD has completed a watershed management plan that Marine has agreed to follow.

Locally, the City has established performance standards within its zoning regulations that protect natural drainageways, wetlands and ponding areas as part of the City-wide storm management system. The City will require all future development to manage storm water in a manner that does not increase storm water runoff rate or volumes over the pre-construction conditions.

PUBLIC BUILDINGS

The Marine public buildings include: City Hall/library; fire hall; public works facility; post office; and elementary school. Each of these public facilities contribute to Marine's identity and quality of life. The retention and enhancement of the public facilities is a priority for future community planning.

In examining these facilities, space shortages clearly exist for the City Hall and the library. Each of these uses are an integral part of the Village Center. Future planning must examine the potential of providing new public space in the Village Center. As described in the land use section of the Development Framework, land area is limited within the Village Center and efforts must be pursued to create new building sites if additional building space is to be provided. Opportunities may exist in redeveloping currently under-utilized properties.

The Marine Elementary School is a valued resource to Marine and is viewed by citizens as critical to the future vitality of the community. The City will work cooperatively with the Stillwater School District to promote its continued operation and improvement within the City.

IMPLEMENTATION

The Marine on St. Croix Comprehensive Plan provides a vision of community growth through the year 2030. Implementation of the Comprehensive Plan must recognize the limitations of the small City related to City staff and finances. In this chapter of the Comprehensive Plan, a summary of strategies for plan implementation is offered.

BUDGETING AND FINANCE

The Comprehensive Plan emphasizes the need for continuing land use maintenance, Village Center improvements, and the provision of quality public services. Under these circumstances, concern exists with regard to increasing future public expenditures. In response to this issue, the City may implement the following strategies:

- 1 Establish and maintain a five year Capital Improvement Plan that identifies desired public improvement projects, assigns costs, and schedules implementation based on project priority and funding availability.
- 2 Consider establishing a capital improvement fund within the City's general fund to set aside revenues for identified public improvement projects.
- 3 Continue the City's practice of requiring new development to pay for its own infrastructure (i.e. streets).
- 4 Establish sewer utility service districts to allow the City to assess benefited properties for improvements or maintenance costs.
- 5 Provide for the establishment of a low maintenance trail system to reduce costs for both trail construction and maintenance.
- 6 Pursue available regional, state, and federal grants and aids, as appropriate, to facilitate community improvement and programs.
- 7 Encourage the establishment of community foundations capable of accepting donations and contributions for local projects, improvements, or events. .
- 8 Consider pursuing a fee in lieu of taxes from public or semi-public land uses that receive services from the City.



9. Continue to promote volunteerism as a means of implementing the development and maintenance of public facilities and projects to reduce the expense to the City (adopt a trail program, park development efforts).

PUBLIC PARTICIPATION

Marine on St. Croix is heavily reliant on volunteerism and public participation in the ongoing operations of the City. Future implementation efforts will continue to rely on resident involvement.

- 1 Disseminate information on current events and community issues through public meetings, newsletters, Internet, and news releases.
- 2 Continue to maintain strong citizen advisory committees to assist the City Council in the ongoing operations of the City.
- 3 Promote volunteerism citizen groups to assist in the development and maintenance of public facilities (e.g., volunteer fire department, ambulance service, adopt a trail program, park development).
- 4 Utilize citizen advocates to participate in regional planning efforts to represent the City positions (Lower St. Croix River Management Plan, Mn/DOT and County transportation planning, Gateway Trail Corridor, and Mn/DNR William O'Brien State Park planning).

ORDINANCES

The Marine Zoning and Subdivision Ordinances will be the primary regulations governing future land use and development decisions. As a means of implementing the stated land use goals for Marine, the City may implement the following ordinance provisions:

Zoning Ordinance

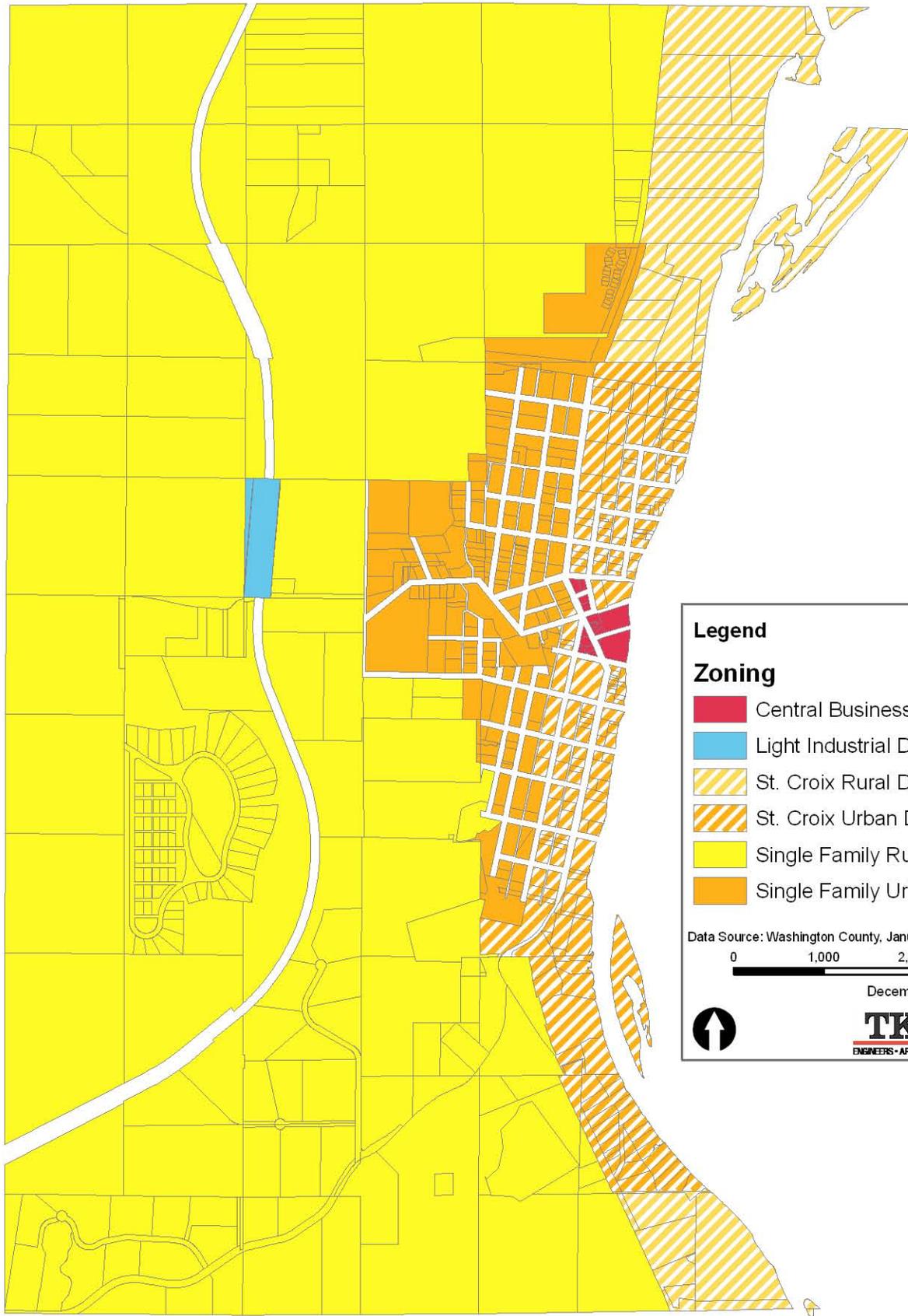
1. Consistent with the Proposed Land Use Plan and the Lower St. Croix River Management Plan, the City will maintain the following zoning districts:
 - SFR, Single Family Rural. This district allows for a development density of one unit for five acres in mandatory clustered subdivisions.
 - SCRD, St. Croix Rural District. This district allows for single family development at a one unit per 2.5 acre density. The district also imposes shoreland setbacks that protect the natural scenic values of the river.
 - SFU, Single Family Urban District. This district covers the older areas of the community away from the river, allowing for a minimum lot size of 30,000 square feet unless a larger lot is required for the installation of an ISTS.

- SCUD, St. Croix Urban District. This district also covers older portions of the City near the river allowing single family homes on one acre lots, This district includes also includes shoreland protections for the riverway.
- VCD, Village Center District. This district is located to the east of Highway 95 and is the primary commercial area in the City.
- LI, Light Industrial Business District. This district covers a small area of land along the Railroad tracks.

The following map illustrates the proposed zoning for Marine on St. Croix.

Zoning Map

Marine on St. Croix 2030 Comprehensive Plan



Legend

Zoning

-  Central Business District
-  Light Industrial District
-  St. Croix Rural District
-  St. Croix Urban District
-  Single Family Rural
-  Single Family Urban

Data Source: Washington County, January 31, 2007

0 1,000 2,000
Feet

December 2007



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2. Environmental Performance Standards. The Marine Zoning Ordinance incorporates strong performance standards related to performance standards.

a. Performance standards relative to the environment can be found in Paragraph 455 of Marine's Zoning Ordinance.

3. Land Use Performance Standards. The Comprehensive Plan identifies the following topic areas that may be addressed in the Zoning Ordinance.

□ Due to limitations in the City's community sanitary sewer system, all new development must be served by ISTS or a communal sanitary sewer system. All new sewage treatment systems must comply with Marine's Sewer Use Ordinance No. 93 which addresses both installation and maintenance of ISTS. Examination of Ordinance No. 93 should be undertaken to insure that adequate restrictions exist to prevent the installation of an ISTS in an area not suitable for development.

□ Within the City's St. Croix River District, the Marine on St. Croix Zoning Ordinance outlines standards under which substandard structures (noncompliant with river setbacks) may be improved, expanded or replaced. Concern exists over the Lower St. Croix River Management Plan and the State's desire to phase non-conforming riverfront structures out of existence. The City of Marine will maintain its current regulations as a means of protecting the historic land use of the city and private property owners.

□ The Lower St. Croix River Management Plan has suggested requiring all commercial uses within the St. Croix River District to be conditional uses. This change in zoning classification will affect Marine's Village Center. As conditional use permits in a Shoreland District, the review process for any development is extended by requiring a public hearing and review and comment by Minnesota DNR. The Village Center is an established commercial center on non-riparian lots. The change in zoning classification adds review time and administrative expense to any development or redevelopment efforts the City wishes to encourage in the Village Center. The City of Marine opposes this change in zoning classification for the Village Center land uses.

□ To protect views of the river and valley between riverfront buildings, the City will consider establishing performance standards to address setbacks between buildings, riparian lot building envelopes, and open space protection. The regulations are intended to prevent buildings on riverfront properties from expanding in such a manner as to obstruct river and valley views for non-riparian residents.

□ To provide for some life cycle housing opportunities within Marine, the City may investigate accommodating accessory apartments or guest homes in single family residential zoning districts.

- The City may examine its zoning regulations pertaining to home occupations, extended home occupations as a means of fostering some local economic development and employment opportunities.
- The City may examine its Light Industrial Zoning District to identify land uses that may be appropriate within the limited industrial zoned area of the City.
- The Marine Zoning Ordinance regulates signs. The City may examine the current regulations and establish signage performance standards within the Village Center that are reflective of the City's historic, rural, small town character. The City may prohibit franchise signage that detracts from the Village Center identity.

Subdivision Ordinance

1 The City values its narrow local street system as part of the rural character of the community. The Marine Subdivision Ordinance outlines the City's minimum right-of-way and road width standards. The City may amend its subdivision regulations to establish street standards reflective of actual local street design.

2 Section 1002.3, Public Site and Open Spaces, outlines Marine's park land dedication requirements. This section requires a cash contribution in lieu of a land dedication of \$50.00 per lot or a fee equal to 10 percent of the market value of the land prior to subdivision, whichever is larger. With increasing land values occurring in Marine, the \$50.00 per lot no longer is a true representation of land values. This section of the Subdivision Ordinance should be amended to remove the per lot cost contribution reference.

SURFACE WATER MANAGEMENT

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.

COMMERCIAL MAINTENANCE/REDEVELOPMENT

The retention and enhancement of the Village Center is seen as a priority for maintaining the community identity and vital community services. In fulfilling this objective, the City commissioned a study called the “Village Center Redevelopment Study in 2001”.

1. The Village Center Redevelopment study was intended to identify public improvements that will increase the aesthetic appeal of and improve the pedestrian circulation within the Village Center. The following improvements were considered :

- Narrowing the public street width.
- Reconfiguring the local streets and improving the sidewalks to promote traffic safety and the aesthetic appeal within the Village Center.
- Introducing landscaping into the Village Center streetscape.
- Burying the overhead utilities within the Village Center.
- Creating a landscape focal point at the waterfall.
- Provide pedestrian scale lighting as part of the streetscape design.

2. The City will explore alternate architectural standards for the Village Center buildings as an effort to define the historical, small town themes that the City will promote through future development or redevelopment.

3. The City will utilize public lands to further enhance the attractiveness of the Village Center.

- The City will cooperate with the Minnesota Historical Society in planning and improving the mill site within the Village Center as a significant local historical site.
- The City will maintain the City-owned Burris property as a passive recreation park that will attract community residents to the Village Center.
-

4. The City will actively investigate opportunities to add building space within the Village and work with property owners subject to its means and constraints.

The City formed a task force in 2000 which held a series of workshops. The workshops resulted in three goals for the redevelopment study.

- 1 Enhance the aesthetic appeal and improve the pedestrian circulation of the Village Center.
- 2 Utilize the public lands to enhance the attractiveness of the Village Center.
- 3 Investigate opportunities to add building space within the Village Center in order to retain existing uses as well as attract new businesses to the community.

These goals resulted in more discrete objectives:

- 1 Maintain historic integrity.
- 2 No impact on surrounding residential areas.
- 3 The retention of the library and post office is a priority.
- 4 Attracting tourist traffic to the village is not a priority.
- 5 Additions of public restrooms would reduce pressure on existing village businesses.
- 6 Discourage vehicles speeding through the town.
- 7 The Mill Creek Falls should be a focal point.

The Village Redevelopment Study (March 2001) was never formally adopted by the City. It did, however, provide a basis for change based upon a number of alternative recommendations. It addressed circulation by providing in graphic and textural form four alternative circulation patterns for the Village Center. It looked at parking options including parallel parking on both sides of the street, parallel parking on one side with pull in parking on the other side, and pull in parking on both sides. The Task Force found that the features of the studies that were most desirable were those that:

- Offered greatest development potential
- Maintained pull-in parking
- Maintained existing streets
- Maintained gazebo corner as primary open space (Village Green0
- Allowed for development of Block 8

The study also provided three streetscape design concepts. These three concepts were identified as:

- Concept 1: Civic Terminus/Town Grid
- Concept 2: Anchor--City Owned Land
- Concept 3: Civic Cluster

INTERGOVERNMENTAL COOPERATION

The Comprehensive Plan identifies a number of issues that will require the cooperation between the City and other governmental agencies to resolve. The City will pursue cooperation of the following governmental agencies in addressing the local community development issues:

1. Lower St. Croix Management Commission and Minnesota DNR and National Park Service. The City will work with these agencies to identify and resolve conflicts between proposed regional zoning standards and Marine's local zoning controls (e.g. non-conforming riverfront buildings, and commercial land use in the river corridor).

1 Mn/DNR. The City wishes to work cooperatively with Minnesota DNR in future planning of the William O'Brien State Park and the Gateway Trail Corridor pertinent to park use, trail locations, connections between City and State trails, etc.

2 Mn/DOT. The City will seek immediate improvements to Minnesota TH 95 to improve the traffic safety for residents accessing or crossing this major highway. The City would ultimately promote a Minnesota TH 95 bypass of Marine on St. Croix as a means of removing this physical barrier from the center of the community.

3 Washington County. The City wishes to be actively involved in any planning of or improvements to the County roads serving Marine. The City involvement is intended to address concerns related to roadway design and pedestrian safety.

4 Historical Society. The Minnesota Historical Society owns the Mill site within Marine's Village Center, This is a significant site both historically and geographically within the City. The site's use and improvement will contribute to the character and identity of the City. The City will continue to cooperate with the Historical Society regarding maintenance and use of the site.

5 Other Governmental Units. The City will maintain cooperative planning efforts with other governmental units including, but not limited to, May Township, City of Scandia, ISD 834, the Cornelian Marine St. Croix Watershed District, and the Washington County Sheriffs Department in addressing the ongoing issues related to the land use planning and community services for Marine and the surrounding area.

APPENDIX

Summary of Community Workshop Group Exercise--May 12, 2007

Community residents participated in a workshop on May 12, 2007. The workshop included small group exercises that focused on the character and assets of the community, and the major issues facing Marine in the next ten years. The questions and most frequent responses from the workshop participants are identified below:

1. What are some special places in Marine?

Workshop participants most frequently identified the following as special places in the community:

- The Village Core area and buildings or landmarks within it were identified most often--including the Town Hall, General Store, Gazebo, Bank and Library
- Water resources and their access points--the St. Croix River, Marina, waterfall, Mill Stream and Mill Pond
- Trails and parks--including William O'Brien Park, the Red Bridge, and all trails in the community
- Historic buildings and sites, such as the cemetery
- County Road 4 and its tunnel
- Community buildings, such as the school, library and church
- Jackson Meadow

2. How would you describe the community character of Marine, in five words or less?

The words that participants most frequently used to describe the character of the community include:

- Welcoming (similar words included friendly, supportive, generous, caring)
- Historic
- Green or natural connections
- Small (similar words included village, quaint)
- Community
- River
- Rural
- Quiet
- Diverse (similar words included changing, evolving)

3. What are the major issues facing Marine in the next ten years?

The major issues identified during the workshop included the following:

- Maintaining the special character of the community--its rural, green, historic and small town qualities
- Maintaining or improving the viability and vitality of the Village Center, including its retail services and institutions
- Protecting water quality and natural resources
- Managing traffic and noise, particularly motorcycle noise
- Adapting to an aging population
- Providing critical public services, while keeping taxes reasonable
- Retention and recruitment of firefighters
- Manage growth and scale of growth

4. What brought you to Marine? Why do you stay in Marine?

Responses to the two questions were similar, and focused on the following characteristics or elements of Marine:

- Good place to raise a family
- Sense of community
- People
- Natural beauty and accessibility to natural resources
- Community character--history, quiet, slower pace
- Housing types and affordability
- Access to Twin Cities in combination with smaller town/rural character

5. What features might deter people from moving here?

Workshop participants cited the following as elements that might discourage new people from moving to the community:

- The cost of housing and land
- Distance from the Twin cities and services, such as employment, shopping and urban amenities
- Loss of services and vitality in the Village Center
- Highway and motorcycle noise
- Lifecycle needs, including activities for kids and lifecycle housing
- Perception as "exclusive"
- Education-related concerns--loss of local school or distance to schools

6. Should Marine be an historical or cultural destination? Why or why not?

Workshop participants were divided on responses to this issue. Many expressed concerns that becoming a destination for historical or cultural tourism would have negative impacts on the community, while others cited potential economic benefits as a positive. A summary of the comments at the workshop includes the following themes:

- The community should serve the needs of its residents first

- The village should maintain its character as a small community, rather than become a “tourist trap”
- Residents expressed concerns that traffic or a large number of visitors could overwhelm the community
- The community should maintain its historic character
- Some additional tourism could be helpful in maintaining or adding to the vitality of the community. “Low impact” tourism could include a few special events or meetings, or take advantage of local artistic and musical talent

**Summary of Town Meetings, Natural Environment and Land Use--May 16, 2007,
and Community Facilities --May 19, 2007**

Community members discussed issues and potential solutions to issues. The most frequently identified issues and solutions are identified below.

Natural Environment

1. Views

- Restrict cutting of trees within river and stream corridors
- Restrict height of wireless towers
- Bury utilities
- Protect night sky, regulate against light pollution

2. Water Quality

- Study existing stormwater system, develop plan for improvement if needed
- Improve stormwater management, especially to control runoff from Highway 95, and downtown
- Use best management practices (raingardens)
- Preserve quality of ground water
- Enforce septic system ordinances

3. Trails

- Work with other communities for trail connections
- Create local trail network
- Use trails to promote public health

4. Land Use Impacts on Natural Resources

- Regulate building height, lot size, setback, and building scale
- Code enforcement for natural resource regulations

- Control invasive species through property owner education and programs
- Do not allow street vacations to increase lot size of shoreland property
- Leverage Washington County Land and Water Legacy program
- Public access to river
- Conservative allowance of variances

5. Energy

- Promote use of renewable energy and green building

Land Use

1. Village Center

- Restrict cutting of trees within river and stream corridors
- Cluster businesses in the Village Center
- Less asphalt

2. Stewardship

- Protect wetlands
- Protect historic resources

3. Governance

- Recruit high quality city staff, staff training
- Encourage volunteer efforts
- Planning Commission review of all additions, new construction
- Provide education, grants, and organize community workshops
- Inventory buildable land
- Follow Comprehensive Plan
- Re-guide industrial area or define standards to be more compatible with surroundings

4. Ordinances

- Enforce ordinances
- Fewer variances
- Change ordinances to address scale, character of in-fill
- Keep zoning districts as they are
- Accessory structure scale and use

Transportation

1. Highway 95

- Post signs about “jake brakes” at city limits
- Explore noise ordinance
- Get speed measuring device
- Lower speed limit on Highway 95 through the City
- Extend the 45 mph speed limit farther north and south of the City
- Post signs indicating that the speed limit is reduced ahead
- Post a stop sign on Highway 95 at CR 4
- Make change at the State level to require state highway speed limit of 30 mph through small towns (Wisconsin model)
- Beware auto-oriented land use, such as food and fuel convenience stores

2. City Roads

- Lower speed limit
- Maintain City roads but keep rural
- Design streets for lower speeds
- Improve sight triangle at Broadway and CR 4
- Funding of roads based upon classifications, % assessments and % City general fund
- Decrease amount of paving downtown
- Keep rolling hills on CR 4

3. Pedestrian Connections

- Create map of trails
- Create shoulder for pedestrians on CR 4
- Purchase or arrange for easements to create a trail connection from Broadway to O'Brien
- Create a walking bridge over Highway 95
- Improve signage and way-finding
- Link trails to form better connections

Other Community Facilities

1. Maintain/Improve Public Buildings

- Post Office: keep post office in the community
- City Hall: need for additional space
- Library
- Fire Hall: maintenance, public restroom

2. Outdoor Environment

- Allow uniform signage
- Beautify village streetscape: trash containers, bathroom, lighting, kiosk, and maps
- Public spaces
- More greenery
- Maintain landings
- Support non-motorized travel through paths, trails, and sidewalks
- Parks and recreation facilities
- Mark path to historic sites
- Maintenance of Red Bridge

3. Utilities

- Phone service
- Safe water supply
- Sanitary sewer, plan for future
- Take on Jackson Meadow wastewater treatment

4. Other

- Maintain historic City documents, records
- Chamber of Commerce
- Friends of Marine
- Police protection, part-time officer to address Highway 95 issues